

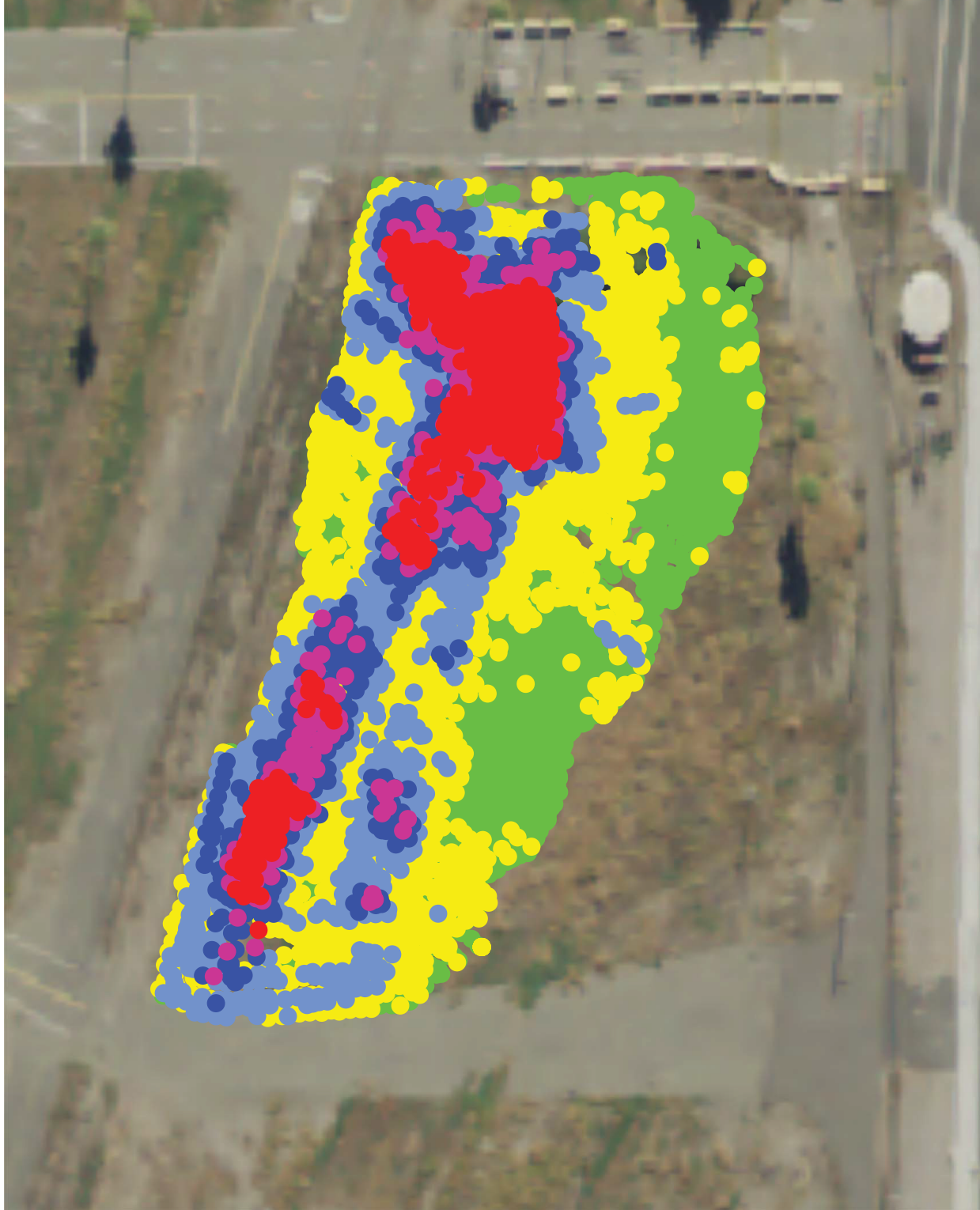
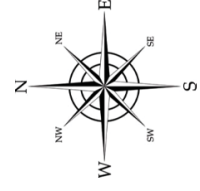
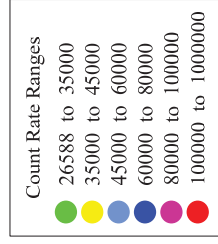
## **Appendix E**

### **Gamma Walkover Survey, Downhole Gamma and Soil Core Scan Logs**

**E-1 Gamma Walkover Survey**

Statistics for SHAD-041 Gamma Survey	
Mean	68,289.7
Standard Error	1,141.4
Median	39,307
Mode	999,960
Standard Deviation	107,221.1
Sample Variance	11,496,368,013.9
Kurtosis	45.5
Skewness	6.3
Range	973,372
Minimum	26,588
Maximum	999,960
Sum	602,588,104
Count	8,824
Confidence Level(95.0%)	2,237.5

Survey Information	
Meter:	Ludlum 2221
Serial Number:	309548
Detector:	Ludlum 44-20 (3"x3" NaI)
Serial Number:	PR362630
Calibration Date:	2/8/2017
Field of View:	1 meter
Dates of Survey:	10/2/2017 - 10/3/2017



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1	-121.2673263	37.82704211	6340063.464	2124519.458	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	126,200	Geo 7X	Uncorrected	10/3/2017	09:17:32am	C Gray	SHAD41 D.ssf
3	-121.2673264	37.82704446	6340064.137	2124520.307	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	126,003	Geo 7X	Uncorrected	10/3/2017	09:17:42am	C Gray	SHAD41 D.ssf
4	-121.2673255	37.82704816	6340063.729	2124521.657	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	128,496	Geo 7X	Uncorrected	10/3/2017	09:17:44am	C Gray	SHAD41 D.ssf
5	-121.2673267	37.8270488	6340063.366	2124521.892	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	127,099	Geo 7X	Uncorrected	10/3/2017	09:17:46am	C Gray	SHAD41 D.ssf
6	-121.2673281	37.82704846	6340062.974	2124521.772	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	127,384	Geo 7X	Uncorrected	10/3/2017	09:17:48am	C Gray	SHAD41 D.ssf
7	-121.2673287	37.8270484	6340062.787	2124521.752	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	127,745	Geo 7X	Uncorrected	10/3/2017	09:17:50am	C Gray	SHAD41 D.ssf
8	-121.2673287	37.82704859	6340062.781	2124521.822	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	126,860	Geo 7X	Uncorrected	10/3/2017	09:17:52am	C Gray	SHAD41 D.ssf
9	-121.2673287	37.82704604	6340062.794	2124521.84	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	126,365	Geo 7X	Uncorrected	10/3/2017	09:17:54am	C Gray	SHAD41 D.ssf
10	-121.2673288	37.82704844	6340062.768	2124521.767	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	128,697	Geo 7X	Uncorrected	10/3/2017	09:17:56am	C Gray	SHAD41 D.ssf
11	-121.2673294	37.82704703	6340062.593	2124521.257	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	126,483	Geo 7X	Uncorrected	10/3/2017	09:17:58am	C Gray	SHAD41 D.ssf
12	-121.2673299	37.82704561	6340062.424	2124520.741	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	129,157	Geo 7X	Uncorrected	10/3/2017	09:18:00am	C Gray	SHAD41 D.ssf
13	-121.2673285	37.82704723	6340062.795	2124521.328	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	124,895	Geo 7X	Uncorrected	10/3/2017	09:18:02am	C Gray	SHAD41 D.ssf
14	-121.2673285	37.82704762	6340062.847	2124521.468	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	127,074	Geo 7X	Uncorrected	10/3/2017	09:18:04am	C Gray	SHAD41 D.ssf
15	-121.2673286	37.8270476	6340062.82	2124521.46	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	127,527	Geo 7X	Uncorrected	10/3/2017	09:18:06am	C Gray	SHAD41 D.ssf
16	-121.2673293	37.82704604	6340062.611	2124520.897	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	126,356	Geo 7X	Uncorrected	10/3/2017	09:18:08am	C Gray	SHAD41 D.ssf
17	-121.2673296	37.82704584	6340062.524	2124520.822	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	126,472	Geo 7X	Uncorrected	10/3/2017	09:18:10am	C Gray	SHAD41 D.ssf
18	-121.2673292	37.82704586	6340062.632	2124520.831	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	127,939	Geo 7X	Uncorrected	10/3/2017	09:18:12am	C Gray	SHAD41 D.ssf
19	-121.2673298	37.82704479	6340062.468	2124520.441	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	129,851	Geo 7X	Uncorrected	10/3/2017	09:18:14am	C Gray	SHAD41 D.ssf
20	-121.267329	37.82704501	6340062.689	2124520.52	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	127,270	Geo 7X	Uncorrected	10/3/2017	09:18:16am	C Gray	SHAD41 D.ssf
21	-121.267329	37.82704625	6340062.976	2124520.616	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	126,720	Geo 7X	Uncorrected	10/3/2017	09:18:18am	C Gray	SHAD41 D.ssf
22	-121.2673297	37.82704787	6340062.493	2124521.561	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	130,116	Geo 7X	Uncorrected	10/3/2017	09:18:20am	C Gray	SHAD41 D.ssf
23	-121.2673355	37.82705014	6340060.846	2124522.402	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	129,705	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:22am	C Gray	SHAD41 D.ssf
24	-121.2673377	37.82705196	6340060.205	2124523.072	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	128,459	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:24am	C Gray	SHAD41 D.ssf
25	-121.2673386	37.82705151	6340059.932	2124522.911	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	126,000	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:26am	C Gray	SHAD41 D.ssf
26	-121.2673363	37.8270477	6340060.518	2124521.518	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	126,802	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:28am	C Gray	SHAD41 D.ssf
27	-121.2673386	37.82704468	6340060.013	2124520.42	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	126,687	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:30am	C Gray	SHAD41 D.ssf
28	-121.2673298	37.82704696	6340062.466	2124521.233	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	118,383	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:32am	C Gray	SHAD41 D.ssf
29	-121.2673297	37.82704787	6340062.493	2124521.561	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88,810	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:34am	C Gray	SHAD41 D.ssf
30	-121.2673306	37.82704571	6340062.236	2124520.78	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	86,441	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:36am	C Gray	SHAD41 D.ssf
31	-121.2673386	37.82703712	6340059.892	2124517.671	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,896	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:38am	C Gray	SHAD41 D.ssf
32	-121.2673458	37.82702712	6340057.792	2124514.047	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,493	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:40am	C Gray	SHAD41 D.ssf
33	-121.2673511	37.82701735	6340056.225	2124510.501	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68,310	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:42am	C Gray	SHAD41 D.ssf
34	-121.2673566	37.82700739	6340054.609	2124506.887	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,977	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:44am	C Gray	SHAD41 D.ssf
35	-121.2673576	37.82699537	6340053.704	2124502.514	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,181	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:46am	C Gray	SHAD41 D.ssf
36	-121.2673595	37.8269857	6340052.361	2124495.693	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,493	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:48am	C Gray	SHAD41 D.ssf
37	-121.2673641	37.8269766	6340049.799	2124491.85	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,786	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:50am	C Gray	SHAD41 D.ssf
38	-121.2673728	37.82696599	6340048.072	2124488.51	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,593	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:52am	C Gray	SHAD41 D.ssf
39	-121.2673787	37.82695677	6340045.883	2124485.042	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,014	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:54am	C Gray	SHAD41 D.ssf
40	-121.2673962	37.8269472	6340044.578	2124482.213	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,672	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:18:56am	C Gray	SHAD41 D.ssf
41	-121.2673962	37.8269396	6340043.129	2124478.957	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,628	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:00am	C Gray	SHAD41 D.ssf
42	-121.2673956	37.82692133	6340041.347	2124475.657	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,221	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:02am	C Gray	SHAD41 D.ssf
43	-121.2674016	37.8269133	6340039.182	2124472.898	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,472	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:04am	C Gray	SHAD41 D.ssf
44	-121.2674091	37.8269133	6340037.349	2124469.755	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,517	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:06am	C Gray	SHAD41 D.ssf
45	-121.2674127	37.82690503	6340035.471	2124466.19	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,375	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:08am	C Gray	SHAD41 D.ssf
46	-121.2674217	37.8268952	6340033.685	2124462.08	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,529	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:10am	C Gray	SHAD41 D.ssf
47	-121.2674278	37.82688387	6340033.685	2124462.08	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,529	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:10am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
48	-121.26744351	37.82687254	6340031.531	2124457.973	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,639	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:12am	C Gray	SHAD41 D.ssf
49	-121.2674414	37.82686485	6340029.687	2124455.188	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,858	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:14am	C Gray	SHAD41 D.ssf
50	-121.2674473	37.82685928	6340027.975	2124453.172	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,979	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:16am	C Gray	SHAD41 D.ssf
51	-121.2674498	37.82685329	6340027.222	2124450.999	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,797	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:18am	C Gray	SHAD41 D.ssf
52	-121.2674478	37.82685761	6340027.818	2124452.566	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,951	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:20am	C Gray	SHAD41 D.ssf
53	-121.2674445	37.82685463	6340028.776	2124451.473	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,667	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:22am	C Gray	SHAD41 D.ssf
54	-121.2674432	37.82686237	6340029.376	2124454.268	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,208	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:24am	C Gray	SHAD41 D.ssf
55	-121.2674428	37.82686877	6340030.643	2124456.608	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,093	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:26am	C Gray	SHAD41 D.ssf
56	-121.26744316	37.82687792	6340032.56	2124459.924	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,731	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:28am	C Gray	SHAD41 D.ssf
57	-121.2674251	37.82688637	6340034.471	2124462.986	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,624	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:30am	C Gray	SHAD41 D.ssf
58	-121.267442	37.82689486	6340035.959	2124466.063	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,239	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:32am	C Gray	SHAD41 D.ssf
59	-121.2674096	37.82690538	6340037.673	2124469.879	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,978	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:34am	C Gray	SHAD41 D.ssf
60	-121.2674044	37.82691313	6340039.016	2124472.691	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,478	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:36am	C Gray	SHAD41 D.ssf
61	-121.2674044	37.82692418	6340040.572	2124476.703	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,783	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:38am	C Gray	SHAD41 D.ssf
62	-121.2673981	37.82693911	6340042.407	2124479.208	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,892	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:40am	C Gray	SHAD41 D.ssf
63	-121.2673912	37.82693963	6340044.406	2124482.397	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,370	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:42am	C Gray	SHAD41 D.ssf
64	-121.2673851	37.82694963	6340046.209	2124485.922	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,305	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:44am	C Gray	SHAD41 D.ssf
65	-121.2673787	37.82695785	6340048.071	2124488.901	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,065	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:46am	C Gray	SHAD41 D.ssf
66	-121.2673701	37.82696905	6340050.591	2124492.96	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,156	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:48am	C Gray	SHAD41 D.ssf
67	-121.267366	37.82697716	6340051.796	2124495.997	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,451	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:50am	C Gray	SHAD41 D.ssf
68	-121.2673529	37.82698622	6340055.586	2124499.602	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,931	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:52am	C Gray	SHAD41 D.ssf
69	-121.267349	37.82700407	6340056.797	2124505.662	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,062	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:54am	C Gray	SHAD41 D.ssf
70	-121.2673445	37.82701128	6340058.116	2124508.274	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,072	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:19:56am	C Gray	SHAD41 D.ssf
71	-121.2673385	37.82701979	6340059.862	2124511.358	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,824	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:00am	C Gray	SHAD41 D.ssf
72	-121.2673319	37.82702921	6340061.819	2124514.773	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,680	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:02am	C Gray	SHAD41 D.ssf
73	-121.2673274	37.82703828	6340063.138	2124518.064	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,097	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:04am	C Gray	SHAD41 D.ssf
74	-121.2673207	37.82704337	6340065.082	2124519.903	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,923	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:06am	C Gray	SHAD41 D.ssf
75	-121.2673191	37.82703883	6340065.544	2124518.054	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,899	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:08am	C Gray	SHAD41 D.ssf
76	-121.2673242	37.82702832	6340064.042	2124514.431	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	55,835	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:10am	C Gray	SHAD41 D.ssf
77	-121.2673298	37.82701851	6340062.386	2124510.874	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,256	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:12am	C Gray	SHAD41 D.ssf
78	-121.2673372	37.82700796	6340060.216	2124507.048	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,516	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:14am	C Gray	SHAD41 D.ssf
79	-121.2673446	37.82699907	6340058.04	2124503.831	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,680	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:16am	C Gray	SHAD41 D.ssf
80	-121.2673514	37.82698945	6340056.049	2124500.343	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,535	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:18am	C Gray	SHAD41 D.ssf
81	-121.2673207	37.82697976	6340053.939	2124496.833	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,317	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:20am	C Gray	SHAD41 D.ssf
82	-121.2673645	37.82696958	6340052.216	2124493.14	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,230	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:22am	C Gray	SHAD41 D.ssf
83	-121.2673723	37.82696047	6340049.939	2124489.84	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,482	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:24am	C Gray	SHAD41 D.ssf
84	-121.2673768	37.82695035	6340048.599	2124486.166	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,007	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:26am	C Gray	SHAD41 D.ssf
85	-121.2673899	37.82694	6340046.538	2124482.413	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,325	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:28am	C Gray	SHAD41 D.ssf
86	-121.2673887	37.82692979	6340045.119	2124478.707	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,068	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:30am	C Gray	SHAD41 D.ssf
87	-121.2673945	37.82691973	6340043.403	2124475.059	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,179	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:32am	C Gray	SHAD41 D.ssf
88	-121.2674071	37.82691072	6340041.49	2124471.792	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,126	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:34am	C Gray	SHAD41 D.ssf
89	-121.2674074	37.82690255	6340039.631	2124468.834	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,732	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:36am	C Gray	SHAD41 D.ssf
90	-121.2674137	37.82689377	6340037.779	2124465.46	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,822	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:38am	C Gray	SHAD41 D.ssf
91	-121.2674192	37.82688469	6340036.177	2124462.38	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,570	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:40am	C Gray	SHAD41 D.ssf
92	-121.2674263	37.82687397	6340034.084	2124458.473	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,421	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:42am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
94	-121.2674329	37.82686448	6340032.157	2124455.031	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,306	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:44am	C Gray	SHAD41 D.ssf
95	-121.2674388	37.82685325	6340030.417	2124451.176	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,896	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:46am	C Gray	SHAD41 D.ssf
96	-121.2674445	37.82684527	6340028.597	2124448.066	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,806	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:48am	C Gray	SHAD41 D.ssf
97	-121.2674432	37.82684559	6340029.121	2124448.177	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,677	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:50am	C Gray	SHAD41 D.ssf
98	-121.2674377	37.82684448	6340030.706	2124447.76	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,009	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:52am	C Gray	SHAD41 D.ssf
99	-121.2674411	37.82684192	6340029.716	2124446.836	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,143	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:54am	C Gray	SHAD41 D.ssf
100	-121.2674406	37.82684853	6340029.879	2124449.242	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,703	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:56am	C Gray	SHAD41 D.ssf
101	-121.2674355	37.82685804	6340031.391	2124452.694	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,465	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:20:58am	C Gray	SHAD41 D.ssf
102	-121.2674304	37.82686806	6340032.892	2124456.332	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,102	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:00am	C Gray	SHAD41 D.ssf
103	-121.2674228	37.82687862	6340035.1	2124460.156	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,692	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:02am	C Gray	SHAD41 D.ssf
104	-121.2674182	37.82688779	6340036.455	2124463.484	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,486	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:04am	C Gray	SHAD41 D.ssf
105	-121.2674136	37.82689794	6340037.82	2124467.172	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,171	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:06am	C Gray	SHAD41 D.ssf
106	-121.267407	37.82689809	6340039.749	2124470.85	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,704	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:08am	C Gray	SHAD41 D.ssf
107	-121.2674024	37.82691706	6340041.12	2124474.105	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,816	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:10am	C Gray	SHAD41 D.ssf
108	-121.267398	37.82692608	6340042.426	2124477.38	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,861	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:12am	C Gray	SHAD41 D.ssf
109	-121.2673918	37.82693623	6340044.226	2124481.06	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,788	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:14am	C Gray	SHAD41 D.ssf
110	-121.2673875	37.82694654	6340045.509	2124484.803	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,583	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:16am	C Gray	SHAD41 D.ssf
111	-121.2673828	37.82695536	6340046.897	2124488.003	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,065	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:18am	C Gray	SHAD41 D.ssf
112	-121.2673786	37.82696324	6340048.127	2124490.863	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,411	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:19am	C Gray	SHAD41 D.ssf
113	-121.2673717	37.82697401	6340050.141	2124494.771	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,182	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:22am	C Gray	SHAD41 D.ssf
114	-121.2673652	37.82698381	6340052.067	2124498.32	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,066	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:24am	C Gray	SHAD41 D.ssf
115	-121.2673591	37.82699343	6340053.857	2124501.809	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,672	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:26am	C Gray	SHAD41 D.ssf
116	-121.2673526	37.82700057	6340055.751	2124504.394	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,192	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:28am	C Gray	SHAD41 D.ssf
117	-121.2673468	37.82701274	6340057.453	2124508.813	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,157	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:30am	C Gray	SHAD41 D.ssf
118	-121.2673416	37.82702147	6340058.993	2124511.98	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,243	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:32am	C Gray	SHAD41 D.ssf
119	-121.2673362	37.82702988	6340060.534	2124515.027	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,133	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:34am	C Gray	SHAD41 D.ssf
120	-121.2673299	37.82704029	6340062.432	2124518.803	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,189	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:36am	C Gray	SHAD41 D.ssf
121	-121.2673189	37.82704397	6340065.605	2124520.116	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,823	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:38am	C Gray	SHAD41 D.ssf
122	-121.2673051	37.82704435	6340069.608	2124519.912	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,244	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:40am	C Gray	SHAD41 D.ssf
123	-121.2672912	37.82704489	6340073.608	2124520.387	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,108	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:42am	C Gray	SHAD41 D.ssf
124	-121.2672812	37.82704506	6340077.36	2124520.418	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,648	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:44am	C Gray	SHAD41 D.ssf
125	-121.2672619	37.82704587	6340082.086	2124520.674	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	64,207	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:46am	C Gray	SHAD41 D.ssf
126	-121.2672446	37.82704609	6340087.078	2124520.714	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	77,460	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:48am	C Gray	SHAD41 D.ssf
127	-121.2672279	37.82704715	6340091.887	2124521.06	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	75,318	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:50am	C Gray	SHAD41 D.ssf
128	-121.2671757	37.82704798	6340097.067	2124521.318	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	75,379	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:52am	C Gray	SHAD41 D.ssf
129	-121.2671935	37.82704783	6340101.84	2124521.225	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	110,260	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:54am	C Gray	SHAD41 D.ssf
130	-121.2671781	37.82704888	6340106.28	2124521.543	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	90,052	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:56am	C Gray	SHAD41 D.ssf
131	-121.2671685	37.82704648	6340109.066	2124520.674	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	73,067	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:21:58am	C Gray	SHAD41 D.ssf
132	-121.2671674	37.82703516	6340110.31	2124516.543	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,625	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:00am	C Gray	SHAD41 D.ssf
133	-121.2671577	37.82702584	6340112.103	2124513.136	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,643	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:02am	C Gray	SHAD41 D.ssf
134	-121.2671407	37.8270201	6340117.006	2124511.002	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,590	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:04am	C Gray	SHAD41 D.ssf
135	-121.2671283	37.82702605	6340120.598	2124513.141	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,316	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:06am	C Gray	SHAD41 D.ssf
136	-121.2671175	37.82703658	6340123.749	2124516.948	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,691	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:08am	C Gray	SHAD41 D.ssf
137	-121.2671162	37.82704519	6340124.147	2124520.08	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,519	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:10am	C Gray	SHAD41 D.ssf
138	-121.2671142	37.8270515	6340124.762	2124522.375	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	64,935	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:12am	C Gray	SHAD41 D.ssf
139	-121.2671121	37.82706427	6340125.407	2124527.019	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	80,722	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:14am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
140	-121.267113	37.82707684	6340125.178	2124531.598	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	93,025	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:16am	C Gray	SHAD41 D.ssf
141	-121.2671125	37.82708782	6340125.354	2124535.595	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	88,482	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:18am	C Gray	SHAD41 D.ssf
142	-121.267112	37.82709962	6340125.524	2124539.89	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	83,432	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:20am	C Gray	SHAD41 D.ssf
143	-121.2671119	37.8271116	6340125.593	2124544.252	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	70,409	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:22am	C Gray	SHAD41 D.ssf
144	-121.2671108	37.82712449	6340125.947	2124548.942	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	70,004	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:24am	C Gray	SHAD41 D.ssf
145	-121.2671111	37.82713564	6340125.9	2124553.005	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	65,764	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:26am	C Gray	SHAD41 D.ssf
146	-121.2671122	37.82714795	6340125.615	2124557.489	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	83,048	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:28am	C Gray	SHAD41 D.ssf
147	-121.2671121	37.82716219	6340125.686	2124562.673	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	87,339	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:30am	C Gray	SHAD41 D.ssf
148	-121.2671124	37.82717506	6340125.632	2124567.358	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	96,285	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:32am	C Gray	SHAD41 D.ssf
149	-121.267112	37.82718805	6340125.784	2124572.087	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	121,291	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:34am	C Gray	SHAD41 D.ssf
150	-121.2671103	37.8271988	6340126.314	2124576	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	128,206	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:36am	C Gray	SHAD41 D.ssf
151	-121.2671103	37.82721301	6340126.355	2124581.175	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	124,864	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:38am	C Gray	SHAD41 D.ssf
152	-121.2671154	37.82721851	6340124.903	2124583.186	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	147,620	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:40am	C Gray	SHAD41 D.ssf
153	-121.2671304	37.82721879	6340120.572	2124583.325	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	163,074	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:42am	C Gray	SHAD41 D.ssf
154	-121.2671431	37.82721757	6340116.904	2124582.91	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	115,553	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:44am	C Gray	SHAD41 D.ssf
155	-121.2671598	37.82721462	6340112.074	2124581.876	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	88,050	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:46am	C Gray	SHAD41 D.ssf
156	-121.2671733	37.82721351	6340108.168	2124581.505	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	96,661	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:48am	C Gray	SHAD41 D.ssf
157	-121.2671917	37.82721148	6340102.856	2124580.807	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	77,793	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:50am	C Gray	SHAD41 D.ssf
158	-121.2672083	37.82721139	6340098.062	2124580.814	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	61,555	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:52am	C Gray	SHAD41 D.ssf
159	-121.2672224	37.82721142	6340093.979	2124580.858	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,848	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:54am	C Gray	SHAD41 D.ssf
160	-121.2673328	37.82721077	6340065.975	2124580.853	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,631	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:56am	C Gray	SHAD41 D.ssf
161	-121.2672557	37.82721111	6340084.363	2124580.825	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,234	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:22:58am	C Gray	SHAD41 D.ssf
162	-121.267271	37.82721018	6340079.953	2124580.522	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	55,158	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:00am	C Gray	SHAD41 D.ssf
163	-121.2672881	37.82720885	6340074.992	2124580.079	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,930	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:02am	C Gray	SHAD41 D.ssf
164	-121.2673034	37.82720874	6340070.584	2124580.077	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,592	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:04am	C Gray	SHAD41 D.ssf
165	-121.2673192	37.82721077	6340065.975	2124580.853	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,631	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:06am	C Gray	SHAD41 D.ssf
166	-121.2673283	37.82720379	6340063.36	2124578.331	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,821	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:08am	C Gray	SHAD41 D.ssf
167	-121.2673298	37.82719214	6340062.911	2124574.095	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	71,178	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:10am	C Gray	SHAD41 D.ssf
168	-121.2673316	37.8271778	6340062.356	2124568.876	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	125,370	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:12am	C Gray	SHAD41 D.ssf
169	-121.2673306	37.82716351	6340062.583	2124563.672	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	105,227	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:14am	C Gray	SHAD41 D.ssf
170	-121.2673319	37.82714901	6340062.458	2124558.394	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	84,459	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:16am	C Gray	SHAD41 D.ssf
171	-121.2673318	37.82713515	6340062.154	2124553.348	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	98,828	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:18am	C Gray	SHAD41 D.ssf
172	-121.2673298	37.82712437	6340062.707	2124549.417	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	91,885	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:20am	C Gray	SHAD41 D.ssf
173	-121.2673317	37.8271119	6340062.127	2124544.881	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	89,932	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:22am	C Gray	SHAD41 D.ssf
174	-121.2673324	37.82705131	6340062.224	2124540.96	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	97,052	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:24am	C Gray	SHAD41 D.ssf
175	-121.2673317	37.82708999	6340062.047	2124536.906	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	114,859	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:26am	C Gray	SHAD41 D.ssf
176	-121.2673312	37.82707587	6340062.158	2124531.761	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	118,672	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:28am	C Gray	SHAD41 D.ssf
177	-121.2673314	37.82706396	6340062.061	2124527.427	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	94,361	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:30am	C Gray	SHAD41 D.ssf
178	-121.2673323	37.82705163	6340062.107	2124522.82	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,324	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:32am	C Gray	SHAD41 D.ssf
179	-121.2673311	37.82704131	6340061.727	2124519.299	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	67,437	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:34am	C Gray	SHAD41 D.ssf
180	-121.2673309	37.82703143	6340062.095	2124515.579	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	72,123	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:36am	C Gray	SHAD41 D.ssf
181	-121.2673361	37.82701939	6340060.558	2124511.206	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,099	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:38am	C Gray	SHAD41 D.ssf
182	-121.2673424	37.82700704	6340058.711	2124506.725	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,922	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:40am	C Gray	SHAD41 D.ssf
183	-121.2673494	37.82699293	6340056.644	2124501.604	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,479	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:42am	C Gray	SHAD41 D.ssf
184	-121.2673555	37.82698157	6340054.848	2124497.484	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,989	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:44am	C Gray	SHAD41 D.ssf
185	-121.2673622	37.82697053	6340052.889	2124493.479	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,126	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:46am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
186	-121.2673674	37.82695794	6340051.341	2124488.907	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,029	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:48am	C Gray	SHAD41 D.ssf
187	-121.2673707	37.82694674	6340049.723	2124484.84	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,616	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:50am	C Gray	SHAD41 D.ssf
188	-121.2673827	37.82693243	6340042.423	2124479.65	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,080	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:52am	C Gray	SHAD41 D.ssf
189	-121.2673864	37.82692196	6340045.763	2124475.853	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,657	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:54am	C Gray	SHAD41 D.ssf
190	-121.2673918	37.826911	6340044.146	2124471.874	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,643	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:55am	C Gray	SHAD41 D.ssf
191	-121.2673939	37.8268975	6340042.037	2124466.975	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,571	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:23:58am	C Gray	SHAD41 D.ssf
192	-121.2674032	37.82688516	6340040.212	2124462.496	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,750	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:00am	C Gray	SHAD41 D.ssf
193	-121.2674112	37.82687348	6340038.446	2124458.259	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	27,464	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:02am	C Gray	SHAD41 D.ssf
194	-121.2674164	37.82686276	6340036.9	2124454.368	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,634	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:04am	C Gray	SHAD41 D.ssf
195	-121.2674225	37.82685145	6340035.121	2124450.262	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,376	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:06am	C Gray	SHAD41 D.ssf
196	-121.2674309	37.82684019	6340032.658	2124446.185	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,041	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:08am	C Gray	SHAD41 D.ssf
197	-121.2674347	37.82683427	6340031.534	2124444.037	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,740	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:10am	C Gray	SHAD41 D.ssf
198	-121.2674424	37.82683226	6340033.05	2124443.293	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,138	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:12am	C Gray	SHAD41 D.ssf
199	-121.2674348	37.82683146	6340031.498	2124443.012	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,277	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:14am	C Gray	SHAD41 D.ssf
200	-121.2674265	37.82683212	6340032.824	2124443.242	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,222	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:16am	C Gray	SHAD41 D.ssf
201	-121.2674265	37.82683904	6340033.923	2124445.754	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,590	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:18am	C Gray	SHAD41 D.ssf
202	-121.267424	37.8268493	6340034.669	2124449.483	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,710	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:20am	C Gray	SHAD41 D.ssf
203	-121.2674197	37.82685958	6340035.95	2124453.216	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,555	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:22am	C Gray	SHAD41 D.ssf
204	-121.2674149	37.82686693	6340037.355	2124456.744	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,287	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:24am	C Gray	SHAD41 D.ssf
205	-121.2674112	37.82687889	6340038.449	2124460.229	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,680	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:26am	C Gray	SHAD41 D.ssf
206	-121.2674036	37.82688987	6340039.81	2124464.214	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,079	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:28am	C Gray	SHAD41 D.ssf
207	-121.2674033	37.82689953	6340041.368	2124467.721	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,985	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:30am	C Gray	SHAD41 D.ssf
208	-121.2673982	37.82691206	6340042.303	2124472.274	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,211	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:32am	C Gray	SHAD41 D.ssf
209	-121.2673944	37.82692244	6340043.447	2124476.044	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,889	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:33am	C Gray	SHAD41 D.ssf
210	-121.2673875	37.82693443	6340045.464	2124480.394	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,767	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:35am	C Gray	SHAD41 D.ssf
211	-121.2673815	37.82694534	6340047.226	2124484.352	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,815	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:38am	C Gray	SHAD41 D.ssf
212	-121.2673743	37.82695748	6340049.359	2124488.755	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,007	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:40am	C Gray	SHAD41 D.ssf
213	-121.2673683	37.82696981	6340051.134	2124493.231	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,529	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:42am	C Gray	SHAD41 D.ssf
214	-121.2673621	37.82698228	6340052.937	2124497.758	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,402	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:44am	C Gray	SHAD41 D.ssf
215	-121.2673567	37.82699248	6340054.525	2124501.458	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,668	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:46am	C Gray	SHAD41 D.ssf
216	-121.2673513	37.82700243	6340056.117	2124505.07	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,420	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:48am	C Gray	SHAD41 D.ssf
217	-121.267345	37.82701349	6340057.989	2124509.082	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,699	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:50am	C Gray	SHAD41 D.ssf
218	-121.2673405	37.827025	6340059.312	2124513.263	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,420	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:52am	C Gray	SHAD41 D.ssf
219	-121.2673342	37.827033	6340061.169	2124516.159	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,267	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:54am	C Gray	SHAD41 D.ssf
220	-121.267321	37.82703446	6340064.974	2124516.661	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,484	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:56am	C Gray	SHAD41 D.ssf
221	-121.2673068	37.82703438	6340069.062	2124516.596	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	60,680	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:24:58am	C Gray	SHAD41 D.ssf
222	-121.2672947	37.82703523	6340072.56	2124516.877	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,636	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:00am	C Gray	SHAD41 D.ssf
223	-121.2672789	37.82703515	6340077.122	2124516.811	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,205	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:02am	C Gray	SHAD41 D.ssf
224	-121.2672662	37.82703447	6340080.806	2124516.532	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	61,019	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:03am	C Gray	SHAD41 D.ssf
225	-121.2672505	37.82703465	6340085.327	2124516.562	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,260	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:06am	C Gray	SHAD41 D.ssf
226	-121.2672379	37.82703778	6340088.983	2124517.673	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,007	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:08am	C Gray	SHAD41 D.ssf
227	-121.2672237	37.82703822	6340093.087	2124517.797	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	70,118	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:10am	C Gray	SHAD41 D.ssf
228	-121.2672099	37.82703851	6340097.076	2124517.871	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	68,745	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:12am	C Gray	SHAD41 D.ssf
229	-121.267195	37.82703693	6340101.381	2124517.261	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	93,311	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:14am	C Gray	SHAD41 D.ssf
230	-121.2671806	37.82703929	6340105.552	2124518.084	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	73,554	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:16am	C Gray	SHAD41 D.ssf
231	-121.2671733	37.82703143	6340107.624	2124515.207	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,658	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:18am	C Gray	SHAD41 D.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
232	-121.26711695	37.82702265	6340108.684	2124511.999	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,897	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:20am	C Gray	SHAD41 D.ssf
233	-121.2671617	37.82701496	6340110.927	2124509.183	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,387	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:22am	C Gray	SHAD41 D.ssf
234	-121.2671506	37.82700935	6340114.127	2124507.113	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,787	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:24am	C Gray	SHAD41 D.ssf
235	-121.2671385	37.82701241	6340117.613	2124508.199	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,200	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:26am	C Gray	SHAD41 D.ssf
236	-121.2671304	37.82702097	6340119.976	2124511.295	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,573	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:28am	C Gray	SHAD41 D.ssf
237	-121.2671253	37.82703026	6340121.499	2124515.321	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,468	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:30am	C Gray	SHAD41 D.ssf
238	-121.2671121	37.82703959	6340122.751	2124518.053	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,905	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:31am	C Gray	SHAD41 D.ssf
239	-121.2671163	37.82704197	6340124.128	2124521.554	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,577	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:34am	C Gray	SHAD41 D.ssf
240	-121.2671157	37.82705969	6340124.349	2124525.36	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,688	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:36am	C Gray	SHAD41 D.ssf
241	-121.2671156	37.82707001	6340124.396	2124529.118	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	97,433	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:37am	C Gray	SHAD41 D.ssf
242	-121.2671164	37.82708226	6340124.215	2124533.578	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90,361	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:40am	C Gray	SHAD41 D.ssf
243	-121.2671143	37.82709172	6340124.352	2124537.024	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	86,408	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:41am	C Gray	SHAD41 D.ssf
244	-121.2671143	37.82710269	6340124.875	2124541.015	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,576	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:43am	C Gray	SHAD41 D.ssf
245	-121.2671143	37.82711819	6340124.931	2124546.658	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,853	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:46am	C Gray	SHAD41 D.ssf
246	-121.2671133	37.82712957	6340125.238	2124550.8	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,470	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:48am	C Gray	SHAD41 D.ssf
247	-121.2671128	37.82713997	6340125.408	2124554.582	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,476	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:50am	C Gray	SHAD41 D.ssf
248	-121.2671141	37.82715227	6340125.086	2124559.067	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,244	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:52am	C Gray	SHAD41 D.ssf
249	-121.2671143	37.82716196	6340125.05	2124562.594	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	94,212	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:54am	C Gray	SHAD41 D.ssf
250	-121.2671144	37.82717248	6340125.068	2124566.427	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	101,982	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:55am	C Gray	SHAD41 D.ssf
251	-121.2671137	37.82718599	6340125.311	2124571.342	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	124,078	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:25:58am	C Gray	SHAD41 D.ssf
252	-121.2671146	37.82719484	6340125.056	2124574.566	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	125,304	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:00am	C Gray	SHAD41 D.ssf
253	-121.2671141	37.82720738	6340125.238	2124579.133	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	130,762	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:02am	C Gray	SHAD41 D.ssf
254	-121.2671153	37.82721511	6340124.908	2124581.949	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	150,250	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:04am	C Gray	SHAD41 D.ssf
255	-121.2671287	37.82721627	6340121.044	2124582.403	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	265,766	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:06am	C Gray	SHAD41 D.ssf
256	-121.2671462	37.82721508	6340115.991	2124582.013	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	188,880	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:08am	C Gray	SHAD41 D.ssf
257	-121.2671608	37.82721368	6340111.784	2124581.535	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	116,679	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:10am	C Gray	SHAD41 D.ssf
258	-121.2671785	37.82721317	6340106.672	2124581.392	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90,171	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:12am	C Gray	SHAD41 D.ssf
259	-121.2671911	37.82721269	6340103.034	2124581.249	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,703	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:13am	C Gray	SHAD41 D.ssf
260	-121.2672094	37.82721343	6340097.75	2124581.561	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,138	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:16am	C Gray	SHAD41 D.ssf
261	-121.2672236	37.82721629	6340093.63	2124581.69	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,440	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:18am	C Gray	SHAD41 D.ssf
262	-121.2672399	37.82721215	6340088.934	2124581.296	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,234	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:20am	C Gray	SHAD41 D.ssf
263	-121.2672553	37.82721256	6340084.494	2124581.353	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,246	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:22am	C Gray	SHAD41 D.ssf
264	-121.2672685	37.82721086	6340080.674	2124580.764	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,277	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:24am	C Gray	SHAD41 D.ssf
265	-121.2672835	37.82720993	6340076.334	2124580.462	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,491	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:26am	C Gray	SHAD41 D.ssf
266	-121.267301	37.82721047	6340071.282	2124580.698	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,002	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:28am	C Gray	SHAD41 D.ssf
267	-121.2673154	37.82721119	6340067.129	2124580.995	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,443	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:29am	C Gray	SHAD41 D.ssf
268	-121.26733	37.82720955	6340062.908	2124580.434	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,933	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:32am	C Gray	SHAD41 D.ssf
269	-121.2673333	37.82719894	6340061.902	2124576.578	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,010	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:34am	C Gray	SHAD41 D.ssf
270	-121.2673341	37.82718699	6340061.638	2124572.23	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	98,321	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:36am	C Gray	SHAD41 D.ssf
271	-121.2673348	37.82717756	6340061.429	2124568.797	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	138,161	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:37am	C Gray	SHAD41 D.ssf
272	-121.2673347	37.82716316	6340061.408	2124563.554	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	102,436	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:40am	C Gray	SHAD41 D.ssf
273	-121.2673358	37.82714764	6340061.051	2124557.904	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	83,392	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:42am	C Gray	SHAD41 D.ssf
274	-121.2673362	37.82713467	6340060.885	2124553.183	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90,965	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:44am	C Gray	SHAD41 D.ssf
275	-121.2673366	37.82712197	6340060.72	2124548.559	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,014	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:45am	C Gray	SHAD41 D.ssf
276	-121.2673385	37.827110581	6340060.096	2124542.668	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,472	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:48am	C Gray	SHAD41 D.ssf
277	-121.2673399	37.8270936	6340059.698	2124538.238	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	109,112	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:49am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
276	-121.2673377	37.82707979	6340060.299	2124533.203	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	149,077	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:52am	C Gray	SHAD41 D.ssf
279	-121.2673365	37.82706755	6340060.575	2124528.744	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	99,381	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:54am	C Gray	SHAD41 D.ssf
280	-121.2673364	37.82705316	6340060.596	2124523.504	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,043	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:56am	C Gray	SHAD41 D.ssf
281	-121.2673353	37.82704368	6340060.869	2124520.05	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,440	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:26:58am	C Gray	SHAD41 D.ssf
282	-121.2673317	37.82703464	6340061.89	2124516.751	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,952	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:00am	C Gray	SHAD41 D.ssf
283	-121.2673357	37.82702028	6340060.681	2124512.449	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	61,424	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:02am	C Gray	SHAD41 D.ssf
284	-121.2673413	37.82701109	6340060.039	2124508.197	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,583	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:04am	C Gray	SHAD41 D.ssf
285	-121.2673434	37.82699867	6340057.835	2124503.684	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,820	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:06am	C Gray	SHAD41 D.ssf
286	-121.2673508	37.82698599	6340056.213	2124499.081	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,293	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:08am	C Gray	SHAD41 D.ssf
287	-121.2673575	37.82697363	6340054.241	2124494.597	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,185	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:10am	C Gray	SHAD41 D.ssf
288	-121.2673667	37.82695544	6340051.548	2124487.997	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,547	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:13am	C Gray	SHAD41 D.ssf
289	-121.2673706	37.82695032	6340050.4	2124486.142	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,864	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:14am	C Gray	SHAD41 D.ssf
290	-121.2673765	37.82693614	6340048.651	2124480.993	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,231	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:16am	C Gray	SHAD41 D.ssf
291	-121.2673808	37.8269257	6340047.38	2124477.199	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,714	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:17am	C Gray	SHAD41 D.ssf
292	-121.2673855	37.82691632	6340045.997	2124473.794	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,389	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:19am	C Gray	SHAD41 D.ssf
293	-121.2673929	37.82690225	6340043.8	2124468.69	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,327	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:22am	C Gray	SHAD41 D.ssf
294	-121.2673994	37.82689169	6340041.913	2124464.862	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,698	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:24am	C Gray	SHAD41 D.ssf
295	-121.2674049	37.82688055	6340040.276	2124460.819	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,368	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:26am	C Gray	SHAD41 D.ssf
296	-121.2674084	37.82687064	6340039.252	2124457.217	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,451	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:27am	C Gray	SHAD41 D.ssf
297	-121.2674124	37.82686566	6340036.289	2124448.501	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,597	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:30am	C Gray	SHAD41 D.ssf
298	-121.2674184	37.82684664	6340034.594	2124445.129	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,836	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:32am	C Gray	SHAD41 D.ssf
299	-121.2674242	37.82683734	6340033.206	2124441.523	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,266	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:34am	C Gray	SHAD41 D.ssf
300	-121.2674323	37.82682738	6340032.206	2124441.523	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,548	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:36am	C Gray	SHAD41 D.ssf
301	-121.2674362	37.82682255	6340031.067	2124439.772	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,277	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:37am	C Gray	SHAD41 D.ssf
302	-121.2674249	37.82682849	6340033.157	2124441.919	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,841	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:40am	C Gray	SHAD41 D.ssf
303	-121.2674281	37.82682596	6340033.43	2124440.993	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,312	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:42am	C Gray	SHAD41 D.ssf
304	-121.2674314	37.82682917	6340032.472	2124442.172	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,706	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:43am	C Gray	SHAD41 D.ssf
305	-121.2674271	37.82683544	6340033.74	2124444.443	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,045	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:45am	C Gray	SHAD41 D.ssf
306	-121.2674219	37.82684664	6340035.277	2124448.424	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,743	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:48am	C Gray	SHAD41 D.ssf
307	-121.2674174	37.82685433	6340036.592	2124451.3	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,856	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:50am	C Gray	SHAD41 D.ssf
308	-121.2674132	37.8268651	6340037.85	2124455.212	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,106	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:52am	C Gray	SHAD41 D.ssf
309	-121.2674084	37.82687451	6340039.257	2124458.627	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,869	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:54am	C Gray	SHAD41 D.ssf
310	-121.2674046	37.82688439	6340040.393	2124462.215	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,467	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:55am	C Gray	SHAD41 D.ssf
311	-121.2674	37.82689418	6340041.747	2124465.769	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	27,580	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:27:57am	C Gray	SHAD41 D.ssf
312	-121.2673952	37.82690513	6340043.17	2124469.745	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,874	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:00am	C Gray	SHAD41 D.ssf
313	-121.2673917	37.82691376	6340044.191	2124472.878	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,167	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:01am	C Gray	SHAD41 D.ssf
314	-121.267387	37.82692624	6340045.583	2124477.411	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,602	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:04am	C Gray	SHAD41 D.ssf
315	-121.2673834	37.82693387	6340046.658	2124481.94	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,444	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:05am	C Gray	SHAD41 D.ssf
316	-121.2673774	37.82695503	6340048.433	2124487.143	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,614	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:08am	C Gray	SHAD41 D.ssf
317	-121.267373	37.82696453	6340049.738	2124491.319	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,243	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:10am	C Gray	SHAD41 D.ssf
318	-121.2673682	37.82697521	6340051.169	2124495.198	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,986	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:12am	C Gray	SHAD41 D.ssf
319	-121.2673625	37.82698536	6340052.84	2124498.88	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,479	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:13am	C Gray	SHAD41 D.ssf
320	-121.2673554	37.82699867	6340054.919	2124503.709	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,271	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:16am	C Gray	SHAD41 D.ssf
321	-121.267351	37.82700788	6340056.22	2124507.053	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,257	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:18am	C Gray	SHAD41 D.ssf
322	-121.2673484	37.82701782	6340057.018	2124510.664	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,978	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:19am	C Gray	SHAD41 D.ssf
323	-121.267343	37.82703038	6340058.617	2124515.225	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,948	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:22am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
324	-121.2673346	37.82703768	6340061.049	2124517.865	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,018	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:24am	C Gray	SHAD41 D.ssf
325	-121.2673275	37.82703716	6340064.552	2124517.644	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,330	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:25am	C Gray	SHAD41 D.ssf
326	-121.2673044	37.82703745	6340068.9	2124517.716	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	57,898	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:28am	C Gray	SHAD41 D.ssf
327	-121.267294	37.82703711	6340072.769	2124517.561	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,849	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:29am	C Gray	SHAD41 D.ssf
328	-121.2672801	37.82703833	6340076.802	2124517.971	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,882	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:31am	C Gray	SHAD41 D.ssf
329	-121.2672642	37.82703989	6340081.382	2124518.141	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	70,208	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:34am	C Gray	SHAD41 D.ssf
330	-121.2672501	37.82703996	6340085.464	2124518.495	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	72,945	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:36am	C Gray	SHAD41 D.ssf
331	-121.2672402	37.82703999	6340088.311	2124518.111	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	71,239	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:37am	C Gray	SHAD41 D.ssf
332	-121.2672232	37.82703997	6340093.237	2124518.337	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	68,855	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:39am	C Gray	SHAD41 D.ssf
333	-121.2672064	37.82703987	6340098.085	2124518.357	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	92,108	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:42am	C Gray	SHAD41 D.ssf
334	-121.2671955	37.82703995	6340101.227	2124518.196	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	83,666	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:44am	C Gray	SHAD41 D.ssf
335	-121.2671803	37.82703654	6340105.606	2124517.083	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	66,492	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:46am	C Gray	SHAD41 D.ssf
336	-121.2671764	37.82702772	6340106.724	2124513.861	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,091	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:48am	C Gray	SHAD41 D.ssf
337	-121.2671671	37.82701953	6340109.375	2124510.858	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,245	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:50am	C Gray	SHAD41 D.ssf
338	-121.2671547	37.82701331	6340112.952	2124508.564	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,783	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:52am	C Gray	SHAD41 D.ssf
339	-121.2671434	37.82701734	6340116.213	2124510.005	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,019	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:53am	C Gray	SHAD41 D.ssf
340	-121.2671334	37.82702841	6340119.134	2124514.013	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,998	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:56am	C Gray	SHAD41 D.ssf
341	-121.2671294	37.82703772	6340120.334	2124517.391	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,191	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:58am	C Gray	SHAD41 D.ssf
342	-121.2671235	37.82704473	6340122.033	2124519.933	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	60,194	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:28:59am	C Gray	SHAD41 D.ssf
343	-121.2671215	37.82705692	6340122.67	2124524.365	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	79,335	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:02am	C Gray	SHAD41 D.ssf
344	-121.2671207	37.82706805	6340122.998	2124528.414	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	94,850	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:04am	C Gray	SHAD41 D.ssf
345	-121.2671211	37.8270813	6340122.859	2124533.241	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	94,859	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:06am	C Gray	SHAD41 D.ssf
346	-121.2671205	37.82709347	6340123.059	2124537.67	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	86,831	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:08am	C Gray	SHAD41 D.ssf
347	-121.2671193	37.82710458	6340123.433	2124541.715	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	68,232	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:10am	C Gray	SHAD41 D.ssf
348	-121.2671142	37.82711492	6340124.029	2124545.475	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	65,735	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:11am	C Gray	SHAD41 D.ssf
349	-121.2671182	37.82712169	6340123.816	2124549.837	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	63,606	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:13am	C Gray	SHAD41 D.ssf
350	-121.2671198	37.82714415	6340123.409	2124556.123	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	70,295	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:16am	C Gray	SHAD41 D.ssf
351	-121.2671207	37.82715305	6340123.163	2124559.367	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	75,866	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:18am	C Gray	SHAD41 D.ssf
352	-121.2671195	37.82716685	6340123.577	2124564.386	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	92,075	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:20am	C Gray	SHAD41 D.ssf
353	-121.2671201	37.82717812	6340123.422	2124568.492	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	108,898	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:22am	C Gray	SHAD41 D.ssf
354	-121.2671196	37.82719124	6340123.595	2124573.268	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	128,658	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:24am	C Gray	SHAD41 D.ssf
355	-121.2671207	37.82720368	6340123.318	2124577.802	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	124,391	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:26am	C Gray	SHAD41 D.ssf
356	-121.2671247	37.82721265	6340122.21	2124581.075	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	136,466	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:28am	C Gray	SHAD41 D.ssf
357	-121.2671373	37.82721663	6340118.561	2124582.556	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	261,083	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:29am	C Gray	SHAD41 D.ssf
358	-121.2671554	37.82721733	6340113.338	2124582.854	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	171,377	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:32am	C Gray	SHAD41 D.ssf
359	-121.2671734	37.82721548	6340108.135	2124582.22	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	106,999	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:34am	C Gray	SHAD41 D.ssf
360	-121.2671921	37.82721389	6340102.744	2124581.685	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	82,005	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:36am	C Gray	SHAD41 D.ssf
361	-121.2672074	37.82721363	6340098.311	2124581.628	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	65,205	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:37am	C Gray	SHAD41 D.ssf
362	-121.2672266	37.82721409	6340092.763	2124581.841	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,919	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:40am	C Gray	SHAD41 D.ssf
363	-121.2672429	37.82721448	6340088.065	2124582.14	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,201	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:42am	C Gray	SHAD41 D.ssf
364	-121.2672586	37.82721247	6340083.52	2124581.326	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,891	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:44am	C Gray	SHAD41 D.ssf
365	-121.2672747	37.82721288	6340078.865	2124581.514	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,400	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:46am	C Gray	SHAD41 D.ssf
366	-121.2672934	37.82721181	6340073.475	2124581.169	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,436	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:48am	C Gray	SHAD41 D.ssf
367	-121.2673067	37.82721063	6340069.041	2124580.774	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,381	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:49am	C Gray	SHAD41 D.ssf
368	-121.2673266	37.82721119	6340063.882	2124581.021	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,806	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:52am	C Gray	SHAD41 D.ssf
369	-121.2673395	37.82720896	6340060.151	2124580.241	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,321	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:54am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
370	-121.2673447	37.82719796	6340058.627	2124576.249	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,340	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:56am	C Gray	SHAD41 D.ssf
371	-121.2673441	37.82718714	6340059.657	2124572.301	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	98,258	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:57am	C Gray	SHAD41 D.ssf
372	-121.2673414	37.82717439	6340059.494	2124567.659	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	134,284	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:29:59am	C Gray	SHAD41 D.ssf
373	-121.2673418	37.8271598	6340059.348	2124562.345	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	95,270	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:02am	C Gray	SHAD41 D.ssf
374	-121.2673431	37.82714535	6340058.909	2124557.089	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	89,594	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:03am	C Gray	SHAD41 D.ssf
375	-121.2673447	37.82713111	6340059.288	2124551.898	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	85,528	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:06am	C Gray	SHAD41 D.ssf
376	-121.2673445	37.827119	6340058.452	2124547.498	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	84,663	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:08am	C Gray	SHAD41 D.ssf
377	-121.2673459	37.82710647	6340057.997	2124542.939	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	78,060	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:09am	C Gray	SHAD41 D.ssf
378	-121.2673435	37.82708993	6340058.653	2124536.911	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	113,757	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:12am	C Gray	SHAD41 D.ssf
379	-121.2673426	37.82707649	6340058.851	2124532.015	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	132,072	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:13am	C Gray	SHAD41 D.ssf
380	-121.2673448	37.82706055	6340058.185	2124526.214	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	84,270	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:16am	C Gray	SHAD41 D.ssf
381	-121.2673422	37.82704704	6340058.892	2124521.289	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,831	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:18am	C Gray	SHAD41 D.ssf
382	-121.2673365	37.82703652	6340060.51	2124517.446	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,490	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:20am	C Gray	SHAD41 D.ssf
383	-121.267337	37.8270256	6340060.334	2124513.471	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	63,248	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:21am	C Gray	SHAD41 D.ssf
384	-121.2673444	37.82700871	6340058.146	2124507.338	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,275	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:24am	C Gray	SHAD41 D.ssf
385	-121.2673501	37.8269973	6340056.451	2124503.198	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,507	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:25am	C Gray	SHAD41 D.ssf
386	-121.2673542	37.82698575	6340055.235	2124499.002	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,804	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:28am	C Gray	SHAD41 D.ssf
387	-121.2673582	37.82697536	6340054.053	2124495.229	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,782	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:30am	C Gray	SHAD41 D.ssf
388	-121.2673617	37.82696635	6340053.013	2124490.916	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,645	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:31am	C Gray	SHAD41 D.ssf
389	-121.2673686	37.82695619	6340050.99	2124487.291	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,094	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:34am	C Gray	SHAD41 D.ssf
390	-121.2673732	37.826943169	6340049.619	2124483.003	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,153	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:35am	C Gray	SHAD41 D.ssf
391	-121.267381	37.82692801	6340047.32	2124478.042	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,156	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:38am	C Gray	SHAD41 D.ssf
392	-121.2673875	37.82691873	6340045.412	2124474.677	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,087	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:40am	C Gray	SHAD41 D.ssf
393	-121.2673914	37.82690673	6340044.275	2124470.318	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,194	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:42am	C Gray	SHAD41 D.ssf
394	-121.2673937	37.82689392	6340043.57	2124465.659	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,243	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:44am	C Gray	SHAD41 D.ssf
395	-121.2673976	37.82688065	6340042.396	2124460.837	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,522	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:46am	C Gray	SHAD41 D.ssf
396	-121.2674002	37.82686892	6340041.597	2124456.57	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,017	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:48am	C Gray	SHAD41 D.ssf
397	-121.2674098	37.82685288	6340038.783	2124450.752	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,779	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:51am	C Gray	SHAD41 D.ssf
398	-121.267412	37.82684625	6340038.121	2124448.345	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,516	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:52am	C Gray	SHAD41 D.ssf
399	-121.2674176	37.82683674	6340036.48	2124444.896	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,257	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:53am	C Gray	SHAD41 D.ssf
400	-121.2674215	37.82682233	6340035.302	2124439.658	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,879	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:56am	C Gray	SHAD41 D.ssf
401	-121.2674176	37.82682081	6340036.449	2124439.095	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,033	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:58am	C Gray	SHAD41 D.ssf
402	-121.2674156	37.82681909	6340037.014	2124438.465	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,500	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:30:59am	C Gray	SHAD41 D.ssf
403	-121.2674119	37.82682237	6340036.9	2124439.661	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,899	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:02am	C Gray	SHAD41 D.ssf
404	-121.2674198	37.82683041	6340038.099	2124442.578	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,738	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:04am	C Gray	SHAD41 D.ssf
405	-121.2674085	37.82684115	6340039.123	2124446.479	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,680	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:06am	C Gray	SHAD41 D.ssf
406	-121.2674045	37.82685562	6340040.313	2124451.739	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,698	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:08am	C Gray	SHAD41 D.ssf
407	-121.2674016	37.82686223	6340041.176	2124454.138	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,376	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:09am	C Gray	SHAD41 D.ssf
408	-121.2673962	37.82687578	6340042.792	2124459.06	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,764	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:11am	C Gray	SHAD41 D.ssf
409	-121.2673898	37.82688704	6340044.66	2124463.144	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,715	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:14am	C Gray	SHAD41 D.ssf
410	-121.2673868	37.82689695	6340045.552	2124466.745	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,629	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:15am	C Gray	SHAD41 D.ssf
411	-121.2673833	37.82691083	6340046.609	2124471.79	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,178	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:18am	C Gray	SHAD41 D.ssf
412	-121.2673798	37.82692164	6340047.645	2124475.642	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,291	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:19am	C Gray	SHAD41 D.ssf
413	-121.2673758	37.82692908	6340048.844	2124478.42	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,688	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:21am	C Gray	SHAD41 D.ssf
414	-121.2673706	37.82693941	6340050.365	2124482.167	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,557	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:23am	C Gray	SHAD41 D.ssf
415	-121.2673656	37.82695111	6340051.858	2124486.414	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,968	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:26am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
416	-121.2673619	37.82696322	6340052.937	2124490.818	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,058	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:28am	C Gray	SHAD41 D.ssf
417	-121.2673581	37.8269756	6340054.086	2124495.315	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,126	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:30am	C Gray	SHAD41 D.ssf
418	-121.2673538	37.82698699	6340055.357	2124499.451	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,715	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:32am	C Gray	SHAD41 D.ssf
419	-121.2673503	37.82699648	6340056.397	2124502.901	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,045	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:33am	C Gray	SHAD41 D.ssf
420	-121.2673465	37.82700809	6340057.526	2124507.119	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,980	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:36am	C Gray	SHAD41 D.ssf
421	-121.2673418	37.82701945	6340058.993	2124511.245	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,668	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:38am	C Gray	SHAD41 D.ssf
422	-121.2673378	37.82702887	6340060.112	2124514.664	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,700	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:39am	C Gray	SHAD41 D.ssf
423	-121.2673318	37.82703338	6340061.842	2124516.445	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,101	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:42am	C Gray	SHAD41 D.ssf
424	-121.2673312	37.82702673	6340062.007	2124513.87	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,212	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:44am	C Gray	SHAD41 D.ssf
425	-121.2673355	37.82701834	6340060.728	2124510.823	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,663	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:45am	C Gray	SHAD41 D.ssf
426	-121.2673411	37.82700554	6340059.096	2124506.178	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,496	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:48am	C Gray	SHAD41 D.ssf
427	-121.2673452	37.82699513	6340057.873	2124502.395	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,399	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:50am	C Gray	SHAD41 D.ssf
428	-121.2673479	37.82698358	6340057.046	2124498.196	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,292	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:51am	C Gray	SHAD41 D.ssf
429	-121.2673523	37.82697222	6340055.761	2124494.071	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,393	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:54am	C Gray	SHAD41 D.ssf
430	-121.2673553	37.82696193	6340054.853	2124490.332	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,025	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:56am	C Gray	SHAD41 D.ssf
431	-121.2673592	37.82695281	6340053.689	2124487.019	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,836	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:31:58am	C Gray	SHAD41 D.ssf
432	-121.2673645	37.82694056	6340052.132	2124482.571	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,633	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:00am	C Gray	SHAD41 D.ssf
433	-121.2673718	37.82693112	6340049.995	2124479.153	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,059	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:01am	C Gray	SHAD41 D.ssf
434	-121.2673744	37.82692024	6340049.202	2124475.198	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,063	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:04am	C Gray	SHAD41 D.ssf
435	-121.2673776	37.82691051	6340048.244	2124471.663	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,257	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:06am	C Gray	SHAD41 D.ssf
436	-121.2673831	37.82690067	6340047.217	2124468.083	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,337	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:08am	C Gray	SHAD41 D.ssf
437	-121.2673879	37.82687563	6340045.166	2124458.987	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,904	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:09am	C Gray	SHAD41 D.ssf
438	-121.2673919	37.82686672	6340044.005	2124455.927	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,087	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:12am	C Gray	SHAD41 D.ssf
439	-121.2673986	37.82685431	6340042.015	2124451.25	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	27,737	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:13am	C Gray	SHAD41 D.ssf
440	-121.2674034	37.82684035	6340040.622	2124447.706	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,596	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:15am	C Gray	SHAD41 D.ssf
441	-121.2674043	37.82682016	6340039.065	2124447.853	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,534	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:17am	C Gray	SHAD41 D.ssf
442	-121.267405	37.82683238	6340040.098	2124443.279	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,908	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:19am	C Gray	SHAD41 D.ssf
443	-121.2674107	37.82682023	6340038.433	2124438.867	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,205	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:21am	C Gray	SHAD41 D.ssf
444	-121.2674071	37.82681833	6340039.469	2124438.168	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,687	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:24am	C Gray	SHAD41 D.ssf
445	-121.2674043	37.8268153	6340040.271	2124437.058	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,693	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:26am	C Gray	SHAD41 D.ssf
446	-121.2674109	37.82681712	6340038.362	2124437.737	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,655	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:27am	C Gray	SHAD41 D.ssf
447	-121.2674115	37.82681777	6340038.185	2124437.975	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,383	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:29am	C Gray	SHAD41 D.ssf
448	-121.2674085	37.82682016	6340039.065	2124438.836	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,303	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:32am	C Gray	SHAD41 D.ssf
449	-121.2674063	37.82682846	6340039.72	2124441.853	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,088	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:34am	C Gray	SHAD41 D.ssf
450	-121.2674032	37.82683645	6340040.652	2124444.754	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,779	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:35am	C Gray	SHAD41 D.ssf
451	-121.2674004	37.82684408	6340041.483	2124447.527	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,516	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:37am	C Gray	SHAD41 D.ssf
452	-121.2673965	37.82685741	6340042.627	2124452.371	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,434	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:40am	C Gray	SHAD41 D.ssf
453	-121.2673935	37.82686608	6340043.538	2124455.52	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,747	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:41am	C Gray	SHAD41 D.ssf
454	-121.2673894	37.82687727	6340044.74	2124459.587	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,048	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:43am	C Gray	SHAD41 D.ssf
455	-121.2673868	37.82688614	6340045.527	2124462.809	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,117	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:45am	C Gray	SHAD41 D.ssf
456	-121.2673819	37.82689677	6340046.961	2124466.67	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,958	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:48am	C Gray	SHAD41 D.ssf
457	-121.2673786	37.82690579	6340047.949	2124469.946	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,451	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:50am	C Gray	SHAD41 D.ssf
458	-121.2673768	37.82691517	6340048.889	2124473.356	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,901	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:52am	C Gray	SHAD41 D.ssf
459	-121.2673723	37.82692553	6340049.819	2124477.12	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,436	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:54am	C Gray	SHAD41 D.ssf
460	-121.2673733	37.82693595	6340050.152	2124480.89	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,290	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:55am	C Gray	SHAD41 D.ssf
461	-121.2673688	37.82694666	6340050.91	2124484.804	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,456	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:32:57am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
462	-121.2673646	37.82695574	6340052.17	2124488.098	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,588	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:00am	C Gray	SHAD41 D.ssf
463	-121.2673616	37.82696363	6340053.048	2124490.892	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,899	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:01am	C Gray	SHAD41 D.ssf
464	-121.2673575	37.82697863	6340054.279	2124496.418	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,228	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:04am	C Gray	SHAD41 D.ssf
465	-121.2673527	37.82698725	6340055.677	2124499.545	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,303	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:05am	C Gray	SHAD41 D.ssf
466	-121.2673473	37.82699928	6340057.275	2124503.913	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,917	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:07am	C Gray	SHAD41 D.ssf
467	-121.2673437	37.82701105	6340058.338	2124508.19	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,895	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:09am	C Gray	SHAD41 D.ssf
468	-121.267342	37.82702257	6340058.886	2124512.743	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,518	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:12am	C Gray	SHAD41 D.ssf
469	-121.2673361	37.82703289	6340060.609	2124516.123	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,240	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:13am	C Gray	SHAD41 D.ssf
470	-121.2673285	37.82702754	6340062.78	2124514.159	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,139	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:16am	C Gray	SHAD41 D.ssf
471	-121.2673313	37.82701811	6340061.961	2124510.729	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,080	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:17am	C Gray	SHAD41 D.ssf
472	-121.2673359	37.82700482	6340060.577	2124505.901	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,728	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:19am	C Gray	SHAD41 D.ssf
473	-121.2673406	37.82699351	6340059.206	2124501.796	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,293	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:22am	C Gray	SHAD41 D.ssf
474	-121.2673447	37.82698357	6340057.978	2124498.186	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,940	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:23am	C Gray	SHAD41 D.ssf
475	-121.2673487	37.82696887	6340056.79	2124492.779	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,705	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:26am	C Gray	SHAD41 D.ssf
476	-121.267352	37.82695572	6340055.788	2124488.6	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,418	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:28am	C Gray	SHAD41 D.ssf
477	-121.2673555	37.82694565	6340054.754	2124484.406	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,758	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:30am	C Gray	SHAD41 D.ssf
478	-121.2673585	37.82693509	6340053.862	2124480.566	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,097	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:32am	C Gray	SHAD41 D.ssf
479	-121.2673636	37.8269229	6340052.347	2124476.141	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,634	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:34am	C Gray	SHAD41 D.ssf
480	-121.2673653	37.82691249	6340051.815	2124472.355	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,389	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:36am	C Gray	SHAD41 D.ssf
481	-121.2673701	37.82690274	6340050.275	2124468.656	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,630	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:38am	C Gray	SHAD41 D.ssf
482	-121.2673751	37.82689074	6340048.909	2124464.459	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,026	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:39am	C Gray	SHAD41 D.ssf
483	-121.2673768	37.82688178	6340048.317	2124461.198	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,611	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:41am	C Gray	SHAD41 D.ssf
484	-121.2673829	37.82686778	6340046.608	2124456.115	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	26,997	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:44am	C Gray	SHAD41 D.ssf
485	-121.2673872	37.82685499	6340045.317	2124451.47	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,738	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:46am	C Gray	SHAD41 D.ssf
486	-121.2673901	37.82684229	6340044.456	2124446.851	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,162	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:48am	C Gray	SHAD41 D.ssf
487	-121.2673913	37.8268381	6340044.059	2124443.107	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:49am	C Gray	SHAD41 D.ssf
488	-121.2673969	37.82682033	6340042.425	2124438.87	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,872	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:51am	C Gray	SHAD41 D.ssf
489	-121.2673985	37.82681212	6340041.933	2124435.884	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,147	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:53am	C Gray	SHAD41 D.ssf
490	-121.2673945	37.82681124	6340043.079	2124435.979	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,219	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:55am	C Gray	SHAD41 D.ssf
491	-121.2674004	37.8268111	6340041.373	2124435.517	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,279	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:57am	C Gray	SHAD41 D.ssf
492	-121.267396	37.82680997	6340042.655	2124435.096	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,756	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:33:59am	C Gray	SHAD41 D.ssf
493	-121.267395	37.82681563	6340042.957	2124437.154	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,407	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:02am	C Gray	SHAD41 D.ssf
494	-121.2673935	37.82682381	6340043.412	2124440.129	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,130	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:03am	C Gray	SHAD41 D.ssf
495	-121.2673913	37.82683552	6340044.088	2124444.389	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,184	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:05am	C Gray	SHAD41 D.ssf
496	-121.2673871	37.8268467	6340045.313	2124448.45	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,973	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:07am	C Gray	SHAD41 D.ssf
497	-121.2673884	37.82685727	6340046.224	2124452.292	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,739	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:09am	C Gray	SHAD41 D.ssf
498	-121.2673805	37.82686926	6340047.285	2124456.647	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,628	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:12am	C Gray	SHAD41 D.ssf
499	-121.2673762	37.82688097	6340048.574	2124460.903	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,425	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:14am	C Gray	SHAD41 D.ssf
500	-121.2673734	37.82689047	6340049.421	2124464.355	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,449	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:15am	C Gray	SHAD41 D.ssf
501	-121.2673697	37.82690148	6340050.505	2124468.356	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,550	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:18am	C Gray	SHAD41 D.ssf
502	-121.2673678	37.82691191	6340051.1	2124472.149	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,025	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:20am	C Gray	SHAD41 D.ssf
503	-121.2673654	37.826922	6340051.81	2124475.815	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,967	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:22am	C Gray	SHAD41 D.ssf
504	-121.2673620	37.82693267	6340052.718	2124479.695	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,528	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:24am	C Gray	SHAD41 D.ssf
505	-121.2673603	37.82694383	6340053.36	2124483.752	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,425	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:25am	C Gray	SHAD41 D.ssf
506	-121.2673576	37.82695582	6340054.162	2124488.114	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,360	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:28am	C Gray	SHAD41 D.ssf
507	-121.2673545	37.82696383	6340055.093	2124491.022	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,344	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:29am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
508	-121.2673509	37.82697965	6340056.186	2124496.775	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,680	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:32am	C Gray	SHAD41 D.ssf
509	-121.2673468	37.82699057	6340057.406	2124500.739	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,101	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:33am	C Gray	SHAD41 D.ssf
510	-121.2673435	37.82700206	6340058.394	2124504.915	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,612	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:35am	C Gray	SHAD41 D.ssf
511	-121.2673422	37.82701582	6340058.809	2124509.921	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,901	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:38am	C Gray	SHAD41 D.ssf
512	-121.2673403	37.82702541	6340059.367	2124513.41	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,506	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:39am	C Gray	SHAD41 D.ssf
513	-121.2673352	37.82703743	6340060.871	2124517.774	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,212	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:41am	C Gray	SHAD41 D.ssf
514	-121.2673268	37.82702958	6340062.399	2124514.894	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,574	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:44am	C Gray	SHAD41 D.ssf
515	-121.2673304	37.82701933	6340063.087	2124511.173	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,823	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:46am	C Gray	SHAD41 D.ssf
516	-121.2673352	37.82700856	6340060.79	2124507.264	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,878	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:48am	C Gray	SHAD41 D.ssf
517	-121.2673339	37.82699648	6340059.673	2124502.875	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,074	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:50am	C Gray	SHAD41 D.ssf
518	-121.2673443	37.82698426	6340058.97	2124498.428	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,074	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:51am	C Gray	SHAD41 D.ssf
519	-121.2673443	37.82697262	6340058.057	2124494.197	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,591	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:53am	C Gray	SHAD41 D.ssf
520	-121.2673495	37.82696252	6340056.533	2124490.532	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,110	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:55am	C Gray	SHAD41 D.ssf
521	-121.2673531	37.82694725	6340055.457	2124484.982	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,956	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:34:58am	C Gray	SHAD41 D.ssf
522	-121.2673578	37.82693643	6340054.061	2124481.052	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,516	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:00am	C Gray	SHAD41 D.ssf
523	-121.2673592	37.82692946	6340053.526	2124477.061	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,812	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:01am	C Gray	SHAD41 D.ssf
524	-121.2673625	37.82691146	6340052.697	2124471.97	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,422	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:03am	C Gray	SHAD41 D.ssf
525	-121.2673664	37.82689878	6340051.464	2124467.007	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,355	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:06am	C Gray	SHAD41 D.ssf
526	-121.2673676	37.82688694	6340051.076	2124463.056	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,367	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:08am	C Gray	SHAD41 D.ssf
527	-121.2673709	37.82687686	6340050.097	2124459.395	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,615	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:09am	C Gray	SHAD41 D.ssf
528	-121.2673734	37.82686773	6340049.161	2124456.075	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,415	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:11am	C Gray	SHAD41 D.ssf
529	-121.2673773	37.82685292	6340048.163	2124450.693	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	26,588	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:13am	C Gray	SHAD41 D.ssf
530	-121.2673796	37.82684307	6340047.471	2124447.111	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,041	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:15am	C Gray	SHAD41 D.ssf
531	-121.2673815	37.82683086	6340046.899	2124442.668	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,527	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:17am	C Gray	SHAD41 D.ssf
532	-121.2673847	37.82682113	6340045.942	2124439.195	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,594	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:20am	C Gray	SHAD41 D.ssf
533	-121.2673878	37.82681283	6340045.006	2124436.118	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,356	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:21am	C Gray	SHAD41 D.ssf
534	-121.2673872	37.82681122	6340045.191	2124435.532	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,100	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:23am	C Gray	SHAD41 D.ssf
535	-121.2673856	37.82680713	6340045.646	2124434.037	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,789	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:26am	C Gray	SHAD41 D.ssf
536	-121.2673865	37.82680922	6340045.379	2124434.8	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,383	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:27am	C Gray	SHAD41 D.ssf
537	-121.2673837	37.82681625	6340046.201	2124437.353	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,190	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:29am	C Gray	SHAD41 D.ssf
538	-121.2673814	37.82682493	6340046.91	2124440.51	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,738	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:31am	C Gray	SHAD41 D.ssf
539	-121.267378	37.82683716	6340047.93	2124444.956	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,283	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:34am	C Gray	SHAD41 D.ssf
540	-121.2673756	37.82684554	6340048.649	2124448.001	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,052	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:35am	C Gray	SHAD41 D.ssf
541	-121.2673737	37.82685805	6340049.226	2124452.553	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,240	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:38am	C Gray	SHAD41 D.ssf
542	-121.2673708	37.82687033	6340049.754	2124457.019	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,521	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:39am	C Gray	SHAD41 D.ssf
543	-121.2673708	37.82687917	6340050.125	2124460.236	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	27,769	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:41am	C Gray	SHAD41 D.ssf
544	-121.2673698	37.82689219	6340050.447	2124464.973	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,349	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:43am	C Gray	SHAD41 D.ssf
545	-121.2673681	37.82690232	6340050.97	2124468.656	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,099	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:45am	C Gray	SHAD41 D.ssf
546	-121.2673655	37.82691602	6340051.755	2124473.64	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,132	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:47am	C Gray	SHAD41 D.ssf
547	-121.2673611	37.82693055	6340053.092	2124478.918	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,130	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:50am	C Gray	SHAD41 D.ssf
548	-121.2673578	37.82694064	6340054.058	2124482.587	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,159	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:51am	C Gray	SHAD41 D.ssf
549	-121.2673585	37.8269524	6340053.885	2124486.869	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,587	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:53am	C Gray	SHAD41 D.ssf
550	-121.2673564	37.82696404	6340054.523	2124491.102	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,501	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:55am	C Gray	SHAD41 D.ssf
551	-121.2673539	37.82697718	6340055.443	2124495.981	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,411	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:57am	C Gray	SHAD41 D.ssf
552	-121.2673484	37.82698849	6340056.793	2124499.887	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,297	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:35:59am	C Gray	SHAD41 D.ssf
553	-121.2673455	37.82699974	6340057.796	2124504.075	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,577	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:01am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
554	-121.2673435	37.82701158	6340058.405	2124508.381	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,395	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:03am	C Gray	SHAD41 D.ssf
555	-121.2673408	37.82702579	6340059.224	2124513.551	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,056	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:06am	C Gray	SHAD41 D.ssf
556	-121.2673361	37.82703301	6340060.616	2124516.169	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,052	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:07am	C Gray	SHAD41 D.ssf
557	-121.2673248	37.82702867	6340063.847	2124514.56	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,837	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:09am	C Gray	SHAD41 D.ssf
558	-121.2673243	37.82701846	6340063.972	2124510.842	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,865	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:11am	C Gray	SHAD41 D.ssf
559	-121.2673263	37.82700603	6340062.371	2124506.32	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,413	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:13am	C Gray	SHAD41 D.ssf
560	-121.2673351	37.82698136	6340062.44	2124501.569	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,965	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:16am	C Gray	SHAD41 D.ssf
561	-121.2673233	37.82698133	6340060.754	2124497.348	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,388	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:17am	C Gray	SHAD41 D.ssf
562	-121.2673398	37.82696864	6340059.357	2124492.738	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,978	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:20am	C Gray	SHAD41 D.ssf
563	-121.2673425	37.82695561	6340058.516	2124488	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,697	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:22am	C Gray	SHAD41 D.ssf
564	-121.2673457	37.826944	6340057.557	2124483.782	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,975	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:23am	C Gray	SHAD41 D.ssf
565	-121.267349	37.82693258	6340056.596	2124479.631	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,053	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:25am	C Gray	SHAD41 D.ssf
566	-121.2673508	37.82692122	6340056.02	2124475.496	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,046	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:27am	C Gray	SHAD41 D.ssf
567	-121.2673544	37.82690855	6340054.96	2124470.893	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,979	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:29am	C Gray	SHAD41 D.ssf
568	-121.2673563	37.82689336	6340054.359	2124465.454	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,495	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:32am	C Gray	SHAD41 D.ssf
569	-121.2673597	37.82688255	6340053.348	2124461.438	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,336	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:33am	C Gray	SHAD41 D.ssf
570	-121.2673647	37.82687336	6340051.864	2124458.104	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,024	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:35am	C Gray	SHAD41 D.ssf
571	-121.2673682	37.82686283	6340050.825	2124454.278	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,222	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:37am	C Gray	SHAD41 D.ssf
572	-121.2673722	37.82684777	6340049.642	2124448.804	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,170	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:39am	C Gray	SHAD41 D.ssf
573	-121.2673742	37.82683432	6340048.94	2124443.602	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,477	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:42am	C Gray	SHAD41 D.ssf
574	-121.2673784	37.82682283	6340047.831	2124439.738	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,225	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:44am	C Gray	SHAD41 D.ssf
575	-121.2673798	37.82681278	6340047.342	2124436.081	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,708	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:45am	C Gray	SHAD41 D.ssf
576	-121.2673811	37.82680309	6340046.92	2124432.557	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,194	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:47am	C Gray	SHAD41 D.ssf
577	-121.2673828	37.82680609	6340046.446	2124433.654	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,374	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:50am	C Gray	SHAD41 D.ssf
578	-121.2673757	37.82680634	6340048.494	2124433.726	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,463	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:51am	C Gray	SHAD41 D.ssf
579	-121.2673764	37.82680521	6340048.3	2124433.316	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,338	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:53am	C Gray	SHAD41 D.ssf
580	-121.2673778	37.82680674	6340047.878	2124433.88	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,146	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:56am	C Gray	SHAD41 D.ssf
581	-121.2673761	37.82681387	6340048.415	2124436.47	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,520	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:57am	C Gray	SHAD41 D.ssf
582	-121.2673759	37.82682225	6340048.472	2124439.522	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,381	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:36:59am	C Gray	SHAD41 D.ssf
583	-121.2673747	37.82683297	6340048.859	2124443.421	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,646	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:02am	C Gray	SHAD41 D.ssf
584	-121.2673734	37.82684298	6340049.262	2124447.065	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,530	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:03am	C Gray	SHAD41 D.ssf
585	-121.2673716	37.82685519	6340049.821	2124451.503	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,083	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:05am	C Gray	SHAD41 D.ssf
586	-121.2673702	37.82686728	6340050.258	2124455.903	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,690	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:07am	C Gray	SHAD41 D.ssf
587	-121.2673697	37.82687968	6340050.44	2124460.417	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,714	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:09am	C Gray	SHAD41 D.ssf
588	-121.2673651	37.82689221	6340051.59	2124465.114	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,189	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:12am	C Gray	SHAD41 D.ssf
589	-121.2673645	37.82689095	6340052.017	2124468.149	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,026	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:13am	C Gray	SHAD41 D.ssf
590	-121.2673619	37.82691265	6340052.803	2124472.405	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,945	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:15am	C Gray	SHAD41 D.ssf
591	-121.2673597	37.82692305	6340053.477	2124476.184	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,190	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:17am	C Gray	SHAD41 D.ssf
592	-121.2673575	37.82693251	6340054.137	2124479.625	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,928	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:19am	C Gray	SHAD41 D.ssf
593	-121.2673567	37.82694306	6340054.404	2124483.463	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,407	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:21am	C Gray	SHAD41 D.ssf
594	-121.2673541	37.82695763	6340055.172	2124488.764	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,691	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:23am	C Gray	SHAD41 D.ssf
595	-121.2673524	37.82697006	6340055.714	2124493.284	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,716	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:25am	C Gray	SHAD41 D.ssf
596	-121.2673496	37.82698221	6340056.548	2124497.701	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,574	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:27am	C Gray	SHAD41 D.ssf
597	-121.2673453	37.82699673	6340057.851	2124502.977	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,314	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:30am	C Gray	SHAD41 D.ssf
598	-121.2673433	37.82700672	6340058.455	2124506.611	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,942	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:31am	C Gray	SHAD41 D.ssf
599	-121.2673408	37.82701946	6340059.201	2124511.244	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,270	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:33am	C Gray	SHAD41 D.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
600	-121.2673405	37.82702985	6340059.331	2124515.028	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,653	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:35am	C Gray	SHAD41 D.ssf
601	-121.2673274	37.82703517	6340063.122	2124516.933	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,906	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:38am	C Gray	SHAD41 D.ssf
602	-121.2673277	37.82702809	6340065.018	2124514.357	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,011	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:39am	C Gray	SHAD41 D.ssf
603	-121.2673328	37.82701579	6340061.52	2124509.889	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,421	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:41am	C Gray	SHAD41 D.ssf
604	-121.2673355	37.82700178	6340060.689	2124504.794	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,731	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:43am	C Gray	SHAD41 D.ssf
605	-121.2673381	37.82698893	6340059.894	2124500.257	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,853	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:45am	C Gray	SHAD41 D.ssf
606	-121.2673402	37.82697569	6340059.258	2124495.305	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,357	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:47am	C Gray	SHAD41 D.ssf
607	-121.2673434	37.82696144	6340058.398	2124490.122	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,653	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:49am	C Gray	SHAD41 D.ssf
608	-121.267346	37.82695124	6340057.51	2124486.418	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,954	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:51am	C Gray	SHAD41 D.ssf
609	-121.267348	37.82693899	6340056.898	2124481.962	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,536	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:53am	C Gray	SHAD41 D.ssf
610	-121.2673494	37.82692617	6340056.443	2124477.298	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,688	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:55am	C Gray	SHAD41 D.ssf
611	-121.2673508	37.82691245	6340054.904	2124472.314	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,220	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:03am	C Gray	SHAD41 D.ssf
612	-121.2673548	37.82690119	6340054.808	2124468.472	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,634	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:57am	C Gray	SHAD41 D.ssf
613	-121.267358	37.82688698	6340053.842	2124463.047	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,853	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:37:59am	C Gray	SHAD41 D.ssf
614	-121.2673607	37.826876	6340053.044	2124459.057	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,592	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:02am	C Gray	SHAD41 D.ssf
615	-121.2673618	37.82686629	6340052.682	2124454.288	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,278	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:05am	C Gray	SHAD41 D.ssf
616	-121.2673627	37.82685044	6340052.547	2124449.754	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,463	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:07am	C Gray	SHAD41 D.ssf
617	-121.2673637	37.82683753	6340052.632	2124445.049	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,037	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:09am	C Gray	SHAD41 D.ssf
618	-121.2673633	37.82682611	6340052.15	2124440.895	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,674	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:11am	C Gray	SHAD41 D.ssf
619	-121.2673708	37.82681332	6340049.926	2124436.257	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,168	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:13am	C Gray	SHAD41 D.ssf
620	-121.2673627	37.82680615	6340050.779	2124433.628	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,161	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:15am	C Gray	SHAD41 D.ssf
621	-121.2673627	37.82680605	6340052.242	2124433.593	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,156	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:17am	C Gray	SHAD41 D.ssf
622	-121.2673663	37.82680361	6340051.204	2124432.709	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,558	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:19am	C Gray	SHAD41 D.ssf
623	-121.2673659	37.82680793	6340051.332	2124434.283	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,182	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:21am	C Gray	SHAD41 D.ssf
624	-121.2673636	37.82681456	6340052.005	2124436.693	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,221	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:23am	C Gray	SHAD41 D.ssf
625	-121.2673633	37.82682811	6340052.15	2124439.695	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,775	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:25am	C Gray	SHAD41 D.ssf
626	-121.2673632	37.8268391	6340052.202	2124445.626	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,781	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:28am	C Gray	SHAD41 D.ssf
627	-121.2673625	37.82685085	6340052.444	2124449.903	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,474	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:29am	C Gray	SHAD41 D.ssf
628	-121.267376	37.82686131	6340053.194	2124453.706	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,417	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:31am	C Gray	SHAD41 D.ssf
629	-121.2673572	37.82687327	6340054.046	2124458.054	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,649	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:33am	C Gray	SHAD41 D.ssf
630	-121.2673554	37.82688411	6340054.584	2124461.997	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,542	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:35am	C Gray	SHAD41 D.ssf
631	-121.2673521	37.82689651	6340055.592	2124466.502	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,368	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:37am	C Gray	SHAD41 D.ssf
632	-121.2673511	37.82690929	6340055.901	2124471.155	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,661	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:39am	C Gray	SHAD41 D.ssf
633	-121.2673492	37.8269218	6340056.486	2124475.704	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,938	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:42am	C Gray	SHAD41 D.ssf
634	-121.2673486	37.82693161	6340056.682	2124479.277	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,705	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:43am	C Gray	SHAD41 D.ssf
635	-121.2673498	37.82694303	6340056.377	2124483.435	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,952	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:45am	C Gray	SHAD41 D.ssf
636	-121.2673465	37.82695797	6340057.367	2124488.868	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,302	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:48am	C Gray	SHAD41 D.ssf
637	-121.2673407	37.82697033	6340058.299	2124493.362	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,422	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:50am	C Gray	SHAD41 D.ssf
638	-121.2673407	37.8269807	6340059.118	2124497.131	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,847	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:51am	C Gray	SHAD41 D.ssf
639	-121.2673366	37.82698366	6340060.306	2124498.178	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,030	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:53am	C Gray	SHAD41 D.ssf
640	-121.2673341	37.82697622	6340061.024	2124495.486	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,248	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:55am	C Gray	SHAD41 D.ssf
641	-121.2673359	37.82696804	6340060.485	2124492.51	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,778	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:57am	C Gray	SHAD41 D.ssf
642	-121.2673368	37.82695418	6340060.175	2124487.805	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,603	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:38:59am	C Gray	SHAD41 D.ssf
643	-121.2673371	37.82694318	6340060.039	2124483.46	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,668	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:02am	C Gray	SHAD41 D.ssf
644	-121.2673376	37.82693335	6340059.884	2124479.882	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,563	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:03am	C Gray	SHAD41 D.ssf
645	-121.2673388	37.8269172	6340059.49	2124474.004	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,319	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:06am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
646	-121.2673403	37.82690642	6340059.006	2124470.083	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,535	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:07am	C Gray	SHAD41 D.ssf
647	-121.2673407	37.82689794	6340058.875	2124466.996	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,642	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:09am	C Gray	SHAD41 D.ssf
648	-121.2673421	37.82688487	6340058.436	2124462.241	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,648	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:11am	C Gray	SHAD41 D.ssf
649	-121.2673435	37.82687555	6340057.992	2124458.85	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,495	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:13am	C Gray	SHAD41 D.ssf
650	-121.2673472	37.8268657	6340056.894	2124455.272	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,238	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:15am	C Gray	SHAD41 D.ssf
651	-121.2673496	37.82685457	6340056.184	2124451.226	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,579	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:17am	C Gray	SHAD41 D.ssf
652	-121.2673493	37.82684186	6340056.226	2124446.597	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,982	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:20am	C Gray	SHAD41 D.ssf
653	-121.2673538	37.82683083	6340054.9	2124442.594	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,955	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:21am	C Gray	SHAD41 D.ssf
654	-121.2673586	37.8268181	6340053.473	2124437.97	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,967	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:23am	C Gray	SHAD41 D.ssf
655	-121.2673615	37.8268052	6340052.599	2124433.279	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,344	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:26am	C Gray	SHAD41 D.ssf
656	-121.2673588	37.82680358	6340053.377	2124432.683	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,255	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:27am	C Gray	SHAD41 D.ssf
657	-121.2673582	37.82680351	6340053.534	2124432.654	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,810	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:29am	C Gray	SHAD41 D.ssf
658	-121.2673635	37.82680154	6340052.001	2124431.952	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,562	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:32am	C Gray	SHAD41 D.ssf
659	-121.2673602	37.82680318	6340052.973	2124432.538	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,017	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:33am	C Gray	SHAD41 D.ssf
660	-121.2673601	37.82680891	6340053.009	2124434.625	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,540	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:35am	C Gray	SHAD41 D.ssf
661	-121.267359	37.82681797	6340053.362	2124437.923	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,810	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:37am	C Gray	SHAD41 D.ssf
662	-121.2673577	37.82682596	6340053.748	2124440.829	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,816	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:39am	C Gray	SHAD41 D.ssf
663	-121.2673554	37.82683489	6340054.436	2124444.076	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,787	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:41am	C Gray	SHAD41 D.ssf
664	-121.2673544	37.82684685	6340054.78	2124448.426	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,970	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:43am	C Gray	SHAD41 D.ssf
665	-121.2673548	37.82685846	6340054.685	2124452.657	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,648	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:46am	C Gray	SHAD41 D.ssf
666	-121.2673557	37.82686913	6340054.47	2124456.543	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,122	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:47am	C Gray	SHAD41 D.ssf
667	-121.2673573	37.82688273	6340054.116	2124461.496	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,046	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:49am	C Gray	SHAD41 D.ssf
668	-121.2673535	37.82689201	6340055.156	2124464.869	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,019	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:51am	C Gray	SHAD41 D.ssf
669	-121.2673532	37.82690645	6340055.287	2124470.126	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,162	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:53am	C Gray	SHAD41 D.ssf
670	-121.2673516	37.82691717	6340055.801	2124474.025	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,901	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:55am	C Gray	SHAD41 D.ssf
671	-121.2673498	37.82692957	6340056.355	2124478.535	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,153	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:57am	C Gray	SHAD41 D.ssf
672	-121.2673509	37.82693953	6340056.044	2124482.164	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,873	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:39:59am	C Gray	SHAD41 D.ssf
673	-121.2673486	37.82695191	6340056.761	2124486.667	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,281	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:01am	C Gray	SHAD41 D.ssf
674	-121.2673457	37.82696414	6340057.619	2124491.112	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,153	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:03am	C Gray	SHAD41 D.ssf
675	-121.2673362	37.82696539	6340060.364	2124491.547	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,422	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:05am	C Gray	SHAD41 D.ssf
676	-121.2673325	37.82695532	6340061.406	2124487.872	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,942	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:07am	C Gray	SHAD41 D.ssf
677	-121.2673348	37.82694515	6340060.723	2124484.172	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,711	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:09am	C Gray	SHAD41 D.ssf
678	-121.267337	37.826935	6340060.063	2124480.481	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,596	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:11am	C Gray	SHAD41 D.ssf
679	-121.2673369	37.82692317	6340060.056	2124476.174	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,247	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:13am	C Gray	SHAD41 D.ssf
680	-121.2673405	37.82691097	6340058.983	2124471.741	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,813	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:15am	C Gray	SHAD41 D.ssf
681	-121.2673493	37.82689991	6340058.952	2124467.714	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,217	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:17am	C Gray	SHAD41 D.ssf
682	-121.2673415	37.82688627	6340058.598	2124462.751	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,612	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:19am	C Gray	SHAD41 D.ssf
683	-121.2673424	37.82687364	6340058.303	2124458.155	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,206	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:21am	C Gray	SHAD41 D.ssf
684	-121.2673428	37.82686177	6340058.155	2124453.833	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,058	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:23am	C Gray	SHAD41 D.ssf
685	-121.2673446	37.82684529	6340057.594	2124447.838	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,728	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:26am	C Gray	SHAD41 D.ssf
686	-121.2673466	37.82683322	6340056.977	2124443.445	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,715	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:27am	C Gray	SHAD41 D.ssf
687	-121.2673496	37.82682149	6340056.082	2124439.181	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,494	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:29am	C Gray	SHAD41 D.ssf
688	-121.2673533	37.82680666	6340054.97	2124433.792	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,337	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:31am	C Gray	SHAD41 D.ssf
689	-121.2673511	37.82680188	6340055.598	2124432.044	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,779	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:33am	C Gray	SHAD41 D.ssf
690	-121.2673432	37.82679924	6340057.866	2124431.065	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,178	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:36am	C Gray	SHAD41 D.ssf
691	-121.2673501	37.82679806	6340055.879	2124430.652	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,120	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:37am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
692	-121.2673487	37.82680367	6340056.292	2124432.692	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,512	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:39am	C Gray	SHAD41 D.ssf
693	-121.2673483	37.82681304	6340056.418	2124436.101	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,272	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:41am	C Gray	SHAD41 D.ssf
694	-121.2673477	37.8268255	6340056.834	2124440.455	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,756	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:43am	C Gray	SHAD41 D.ssf
695	-121.2673475	37.82683482	6340056.738	2124444.029	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,497	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:45am	C Gray	SHAD41 D.ssf
696	-121.2673461	37.82684668	6340057.165	2124448.39	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,488	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:47am	C Gray	SHAD41 D.ssf
697	-121.2673471	37.82685898	6340056.905	2124452.825	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,033	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:49am	C Gray	SHAD41 D.ssf
698	-121.2673477	37.82686897	6340056.871	2124456.464	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,745	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:51am	C Gray	SHAD41 D.ssf
699	-121.2673471	37.82688044	6340056.984	2124460.641	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,091	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:53am	C Gray	SHAD41 D.ssf
700	-121.2673465	37.82689452	6340057.198	2124465.765	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,799	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:55am	C Gray	SHAD41 D.ssf
701	-121.2673465	37.82690731	6340057.226	2124470.422	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,006	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:57am	C Gray	SHAD41 D.ssf
702	-121.2673458	37.82691896	6340057.478	2124474.664	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,122	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:40:59am	C Gray	SHAD41 D.ssf
703	-121.2673449	37.82693148	6340057.778	2124479.221	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,699	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:01am	C Gray	SHAD41 D.ssf
704	-121.2673461	37.82694381	6340058.074	2124483.708	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,975	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:03am	C Gray	SHAD41 D.ssf
705	-121.2673431	37.82695759	6340058.367	2124488.724	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,969	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:05am	C Gray	SHAD41 D.ssf
706	-121.2673432	37.82697212	6340058.37	2124494.015	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,063	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:07am	C Gray	SHAD41 D.ssf
707	-121.2673422	37.82698412	6340058.698	2124498.378	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,258	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:09am	C Gray	SHAD41 D.ssf
708	-121.2673397	37.82699588	6340059.47	2124502.657	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,243	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:11am	C Gray	SHAD41 D.ssf
709	-121.2673382	37.82700838	6340059.932	2124507.205	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,871	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:13am	C Gray	SHAD41 D.ssf
710	-121.2673401	37.82701196	6340059.418	2124511.293	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,337	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:15am	C Gray	SHAD41 D.ssf
711	-121.2673336	37.82703274	6340060.635	2124516.815	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:17am	C Gray	SHAD41 D.ssf
712	-121.2673288	37.82703628	6340060.712	2124516.015	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	55,480	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:19am	C Gray	SHAD41 D.ssf
713	-121.2673327	37.82702282	6340062.909	2124512.439	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,312	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:21am	C Gray	SHAD41 D.ssf
714	-121.2673277	37.82701108	6340062.974	2124508.06	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,443	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:23am	C Gray	SHAD41 D.ssf
715	-121.2673282	37.82699669	6340062.774	2124502.926	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,292	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:25am	C Gray	SHAD41 D.ssf
716	-121.2673208	37.82698181	6340061.959	2124497.517	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,788	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:27am	C Gray	SHAD41 D.ssf
717	-121.2673328	37.82698947	6340062.561	2124492.909	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,294	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:29am	C Gray	SHAD41 D.ssf
718	-121.2673298	37.82696086	6340062.207	2124489.881	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,739	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:31am	C Gray	SHAD41 D.ssf
719	-121.2673321	37.82695281	6340061.533	2124486.955	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,051	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:33am	C Gray	SHAD41 D.ssf
720	-121.2673331	37.82693793	6340061.206	2124481.54	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,980	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:35am	C Gray	SHAD41 D.ssf
721	-121.2673331	37.82692291	6340061.185	2124476.071	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,397	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:38am	C Gray	SHAD41 D.ssf
722	-121.2673331	37.82690949	6340061.094	2124471.183	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,312	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:39am	C Gray	SHAD41 D.ssf
723	-121.2673326	37.82689905	6340061.23	2124467.382	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,105	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:41am	C Gray	SHAD41 D.ssf
724	-121.2673355	37.82688714	6340060.343	2124463.054	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,325	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:43am	C Gray	SHAD41 D.ssf
725	-121.2673373	37.82687385	6340059.784	2124458.218	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,837	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:45am	C Gray	SHAD41 D.ssf
726	-121.2673378	37.82686197	6340059.603	2124453.894	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,993	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:47am	C Gray	SHAD41 D.ssf
727	-121.2673355	37.82684662	6340060.217	2124448.301	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,475	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:50am	C Gray	SHAD41 D.ssf
728	-121.2673395	37.8268354	6340059.04	2124444.224	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,114	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:51am	C Gray	SHAD41 D.ssf
729	-121.2673388	37.82682284	6340059.189	2124439.646	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,239	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:53am	C Gray	SHAD41 D.ssf
730	-121.2673382	37.82681286	6340059.359	2124436.012	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,835	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:55am	C Gray	SHAD41 D.ssf
731	-121.2673378	37.82679912	6340059.357	2124431.017	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,832	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:57am	C Gray	SHAD41 D.ssf
732	-121.2673381	37.82679425	6340059.312	2124429.237	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,447	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:41:59am	C Gray	SHAD41 D.ssf
733	-121.2673345	37.82679414	6340060.361	2124429.189	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,120	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:01am	C Gray	SHAD41 D.ssf
734	-121.2673387	37.82679353	6340059.561	2124428.974	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,591	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:03am	C Gray	SHAD41 D.ssf
735	-121.2673378	37.82680198	6340059.175	2124432.052	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,457	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:05am	C Gray	SHAD41 D.ssf
736	-121.2673402	37.82681198	6340058.772	2124435.696	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,509	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:07am	C Gray	SHAD41 D.ssf
737	-121.2673394	37.82682201	6340059.016	2124439.349	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,981	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:09am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
738	-121.267338	37.82683303	6340059.473	2124443.358	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,147	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:11am	C Gray	SHAD41 D.ssf
739	-121.2673378	37.82684465	6340059.543	2124447.588	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,082	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:13am	C Gray	SHAD41 D.ssf
740	-121.2673393	37.82685703	6340059.153	2124452.099	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,279	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:15am	C Gray	SHAD41 D.ssf
741	-121.2673394	37.82686992	6340059.178	2124456.79	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,585	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:17am	C Gray	SHAD41 D.ssf
742	-121.2673385	37.82687997	6340059.473	2124460.448	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,619	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:19am	C Gray	SHAD41 D.ssf
743	-121.2673389	37.82689245	6340059.384	2124464.992	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,627	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:21am	C Gray	SHAD41 D.ssf
744	-121.2673386	37.82690502	6340059.494	2124469.571	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,119	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:23am	C Gray	SHAD41 D.ssf
745	-121.2673387	37.82691619	6340059.511	2124473.637	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,294	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:25am	C Gray	SHAD41 D.ssf
746	-121.2673405	37.82692771	6340059.013	2124477.835	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,903	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:27am	C Gray	SHAD41 D.ssf
747	-121.2673402	37.8269423	6340059.15	2124483.148	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,262	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:29am	C Gray	SHAD41 D.ssf
748	-121.2673392	37.82695342	6340059.485	2124487.196	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,281	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:31am	C Gray	SHAD41 D.ssf
749	-121.2673397	37.82696571	6340059.577	2124491.67	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,673	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:33am	C Gray	SHAD41 D.ssf
750	-121.2673382	37.82697888	6340059.835	2124496.464	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,430	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:35am	C Gray	SHAD41 D.ssf
751	-121.2673391	37.82698887	6340059.625	2124500.102	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,161	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:37am	C Gray	SHAD41 D.ssf
752	-121.2673375	37.82700256	6340060.111	2124505.084	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,990	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:39am	C Gray	SHAD41 D.ssf
753	-121.2673372	37.82701511	6340060.226	2124509.654	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,190	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:41am	C Gray	SHAD41 D.ssf
754	-121.2673373	37.82702601	6340060.169	2124513.62	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,292	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:43am	C Gray	SHAD41 D.ssf
755	-121.2673354	37.82703636	6340060.829	2124517.385	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,671	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:45am	C Gray	SHAD41 D.ssf
756	-121.2673315	37.82703337	6340061.943	2124516.287	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,063	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:47am	C Gray	SHAD41 D.ssf
757	-121.2673346	37.82703747	6340061.028	2124516.783	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,294	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:49am	C Gray	SHAD41 D.ssf
758	-121.2673324	37.82703526	6340062.248	2124516.973	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,515	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:51am	C Gray	SHAD41 D.ssf
759	-121.2673317	37.82702998	6340061.874	2124515.054	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,084	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:53am	C Gray	SHAD41 D.ssf
760	-121.2673315	37.82702015	6340061.887	2124511.473	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,948	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:55am	C Gray	SHAD41 D.ssf
761	-121.2673337	37.82700643	6340061.423	2124506.481	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,698	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:57am	C Gray	SHAD41 D.ssf
762	-121.2673318	37.82699506	6340061.77	2124502.337	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,367	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:42:59am	C Gray	SHAD41 D.ssf
763	-121.2673322	37.826989323	6340061.601	2124498.031	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,921	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:01am	C Gray	SHAD41 D.ssf
764	-121.2673299	37.82696747	6340062.196	2124492.289	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,903	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:03am	C Gray	SHAD41 D.ssf
765	-121.2673324	37.82695462	6340061.458	2124487.615	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,406	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:05am	C Gray	SHAD41 D.ssf
766	-121.2673333	37.82694413	6340061.159	2124483.799	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,426	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:07am	C Gray	SHAD41 D.ssf
767	-121.2673325	37.82693023	6340061.063	2124478.738	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,756	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:09am	C Gray	SHAD41 D.ssf
768	-121.2673335	37.82692057	6340061.316	2124475.218	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,813	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:11am	C Gray	SHAD41 D.ssf
769	-121.2673317	37.82690819	6340061.51	2124470.709	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,158	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:13am	C Gray	SHAD41 D.ssf
770	-121.2673306	37.82689917	6340061.793	2124467.422	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,418	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:15am	C Gray	SHAD41 D.ssf
771	-121.2673297	37.82688798	6340062.028	2124463.346	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,567	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:17am	C Gray	SHAD41 D.ssf
772	-121.2673289	37.82687833	6340062.222	2124459.829	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,442	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:19am	C Gray	SHAD41 D.ssf
773	-121.2673286	37.82686737	6340062.272	2124455.838	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,803	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:21am	C Gray	SHAD41 D.ssf
774	-121.2673275	37.82685378	6340062.549	2124450.887	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,461	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:23am	C Gray	SHAD41 D.ssf
775	-121.2673281	37.82684156	6340062.336	2124446.439	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,598	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:25am	C Gray	SHAD41 D.ssf
776	-121.2673278	37.82683139	6340062.407	2124442.735	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,412	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:27am	C Gray	SHAD41 D.ssf
777	-121.2673285	37.82681861	6340062.178	2124438.083	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,478	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:29am	C Gray	SHAD41 D.ssf
778	-121.2673297	37.82680729	6340061.775	2124433.963	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,047	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:31am	C Gray	SHAD41 D.ssf
779	-121.2673326	37.82679597	6340060.924	2124429.848	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,062	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:33am	C Gray	SHAD41 D.ssf
780	-121.2673225	37.82679383	6340060.944	2124429.07	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,057	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:35am	C Gray	SHAD41 D.ssf
781	-121.2673237	37.82679353	6340062.51	2124428.948	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,247	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:37am	C Gray	SHAD41 D.ssf
782	-121.2673318	37.82679115	6340061.14	2124428.094	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,364	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:39am	C Gray	SHAD41 D.ssf
783	-121.267331	37.8267974	6340061.381	2124430.368	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,464	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:41am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
784	-121.2673326	37.82680545	6340060.944	2124433.302	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,129	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:43am	C Gray	SHAD41 D.ssf
785	-121.2673332	37.82681741	6340060.964	2124437.656	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,656	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:45am	C Gray	SHAD41 D.ssf
786	-121.2673336	37.8268267	6340060.843	2124441.039	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,193	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:47am	C Gray	SHAD41 D.ssf
787	-121.2673336	37.82683933	6340060.747	2124445.639	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,432	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:49am	C Gray	SHAD41 D.ssf
788	-121.2673344	37.82684902	6340060.549	2124449.17	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,668	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:51am	C Gray	SHAD41 D.ssf
789	-121.2673332	37.82686212	6340060.427	2124453.941	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,504	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:53am	C Gray	SHAD41 D.ssf
790	-121.2673342	37.8268719	6340060.688	2124457.499	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,397	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:55am	C Gray	SHAD41 D.ssf
791	-121.2673337	37.82688408	6340060.863	2124461.933	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,233	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:57am	C Gray	SHAD41 D.ssf
792	-121.2673336	37.82689333	6340060.919	2124466.03	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,015	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:43:59am	C Gray	SHAD41 D.ssf
793	-121.2673332	37.82690793	6340061.409	2124470.614	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,776	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:01am	C Gray	SHAD41 D.ssf
794	-121.2673341	37.82691962	6340060.862	2124474.876	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,909	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:03am	C Gray	SHAD41 D.ssf
795	-121.2673349	37.82693115	6340060.638	2124479.076	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,700	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:05am	C Gray	SHAD41 D.ssf
796	-121.2673353	37.82694226	6340060.565	2124483.123	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,922	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:07am	C Gray	SHAD41 D.ssf
797	-121.2673342	37.82695526	6340060.935	2124487.851	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,898	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:09am	C Gray	SHAD41 D.ssf
798	-121.2673331	37.82696457	6340061.258	2124491.24	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,091	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:11am	C Gray	SHAD41 D.ssf
799	-121.2673327	37.82697959	6340061.442	2124496.708	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,204	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:13am	C Gray	SHAD41 D.ssf
800	-121.2673338	37.82699084	6340061.134	2124500.808	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,935	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:15am	C Gray	SHAD41 D.ssf
801	-121.267333	37.82700516	6340061.41	2124506.018	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,860	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:17am	C Gray	SHAD41 D.ssf
802	-121.2673322	37.82701507	6340061.672	2124509.626	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,913	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:19am	C Gray	SHAD41 D.ssf
803	-121.2673325	37.82702055	6340063.472	2124513.827	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,671	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:21am	C Gray	SHAD41 D.ssf
804	-121.2673317	37.82703859	6340061.974	2124518.18	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,372	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:23am	C Gray	SHAD41 D.ssf
805	-121.2673232	37.82703994	6340064.368	2124518.661	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,147	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:25am	C Gray	SHAD41 D.ssf
806	-121.2673194	37.82703819	6340065.443	2124518.014	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,964	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:27am	C Gray	SHAD41 D.ssf
807	-121.2673229	37.82702854	6340064.405	2124514.508	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	60,566	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:29am	C Gray	SHAD41 D.ssf
808	-121.2673236	37.82702049	6340064.19	2124511.616	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,263	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:31am	C Gray	SHAD41 D.ssf
809	-121.2673265	37.82693009	6340063.076	2124478.668	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,671	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:33am	C Gray	SHAD41 D.ssf
810	-121.2673268	37.82699727	6340063.472	2124503.132	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,775	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:35am	C Gray	SHAD41 D.ssf
811	-121.2673253	37.82698601	6340063.602	2124499.027	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,619	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:37am	C Gray	SHAD41 D.ssf
812	-121.2673232	37.82697588	6340064.21	2124495.333	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,830	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:39am	C Gray	SHAD41 D.ssf
813	-121.2673227	37.82696504	6340064.282	2124491.387	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,235	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:41am	C Gray	SHAD41 D.ssf
814	-121.2673253	37.82695684	6340063.497	2124488.406	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,683	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:43am	C Gray	SHAD41 D.ssf
815	-121.2673257	37.82694306	6340063.349	2124483.391	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,575	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:45am	C Gray	SHAD41 D.ssf
816	-121.2673265	37.82693009	6340063.076	2124478.668	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,698	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:47am	C Gray	SHAD41 D.ssf
817	-121.2673262	37.82691891	6340063.117	2124474.6	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,685	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:49am	C Gray	SHAD41 D.ssf
818	-121.2673252	37.82690592	6340063.247	2124469.866	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,534	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:52am	C Gray	SHAD41 D.ssf
819	-121.2673253	37.82689613	6340063.328	2124466.3	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,535	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:53am	C Gray	SHAD41 D.ssf
820	-121.267326	37.82688321	6340063.081	2124461.599	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,501	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:55am	C Gray	SHAD41 D.ssf
821	-121.2673248	37.8268719	6340063.385	2124457.441	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,501	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:57am	C Gray	SHAD41 D.ssf
822	-121.2673244	37.82685892	6340063.477	2124452.749	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,153	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:44:59am	C Gray	SHAD41 D.ssf
823	-121.2673242	37.82684663	6340063.477	2124448.154	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,761	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:01am	C Gray	SHAD41 D.ssf
824	-121.2673246	37.82683454	6340063.331	2124443.874	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,141	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:03am	C Gray	SHAD41 D.ssf
825	-121.2673251	37.82682278	6340063.161	2124439.595	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,320	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:05am	C Gray	SHAD41 D.ssf
826	-121.2673247	37.826812	6340063.231	2124435.667	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,419	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:07am	C Gray	SHAD41 D.ssf
827	-121.2673248	37.82679924	6340062.886	2124431.025	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,452	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:09am	C Gray	SHAD41 D.ssf
828	-121.2673228	37.82679338	6340063.739	2124428.884	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,838	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:11am	C Gray	SHAD41 D.ssf
829	-121.2673227	37.82679104	6340063.765	2124428.032	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,748	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:13am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
830	-121.2673224	37.82678942	6340063.83	2124427.441	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,974	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:15am	C Gray	SHAD41 D.ssf
831	-121.2673224	37.82679446	6340063.379	2124429.28	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,769	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:17am	C Gray	SHAD41 D.ssf
832	-121.2673249	37.82680306	6340063.162	2124432.412	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,187	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:19am	C Gray	SHAD41 D.ssf
833	-121.2673261	37.82681393	6340062.832	2124436.374	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,693	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:21am	C Gray	SHAD41 D.ssf
834	-121.267326	37.8268235	6340062.892	2124439.858	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,953	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:23am	C Gray	SHAD41 D.ssf
835	-121.267326	37.8268324	6340062.934	2124443.098	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,207	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:25am	C Gray	SHAD41 D.ssf
836	-121.2673267	37.82684391	6340062.756	2124447.293	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,725	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:27am	C Gray	SHAD41 D.ssf
837	-121.2673267	37.82685491	6340062.793	2124451.297	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,873	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:29am	C Gray	SHAD41 D.ssf
838	-121.2673265	37.82686545	6340062.878	2124455.134	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,841	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:31am	C Gray	SHAD41 D.ssf
839	-121.2673267	37.82687767	6340062.855	2124459.583	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,402	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:33am	C Gray	SHAD41 D.ssf
840	-121.267327	37.82688754	6340062.817	2124463.178	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,099	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:35am	C Gray	SHAD41 D.ssf
841	-121.2673269	37.82689785	6340062.872	2124466.93	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,664	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:37am	C Gray	SHAD41 D.ssf
842	-121.2673267	37.82691014	6340062.957	2124471.406	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,215	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:39am	C Gray	SHAD41 D.ssf
843	-121.2673283	37.8269193	6340062.515	2124474.747	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,213	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:41am	C Gray	SHAD41 D.ssf
844	-121.2673267	37.82693114	6340062.755	2124479.056	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,230	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:43am	C Gray	SHAD41 D.ssf
845	-121.2673285	37.82694214	6340062.531	2124483.063	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,825	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:45am	C Gray	SHAD41 D.ssf
846	-121.2673287	37.82695231	6340062.512	2124486.764	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,746	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:47am	C Gray	SHAD41 D.ssf
847	-121.2673282	37.82696398	6340062.695	2124491.014	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,285	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:49am	C Gray	SHAD41 D.ssf
848	-121.2673283	37.82697692	6340062.698	2124495.726	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,031	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:51am	C Gray	SHAD41 D.ssf
849	-121.2673267	37.82698983	6340063.279	2124499.707	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,463	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:53am	C Gray	SHAD41 D.ssf
850	-121.2673254	37.82701361	6340063.345	2124504.06	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,026	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:55am	C Gray	SHAD41 D.ssf
851	-121.2673264	37.82702298	6340063.395	2124512.492	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,421	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:57am	C Gray	SHAD41 D.ssf
852	-121.2673229	37.82703577	6340064.443	2124517.14	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,567	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:45:59am	C Gray	SHAD41 D.ssf
853	-121.2673151	37.82703971	6340066.691	2124518.558	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,055	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:01am	C Gray	SHAD41 D.ssf
854	-121.2673147	37.82703338	6340066.782	2124516.403	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,826	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:03am	C Gray	SHAD41 D.ssf
855	-121.2673153	37.82702483	6340066.602	2124513.141	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,314	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:05am	C Gray	SHAD41 D.ssf
856	-121.267313	37.82701361	6340067.218	2124509.05	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,529	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:07am	C Gray	SHAD41 D.ssf
857	-121.2673123	37.82700337	6340067.407	2124505.318	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,849	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:09am	C Gray	SHAD41 D.ssf
858	-121.2673133	37.82699247	6340067.068	2124501.351	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,417	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:11am	C Gray	SHAD41 D.ssf
859	-121.2673125	37.82698031	6340067.265	2124496.922	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,521	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:13am	C Gray	SHAD41 D.ssf
860	-121.2673126	37.82697119	6340067.209	2124493.604	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,875	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:15am	C Gray	SHAD41 D.ssf
861	-121.2673116	37.82695887	6340067.469	2124489.112	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,168	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:17am	C Gray	SHAD41 D.ssf
862	-121.2673107	37.8269492	6340067.685	2124485.589	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,020	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:19am	C Gray	SHAD41 D.ssf
863	-121.267311	37.8269382	6340067.857	2124481.585	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,725	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:21am	C Gray	SHAD41 D.ssf
864	-121.267311	37.8269247	6340067.521	2124477.996	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,562	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:23am	C Gray	SHAD41 D.ssf
865	-121.2673111	37.82691654	6340067.181	2124473.703	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,615	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:25am	C Gray	SHAD41 D.ssf
866	-121.2673118	37.82690494	6340067.259	2124469.476	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,517	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:27am	C Gray	SHAD41 D.ssf
867	-121.2673119	37.82689593	6340066.881	2124466.159	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,828	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:29am	C Gray	SHAD41 D.ssf
868	-121.2673113	37.82688317	6340067.155	2124461.551	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,508	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:31am	C Gray	SHAD41 D.ssf
869	-121.2673119	37.82687344	6340067.117	2124458.008	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,951	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:33am	C Gray	SHAD41 D.ssf
870	-121.2673119	37.82686349	6340067.145	2124454.384	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,594	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:35am	C Gray	SHAD41 D.ssf
871	-121.2673117	37.82685051	6340066.847	2124449.662	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,769	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:37am	C Gray	SHAD41 D.ssf
872	-121.2673126	37.82684015	6340066.433	2124449.662	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,100	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:39am	C Gray	SHAD41 D.ssf
873	-121.2673139	37.82683047	6340066.324	2124445.893	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,148	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:41am	C Gray	SHAD41 D.ssf
874	-121.2673142	37.82682047	6340066.334	2124442.366	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,255	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:43am	C Gray	SHAD41 D.ssf
875	-121.2673148	37.82681629	6340066.109	2124437.208	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,470	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:45am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
876	-121.2673158	37.82680663	6340065.739	2124433.691	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,096	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:47am	C Gray	SHAD41 D.ssf
877	-121.2673177	37.82679882	6340065.232	2124430.626	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,334	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:49am	C Gray	SHAD41 D.ssf
878	-121.2673171	37.82678966	6340065.362	2124427.516	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,462	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:51am	C Gray	SHAD41 D.ssf
879	-121.2673158	37.82679039	6340065.736	2124427.78	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,634	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:53am	C Gray	SHAD41 D.ssf
880	-121.2673121	37.82678947	6340066.805	2124427.435	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,675	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:55am	C Gray	SHAD41 D.ssf
881	-121.2673149	37.82679008	6340066.004	2124427.662	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,575	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:57am	C Gray	SHAD41 D.ssf
882	-121.2673142	37.82679884	6340066.246	2124430.851	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,725	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:46:59am	C Gray	SHAD41 D.ssf
883	-121.2673152	37.8268077	6340065.985	2124434.079	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,161	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:01am	C Gray	SHAD41 D.ssf
884	-121.2673156	37.82681768	6340065.873	2124437.714	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,887	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:03am	C Gray	SHAD41 D.ssf
885	-121.2673166	37.82682707	6340065.622	2124441.134	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,094	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:05am	C Gray	SHAD41 D.ssf
886	-121.2673162	37.82683769	6340065.771	2124445.002	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,287	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:07am	C Gray	SHAD41 D.ssf
887	-121.2673165	37.82684712	6340065.782	2124448.434	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,210	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:09am	C Gray	SHAD41 D.ssf
888	-121.2673165	37.82685756	6340065.76	2124452.238	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,557	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:11am	C Gray	SHAD41 D.ssf
889	-121.267318	37.82686829	6340065.358	2124456.147	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,063	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:13am	C Gray	SHAD41 D.ssf
890	-121.2673186	37.82687928	6340065.217	2124460.149	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,754	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:15am	C Gray	SHAD41 D.ssf
891	-121.2673197	37.826889	6340064.904	2124464.055	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,379	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:17am	C Gray	SHAD41 D.ssf
892	-121.2673132	37.82690161	6340064.504	2124468.286	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,277	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:19am	C Gray	SHAD41 D.ssf
893	-121.267321	37.82691117	6340064.6	2124471.766	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,085	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:21am	C Gray	SHAD41 D.ssf
894	-121.2673207	37.82692213	6340064.712	2124475.759	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,062	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:23am	C Gray	SHAD41 D.ssf
895	-121.2673219	37.82693323	6340064.615	2124479.801	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,205	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:25am	C Gray	SHAD41 D.ssf
896	-121.2673202	37.82694443	6340064.723	2124483.877	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,955	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:27am	C Gray	SHAD41 D.ssf
897	-121.2673203	37.82695562	6340064.938	2124487.951	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,202	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:29am	C Gray	SHAD41 D.ssf
898	-121.2673209	37.82696392	6340064.796	2124490.973	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,314	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:31am	C Gray	SHAD41 D.ssf
899	-121.2673138	37.82697656	6340065.654	2124495.569	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,820	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:33am	C Gray	SHAD41 D.ssf
900	-121.2673193	37.82698868	6340065.302	2124499.298	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,879	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:35am	C Gray	SHAD41 D.ssf
901	-121.2673077	37.82703692	6340068.833	2124517.524	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,967	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:37am	C Gray	SHAD41 D.ssf
902	-121.2673177	37.82700587	6340065.839	2124506.242	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,227	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:39am	C Gray	SHAD41 D.ssf
903	-121.2673167	37.82701658	6340066.151	2124510.137	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,316	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:41am	C Gray	SHAD41 D.ssf
904	-121.2673197	37.8270265	6340065.331	2124513.756	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,862	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:43am	C Gray	SHAD41 D.ssf
905	-121.2673139	37.82703785	6340067.043	2124517.875	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,895	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:45am	C Gray	SHAD41 D.ssf
906	-121.2673113	37.82703801	6340067.784	2124517.928	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,948	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:47am	C Gray	SHAD41 D.ssf
907	-121.2673077	37.82703692	6340068.833	2124517.524	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	55,697	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:49am	C Gray	SHAD41 D.ssf
908	-121.2673077	37.82703417	6340068.826	2124516.523	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,374	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:51am	C Gray	SHAD41 D.ssf
909	-121.2673081	37.82702339	6340068.668	2124512.599	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,958	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:53am	C Gray	SHAD41 D.ssf
910	-121.2673057	37.82701177	6340069.333	2124508.36	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,589	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:55am	C Gray	SHAD41 D.ssf
911	-121.2673071	37.82700066	6340068.901	2124504.32	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	55,410	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:57am	C Gray	SHAD41 D.ssf
912	-121.2673084	37.82698669	6340068.457	2124499.313	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,252	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:47:59am	C Gray	SHAD41 D.ssf
913	-121.2673082	37.82697511	6340068.508	2124494.984	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,333	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:01am	C Gray	SHAD41 D.ssf
914	-121.2673081	37.82696211	6340068.478	2124490.286	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,618	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:03am	C Gray	SHAD41 D.ssf
915	-121.2673082	37.82694921	6340068.418	2124485.587	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,575	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:05am	C Gray	SHAD41 D.ssf
916	-121.2673085	37.82693622	6340068.281	2124480.861	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,031	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:07am	C Gray	SHAD41 D.ssf
917	-121.2673069	37.82692413	6340068.72	2124476.454	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,815	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:09am	C Gray	SHAD41 D.ssf
918	-121.2673066	37.82691453	6340068.775	2124472.959	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,212	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:11am	C Gray	SHAD41 D.ssf
919	-121.267306	37.82690193	6340068.367	2124468.367	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,689	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:13am	C Gray	SHAD41 D.ssf
920	-121.2673053	37.82688887	6340069.066	2124463.611	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,765	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:15am	C Gray	SHAD41 D.ssf
921	-121.267306	37.82687843	6340068.828	2124459.813	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,277	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:17am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
922	-121.267306	37.82686562	6340068.816	2124455.146	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	30,395	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:19am	C Gray	SHAD41 D.ssf
923	-121.2673063	37.8268547	6340068.681	2124451.172	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	30,982	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:21am	C Gray	SHAD41 D.ssf
924	-121.2673068	37.82684365	6340068.499	2124447.149	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	30,621	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:23am	C Gray	SHAD41 D.ssf
925	-121.2673053	37.82683207	6340068.906	2124442.928	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,109	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:25am	C Gray	SHAD41 D.ssf
926	-121.2673043	37.82682097	6340069.162	2124438.884	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,622	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:27am	C Gray	SHAD41 D.ssf
927	-121.2673049	37.8268095	6340068.961	2124434.71	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	30,431	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:29am	C Gray	SHAD41 D.ssf
928	-121.2673066	37.82679979	6340068.57	2124431.178	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,425	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:31am	C Gray	SHAD41 D.ssf
929	-121.2673061	37.82678914	6340068.39	2124427.302	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,803	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:33am	C Gray	SHAD41 D.ssf
930	-121.267304	37.82678596	6340069.142	2124426.135	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,456	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:35am	C Gray	SHAD41 D.ssf
931	-121.2672996	37.82679015	6340070.417	2124427.652	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,132	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:37am	C Gray	SHAD41 D.ssf
932	-121.2673005	37.8267875	6340070.161	2124426.69	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,233	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:39am	C Gray	SHAD41 D.ssf
933	-121.2673024	37.82679465	6340069.64	2124429.298	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,730	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:41am	C Gray	SHAD41 D.ssf
934	-121.267303	37.82680201	6340069.755	2124431.975	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,742	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:43am	C Gray	SHAD41 D.ssf
935	-121.2673024	37.82681191	6340069.676	2124435.581	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,850	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:45am	C Gray	SHAD41 D.ssf
936	-121.2673036	37.82682067	6340069.355	2124438.774	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,117	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:47am	C Gray	SHAD41 D.ssf
937	-121.2673033	37.82683278	6340069.577	2124443.182	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,318	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:49am	C Gray	SHAD41 D.ssf
938	-121.2673028	37.8268518	6340069.826	2124446.929	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,316	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:51am	C Gray	SHAD41 D.ssf
939	-121.267303	37.82685343	6340069.646	2124450.699	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,998	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:53am	C Gray	SHAD41 D.ssf
940	-121.2673021	37.82686431	6340069.911	2124454.662	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,300	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:55am	C Gray	SHAD41 D.ssf
941	-121.2673034	37.82687425	6340069.825	2124458.28	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	29,223	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:57am	C Gray	SHAD41 D.ssf
942	-121.2673034	37.82688614	6340069.612	2124462.611	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,043	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:48:59am	C Gray	SHAD41 D.ssf
943	-121.2673028	37.82689518	6340069.826	2124465.902	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	30,619	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:01am	C Gray	SHAD41 D.ssf
944	-121.2673031	37.82690839	6340069.769	2124470.713	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,557	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:03am	C Gray	SHAD41 D.ssf
945	-121.2673047	37.82692932	6340069.827	2124474.163	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	35,685	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:05am	C Gray	SHAD41 D.ssf
946	-121.2673047	37.82692932	6340069.366	2124478.339	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	35,690	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:07am	C Gray	SHAD41 D.ssf
947	-121.2673073	37.82693745	6340069.22	2124482.448	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,514	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:09am	C Gray	SHAD41 D.ssf
948	-121.2673064	37.82695361	6340068.952	2124487.185	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,505	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:11am	C Gray	SHAD41 D.ssf
949	-121.2673054	37.82696324	6340069.278	2124490.691	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,613	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:13am	C Gray	SHAD41 D.ssf
950	-121.2673053	37.82697731	6340069.338	2124495.814	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,065	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:15am	C Gray	SHAD41 D.ssf
951	-121.2673048	37.82698895	6340069.504	2124500.052	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,563	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:17am	C Gray	SHAD41 D.ssf
952	-121.2673064	37.82699923	6340069.094	2124503.798	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,502	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:19am	C Gray	SHAD41 D.ssf
953	-121.2673065	37.82701244	6340069.103	2124508.607	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	52,341	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:21am	C Gray	SHAD41 D.ssf
954	-121.2673073	37.82702446	6340068.887	2124512.986	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	59,299	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:23am	C Gray	SHAD41 D.ssf
955	-121.2673056	37.82703745	6340069.426	2124517.711	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	50,798	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:25am	C Gray	SHAD41 D.ssf
956	-121.2673026	37.82703784	6340070.292	2124517.846	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	46,875	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:27am	C Gray	SHAD41 D.ssf
957	-121.2672973	37.82703391	6340071.829	2124516.405	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	50,763	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:29am	C Gray	SHAD41 D.ssf
958	-121.2672972	37.82703235	6340071.849	2124515.834	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	49,746	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:31am	C Gray	SHAD41 D.ssf
959	-121.267297	37.82702473	6340071.871	2124513.061	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	47,573	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:33am	C Gray	SHAD41 D.ssf
960	-121.2672966	37.82701578	6340071.968	2124509.799	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	46,574	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:35am	C Gray	SHAD41 D.ssf
961	-121.2672943	37.82700444	6340072.559	2124505.667	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	59,506	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:37am	C Gray	SHAD41 D.ssf
962	-121.2672945	37.82699506	6340072.514	2124502.251	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	53,071	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:39am	C Gray	SHAD41 D.ssf
963	-121.2672937	37.82698224	6340072.715	2124497.58	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	41,340	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:41am	C Gray	SHAD41 D.ssf
964	-121.2672936	37.82697425	6340072.697	2124494.215	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,332	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:43am	C Gray	SHAD41 D.ssf
965	-121.267294	37.82696215	6340072.559	2124490.266	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,806	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:45am	C Gray	SHAD41 D.ssf
966	-121.2672941	37.82695221	6340072.504	2124486.647	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,185	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:47am	C Gray	SHAD41 D.ssf
967	-121.2672925	37.82694262	6340072.941	2124483.151	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,938	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:49am	C Gray	SHAD41 D.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
968	-121.2672913	37.82693202	6340073.243	2124479.29	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,374	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:51am	C Gray	SHAD41 D.ssf
969	-121.2672916	37.82691858	6340073.118	2124474.397	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,356	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:53am	C Gray	SHAD41 D.ssf
970	-121.2672906	37.82690701	6340073.388	2124470.18	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,856	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:55am	C Gray	SHAD41 D.ssf
971	-121.2672885	37.82689505	6340073.942	2124465.821	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,355	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:57am	C Gray	SHAD41 D.ssf
972	-121.2672883	37.82688339	6340073.958	2124461.576	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,324	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:49:59am	C Gray	SHAD41 D.ssf
973	-121.2672888	37.82687111	6340073.784	2124457.105	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,053	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:01am	C Gray	SHAD41 D.ssf
974	-121.2672877	37.82686268	6340073.678	2124454.032	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,747	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:03am	C Gray	SHAD41 D.ssf
975	-121.2672895	37.82684887	6340073.075	2124449.007	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,431	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:05am	C Gray	SHAD41 D.ssf
976	-121.2672901	37.82683675	6340073.3	2124444.598	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,066	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:07am	C Gray	SHAD41 D.ssf
977	-121.2672919	37.82682498	6340072.752	2124440.317	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,764	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:09am	C Gray	SHAD41 D.ssf
978	-121.267294	37.82681303	6340072.101	2124435.97	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,972	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:11am	C Gray	SHAD41 D.ssf
979	-121.2672955	37.82680255	6340071.645	2124432.157	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,678	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:13am	C Gray	SHAD41 D.ssf
980	-121.2672954	37.82679233	6340071.652	2124428.437	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,978	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:15am	C Gray	SHAD41 D.ssf
981	-121.2672924	37.82678695	6340072.497	2124426.471	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,577	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:17am	C Gray	SHAD41 D.ssf
982	-121.2672919	37.82679197	6340072.656	2124428.298	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,683	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:19am	C Gray	SHAD41 D.ssf
983	-121.2672935	37.82680135	6340072.252	2124431.717	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,189	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:21am	C Gray	SHAD41 D.ssf
984	-121.2672952	37.8268133	6340071.771	2124435.962	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,447	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:23am	C Gray	SHAD41 D.ssf
985	-121.2672954	37.82682307	6340071.745	2124439.63	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,856	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:25am	C Gray	SHAD41 D.ssf
986	-121.2672971	37.82683494	6340071.275	2124443.954	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,376	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:27am	C Gray	SHAD41 D.ssf
987	-121.2672993	37.82684865	6340071.085	2124448.075	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,228	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:29am	C Gray	SHAD41 D.ssf
988	-121.2672979	37.82685629	6340070.717	2124452.609	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,935	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:31am	C Gray	SHAD41 D.ssf
989	-121.2672995	37.82686965	6340070.704	2124456.6	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,210	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:33am	C Gray	SHAD41 D.ssf
990	-121.2672999	37.82688169	6340070.615	2124460.982	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,246	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:35am	C Gray	SHAD41 D.ssf
991	-121.2672974	37.82689917	6340071.346	2124463.701	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,220	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:37am	C Gray	SHAD41 D.ssf
992	-121.2672979	37.82690292	6340071.259	2124468.709	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,065	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:39am	C Gray	SHAD41 D.ssf
993	-121.2672972	37.82691081	6340071.142	2124471.58	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,487	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:41am	C Gray	SHAD41 D.ssf
994	-121.267296	37.82692339	6340071.873	2124475.795	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,432	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:43am	C Gray	SHAD41 D.ssf
995	-121.2672967	37.82693381	6340071.702	2124479.954	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,075	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:45am	C Gray	SHAD41 D.ssf
996	-121.2672985	37.82694442	6340071.192	2124483.823	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,080	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:47am	C Gray	SHAD41 D.ssf
997	-121.2673	37.82695629	6340070.808	2124488.145	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,384	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:49am	C Gray	SHAD41 D.ssf
998	-121.2673006	37.82696842	6340070.681	2124492.565	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,496	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:51am	C Gray	SHAD41 D.ssf
999	-121.2672997	37.82697894	6340070.955	2124496.394	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,997	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:53am	C Gray	SHAD41 D.ssf
1000	-121.2672992	37.82698763	6340071.142	2124499.555	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,893	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:55am	C Gray	SHAD41 D.ssf
1001	-121.2672982	37.82700026	6340071.38	2124505.007	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,443	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:57am	C Gray	SHAD41 D.ssf
1002	-121.2672995	37.8270126	6340071.209	2124508.646	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,604	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:50:59am	C Gray	SHAD41 D.ssf
1003	-121.2672985	37.82702329	6340071.449	2124512.539	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,842	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:01am	C Gray	SHAD41 D.ssf
1004	-121.2672985	37.82703376	6340071.48	2124516.35	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,952	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:03am	C Gray	SHAD41 D.ssf
1005	-121.2672924	37.82703845	6340073.237	2124518.043	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,874	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:05am	C Gray	SHAD41 D.ssf
1006	-121.2672885	37.82703869	6340074.362	2124518.124	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,340	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:07am	C Gray	SHAD41 D.ssf
1007	-121.2672846	37.82703492	6340075.475	2124516.741	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,370	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:09am	C Gray	SHAD41 D.ssf
1008	-121.2672863	37.82703138	6340074.992	2124515.457	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,607	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:11am	C Gray	SHAD41 D.ssf
1009	-121.2672865	37.82702588	6340074.911	2124513.453	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,248	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:13am	C Gray	SHAD41 D.ssf
1010	-121.267285	37.82701579	6340075.307	2124509.775	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,430	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:15am	C Gray	SHAD41 D.ssf
1011	-121.2672864	37.82701301	6340074.914	2124508.767	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,680	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:17am	C Gray	SHAD41 D.ssf
1012	-121.267285	37.82702002	6340075.324	2124511.317	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,653	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:19am	C Gray	SHAD41 D.ssf
1013	-121.2672831	37.82703131	6340075.92	2124515.422	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,458	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:21am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1014	-121.2672816	37.827034415	6340076.339	2124516.453	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,984	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:23am	C Gray	SHAD41 D.ssf
1015	-121.2672881	37.827035326	6340074.453	2124516.874	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,955	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:25am	C Gray	SHAD41 D.ssf
1016	-121.2672882	37.827037279	6340074.453	2124515.975	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,667	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:27am	C Gray	SHAD41 D.ssf
1017	-121.2672883	37.827027739	6340074.39	2124514.006	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,723	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:29am	C Gray	SHAD41 D.ssf
1018	-121.2672896	37.82701856	6340073.995	2124510.794	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,221	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:31am	C Gray	SHAD41 D.ssf
1019	-121.2672729	37.82700923	6340073.849	2124507.399	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,163	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:33am	C Gray	SHAD41 D.ssf
1020	-121.2672887	37.82700031	6340073.899	2124504.15	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,001	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:35am	C Gray	SHAD41 D.ssf
1021	-121.2672897	37.82699921	6340074.17	2124501.158	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,046	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:37am	C Gray	SHAD41 D.ssf
1022	-121.2672868	37.82698353	6340074.693	2124498.035	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,873	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:39am	C Gray	SHAD41 D.ssf
1023	-121.2672857	37.82697271	6340074.994	2124494.091	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,394	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:41am	C Gray	SHAD41 D.ssf
1024	-121.2672867	37.82696394	6340074.663	2124490.9	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,594	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:43am	C Gray	SHAD41 D.ssf
1025	-121.2672889	37.82695191	6340074.012	2124486.526	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,483	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:45am	C Gray	SHAD41 D.ssf
1026	-121.2672894	37.82694213	6340073.839	2124482.966	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,837	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:47am	C Gray	SHAD41 D.ssf
1027	-121.2672889	37.82693097	6340073.939	2124478.9	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,806	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:49am	C Gray	SHAD41 D.ssf
1028	-121.2672895	37.82692062	6340073.739	2124475.135	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,380	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:51am	C Gray	SHAD41 D.ssf
1029	-121.2672909	37.82690807	6340073.29	2124470.569	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,381	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:53am	C Gray	SHAD41 D.ssf
1030	-121.2672919	37.82689919	6340072.978	2124467.337	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,667	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:55am	C Gray	SHAD41 D.ssf
1031	-121.2672908	37.82688928	6340073.275	2124463.725	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,406	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:57am	C Gray	SHAD41 D.ssf
1032	-121.2672913	37.82688004	6340073.082	2124460.364	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,999	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:51:59am	C Gray	SHAD41 D.ssf
1033	-121.267292	37.82686836	6340072.867	2124456.111	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,013	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:01am	C Gray	SHAD41 D.ssf
1034	-121.2672925	37.82685601	6340072.672	2124451.617	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,762	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:03am	C Gray	SHAD41 D.ssf
1035	-121.2672923	37.82684496	6340072.694	2124447.593	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,515	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:05am	C Gray	SHAD41 D.ssf
1036	-121.2672907	37.8268353	6340073.135	2124444.07	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,555	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:07am	C Gray	SHAD41 D.ssf
1037	-121.267292	37.82682226	6340072.724	2124439.324	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,663	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:09am	C Gray	SHAD41 D.ssf
1038	-121.2672922	37.82681089	6340072.629	2124435.185	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,331	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:11am	C Gray	SHAD41 D.ssf
1039	-121.2672894	37.82679694	6340072.471	2124431.005	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,154	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:13am	C Gray	SHAD41 D.ssf
1040	-121.2672909	37.82679179	6340072.941	2124428.23	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,549	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:15am	C Gray	SHAD41 D.ssf
1041	-121.267293	37.82678985	6340072.32	2124427.529	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,894	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:17am	C Gray	SHAD41 D.ssf
1042	-121.2672892	37.82678909	6340073.422	2124427.243	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,745	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:19am	C Gray	SHAD41 D.ssf
1043	-121.2672889	37.82678805	6340073.508	2124426.86	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,763	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:21am	C Gray	SHAD41 D.ssf
1044	-121.2672897	37.8267892	6340073.295	2124427.283	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,005	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:23am	C Gray	SHAD41 D.ssf
1045	-121.2672897	37.82679513	6340073.299	2124429.442	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,521	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:25am	C Gray	SHAD41 D.ssf
1046	-121.2672894	37.82680371	6340073.403	2124432.567	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,555	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:27am	C Gray	SHAD41 D.ssf
1047	-121.2672898	37.82681556	6340073.342	2124436.88	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,338	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:29am	C Gray	SHAD41 D.ssf
1048	-121.2672874	37.82682576	6340074.049	2124440.588	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,017	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:31am	C Gray	SHAD41 D.ssf
1049	-121.2672878	37.82682576	6340073.992	2124445.418	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,012	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:33am	C Gray	SHAD41 D.ssf
1050	-121.2672892	37.82684862	6340073.604	2124448.918	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,866	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:35am	C Gray	SHAD41 D.ssf
1051	-121.2672898	37.82686037	6340073.445	2124453.199	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,549	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:37am	C Gray	SHAD41 D.ssf
1052	-121.2672904	37.82687505	6340073.345	2124458.544	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,183	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:39am	C Gray	SHAD41 D.ssf
1053	-121.2672909	37.82688644	6340073.424	2124462.692	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,772	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:41am	C Gray	SHAD41 D.ssf
1054	-121.2672896	37.82689794	6340073.647	2124466.875	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,360	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:43am	C Gray	SHAD41 D.ssf
1055	-121.2672896	37.82690944	6340073.677	2124471.064	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,633	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:45am	C Gray	SHAD41 D.ssf
1056	-121.2672903	37.82693439	6340073.512	2124475.473	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,180	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:47am	C Gray	SHAD41 D.ssf
1057	-121.2672897	37.82692155	6340073.705	2124480.149	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,382	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:49am	C Gray	SHAD41 D.ssf
1058	-121.2672903	37.82694651	6340073.585	2124484.563	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,566	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:51am	C Gray	SHAD41 D.ssf
1059	-121.2672907	37.82695795	6340073.497	2124488.728	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,551	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:53am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
1060	-121.2672898	37.826971461	6340073.788	2124493.702	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,844	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:55am	C Gray	SHAD41 D.ssf
1061	-121.2672897	37.82698352	6340073.875	2124498.694	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,165	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:57am	C Gray	SHAD41 D.ssf
1062	-121.2672886	37.82699814	6340074.214	2124503.358	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,792	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:52:59am	C Gray	SHAD41 D.ssf
1063	-121.2672872	37.8270111	6340074.68	2124508.074	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	42,075	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:01am	C Gray	SHAD41 D.ssf
1064	-121.2672869	37.8270228	6340074.78	2124512.334	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	46,679	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:03am	C Gray	SHAD41 D.ssf
1065	-121.2672859	37.82703306	6340075.104	2124516.066	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	50,066	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:05am	C Gray	SHAD41 D.ssf
1066	-121.2672817	37.82703885	6340076.55	2124518.164	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	57,947	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:07am	C Gray	SHAD41 D.ssf
1067	-121.2672767	37.82703523	6340077.78	2124516.836	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	67,906	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:09am	C Gray	SHAD41 D.ssf
1068	-121.2672761	37.82703078	6340077.92	2124515.212	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	67,196	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:11am	C Gray	SHAD41 D.ssf
1069	-121.267276	37.82702117	6340077.933	2124511.715	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	57,303	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:13am	C Gray	SHAD41 D.ssf
1070	-121.2672756	37.82701231	6340078.025	2124508.485	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	50,937	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:15am	C Gray	SHAD41 D.ssf
1071	-121.2672761	37.82700078	6340077.839	2124504.29	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	46,280	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:17am	C Gray	SHAD41 D.ssf
1072	-121.2672764	37.82699114	6340077.735	2124500.78	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	44,726	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:19am	C Gray	SHAD41 D.ssf
1073	-121.2672768	37.8269983	6340077.585	2124497.819	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	42,376	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:21am	C Gray	SHAD41 D.ssf
1074	-121.2672771	37.826997391	6340077.503	2124494.509	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,703	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:23am	C Gray	SHAD41 D.ssf
1075	-121.2672771	37.82696348	6340077.445	2124490.692	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,786	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:25am	C Gray	SHAD41 D.ssf
1076	-121.2672767	37.82695088	6340077.532	2124486.12	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,215	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:27am	C Gray	SHAD41 D.ssf
1077	-121.2672758	37.82694002	6340077.741	2124482.167	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	40,750	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:29am	C Gray	SHAD41 D.ssf
1078	-121.2672757	37.82692709	6340077.747	2124477.456	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	47,159	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:31am	C Gray	SHAD41 D.ssf
1079	-121.2672754	37.82691825	6340077.805	2124474.237	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	48,203	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:33am	C Gray	SHAD41 D.ssf
1080	-121.2672761	37.82690601	6340077.557	2124469.781	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,797	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:35am	C Gray	SHAD41 D.ssf
1081	-121.2672769	37.82689357	6340077.296	2124465.256	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,245	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:37am	C Gray	SHAD41 D.ssf
1082	-121.2672766	37.82688272	6340077.344	2124461.305	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,692	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:39am	C Gray	SHAD41 D.ssf
1083	-121.2672778	37.82686938	6340076.95	2124456.619	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	29,891	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:41am	C Gray	SHAD41 D.ssf
1084	-121.2672794	37.82685808	6340076.472	2124452.34	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	29,937	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:43am	C Gray	SHAD41 D.ssf
1085	-121.267281	37.82684731	6340075.967	2124448.422	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	28,952	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:45am	C Gray	SHAD41 D.ssf
1086	-121.2672814	37.82683674	6340075.822	2124444.575	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	30,783	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:47am	C Gray	SHAD41 D.ssf
1087	-121.2672828	37.82682403	6340075.392	2124439.95	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,662	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:49am	C Gray	SHAD41 D.ssf
1088	-121.2672839	37.82681294	6340075.042	2124435.913	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,363	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:51am	C Gray	SHAD41 D.ssf
1089	-121.267284	37.82680009	6340074.971	2124431.273	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,222	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:53am	C Gray	SHAD41 D.ssf
1090	-121.2672818	37.8267903	6340075.577	2124427.665	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,686	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:55am	C Gray	SHAD41 D.ssf
1091	-121.2672793	37.82678702	6340076.292	2124426.463	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,567	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:57am	C Gray	SHAD41 D.ssf
1092	-121.2672861	37.82678624	6340074.319	2124426.198	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	34,197	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:53:59am	C Gray	SHAD41 D.ssf
1093	-121.2672845	37.8267855	6340074.759	2124425.925	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	34,142	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:01am	C Gray	SHAD41 D.ssf
1094	-121.2672836	37.82678966	6340075.059	2124427.436	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,483	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:03am	C Gray	SHAD41 D.ssf
1095	-121.2672835	37.82680052	6340075.111	2124431.39	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	34,177	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:05am	C Gray	SHAD41 D.ssf
1096	-121.2672831	37.8268119	6340075.257	2124435.533	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,388	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:07am	C Gray	SHAD41 D.ssf
1097	-121.2672842	37.82682291	6340074.984	2124439.542	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,680	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:09am	C Gray	SHAD41 D.ssf
1098	-121.2672839	37.82683576	6340075.083	2124444.223	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,650	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:11am	C Gray	SHAD41 D.ssf
1099	-121.2672821	37.82684608	6340075.641	2124447.977	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,609	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:13am	C Gray	SHAD41 D.ssf
1100	-121.2672817	37.82685647	6340075.797	2124451.757	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	30,562	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:15am	C Gray	SHAD41 D.ssf
1101	-121.2672814	37.82686038	6340075.933	2124456.82	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	29,631	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:17am	C Gray	SHAD41 D.ssf
1102	-121.2672817	37.82688041	6340075.854	2124460.479	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	29,801	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:19am	C Gray	SHAD41 D.ssf
1103	-121.2672817	37.82688943	6340075.905	2124463.759	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	29,974	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:21am	C Gray	SHAD41 D.ssf
1104	-121.2672804	37.82690276	6340076.316	2124468.608	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,087	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:23am	C Gray	SHAD41 D.ssf
1105	-121.2672806	37.82691438	6340076.272	2124472.842	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,402	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:25am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastng	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1106	-121.267285	37.826926575	6340076.498	2124477.344	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,606	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:27am	C Gray	SHAD41 D.ssf
1107	-121.2672805	37.82693792	6340076.376	2124481.111	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,524	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:29am	C Gray	SHAD41 D.ssf
1108	-121.2672804	37.82695056	6340076.451	2124486.014	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,489	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:31am	C Gray	SHAD41 D.ssf
1109	-121.2672798	37.82696642	6340076.651	2124490.98	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,947	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:33am	C Gray	SHAD41 D.ssf
1110	-121.2672795	37.82697665	6340076.796	2124495.513	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,397	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:35am	C Gray	SHAD41 D.ssf
1111	-121.2672799	37.82698841	6340076.713	2124499.795	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,030	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:37am	C Gray	SHAD41 D.ssf
1112	-121.2672786	37.82700017	6340077.108	2124504.268	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,220	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:39am	C Gray	SHAD41 D.ssf
1113	-121.2672796	37.8270151	6340076.876	2124509.512	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,743	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:41am	C Gray	SHAD41 D.ssf
1114	-121.2672796	37.82702497	6340076.889	2124513.106	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,324	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:43am	C Gray	SHAD41 D.ssf
1115	-121.2672815	37.82703451	6340076.371	2124516.584	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,170	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:45am	C Gray	SHAD41 D.ssf
1116	-121.2672737	37.82704015	6340078.655	2124518.617	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,195	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:47am	C Gray	SHAD41 D.ssf
1117	-121.2672789	37.82703789	6340078.807	2124517.795	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,173	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:49am	C Gray	SHAD41 D.ssf
1118	-121.2672685	37.82703658	6340080.149	2124517.308	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,584	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:51am	C Gray	SHAD41 D.ssf
1119	-121.267267	37.82703095	6340080.549	2124515.255	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,369	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:53am	C Gray	SHAD41 D.ssf
1120	-121.2672687	37.82702072	6340079.964	2124511.535	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,243	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:55am	C Gray	SHAD41 D.ssf
1121	-121.2672687	37.82700893	6340080.777	2124507.991	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,610	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:57am	C Gray	SHAD41 D.ssf
1122	-121.2672696	37.827	6340079.726	2124503.924	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,008	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:54:59am	C Gray	SHAD41 D.ssf
1123	-121.2672695	37.82699109	6340079.716	2124500.746	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,624	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:01am	C Gray	SHAD41 D.ssf
1124	-121.2672701	37.82697988	6340079.51	2124496.664	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,775	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:03am	C Gray	SHAD41 D.ssf
1125	-121.2672725	37.82699719	6340078.796	2124493.764	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,167	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:05am	C Gray	SHAD41 D.ssf
1126	-121.2672752	37.82696055	6340078.834	2124489.633	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,511	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:07am	C Gray	SHAD41 D.ssf
1127	-121.2672734	37.82695226	6340078.473	2124486.61	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,030	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:09am	C Gray	SHAD41 D.ssf
1128	-121.2672722	37.82693863	6340078.777	2124481.652	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,336	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:11am	C Gray	SHAD41 D.ssf
1129	-121.2672724	37.82692863	6340078.686	2124478.011	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,569	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:13am	C Gray	SHAD41 D.ssf
1130	-121.2672726	37.82691516	6340078.61	2124473.104	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,326	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:15am	C Gray	SHAD41 D.ssf
1131	-121.2672709	37.8269075	6340079.048	2124469.404	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,280	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:17am	C Gray	SHAD41 D.ssf
1132	-121.2672709	37.8268917	6340079.031	2124464.561	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,490	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:19am	C Gray	SHAD41 D.ssf
1133	-121.2672705	37.82688205	6340079.096	2124461.045	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,761	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:21am	C Gray	SHAD41 D.ssf
1134	-121.2672693	37.82687186	6340079.421	2124457.333	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,712	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:23am	C Gray	SHAD41 D.ssf
1135	-121.2672725	37.82685853	6340078.619	2124452.486	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,128	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:25am	C Gray	SHAD41 D.ssf
1136	-121.2672715	37.82684622	6340078.408	2124448.003	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,656	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:27am	C Gray	SHAD41 D.ssf
1137	-121.2672713	37.82683508	6340078.72	2124443.945	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,409	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:29am	C Gray	SHAD41 D.ssf
1138	-121.2672712	37.82681745	6340078.699	2124437.525	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,313	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:31am	C Gray	SHAD41 D.ssf
1139	-121.2672749	37.82680526	6340077.608	2124433.097	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,611	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:33am	C Gray	SHAD41 D.ssf
1140	-121.2672705	37.82679686	6340077.935	2124430.043	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,122	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:35am	C Gray	SHAD41 D.ssf
1141	-121.2672744	37.82678541	6340077.675	2124425.868	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,845	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:37am	C Gray	SHAD41 D.ssf
1142	-121.2672714	37.82678343	6340078.554	2124425.139	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,302	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:39am	C Gray	SHAD41 D.ssf
1143	-121.2672743	37.82678202	6340077.72	2124424.633	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,745	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:41am	C Gray	SHAD41 D.ssf
1144	-121.2672734	37.82678309	6340077.974	2124425.021	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,022	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:43am	C Gray	SHAD41 D.ssf
1145	-121.2672741	37.82678773	6340077.792	2124426.712	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,712	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:45am	C Gray	SHAD41 D.ssf
1146	-121.2672751	37.82679508	6340077.502	2124429.391	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,867	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:47am	C Gray	SHAD41 D.ssf
1147	-121.2672753	37.82680387	6340077.474	2124432.589	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,122	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:49am	C Gray	SHAD41 D.ssf
1148	-121.2672743	37.82681793	6340077.793	2124435.913	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,636	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:51am	C Gray	SHAD41 D.ssf
1149	-121.2672744	37.82682127	6340077.796	2124438.922	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,460	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:53am	C Gray	SHAD41 D.ssf
1150	-121.2672745	37.82683167	6340077.798	2124442.709	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,033	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:55am	C Gray	SHAD41 D.ssf
1151	-121.2672728	37.82683997	6340078.319	2124445.73	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,654	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:57am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1152	-121.2672727	37.82684939	6340078.363	2124449.158	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,092	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:55:59am	C Gray	SHAD41 D.ssf
1153	-121.2672727	37.82685896	6340078.392	2124452.643	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,651	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:01am	C Gray	SHAD41 D.ssf
1154	-121.2672727	37.82686936	6340078.495	2124456.431	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,055	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:03am	C Gray	SHAD41 D.ssf
1155	-121.2672723	37.82687881	6340078.588	2124459.87	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,853	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:05am	C Gray	SHAD41 D.ssf
1156	-121.267271	37.82688672	6340078.969	2124462.747	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,908	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:07am	C Gray	SHAD41 D.ssf
1157	-121.2672707	37.82689708	6340079.088	2124466.497	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,910	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:09am	C Gray	SHAD41 D.ssf
1158	-121.2672681	37.82690681	6340079.293	2124470.059	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,459	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:11am	C Gray	SHAD41 D.ssf
1159	-121.2672708	37.82691974	6340079.118	2124474.771	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,755	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:13am	C Gray	SHAD41 D.ssf
1160	-121.2672701	37.82693094	6340079.366	2124478.847	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,853	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:15am	C Gray	SHAD41 D.ssf
1161	-121.2672693	37.82694199	6340079.621	2124482.866	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,516	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:17am	C Gray	SHAD41 D.ssf
1162	-121.2672682	37.82695132	6340079.961	2124486.262	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,342	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:19am	C Gray	SHAD41 D.ssf
1163	-121.267272	37.82696435	6340079.495	2124491.012	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,020	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:21am	C Gray	SHAD41 D.ssf
1164	-121.2672705	37.82697628	6340079.389	2124495.356	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,483	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:23am	C Gray	SHAD41 D.ssf
1165	-121.2672698	37.82698707	6340079.61	2124499.284	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,393	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:25am	C Gray	SHAD41 D.ssf
1166	-121.2672706	37.82699808	6340079.41	2124503.293	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,115	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:27am	C Gray	SHAD41 D.ssf
1167	-121.2672682	37.82701066	6340080.145	2124507.867	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,563	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:29am	C Gray	SHAD41 D.ssf
1168	-121.2672678	37.82702212	6340080.317	2124512.041	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,435	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:31am	C Gray	SHAD41 D.ssf
1169	-121.2672677	37.82703292	6340080.37	2124515.973	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,402	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:33am	C Gray	SHAD41 D.ssf
1170	-121.2672659	37.82704065	6340080.915	2124518.782	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,506	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:35am	C Gray	SHAD41 D.ssf
1171	-121.2672616	37.82703874	6340080.592	2124518.09	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	83,977	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:37am	C Gray	SHAD41 D.ssf
1172	-121.2672587	37.82703838	6340082.993	2124517.938	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	83,347	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:39am	C Gray	SHAD41 D.ssf
1173	-121.2672584	37.82703034	6340083.047	2124515.012	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,723	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:41am	C Gray	SHAD41 D.ssf
1174	-121.2672588	37.82701972	6340082.892	2124511.145	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,993	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:43am	C Gray	SHAD41 D.ssf
1175	-121.2672598	37.82700866	6340082.863	2124507.119	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,394	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:45am	C Gray	SHAD41 D.ssf
1176	-121.2672596	37.82699651	6340082.538	2124502.733	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,445	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:47am	C Gray	SHAD41 D.ssf
1177	-121.2672616	37.82698449	6340081.971	2124498.694	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,861	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:49am	C Gray	SHAD41 D.ssf
1178	-121.267261	37.82697133	6340082.126	2124493.531	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,033	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:51am	C Gray	SHAD41 D.ssf
1179	-121.2672623	37.82695792	6340081.69	2124488.653	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,124	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:53am	C Gray	SHAD41 D.ssf
1180	-121.2672628	37.82694796	6340081.536	2124485.027	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,849	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:55am	C Gray	SHAD41 D.ssf
1181	-121.2672628	37.82693768	6340081.491	2124481.283	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,593	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:57am	C Gray	SHAD41 D.ssf
1182	-121.2672619	37.82692719	6340081.719	2124477.46	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,677	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:56:59am	C Gray	SHAD41 D.ssf
1183	-121.2672634	37.82691299	6340081.253	2124472.295	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,586	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:01am	C Gray	SHAD41 D.ssf
1184	-121.2672624	37.82690316	6340081.513	2124468.712	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,575	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:03am	C Gray	SHAD41 D.ssf
1185	-121.2672607	37.82689002	6340082.952	2124463.925	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,760	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:05am	C Gray	SHAD41 D.ssf
1186	-121.2672623	37.82689579	6340082.225	2124460.25	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,371	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:07am	C Gray	SHAD41 D.ssf
1187	-121.2672596	37.82688604	6340082.192	2124455.19	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,260	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:09am	C Gray	SHAD41 D.ssf
1188	-121.2672612	37.82688547	6340081.697	2124451.346	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,469	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:11am	C Gray	SHAD41 D.ssf
1189	-121.2672613	37.82688449	6340081.656	2124447.523	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,633	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:13am	C Gray	SHAD41 D.ssf
1190	-121.2672636	37.82683379	6340080.942	2124443.457	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,931	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:15am	C Gray	SHAD41 D.ssf
1191	-121.2672635	37.82681998	6340080.951	2124438.43	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,260	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:17am	C Gray	SHAD41 D.ssf
1192	-121.2672627	37.82680942	6340081.13	2124434.58	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,943	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:19am	C Gray	SHAD41 D.ssf
1193	-121.2672616	37.82679934	6340081.435	2124430.91	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,254	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:21am	C Gray	SHAD41 D.ssf
1194	-121.2672611	37.82678892	6340081.541	2124427.112	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,080	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:23am	C Gray	SHAD41 D.ssf
1195	-121.2672596	37.82678636	6340083.016	2124426.17	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,776	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:25am	C Gray	SHAD41 D.ssf
1196	-121.2672601	37.82678151	6340081.813	2124424.412	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,128	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:27am	C Gray	SHAD41 D.ssf
1197	-121.2672595	37.82678557	6340082.006	2124425.891	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,096	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:29am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1198	-121.2672572	37.82679401	6340082.669	2124428.957	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,069	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:31am	C Gray	SHAD41 D.ssf
1199	-121.2672587	37.82680468	6340082.471	2124432.846	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,328	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:33am	C Gray	SHAD41 D.ssf
1200	-121.2672587	37.82681591	6340082.321	2124436.935	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,405	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:35am	C Gray	SHAD41 D.ssf
1201	-121.26726	37.82682771	6340081.973	2124441.234	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,373	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:37am	C Gray	SHAD41 D.ssf
1202	-121.2672616	37.82683672	6340081.552	2124444.517	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,456	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:39am	C Gray	SHAD41 D.ssf
1203	-121.2672624	37.82684574	6340081.338	2124447.805	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,596	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:41am	C Gray	SHAD41 D.ssf
1204	-121.2672632	37.8268555	6340080.733	2124451.363	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,288	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:43am	C Gray	SHAD41 D.ssf
1205	-121.2672646	37.82686179	6340081.179	2124455.616	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,771	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:45am	C Gray	SHAD41 D.ssf
1206	-121.2672636	37.82688017	6340081.082	2124460.344	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,260	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:47am	C Gray	SHAD41 D.ssf
1207	-121.2672613	37.82689058	6340081.774	2124464.13	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,584	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:49am	C Gray	SHAD41 D.ssf
1208	-121.2672615	37.82690167	6340081.753	2124468.166	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,821	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:51am	C Gray	SHAD41 D.ssf
1209	-121.2672605	37.82691261	6340082.082	2124472.148	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,271	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:53am	C Gray	SHAD41 D.ssf
1210	-121.2672612	37.82692533	6340081.917	2124476.783	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,741	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:55am	C Gray	SHAD41 D.ssf
1211	-121.2672621	37.82693559	6340081.696	2124480.518	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,479	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:57am	C Gray	SHAD41 D.ssf
1212	-121.2672618	37.8269459	6340081.796	2124484.274	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,542	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:57:59am	C Gray	SHAD41 D.ssf
1213	-121.2672636	37.82695886	6340081.333	2124488.998	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,648	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:01am	C Gray	SHAD41 D.ssf
1214	-121.2672639	37.82697171	6340081.248	2124493.473	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,405	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:03am	C Gray	SHAD41 D.ssf
1215	-121.2672643	37.82698263	6340081.201	2124497.653	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,253	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:05am	C Gray	SHAD41 D.ssf
1216	-121.267265	37.82699396	6340081.025	2124501.781	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,208	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:07am	C Gray	SHAD41 D.ssf
1217	-121.2672657	37.82700567	6340081.917	2124506.045	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,890	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:09am	C Gray	SHAD41 D.ssf
1218	-121.2672636	37.82701771	6340081.514	2124510.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,791	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:11am	C Gray	SHAD41 D.ssf
1219	-121.267264	37.82702704	6340081.408	2124513.822	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,181	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:13am	C Gray	SHAD41 D.ssf
1220	-121.2672642	37.82703673	6340081.392	2124517.352	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,213	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:15am	C Gray	SHAD41 D.ssf
1221	-121.2672527	37.82704164	6340084.734	2124519.112	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,276	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:17am	C Gray	SHAD41 D.ssf
1222	-121.2672533	37.82704153	6340084.548	2124519.004	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,890	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:19am	C Gray	SHAD41 D.ssf
1223	-121.2672505	37.8270296	6340085.331	2124514.724	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73,716	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:21am	C Gray	SHAD41 D.ssf
1224	-121.2672505	37.8270296	6340085.331	2124514.724	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,694	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:23am	C Gray	SHAD41 D.ssf
1225	-121.2672502	37.82702127	6340085.381	2124511.688	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,012	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:25am	C Gray	SHAD41 D.ssf
1226	-121.2672502	37.82701817	6340085.369	2124510.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,189	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:27am	C Gray	SHAD41 D.ssf
1227	-121.2672488	37.82700829	6340085.739	2124506.961	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,030	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:29am	C Gray	SHAD41 D.ssf
1228	-121.2672493	37.8269981	6340085.568	2124503.25	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,824	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:31am	C Gray	SHAD41 D.ssf
1229	-121.2672489	37.82698766	6340085.672	2124499.447	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,241	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:33am	C Gray	SHAD41 D.ssf
1230	-121.2672494	37.82697476	6340085.468	2124494.753	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,835	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:35am	C Gray	SHAD41 D.ssf
1231	-121.2672503	37.82696373	6340085.19	2124490.737	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,418	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:37am	C Gray	SHAD41 D.ssf
1232	-121.2672501	37.82695084	6340085.19	2124486.046	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,105	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:39am	C Gray	SHAD41 D.ssf
1233	-121.2672496	37.82693968	6340085.325	2124481.98	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,692	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:41am	C Gray	SHAD41 D.ssf
1234	-121.2672494	37.82692696	6340085.343	2124477.349	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,753	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:43am	C Gray	SHAD41 D.ssf
1235	-121.2672495	37.82691518	6340085.262	2124473.06	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,505	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:45am	C Gray	SHAD41 D.ssf
1236	-121.2672497	37.82690329	6340085.17	2124468.731	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,902	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:47am	C Gray	SHAD41 D.ssf
1237	-121.2672501	37.82689221	6340085.037	2124464.695	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,983	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:49am	C Gray	SHAD41 D.ssf
1238	-121.2672504	37.82687998	6340084.898	2124460.243	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,976	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:51am	C Gray	SHAD41 D.ssf
1239	-121.2672502	37.82686719	6340084.93	2124455.585	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,340	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:53am	C Gray	SHAD41 D.ssf
1240	-121.2672515	37.82685458	6340084.506	2124450.998	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,401	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:55am	C Gray	SHAD41 D.ssf
1241	-121.2672519	37.82684247	6340084.368	2124446.588	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,619	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:57am	C Gray	SHAD41 D.ssf
1242	-121.267252	37.82682859	6340084.291	2124441.535	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,841	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:58:59am	C Gray	SHAD41 D.ssf
1243	-121.2672528	37.82681839	6340084.018	2124437.826	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,561	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:01am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1244	-121.2672547	37.82680752	6340083.46	2124433.871	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,948	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:03am	C Gray	SHAD41 D.ssf
1245	-121.2672539	37.82679685	6340083.634	2124429.984	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,393	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:05am	C Gray	SHAD41 D.ssf
1246	-121.2672491	37.82678785	6340085.013	2124426.695	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,565	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:07am	C Gray	SHAD41 D.ssf
1247	-121.2672453	37.82678948	6340086.107	2124427.28	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,370	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:09am	C Gray	SHAD41 D.ssf
1248	-121.2672504	37.82678629	6340084.612	2124426.131	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,669	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:11am	C Gray	SHAD41 D.ssf
1249	-121.2672551	37.82679115	6340084.466	2124427.901	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,006	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:13am	C Gray	SHAD41 D.ssf
1250	-121.2672505	37.82680014	6340084.627	2124431.173	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,094	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:15am	C Gray	SHAD41 D.ssf
1251	-121.2672505	37.82680958	6340084.671	2124434.611	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,446	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:17am	C Gray	SHAD41 D.ssf
1252	-121.2672511	37.82682115	6340084.525	2124438.825	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,278	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:19am	C Gray	SHAD41 D.ssf
1253	-121.267252	37.82683129	6340084.31	2124442.518	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,962	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:21am	C Gray	SHAD41 D.ssf
1254	-121.2672519	37.82683964	6340084.363	2124445.559	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,817	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:23am	C Gray	SHAD41 D.ssf
1255	-121.2672523	37.82685243	6340084.265	2124450.1	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,731	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:25am	C Gray	SHAD41 D.ssf
1256	-121.2672523	37.82686635	6340084.3	2124454.249	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,841	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:27am	C Gray	SHAD41 D.ssf
1257	-121.2672538	37.82687421	6340083.917	2124458.15	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,638	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:29am	C Gray	SHAD41 D.ssf
1258	-121.2672534	37.82688484	6340084.053	2124462.02	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,642	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:31am	C Gray	SHAD41 D.ssf
1259	-121.2672513	37.82689615	6340084.705	2124466.135	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,585	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:33am	C Gray	SHAD41 D.ssf
1260	-121.2672497	37.82690513	6340085.17	2124469.399	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,880	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:35am	C Gray	SHAD41 D.ssf
1261	-121.2672514	37.82691834	6340084.738	2124474.213	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,803	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:37am	C Gray	SHAD41 D.ssf
1262	-121.2672522	37.82692967	6340084.519	2124478.34	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,292	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:39am	C Gray	SHAD41 D.ssf
1263	-121.2672528	37.82694021	6340084.377	2124482.179	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,484	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:41am	C Gray	SHAD41 D.ssf
1264	-121.2672516	37.8269513	6340084.917	2124486.072	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,853	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:43am	C Gray	SHAD41 D.ssf
1265	-121.2672526	37.82696089	6340084.497	2124489.708	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,843	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:45am	C Gray	SHAD41 D.ssf
1266	-121.2672538	37.82697239	6340084.185	2124493.899	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,145	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:47am	C Gray	SHAD41 D.ssf
1267	-121.2672541	37.82698373	6340084.145	2124497.519	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,968	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:49am	C Gray	SHAD41 D.ssf
1268	-121.2672545	37.82699341	6340084.055	2124501.664	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,056	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:51am	C Gray	SHAD41 D.ssf
1269	-121.2672542	37.82700424	6340084.048	2124505.697	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,748	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:53am	C Gray	SHAD41 D.ssf
1270	-121.2672516	37.82701177	6340084.956	2124510.394	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,887	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:55am	C Gray	SHAD41 D.ssf
1271	-121.2672509	37.82702757	6340085.2	2124513.984	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,270	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:57am	C Gray	SHAD41 D.ssf
1272	-121.2672524	37.82703924	6340084.883	2124518.239	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,588	Geo 7X	Real-time SBAS Corrected	10/3/2017	09:59:59am	C Gray	SHAD41 D.ssf
1273	-121.2672508	37.82704167	6340085.283	2124519.117	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,759	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:01am	C Gray	SHAD41 D.ssf
1274	-121.2672484	37.82704111	6340085.967	2124518.909	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,562	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:03am	C Gray	SHAD41 D.ssf
1275	-121.2672423	37.82703882	6340087.715	2124517.835	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,911	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:05am	C Gray	SHAD41 D.ssf
1276	-121.2672412	37.82702649	6340087.995	2124513.568	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,570	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:07am	C Gray	SHAD41 D.ssf
1277	-121.2672474	37.82701474	6340088.313	2124509.286	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,016	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:09am	C Gray	SHAD41 D.ssf
1278	-121.2672399	37.82700392	6340088.308	2124505.346	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,484	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:11am	C Gray	SHAD41 D.ssf
1279	-121.2672426	37.82699677	6340087.497	2124502.751	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,828	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:13am	C Gray	SHAD41 D.ssf
1280	-121.2672444	37.82698305	6340086.951	2124497.758	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,190	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:15am	C Gray	SHAD41 D.ssf
1281	-121.2672457	37.82697115	6340086.536	2124493.431	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,730	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:17am	C Gray	SHAD41 D.ssf
1282	-121.2672461	37.82696077	6340086.38	2124489.652	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,247	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:19am	C Gray	SHAD41 D.ssf
1283	-121.2672425	37.82694966	6340086.472	2124485.605	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,593	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:21am	C Gray	SHAD41 D.ssf
1284	-121.2672443	37.82693887	6340086.853	2124481.672	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,779	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:23am	C Gray	SHAD41 D.ssf
1285	-121.2672443	37.82692624	6340086.801	2124477.073	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,290	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:25am	C Gray	SHAD41 D.ssf
1286	-121.2672434	37.82691449	6340087.022	2124472.793	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,163	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:27am	C Gray	SHAD41 D.ssf
1287	-121.2672445	37.82690227	6340086.685	2124468.348	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,293	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:29am	C Gray	SHAD41 D.ssf
1288	-121.2672453	37.82689909	6340086.396	2124463.914	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,051	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:31am	C Gray	SHAD41 D.ssf
1289	-121.2672456	37.82687821	6340086.276	2124459.588	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,454	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:33am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
1290	-121.2672455	37.82686512	6340086.266	2124454.823	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,925	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:35am	C Gray	SHAD41 D.ssf
1291	-121.2672468	37.8268552	6340085.871	2124450.046	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,903	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:37am	C Gray	SHAD41 D.ssf
1292	-121.2672473	37.82683825	6340085.671	2124445.041	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,019	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:39am	C Gray	SHAD41 D.ssf
1293	-121.2672481	37.82682571	6340085.417	2124440.478	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,948	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:41am	C Gray	SHAD41 D.ssf
1294	-121.2672485	37.82681316	6340085.243	2124435.908	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,980	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:43am	C Gray	SHAD41 D.ssf
1295	-121.2672473	37.82680188	6340085.579	2124431.798	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,990	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:45am	C Gray	SHAD41 D.ssf
1296	-121.2672457	37.82679072	6340085.623	2124427.736	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,677	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:47am	C Gray	SHAD41 D.ssf
1297	-121.2672447	37.82678553	6340085.966	2124425.842	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,896	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:49am	C Gray	SHAD41 D.ssf
1298	-121.2672414	37.82678953	6340087.225	2124427.29	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,419	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:51am	C Gray	SHAD41 D.ssf
1299	-121.2672431	37.82678681	6340086.727	2124426.304	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,072	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:53am	C Gray	SHAD41 D.ssf
1300	-121.2672436	37.82678875	6340086.603	2124427.011	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,293	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:55am	C Gray	SHAD41 D.ssf
1301	-121.2672445	37.82679223	6340087.187	2124428.273	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,559	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:57am	C Gray	SHAD41 D.ssf
1302	-121.2672433	37.82680267	6340086.716	2124432.078	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,827	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:00:59am	C Gray	SHAD41 D.ssf
1303	-121.2672432	37.82681442	6340086.774	2124436.355	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,525	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:01am	C Gray	SHAD41 D.ssf
1304	-121.2672446	37.82682503	6340086.415	2124440.224	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,451	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:03am	C Gray	SHAD41 D.ssf
1305	-121.2672448	37.82683637	6340086.397	2124444.352	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,205	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:05am	C Gray	SHAD41 D.ssf
1306	-121.2672447	37.82684672	6340086.437	2124448.122	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,768	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:07am	C Gray	SHAD41 D.ssf
1307	-121.2672449	37.82686046	6340086.435	2124453.123	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,172	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:09am	C Gray	SHAD41 D.ssf
1308	-121.2672453	37.82687015	6340086.352	2124456.652	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,046	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:11am	C Gray	SHAD41 D.ssf
1309	-121.2672445	37.82688138	6340086.615	2124460.685	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,978	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:13am	C Gray	SHAD41 D.ssf
1310	-121.2672442	37.82689133	6340086.513	2124464.382	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,635	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:15am	C Gray	SHAD41 D.ssf
1311	-121.2672444	37.82690254	6340086.773	2124468.444	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,212	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:17am	C Gray	SHAD41 D.ssf
1312	-121.2672428	37.82691505	6340087.192	2124472.995	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,507	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:19am	C Gray	SHAD41 D.ssf
1313	-121.2672458	37.82692628	6340086.673	2124477.279	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,413	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:21am	C Gray	SHAD41 D.ssf
1314	-121.2672457	37.82693757	6340086.441	2124481.206	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,371	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:23am	C Gray	SHAD41 D.ssf
1315	-121.2672464	37.82693508	6340086.262	2124485.938	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,058	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:25am	C Gray	SHAD41 D.ssf
1316	-121.2672444	37.82696274	6340086.874	2124490.363	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,970	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:27am	C Gray	SHAD41 D.ssf
1317	-121.2672447	37.82697239	6340086.835	2124493.878	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,634	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:29am	C Gray	SHAD41 D.ssf
1318	-121.2672441	37.82698533	6340087.034	2124498.589	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,811	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:31am	C Gray	SHAD41 D.ssf
1319	-121.2672444	37.82699851	6340086.997	2124503.389	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,505	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:33am	C Gray	SHAD41 D.ssf
1320	-121.2672424	37.82701125	6340087.619	2124508.476	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,180	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:35am	C Gray	SHAD41 D.ssf
1321	-121.2672405	37.82702704	6340088.194	2124513.768	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,507	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:37am	C Gray	SHAD41 D.ssf
1322	-121.2672416	37.82703809	6340087.915	2124517.793	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	55,671	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:39am	C Gray	SHAD41 D.ssf
1323	-121.2672383	37.82704266	6340088.883	2124519.45	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	63,577	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:41am	C Gray	SHAD41 D.ssf
1324	-121.2672358	37.82704063	6340089.607	2124518.703	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	70,727	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:43am	C Gray	SHAD41 D.ssf
1325	-121.2672357	37.82703307	6340089.617	2124515.95	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	67,322	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:45am	C Gray	SHAD41 D.ssf
1326	-121.2672366	37.82702282	6340089.315	2124512.586	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	60,006	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:47am	C Gray	SHAD41 D.ssf
1327	-121.2672383	37.82701242	6340088.776	2124508.145	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,047	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:49am	C Gray	SHAD41 D.ssf
1328	-121.2672382	37.82700063	6340088.795	2124504.145	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,919	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:51am	C Gray	SHAD41 D.ssf
1329	-121.2672384	37.82699816	6340088.699	2124499.603	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,040	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:53am	C Gray	SHAD41 D.ssf
1330	-121.2672392	37.82697592	6340088.429	2124495.151	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,476	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:55am	C Gray	SHAD41 D.ssf
1331	-121.2672386	37.82696409	6340088.568	2124490.841	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,511	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:57am	C Gray	SHAD41 D.ssf
1332	-121.2672373	37.82695218	6340088.692	2124486.505	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,041	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:01:59am	C Gray	SHAD41 D.ssf
1333	-121.2672337	37.82693957	6340088.943	2124481.956	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,840	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:01am	C Gray	SHAD41 D.ssf
1334	-121.2672371	37.8269257	6340088.877	2124476.858	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,557	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:03am	C Gray	SHAD41 D.ssf
1335	-121.2672361	37.82691106	6340089.116	2124471.526	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,997	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:05am	C Gray	SHAD41 D.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1336	-121.2672369	37.82690088	6340088.854	2124467.821	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,563	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:07am	C Gray	SHAD41 D.ssf
1337	-121.2672376	37.82689388	6340088.628	2124463.636	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,724	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:09am	C Gray	SHAD41 D.ssf
1338	-121.2672377	37.82687567	6340088.545	2124458.644	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,887	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:11am	C Gray	SHAD41 D.ssf
1339	-121.2672373	37.82686267	6340088.642	2124453.909	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,742	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:13am	C Gray	SHAD41 D.ssf
1340	-121.2672379	37.82684991	6340088.417	2124449.266	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,202	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:15am	C Gray	SHAD41 D.ssf
1341	-121.2672384	37.82683347	6340088.227	2124444.008	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,098	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:17am	C Gray	SHAD41 D.ssf
1342	-121.2672396	37.82682214	6340087.85	2124439.159	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,458	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:19am	C Gray	SHAD41 D.ssf
1343	-121.2672395	37.82680985	6340087.833	2124434.684	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,225	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:21am	C Gray	SHAD41 D.ssf
1344	-121.2672383	37.82679665	6340088.154	2124429.874	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,992	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:23am	C Gray	SHAD41 D.ssf
1345	-121.2672341	37.82678957	6340089.335	2124427.287	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,383	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:25am	C Gray	SHAD41 D.ssf
1346	-121.2672343	37.82679087	6340089.278	2124427.759	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,615	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:27am	C Gray	SHAD41 D.ssf
1347	-121.2672352	37.82679404	6340089.043	2124428.917	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,417	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:29am	C Gray	SHAD41 D.ssf
1348	-121.2672335	37.82680371	6340089.706	2124432.433	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,856	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:31am	C Gray	SHAD41 D.ssf
1349	-121.2672344	37.82681375	6340089.34	2124436.09	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,910	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:33am	C Gray	SHAD41 D.ssf
1350	-121.2672348	37.82682429	6340089.249	2124439.928	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,797	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:35am	C Gray	SHAD41 D.ssf
1351	-121.2672348	37.82683398	6340089.264	2124443.458	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,964	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:37am	C Gray	SHAD41 D.ssf
1352	-121.2672349	37.82684322	6340089.277	2124446.823	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,557	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:39am	C Gray	SHAD41 D.ssf
1353	-121.2672362	37.82685725	6340088.947	2124451.933	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,762	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:41am	C Gray	SHAD41 D.ssf
1354	-121.2672374	37.82686826	6340088.616	2124455.944	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,387	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:43am	C Gray	SHAD41 D.ssf
1355	-121.2672381	37.82688021	6340088.444	2124460.297	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,182	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:45am	C Gray	SHAD41 D.ssf
1356	-121.2672387	37.82689362	6340088.447	2124465.194	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,035	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:47am	C Gray	SHAD41 D.ssf
1357	-121.2672383	37.8269052	6340088.363	2124469.4	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,789	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:49am	C Gray	SHAD41 D.ssf
1358	-121.267237	37.82691599	6340088.892	2124473.325	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,458	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:51am	C Gray	SHAD41 D.ssf
1359	-121.2672364	37.82692967	6340089.088	2124478.304	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,538	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:53am	C Gray	SHAD41 D.ssf
1360	-121.2672367	37.82694067	6340089.451	2124482.308	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,738	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:55am	C Gray	SHAD41 D.ssf
1361	-121.2672354	37.82695312	6340089.312	2124486.84	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,793	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:57am	C Gray	SHAD41 D.ssf
1362	-121.2672359	37.82696647	6340089.355	2124491.058	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,105	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:02:59am	C Gray	SHAD41 D.ssf
1363	-121.267238	37.82697378	6340088.767	2124494.367	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,801	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:01am	C Gray	SHAD41 D.ssf
1364	-121.2672376	37.82698863	6340088.919	2124499.775	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,336	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:03am	C Gray	SHAD41 D.ssf
1365	-121.2672355	37.82699951	6340089.576	2124503.731	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,756	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:05am	C Gray	SHAD41 D.ssf
1366	-121.2672346	37.82701082	6340089.87	2124507.847	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,438	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:07am	C Gray	SHAD41 D.ssf
1367	-121.2672334	37.82702151	6340090.225	2124511.738	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,549	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:09am	C Gray	SHAD41 D.ssf
1368	-121.2672344	37.82703563	6340089.987	2124516.882	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,606	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:11am	C Gray	SHAD41 D.ssf
1369	-121.2672328	37.82704414	6340090.462	2124519.974	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	60,726	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:13am	C Gray	SHAD41 D.ssf
1370	-121.2672345	37.82705305	6340089.986	2124519.583	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	71,196	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:15am	C Gray	SHAD41 D.ssf
1371	-121.2672271	37.82703679	6340092.106	2124517.284	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	72,056	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:17am	C Gray	SHAD41 D.ssf
1372	-121.2672283	37.82702828	6340091.723	2124514.191	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	65,000	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:19am	C Gray	SHAD41 D.ssf
1373	-121.2672288	37.82701655	6340091.541	2124509.919	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	55,135	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:21am	C Gray	SHAD41 D.ssf
1374	-121.2672282	37.82700306	6340091.735	2124505.006	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,235	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:23am	C Gray	SHAD41 D.ssf
1375	-121.2672282	37.82699269	6340091.638	2124501.231	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,081	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:25am	C Gray	SHAD41 D.ssf
1376	-121.2672286	37.82698099	6340091.497	2124496.972	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,067	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:27am	C Gray	SHAD41 D.ssf
1377	-121.2672274	37.82696623	6340091.792	2124491.594	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,909	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:29am	C Gray	SHAD41 D.ssf
1378	-121.2672272	37.82695457	6340091.77	2124487.708	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,468	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:31am	C Gray	SHAD41 D.ssf
1379	-121.2672265	37.82694507	6340091.985	2124483.889	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,051	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:33am	C Gray	SHAD41 D.ssf
1380	-121.2672261	37.82693121	6340092.101	2124478.84	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,765	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:35am	C Gray	SHAD41 D.ssf
1381	-121.2672273	37.82692048	6340091.709	2124474.937	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,706	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:37am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1382	-121.267226	37.82690826	6340092.037	2124470.484	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,645	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:39am	C Gray	SHAD41 D.ssf
1383	-121.267226	37.82689689	6340091.119	2124466.341	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,071	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:41am	C Gray	SHAD41 D.ssf
1384	-121.267226	37.82688107	6340091.712	2124460.583	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,742	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:43am	C Gray	SHAD41 D.ssf
1385	-121.267227	37.82687041	6340091.374	2124456.706	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,703	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:45am	C Gray	SHAD41 D.ssf
1386	-121.267228	37.8268584	6340091.149	2124452.334	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,499	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:47am	C Gray	SHAD41 D.ssf
1387	-121.267228	37.82684652	6340091.253	2124448.008	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,011	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:49am	C Gray	SHAD41 D.ssf
1388	-121.267227	37.82683334	6340091.31	2124443.208	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,432	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:51am	C Gray	SHAD41 D.ssf
1389	-121.267227	37.82682132	6340091.33	2124438.829	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,243	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:53am	C Gray	SHAD41 D.ssf
1390	-121.267227	37.82680688	6340091.392	2124433.573	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,713	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:55am	C Gray	SHAD41 D.ssf
1391	-121.267228	37.82679554	6340091.089	2124429.445	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,507	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:57am	C Gray	SHAD41 D.ssf
1392	-121.267225	37.82679162	6340091.968	2124428.011	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,479	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:03:59am	C Gray	SHAD41 D.ssf
1393	-121.267226	37.82678949	6340091.688	2124427.237	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,307	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:01am	C Gray	SHAD41 D.ssf
1394	-121.267227	37.82679371	6340091.325	2124428.779	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,637	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:03am	C Gray	SHAD41 D.ssf
1395	-121.267226	37.82679982	6340091.583	2124430.998	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,326	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:05am	C Gray	SHAD41 D.ssf
1396	-121.267226	37.82680785	6340091.496	2124433.925	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,287	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:07am	C Gray	SHAD41 D.ssf
1397	-121.267228	37.82681793	6340091.541	2124437.596	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,563	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:09am	C Gray	SHAD41 D.ssf
1398	-121.267228	37.82683051	6340091.297	2124442.178	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,371	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:11am	C Gray	SHAD41 D.ssf
1399	-121.267227	37.82684345	6340091.429	2124446.889	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,768	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:13am	C Gray	SHAD41 D.ssf
1400	-121.267228	37.82685616	6340091.316	2124451.517	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,095	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:15am	C Gray	SHAD41 D.ssf
1401	-121.267228	37.82686747	6340091.152	2124455.637	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,229	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:17am	C Gray	SHAD41 D.ssf
1402	-121.267232	37.82687986	6340090.869	2124460.153	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,116	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:19am	C Gray	SHAD41 D.ssf
1403	-121.267233	37.82689219	6340090.459	2124464.645	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,450	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:21am	C Gray	SHAD41 D.ssf
1404	-121.267234	37.82690631	6340090.458	2124469.786	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,205	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:23am	C Gray	SHAD41 D.ssf
1405	-121.267229	37.82691951	6340091.027	2124474.589	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,615	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:25am	C Gray	SHAD41 D.ssf
1406	-121.267230	37.82693072	6340090.735	2124478.671	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,595	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:27am	C Gray	SHAD41 D.ssf
1407	-121.267232	37.82694428	6340090.414	2124483.614	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,696	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:29am	C Gray	SHAD41 D.ssf
1408	-121.267231	37.82695805	6340090.414	2124488.627	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,264	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:31am	C Gray	SHAD41 D.ssf
1409	-121.267232	37.82696945	6340090.378	2124492.778	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,581	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:33am	C Gray	SHAD41 D.ssf
1410	-121.267233	37.82698379	6340090.074	2124498.002	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,202	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:35am	C Gray	SHAD41 D.ssf
1411	-121.267233	37.82699372	6340090.172	2124501.619	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,293	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:37am	C Gray	SHAD41 D.ssf
1412	-121.267235	37.82700535	6340089.867	2124505.856	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,055	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:39am	C Gray	SHAD41 D.ssf
1413	-121.267236	37.82702046	6340090.161	2124511.354	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,405	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:41am	C Gray	SHAD41 D.ssf
1414	-121.267235	37.82703171	6340090.523	2124515.449	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,251	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:43am	C Gray	SHAD41 D.ssf
1415	-121.267229	37.82704249	6340091.476	2124519.364	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	60,761	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:45am	C Gray	SHAD41 D.ssf
1416	-121.267226	37.82705154	6340093.157	2124522.649	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	72,148	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:47am	C Gray	SHAD41 D.ssf
1417	-121.267224	37.82705144	6340093.045	2124522.612	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	79,763	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:49am	C Gray	SHAD41 D.ssf
1418	-121.267218	37.8270404	6340094.717	2124518.577	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	74,061	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:51am	C Gray	SHAD41 D.ssf
1419	-121.267215	37.82702594	6340095.424	2124513.307	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	63,809	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:53am	C Gray	SHAD41 D.ssf
1420	-121.267165	37.82701182	6340095.103	2124508.531	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,132	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:55am	C Gray	SHAD41 D.ssf
1421	-121.267217	37.82700127	6340094.407	2124504.333	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,061	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:57am	C Gray	SHAD41 D.ssf
1422	-121.267218	37.82698889	6340094.421	2124499.823	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,041	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:04:59am	C Gray	SHAD41 D.ssf
1423	-121.267219	37.82697592	6340094.188	2124495.102	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,985	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:01am	C Gray	SHAD41 D.ssf
1424	-121.267219	37.82696598	6340093.986	2124491.317	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,654	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:03am	C Gray	SHAD41 D.ssf
1425	-121.267215	37.82695453	6340094.339	2124487.482	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,058	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:05am	C Gray	SHAD41 D.ssf
1426	-121.267217	37.82694235	6340094.687	2124482.874	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,732	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:07am	C Gray	SHAD41 D.ssf
1427	-121.267217	37.82693288	6340094.496	2124479.428	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,030	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:09am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1428	-121.26721172	37.8269209	6340094.603	2124475.065	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,502	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:11am	C Gray	SHAD41 D.ssf
1429	-121.26721163	37.82690787	6340094.833	2124470.318	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,177	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:13am	C Gray	SHAD41 D.ssf
1430	-121.26721151	37.82689592	6340095.143	2124465.966	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,765	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:15am	C Gray	SHAD41 D.ssf
1431	-121.26721159	37.82688208	6340094.871	2124460.929	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,189	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:17am	C Gray	SHAD41 D.ssf
1432	-121.26721172	37.82687017	6340094.47	2124456.593	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,544	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:19am	C Gray	SHAD41 D.ssf
1433	-121.26721183	37.82685855	6340094.107	2124452.366	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,703	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:21am	C Gray	SHAD41 D.ssf
1434	-121.26721182	37.82684509	6340094.171	2124447.465	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,756	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:23am	C Gray	SHAD41 D.ssf
1435	-121.26721185	37.82683344	6340093.971	2124443.604	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,946	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:25am	C Gray	SHAD41 D.ssf
1436	-121.2672205	37.82682406	6340093.378	2124439.813	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,030	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:27am	C Gray	SHAD41 D.ssf
1437	-121.26721188	37.82681061	6340093.823	2124434.912	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,408	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:29am	C Gray	SHAD41 D.ssf
1438	-121.26721182	37.826799	6340093.972	2124430.681	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,588	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:31am	C Gray	SHAD41 D.ssf
1439	-121.26721174	37.82679228	6340094.164	2124428.233	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,240	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:33am	C Gray	SHAD41 D.ssf
1440	-121.26721137	37.82679234	6340095.248	2124428.247	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,830	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:35am	C Gray	SHAD41 D.ssf
1441	-121.26721164	37.82678978	6340094.453	2124427.32	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,860	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:37am	C Gray	SHAD41 D.ssf
1442	-121.26721147	37.8267918	6340094.937	2124428.051	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,825	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:39am	C Gray	SHAD41 D.ssf
1443	-121.26721151	37.82679562	6340094.852	2124429.443	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,404	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:41am	C Gray	SHAD41 D.ssf
1444	-121.26721158	37.82680624	6340094.688	2124433.312	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,044	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:43am	C Gray	SHAD41 D.ssf
1445	-121.26721159	37.82681678	6340094.676	2124437.151	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,651	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:45am	C Gray	SHAD41 D.ssf
1446	-121.26721164	37.82682865	6340094.564	2124441.473	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,002	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:47am	C Gray	SHAD41 D.ssf
1447	-121.26721158	37.82683953	6340094.779	2124445.432	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,842	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:49am	C Gray	SHAD41 D.ssf
1448	-121.26721169	37.82684976	6340094.433	2124449.14	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,060	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:51am	C Gray	SHAD41 D.ssf
1449	-121.26721179	37.82686243	6340094.237	2124453.775	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,923	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:53am	C Gray	SHAD41 D.ssf
1450	-121.26721183	37.82687313	6340094.153	2124457.675	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,538	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:55am	C Gray	SHAD41 D.ssf
1451	-121.26721162	37.82688535	6340093.707	2124462.126	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,954	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:57am	C Gray	SHAD41 D.ssf
1452	-121.26721186	37.82689866	6340094.113	2124466.969	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,788	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:05:59am	C Gray	SHAD41 D.ssf
1453	-121.26721197	37.82690957	6340093.786	2124470.945	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,135	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:01am	C Gray	SHAD41 D.ssf
1454	-121.26721197	37.82691981	6340093.885	2124474.673	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,191	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:03am	C Gray	SHAD41 D.ssf
1455	-121.26721198	37.82693196	6340093.896	2124479.1	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,661	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:05am	C Gray	SHAD41 D.ssf
1456	-121.26721193	37.82694339	6340094.074	2124483.445	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,090	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:07am	C Gray	SHAD41 D.ssf
1457	-121.26721189	37.82695579	6340094.226	2124487.771	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,705	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:09am	C Gray	SHAD41 D.ssf
1458	-121.2672119	37.82696976	6340094.249	2124492.86	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,766	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:11am	C Gray	SHAD41 D.ssf
1459	-121.2672201	37.82698816	6340093.958	2124497.174	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,559	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:13am	C Gray	SHAD41 D.ssf
1460	-121.2672212	37.82699297	6340093.677	2124501.317	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,529	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:15am	C Gray	SHAD41 D.ssf
1461	-121.2672223	37.82700332	6340093.677	2124505.088	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,383	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:17am	C Gray	SHAD41 D.ssf
1462	-121.2672225	37.82701633	6340093.364	2124509.824	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,004	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:19am	C Gray	SHAD41 D.ssf
1463	-121.2672227	37.82702631	6340093.346	2124513.459	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,822	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:21am	C Gray	SHAD41 D.ssf
1464	-121.2672216	37.82703501	6340093.677	2124516.623	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,599	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:23am	C Gray	SHAD41 D.ssf
1465	-121.2672186	37.8270437	6340094.567	2124519.782	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	74,285	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:25am	C Gray	SHAD41 D.ssf
1466	-121.2672206	37.82704211	6340093.981	2124519.207	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	79,147	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:27am	C Gray	SHAD41 D.ssf
1467	-121.2672131	37.82703923	6340096.137	2124518.14	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	95,970	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:29am	C Gray	SHAD41 D.ssf
1468	-121.2672121	37.82703214	6340096.433	2124515.556	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	89,548	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:31am	C Gray	SHAD41 D.ssf
1469	-121.2672121	37.82702353	6340096.381	2124512.421	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	72,173	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:33am	C Gray	SHAD41 D.ssf
1470	-121.2672114	37.82701031	6340096.558	2124507.608	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,113	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:35am	C Gray	SHAD41 D.ssf
1471	-121.2672113	37.82699993	6340096.564	2124503.826	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,612	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:37am	C Gray	SHAD41 D.ssf
1472	-121.2672112	37.82698959	6340096.547	2124500.208	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,845	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:39am	C Gray	SHAD41 D.ssf
1473	-121.2672098	37.82697819	6340096.912	2124495.907	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,948	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:41am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1474	-121.2672092	37.82696717	6340097.076	2124491.892	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,385	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:43am	C Gray	SHAD41 D.ssf
1475	-121.2672082	37.82695633	6340097.309	2124487.966	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,678	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:45am	C Gray	SHAD41 D.ssf
1476	-121.267207	37.82694363	6340097.627	2124483.318	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,954	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:47am	C Gray	SHAD41 D.ssf
1477	-121.2672056	37.82693197	6340098.062	2124479.067	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,209	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:49am	C Gray	SHAD41 D.ssf
1478	-121.2672052	37.8269189	6340098.062	2124474.307	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,909	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:51am	C Gray	SHAD41 D.ssf
1479	-121.2672075	37.82690884	6340097.389	2124470.652	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,157	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:53am	C Gray	SHAD41 D.ssf
1480	-121.2672091	37.82689543	6340097.832	2124465.765	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,983	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:55am	C Gray	SHAD41 D.ssf
1481	-121.2672072	37.82688277	6340096.827	2124461.16	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,729	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:57am	C Gray	SHAD41 D.ssf
1482	-121.2672087	37.82687214	6340096.93	2124457.291	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,175	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:06:59am	C Gray	SHAD41 D.ssf
1483	-121.2672093	37.82686089	6340096.712	2124453.197	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,980	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:01am	C Gray	SHAD41 D.ssf
1484	-121.2672111	37.82684848	6340096.164	2124448.682	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,777	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:03am	C Gray	SHAD41 D.ssf
1485	-121.2672114	37.82683908	6340096.043	2124445.26	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,221	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:05am	C Gray	SHAD41 D.ssf
1486	-121.2672104	37.82682612	6340096.292	2124440.537	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,523	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:07am	C Gray	SHAD41 D.ssf
1487	-121.2672106	37.82681595	6340096.216	2124436.837	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,778	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:09am	C Gray	SHAD41 D.ssf
1488	-121.2672121	37.82680415	6340095.734	2124432.543	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,123	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:11am	C Gray	SHAD41 D.ssf
1489	-121.2672131	37.82679409	6340095.426	2124428.883	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,342	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:13am	C Gray	SHAD41 D.ssf
1490	-121.267211	37.82679209	6340096.021	2124428.148	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,674	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:15am	C Gray	SHAD41 D.ssf
1491	-121.2672066	37.82679208	6340097.305	2124428.135	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,265	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:17am	C Gray	SHAD41 D.ssf
1492	-121.267209	37.82678908	6340096.579	2124427.048	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,050	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:19am	C Gray	SHAD41 D.ssf
1493	-121.2672098	37.82678553	6340096.621	2124429.392	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,884	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:21am	C Gray	SHAD41 D.ssf
1494	-121.2672087	37.82680213	6340096.714	2124431.757	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,842	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:23am	C Gray	SHAD41 D.ssf
1495	-121.2672093	37.82681025	6340096.569	2124434.757	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,101	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:25am	C Gray	SHAD41 D.ssf
1496	-121.2672097	37.82682413	6340096.499	2124439.811	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,724	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:27am	C Gray	SHAD41 D.ssf
1497	-121.2672103	37.82683348	6340096.342	2124443.697	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,440	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:29am	C Gray	SHAD41 D.ssf
1498	-121.2672098	37.82684702	6340096.818	2124448.146	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,533	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:31am	C Gray	SHAD41 D.ssf
1499	-121.2672099	37.82685987	6340096.545	2124451.935	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,199	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:33am	C Gray	SHAD41 D.ssf
1500	-121.2672122	37.82686786	6340095.9	2124455.739	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,313	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:35am	C Gray	SHAD41 D.ssf
1501	-121.2672137	37.82688093	6340095.518	2124460.502	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,730	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:37am	C Gray	SHAD41 D.ssf
1502	-121.2672136	37.82689194	6340095.576	2124464.51	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,285	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:39am	C Gray	SHAD41 D.ssf
1503	-121.2672132	37.82690403	6340095.716	2124468.912	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,534	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:41am	C Gray	SHAD41 D.ssf
1504	-121.2672146	37.82691689	6340095.342	2124473.6	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,397	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:43am	C Gray	SHAD41 D.ssf
1505	-121.2672138	37.82692825	6340095.626	2124477.734	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,198	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:45am	C Gray	SHAD41 D.ssf
1506	-121.2672157	37.82693987	6340095.1	2124481.969	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,589	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:47am	C Gray	SHAD41 D.ssf
1507	-121.2672148	37.82695937	6340095.396	2124487.002	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,165	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:49am	C Gray	SHAD41 D.ssf
1508	-121.2672133	37.82696452	6340095.332	2124490.944	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,291	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:51am	C Gray	SHAD41 D.ssf
1509	-121.2672153	37.82697582	6340095.316	2124495.056	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,525	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:53am	C Gray	SHAD41 D.ssf
1510	-121.2672147	37.82699097	6340095.535	2124500.573	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,999	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:55am	C Gray	SHAD41 D.ssf
1511	-121.2672132	37.82700182	6340096.004	2124504.52	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,148	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:57am	C Gray	SHAD41 D.ssf
1512	-121.2672143	37.82701528	6340095.028	2124509.419	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,955	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:07:59am	C Gray	SHAD41 D.ssf
1513	-121.2672133	37.82702708	6340095.804	2124513.72	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,171	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:01am	C Gray	SHAD41 D.ssf
1514	-121.2672128	37.82703841	6340096.229	2124517.84	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	70,339	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:03am	C Gray	SHAD41 D.ssf
1515	-121.2672064	37.82704438	6340098.092	2124519.999	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	120,337	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:05am	C Gray	SHAD41 D.ssf
1516	-121.2672063	37.82704191	6340098.111	2124519.101	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	131,663	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:07am	C Gray	SHAD41 D.ssf
1517	-121.2672037	37.82703526	6340098.85	2124516.674	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	132,077	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:09am	C Gray	SHAD41 D.ssf
1518	-121.2672043	37.82702718	6340098.644	2124513.733	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	91,926	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:11am	C Gray	SHAD41 D.ssf
1519	-121.2672038	37.8270166	6340098.784	2124509.88	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	65,928	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:13am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
1520	-121.2672061	37.82700486	6340098.061	2124505.61	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,553	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:15am	C Gray	SHAD41 D.ssf
1521	-121.2672076	37.82699309	6340097.609	2124501.377	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,167	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:17am	C Gray	SHAD41 D.ssf
1522	-121.2672077	37.82698255	6340097.556	2124497.471	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,475	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:19am	C Gray	SHAD41 D.ssf
1523	-121.2672055	37.82696788	6340098.133	2124492.144	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,994	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:21am	C Gray	SHAD41 D.ssf
1524	-121.2672045	37.82695516	6340098.391	2124487.509	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,290	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:23am	C Gray	SHAD41 D.ssf
1525	-121.267203	37.82694274	6340098.794	2124482.985	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,124	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:25am	C Gray	SHAD41 D.ssf
1526	-121.2672023	37.82693937	6340098.937	2124478.242	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,713	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:27am	C Gray	SHAD41 D.ssf
1527	-121.2672017	37.82691559	6340099.089	2124473.093	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,843	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:29am	C Gray	SHAD41 D.ssf
1528	-121.2672016	37.82690397	6340099.081	2124468.864	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,364	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:31am	C Gray	SHAD41 D.ssf
1529	-121.2672023	37.82689184	6340098.843	2124464.448	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,898	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:33am	C Gray	SHAD41 D.ssf
1530	-121.2672019	37.82687789	6340098.898	2124459.367	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,145	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:35am	C Gray	SHAD41 D.ssf
1531	-121.2672013	37.82686691	6340099.048	2124455.368	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,054	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:37am	C Gray	SHAD41 D.ssf
1532	-121.2672008	37.82685533	6340099.169	2124451.152	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,321	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:39am	C Gray	SHAD41 D.ssf
1533	-121.267202	37.82684328	6340098.775	2124446.766	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,851	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:41am	C Gray	SHAD41 D.ssf
1534	-121.2672023	37.82682971	6340098.655	2124441.825	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,604	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:43am	C Gray	SHAD41 D.ssf
1535	-121.2672012	37.8268186	6340098.926	2124437.78	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,970	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:45am	C Gray	SHAD41 D.ssf
1536	-121.2672011	37.82680704	6340098.926	2124433.569	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,998	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:47am	C Gray	SHAD41 D.ssf
1537	-121.2672015	37.82679574	6340098.786	2124429.454	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,653	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:49am	C Gray	SHAD41 D.ssf
1538	-121.2671997	37.82679154	6340099.278	2124427.922	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,048	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:51am	C Gray	SHAD41 D.ssf
1539	-121.2671986	37.82679244	6340099.345	2124428.242	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,946	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:53am	C Gray	SHAD41 D.ssf
1540	-121.2671964	37.826791	6340099.317	2124427.726	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,256	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:55am	C Gray	SHAD41 D.ssf
1541	-121.2671972	37.82679045	6340100.001	2124427.517	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,251	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:57am	C Gray	SHAD41 D.ssf
1542	-121.2671972	37.8267908	6340100.011	2124427.646	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,982	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:08:59am	C Gray	SHAD41 D.ssf
1543	-121.2671989	37.82679762	6340099.531	2124430.133	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,785	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:01am	C Gray	SHAD41 D.ssf
1544	-121.2671985	37.8268076	6340099.674	2124433.765	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,028	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:03am	C Gray	SHAD41 D.ssf
1545	-121.2671988	37.82681807	6340099.624	2124437.579	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,516	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:05am	C Gray	SHAD41 D.ssf
1546	-121.267201	37.82683016	6340099.011	2124441.987	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,877	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:07am	C Gray	SHAD41 D.ssf
1547	-121.2672018	37.82684559	6340098.849	2124447.608	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,479	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:09am	C Gray	SHAD41 D.ssf
1548	-121.2672035	37.82685675	6340098.368	2124451.673	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,103	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:11am	C Gray	SHAD41 D.ssf
1549	-121.2672023	37.82686894	6340098.756	2124456.111	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,487	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:13am	C Gray	SHAD41 D.ssf
1550	-121.2672031	37.8268831	6340098.569	2124461.269	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,919	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:15am	C Gray	SHAD41 D.ssf
1551	-121.2672039	37.82689807	6340098.388	2124466.72	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,852	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:17am	C Gray	SHAD41 D.ssf
1552	-121.2672067	37.8269125	6340097.609	2124471.982	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,497	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:19am	C Gray	SHAD41 D.ssf
1553	-121.2672047	37.82692368	6340098.176	2124476.046	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,294	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:21am	C Gray	SHAD41 D.ssf
1554	-121.2672049	37.82693793	6340098.261	2124481.235	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,135	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:23am	C Gray	SHAD41 D.ssf
1555	-121.2672063	37.82695004	6340097.843	2124485.651	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,212	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:25am	C Gray	SHAD41 D.ssf
1556	-121.2672089	37.82696724	6340097.149	2124491.917	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,526	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:27am	C Gray	SHAD41 D.ssf
1557	-121.2672098	37.82698091	6340096.927	2124496.897	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,258	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:29am	C Gray	SHAD41 D.ssf
1558	-121.2672101	37.82699351	6340096.883	2124501.487	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,433	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:31am	C Gray	SHAD41 D.ssf
1559	-121.2672083	37.82700968	6340097.451	2124507.369	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,418	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:33am	C Gray	SHAD41 D.ssf
1560	-121.2672072	37.82702362	6340097.808	2124512.441	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,037	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:35am	C Gray	SHAD41 D.ssf
1561	-121.2672061	37.82703614	6340098.159	2124516.999	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,576	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:37am	C Gray	SHAD41 D.ssf
1562	-121.2671984	37.82704317	6340100.402	2124519.54	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	91,703	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:39am	C Gray	SHAD41 D.ssf
1563	-121.2672047	37.82704157	6340099.973	2124518.962	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	89,023	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:41am	C Gray	SHAD41 D.ssf
1564	-121.2671956	37.82703628	6340101.189	2124517.021	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,664	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:43am	C Gray	SHAD41 D.ssf
1565	-121.2671951	37.82702515	6340101.31	2124512.971	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,808	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:45am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1566	-121.2671948	37.827001383	6340101.355	2124508.848	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,602	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:47am	C Gray	SHAD41 D.ssf
1567	-121.2671957	37.827002771	6340101.061	2124504.804	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,262	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:49am	C Gray	SHAD41 D.ssf
1568	-121.2671974	37.82699108	6340100.551	2124500.572	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,267	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:51am	C Gray	SHAD41 D.ssf
1569	-121.2671977	37.82698025	6340100.425	2124496.629	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,198	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:53am	C Gray	SHAD41 D.ssf
1570	-121.2671985	37.82696882	6340100.172	2124492.47	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,365	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:55am	C Gray	SHAD41 D.ssf
1571	-121.2671966	37.82695553	6340100.653	2124487.625	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,150	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:57am	C Gray	SHAD41 D.ssf
1572	-121.2671947	37.82694293	6340101.19	2124483.032	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,552	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:09:59am	C Gray	SHAD41 D.ssf
1573	-121.2671948	37.82693011	6340101.116	2124478.367	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,519	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:01am	C Gray	SHAD41 D.ssf
1574	-121.2671929	37.82691897	6340101.619	2124474.303	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,175	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:03am	C Gray	SHAD41 D.ssf
1575	-121.267193	37.82690665	6340101.555	2124469.82	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,582	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:05am	C Gray	SHAD41 D.ssf
1576	-121.2671944	37.82689322	6340101.129	2124464.93	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,725	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:07am	C Gray	SHAD41 D.ssf
1577	-121.2671942	37.82688113	6340101.033	2124460.667	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,665	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:09am	C Gray	SHAD41 D.ssf
1578	-121.2671946	37.82686945	6340101.089	2124456.162	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,881	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:11am	C Gray	SHAD41 D.ssf
1579	-121.2671946	37.82685787	6340100.942	2124452.061	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,994	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:13am	C Gray	SHAD41 D.ssf
1580	-121.267195	37.82684542	6340100.793	2124447.53	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,026	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:15am	C Gray	SHAD41 D.ssf
1581	-121.2671926	37.8268327	6340100.788	2124442.896	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,642	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:17am	C Gray	SHAD41 D.ssf
1582	-121.2671926	37.82682085	6340101.412	2124438.576	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,682	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:19am	C Gray	SHAD41 D.ssf
1583	-121.2671933	37.82680892	6340101.19	2124434.236	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,618	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:21am	C Gray	SHAD41 D.ssf
1584	-121.267193	37.82680044	6340101.249	2124431.145	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,764	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:23am	C Gray	SHAD41 D.ssf
1585	-121.2671924	37.82679043	6340101.396	2124427.498	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,383	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:25am	C Gray	SHAD41 D.ssf
1586	-121.2671915	37.82679117	6340101.65	2124427.767	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,634	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:27am	C Gray	SHAD41 D.ssf
1587	-121.2671887	37.82679531	6340102.457	2124429.267	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,023	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:29am	C Gray	SHAD41 D.ssf
1588	-121.2671902	37.82679111	6340102.038	2124427.744	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,334	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:31am	C Gray	SHAD41 D.ssf
1589	-121.2671924	37.82679379	6340101.402	2124428.725	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,003	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:33am	C Gray	SHAD41 D.ssf
1590	-121.2671922	37.8268024	6340101.476	2124431.859	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,604	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:35am	C Gray	SHAD41 D.ssf
1591	-121.2671914	37.82681195	6340101.74	2124435.335	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,940	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:37am	C Gray	SHAD41 D.ssf
1592	-121.267192	37.82682122	6340101.599	2124438.71	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,567	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:39am	C Gray	SHAD41 D.ssf
1593	-121.2671933	37.82683347	6340101.259	2124443.172	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,172	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:41am	C Gray	SHAD41 D.ssf
1594	-121.2671945	37.82684493	6340100.952	2124447.348	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,686	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:43am	C Gray	SHAD41 D.ssf
1595	-121.2671942	37.82685653	6340101.068	2124451.574	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,157	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:45am	C Gray	SHAD41 D.ssf
1596	-121.2671943	37.82686667	6340101.059	2124455.265	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,239	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:47am	C Gray	SHAD41 D.ssf
1597	-121.267194	37.82687738	6340101.195	2124459.164	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,791	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:49am	C Gray	SHAD41 D.ssf
1598	-121.2671951	37.82688882	6340100.899	2124463.332	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,674	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:51am	C Gray	SHAD41 D.ssf
1599	-121.2671947	37.82689882	6340101.036	2124466.974	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,335	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:53am	C Gray	SHAD41 D.ssf
1600	-121.2671939	37.82690861	6340101.32	2124470.534	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,167	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:55am	C Gray	SHAD41 D.ssf
1601	-121.267193	37.8269194	6340101.593	2124474.462	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,598	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:57am	C Gray	SHAD41 D.ssf
1602	-121.2671948	37.8269302	6340101.109	2124478.399	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,678	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:10:59am	C Gray	SHAD41 D.ssf
1603	-121.2671951	37.82694292	6340101.37	2124483.026	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,504	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:01am	C Gray	SHAD41 D.ssf
1604	-121.2671951	37.82695373	6340101.095	2124486.967	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,502	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:03am	C Gray	SHAD41 D.ssf
1605	-121.2671966	37.82696471	6340100.684	2124490.967	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,835	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:05am	C Gray	SHAD41 D.ssf
1606	-121.2671972	37.82697755	6340100.561	2124495.643	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,029	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:07am	C Gray	SHAD41 D.ssf
1607	-121.2672	37.82698822	6340099.795	2124499.537	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,227	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:09am	C Gray	SHAD41 D.ssf
1608	-121.2672025	37.82699884	6340099.105	2124503.409	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,402	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:11am	C Gray	SHAD41 D.ssf
1609	-121.2672035	37.8270093	6340098.84	2124507.221	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,414	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:13am	C Gray	SHAD41 D.ssf
1610	-121.267205	37.82701941	6340098.44	2124510.903	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,607	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:15am	C Gray	SHAD41 D.ssf
1611	-121.267205	37.82702706	6340098.464	2124513.691	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,861	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:17am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
1612	-121.2672017	37.82703803	6340099.438	2124517.675	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	58,521	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:19am	C Gray	SHAD41 D.ssf
1613	-121.2671937	37.82704449	6340102.756	2124520.011	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	67,622	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:21am	C Gray	SHAD41 D.ssf
1614	-121.2671916	37.82704298	6340103.359	2124519.455	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	70,497	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:23am	C Gray	SHAD41 D.ssf
1615	-121.2671907	37.82704182	6340102.627	2124519.029	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	70,433	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:25am	C Gray	SHAD41 D.ssf
1616	-121.2671868	37.82703913	6340103.761	2124518.043	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	63,461	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:27am	C Gray	SHAD41 D.ssf
1617	-121.2671876	37.82703281	6340103.503	2124515.744	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	55,751	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:29am	C Gray	SHAD41 D.ssf
1618	-121.2671899	37.82702077	6340102.806	2124511.363	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	52,693	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:31am	C Gray	SHAD41 D.ssf
1619	-121.2671908	37.82701249	6340102.515	2124508.352	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	48,809	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:33am	C Gray	SHAD41 D.ssf
1620	-121.2671914	37.82700181	6340102.32	2124504.463	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	43,542	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:35am	C Gray	SHAD41 D.ssf
1621	-121.2671923	37.82699277	6340102.01	2124501.175	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	41,165	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:37am	C Gray	SHAD41 D.ssf
1622	-121.2671914	37.82698354	6340102.265	2124497.812	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	43,205	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:39am	C Gray	SHAD41 D.ssf
1623	-121.2671908	37.82697502	6340102.389	2124494.708	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	42,391	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:41am	C Gray	SHAD41 D.ssf
1624	-121.267193	37.82696885	6340101.751	2124492.467	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,311	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:43am	C Gray	SHAD41 D.ssf
1625	-121.2671926	37.82695885	6340101.828	2124488.827	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,206	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:45am	C Gray	SHAD41 D.ssf
1626	-121.2671905	37.82694753	6340102.392	2124480.626	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,420	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:47am	C Gray	SHAD41 D.ssf
1627	-121.2671901	37.82693635	6340102.49	2124474.937	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	35,858	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:49am	C Gray	SHAD41 D.ssf
1628	-121.2671894	37.82692925	6340102.455	2124476.75	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	35,420	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:51am	C Gray	SHAD41 D.ssf
1629	-121.2671899	37.82691687	6340102.501	2124473.534	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	35,851	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:52am	C Gray	SHAD41 D.ssf
1630	-121.2671899	37.8269036	6340102.433	2124468.702	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,719	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:55am	C Gray	SHAD41 D.ssf
1631	-121.2671898	37.82689449	6340102.45	2124465.368	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,773	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:56am	C Gray	SHAD41 D.ssf
1632	-121.2671884	37.82688809	6340102.608	2124460.932	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,227	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:11:59am	C Gray	SHAD41 D.ssf
1633	-121.2671894	37.8268853	6340102.766	2124455.927	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,326	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:01am	C Gray	SHAD41 D.ssf
1634	-121.2671882	37.82685703	6340102.796	2124451.74	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,365	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:03am	C Gray	SHAD41 D.ssf
1635	-121.267186	37.82684331	6340103.387	2124446.738	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,177	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:05am	C Gray	SHAD41 D.ssf
1636	-121.2671856	37.82683061	6340103.468	2124442.114	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,256	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:07am	C Gray	SHAD41 D.ssf
1637	-121.2671819	37.82681744	6340103.497	2124437.444	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,706	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:09am	C Gray	SHAD41 D.ssf
1638	-121.267186	37.82680691	6340103.273	2124433.486	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,370	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:11am	C Gray	SHAD41 D.ssf
1639	-121.2671848	37.82679875	6340103.594	2124430.511	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,303	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:13am	C Gray	SHAD41 D.ssf
1640	-121.2671824	37.82680035	6340104.314	2124431.089	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,417	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:15am	C Gray	SHAD41 D.ssf
1641	-121.2671824	37.82680009	6340104.3	2124430.993	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,408	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:17am	C Gray	SHAD41 D.ssf
1642	-121.2671837	37.82680078	6340103.926	2124431.247	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,460	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:19am	C Gray	SHAD41 D.ssf
1643	-121.2671804	37.82680732	6340104.912	2124433.623	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,415	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:21am	C Gray	SHAD41 D.ssf
1644	-121.2671819	37.82681744	6340104.499	2124437.311	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	34,018	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:23am	C Gray	SHAD41 D.ssf
1645	-121.2671824	37.82682765	6340104.39	2124441.029	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	34,066	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:25am	C Gray	SHAD41 D.ssf
1646	-121.2671832	37.82683967	6340104.194	2124445.409	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,480	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:27am	C Gray	SHAD41 D.ssf
1647	-121.2671817	37.82683322	6340104.664	2124450.339	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,600	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:29am	C Gray	SHAD41 D.ssf
1648	-121.2671803	37.82686279	6340105.111	2124453.817	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	30,559	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:31am	C Gray	SHAD41 D.ssf
1649	-121.2671796	37.82687209	6340105.318	2124457.202	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,148	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:33am	C Gray	SHAD41 D.ssf
1650	-121.2671818	37.82688537	6340104.72	2124462.044	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,402	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:35am	C Gray	SHAD41 D.ssf
1651	-121.2671843	37.8268949	6340104.024	2124465.519	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,675	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:37am	C Gray	SHAD41 D.ssf
1652	-121.2671844	37.82690718	6340104.039	2124469.992	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,780	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:39am	C Gray	SHAD41 D.ssf
1653	-121.2671846	37.82691835	6340104.007	2124474.058	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,698	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:41am	C Gray	SHAD41 D.ssf
1654	-121.2671834	37.82692817	6340103.861	2124477.633	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	35,692	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:43am	C Gray	SHAD41 D.ssf
1655	-121.2671854	37.82694176	6340103.864	2124482.593	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	35,070	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:45am	C Gray	SHAD41 D.ssf
1656	-121.2671884	37.82695106	6340103.024	2124485.979	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	35,978	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:47am	C Gray	SHAD41 D.ssf
1657	-121.2671923	37.82696106	6340101.935	2124489.629	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,777	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:49am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastng	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1658	-121.2671902	37.82697297	6340102.561	2124493.959	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,124	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:51am	C Gray	SHAD41 D.ssf
1659	-121.2671927	37.82698341	6340101.872	2124497.767	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,915	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:53am	C Gray	SHAD41 D.ssf
1660	-121.267194	37.82699632	6340101.534	2124502.471	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,382	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:55am	C Gray	SHAD41 D.ssf
1661	-121.2671918	37.82700641	6340102.199	2124506.14	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,028	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:56am	C Gray	SHAD41 D.ssf
1662	-121.2671928	37.8270183	6340101.965	2124510.472	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,287	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:12:59am	C Gray	SHAD41 D.ssf
1663	-121.2671943	37.8270306	6340101.564	2124514.953	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,968	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:01am	C Gray	SHAD41 D.ssf
1664	-121.2671897	37.82704262	6340102.905	2124519.319	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,156	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:03am	C Gray	SHAD41 D.ssf
1665	-121.2671827	37.82707475	6340104.933	2124519.349	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,043	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:05am	C Gray	SHAD41 D.ssf
1666	-121.2671778	37.82704058	6340106.359	2124518.549	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,426	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:07am	C Gray	SHAD41 D.ssf
1667	-121.2671787	37.82703073	6340106.069	2124517.355	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,611	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:09am	C Gray	SHAD41 D.ssf
1668	-121.2671779	37.82702812	6340106.296	2124514.011	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,743	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:11am	C Gray	SHAD41 D.ssf
1669	-121.2671782	37.82701741	6340106.357	2124510.111	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,941	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:13am	C Gray	SHAD41 D.ssf
1670	-121.2671763	37.82700752	6340106.675	2124506.506	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,956	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:14am	C Gray	SHAD41 D.ssf
1671	-121.2671782	37.82699354	6340106.087	2124501.421	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,341	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:17am	C Gray	SHAD41 D.ssf
1672	-121.2671782	37.82698084	6340106.046	2124496.796	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,946	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:19am	C Gray	SHAD41 D.ssf
1673	-121.2671787	37.82696822	6340105.865	2124492.202	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,865	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:21am	C Gray	SHAD41 D.ssf
1674	-121.2671743	37.82695574	6340107.114	2124488.254	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,412	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:23am	C Gray	SHAD41 D.ssf
1675	-121.2671767	37.8269474	6340106.402	2124484.617	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,519	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:25am	C Gray	SHAD41 D.ssf
1676	-121.2671769	37.82693398	6340106.284	2124479.733	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,806	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:27am	C Gray	SHAD41 D.ssf
1677	-121.2671781	37.82692243	6340105.918	2124475.529	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,358	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:29am	C Gray	SHAD41 D.ssf
1678	-121.2671785	37.82691051	6340105.771	2124471.19	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,538	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:31am	C Gray	SHAD41 D.ssf
1679	-121.267178	37.82689747	6340105.86	2124466.439	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,938	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:33am	C Gray	SHAD41 D.ssf
1680	-121.2671767	37.82688683	6340106.196	2124462.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,664	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:34am	C Gray	SHAD41 D.ssf
1681	-121.2671741	37.82687401	6340106.932	2124457.888	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,845	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:37am	C Gray	SHAD41 D.ssf
1682	-121.2671746	37.82686177	6340106.745	2124453.436	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,432	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:39am	C Gray	SHAD41 D.ssf
1683	-121.2671762	37.82685057	6340106.72	2124449.355	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,078	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:40am	C Gray	SHAD41 D.ssf
1684	-121.2671746	37.82683344	6340106.668	2124443.468	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,884	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:43am	C Gray	SHAD41 D.ssf
1685	-121.267175	37.82682255	6340106.5	2124439.156	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,785	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:45am	C Gray	SHAD41 D.ssf
1686	-121.2671738	37.82680927	6340106.815	2124434.316	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,458	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:47am	C Gray	SHAD41 D.ssf
1687	-121.2671703	37.82679693	6340107.492	2124429.818	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,775	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:49am	C Gray	SHAD41 D.ssf
1688	-121.2671711	37.82679196	6340107.845	2124428.004	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,395	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:51am	C Gray	SHAD41 D.ssf
1689	-121.2671688	37.82679779	6340108.22	2124430.126	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,365	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:53am	C Gray	SHAD41 D.ssf
1690	-121.2671692	37.82679331	6340108.094	2124428.496	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,068	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:55am	C Gray	SHAD41 D.ssf
1691	-121.2671691	37.8267966	6340108.142	2124429.693	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,389	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:56am	C Gray	SHAD41 D.ssf
1692	-121.2671684	37.82680471	6340108.367	2124432.642	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,598	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:13:59am	C Gray	SHAD41 D.ssf
1693	-121.2671716	37.82681703	6340107.476	2124437.138	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,818	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:01am	C Gray	SHAD41 D.ssf
1694	-121.2671733	37.82682815	6340107.018	2124441.191	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,233	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:03am	C Gray	SHAD41 D.ssf
1695	-121.267175	37.82684128	6340106.55	2124445.975	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,825	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:05am	C Gray	SHAD41 D.ssf
1696	-121.2671756	37.82684891	6340106.416	2124448.752	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,312	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:06am	C Gray	SHAD41 D.ssf
1697	-121.2671767	37.82686502	6340105.894	2124454.623	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,755	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:09am	C Gray	SHAD41 D.ssf
1698	-121.2671766	37.82687901	6340106.218	2124459.716	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,062	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:11am	C Gray	SHAD41 D.ssf
1699	-121.2671766	37.8268895	6340106.249	2124463.535	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,413	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:13am	C Gray	SHAD41 D.ssf
1700	-121.2671785	37.82690356	6340105.732	2124468.659	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,597	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:15am	C Gray	SHAD41 D.ssf
1701	-121.2671784	37.82691563	6340105.513	2124473.056	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,649	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:17am	C Gray	SHAD41 D.ssf
1702	-121.2671806	37.82692712	6340105.201	2124477.244	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,818	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:19am	C Gray	SHAD41 D.ssf
1703	-121.2671783	37.82693721	6340105.888	2124480.913	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,695	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:21am	C Gray	SHAD41 D.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
1704	-121.26711781	37.826994831	6340105.979	2124484.954	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,621	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:23am	C Gray	SHAD41 D.ssf
1705	-121.26711773	37.826996193	6340106.272	2124489.911	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,605	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:25am	C Gray	SHAD41 D.ssf
1706	-121.2671793	37.82697437	6340105.746	2124494.445	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,383	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:27am	C Gray	SHAD41 D.ssf
1707	-121.2671837	37.8269853	6340104.49	2124498.433	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,364	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:28am	C Gray	SHAD41 D.ssf
1708	-121.2671835	37.82699942	6340104.595	2124503.577	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,524	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:31am	C Gray	SHAD41 D.ssf
1709	-121.2671831	37.82700902	6340104.728	2124507.07	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,629	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:33am	C Gray	SHAD41 D.ssf
1710	-121.2671813	37.82701798	6340105.367	2124510.327	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,837	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:35am	C Gray	SHAD41 D.ssf
1711	-121.2671813	37.8270161	6340105.27	2124509.643	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,862	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:37am	C Gray	SHAD41 D.ssf
1712	-121.2671848	37.82700296	6340104.222	2124504.866	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,764	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:39am	C Gray	SHAD41 D.ssf
1713	-121.2671846	37.82699932	6340104.259	2124501.314	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,113	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:40am	C Gray	SHAD41 D.ssf
1714	-121.2671868	37.82697844	6340103.571	2124495.943	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,679	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:42am	C Gray	SHAD41 D.ssf
1715	-121.2671903	37.826967	6340102.441	2124491.787	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,032	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:45am	C Gray	SHAD41 D.ssf
1716	-121.2671906	37.826995249	6340102.469	2124486.505	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,883	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:47am	C Gray	SHAD41 D.ssf
1717	-121.2671895	37.82694281	6340102.691	2124482.977	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,078	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:49am	C Gray	SHAD41 D.ssf
1718	-121.2671837	37.826994343	6340104.079	2124483.19	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,945	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:51am	C Gray	SHAD41 D.ssf
1719	-121.2671797	37.82695224	6340105.525	2124486.388	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,868	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:53am	C Gray	SHAD41 D.ssf
1720	-121.2671809	37.82696356	6340105.234	2124490.512	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,727	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:55am	C Gray	SHAD41 D.ssf
1721	-121.2671833	37.82697502	6340104.562	2124494.692	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,591	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:57am	C Gray	SHAD41 D.ssf
1722	-121.2671833	37.82698534	6340104.602	2124498.45	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,069	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:14:59am	C Gray	SHAD41 D.ssf
1723	-121.2671844	37.82699476	6340104.319	2124501.867	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,038	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:00am	C Gray	SHAD41 D.ssf
1724	-121.2671819	37.82701012	6340105.073	2124507.467	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,690	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:03am	C Gray	SHAD41 D.ssf
1725	-121.2671802	37.82701895	6340105.606	2124510.68	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,223	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:05am	C Gray	SHAD41 D.ssf
1726	-121.2671834	37.82702274	6340104.707	2124513.886	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,689	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:07am	C Gray	SHAD41 D.ssf
1727	-121.2671869	37.82703609	6340103.699	2124516.937	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,306	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:09am	C Gray	SHAD41 D.ssf
1728	-121.2671937	37.82703731	6340103.019	2124517.386	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,103	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:11am	C Gray	SHAD41 D.ssf
1729	-121.2671987	37.82703358	6340100.302	2124516.05	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,472	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:13am	C Gray	SHAD41 D.ssf
1730	-121.2672026	37.82702847	6340099.163	2124514.199	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,954	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:15am	C Gray	SHAD41 D.ssf
1731	-121.2672037	37.82702655	6340098.828	2124513.502	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,132	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:16am	C Gray	SHAD41 D.ssf
1732	-121.2671979	37.82701095	6340100.445	2124507.809	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,985	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:19am	C Gray	SHAD41 D.ssf
1733	-121.2671985	37.82700049	6340100.256	2124505.604	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,812	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:21am	C Gray	SHAD41 D.ssf
1734	-121.2671966	37.82699625	6340100.782	2124502.453	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,163	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:23am	C Gray	SHAD41 D.ssf
1735	-121.2672075	37.82699867	6340097.64	2124503.36	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,033	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:24am	C Gray	SHAD41 D.ssf
1736	-121.2672108	37.82700596	6340096.721	2124506.022	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,698	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:26am	C Gray	SHAD41 D.ssf
1737	-121.2672117	37.82701537	6340096.484	2124509.449	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,107	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:29am	C Gray	SHAD41 D.ssf
1738	-121.2672027	37.82702012	6340099.095	2124511.157	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,587	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:30am	C Gray	SHAD41 D.ssf
1739	-121.2671878	37.82701891	6340103.385	2124510.68	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,891	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:33am	C Gray	SHAD41 D.ssf
1740	-121.26718	37.82701935	6340105.66	2124510.823	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,029	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:35am	C Gray	SHAD41 D.ssf
1741	-121.2671836	37.82702346	6340104.62	2124512.33	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,360	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:37am	C Gray	SHAD41 D.ssf
1742	-121.2671895	37.82702221	6340102.917	2124511.889	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,003	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:39am	C Gray	SHAD41 D.ssf
1743	-121.2671947	37.82702427	6340101.418	2124512.649	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,528	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:40am	C Gray	SHAD41 D.ssf
1744	-121.2671854	37.82703875	6340104.163	2124517.901	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,763	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:43am	C Gray	SHAD41 D.ssf
1745	-121.2671824	37.82703919	6340105.004	2124518.053	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,546	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:44am	C Gray	SHAD41 D.ssf
1746	-121.2671819	37.82703998	6340105.154	2124518.339	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,785	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:47am	C Gray	SHAD41 D.ssf
1747	-121.267181	37.82703842	6340105.428	2124517.769	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,803	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:15:28:10am	C Gray	SHAD41 D.ssf
1748	-121.2671805	37.82703891	6340105.557	2124517.946	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,803	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:12am	C Gray	SHAD41 D.ssf
1749	-121.267178	37.82704058	6340106.286	2124518.551	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,531	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:14am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1750	-121.2671781	37.82704094	6340106.268	2124518.681	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,650	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:16am	C Gray	SHAD41 D.ssf
1751	-121.2671787	37.82703069	6340106.074	2124517.862	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,285	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:18am	C Gray	SHAD41 D.ssf
1752	-121.2671738	37.82703568	6340107.49	2124514.899	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,224	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:20am	C Gray	SHAD41 D.ssf
1753	-121.2671685	37.82702334	6340108.995	2124512.248	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,272	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:22am	C Gray	SHAD41 D.ssf
1754	-121.2671665	37.82701495	6340109.543	2124509.19	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,335	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:24am	C Gray	SHAD41 D.ssf
1755	-121.2671702	37.82699518	6340108.422	2124502.001	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,809	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:27am	C Gray	SHAD41 D.ssf
1756	-121.2671689	37.82699152	6340108.789	2124500.665	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,329	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:28am	C Gray	SHAD41 D.ssf
1757	-121.2671696	37.82698388	6340108.541	2124497.884	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,434	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:30am	C Gray	SHAD41 D.ssf
1758	-121.2671711	37.82697574	6340108.082	2124494.924	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,404	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:32am	C Gray	SHAD41 D.ssf
1759	-121.2671701	37.82696664	6340108.344	2124491.519	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,218	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:34am	C Gray	SHAD41 D.ssf
1760	-121.2671691	37.82695391	6340108.594	2124486.971	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,793	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:37am	C Gray	SHAD41 D.ssf
1761	-121.2671709	37.82694632	6340108.066	2124484.209	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,346	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:38am	C Gray	SHAD41 D.ssf
1762	-121.2671702	37.82693466	6340108.221	2124479.963	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,956	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:40am	C Gray	SHAD41 D.ssf
1763	-121.2671696	37.82691861	6340108.348	2124474.117	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,045	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:43am	C Gray	SHAD41 D.ssf
1764	-121.2671693	37.82691195	6340108.407	2124471.693	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,689	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:44am	C Gray	SHAD41 D.ssf
1765	-121.2671655	37.82690062	6340109.489	2124467.557	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,006	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:46am	C Gray	SHAD41 D.ssf
1766	-121.2671691	37.82689057	6340109.577	2124463.896	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,896	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:48am	C Gray	SHAD41 D.ssf
1767	-121.267166	37.8268783	6340109.264	2124459.432	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,654	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:50am	C Gray	SHAD41 D.ssf
1768	-121.2671637	37.82686943	6340109.914	2124456.198	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,959	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:52am	C Gray	SHAD41 D.ssf
1769	-121.2671634	37.82685858	6340109.659	2124452.249	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,783	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:54am	C Gray	SHAD41 D.ssf
1770	-121.2671646	37.82684597	6340109.927	2124447.656	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,812	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:56am	C Gray	SHAD41 D.ssf
1771	-121.2671619	37.82683354	6340110.333	2124443.806	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,305	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:28:58am	C Gray	SHAD41 D.ssf
1772	-121.2671612	37.82682517	6340110.513	2124440.077	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,733	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:00am	C Gray	SHAD41 D.ssf
1773	-121.2671585	37.82680877	6340111.077	2124434.099	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:02am	C Gray	SHAD41 D.ssf
1774	-121.2671585	37.82680232	6340111.226	2124431.75	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,428	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:04am	C Gray	SHAD41 D.ssf
1775	-121.2671659	37.82685314	6340111.836	2124439.852	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,134	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:07am	C Gray	SHAD41 D.ssf
1776	-121.2671617	37.82680531	6340110.297	2124432.846	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,034	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:08am	C Gray	SHAD41 D.ssf
1777	-121.2671594	37.82680803	6340110.971	2124433.832	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,129	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:10am	C Gray	SHAD41 D.ssf
1778	-121.2671584	37.82681759	6340111.301	2124437.309	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,214	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:12am	C Gray	SHAD41 D.ssf
1779	-121.2671592	37.82682452	6340111.079	2124439.833	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,389	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:14am	C Gray	SHAD41 D.ssf
1780	-121.2671592	37.82683677	6340111.166	2124444.294	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,497	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:16am	C Gray	SHAD41 D.ssf
1781	-121.2671631	37.82684419	6340110.01	2124447.005	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,640	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:18am	C Gray	SHAD41 D.ssf
1782	-121.2671659	37.82685314	6340109.22	2124450.27	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,898	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:20am	C Gray	SHAD41 D.ssf
1783	-121.2671673	37.82686089	6340108.836	2124453.097	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,154	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:22am	C Gray	SHAD41 D.ssf
1784	-121.2671678	37.82686026	6340108.807	2124452.867	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,449	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:24am	C Gray	SHAD41 D.ssf
1785	-121.2671672	37.82686456	6340108.822	2124447.53	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,076	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:27am	C Gray	SHAD41 D.ssf
1786	-121.2671687	37.82683621	6340108.355	2124444.112	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,734	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:28am	C Gray	SHAD41 D.ssf
1787	-121.2671658	37.82682453	6340109.182	2124439.852	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,560	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:30am	C Gray	SHAD41 D.ssf
1788	-121.2671678	37.82681598	6340108.569	2124436.746	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,314	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:32am	C Gray	SHAD41 D.ssf
1789	-121.2671704	37.82680519	6340107.787	2124433.082	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,261	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:34am	C Gray	SHAD41 D.ssf
1790	-121.2671685	37.82680152	6340108.32	2124431.482	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,048	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:36am	C Gray	SHAD41 D.ssf
1791	-121.2671686	37.82680516	6340108.298	2124432.808	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,175	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:38am	C Gray	SHAD41 D.ssf
1792	-121.2671687	37.82681507	6340108.497	2124436.415	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,261	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:40am	C Gray	SHAD41 D.ssf
1793	-121.2671673	37.82682885	6340108.76	2124441.429	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,839	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:43am	C Gray	SHAD41 D.ssf
1794	-121.2671642	37.82684018	6340109.676	2124445.549	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,663	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:45am	C Gray	SHAD41 D.ssf
1795	-121.2671629	37.8268484	6340110.086	2124448.537	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,509	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:46am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1796	-121.2671668	37.82686034	6340109.004	2124452.894	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,219	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:48am	C Gray	SHAD41 D.ssf
1797	-121.2671686	37.82687305	6340108.516	2124457.527	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,518	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:50am	C Gray	SHAD41 D.ssf
1798	-121.2671702	37.82688432	6340108.071	2124461.636	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,699	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:52am	C Gray	SHAD41 D.ssf
1799	-121.2671708	37.82689569	6340107.937	2124465.774	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,667	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:54am	C Gray	SHAD41 D.ssf
1800	-121.2671721	37.82690802	6340107.599	2124470.269	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,473	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:56am	C Gray	SHAD41 D.ssf
1801	-121.2671733	37.82692213	6340107.872	2124475.404	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,444	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:29:58am	C Gray	SHAD41 D.ssf
1802	-121.2671726	37.82694953	6340107.591	2124485.301	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,029	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:02am	C Gray	SHAD41 D.ssf
1803	-121.2671719	37.82698585	6340107.817	2124488.659	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,442	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:04am	C Gray	SHAD41 D.ssf
1804	-121.267176	37.82697453	6340106.682	2124494.495	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,021	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:06am	C Gray	SHAD41 D.ssf
1805	-121.2671756	37.82698406	6340106.825	2124497.964	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,983	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:08am	C Gray	SHAD41 D.ssf
1806	-121.2671763	37.82699639	6340106.665	2124502.456	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,231	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:10am	C Gray	SHAD41 D.ssf
1807	-121.2671775	37.82700876	6340106.348	2124506.96	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,726	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:12am	C Gray	SHAD41 D.ssf
1808	-121.2671758	37.82701738	6340106.853	2124510.098	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,654	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:14am	C Gray	SHAD41 D.ssf
1809	-121.2671762	37.82702938	6340106.768	2124514.466	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,304	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:16am	C Gray	SHAD41 D.ssf
1810	-121.2671749	37.82704182	6340107.205	2124518.174	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	57,595	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:20am	C Gray	SHAD41 D.ssf
1811	-121.2671731	37.82703958	6340107.317	2124518.174	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,980	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:22am	C Gray	SHAD41 D.ssf
1812	-121.2671673	37.82700036	6340109.377	2124516.706	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,623	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:24am	C Gray	SHAD41 D.ssf
1813	-121.2671639	37.82703271	6340110.343	2124515.651	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,837	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:26am	C Gray	SHAD41 D.ssf
1814	-121.2671617	37.82702077	6340110.97	2124513.821	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,004	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:28am	C Gray	SHAD41 D.ssf
1815	-121.2671638	37.82701386	6340110.306	2124508.788	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,697	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:30am	C Gray	SHAD41 D.ssf
1816	-121.2671659	37.82700596	6340109.671	2124505.916	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,791	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:32am	C Gray	SHAD41 D.ssf
1817	-121.2671658	37.82700036	6340109.458	2124503.876	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,823	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:34am	C Gray	SHAD41 D.ssf
1818	-121.2671668	37.82700125	6340109.422	2124504.203	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,796	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:37am	C Gray	SHAD41 D.ssf
1819	-121.2671658	37.82700515	6340109.723	2124505.62	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,963	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:38am	C Gray	SHAD41 D.ssf
1820	-121.2671678	37.82701844	6340109.164	2124510.463	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,041	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:40am	C Gray	SHAD41 D.ssf
1821	-121.267165	37.82701915	6340109.986	2124510.717	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,865	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:42am	C Gray	SHAD41 D.ssf
1822	-121.2671615	37.82701743	6340110.982	2124510.082	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,056	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:44am	C Gray	SHAD41 D.ssf
1823	-121.26716	37.82701068	6340111.404	2124507.618	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,004	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:46am	C Gray	SHAD41 D.ssf
1824	-121.2671659	37.82700605	6340109.693	2124505.948	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,835	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:48am	C Gray	SHAD41 D.ssf
1825	-121.2671654	37.82699858	6340109.793	2124503.226	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,397	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:50am	C Gray	SHAD41 D.ssf
1826	-121.2671617	37.82697939	6340110.806	2124496.232	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,944	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:54am	C Gray	SHAD41 D.ssf
1827	-121.2671607	37.82697063	6340111.088	2124493.038	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,042	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:56am	C Gray	SHAD41 D.ssf
1828	-121.2671606	37.82695859	6340111.064	2124488.656	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,481	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:30:58am	C Gray	SHAD41 D.ssf
1829	-121.267158	37.82695257	6340111.816	2124486.455	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,845	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:00am	C Gray	SHAD41 D.ssf
1830	-121.2671566	37.82694133	6340112.186	2124482.362	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,116	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:02am	C Gray	SHAD41 D.ssf
1831	-121.2671583	37.82692043	6340111.61	2124474.753	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,863	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:06am	C Gray	SHAD41 D.ssf
1832	-121.267156	37.82689265	6340112.191	2124464.633	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,288	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:11am	C Gray	SHAD41 D.ssf
1833	-121.2671548	37.82687173	6340112.567	2124457.012	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,032	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:14am	C Gray	SHAD41 D.ssf
1834	-121.2671528	37.82686327	6340113.055	2124453.927	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,853	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:16am	C Gray	SHAD41 D.ssf
1835	-121.2671528	37.82683928	6340112.957	2124445.194	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,086	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:20am	C Gray	SHAD41 D.ssf
1836	-121.2671516	37.82683175	6340113.287	2124442.45	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,643	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:22am	C Gray	SHAD41 D.ssf
1837	-121.267151	37.82680061	6340113.376	2124431.109	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,351	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:28am	C Gray	SHAD41 D.ssf
1838	-121.2671513	37.82689051	6340113.288	2124430.191	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,742	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:30am	C Gray	SHAD41 D.ssf
1839	-121.2671534	37.82687809	6340112.675	2124431.077	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,161	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:32am	C Gray	SHAD41 D.ssf
1840	-121.2671553	37.82681163	6340112.181	2124435.13	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,425	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:34am	C Gray	SHAD41 D.ssf
1841	-121.2671545	37.82682018	6340112.43	2124438.244	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,493	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:36am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1842	-121.2671541	37.82683229	6340112.568	2124442.651	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,342	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:38am	C Gray	SHAD41 D.ssf
1843	-121.2671573	37.82688087	6340111.718	2124460.346	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,390	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:46am	C Gray	SHAD41 D.ssf
1844	-121.2671628	37.82691632	6340110.319	2124473.27	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,116	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:52am	C Gray	SHAD41 D.ssf
1845	-121.2671665	37.82692781	6340109.284	2124477.462	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,332	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:54am	C Gray	SHAD41 D.ssf
1846	-121.2671692	37.82694135	6340108.527	2124482.396	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,877	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:56am	C Gray	SHAD41 D.ssf
1847	-121.2671668	37.82695249	6340108.917	2124486.45	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,614	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:31:58am	C Gray	SHAD41 D.ssf
1848	-121.2671703	37.82696493	6340108.289	2124490.986	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,620	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:00am	C Gray	SHAD41 D.ssf
1849	-121.2671727	37.82699048	6340107.66	2124500.295	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,669	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:04am	C Gray	SHAD41 D.ssf
1850	-121.2671743	37.82702295	6340107.318	2124512.122	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,550	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:10am	C Gray	SHAD41 D.ssf
1851	-121.2671685	37.82702551	6340108.981	2124513.041	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,359	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:12am	C Gray	SHAD41 D.ssf
1852	-121.2671752	37.8270245	6340107.058	2124512.689	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,998	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:14am	C Gray	SHAD41 D.ssf
1853	-121.2671732	37.82701535	6340107.612	2124509.35	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,993	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:18am	C Gray	SHAD41 D.ssf
1854	-121.2671717	37.82700715	6340108.49	2124506.359	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,275	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:20am	C Gray	SHAD41 D.ssf
1855	-121.2671661	37.82698502	6340109.551	2124498.29	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,964	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:24am	C Gray	SHAD41 D.ssf
1856	-121.2671635	37.82695379	6340110.208	2124486.912	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,358	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:30am	C Gray	SHAD41 D.ssf
1857	-121.2671544	37.82691773	6340113.742	2124473.761	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,230	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:36am	C Gray	SHAD41 D.ssf
1858	-121.2671533	37.82690713	6340113.014	2124469.901	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,303	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:38am	C Gray	SHAD41 D.ssf
1859	-121.2671533	37.82689247	6340112.986	2124464.561	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,350	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:40am	C Gray	SHAD41 D.ssf
1860	-121.2671506	37.82688816	6340113.721	2124460.598	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,040	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:42am	C Gray	SHAD41 D.ssf
1861	-121.2671468	37.82685398	6340114.734	2124450.203	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,134	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:46am	C Gray	SHAD41 D.ssf
1862	-121.2671472	37.82683987	6340114.602	2124445.396	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,204	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:48am	C Gray	SHAD41 D.ssf
1863	-121.2671417	37.82681948	6340116.123	2124437.957	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,228	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:52am	C Gray	SHAD41 D.ssf
1864	-121.2671385	37.82679953	6340116.991	2124430.687	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,253	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:32:56am	C Gray	SHAD41 D.ssf
1865	-121.2671029	37.82678128	6340127.197	2124423.956	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,143	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:02am	C Gray	SHAD41 D.ssf
1866	-121.2670954	37.82679145	6340129.339	2124427.642	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,876	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:04am	C Gray	SHAD41 D.ssf
1867	-121.2670854	37.82678486	6340132.338	2124432.829	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,405	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:06am	C Gray	SHAD41 D.ssf
1868	-121.2670855	37.82681698	6340132.345	2124436.913	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,191	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:08am	C Gray	SHAD41 D.ssf
1869	-121.2670991	37.82682675	6340128.449	2124440.503	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,682	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:10am	C Gray	SHAD41 D.ssf
1870	-121.2671181	37.82683073	6340122.974	2124442	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,394	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:12am	C Gray	SHAD41 D.ssf
1871	-121.2671361	37.82682785	6340117.76	2124440.99	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,156	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:14am	C Gray	SHAD41 D.ssf
1872	-121.2671417	37.82682312	6340116.133	2124439.282	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,097	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:16am	C Gray	SHAD41 D.ssf
1873	-121.2671462	37.82680851	6340114.777	2124433.975	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,483	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:18am	C Gray	SHAD41 D.ssf
1874	-121.2671259	37.82678486	6340120.564	2124425.315	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,361	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:22am	C Gray	SHAD41 D.ssf
1875	-121.2670879	37.82680154	6340131.607	2124431.298	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,575	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:28am	C Gray	SHAD41 D.ssf
1876	-121.2670864	37.82681642	6340132.087	2124436.713	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,044	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:30am	C Gray	SHAD41 D.ssf
1877	-121.2670949	37.82682386	6340129.644	2124439.442	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,288	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:32am	C Gray	SHAD41 D.ssf
1878	-121.2671465	37.82681234	6340114.709	2124435.37	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,357	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:44am	C Gray	SHAD41 D.ssf
1879	-121.2671448	37.82681715	6340115.209	2124437.118	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,104	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:46am	C Gray	SHAD41 D.ssf
1880	-121.2671446	37.82681476	6340115.259	2124437.118	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,848	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:48am	C Gray	SHAD41 D.ssf
1881	-121.2671464	37.82681747	6340114.312	2124437.237	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,750	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:50am	C Gray	SHAD41 D.ssf
1882	-121.2671469	37.82681597	6340114.613	2124436.691	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,776	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:52am	C Gray	SHAD41 D.ssf
1883	-121.2671468	37.82681325	6340114.639	2124435.702	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,792	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:54am	C Gray	SHAD41 D.ssf
1884	-121.2671476	37.82681083	6340114.389	2124434.822	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,434	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:56am	C Gray	SHAD41 D.ssf
1885	-121.2671478	37.82680997	6340114.312	2124434.412	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,834	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:33:58am	C Gray	SHAD41 D.ssf
1886	-121.2671478	37.82680944	6340114.314	2124434.316	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,481	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:00am	C Gray	SHAD41 D.ssf
1887	-121.2671463	37.82681045	6340114.759	2124434.682	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,418	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:02am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
1888	-121.2671472	37.82681311	6340114.506	2124435.652	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,695	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:04am	C Gray	SHAD41 D.ssf
1889	-121.2671478	37.82681807	6340114.349	2124437.495	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,694	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:06am	C Gray	SHAD41 D.ssf
1890	-121.2671456	37.82682803	6340115.011	2124441.081	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	34,010	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:08am	C Gray	SHAD41 D.ssf
1891	-121.2671465	37.82683938	6340114.801	2124445.215	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	34,118	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:10am	C Gray	SHAD41 D.ssf
1892	-121.2671481	37.82685267	6340114.366	2124450.057	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	34,395	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:12am	C Gray	SHAD41 D.ssf
1893	-121.2671494	37.82686415	6340114.015	2124454.241	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,664	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:14am	C Gray	SHAD41 D.ssf
1894	-121.2671514	37.82687504	6340113.585	2124458.208	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,133	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:16am	C Gray	SHAD41 D.ssf
1895	-121.2671544	37.82690049	6340112.699	2124467.486	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,941	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:20am	C Gray	SHAD41 D.ssf
1896	-121.2671564	37.82691587	6340112.16	2124473.089	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,371	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:22am	C Gray	SHAD41 D.ssf
1897	-121.2671595	37.8269392	6340111.325	2124481.593	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	35,300	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:26am	C Gray	SHAD41 D.ssf
1898	-121.2671611	37.82695173	6340110.901	2124486.158	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,081	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:28am	C Gray	SHAD41 D.ssf
1899	-121.2671631	37.82696011	6340109.473	2124489.222	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,986	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:30am	C Gray	SHAD41 D.ssf
1900	-121.2671683	37.82696988	6340108.887	2124492.782	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,584	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:32am	C Gray	SHAD41 D.ssf
1901	-121.2671675	37.82698418	6340109.143	2124497.989	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,943	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:34am	C Gray	SHAD41 D.ssf
1902	-121.2671683	37.82699401	6340108.963	2124501.571	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	40,723	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:36am	C Gray	SHAD41 D.ssf
1903	-121.2671579	37.8270106	6340112.015	2124507.585	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	42,057	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:40am	C Gray	SHAD41 D.ssf
1904	-121.2671561	37.82701049	6340112.515	2124507.541	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	42,236	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:42am	C Gray	SHAD41 D.ssf
1906	-121.2671608	37.82701665	6340111.181	2124509.794	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	41,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:46am	C Gray	SHAD41 D.ssf
1907	-121.2671614	37.82700943	6340110.982	2124507.169	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	41,847	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:50am	C Gray	SHAD41 D.ssf
1908	-121.2671592	37.82698742	6340111.521	2124498.406	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,003	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:54am	C Gray	SHAD41 D.ssf
1909	-121.2671578	37.8269743	6340112.101	2124494.332	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,735	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:56am	C Gray	SHAD41 D.ssf
1910	-121.2671558	37.82696179	6340112.465	2124489.808	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,977	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:34:58am	C Gray	SHAD41 D.ssf
1911	-121.2671522	37.82694924	6340113.464	2124485.228	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,179	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:00am	C Gray	SHAD41 D.ssf
1912	-121.267152	37.8269406	6340113.503	2124482.085	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,443	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:02am	C Gray	SHAD41 D.ssf
1913	-121.2671529	37.82692446	6340113.194	2124476.211	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,104	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:04am	C Gray	SHAD41 D.ssf
1914	-121.2671494	37.8269116	6340114.166	2124471.446	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,059	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:06am	C Gray	SHAD41 D.ssf
1915	-121.2671445	37.82684754	6340115.384	2124448.181	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	30,968	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:16am	C Gray	SHAD41 D.ssf
1916	-121.2671428	37.82683423	6340115.848	2124443.329	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	30,814	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:18am	C Gray	SHAD41 D.ssf
1917	-121.2671402	37.82682469	6340116.579	2124439.851	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,981	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:24am	C Gray	SHAD41 D.ssf
1918	-121.267138	37.8268232	6340117.197	2124439.558	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,041	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:26am	C Gray	SHAD41 D.ssf
1919	-121.2671369	37.82682442	6340117.503	2124439.744	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,525	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:28am	C Gray	SHAD41 D.ssf
1920	-121.2671378	37.82683024	6340117.261	2124441.868	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,172	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:30am	C Gray	SHAD41 D.ssf
1921	-121.2671392	37.82683985	6340116.892	2124445.37	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	35,105	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:32am	C Gray	SHAD41 D.ssf
1922	-121.2671412	37.82685283	6340116.36	2124450.099	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,518	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:34am	C Gray	SHAD41 D.ssf
1923	-121.2671419	37.82686583	6340116.207	2124454.842	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,142	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:36am	C Gray	SHAD41 D.ssf
1924	-121.2671441	37.82687488	6340115.585	2124458.134	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,892	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:38am	C Gray	SHAD41 D.ssf
1925	-121.267147	37.82689989	6340114.827	2124467.25	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,307	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:42am	C Gray	SHAD41 D.ssf
1926	-121.2671562	37.82696324	6340112.371	2124490.338	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,597	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:35:52am	C Gray	SHAD41 D.ssf
1928	-121.2671633	37.82701135	6340110.156	2124507.874	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	42,699	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:00am	C Gray	SHAD41 D.ssf
1929	-121.2671645	37.82701215	6340110.41	2124508.163	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	44,240	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:04am	C Gray	SHAD41 D.ssf
1930	-121.2671526	37.8270035	6340113.515	2124504.986	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	43,754	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:11am	C Gray	SHAD41 D.ssf
1931	-121.2671538	37.82699835	6340113.147	2124503.115	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	40,735	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:12am	C Gray	SHAD41 D.ssf
1932	-121.2671519	37.82698523	6340113.662	2124498.332	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,172	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:16am	C Gray	SHAD41 D.ssf
1933	-121.2671542	37.82697603	6340113.841	2124494.981	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,753	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:18am	C Gray	SHAD41 D.ssf
1934	-121.2671517	37.82696523	6340113.651	2124491.052	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,663	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:20am	C Gray	SHAD41 D.ssf
1935	-121.2671481	37.82695819	6340114.669	2124488.48	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,557	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:22am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1936	-121.26711335	37.82693383	6340117.921	2124481.418	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,530	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:24am	C Gray	SHAD41 D.ssf
1937	-121.26711337	37.82691432	6340117.721	2124472.479	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,150	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:28am	C Gray	SHAD41 D.ssf
1938	-121.26713888	37.82688493	6340117.162	2124461.78	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	35,250	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:32am	C Gray	SHAD41 D.ssf
1939	-121.2671376	37.82687384	6340117.473	2124457.742	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,828	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:34am	C Gray	SHAD41 D.ssf
1940	-121.2671351	37.8268484	6340118.104	2124448.474	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,813	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:38am	C Gray	SHAD41 D.ssf
1941	-121.2671357	37.82682872	6340117.886	2124441.308	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,929	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:42am	C Gray	SHAD41 D.ssf
1942	-121.2671333	37.82684416	6340118.622	2124446.925	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,671	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:46am	C Gray	SHAD41 D.ssf
1943	-121.2671346	37.82685486	6340118.286	2124450.822	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	31,331	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:48am	C Gray	SHAD41 D.ssf
1944	-121.2671354	37.8268628	6340118.079	2124453.716	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	30,856	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:50am	C Gray	SHAD41 D.ssf
1945	-121.2671468	37.82689701	6340116.866	2124466.199	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,876	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:36:56am	C Gray	SHAD41 D.ssf
1946	-121.2671477	37.82691977	6340114.688	2124474.489	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,976	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:00am	C Gray	SHAD41 D.ssf
1947	-121.2671446	37.82692782	6340115.615	2124477.412	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	35,223	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:02am	C Gray	SHAD41 D.ssf
1948	-121.2671397	37.82691701	6340116.976	2124473.463	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,866	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:05am	C Gray	SHAD41 D.ssf
1949	-121.2671381	37.82690671	6340117.428	2124469.71	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,084	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:06am	C Gray	SHAD41 D.ssf
1950	-121.2671366	37.82689746	6340117.816	2124466.339	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	34,951	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:08am	C Gray	SHAD41 D.ssf
1951	-121.2671354	37.82689001	6340118.27	2124463.623	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	34,439	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:10am	C Gray	SHAD41 D.ssf
1952	-121.2671406	37.82689532	6340116.665	2124465.571	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,290	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:12am	C Gray	SHAD41 D.ssf
1953	-121.2671456	37.82690134	6340115.246	2124467.774	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,603	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:14am	C Gray	SHAD41 D.ssf
1954	-121.267148	37.82690932	6340114.567	2124470.685	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	34,211	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:16am	C Gray	SHAD41 D.ssf
1955	-121.2671488	37.82690932	6340114.37	2124475.321	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	34,403	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:18am	C Gray	SHAD41 D.ssf
1956	-121.2671483	37.82693398	6340114.566	2124479.665	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,018	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:20am	C Gray	SHAD41 D.ssf
1957	-121.2671491	37.82694269	6340114.358	2124482.838	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,561	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:22am	C Gray	SHAD41 D.ssf
1958	-121.267153	37.82696156	6340113.266	2124489.719	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,207	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:24am	C Gray	SHAD41 D.ssf
1959	-121.2671536	37.82697439	6340113.15	2124494.392	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,667	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:26am	C Gray	SHAD41 D.ssf
1960	-121.267153	37.826991	6340113.351	2124500.437	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,599	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:28am	C Gray	SHAD41 D.ssf
1961	-121.2671512	37.827002	6340113.926	2124504.438	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,925	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:30am	C Gray	SHAD41 D.ssf
1962	-121.2671551	37.82700723	6340112.807	2124506.352	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	41,903	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:32am	C Gray	SHAD41 D.ssf
1963	-121.2671618	37.82699997	6340110.841	2124503.722	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	42,274	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:34am	C Gray	SHAD41 D.ssf
1964	-121.267164	37.82699954	6340110.202	2124502.064	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	41,868	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:36am	C Gray	SHAD41 D.ssf
1965	-121.2671615	37.82698726	6340110.901	2124499.097	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	42,730	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:38am	C Gray	SHAD41 D.ssf
1966	-121.2671577	37.82699029	6340112.014	2124500.191	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,719	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:40am	C Gray	SHAD41 D.ssf
1967	-121.2671545	37.82699226	6340112.925	2124500.901	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,779	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:42am	C Gray	SHAD41 D.ssf
1968	-121.2671547	37.82699419	6340112.886	2124501.604	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,082	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:44am	C Gray	SHAD41 D.ssf
1969	-121.2671534	37.82700199	6340113.287	2124504.44	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	41,177	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:46am	C Gray	SHAD41 D.ssf
1970	-121.2671527	37.82700657	6340113.486	2124506.105	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	41,406	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:48am	C Gray	SHAD41 D.ssf
1971	-121.267149	37.82701277	6340114.589	2124508.355	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	42,762	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:50am	C Gray	SHAD41 D.ssf
1972	-121.2671476	37.82701648	6340115.007	2124509.703	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	43,791	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:52am	C Gray	SHAD41 D.ssf
1973	-121.2671456	37.82701674	6340115.573	2124509.791	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	44,579	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:37:54am	C Gray	SHAD41 D.ssf
1974	-121.2671448	37.82699016	6340114.783	2124496.477	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,694	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:06am	C Gray	SHAD41 D.ssf
1975	-121.2671461	37.82699706	6340115.305	2124492.993	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,157	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:08am	C Gray	SHAD41 D.ssf
1976	-121.2671398	37.82695769	6340117.073	2124488.276	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,380	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:10am	C Gray	SHAD41 D.ssf
1977	-121.2671366	37.82691847	6340117.874	2124473.988	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,778	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:16am	C Gray	SHAD41 D.ssf
1978	-121.2671352	37.82699356	6340118.251	2124469.138	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,394	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:18am	C Gray	SHAD41 D.ssf
1979	-121.2671354	37.82689369	6340118.169	2124464.963	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	34,467	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:20am	C Gray	SHAD41 D.ssf
1980	-121.267136	37.82688923	6340117.975	2124463.341	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,669	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:22am	C Gray	SHAD41 D.ssf
1981	-121.2671384	37.82689432	6340117.284	2124465.2	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,545	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:24am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
1982	-121.2671416	37.8269013	6340116.384	2124468.367	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,914	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:26am	C Gray	SHAD41 D.ssf
1983	-121.2671407	37.8269074	6340116.666	2124468.787	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,045	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:28am	C Gray	SHAD41 D.ssf
1984	-121.2671431	37.82690115	6340115.962	2124470.097	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,312	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:32am	C Gray	SHAD41 D.ssf
1985	-121.2671468	37.8269219	6340114.947	2124475.261	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,392	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:40am	C Gray	SHAD41 D.ssf
1986	-121.267143	37.82691629	6340116.042	2124473.209	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,704	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:44am	C Gray	SHAD41 D.ssf
1987	-121.26714121	37.82690557	6340116.253	2124469.306	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,405	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:46am	C Gray	SHAD41 D.ssf
1988	-121.2671434	37.82689249	6340116.431	2124464.54	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,788	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:48am	C Gray	SHAD41 D.ssf
1989	-121.2671402	37.82683414	6340116.704	2124455.856	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,348	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:52am	C Gray	SHAD41 D.ssf
1990	-121.2671418	37.82685671	6340116.206	2124451.513	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,648	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:54am	C Gray	SHAD41 D.ssf
1991	-121.2671402	37.82684719	6340116.639	2124448.044	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,390	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:38:56am	C Gray	SHAD41 D.ssf
1992	-121.267133	37.82683263	6340118.671	2124442.727	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,238	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:04am	C Gray	SHAD41 D.ssf
1993	-121.2671167	37.82683414	6340120.504	2124443.261	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,840	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:06am	C Gray	SHAD41 D.ssf
1994	-121.2671305	37.82683935	6340119.408	2124445.166	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,106	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:08am	C Gray	SHAD41 D.ssf
1995	-121.2671339	37.82683946	6340118.432	2124445.214	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,647	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:10am	C Gray	SHAD41 D.ssf
1996	-121.2671263	37.82685654	6340120.687	2124451.415	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,296	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:14am	C Gray	SHAD41 D.ssf
1997	-121.2671141	37.82686452	6340119.708	2124447.039	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,925	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:16am	C Gray	SHAD41 D.ssf
1998	-121.2671272	37.82686451	6340120.444	2124454.32	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,210	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:18am	C Gray	SHAD41 D.ssf
1999	-121.2671289	37.82687296	6340119.969	2124457.401	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,448	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:20am	C Gray	SHAD41 D.ssf
2000	-121.2671321	37.82689719	6340119.129	2124466.23	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,139	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:24am	C Gray	SHAD41 D.ssf
2001	-121.2671342	37.82691147	6340118.559	2124471.434	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,914	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:26am	C Gray	SHAD41 D.ssf
2002	-121.2671342	37.82692114	6340118.559	2124474.956	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,379	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:28am	C Gray	SHAD41 D.ssf
2003	-121.2671367	37.82693471	6340117.918	2124479.903	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,404	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:30am	C Gray	SHAD41 D.ssf
2004	-121.2671441	37.82695924	6340115.854	2124488.853	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,472	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:34am	C Gray	SHAD41 D.ssf
2005	-121.2671441	37.82696948	6340115.877	2124492.582	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,937	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:36am	C Gray	SHAD41 D.ssf
2006	-121.2671425	37.82698387	6340115.657	2124497.822	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,999	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:38am	C Gray	SHAD41 D.ssf
2007	-121.2671422	37.82699519	6340116.494	2124502.186	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,680	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:40am	C Gray	SHAD41 D.ssf
2008	-121.2671404	37.82700588	6340117.056	2124505.826	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,981	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:42am	C Gray	SHAD41 D.ssf
2009	-121.2671333	37.82701171	6340119.118	2124507.933	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,544	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:44am	C Gray	SHAD41 D.ssf
2010	-121.2671281	37.82702613	6340120.662	2124513.169	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,448	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:46am	C Gray	SHAD41 D.ssf
2011	-121.267125	37.82703672	6340121.588	2124517.017	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,287	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:48am	C Gray	SHAD41 D.ssf
2012	-121.2671249	37.82702659	6340121.586	2124513.329	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,877	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:50am	C Gray	SHAD41 D.ssf
2013	-121.2671257	37.82701419	6340121.332	2124508.816	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,925	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:52am	C Gray	SHAD41 D.ssf
2014	-121.2671229	37.82700417	6340122.098	2124505.163	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,310	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:54am	C Gray	SHAD41 D.ssf
2015	-121.2671168	37.82700268	6340123.842	2124504.606	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,747	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:56am	C Gray	SHAD41 D.ssf
2016	-121.2671132	37.82700851	6340125.249	2124506.717	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	57,175	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:39:58am	C Gray	SHAD41 D.ssf
2017	-121.2671113	37.82701706	6340124.983	2124509.831	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,197	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:00am	C Gray	SHAD41 D.ssf
2018	-121.2671133	37.82702912	6340124.938	2124514.225	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,543	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:02am	C Gray	SHAD41 D.ssf
2019	-121.267115	37.82704026	6340124.481	2124518.285	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,390	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:04am	C Gray	SHAD41 D.ssf
2020	-121.2671131	37.82704127	6340125.045	2124518.647	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,352	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:06am	C Gray	SHAD41 D.ssf
2021	-121.2671121	37.82703964	6340125.336	2124518.052	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,585	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:08am	C Gray	SHAD41 D.ssf
2022	-121.2671102	37.82703895	6340125.866	2124517.796	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	55,541	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:10am	C Gray	SHAD41 D.ssf
2023	-121.2671117	37.82703373	6340125.411	2124515.899	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,276	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:12am	C Gray	SHAD41 D.ssf
2024	-121.2671127	37.82701285	6340125.101	2124512.849	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,794	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:14am	C Gray	SHAD41 D.ssf
2025	-121.2671116	37.82702185	6340125.39	2124508.296	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,037	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:18am	C Gray	SHAD41 D.ssf
2026	-121.2671199	37.82701176	6340122.974	2124507.919	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,040	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:20am	C Gray	SHAD41 D.ssf
2027	-121.2671248	37.82701058	6340121.557	2124507.501	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,514	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:24am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
2028	-121.26711292	37.82700133	6340120.268	2124504.142	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,778	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:26am	C Gray	SHAD41 D.ssf
2029	-121.2671136	37.826998138	6340118.271	2124501.193	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,542	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:28am	C Gray	SHAD41 D.ssf
2030	-121.2671437	37.826998136	6340116.031	2124496.904	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,833	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:30am	C Gray	SHAD41 D.ssf
2031	-121.2671429	37.82697033	6340116.219	2124492.888	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,440	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:32am	C Gray	SHAD41 D.ssf
2032	-121.2671387	37.82695841	6340117.411	2124488.539	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,672	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:34am	C Gray	SHAD41 D.ssf
2033	-121.2671258	37.826995697	6340121.119	2124487.984	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,316	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:36am	C Gray	SHAD41 D.ssf
2034	-121.2671162	37.82696521	6340123.908	2124490.958	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,673	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:38am	C Gray	SHAD41 D.ssf
2035	-121.2671122	37.8269735	6340112.507	2124493.969	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,685	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:40am	C Gray	SHAD41 D.ssf
2036	-121.2671015	37.82698539	6340128.234	2124498.271	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,259	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:42am	C Gray	SHAD41 D.ssf
2037	-121.2671085	37.82699936	6340126.216	2124501.279	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,086	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:44am	C Gray	SHAD41 D.ssf
2038	-121.2671249	37.82700006	6340121.504	2124503.866	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,948	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:46am	C Gray	SHAD41 D.ssf
2039	-121.2671137	37.82699369	6340115.045	2124501.378	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,732	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:48am	C Gray	SHAD41 D.ssf
2040	-121.2671471	37.826998596	6340115.045	2124498.589	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,299	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:50am	C Gray	SHAD41 D.ssf
2041	-121.267148	37.82697374	6340114.768	2124494.142	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,562	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:52am	C Gray	SHAD41 D.ssf
2042	-121.2671415	37.82696126	6340116.607	2124489.581	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,400	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:54am	C Gray	SHAD41 D.ssf
2043	-121.2671129	37.826985828	6340120.198	2124488.467	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,600	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:56am	C Gray	SHAD41 D.ssf
2044	-121.2671127	37.82696329	6340123.668	2124490.261	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,266	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:40:58am	C Gray	SHAD41 D.ssf
2045	-121.2671113	37.82697712	6340124.868	2124495.288	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,235	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:00am	C Gray	SHAD41 D.ssf
2046	-121.2671088	37.82698841	6340126.131	2124499.388	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,225	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:02am	C Gray	SHAD41 D.ssf
2047	-121.2671146	37.82699882	6340124.47	2124503.194	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,180	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:04am	C Gray	SHAD41 D.ssf
2048	-121.2671328	37.82699421	6340119.198	2124501.56	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,708	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:06am	C Gray	SHAD41 D.ssf
2049	-121.2671357	37.826959337	6340118.252	2124487.058	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,524	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:14am	C Gray	SHAD41 D.ssf
2050	-121.2671208	37.82695587	6340122.55	2124487.569	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,091	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:16am	C Gray	SHAD41 D.ssf
2051	-121.2671121	37.82696446	6340125.107	2124490.677	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,538	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:18am	C Gray	SHAD41 D.ssf
2052	-121.2671011	37.82697996	6340128.321	2124496.294	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,269	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:20am	C Gray	SHAD41 D.ssf
2053	-121.2671144	37.82698883	6340128.065	2124499.334	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,566	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:22am	C Gray	SHAD41 D.ssf
2054	-121.2671088	37.82699833	6340126.152	2124503.002	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,615	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:24am	C Gray	SHAD41 D.ssf
2055	-121.2671206	37.82700182	6340122.753	2124504.302	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,546	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:26am	C Gray	SHAD41 D.ssf
2056	-121.2671395	37.82700024	6340117.286	2124503.77	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,964	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:28am	C Gray	SHAD41 D.ssf
2057	-121.2671506	37.82698906	6340114.05	2124499.726	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,850	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:30am	C Gray	SHAD41 D.ssf
2058	-121.2671549	37.82697684	6340112.771	2124495.286	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,562	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:32am	C Gray	SHAD41 D.ssf
2059	-121.2671549	37.82696601	6340112.748	2124491.343	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,845	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:34am	C Gray	SHAD41 D.ssf
2060	-121.2671444	37.82695485	6340115.731	2124487.255	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,999	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:36am	C Gray	SHAD41 D.ssf
2061	-121.2671337	37.82694463	6340118.807	2124483.506	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,307	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:38am	C Gray	SHAD41 D.ssf
2062	-121.2671303	37.82693616	6340119.75	2124480.414	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,652	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:39am	C Gray	SHAD41 D.ssf
2063	-121.2671262	37.82699223	6340120.914	2124475.357	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,709	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:42am	C Gray	SHAD41 D.ssf
2064	-121.2671208	37.8269163	6340122.45	2124473.163	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,522	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:44am	C Gray	SHAD41 D.ssf
2065	-121.2671114	37.82691208	6340125.142	2124471.602	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,459	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:46am	C Gray	SHAD41 D.ssf
2066	-121.2670932	37.82691037	6340130.393	2124470.999	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,424	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:48am	C Gray	SHAD41 D.ssf
2067	-121.2670774	37.82691337	6340134.975	2124471.893	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,381	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:50am	C Gray	SHAD41 D.ssf
2068	-121.2670661	37.82692458	6340138.269	2124476.049	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,499	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:52am	C Gray	SHAD41 D.ssf
2069	-121.2670627	37.82694042	6340139.295	2124481.807	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,655	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:54am	C Gray	SHAD41 D.ssf
2070	-121.2670761	37.82695087	6340139.807	2124485.608	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,381	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:56am	C Gray	SHAD41 D.ssf
2071	-121.2670728	37.82695845	6340136.442	2124488.396	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,703	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:41:58am	C Gray	SHAD41 D.ssf
2072	-121.2670854	37.82696086	6340132.797	2124489.304	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,556	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:00am	C Gray	SHAD41 D.ssf
2073	-121.2671005	37.82695585	6340128.412	2124487.515	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,693	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:02am	C Gray	SHAD41 D.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2074	-121.2671129	37.82695376	6340125.134	2124486.781	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,086	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:04am	C Gray	SHAD41 D.ssf
2075	-121.2671228	37.82694751	6340121.953	2124484.537	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,698	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:06am	C Gray	SHAD41 D.ssf
2076	-121.2671259	37.82693916	6340121.038	2124481.492	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,330	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:08am	C Gray	SHAD41 D.ssf
2077	-121.2671207	37.82692438	6340122.491	2124476.103	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,972	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:10am	C Gray	SHAD41 D.ssf
2078	-121.2671116	37.82691478	6340125.098	2124472.585	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,497	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:12am	C Gray	SHAD41 D.ssf
2079	-121.2670977	37.82691167	6340129.086	2124471.423	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,935	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:14am	C Gray	SHAD41 D.ssf
2080	-121.2670684	37.82691202	6340133.057	2124471.545	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,543	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:16am	C Gray	SHAD41 D.ssf
2081	-121.2670685	37.82692044	6340137.443	2124474.515	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,636	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:18am	C Gray	SHAD41 D.ssf
2082	-121.2670647	37.82693548	6340138.71	2124480.013	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,546	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:20am	C Gray	SHAD41 D.ssf
2083	-121.2670736	37.82694124	6340136.139	2124482.13	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,227	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:24am	C Gray	SHAD41 D.ssf
2084	-121.2670641	37.82694806	6340138.924	2124484.591	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,005	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:26am	C Gray	SHAD41 D.ssf
2085	-121.2670659	37.82695762	6340138.405	2124487.516	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,936	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:28am	C Gray	SHAD41 D.ssf
2086	-121.2670711	37.82695762	6340136.919	2124488.089	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,286	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:30am	C Gray	SHAD41 D.ssf
2087	-121.2670794	37.82696259	6340134.542	2124489.919	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,012	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:32am	C Gray	SHAD41 D.ssf
2088	-121.2670917	37.82695878	6340130.983	2124488.561	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,261	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:34am	C Gray	SHAD41 D.ssf
2089	-121.2670966	37.82695089	6340129.521	2124485.698	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,263	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:36am	C Gray	SHAD41 D.ssf
2090	-121.2670963	37.82695172	6340129.621	2124486.001	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,108	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:38am	C Gray	SHAD41 D.ssf
2091	-121.267109	37.82695011	6340125.953	2124485.443	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,763	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:40am	C Gray	SHAD41 D.ssf
2092	-121.2671194	37.82694374	6340122.924	2124483.149	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,768	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:42am	C Gray	SHAD41 D.ssf
2093	-121.2671246	37.82693452	6340121.384	2124479.806	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,648	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:44am	C Gray	SHAD41 D.ssf
2094	-121.2671297	37.82692552	6340121.053	2124476.535	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,084	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:46am	C Gray	SHAD41 D.ssf
2095	-121.2671216	37.82692268	6340122.228	2124475.487	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,239	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:48am	C Gray	SHAD41 D.ssf
2096	-121.2671212	37.82692119	6340122.346	2124474.945	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,838	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:50am	C Gray	SHAD41 D.ssf
2097	-121.2671287	37.82690655	6340120.121	2124469.63	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,943	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:52am	C Gray	SHAD41 D.ssf
2098	-121.267131	37.82689238	6340119.412	2124464.477	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,810	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:54am	C Gray	SHAD41 D.ssf
2099	-121.2671298	37.82687669	6340119.731	2124458.76	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,364	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:56am	C Gray	SHAD41 D.ssf
2100	-121.2671297	37.82686545	6340119.707	2124454.667	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,130	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:42:58am	C Gray	SHAD41 D.ssf
2101	-121.2671297	37.82685071	6340119.68	2124449.299	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,601	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:00am	C Gray	SHAD41 D.ssf
2102	-121.2671311	37.82684124	6340119.229	2124445.855	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,607	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:02am	C Gray	SHAD41 D.ssf
2103	-121.267136	37.82683594	6340117.809	2124443.936	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,851	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:04am	C Gray	SHAD41 D.ssf
2104	-121.2671424	37.82684335	6340115.995	2124446.651	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,023	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:06am	C Gray	SHAD41 D.ssf
2105	-121.2671438	37.82685492	6340115.622	2124450.869	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,113	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:08am	C Gray	SHAD41 D.ssf
2106	-121.26714	37.82686555	6340116.732	2124454.727	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,192	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:10am	C Gray	SHAD41 D.ssf
2107	-121.2671358	37.82687746	6340118.008	2124459.054	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,575	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:12am	C Gray	SHAD41 D.ssf
2108	-121.2671366	37.82686859	6340117.918	2124462.524	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,895	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:14am	C Gray	SHAD41 D.ssf
2109	-121.2671392	37.82690031	6340116.955	2124467.383	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,243	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:16am	C Gray	SHAD41 D.ssf
2110	-121.267137	37.82690965	6340117.734	2124470.779	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,365	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:18am	C Gray	SHAD41 D.ssf
2111	-121.2671253	37.82690948	6340120.135	2124470.689	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,910	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:20am	C Gray	SHAD41 D.ssf
2112	-121.2671289	37.82690031	6340118.056	2124467.36	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,743	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:22am	C Gray	SHAD41 D.ssf
2113	-121.2671311	37.82689344	6340119.397	2124464.79	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,653	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:24am	C Gray	SHAD41 D.ssf
2114	-121.2671325	37.82688295	6340118.973	2124461.048	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,215	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:26am	C Gray	SHAD41 D.ssf
2115	-121.2671326	37.8268762	6340118.905	2124458.588	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,638	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:28am	C Gray	SHAD41 D.ssf
2116	-121.2671335	37.82688588	6340118.747	2124452.985	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,345	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:30am	C Gray	SHAD41 D.ssf
2117	-121.2671345	37.82684709	6340118.28	2124447.282	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,670	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:32am	C Gray	SHAD41 D.ssf
2118	-121.2671302	37.82683307	6340119.496	2124445.065	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,641	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:34am	C Gray	SHAD41 D.ssf
2119	-121.2671254	37.82683599	6340120.863	2124443.929	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,411	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:36am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
2120	-121.26711216	37.82683585	6340121.969	2124443.871	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,983	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:38am	C Gray	SHAD41 D.ssf
2121	-121.2671215	37.82684429	6340121.919	2124446.945	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,429	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:40am	C Gray	SHAD41 D.ssf
2122	-121.2671215	37.82685538	6340122.052	2124450.981	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,476	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:42am	C Gray	SHAD41 D.ssf
2123	-121.2671208	37.82686763	6340122.33	2124455.441	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,127	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:44am	C Gray	SHAD41 D.ssf
2124	-121.2671203	37.82687747	6340122.474	2124459.02	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,963	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:46am	C Gray	SHAD41 D.ssf
2125	-121.2671222	37.82688988	6340121.998	2124463.545	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,634	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:48am	C Gray	SHAD41 D.ssf
2126	-121.2671229	37.82689947	6340121.796	2124467.037	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,554	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:50am	C Gray	SHAD41 D.ssf
2127	-121.26711239	37.82691005	6340121.524	2124470.893	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,899	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:52am	C Gray	SHAD41 D.ssf
2128	-121.267124	37.82691301	6340121.498	2124471.971	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,854	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:54am	C Gray	SHAD41 D.ssf
2129	-121.2671258	37.82690498	6340120.951	2124469.05	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,942	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:56am	C Gray	SHAD41 D.ssf
2130	-121.267126	37.82689615	6340120.872	2124465.836	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,627	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:43:58am	C Gray	SHAD41 D.ssf
2131	-121.2671265	37.82688104	6340120.717	2124463.979	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,639	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:00am	C Gray	SHAD41 D.ssf
2132	-121.2671254	37.82688673	6340121.031	2124462.404	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,128	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:02am	C Gray	SHAD41 D.ssf
2133	-121.2671236	37.82687455	6340121.522	2124457.967	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,311	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:04am	C Gray	SHAD41 D.ssf
2134	-121.2671195	37.82686606	6340122.654	2124454.865	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,722	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:06am	C Gray	SHAD41 D.ssf
2135	-121.2671183	37.82685593	6340123.992	2124451.175	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,694	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:08am	C Gray	SHAD41 D.ssf
2136	-121.267118	37.82684511	6340122.047	2124447.232	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,244	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:10am	C Gray	SHAD41 D.ssf
2137	-121.2671148	37.82683921	6340123.958	2124445.08	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,789	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:12am	C Gray	SHAD41 D.ssf
2138	-121.2671096	37.82684018	6340125.448	2124445.42	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,939	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:14am	C Gray	SHAD41 D.ssf
2139	-121.2671044	37.8268446	6340126.956	2124447.018	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,072	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:15am	C Gray	SHAD41 D.ssf
2140	-121.2671082	37.8268524	6340125.89	2124449.864	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,252	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:18am	C Gray	SHAD41 D.ssf
2141	-121.2671118	37.82686119	6340125.399	2124453.069	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,745	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:20am	C Gray	SHAD41 D.ssf
2142	-121.267114	37.82686914	6340124.267	2124455.974	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,745	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:22am	C Gray	SHAD41 D.ssf
2143	-121.2671155	37.82688091	6340123.865	2124460.262	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,935	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:24am	C Gray	SHAD41 D.ssf
2144	-121.2671169	37.82689151	6340123.485	2124464.127	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,569	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:26am	C Gray	SHAD41 D.ssf
2145	-121.2671187	37.82690113	6340123.023	2124467.631	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,989	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:28am	C Gray	SHAD41 D.ssf
2146	-121.2671187	37.82691104	6340123.023	2124471.242	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,290	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:30am	C Gray	SHAD41 D.ssf
2147	-121.2671094	37.82691186	6340125.708	2124471.519	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,833	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:32am	C Gray	SHAD41 D.ssf
2148	-121.2671066	37.82690551	6340126.524	2124469.199	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,929	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:34am	C Gray	SHAD41 D.ssf
2149	-121.2671072	37.82689897	6340126.316	2124466.821	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,767	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:36am	C Gray	SHAD41 D.ssf
2150	-121.2671068	37.82690692	6340126.448	2124469.711	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,183	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:38am	C Gray	SHAD41 D.ssf
2151	-121.2671136	37.82691706	6340124.51	2124473.423	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,764	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:40am	C Gray	SHAD41 D.ssf
2152	-121.2671147	37.82691738	6340124.209	2124473.541	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,384	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:42am	C Gray	SHAD41 D.ssf
2153	-121.2671154	37.8269162	6340124.001	2124473.114	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,191	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:44am	C Gray	SHAD41 D.ssf
2154	-121.2671145	37.82691521	6340124.246	2124472.75	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,817	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:46am	C Gray	SHAD41 D.ssf
2155	-121.2671145	37.8269135	6340124.246	2124472.126	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,470	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:48am	C Gray	SHAD41 D.ssf
2156	-121.2671176	37.82690538	6340123.321	2124469.177	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,302	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:50am	C Gray	SHAD41 D.ssf
2157	-121.2671182	37.82689775	6340123.137	2124466.401	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,392	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:52am	C Gray	SHAD41 D.ssf
2158	-121.26711207	37.82688759	6340122.389	2124462.709	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,092	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:54am	C Gray	SHAD41 D.ssf
2159	-121.2671107	37.82687964	6340123.204	2124459.805	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,536	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:56am	C Gray	SHAD41 D.ssf
2160	-121.2671137	37.82686831	6340124.335	2124455.67	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,121	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:44:58am	C Gray	SHAD41 D.ssf
2161	-121.2671104	37.82685684	6340125.276	2124451.489	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,726	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:00am	C Gray	SHAD41 D.ssf
2162	-121.2671079	37.82684618	6340125.97	2124447.601	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,843	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:02am	C Gray	SHAD41 D.ssf
2163	-121.2671036	37.82683923	6340127.18	2124445.061	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,167	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:04am	C Gray	SHAD41 D.ssf
2164	-121.267101	37.82682918	6340127.896	2124441.392	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,908	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:10am	C Gray	SHAD41 D.ssf
2165	-121.2670998	37.82682277	6340128.236	2124439.055	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,000	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:12am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2166	-121.2670997	37.82682151	6340128.249	2124438.596	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,731	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:14am	C Gray	SHAD41 D.ssf
2167	-121.2670997	37.82682217	6340128.258	2124438.833	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,543	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:16am	C Gray	SHAD41 D.ssf
2168	-121.2671018	37.82682425	6340127.664	2124439.696	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,019	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:18am	C Gray	SHAD41 D.ssf
2169	-121.2671145	37.82682878	6340123.994	2124441.281	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,206	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:20am	C Gray	SHAD41 D.ssf
2170	-121.2671383	37.82683296	6340117.159	2124445.152	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,055	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:28am	C Gray	SHAD41 D.ssf
2171	-121.2671299	37.82684444	6340119.611	2124447.018	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,973	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:30am	C Gray	SHAD41 D.ssf
2172	-121.267111	37.82684315	6340125.045	2124446.503	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,240	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:33am	C Gray	SHAD41 D.ssf
2173	-121.2670982	37.82683389	6340128.73	2124443.1	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,513	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:36am	C Gray	SHAD41 D.ssf
2174	-121.2670911	37.82682816	6340130.769	2124440.997	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,645	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:38am	C Gray	SHAD41 D.ssf
2175	-121.2670747	37.82682593	6340135.491	2124440.147	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,309	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:40am	C Gray	SHAD41 D.ssf
2176	-121.2670539	37.82684432	6340140.295	2124446.805	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,785	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:44am	C Gray	SHAD41 D.ssf
2177	-121.2670582	37.82685882	6340141.584	2124452.075	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,788	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:46am	C Gray	SHAD41 D.ssf
2178	-121.2670608	37.82686842	6340139.63	2124455.585	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,903	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:48am	C Gray	SHAD41 D.ssf
2179	-121.2670731	37.82687014	6340136.093	2124456.243	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,525	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:50am	C Gray	SHAD41 D.ssf
2180	-121.2670958	37.82685563	6340129.476	2124451.011	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,474	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:54am	C Gray	SHAD41 D.ssf
2181	-121.2670987	37.82684404	6340128.608	2124446.798	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,407	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:56am	C Gray	SHAD41 D.ssf
2182	-121.2670981	37.82683029	6340128.727	2124441.789	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,964	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:45:58am	C Gray	SHAD41 D.ssf
2183	-121.2670864	37.82682731	6340132.124	2124440.679	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,928	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:00am	C Gray	SHAD41 D.ssf
2184	-121.2670705	37.82683451	6340136.717	2124443.262	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,272	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:02am	C Gray	SHAD41 D.ssf
2185	-121.2670612	37.82684636	6340139.455	2124447.555	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,294	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:04am	C Gray	SHAD41 D.ssf
2186	-121.2670517	37.82685706	6340142.222	2124451.427	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,234	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:06am	C Gray	SHAD41 D.ssf
2187	-121.2670566	37.82686467	6340140.837	2124454.211	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,620	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:08am	C Gray	SHAD41 D.ssf
2188	-121.2670673	37.82687085	6340137.747	2124456.487	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,979	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:10am	C Gray	SHAD41 D.ssf
2189	-121.2670796	37.82687225	6340134.217	2124457.024	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,580	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:12am	C Gray	SHAD41 D.ssf
2190	-121.2670893	37.8268717	6340131.397	2124456.847	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,067	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:14am	C Gray	SHAD41 D.ssf
2191	-121.2670896	37.82686689	6340131.314	2124455.096	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,664	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:16am	C Gray	SHAD41 D.ssf
2192	-121.2670904	37.82686471	6340131.078	2124454.305	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,994	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:18am	C Gray	SHAD41 D.ssf
2193	-121.2670898	37.8268579	6340131.211	2124451.825	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,238	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:20am	C Gray	SHAD41 D.ssf
2194	-121.2670934	37.82685308	6340130.176	2124450.076	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,602	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:22am	C Gray	SHAD41 D.ssf
2195	-121.2670927	37.82685226	6340130.375	2124449.777	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,097	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:24am	C Gray	SHAD41 D.ssf
2196	-121.2670963	37.82684316	6340129.29	2124446.471	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,811	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:28am	C Gray	SHAD41 D.ssf
2197	-121.2670897	37.82683707	6340131.178	2124444.241	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,321	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:30am	C Gray	SHAD41 D.ssf
2198	-121.2670828	37.82684113	6340133.204	2124445.702	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,196	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:32am	C Gray	SHAD41 D.ssf
2199	-121.2670843	37.82684319	6340132.755	2124446.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,850	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:34am	C Gray	SHAD41 D.ssf
2200	-121.2670831	37.82684278	6340133.121	2124446.301	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,989	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:36am	C Gray	SHAD41 D.ssf
2201	-121.2670738	37.82684323	6340135.791	2124446.444	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,962	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:38am	C Gray	SHAD41 D.ssf
2202	-121.2670686	37.82684308	6340137.308	2124446.379	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,878	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:40am	C Gray	SHAD41 D.ssf
2203	-121.2670648	37.8268443	6340138.387	2124446.814	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,701	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:42am	C Gray	SHAD41 D.ssf
2204	-121.2670528	37.82684921	6340141.88	2124448.573	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,913	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:44am	C Gray	SHAD41 D.ssf
2205	-121.2670472	37.82685821	6340143.518	2124451.836	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,441	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:46am	C Gray	SHAD41 D.ssf
2206	-121.2670512	37.82687082	6340142.395	2124456.435	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,600	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:48am	C Gray	SHAD41 D.ssf
2207	-121.2670542	37.82688127	6340141.581	2124460.25	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,539	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:50am	C Gray	SHAD41 D.ssf
2208	-121.2670545	37.82689258	6340141.59	2124464.368	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,776	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:52am	C Gray	SHAD41 D.ssf
2209	-121.2670555	37.82689712	6340141.265	2124469.664	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,540	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:54am	C Gray	SHAD41 D.ssf
2210	-121.2670563	37.82691709	6340141.072	2124473.295	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,721	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:56am	C Gray	SHAD41 D.ssf
2211	-121.2670574	37.82692776	6340140.781	2124477.186	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,858	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:46:58am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2212	-121.267057	37.82693815	6340140.94	2124480.965	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,124	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:00am	C Gray	SHAD41 D.ssf
2213	-121.2670568	37.82694656	6340141.201	2124484.077	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,111	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:02am	C Gray	SHAD41 D.ssf
2214	-121.2670568	37.82694559	6340141.201	2124483.628	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,209	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:04am	C Gray	SHAD41 D.ssf
2215	-121.2670586	37.82693784	6340140.473	2124480.858	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,413	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:06am	C Gray	SHAD41 D.ssf
2216	-121.2670585	37.82692629	6340140.472	2124476.651	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,153	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:08am	C Gray	SHAD41 D.ssf
2217	-121.2670628	37.82690553	6340139.162	2124469.104	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,839	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:12am	C Gray	SHAD41 D.ssf
2218	-121.2670666	37.82689334	6340138.205	2124464.674	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,845	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:14am	C Gray	SHAD41 D.ssf
2219	-121.2670666	37.82688845	6340138.007	2124461.453	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,663	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:16am	C Gray	SHAD41 D.ssf
2220	-121.2670692	37.82687075	6340137.202	2124456.454	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,377	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:20am	C Gray	SHAD41 D.ssf
2221	-121.2670696	37.82688411	6340137.147	2124461.32	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,852	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:24am	C Gray	SHAD41 D.ssf
2222	-121.2670697	37.82689043	6340137.11	2124463.622	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,756	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:25am	C Gray	SHAD41 D.ssf
2223	-121.267074	37.82690048	6340135.924	2124468.748	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,286	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:28am	C Gray	SHAD41 D.ssf
2224	-121.2670853	37.82690786	6340132.68	2124470.005	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,872	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:30am	C Gray	SHAD41 D.ssf
2225	-121.2671006	37.82690709	6340128.236	2124469.759	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,823	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:32am	C Gray	SHAD41 D.ssf
2226	-121.2671129	37.82689998	6340124.662	2124467.134	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,388	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:34am	C Gray	SHAD41 D.ssf
2227	-121.2671232	37.82689218	6340121.682	2124464.384	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,001	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:36am	C Gray	SHAD41 D.ssf
2228	-121.2671285	37.82688307	6340120.13	2124461.079	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,807	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:38am	C Gray	SHAD41 D.ssf
2229	-121.2671322	37.82687424	6340119.029	2124457.875	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,137	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:40am	C Gray	SHAD41 D.ssf
2230	-121.2671354	37.82686198	6340118.06	2124453.419	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,391	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:42am	C Gray	SHAD41 D.ssf
2231	-121.267137	37.82685546	6340119.101	2124451.033	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,017	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:44am	C Gray	SHAD41 D.ssf
2232	-121.267132	37.82689922	6340121.629	2124451.247	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,997	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:46am	C Gray	SHAD41 D.ssf
2233	-121.2671184	37.82686630	6340122.984	2124453.756	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,488	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:48am	C Gray	SHAD41 D.ssf
2234	-121.2671162	37.82687197	6340123.645	2124457.009	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,267	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:50am	C Gray	SHAD41 D.ssf
2235	-121.2671149	37.82688242	6340124.039	2124460.812	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,494	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:52am	C Gray	SHAD41 D.ssf
2236	-121.2671165	37.82689425	6340123.623	2124465.123	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,788	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:54am	C Gray	SHAD41 D.ssf
2237	-121.2671103	37.8269072	6340123.662	2124469.847	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,309	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:56am	C Gray	SHAD41 D.ssf
2238	-121.2671084	37.82691036	6340126.641	2124470.969	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,937	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:47:58am	C Gray	SHAD41 D.ssf
2239	-121.2671061	37.82690383	6340126.641	2124468.585	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,912	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:00am	C Gray	SHAD41 D.ssf
2240	-121.2671069	37.82689267	6340126.391	2124464.524	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,209	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:02am	C Gray	SHAD41 D.ssf
2241	-121.2671088	37.82686753	6340125.771	2124455.375	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,324	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:06am	C Gray	SHAD41 D.ssf
2242	-121.2671088	37.82685689	6340125.977	2124451.5	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,270	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:08am	C Gray	SHAD41 D.ssf
2243	-121.2671109	37.82684249	6340125.074	2124446.264	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,976	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:10am	C Gray	SHAD41 D.ssf
2244	-121.2671103	37.82683515	6340125.23	2124443.589	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,021	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:12am	C Gray	SHAD41 D.ssf
2245	-121.2671068	37.82683819	6340126.242	2124444.687	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,255	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:14am	C Gray	SHAD41 D.ssf
2246	-121.2671053	37.82684608	6340126.705	2124447.557	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,533	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:16am	C Gray	SHAD41 D.ssf
2247	-121.2671021	37.82687856	6340127.735	2124459.376	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,236	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:22am	C Gray	SHAD41 D.ssf
2248	-121.2671016	37.82689104	6340127.919	2124463.917	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,703	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:24am	C Gray	SHAD41 D.ssf
2249	-121.2670976	37.82691243	6340129.134	2124471.699	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,353	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:28am	C Gray	SHAD41 D.ssf
2250	-121.2670932	37.82690903	6340130.974	2124470.444	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,554	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:30am	C Gray	SHAD41 D.ssf
2251	-121.2670932	37.82689929	6340130.375	2124466.902	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,289	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:32am	C Gray	SHAD41 D.ssf
2252	-121.2670948	37.82686513	6340129.798	2124454.469	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,447	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:38am	C Gray	SHAD41 D.ssf
2253	-121.2670955	37.82684056	6340129.533	2124445.524	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,446	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:42am	C Gray	SHAD41 D.ssf
2254	-121.2670991	37.82683202	6340128.446	2124442.423	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,577	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:44am	C Gray	SHAD41 D.ssf
2255	-121.2671059	37.82683519	6340126.509	2124443.592	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,057	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:46am	C Gray	SHAD41 D.ssf
2256	-121.2671044	37.82684548	6340126.961	2124447.336	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,044	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:48am	C Gray	SHAD41 D.ssf
2257	-121.2670923	37.82687131	6340130.542	2124456.713	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,361	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:54am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2258	-121.2670922	37.82688418	6340130.616	2124461.399	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,913	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:56am	C Gray	SHAD41 D.ssf
2259	-121.2670928	37.82689506	6340130.469	2124465.361	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,412	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:48:58am	C Gray	SHAD41 D.ssf
2260	-121.2670934	37.82690686	6340131.195	2124469.652	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,840	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:00am	C Gray	SHAD41 D.ssf
2261	-121.2670838	37.82690943	6340133.104	2124470.573	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,451	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:02am	C Gray	SHAD41 D.ssf
2262	-121.2670778	37.82690152	6340134.803	2124467.677	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,442	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:04am	C Gray	SHAD41 D.ssf
2263	-121.2670777	37.82687073	6340134.962	2124456.466	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,156	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:12am	C Gray	SHAD41 D.ssf
2264	-121.2670725	37.82687635	6340136.284	2124458.502	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,083	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:16am	C Gray	SHAD41 D.ssf
2265	-121.2670736	37.82689374	6340135.996	2124463.38	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,916	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:18am	C Gray	SHAD41 D.ssf
2266	-121.2670747	37.82690102	6340135.706	2124467.488	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,556	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:20am	C Gray	SHAD41 D.ssf
2267	-121.2670765	37.82691114	6340135.233	2124471.179	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,283	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:22am	C Gray	SHAD41 D.ssf
2268	-121.2670826	37.82691045	6340133.458	2124470.941	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,168	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:24am	C Gray	SHAD41 D.ssf
2269	-121.2670951	37.82690925	6340129.847	2124470.532	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,215	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:26am	C Gray	SHAD41 D.ssf
2270	-121.2671069	37.82690975	6340126.423	2124469.925	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,418	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:28am	C Gray	SHAD41 D.ssf
2271	-121.2671238	37.82690773	6340121.558	2124470.047	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,455	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:30am	C Gray	SHAD41 D.ssf
2272	-121.2671277	37.82690951	6340120.406	2124469.101	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,040	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:32am	C Gray	SHAD41 D.ssf
2273	-121.2671211	37.82690387	6340122.324	2124468.638	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,525	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:34am	C Gray	SHAD41 D.ssf
2274	-121.2671088	37.82690421	6340125.865	2124468.73	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,151	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:36am	C Gray	SHAD41 D.ssf
2275	-121.2670948	37.82690594	6340129.911	2124469.328	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,580	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:38am	C Gray	SHAD41 D.ssf
2276	-121.2670807	37.82690891	6340133.999	2124470.376	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,832	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:40am	C Gray	SHAD41 D.ssf
2277	-121.2670654	37.82691032	6340142.537	2124470.86	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,548	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:42am	C Gray	SHAD41 D.ssf
2278	-121.2670182	37.82691618	6340149.762	2124472.893	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,618	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:44am	C Gray	SHAD41 D.ssf
2279	-121.2670435	37.82691504	6340144.765	2124472.519	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,521	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:46am	C Gray	SHAD41 D.ssf
2280	-121.2670262	37.82691427	6340153.752	2124472.166	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,425	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:48am	C Gray	SHAD41 D.ssf
2281	-121.2670003	37.82691027	6340157.229	2124470.836	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,712	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:50am	C Gray	SHAD41 D.ssf
2282	-121.2670015	37.82690661	6340156.877	2124469.351	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,057	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:52am	C Gray	SHAD41 D.ssf
2283	-121.2670102	37.82690481	6340154.342	2124468.717	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,175	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:56am	C Gray	SHAD41 D.ssf
2284	-121.2670198	37.82690615	6340151.582	2124469.225	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,799	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:49:58am	C Gray	SHAD41 D.ssf
2285	-121.2670342	37.82690584	6340147.409	2124469.149	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,993	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:00am	C Gray	SHAD41 D.ssf
2286	-121.2670635	37.82690778	6340138.978	2124469.924	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,783	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:04am	C Gray	SHAD41 D.ssf
2287	-121.2670757	37.82690782	6340135.439	2124469.968	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,245	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:06am	C Gray	SHAD41 D.ssf
2288	-121.2670904	37.82690733	6340131.2	2124469.822	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,306	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:08am	C Gray	SHAD41 D.ssf
2289	-121.2671049	37.82690613	6340127.013	2124469.421	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,890	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:10am	C Gray	SHAD41 D.ssf
2290	-121.2671167	37.82690528	6340123.593	2124469.138	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,320	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:12am	C Gray	SHAD41 D.ssf
2291	-121.2671342	37.82690756	6340118.545	2124470.01	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,523	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:14am	C Gray	SHAD41 D.ssf
2292	-121.2671482	37.82690869	6340114.511	2124470.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,158	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:16am	C Gray	SHAD41 D.ssf
2293	-121.2671539	37.82690444	6340112.848	2124468.921	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,304	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:20am	C Gray	SHAD41 D.ssf
2294	-121.2671404	37.82690492	6340116.74	2124469.063	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,952	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:22am	C Gray	SHAD41 D.ssf
2295	-121.2671147	37.82690577	6340120.63	2124469.221	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,157	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:24am	C Gray	SHAD41 D.ssf
2296	-121.2671147	37.82690577	6340124.167	2124469.312	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,250	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:26am	C Gray	SHAD41 D.ssf
2297	-121.2671001	37.82690703	6340128.39	2124469.739	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,260	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:28am	C Gray	SHAD41 D.ssf
2298	-121.2670886	37.82690902	6340132.471	2124470.428	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,119	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:30am	C Gray	SHAD41 D.ssf
2299	-121.2670757	37.82691055	6340140.727	2124470.991	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,568	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:32am	C Gray	SHAD41 D.ssf
2300	-121.2670704	37.82691075	6340140.727	2124470.991	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,390	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:34am	C Gray	SHAD41 D.ssf
2301	-121.2670437	37.82691171	6340144.693	2124471.309	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,654	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:36am	C Gray	SHAD41 D.ssf
2302	-121.2670355	37.82691073	6340147.069	2124470.931	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,156	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:38am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2304	-121.2670205	37.82691168	6340151.391	2124471.241	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,054	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:40am	C Gray	SHAD41 D.ssf
2305	-121.2670094	37.826911	6340154.668	2124470.966	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,531	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:42am	C Gray	SHAD41 D.ssf
2306	-121.2669992	37.82690662	6340157.472	2124469.349	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,268	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:44am	C Gray	SHAD41 D.ssf
2307	-121.2670019	37.82690038	6340156.736	2124467.083	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,173	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:46am	C Gray	SHAD41 D.ssf
2308	-121.267011	37.82690099	6340154.121	2124467.328	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,765	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:48am	C Gray	SHAD41 D.ssf
2309	-121.2670266	37.82690224	6340149.593	2124467.767	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,836	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:50am	C Gray	SHAD41 D.ssf
2310	-121.2670394	37.82690224	6340145.91	2124467.85	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,108	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:52am	C Gray	SHAD41 D.ssf
2311	-121.2670546	37.82690191	6340141.528	2124467.766	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,447	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:54am	C Gray	SHAD41 D.ssf
2312	-121.2670662	37.82690234	6340138.168	2124467.948	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,671	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:56am	C Gray	SHAD41 D.ssf
2313	-121.2670801	37.82690291	6340134.166	2124468.19	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,693	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:50:58am	C Gray	SHAD41 D.ssf
2314	-121.2670923	37.82690284	6340130.63	2124468.195	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,025	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:00am	C Gray	SHAD41 D.ssf
2315	-121.2671037	37.82690319	6340127.342	2124468.346	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,398	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:02am	C Gray	SHAD41 D.ssf
2316	-121.2671162	37.82690341	6340123.728	2124468.457	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,693	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:04am	C Gray	SHAD41 D.ssf
2317	-121.2671274	37.82690488	6340120.513	2124469.017	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,912	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:05am	C Gray	SHAD41 D.ssf
2318	-121.2671457	37.82690806	6340115.228	2124470.221	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,979	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:08am	C Gray	SHAD41 D.ssf
2319	-121.2671537	37.82690923	6340112.919	2124470.666	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,617	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:10am	C Gray	SHAD41 D.ssf
2320	-121.2671557	37.82690456	6340113.68	2124468.957	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,922	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:12am	C Gray	SHAD41 D.ssf
2321	-121.267142	37.82690474	6340116.273	2124469.004	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,458	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:14am	C Gray	SHAD41 D.ssf
2322	-121.2671277	37.82690443	6340120.418	2124468.856	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,410	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:16am	C Gray	SHAD41 D.ssf
2323	-121.2671128	37.82690251	6340124.718	2124468.123	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,902	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:18am	C Gray	SHAD41 D.ssf
2324	-121.2670989	37.82690214	6340128.73	2124467.955	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,143	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:20am	C Gray	SHAD41 D.ssf
2325	-121.2670871	37.82690291	6340132.148	2124468.208	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,791	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:22am	C Gray	SHAD41 D.ssf
2326	-121.2670686	37.82690048	6340137.497	2124469.464	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,128	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:24am	C Gray	SHAD41 D.ssf
2327	-121.2670399	37.82690845	6340145.778	2124470.11	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,548	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:28am	C Gray	SHAD41 D.ssf
2328	-121.2670195	37.82690997	6340154.278	2124470.594	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,325	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:32am	C Gray	SHAD41 D.ssf
2329	-121.2669961	37.82690944	6340158.425	2124468.729	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,432	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:34am	C Gray	SHAD41 D.ssf
2330	-121.2669997	37.82690249	6340158.159	2124467.84	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,769	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:36am	C Gray	SHAD41 D.ssf
2331	-121.2670014	37.82689544	6340156.867	2124465.283	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,116	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:40am	C Gray	SHAD41 D.ssf
2332	-121.2670113	37.82689244	6340154.004	2124464.213	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,772	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:42am	C Gray	SHAD41 D.ssf
2333	-121.267026	37.82689017	6340149.729	2124463.423	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,116	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:44am	C Gray	SHAD41 D.ssf
2334	-121.267042	37.82689128	6340144.833	2124463.867	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,414	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:46am	C Gray	SHAD41 D.ssf
2335	-121.2670571	37.82689287	6340140.758	2124464.48	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,529	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:48am	C Gray	SHAD41 D.ssf
2336	-121.2670897	37.82689384	6340131.348	2124464.909	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,030	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:52am	C Gray	SHAD41 D.ssf
2337	-121.2671053	37.82689465	6340126.842	2124465.243	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,901	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:54am	C Gray	SHAD41 D.ssf
2338	-121.2671236	37.82689491	6340121.57	2124465.378	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,635	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:51:56am	C Gray	SHAD41 D.ssf
2339	-121.2671437	37.8268917	6340115.753	2124464.257	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,475	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:02am	C Gray	SHAD41 D.ssf
2340	-121.2671303	37.82689162	6340119.62	2124464.198	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,858	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:04am	C Gray	SHAD41 D.ssf
2341	-121.2670838	37.82689188	6340135.059	2124464.182	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,684	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:11am	C Gray	SHAD41 D.ssf
2342	-121.2670755	37.82689296	6340135.449	2124464.555	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,114	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:14am	C Gray	SHAD41 D.ssf
2343	-121.2670511	37.82689272	6340142.535	2124464.409	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,887	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:16am	C Gray	SHAD41 D.ssf
2344	-121.2670332	37.82689306	6340147.673	2124464.491	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,264	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:16am	C Gray	SHAD41 D.ssf
2345	-121.2670274	37.8268795	6340149.317	2124459.541	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,934	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:26am	C Gray	SHAD41 D.ssf
2346	-121.2671066	37.82688216	6340126.431	2124460.698	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,398	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:36am	C Gray	SHAD41 D.ssf
2347	-121.2671237	37.82688322	6340122.242	2124461.118	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,077	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:38am	C Gray	SHAD41 D.ssf
2348	-121.2671321	37.82688258	6340118.91	2124460.913	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,605	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:40am	C Gray	SHAD41 D.ssf
2349	-121.2671492	37.82688114	6340114.145	2124460.427	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,040	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:42am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
2350	-121.267154	37.82687563	6340112.724	2124458.798	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,503	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:44am	C Gray	SHAD41 D.ssf
2351	-121.2671498	37.82687655	6340113.949	2124458.758	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,841	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:45am	C Gray	SHAD41 D.ssf
2352	-121.2671383	37.82687446	6340117.27	2124457.969	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,366	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:48am	C Gray	SHAD41 D.ssf
2353	-121.2671243	37.82687754	6340121.308	2124458.278	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,070	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:50am	C Gray	SHAD41 D.ssf
2354	-121.2670996	37.82687569	6340128.445	2124458.325	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,734	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:54am	C Gray	SHAD41 D.ssf
2355	-121.2670815	37.82687502	6340132.655	2124458.047	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,774	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:56am	C Gray	SHAD41 D.ssf
2356	-121.2670191	37.82687787	6340136.457	2124459.054	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,378	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:58am	C Gray	SHAD41 D.ssf
2357	-121.2670652	37.82687794	6340138.387	2124459.061	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,383	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:52:59am	C Gray	SHAD41 D.ssf
2358	-121.2670391	37.82687624	6340145.92	2124458.381	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,067	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:02am	C Gray	SHAD41 D.ssf
2359	-121.2670222	37.82687283	6340150.78	2124457.102	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,462	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:04am	C Gray	SHAD41 D.ssf
2360	-121.2670139	37.82687278	6340153.184	2124457.062	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,329	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:06am	C Gray	SHAD41 D.ssf
2361	-121.2670807	37.82687807	6340154.097	2124458.981	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,488	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:08am	C Gray	SHAD41 D.ssf
2362	-121.2670195	37.82688258	6340151.593	2124460.642	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,722	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:10am	C Gray	SHAD41 D.ssf
2363	-121.2670333	37.82688637	6340147.629	2124462.056	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,942	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:12am	C Gray	SHAD41 D.ssf
2364	-121.2670476	37.82688729	6340143.502	2124462.427	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,362	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:14am	C Gray	SHAD41 D.ssf
2365	-121.2670605	37.82688779	6340139.767	2124462.639	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,289	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:16am	C Gray	SHAD41 D.ssf
2366	-121.2671032	37.82687602	6340117.457	2124458.537	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,671	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:28am	C Gray	SHAD41 D.ssf
2367	-121.2671368	37.82687366	6340117.679	2124457.676	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,111	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:36am	C Gray	SHAD41 D.ssf
2368	-121.2671235	37.82687557	6340121.533	2124458.338	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,763	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:38am	C Gray	SHAD41 D.ssf
2369	-121.2671053	37.826887825	6340126.909	2124459.278	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,944	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:40am	C Gray	SHAD41 D.ssf
2370	-121.2670576	37.82694186	6340140.198	2124482.324	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,393	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:54am	C Gray	SHAD41 D.ssf
2371	-121.2670708	37.82688381	6340133.81	2124464.879	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,310	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:41am	C Gray	SHAD41 D.ssf
2372	-121.2670693	37.82690276	6340137.277	2124468.109	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,910	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:46am	C Gray	SHAD41 D.ssf
2373	-121.2670623	37.82691375	6340139.341	2124472.095	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,277	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:48am	C Gray	SHAD41 D.ssf
2374	-121.2670575	37.82692599	6340140.761	2124476.547	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,298	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:50am	C Gray	SHAD41 D.ssf
2375	-121.2670566	37.82694349	6340141.028	2124479.791	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,498	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:52am	C Gray	SHAD41 D.ssf
2376	-121.2670596	37.82694186	6340140.198	2124482.324	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,207	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:54am	C Gray	SHAD41 D.ssf
2377	-121.2670573	37.82694446	6340140.867	2124483.266	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,207	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:56am	C Gray	SHAD41 D.ssf
2378	-121.2670578	37.82694429	6340140.732	2124483.204	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,722	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:53:58am	C Gray	SHAD41 D.ssf
2379	-121.2670447	37.82694418	6340141.605	2124483.157	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,890	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:00am	C Gray	SHAD41 D.ssf
2380	-121.2670514	37.82694561	6340145.472	2124483.646	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,176	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:02am	C Gray	SHAD41 D.ssf
2381	-121.2670297	37.82694684	6340148.838	2124484.065	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,455	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:04am	C Gray	SHAD41 D.ssf
2382	-121.2670196	37.82694761	6340151.761	2124484.323	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,820	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:06am	C Gray	SHAD41 D.ssf
2383	-121.2670034	37.82694823	6340155.87	2124484.513	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,192	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:08am	C Gray	SHAD41 D.ssf
2384	-121.2669938	37.82694445	6340159.195	2124483.11	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,049	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:10am	C Gray	SHAD41 D.ssf
2385	-121.2669989	37.82694154	6340157.726	2124482.065	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,955	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:12am	C Gray	SHAD41 D.ssf
2386	-121.2670091	37.82694418	6340154.796	2124483.047	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,030	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:14am	C Gray	SHAD41 D.ssf
2387	-121.2670156	37.82694234	6340153.47	2124482.396	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,138	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:16am	C Gray	SHAD41 D.ssf
2388	-121.2670336	37.82693679	6340153.47	2124480.369	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,427	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:18am	C Gray	SHAD41 D.ssf
2389	-121.2670037	37.82693429	6340156.318	2124479.434	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,999	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:20am	C Gray	SHAD41 D.ssf
2390	-121.2669989	37.82694154	6340157.726	2124482.065	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,766	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:22am	C Gray	SHAD41 D.ssf
2391	-121.266998	37.82693133	6340157.945	2124478.344	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,075	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:24am	C Gray	SHAD41 D.ssf
2392	-121.2669973	37.82692958	6340158.136	2124477.705	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,766	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:26am	C Gray	SHAD41 D.ssf
2393	-121.2669974	37.82692154	6340158.102	2124474.779	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,569	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:28am	C Gray	SHAD41 D.ssf
2394	-121.2669965	37.82691356	6340158.33	2124471.869	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,569	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:30am	C Gray	SHAD41 D.ssf
2395	-121.2669967	37.82690218	6340158.251	2124467.727	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,095	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:30am	C Gray	SHAD41 D.ssf
2396	-121.2669978	37.82689512	6340157.905	2124465.159	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,301	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:32am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2397	-121.2669999	37.82689317	6340157.294	2124464.454	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,644	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:34am	C Gray	SHAD41 D.ssf
2398	-121.2670104	37.82689232	6340154.255	2124464.169	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,145	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:36am	C Gray	SHAD41 D.ssf
2399	-121.2670203	37.82689281	6340150.622	2124464.378	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,147	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:38am	C Gray	SHAD41 D.ssf
2400	-121.2670372	37.82689433	6340146.508	2124464.965	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,245	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:40am	C Gray	SHAD41 D.ssf
2401	-121.2670496	37.82689623	6340142.938	2124465.686	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,201	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:42am	C Gray	SHAD41 D.ssf
2402	-121.2670609	37.82690574	6340139.708	2124469.174	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,872	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:44am	C Gray	SHAD41 D.ssf
2403	-121.2670579	37.82691163	6340140.011	2124471.317	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,606	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:45am	C Gray	SHAD41 D.ssf
2404	-121.2670539	37.82692361	6340140.628	2124475.673	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,580	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:48am	C Gray	SHAD41 D.ssf
2405	-121.2670518	37.82692656	6340142.412	2124476.735	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,230	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:50am	C Gray	SHAD41 D.ssf
2406	-121.2670339	37.82692753	6340146.059	2124477.058	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,012	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:52am	C Gray	SHAD41 D.ssf
2407	-121.2670114	37.82692872	6340154.085	2124477.423	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,995	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:56am	C Gray	SHAD41 D.ssf
2408	-121.2669969	37.82692744	6340157.787	2124476.928	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,399	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:54:58am	C Gray	SHAD41 D.ssf
2409	-121.2669985	37.82692106	6340158.252	2124474.601	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,042	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:00am	C Gray	SHAD41 D.ssf
2410	-121.2670055	37.82691494	6340155.74	2124472.392	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,682	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:02am	C Gray	SHAD41 D.ssf
2411	-121.2670145	37.82691273	6340153.145	2124471.612	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,003	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:04am	C Gray	SHAD41 D.ssf
2412	-121.2670165	37.82691519	6340152.555	2124472.511	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,646	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:08am	C Gray	SHAD41 D.ssf
2413	-121.2670232	37.82692093	6340139.179	2124474.251	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,819	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:10am	C Gray	SHAD41 D.ssf
2414	-121.2670307	37.82692065	6340148.49	2124474.533	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,246	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:12am	C Gray	SHAD41 D.ssf
2415	-121.2670388	37.82692212	6340146.128	2124475.087	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,380	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:14am	C Gray	SHAD41 D.ssf
2416	-121.2670475	37.82692068	6340143.635	2124474.584	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,727	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:16am	C Gray	SHAD41 D.ssf
2417	-121.2670615	37.82692093	6340139.579	2124474.706	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,221	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:20am	C Gray	SHAD41 D.ssf
2418	-121.2670645	37.82692336	6340139.145	2124475.683	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,125	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:22am	C Gray	SHAD41 D.ssf
2419	-121.2670645	37.826931	6340138.749	2124478.379	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,704	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:24am	C Gray	SHAD41 D.ssf
2420	-121.2670663	37.82693568	6340139.202	2124480.081	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,713	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:26am	C Gray	SHAD41 D.ssf
2421	-121.2670547	37.82693521	6340141.582	2124479.889	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,999	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:28am	C Gray	SHAD41 D.ssf
2422	-121.2670031	37.82693351	6340148.412	2124480.089	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,889	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:34am	C Gray	SHAD41 D.ssf
2423	-121.2670182	37.8269363	6340152.121	2124480.201	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,119	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:36am	C Gray	SHAD41 D.ssf
2424	-121.2670095	37.82693439	6340154.632	2124479.486	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,118	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:38am	C Gray	SHAD41 D.ssf
2425	-121.2669999	37.82693314	6340157.398	2124478.372	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,619	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:40am	C Gray	SHAD41 D.ssf
2426	-121.2669978	37.82692608	6340158.008	2124476.431	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,342	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:44am	C Gray	SHAD41 D.ssf
2427	-121.2670006	37.82692729	6340157.193	2124476.879	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,000	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:46am	C Gray	SHAD41 D.ssf
2428	-121.2669977	37.82692191	6340158.008	2124474.915	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,386	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:48am	C Gray	SHAD41 D.ssf
2429	-121.2670004	37.82691218	6340156.171	2124471.385	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,724	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:52am	C Gray	SHAD41 D.ssf
2430	-121.2670151	37.82692891	6340153.001	2124477.502	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,377	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:55:58am	C Gray	SHAD41 D.ssf
2431	-121.2670042	37.82691919	6340144.958	2124474.03	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,304	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:00am	C Gray	SHAD41 D.ssf
2432	-121.2670186	37.82691166	6340151.932	2124471.232	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,669	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:02am	C Gray	SHAD41 D.ssf
2433	-121.2670314	37.82692846	6340148.205	2124466.955	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,352	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:06am	C Gray	SHAD41 D.ssf
2434	-121.267004	37.82690835	6340145.746	2124470.076	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,869	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:07am	C Gray	SHAD41 D.ssf
2435	-121.2670429	37.82691919	6340144.958	2124474.03	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,328	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:10am	C Gray	SHAD41 D.ssf
2436	-121.2670044	37.82693349	6340145.668	2124479.231	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,636	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:12am	C Gray	SHAD41 D.ssf
2437	-121.2670398	37.82694432	6340145.931	2124483.173	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,627	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:13am	C Gray	SHAD41 D.ssf
2438	-121.2670372	37.82695765	6340146.7	2124488.019	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,125	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:16am	C Gray	SHAD41 D.ssf
2439	-121.2670352	37.82696744	6340147.332	2124491.945	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,233	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:18am	C Gray	SHAD41 D.ssf
2440	-121.2670044	37.82697071	6340150.447	2124492.744	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,393	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:20am	C Gray	SHAD41 D.ssf
2441	-121.2670113	37.82697015	6340154.234	2124492.509	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,570	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:22am	C Gray	SHAD41 D.ssf
2442	-121.2669988	37.82696859	6340157.819	2124491.912	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,090	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:24am	C Gray	SHAD41 D.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2443	-121.2669915	37.82696202	6340159.919	2124489.504	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,407	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:26am	C Gray	SHAD41 D.ssf
2444	-121.2669914	37.82695181	6340159.931	2124485.639	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,535	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:28am	C Gray	SHAD41 D.ssf
2445	-121.2669914	37.82694581	6340158.49	2124483.612	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,646	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:30am	C Gray	SHAD41 D.ssf
2446	-121.2670071	37.82694517	6340155.378	2124483.404	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,992	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:32am	C Gray	SHAD41 D.ssf
2447	-121.2670174	37.82694577	6340152.396	2124483.648	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,046	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:34am	C Gray	SHAD41 D.ssf
2448	-121.2670313	37.82694636	6340148.376	2124483.895	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,764	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:36am	C Gray	SHAD41 D.ssf
2449	-121.2670432	37.82694552	6340144.946	2124483.618	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,732	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:38am	C Gray	SHAD41 D.ssf
2450	-121.2670115	37.82695057	6340154.118	2124485.43	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,747	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:50am	C Gray	SHAD41 D.ssf
2451	-121.2669999	37.82694924	6340157.728	2124484.869	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,307	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:54am	C Gray	SHAD41 D.ssf
2452	-121.2670047	37.82694832	6340156.06	2124484.547	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,338	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:56:58am	C Gray	SHAD41 D.ssf
2453	-121.2670152	37.82694983	6340153.037	2124485.122	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,808	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:00am	C Gray	SHAD41 D.ssf
2454	-121.2670477	37.82694993	6340149.418	2124485.188	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,690	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:02am	C Gray	SHAD41 D.ssf
2455	-121.2670383	37.82694736	6340146.369	2124484.277	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,369	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:04am	C Gray	SHAD41 D.ssf
2456	-121.2670467	37.82693874	6340143.911	2124481.157	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,016	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:06am	C Gray	SHAD41 D.ssf
2457	-121.2670484	37.82692868	6340143.381	2124477.498	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,014	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:08am	C Gray	SHAD41 D.ssf
2458	-121.2670035	37.82692097	6340145.643	2124474.672	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,015	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:10am	C Gray	SHAD41 D.ssf
2459	-121.2670331	37.82691834	6340147.772	2124473.696	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,682	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:12am	C Gray	SHAD41 D.ssf
2460	-121.2670332	37.82692609	6340147.762	2124476.519	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,670	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:14am	C Gray	SHAD41 D.ssf
2461	-121.2670384	37.82693796	6340146.316	2124480.852	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,140	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:16am	C Gray	SHAD41 D.ssf
2462	-121.2670402	37.82694867	6340145.804	2124484.376	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,275	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:18am	C Gray	SHAD41 D.ssf
2463	-121.2670048	37.82694762	6340146.485	2124488.395	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,195	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:20am	C Gray	SHAD41 D.ssf
2464	-121.2670422	37.82696996	6340145.295	2124492.514	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,176	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:22am	C Gray	SHAD41 D.ssf
2465	-121.2670417	37.82697817	6340145.482	2124495.503	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,558	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:24am	C Gray	SHAD41 D.ssf
2466	-121.2670464	37.82697853	6340144.114	2124495.645	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,008	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:26am	C Gray	SHAD41 D.ssf
2467	-121.2670619	37.82697598	6340139.626	2124494.607	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,347	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:28am	C Gray	SHAD41 D.ssf
2468	-121.2670771	37.82697058	6340135.236	2124492.969	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,494	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:30am	C Gray	SHAD41 D.ssf
2469	-121.2670902	37.82696909	6340131.439	2124492.31	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,032	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:32am	C Gray	SHAD41 D.ssf
2470	-121.2670915	37.82696402	6340131.059	2124490.469	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,620	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:34am	C Gray	SHAD41 D.ssf
2471	-121.2670866	37.82696963	6340132.462	2124490.084	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,219	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:36am	C Gray	SHAD41 D.ssf
2472	-121.2670805	37.82696423	6340134.238	2124490.516	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,439	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:38am	C Gray	SHAD41 D.ssf
2473	-121.2670772	37.82696348	6340136.619	2124490.223	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,363	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:40am	C Gray	SHAD41 D.ssf
2474	-121.2670608	37.82695717	6340139.881	2124487.901	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,728	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:42am	C Gray	SHAD41 D.ssf
2475	-121.2670532	37.82695194	6340142.064	2124485.979	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,252	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:43am	C Gray	SHAD41 D.ssf
2476	-121.2670443	37.82694826	6340144.619	2124484.617	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,309	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:46am	C Gray	SHAD41 D.ssf
2477	-121.2670071	37.82694888	6340143.779	2124484.852	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,569	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:48am	C Gray	SHAD41 D.ssf
2478	-121.2670479	37.82695182	6340143.596	2124485.922	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,552	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:50am	C Gray	SHAD41 D.ssf
2479	-121.2670493	37.82695289	6340143.193	2124486.317	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,602	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:52am	C Gray	SHAD41 D.ssf
2480	-121.2670497	37.82695611	6340143.098	2124487.489	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,499	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:54am	C Gray	SHAD41 D.ssf
2481	-121.2670567	37.82695907	6340141.078	2124488.582	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,925	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:56am	C Gray	SHAD41 D.ssf
2482	-121.2670661	37.82696194	6340138.366	2124489.651	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,578	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:58am	C Gray	SHAD41 D.ssf
2483	-121.2670748	37.82696332	6340135.872	2124490.174	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,065	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:57:59am	C Gray	SHAD41 D.ssf
2484	-121.2670897	37.82697059	6340131.591	2124492.857	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,091	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:02am	C Gray	SHAD41 D.ssf
2485	-121.2670821	37.82697526	6340133.636	2124494.936	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,627	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:04am	C Gray	SHAD41 D.ssf
2486	-121.2670071	37.82697735	6340137.258	2124495.238	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,724	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:06am	C Gray	SHAD41 D.ssf
2487	-121.2670522	37.82697679	6340142.431	2124495.023	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,976	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:08am	C Gray	SHAD41 D.ssf
2488	-121.2670336	37.82697584	6340147.111	2124494.64	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,371	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:10am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2489	-121.2670164	37.82697496	6340152.763	2124494.273	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,488	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:12am	C Gray	SHAD41 D.ssf
2490	-121.267	37.82697257	6340157.512	2124493.968	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,436	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:14am	C Gray	SHAD41 D.ssf
2491	-121.2669955	37.82697148	6340158.803	2124492.355	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,817	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:16am	C Gray	SHAD41 D.ssf
2492	-121.2670069	37.82697074	6340155.497	2124492.714	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,338	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:18am	C Gray	SHAD41 D.ssf
2493	-121.2670214	37.82696979	6340151.296	2124492.403	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,357	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:20am	C Gray	SHAD41 D.ssf
2494	-121.2670382	37.82697035	6340146.473	2124492.647	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,914	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:21am	C Gray	SHAD41 D.ssf
2495	-121.2670607	37.82696733	6340140.105	2124491.546	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,410	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:24am	C Gray	SHAD41 D.ssf
2496	-121.2670732	37.82696325	6340136.175	2124490.146	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,325	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:26am	C Gray	SHAD41 D.ssf
2497	-121.2670893	37.82696693	6340131.697	2124491.522	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,014	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:28am	C Gray	SHAD41 D.ssf
2498	-121.2670978	37.82697458	6340129.252	2124494.326	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,867	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:30am	C Gray	SHAD41 D.ssf
2499	-121.2670883	37.82697989	6340132.023	2124496.24	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,359	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:32am	C Gray	SHAD41 D.ssf
2500	-121.2670016	37.82697956	6340136.933	2124496.077	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,782	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:34am	C Gray	SHAD41 D.ssf
2501	-121.2670547	37.82697936	6340141.716	2124495.965	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:36am	C Gray	SHAD41 D.ssf
2502	-121.2670405	37.82697908	6340145.815	2124495.829	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,715	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:38am	C Gray	SHAD41 D.ssf
2503	-121.2670048	37.82697931	6340151.221	2124495.872	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,054	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:40am	C Gray	SHAD41 D.ssf
2504	-121.2670049	37.82697889	6340156.105	2124495.676	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,645	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:42am	C Gray	SHAD41 D.ssf
2505	-121.2669963	37.82697842	6340158.583	2124495.487	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,817	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:44am	C Gray	SHAD41 D.ssf
2506	-121.2670001	37.82697984	6340157.479	2124496.01	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,284	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:46am	C Gray	SHAD41 D.ssf
2507	-121.2670116	37.82697965	6340154.162	2124495.971	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,057	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:48am	C Gray	SHAD41 D.ssf
2508	-121.2670257	37.82698067	6340150.092	2124496.376	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,654	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:50am	C Gray	SHAD41 D.ssf
2509	-121.2670042	37.82698011	6340145.912	2124496.206	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,400	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:52am	C Gray	SHAD41 D.ssf
2510	-121.2670558	37.82698002	6340141.403	2124496.21	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,263	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:54am	C Gray	SHAD41 D.ssf
2511	-121.2670698	37.82698001	6340137.358	2124496.24	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,353	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:56am	C Gray	SHAD41 D.ssf
2512	-121.2670826	37.82697854	6340133.667	2124495.733	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,774	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:58:58am	C Gray	SHAD41 D.ssf
2513	-121.267095	37.82697896	6340130.069	2124495.916	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,001	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:00am	C Gray	SHAD41 D.ssf
2514	-121.2670906	37.82698374	6340129.803	2124497.617	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,614	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:02am	C Gray	SHAD41 D.ssf
2515	-121.2670819	37.82698434	6340133.879	2124497.843	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,068	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:04am	C Gray	SHAD41 D.ssf
2516	-121.2670692	37.82698557	6340137.549	2124498.261	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,248	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:06am	C Gray	SHAD41 D.ssf
2517	-121.2670517	37.82698674	6340141.075	2124498.659	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,094	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:08am	C Gray	SHAD41 D.ssf
2518	-121.2670416	37.82698626	6340145.536	2124498.449	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,565	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:10am	C Gray	SHAD41 D.ssf
2519	-121.2670287	37.82698634	6340149.256	2124498.446	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,350	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:11am	C Gray	SHAD41 D.ssf
2520	-121.2670219	37.82698719	6340151.215	2124498.741	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,778	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:13am	C Gray	SHAD41 D.ssf
2521	-121.2670245	37.82697805	6340150.426	2124495.419	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,451	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:16am	C Gray	SHAD41 D.ssf
2522	-121.2670209	37.82696901	6340149.11	2124492.136	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,062	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:18am	C Gray	SHAD41 D.ssf
2523	-121.2670336	37.82696053	6340147.757	2124489.061	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,743	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:20am	C Gray	SHAD41 D.ssf
2524	-121.2670382	37.82695075	6340146.394	2124485.51	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,701	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:22am	C Gray	SHAD41 D.ssf
2525	-121.2670425	37.82695034	6340145.143	2124485.371	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,461	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:24am	C Gray	SHAD41 D.ssf
2526	-121.2670286	37.82696041	6340149.198	2124489.003	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,701	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:50am	C Gray	SHAD41 D.ssf
2527	-121.2670013	37.82695804	6340153.702	2124488.103	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,273	Geo 7X	Real-time SBAS Corrected	10/3/2017	10:59:54am	C Gray	SHAD41 D.ssf
2528	-121.2670332	37.82698267	6340156.669	2124497.05	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,253	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:00:22am	C Gray	SHAD41 D.ssf
2529	-121.2669976	37.82698304	6340158.22	2124497.172	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,531	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:00:24am	C Gray	SHAD41 D.ssf
2530	-121.2669967	37.82698451	6340158.481	2124497.704	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,810	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:00:25am	C Gray	SHAD41 D.ssf
2531	-121.2669984	37.82699735	6340158.042	2124502.385	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,883	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:00:28am	C Gray	SHAD41 D.ssf
2532	-121.2669979	37.82700098	6340158.331	2124506.916	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,183	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:00:30am	C Gray	SHAD41 D.ssf
2533	-121.2669975	37.82702271	6340158.261	2124511.616	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,770	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:00:32am	C Gray	SHAD41 D.ssf
2534	-121.2669987	37.82703575	6340158.056	2124516.367	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,909	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:00:34am	C Gray	SHAD41 D.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2535	-121.2669972	37.82705948	6340158.58	2124525.003	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,068	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:00:37am	C Gray	SHAD41 D.ssf
2536	-121.2669977	37.82714139	6340158.078	2124554.834	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,667	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:00:50am	C Gray	SHAD41 D.ssf
2537	-121.2670017	37.87171132	6340157.633	2124565.694	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,713	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:00:54am	C Gray	SHAD41 D.ssf
2538	-121.2670021	37.82718408	6340157.525	2124570.384	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,050	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:00:56am	C Gray	SHAD41 D.ssf
2539	-121.2670028	37.8271839	6340157.324	2124570.321	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,300	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:00:58am	C Gray	SHAD41 D.ssf
2540	-121.2670015	37.82717949	6340157.689	2124568.712	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,689	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:00:59am	C Gray	SHAD41 D.ssf
2541	-121.2669994	37.82716568	6340158.26	2124563.676	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,527	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:01:02am	C Gray	SHAD41 D.ssf
2542	-121.26715482	37.82715482	6340158.19	2124559.721	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,677	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:01:04am	C Gray	SHAD41 D.ssf
2543	-121.2669977	37.82714035	6340158.669	2124554.451	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,697	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:01:06am	C Gray	SHAD41 D.ssf
2544	-121.2670003	37.82704202	6340156.841	2124518.661	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,605	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:01:22am	C Gray	SHAD41 D.ssf
2545	-121.2670008	37.82697159	6340157.261	2124493.01	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,604	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:01:34am	C Gray	SHAD41 D.ssf
2546	-121.2669993	37.8269959	6340157.665	2124488.421	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,381	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:01:36am	C Gray	SHAD41 D.ssf
2547	-121.2670058	37.82696923	6340155.816	2124492.163	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,338	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:01:42am	C Gray	SHAD41 D.ssf
2548	-121.2670114	37.82700917	6340154.322	2124506.719	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,844	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:01:48am	C Gray	SHAD41 D.ssf
2549	-121.2670089	37.82705998	6340155.18	2124525.146	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,345	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:01:55am	C Gray	SHAD41 D.ssf
2550	-121.2670083	37.82709733	6340155.482	2124538.809	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,746	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:01am	C Gray	SHAD41 D.ssf
2551	-121.2670062	37.82710848	6340156.121	2124542.866	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,850	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:04am	C Gray	SHAD41 D.ssf
2552	-121.2670089	37.8271203	6340155.374	2124547.177	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,647	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:06am	C Gray	SHAD41 D.ssf
2553	-121.2670136	37.82714322	6340154.09	2124555.532	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,552	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:09am	C Gray	SHAD41 D.ssf
2555	-121.2670117	37.82717119	6340155.438	2124565.722	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,281	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:14am	C Gray	SHAD41 D.ssf
2556	-121.2670147	37.82719153	6340153.903	2124573.127	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,201	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:17am	C Gray	SHAD41 D.ssf
2557	-121.2670101	37.82720644	6340155.291	2124578.542	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,781	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:24am	C Gray	SHAD41 D.ssf
2558	-121.2670105	37.82720493	6340155.171	2124577.994	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,657	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:25am	C Gray	SHAD41 D.ssf
2559	-121.2670105	37.82720497	6340155.172	2124578.01	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,217	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:28am	C Gray	SHAD41 D.ssf
2560	-121.2670092	37.82720534	6340155.527	2124578.142	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,479	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:29am	C Gray	SHAD41 D.ssf
2561	-121.2670136	37.82720508	6340155.571	2124578.047	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,722	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:32am	C Gray	SHAD41 D.ssf
2562	-121.2670091	37.82720508	6340155.571	2124578.047	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,794	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:37am	C Gray	SHAD41 D.ssf
2563	-121.2670091	37.82720508	6340155.571	2124578.047	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,490	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:38am	C Gray	SHAD41 D.ssf
2564	-121.2670091	37.82720508	6340155.571	2124578.047	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,525	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:42am	C Gray	SHAD41 D.ssf
2565	-121.2670091	37.82720508	6340155.571	2124578.047	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,796	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:02:44am	C Gray	SHAD41 D.ssf
2566	-121.2674165	37.82701698	6340037.352	2124510.521	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,249	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:23:31am	C Gray	SHAD41 -d.ssf
2567	-121.2674165	37.82701698	6340037.352	2124510.521	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,761	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:23:35am	C Gray	SHAD41 -d.ssf
2569	-121.2674177	37.82701743	6340037.008	2124510.686	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,376	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:23:37am	C Gray	SHAD41 -d.ssf
2570	-121.2674184	37.82701713	6340036.802	2124510.581	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,190	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:23:39am	C Gray	SHAD41 -d.ssf
2571	-121.2674192	37.8270171	6340036.551	2124510.572	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,971	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:23:41am	C Gray	SHAD41 -d.ssf
2572	-121.2674196	37.82701697	6340036.449	2124510.523	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,180	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:23:43am	C Gray	SHAD41 -d.ssf
2573	-121.2674201	37.82701673	6340036.309	2124510.439	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,820	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:23:45am	C Gray	SHAD41 -d.ssf
2574	-121.2674198	37.82701569	6340036.397	2124510.058	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,295	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:23:47am	C Gray	SHAD41 -d.ssf
2575	-121.2674179	37.82701357	6340036.782	2124509.282	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,521	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:23:49am	C Gray	SHAD41 -d.ssf
2576	-121.2674184	37.82701214	6340036.937	2124508.856	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,676	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:23:51am	C Gray	SHAD41 -d.ssf
2577	-121.2674177	37.82701143	6340036.987	2124508.503	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,985	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:23:53am	C Gray	SHAD41 -d.ssf
2578	-121.2674245	37.82701046	6340035.003	2124508.167	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,518	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:23:55am	C Gray	SHAD41 -d.ssf
2579	-121.2675391	37.82699123	6340001.687	2124472.67	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,919	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:24:45am	C Gray	SHAD41 -d.ssf
2580	-121.2675429	37.82699177	6340000.887	2124501.646	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,643	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:24:51am	C Gray	SHAD41 -d.ssf
2582	-121.2675349	37.82703172	6340003.194	2124516.167	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,321	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:24:57am	C Gray	SHAD41 -d.ssf
2583	-121.2675277	37.82703695	6340005.282	2124518.054	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,436	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:24:59am	C Gray	SHAD41 -d.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2584	-121.2675266	37.82703398	6340005.583	2124516.971	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,087	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:25:01am	C Gray	SHAD41 -d.ssf
2585	-121.2675263	37.8270288	6340005.676	2124515.085	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,323	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:25:03am	C Gray	SHAD41 -d.ssf
2586	-121.2675266	37.82701595	6340005.531	2124510.405	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,942	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:25:05am	C Gray	SHAD41 -d.ssf
2587	-121.2675677	37.82693869	6339993.434	2124482.371	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,885	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:25:13am	C Gray	SHAD41 -d.ssf
2588	-121.2675726	37.82692679	6339991.995	2124478.052	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,018	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:25:15am	C Gray	SHAD41 -d.ssf
2589	-121.2674243	37.82703709	6340003.161	2124517.861	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,421	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:25:55am	C Gray	SHAD41 -d.ssf
2590	-121.2674169	37.82704564	6340003.371	2124500.958	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,949	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:25:57am	C Gray	SHAD41 -d.ssf
2591	-121.2674078	37.82705444	6340039.971	2124524.158	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,162	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:25:59am	C Gray	SHAD41 -d.ssf
2592	-121.2673995	37.82706227	6340042.389	2124526.971	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,020	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:26:01am	C Gray	SHAD41 -d.ssf
2593	-121.2673924	37.82707031	6340044.457	2124529.881	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,045	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:26:03am	C Gray	SHAD41 -d.ssf
2594	-121.2673846	37.82707911	6340046.731	2124533.069	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,610	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:26:05am	C Gray	SHAD41 -d.ssf
2595	-121.2673774	37.82708681	6340048.838	2124535.855	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,535	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:26:07am	C Gray	SHAD41 -d.ssf
2596	-121.2673623	37.82710308	6340053.242	2124541.742	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,000	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:26:11am	C Gray	SHAD41 -d.ssf
2597	-121.2673501	37.82711175	6340056.822	2124546.964	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	60,552	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:26:15am	C Gray	SHAD41 -d.ssf
2598	-121.267333	37.82712986	6340061.785	2124551.423	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	88,274	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:26:27am	C Gray	SHAD41 -d.ssf
2599	-121.2674154	37.82704105	6340037.734	2124519.282	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,477	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:26:49am	C Gray	SHAD41 -d.ssf
2600	-121.2674808	37.82697015	6340018.641	2124493.621	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,528	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:27:07am	C Gray	SHAD41 -d.ssf
2601	-121.2675324	37.82691869	6340003.573	2124475.006	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,536	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:27:21am	C Gray	SHAD41 -d.ssf
2602	-121.2675387	37.82691265	6340001.729	2124472.822	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,895	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:27:23am	C Gray	SHAD41 -d.ssf
2603	-121.2675294	37.82691382	6340004.144	2124473.226	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,526	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:27:35am	C Gray	SHAD41 -d.ssf
2604	-121.2675235	37.82692029	6340006.137	2124475.555	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,427	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:27:37am	C Gray	SHAD41 -d.ssf
2605	-121.2675174	37.82692629	6340007.925	2124477.737	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,686	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:27:39am	C Gray	SHAD41 -d.ssf
2606	-121.2673434	37.82711557	6340058.756	2124546.244	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	70,416	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:28:29am	C Gray	SHAD41 -d.ssf
2607	-121.2673358	37.82712528	6340060.973	2124549.402	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	72,446	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:28:31am	C Gray	SHAD41 -d.ssf
2608	-121.2673293	37.82710881	6340062.835	2124549.748	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	82,901	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:28:33am	C Gray	SHAD41 -d.ssf
2609	-121.2673361	37.82711242	6340060.822	2124543.767	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	77,251	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:28:41am	C Gray	SHAD41 -d.ssf
2610	-121.2673726	37.82706983	6340050.171	2124529.659	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	62,294	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:28:51am	C Gray	SHAD41 -d.ssf
2611	-121.2674083	37.82703434	6340039.761	2124516.823	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,546	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:29:01am	C Gray	SHAD41 -d.ssf
2612	-121.2674731	37.82696451	6340020.835	2124491.551	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,536	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:29:21am	C Gray	SHAD41 -d.ssf
2613	-121.2674905	37.82694324	6340015.749	2124483.845	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,748	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:29:27am	C Gray	SHAD41 -d.ssf
2614	-121.2675279	37.82689776	6340004.798	2124467.375	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,777	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:29:39am	C Gray	SHAD41 -d.ssf
2615	-121.2675292	37.82690194	6340004.453	2124468.901	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,633	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:29:45am	C Gray	SHAD41 -d.ssf
2616	-121.2675212	37.8269083	6340006.767	2124471.196	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,044	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:29:47am	C Gray	SHAD41 -d.ssf
2617	-121.2675147	37.82691496	6340008.667	2124473.607	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,582	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:29:49am	C Gray	SHAD41 -d.ssf
2618	-121.2675096	37.82692129	6340010.177	2124475.899	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,294	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:29:51am	C Gray	SHAD41 -d.ssf
2619	-121.2675039	37.82692712	6340011.844	2124478.008	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,339	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:29:53am	C Gray	SHAD41 -d.ssf
2620	-121.2674965	37.82693359	6340013.979	2124480.346	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,254	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:29:55am	C Gray	SHAD41 -d.ssf
2621	-121.2674743	37.82695871	6340020.472	2124489.441	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,215	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:30:03am	C Gray	SHAD41 -d.ssf
2622	-121.2674531	37.82697985	6340026.661	2124497.087	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,999	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:30:11am	C Gray	SHAD41 -d.ssf
2623	-121.2674482	37.82698475	6340028.079	2124498.866	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,298	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:30:13am	C Gray	SHAD41 -d.ssf
2624	-121.2674241	37.82701142	6340035.119	2124508.515	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,517	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:30:21am	C Gray	SHAD41 -d.ssf
2625	-121.2674167	37.82701917	6340037.289	2124511.32	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,043	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:30:23am	C Gray	SHAD41 -d.ssf
2626	-121.2674108	37.82702641	6340039.121	2124513.941	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,849	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:30:25am	C Gray	SHAD41 -d.ssf
2627	-121.2673987	37.82703899	6340042.545	2124518.494	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,328	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:30:29am	C Gray	SHAD41 -d.ssf
2628	-121.2673923	37.82704743	6340044.408	2124521.552	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,607	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:30:31am	C Gray	SHAD41 -d.ssf
2629	-121.2673352	37.82710992	6340061.096	2124544.168	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	86,817	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:30:51am	C Gray	SHAD41 -d.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2630	-121.2673253	37.82711297	6340063.956	2124545.257	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	95,717	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:30:55am	C Gray	SHAD41 -d.ssf
2631	-121.2673302	37.82710944	6340060.947	2124543.983	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	95,184	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:30:57am	C Gray	SHAD41 -d.ssf
2632	-121.2673358	37.82711011	6340062.511	2124540.921	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	95,131	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:30:59am	C Gray	SHAD41 -d.ssf
2633	-121.2673439	37.82709401	6340058.549	2124538.398	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	135,424	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:31:01am	C Gray	SHAD41 -d.ssf
2634	-121.2673517	37.82708647	6340056.262	2124535.669	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	109,583	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:31:03am	C Gray	SHAD41 -d.ssf
2635	-121.2673685	37.82706519	6340051.335	2124527.959	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	64,862	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:31:09am	C Gray	SHAD41 -d.ssf
2636	-121.2673917	37.82703926	6340044.573	2124518.481	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,929	Geo 7X	Uncorrected	10/3/2017	08:31:17am	C Gray	SHAD41 -d.ssf
2637	-121.2673918	37.82707039	6340044.526	2124518.487	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,923	Geo 7X	Uncorrected	10/3/2017	08:31:19am	C Gray	SHAD41 -d.ssf
2638	-121.267392	37.82703875	6340044.479	2124518.388	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,230	Geo 7X	Uncorrected	10/3/2017	08:31:21am	C Gray	SHAD41 -d.ssf
2639	-121.2673922	37.82703385	6340044.432	2124518.298	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,389	Geo 7X	Uncorrected	10/3/2017	08:31:23am	C Gray	SHAD41 -d.ssf
2640	-121.2673923	37.82703825	6340044.386	2124518.207	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,224	Geo 7X	Uncorrected	10/3/2017	08:31:25am	C Gray	SHAD41 -d.ssf
2641	-121.2673925	37.82707038	6340044.339	2124518.116	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,897	Geo 7X	Uncorrected	10/3/2017	08:31:27am	C Gray	SHAD41 -d.ssf
2642	-121.2673926	37.82703778	6340044.299	2124518.036	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,478	Geo 7X	Uncorrected	10/3/2017	08:31:29am	C Gray	SHAD41 -d.ssf
2643	-121.2674013	37.82702832	6340041.762	2124514.612	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,195	Geo 7X	Uncorrected	10/3/2017	08:32:33am	C Gray	SHAD41 -d.ssf
2644	-121.2674028	37.82702843	6340041.337	2124514.656	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,694	Geo 7X	Uncorrected	10/3/2017	08:32:35am	C Gray	SHAD41 -d.ssf
2645	-121.2674077	37.82702428	6340039.9	2124513.157	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,275	Geo 7X	Uncorrected	10/3/2017	08:32:37am	C Gray	SHAD41 -d.ssf
2646	-121.2674069	37.82702616	6340040.139	2124513.841	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,719	Geo 7X	Uncorrected	10/3/2017	08:32:41am	C Gray	SHAD41 -d.ssf
2647	-121.2674133	37.82701981	6340038.267	2124511.545	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,175	Geo 7X	Uncorrected	10/3/2017	08:32:43am	C Gray	SHAD41 -d.ssf
2648	-121.2674199	37.82701265	6340036.339	2124508.952	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,391	Geo 7X	Uncorrected	10/3/2017	08:32:45am	C Gray	SHAD41 -d.ssf
2649	-121.2674255	37.82700056	6340034.713	2124506.399	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,576	Geo 7X	Uncorrected	10/3/2017	08:32:47am	C Gray	SHAD41 -d.ssf
2650	-121.2674329	37.82699852	6340032.546	2124503.837	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,485	Geo 7X	Uncorrected	10/3/2017	08:32:49am	C Gray	SHAD41 -d.ssf
2651	-121.2674387	37.82699146	6340030.84	2124501.283	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,927	Geo 7X	Uncorrected	10/3/2017	08:32:51am	C Gray	SHAD41 -d.ssf
2652	-121.2674674	37.82695691	6340022.458	2124488.77	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,569	Geo 7X	Uncorrected	10/3/2017	08:33:01am	C Gray	SHAD41 -d.ssf
2653	-121.2674847	37.82693499	6340017.388	2124480.828	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,177	Geo 7X	Uncorrected	10/3/2017	08:33:07am	C Gray	SHAD41 -d.ssf
2654	-121.2675006	37.82692112	6340012.761	2124475.816	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,783	Geo 7X	Uncorrected	10/3/2017	08:33:11am	C Gray	SHAD41 -d.ssf
2655	-121.2675083	37.82691392	6340010.523	2124473.213	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,688	Geo 7X	Uncorrected	10/3/2017	08:33:13am	C Gray	SHAD41 -d.ssf
2656	-121.2675148	37.82690763	6340008.622	2124470.937	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,524	Geo 7X	Uncorrected	10/3/2017	08:33:15am	C Gray	SHAD41 -d.ssf
2657	-121.2675257	37.82689576	6340005.447	2124466.643	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,031	Geo 7X	Uncorrected	10/3/2017	08:33:19am	C Gray	SHAD41 -d.ssf
2658	-121.2675293	37.82689163	6340004.403	2124465.148	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,288	Geo 7X	Uncorrected	10/3/2017	08:33:21am	C Gray	SHAD41 -d.ssf
2659	-121.2675287	37.82688894	6340004.563	2124464.166	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,953	Geo 7X	Uncorrected	10/3/2017	08:33:25am	C Gray	SHAD41 -d.ssf
2660	-121.2675307	37.82689007	6340003.982	2124464.583	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,437	Geo 7X	Uncorrected	10/3/2017	08:33:27am	C Gray	SHAD41 -d.ssf
2661	-121.2675278	37.82689047	6340004.805	2124464.721	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,793	Geo 7X	Uncorrected	10/3/2017	08:33:29am	C Gray	SHAD41 -d.ssf
2662	-121.2675156	37.82690329	6340008.275	2124469.362	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,761	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:33:33am	C Gray	SHAD41 -d.ssf
2663	-121.2674567	37.82696517	6340025.562	2124491.751	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,124	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:33:51am	C Gray	SHAD41 -d.ssf
2664	-121.2674253	37.82700172	6340034.751	2124504.984	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,601	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:34:01am	C Gray	SHAD41 -d.ssf
2665	-121.2674113	37.82701794	6340038.341	2124510.862	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,850	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:34:05am	C Gray	SHAD41 -d.ssf
2666	-121.2674076	37.82702373	6340039.943	2124512.957	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,951	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:34:07am	C Gray	SHAD41 -d.ssf
2667	-121.2674009	37.82703001	6340041.882	2124515.23	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,116	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:34:09am	C Gray	SHAD41 -d.ssf
2668	-121.2673862	37.82704507	6340046.187	2124520.676	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	86,458	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:34:13am	C Gray	SHAD41 -d.ssf
2669	-121.2673343	37.82711094	6340061.364	2124544.536	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	111,742	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:34:33am	C Gray	SHAD41 -d.ssf
2670	-121.2673302	37.82710593	6340062.54	2124542.705	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	102,386	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:34:35am	C Gray	SHAD41 -d.ssf
2671	-121.2673412	37.82709614	6340059.333	2124539.167	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	146,834	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:34:41am	C Gray	SHAD41 -d.ssf
2672	-121.2673476	37.82708909	6340055.464	2124536.614	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	167,407	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:34:43am	C Gray	SHAD41 -d.ssf
2673	-121.2673533	37.82708182	6340055.777	2124533.979	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	121,868	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:34:45am	C Gray	SHAD41 -d.ssf
2674	-121.2673602	37.82707736	6340053.756	2124531.003	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	76,006	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:34:47am	C Gray	SHAD41 -d.ssf
2675	-121.2673907	37.82703629	6340044.849	2124517.489	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,185	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:34:57am	C Gray	SHAD41 -d.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2676	-121.267396	37.82702947	6340043.301	2124515.022	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,833	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:34:59am	C Gray	SHAD41 -d.ssf
2677	-121.2674023	37.82702256	6340041.468	2124512.518	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,131	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:35:01am	C Gray	SHAD41 -d.ssf
2679	-121.2674273	37.82699281	6340034.152	2124501.746	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,015	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:35:09am	C Gray	SHAD41 -d.ssf
2680	-121.2674336	37.82698857	6340032.303	2124499.017	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,312	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:35:11am	C Gray	SHAD41 -d.ssf
2681	-121.2674395	37.82697792	6340030.568	2124496.352	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,948	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:35:13am	C Gray	SHAD41 -d.ssf
2682	-121.2674669	37.82694739	6340022.564	2124485.302	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,194	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:35:21am	C Gray	SHAD41 -d.ssf
2683	-121.2674882	37.82692204	6340016.349	2124476.121	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,366	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:35:27am	C Gray	SHAD41 -d.ssf
2684	-121.2675122	37.82688559	6340009.301	2124462.907	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,740	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:35:35am	C Gray	SHAD41 -d.ssf
2685	-121.2675146	37.82688792	6340008.626	2124463.762	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,601	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:35:37am	C Gray	SHAD41 -d.ssf
2686	-121.2675132	37.82688867	6340009.026	2124464.03	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,605	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:35:39am	C Gray	SHAD41 -d.ssf
2687	-121.2675075	37.82689397	6340010.679	2124465.946	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,820	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:35:41am	C Gray	SHAD41 -d.ssf
2688	-121.2674912	37.82686633	6340012.98	2124469.415	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,536	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:35:43am	C Gray	SHAD41 -d.ssf
2689	-121.2674863	37.82691895	6340016.879	2124474.992	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,319	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:35:47am	C Gray	SHAD41 -d.ssf
2690	-121.2674436	37.82696255	6340029.361	2124490.768	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,740	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:35:58am	C Gray	SHAD41 -d.ssf
2691	-121.2674176	37.82698689	6340036.946	2124499.566	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,693	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:36:05am	C Gray	SHAD41 -d.ssf
2692	-121.2674104	37.82699519	6340039.05	2124502.572	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,245	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:36:07am	C Gray	SHAD41 -d.ssf
2693	-121.267388	37.82702012	6340045.589	2124511.598	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,475	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:36:13am	C Gray	SHAD41 -d.ssf
2695	-121.2673694	37.82704238	6340051.023	2124519.659	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,316	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:36:19am	C Gray	SHAD41 -d.ssf
2696	-121.2673404	37.82708541	6340059.529	2124535.256	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	91,263	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:36:29am	C Gray	SHAD41 -d.ssf
2697	-121.2673333	37.82709431	6340061.615	2124538.479	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	136,723	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:36:31am	C Gray	SHAD41 -d.ssf
2698	-121.2673448	37.82707459	6340058.225	2124531.327	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	136,849	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:36:41am	C Gray	SHAD41 -d.ssf
2699	-121.2673515	37.82706829	6340056.274	2124529.05	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,986	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:36:43am	C Gray	SHAD41 -d.ssf
2700	-121.2673585	37.82706161	6340054.235	2124526.632	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,311	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:36:45am	C Gray	SHAD41 -d.ssf
2701	-121.2673647	37.82705522	6340052.4	2124523.221	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,255	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:36:47am	C Gray	SHAD41 -d.ssf
2702	-121.2673712	37.82704312	6340050.489	2124519.931	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,685	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:36:49am	C Gray	SHAD41 -d.ssf
2703	-121.2673777	37.82703588	6340048.607	2124517.312	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,834	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:36:51am	C Gray	SHAD41 -d.ssf
2704	-121.2673846	37.82702781	6340046.587	2124514.39	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,420	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:36:53am	C Gray	SHAD41 -d.ssf
2706	-121.2674025	37.82700306	6340041.352	2124505.419	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,278	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:36:59am	C Gray	SHAD41 -d.ssf
2707	-121.2674272	37.82697343	6340034.107	2124494.69	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,059	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:37:07am	C Gray	SHAD41 -d.ssf
2708	-121.2674346	37.82696621	6340031.967	2124492.078	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,229	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:37:09am	C Gray	SHAD41 -d.ssf
2709	-121.2674422	37.82695892	6340029.751	2124489.441	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,336	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:37:11am	C Gray	SHAD41 -d.ssf
2710	-121.2674691	37.82693172	6340021.888	2124479.601	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,592	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:37:19am	C Gray	SHAD41 -d.ssf
2711	-121.2674755	37.82692448	6340020.039	2124476.979	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,174	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:37:21am	C Gray	SHAD41 -d.ssf
2712	-121.2674814	37.82691624	6340018.399	2124473.994	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,442	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:37:23am	C Gray	SHAD41 -d.ssf
2713	-121.2674864	37.82690814	6340016.834	2124471.057	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,888	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:37:25am	C Gray	SHAD41 -d.ssf
2714	-121.2674968	37.82689401	6340013.779	2124465.937	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,646	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:37:29am	C Gray	SHAD41 -d.ssf
2715	-121.2675074	37.82688572	6340010.701	2124462.941	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,833	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:37:31am	C Gray	SHAD41 -d.ssf
2716	-121.2675078	37.82688383	6340012.236	2124462.242	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,607	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:37:33am	C Gray	SHAD41 -d.ssf
2717	-121.2675078	37.82688462	6340010.579	2124462.542	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,434	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:37:35am	C Gray	SHAD41 -d.ssf
2718	-121.2674726	37.82691353	6340020.843	2124472.987	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,932	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:37:47am	C Gray	SHAD41 -d.ssf
2719	-121.2674668	37.82692131	6340022.523	2124475.804	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,328	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:37:49am	C Gray	SHAD41 -d.ssf
2720	-121.2674429	37.82695396	6340029.523	2124487.637	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,442	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:37:57am	C Gray	SHAD41 -d.ssf
2721	-121.2674143	37.82690386	6340037.882	2124498.093	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,551	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:38:05am	C Gray	SHAD41 -d.ssf
2722	-121.2673996	37.82700034	6340042.174	2124504.421	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,838	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:38:09am	C Gray	SHAD41 -d.ssf
2723	-121.2673859	37.82701176	6340046.191	2124510.676	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,443	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:38:13am	C Gray	SHAD41 -d.ssf
2724	-121.2673703	37.82703613	6340050.728	2124517.386	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,983	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:38:17am	C Gray	SHAD41 -d.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2725	-121.2673572	37.82705572	6340054.582	2124524.487	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,928	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:38:22.1am	C Gray	SHAD41 -d.ssf
2726	-121.2673492	37.8270644	6340056.952	2124527.629	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,531	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:38:23.3am	C Gray	SHAD41 -d.ssf
2727	-121.2673302	37.82707899	6340062.459	2124532.896	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	106,404	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:38:30.0am	C Gray	SHAD41 -d.ssf
2728	-121.2673563	37.82705004	6340054.839	2124522.415	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,614	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:38:4.1am	C Gray	SHAD41 -d.ssf
2729	-121.267363	37.82704201	6340052.881	2124519.507	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,926	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:38:4.3am	C Gray	SHAD41 -d.ssf
2730	-121.2673679	37.82703275	6340051.411	2124516.15	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,764	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:38:4.5am	C Gray	SHAD41 -d.ssf
2731	-121.2674014	37.82698795	6340041.485	2124499.916	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,059	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:38:5.5am	C Gray	SHAD41 -d.ssf
2732	-121.2674319	37.82695663	6340032.868	2124488.582	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,101	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:39:0.3am	C Gray	SHAD41 -d.ssf
2733	-121.2674539	37.82693008	6340026.268	2124478.967	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,178	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:39:0.9am	C Gray	SHAD41 -d.ssf
2734	-121.2674606	37.82692234	6340024.308	2124476.166	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,761	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:39:1.1am	C Gray	SHAD41 -d.ssf
2735	-121.2674684	37.82691533	6340022.043	2124473.631	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,279	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:39:1.3am	C Gray	SHAD41 -d.ssf
2736	-121.2674758	37.82690559	6340019.894	2124470.101	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,503	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:39:1.5am	C Gray	SHAD41 -d.ssf
2737	-121.2674961	37.82687885	6340013.932	2124460.416	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,208	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:39:2.1am	C Gray	SHAD41 -d.ssf
2738	-121.2674955	37.82692474	6340025.953	2124477.027	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,307	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:39:3.9am	C Gray	SHAD41 -d.ssf
2739	-121.2674073	37.82698285	6340039.903	2124498.071	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,176	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:39:5.3am	C Gray	SHAD41 -d.ssf
2740	-121.2674026	37.82698961	6340041.273	2124500.523	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,808	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:39:5.5am	C Gray	SHAD41 -d.ssf
2741	-121.2673879	37.82700697	6340045.567	2124506.807	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,429	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:39:5.9am	C Gray	SHAD41 -d.ssf
2742	-121.2673813	37.82701483	6340047.5	2124509.654	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,101	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:0.1am	C Gray	SHAD41 -d.ssf
2743	-121.2673679	37.82703171	6340051.429	2124515.768	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,722	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:0.5am	C Gray	SHAD41 -d.ssf
2744	-121.2673455	37.82705529	6340058.099	2124524.302	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,612	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:1.1am	C Gray	SHAD41 -d.ssf
2745	-121.2673331	37.82706709	6340061.571	2124528.57	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	62,524	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:1.7am	C Gray	SHAD41 -d.ssf
2746	-121.2673385	37.82705649	6340059.98	2124524.724	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,775	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:2.1am	C Gray	SHAD41 -d.ssf
2747	-121.2673749	37.82701131	6340049.327	2124508.356	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,076	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:3.2am	C Gray	SHAD41 -d.ssf
2748	-121.2673822	37.82700354	6340047.2	2124505.545	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,949	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:3.4am	C Gray	SHAD41 -d.ssf
2749	-121.2673955	37.82698701	6340043.461	2124499.559	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,762	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:3.9am	C Gray	SHAD41 -d.ssf
2750	-121.2673995	37.82698026	6340042.136	2124497.108	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,444	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:4.0am	C Gray	SHAD41 -d.ssf
2751	-121.2674074	37.82697091	6340039.818	2124493.723	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,942	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:4.2am	C Gray	SHAD41 -d.ssf
2752	-121.2674139	37.82696283	6340037.94	2124490.798	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,492	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:4.4am	C Gray	SHAD41 -d.ssf
2753	-121.267421	37.82695536	6340035.869	2124488.094	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,113	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:4.7am	C Gray	SHAD41 -d.ssf
2754	-121.2674467	37.82692234	6340028.349	2124476.134	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,678	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:5.4am	C Gray	SHAD41 -d.ssf
2755	-121.2674546	37.82691317	6340026.025	2124472.813	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,759	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:5.7am	C Gray	SHAD41 -d.ssf
2756	-121.2674624	37.82690392	6340023.736	2124469.463	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,496	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:40:5.9am	C Gray	SHAD41 -d.ssf
2757	-121.2674666	37.8268958	6340022.519	2124466.515	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,493	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:41:0.1am	C Gray	SHAD41 -d.ssf
2758	-121.2674717	37.82688784	6340021.02	2124463.629	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,450	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:41:0.2am	C Gray	SHAD41 -d.ssf
2759	-121.2674749	37.82686995	6340016.875	2124457.151	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,161	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:41:0.7am	C Gray	SHAD41 -d.ssf
2760	-121.2674882	37.82686715	6340016.174	2124456.137	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,097	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:41:1.1am	C Gray	SHAD41 -d.ssf
2761	-121.2674874	37.82686745	6340016.408	2124456.244	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,747	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:41:1.2am	C Gray	SHAD41 -d.ssf
2762	-121.2674812	37.82687437	6340018.241	2124458.749	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,281	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:41:1.5am	C Gray	SHAD41 -d.ssf
2763	-121.2674749	37.82688005	6340020.066	2124460.803	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,105	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:41:1.7am	C Gray	SHAD41 -d.ssf
2764	-121.2674707	37.82688857	6340021.301	2124463.895	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,906	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:41:1.9am	C Gray	SHAD41 -d.ssf
2765	-121.2674165	37.82695433	6340037.144	2124487.708	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,551	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:41:3.5am	C Gray	SHAD41 -d.ssf
2766	-121.2674042	37.82697167	6340040.747	2124493.995	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,077	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:41:3.9am	C Gray	SHAD41 -d.ssf
2767	-121.2673573	37.82703091	6340054.488	2124515.451	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,713	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:41:5.3am	C Gray	SHAD41 -d.ssf
2768	-121.2673414	37.82704912	6340059.118	2124522.046	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,308	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:41:5.8am	C Gray	SHAD41 -d.ssf
2769	-121.2673336	37.82706144	6340061.425	2124526.511	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,543	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:0.0am	C Gray	SHAD41 -d.ssf
2770	-121.267333	37.82706017	6340061.585	2124526.049	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,547	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:0.5am	C Gray	SHAD41 -d.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2771	-121.2673372	37.82705327	6340060.345	2124523.548	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,206	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:07am	C Gray	SHAD41 -d.ssf
2772	-121.2673408	37.8270497	6340059.311	2124522.256	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,698	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:08am	C Gray	SHAD41 -d.ssf
2773	-121.2673477	37.82704017	6340057.266	2124518.804	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,497	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:11am	C Gray	SHAD41 -d.ssf
2774	-121.2673535	37.82703207	6340055.588	2124515.867	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,804	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:13am	C Gray	SHAD41 -d.ssf
2775	-121.2673732	37.8270053	6340049.823	2124506.165	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,139	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:18am	C Gray	SHAD41 -d.ssf
2776	-121.267381	37.82699737	6340047.521	2124503.296	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,423	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:20am	C Gray	SHAD41 -d.ssf
2777	-121.2673888	37.82698981	6340045.274	2124500.461	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,551	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:22am	C Gray	SHAD41 -d.ssf
2778	-121.2673948	37.82698125	6340043.489	2124497.561	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,899	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:24am	C Gray	SHAD41 -d.ssf
2779	-121.2674069	37.82696484	6340039.958	2124491.513	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,897	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:28am	C Gray	SHAD41 -d.ssf
2780	-121.267412	37.82695999	6340038.461	2124489.395	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,314	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:30am	C Gray	SHAD41 -d.ssf
2781	-121.2674187	37.82694871	6340036.498	2124485.667	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,194	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:33am	C Gray	SHAD41 -d.ssf
2782	-121.2674259	37.82693915	6340034.398	2124482.205	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,694	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:35am	C Gray	SHAD41 -d.ssf
2783	-121.2674472	37.82690345	6340028.155	2124469.984	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,347	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:42am	C Gray	SHAD41 -d.ssf
2784	-121.2674535	37.82689801	6340026.306	2124467.291	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,059	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:44am	C Gray	SHAD41 -d.ssf
2785	-121.2674769	37.82686092	6340019.417	2124453.841	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,355	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:52am	C Gray	SHAD41 -d.ssf
2786	-121.2674736	37.82685524	6340020.369	2124451.763	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,444	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:42:57am	C Gray	SHAD41 -d.ssf
2787	-121.2674912	37.82693528	6340036.326	2124480.78	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,533	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:43:19am	C Gray	SHAD41 -d.ssf
2788	-121.2674146	37.82694298	6340037.681	2124483.573	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,904	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:43:20am	C Gray	SHAD41 -d.ssf
2789	-121.2674012	37.82695967	6340041.591	2124489.616	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,206	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:43:25am	C Gray	SHAD41 -d.ssf
2790	-121.2673935	37.82696772	6340043.837	2124492.573	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,899	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:43:27am	C Gray	SHAD41 -d.ssf
2791	-121.2673878	37.82697639	6340045.458	2124495.652	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,490	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:43:29am	C Gray	SHAD41 -d.ssf
2792	-121.2673819	37.82698461	6340047.228	2124498.648	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,635	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:43:31am	C Gray	SHAD41 -d.ssf
2793	-121.2673765	37.82699162	6340048.825	2124501.192	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,945	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:43:33am	C Gray	SHAD41 -d.ssf
2794	-121.2673541	37.82702437	6340055.389	2124513.063	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,232	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:43:40am	C Gray	SHAD41 -d.ssf
2795	-121.2673379	37.82703287	6340057.194	2124516.143	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,259	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:43:43am	C Gray	SHAD41 -d.ssf
2796	-121.2673408	37.82703184	6340062.192	2124523.011	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,024	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:43:47am	C Gray	SHAD41 -d.ssf
2797	-121.2673323	37.82704762	6340061.749	2124521.477	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,966	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:43:49am	C Gray	SHAD41 -d.ssf
2798	-121.2673325	37.8270506	6340061.702	2124522.565	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,496	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:43:50am	C Gray	SHAD41 -d.ssf
2799	-121.2673439	37.82703544	6340058.359	2124517.072	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,201	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:43:57am	C Gray	SHAD41 -d.ssf
2800	-121.2673746	37.82699445	6340049.371	2124502.218	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,580	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:44:07am	C Gray	SHAD41 -d.ssf
2801	-121.2673805	37.82698621	6340047.656	2124499.231	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,214	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:44:09am	C Gray	SHAD41 -d.ssf
2802	-121.2673868	37.82697736	6340045.793	2124496.023	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,350	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:44:11am	C Gray	SHAD41 -d.ssf
2803	-121.267392	37.8269687	6340044.279	2124492.884	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,850	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:44:13am	C Gray	SHAD41 -d.ssf
2804	-121.2673989	37.82695975	6340042.26	2124489.64	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,784	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:44:15am	C Gray	SHAD41 -d.ssf
2805	-121.2674177	37.8269354	6340036.749	2124480.819	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,163	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:44:20am	C Gray	SHAD41 -d.ssf
2807	-121.2674253	37.82692511	6340034.521	2124477.092	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,043	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:44:23am	C Gray	SHAD41 -d.ssf
2808	-121.267431	37.82691716	6340032.87	2124474.211	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,505	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:44:24am	C Gray	SHAD41 -d.ssf
2809	-121.267437	37.8269081	6340031.082	2124470.925	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,598	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:44:27am	C Gray	SHAD41 -d.ssf
2810	-121.2674567	37.82687505	6340024.339	2124458.941	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,612	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:44:34am	C Gray	SHAD41 -d.ssf
2811	-121.2674666	37.82685542	6340022.392	2124451.813	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,556	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:44:39am	C Gray	SHAD41 -d.ssf
2812	-121.2674693	37.82685427	6340021.598	2124451.402	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,567	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:44:43am	C Gray	SHAD41 -d.ssf
2813	-121.2674403	37.82688533	6340030.067	2124462.641	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,922	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:44:52am	C Gray	SHAD41 -d.ssf
2814	-121.2674172	37.826943136	6340036.885	2124479.342	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,959	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:44:59am	C Gray	SHAD41 -d.ssf
2815	-121.2673822	37.82694177	6340047.009	2124482.905	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,979	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:00am	C Gray	SHAD41 -d.ssf
2816	-121.2673812	37.82694011	6340047.313	2124482.449	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,945	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:02am	C Gray	SHAD41 -d.ssf
2817	-121.2673861	37.82694209	6340045.9	2124483.179	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,192	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:05am	C Gray	SHAD41 -d.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2818	-121.2673856	37.82694856	6340046.069	2124485.535	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,386	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:07am	C Gray	SHAD41 -d.ssf
2819	-121.2673857	37.82694857	6340046.053	2124487.57	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,038	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:08am	C Gray	SHAD41 -d.ssf
2820	-121.2673915	37.82695963	6340044.401	2124489.579	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,437	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:11am	C Gray	SHAD41 -d.ssf
2821	-121.2673869	37.82696473	6340045.748	2124491.427	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,363	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:12am	C Gray	SHAD41 -d.ssf
2822	-121.2673807	37.8269726	6340047.542	2124494.277	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,206	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:14am	C Gray	SHAD41 -d.ssf
2823	-121.2673738	37.82698354	6340049.576	2124498.243	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,303	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:17am	C Gray	SHAD41 -d.ssf
2824	-121.2673689	37.82699176	6340051.002	2124501.226	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,066	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:19am	C Gray	SHAD41 -d.ssf
2825	-121.2673634	37.82699968	6340052.63	2124504.096	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,162	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:20am	C Gray	SHAD41 -d.ssf
2826	-121.2673576	37.82700811	6340054.326	2124507.152	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,944	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:22am	C Gray	SHAD41 -d.ssf
2827	-121.2673527	37.82701696	6340055.765	2124510.363	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,749	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:25am	C Gray	SHAD41 -d.ssf
2828	-121.2673477	37.82702732	6340057.249	2124514.123	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,528	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:27am	C Gray	SHAD41 -d.ssf
2829	-121.2673432	37.82703266	6340058.562	2124516.055	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,741	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:28am	C Gray	SHAD41 -d.ssf
2830	-121.2673339	37.82703545	6340061.257	2124517.052	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,091	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:30am	C Gray	SHAD41 -d.ssf
2831	-121.2673353	37.82702686	6340060.82	2124513.926	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,737	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:33am	C Gray	SHAD41 -d.ssf
2832	-121.2673417	37.82701986	6340058.957	2124511.391	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,305	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:35am	C Gray	SHAD41 -d.ssf
2833	-121.2673455	37.82701369	6340057.845	2124509.154	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,346	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:36am	C Gray	SHAD41 -d.ssf
2834	-121.2673507	37.82700471	6340056.31	2124505.899	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,149	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:38am	C Gray	SHAD41 -d.ssf
2835	-121.2673556	37.82699499	6340054.869	2124502.369	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,777	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:41am	C Gray	SHAD41 -d.ssf
2836	-121.2673599	37.82698817	6340053.589	2124499.897	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,761	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:43am	C Gray	SHAD41 -d.ssf
2837	-121.2673654	37.82697691	6340051.998	2124497.291	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,881	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:44am	C Gray	SHAD41 -d.ssf
2838	-121.2673731	37.82697191	6340050.339	2124494.003	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,418	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:47am	C Gray	SHAD41 -d.ssf
2839	-121.2673779	37.82696632	6340048.337	2124490.848	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,689	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:49am	C Gray	SHAD41 -d.ssf
2840	-121.2673835	37.82695426	6340046.688	2124487.606	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,153	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:51am	C Gray	SHAD41 -d.ssf
2841	-121.2673898	37.8269462	6340044.838	2124484.686	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,201	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:52am	C Gray	SHAD41 -d.ssf
2842	-121.2673912	37.82694124	6340044.409	2124482.882	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,495	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:54am	C Gray	SHAD41 -d.ssf
2843	-121.2673912	37.82694124	6340044.409	2124482.882	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,680	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:56am	C Gray	SHAD41 -d.ssf
2844	-121.2673912	37.82694124	6340044.409	2124482.882	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,068	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:45:58am	C Gray	SHAD41 -d.ssf
2845	-121.2673912	37.82694124	6340044.409	2124482.882	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,404	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:46:00am	C Gray	SHAD41 -d.ssf
2846	-121.2673912	37.82694124	6340044.409	2124482.882	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,065	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:46:02am	C Gray	SHAD41 -d.ssf
2847	-121.2673912	37.82694124	6340044.409	2124482.882	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,766	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:46:22am	C Gray	SHAD41 -d.ssf
2848	-121.2673912	37.82694124	6340044.409	2124482.882	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,470	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:46:24am	C Gray	SHAD41 -d.ssf
2850	-121.2670095	37.82720537	6340155.461	2124578.151	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,918	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:09am	C Gray	SHAD41 E.ssf
2851	-121.2670092	37.82720629	6340155.552	2124578.486	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,335	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:11am	C Gray	SHAD41 E.ssf
2852	-121.2670087	37.82720548	6340155.687	2124578.189	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,622	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:13am	C Gray	SHAD41 E.ssf
2853	-121.2670083	37.82720501	6340155.776	2124578.02	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,430	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:15am	C Gray	SHAD41 E.ssf
2854	-121.2670082	37.8272044	6340155.812	2124577.795	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,068	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:19am	C Gray	SHAD41 E.ssf
2855	-121.2670083	37.8272041	6340155.784	2124577.687	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,572	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:21am	C Gray	SHAD41 E.ssf
2856	-121.2670082	37.82720431	6340155.807	2124577.762	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,976	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:23am	C Gray	SHAD41 E.ssf
2857	-121.2670083	37.82720419	6340155.788	2124577.721	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,810	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:25am	C Gray	SHAD41 E.ssf
2858	-121.2670083	37.82720411	6340155.806	2124577.69	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,746	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:27am	C Gray	SHAD41 E.ssf
2859	-121.2670083	37.82720415	6340155.804	2124577.706	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,565	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:29am	C Gray	SHAD41 E.ssf
2860	-121.2670084	37.82720435	6340155.766	2124577.779	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,704	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:31am	C Gray	SHAD41 E.ssf
2861	-121.2670085	37.82720444	6340155.733	2124577.812	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,012	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:33am	C Gray	SHAD41 E.ssf
2862	-121.2670086	37.82720411	6340155.676	2124577.691	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,885	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:35am	C Gray	SHAD41 E.ssf
2863	-121.2670087	37.82720424	6340155.72	2124577.739	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,710	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:37am	C Gray	SHAD41 E.ssf
2864	-121.2670085	37.82720415	6340155.724	2124577.704	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,546	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:39am	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
2865	-121.2670085	37.82720413	6340155.738	2124577.697	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,853	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:41am	C Gray	SHAD41 E.ssf
2866	-121.2670086	37.8272046	6340155.712	2124577.868	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,491	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:43am	C Gray	SHAD41 E.ssf
2867	-121.2670095	37.82720521	6340155.451	2124578.094	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,627	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:45am	C Gray	SHAD41 E.ssf
2868	-121.2670094	37.82720557	6340155.478	2124578.225	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,167	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:47am	C Gray	SHAD41 E.ssf
2869	-121.2670099	37.82720613	6340155.34	2124578.431	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,647	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:35:55am	C Gray	SHAD41 E.ssf
2870	-121.2670207	37.82717671	6340152.13	2124567.742	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,473	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:37:49am	C Gray	SHAD41 E.ssf
2871	-121.2670346	37.82720248	6340148.201	2124577.16	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,118	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:40:15am	C Gray	SHAD41 E.ssf
2872	-121.2670394	37.82717508	6340146.734	2124567.196	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,021	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:41:25am	C Gray	SHAD41 E.ssf
2873	-121.2670409	37.8272036	6340146.368	2124577.582	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,643	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:41:35am	C Gray	SHAD41 E.ssf
2874	-121.2670411	37.82719447	6340146.304	2124574.258	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,943	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:41:37am	C Gray	SHAD41 E.ssf
2875	-121.2670442	37.82719296	6340146.017	2124573.578	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,435	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:41:39am	C Gray	SHAD41 E.ssf
2876	-121.2670419	37.82719283	6340146.056	2124573.662	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73,440	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:41:41am	C Gray	SHAD41 E.ssf
2877	-121.2670418	37.82719304	6340146.091	2124573.738	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,172	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:41:43am	C Gray	SHAD41 E.ssf
2878	-121.2670417	37.82719325	6340146.127	2124573.815	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,817	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:41:45am	C Gray	SHAD41 E.ssf
2879	-121.2670415	37.82719347	6340146.164	2124573.896	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,768	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:41:47am	C Gray	SHAD41 E.ssf
2880	-121.2670414	37.82719369	6340146.201	2124573.976	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,884	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:41:49am	C Gray	SHAD41 E.ssf
2881	-121.2670413	37.82719391	6340146.238	2124574.056	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,017	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:41:51am	C Gray	SHAD41 E.ssf
2882	-121.2670412	37.82719412	6340146.273	2124574.132	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,272	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:41:53am	C Gray	SHAD41 E.ssf
2883	-121.2670331	37.82720794	6340148.636	2124579.144	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	84,277	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:05am	C Gray	SHAD41 E.ssf
2884	-121.2670436	37.82720042	6340145.165	2124576.43	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,919	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:09am	C Gray	SHAD41 E.ssf
2885	-121.2670445	37.82718618	6340145.143	2124571.249	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,898	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:11am	C Gray	SHAD41 E.ssf
2886	-121.2670426	37.82717539	6340145.813	2124567.315	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,860	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:13am	C Gray	SHAD41 E.ssf
2887	-121.2670413	37.82716443	6340146.14	2124563.322	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,917	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:15am	C Gray	SHAD41 E.ssf
2888	-121.2670394	37.82715438	6340146.653	2124559.657	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,712	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:17am	C Gray	SHAD41 E.ssf
2889	-121.2670368	37.82714447	6340147.388	2124556.127	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,832	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:19am	C Gray	SHAD41 E.ssf
2890	-121.2670348	37.82713443	6340147.917	2124552.381	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,772	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:21am	C Gray	SHAD41 E.ssf
2891	-121.2670346	37.82712389	6340147.952	2124548.544	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,921	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:23am	C Gray	SHAD41 E.ssf
2892	-121.267036	37.82711357	6340147.535	2124544.789	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,801	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:25am	C Gray	SHAD41 E.ssf
2893	-121.2670338	37.82710044	6340146.914	2124540.015	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,250	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:27am	C Gray	SHAD41 E.ssf
2894	-121.2670386	37.82709105	6340146.699	2124536.598	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,312	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:29am	C Gray	SHAD41 E.ssf
2895	-121.2670401	37.82708041	6340146.252	2124532.726	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,379	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:31am	C Gray	SHAD41 E.ssf
2896	-121.26704	37.82706825	6340146.218	2124528.297	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,469	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:33am	C Gray	SHAD41 E.ssf
2897	-121.2670391	37.82705722	6340146.469	2124524.278	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,020	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:35am	C Gray	SHAD41 E.ssf
2898	-121.2670411	37.82704467	6340145.856	2124519.713	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,342	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:37am	C Gray	SHAD41 E.ssf
2899	-121.2670434	37.82703094	6340145.145	2124514.721	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,708	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:39am	C Gray	SHAD41 E.ssf
2900	-121.2670443	37.82701998	6340144.854	2124510.732	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,124	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:41am	C Gray	SHAD41 E.ssf
2901	-121.267043	37.82700981	6340145.199	2124507.027	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,057	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:43am	C Gray	SHAD41 E.ssf
2902	-121.267047	37.82702321	6340144.068	2124511.915	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,704	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:44:55am	C Gray	SHAD41 E.ssf
2903	-121.2670406	37.82710836	6340146.176	2124542.905	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,522	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:45:11am	C Gray	SHAD41 E.ssf
2904	-121.2670437	37.82711793	6340146.169	2124546.388	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,646	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:45:13am	C Gray	SHAD41 E.ssf
2905	-121.2670427	37.82720281	6340145.862	2124577.298	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,570	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:45:33am	C Gray	SHAD41 E.ssf
2906	-121.2670428	37.82719957	6340145.81	2124576.118	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,584	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:45:35am	C Gray	SHAD41 E.ssf
2907	-121.2670427	37.82719074	6340145.661	2124572.906	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,163	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:45:37am	C Gray	SHAD41 E.ssf
2908	-121.2670427	37.82718158	6340145.777	2124569.568	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,435	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:45:39am	C Gray	SHAD41 E.ssf
2909	-121.2670434	37.82717337	6340145.561	2124566.58	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,074	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:45:41am	C Gray	SHAD41 E.ssf
2910	-121.2670446	37.8271618	6340145.169	2124562.372	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,949	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:45:43am	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
2911	-121.2670449	37.82715182	6340145.061	2124558.737	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,738	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:45:45am	C Gray	SHAD41 E.ssf
2912	-121.2670441	37.82713219	6340144.95	2124551.59	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,119	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:45:49am	C Gray	SHAD41 E.ssf
2913	-121.2670454	37.82711218	6340145.13	2124547.946	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,621	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:45:51am	C Gray	SHAD41 E.ssf
2914	-121.2670451	37.82711082	6340144.884	2124543.811	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,957	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:45:53am	C Gray	SHAD41 E.ssf
2915	-121.2670456	37.82708655	6340144.673	2124534.973	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,178	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:45:57am	C Gray	SHAD41 E.ssf
2916	-121.2670486	37.82707554	6340143.762	2124530.971	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,747	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:45:59am	C Gray	SHAD41 E.ssf
2917	-121.2670458	37.82703765	6340144.469	2124531.168	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,649	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:46:05am	C Gray	SHAD41 E.ssf
2918	-121.2670529	37.82717888	6340142.827	2124568.609	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,567	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:46:45am	C Gray	SHAD41 E.ssf
2919	-121.2670562	37.8272041	6340141.963	2124577.799	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,334	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:46:57am	C Gray	SHAD41 E.ssf
2920	-121.2670571	37.82719673	6340141.681	2124575.119	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,571	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:46:59am	C Gray	SHAD41 E.ssf
2921	-121.2670588	37.82718857	6340141.156	2124572.152	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,976	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:01am	C Gray	SHAD41 E.ssf
2922	-121.2670595	37.82717892	6340140.934	2124568.64	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,741	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:03am	C Gray	SHAD41 E.ssf
2923	-121.2670584	37.82716873	6340141.222	2124564.928	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,114	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:05am	C Gray	SHAD41 E.ssf
2924	-121.2670591	37.82715844	6340140.971	2124561.183	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,187	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:07am	C Gray	SHAD41 E.ssf
2925	-121.2670558	37.82715034	6340141.267	2124558.232	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,596	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:09am	C Gray	SHAD41 E.ssf
2926	-121.2670591	37.82713776	6340140.912	2124553.652	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,165	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:11am	C Gray	SHAD41 E.ssf
2927	-121.2670601	37.82712863	6340140.618	2124550.328	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,886	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:13am	C Gray	SHAD41 E.ssf
2928	-121.2670616	37.82711804	6340140.131	2124546.477	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,333	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:15am	C Gray	SHAD41 E.ssf
2929	-121.2670612	37.82710868	6340140.234	2124543.067	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,943	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:17am	C Gray	SHAD41 E.ssf
2930	-121.2670624	37.82709829	6340140.126	2124539.286	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,671	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:19am	C Gray	SHAD41 E.ssf
2931	-121.2670614	37.82708839	6340139.812	2124535.683	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,048	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:21am	C Gray	SHAD41 E.ssf
2932	-121.2670636	37.82707712	6340139.443	2124531.582	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,433	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:23am	C Gray	SHAD41 E.ssf
2933	-121.2670638	37.82706659	6340139.337	2124527.498	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,069	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:25am	C Gray	SHAD41 E.ssf
2934	-121.2670641	37.82705145	6340139.206	2124522.237	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,682	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:27am	C Gray	SHAD41 E.ssf
2935	-121.267065	37.82703853	6340138.909	2124517.535	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,768	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:29am	C Gray	SHAD41 E.ssf
2936	-121.2670646	37.82702947	6340138.947	2124514.237	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,964	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:31am	C Gray	SHAD41 E.ssf
2937	-121.2670636	37.82701978	6340139.257	2124510.704	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,780	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:47:33am	C Gray	SHAD41 E.ssf
2938	-121.2670671	37.82720748	6340138.83	2124579.056	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,761	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:48:23am	C Gray	SHAD41 E.ssf
2939	-121.2670812	37.82700989	6340134.158	2124507.145	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,611	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:49:05am	C Gray	SHAD41 E.ssf
2940	-121.2670784	37.82701822	6340134.981	2124510.173	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,129	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:49:07am	C Gray	SHAD41 E.ssf
2941	-121.2670783	37.82702837	6340135.038	2124513.868	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,769	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:49:09am	C Gray	SHAD41 E.ssf
2942	-121.2670772	37.82703716	6340135.398	2124517.064	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,185	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:49:11am	C Gray	SHAD41 E.ssf
2943	-121.2670774	37.82705758	6340136.387	2124524.493	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,239	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:49:15am	C Gray	SHAD41 E.ssf
2944	-121.2670755	37.82707185	6340135.985	2124529.693	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,884	Geo 7X	Uncorrected	10/3/2017	11:49:19am	C Gray	SHAD41 E.ssf
2945	-121.2670768	37.82707193	6340135.613	2124529.725	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,449	Geo 7X	Uncorrected	10/3/2017	11:49:27am	C Gray	SHAD41 E.ssf
2946	-121.2670771	37.82707195	6340135.54	2124529.731	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,581	Geo 7X	Uncorrected	10/3/2017	11:49:29am	C Gray	SHAD41 E.ssf
2947	-121.2670774	37.82707196	6340135.452	2124529.738	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,268	Geo 7X	Uncorrected	10/3/2017	11:49:31am	C Gray	SHAD41 E.ssf
2948	-121.2670777	37.82707198	6340135.365	2124529.746	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,946	Geo 7X	Uncorrected	10/3/2017	11:49:33am	C Gray	SHAD41 E.ssf
2949	-121.2670783	37.82707202	6340135.267	2124529.754	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,401	Geo 7X	Uncorrected	10/3/2017	11:49:35am	C Gray	SHAD41 E.ssf
2950	-121.2670783	37.82707202	6340135.181	2124529.761	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,406	Geo 7X	Uncorrected	10/3/2017	11:49:37am	C Gray	SHAD41 E.ssf
2951	-121.2670823	37.82707226	6340134.026	2124529.859	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,720	Geo 7X	Uncorrected	10/3/2017	11:50:03am	C Gray	SHAD41 E.ssf
2953	-121.2670894	37.82707281	6340131.985	2124530.076	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,662	Geo 7X	Uncorrected	10/3/2017	11:50:49am	C Gray	SHAD41 E.ssf
2954	-121.2670889	37.82707375	6340132.128	2124530.415	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,770	Geo 7X	Uncorrected	10/3/2017	11:50:51am	C Gray	SHAD41 E.ssf
2955	-121.2670893	37.82707566	6340132.023	2124531.113	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,421	Geo 7X	Uncorrected	10/3/2017	11:50:53am	C Gray	SHAD41 E.ssf
2956	-121.2670885	37.82707223	6340133.24	2124529.853	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,732	Geo 7X	Uncorrected	10/3/2017	11:50:55am	C Gray	SHAD41 E.ssf
2957	-121.2670889	37.82707321	6340132.119	2124530.218	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,620	Geo 7X	Uncorrected	10/3/2017	11:50:57am	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
2958	-121.2670876	37.8270816	6340132.527	2124533.269	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,081	Geo 7X	Uncorrected	10/3/2017	11:50:58am	C Gray	SHAD41 E.ssf
2959	-121.2670843	37.82709338	6340133.003	2124537.556	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,520	Geo 7X	Uncorrected	10/3/2017	11:51:01am	C Gray	SHAD41 E.ssf
2960	-121.2670861	37.82710422	6340133.533	2124541.498	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,878	Geo 7X	Uncorrected	10/3/2017	11:51:03am	C Gray	SHAD41 E.ssf
2961	-121.2670777	37.82711279	6340135.677	2124544.603	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,812	Geo 7X	Uncorrected	10/3/2017	11:51:05am	C Gray	SHAD41 E.ssf
2962	-121.2670736	37.82711896	6340136.687	2124546.843	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,065	Geo 7X	Uncorrected	10/3/2017	11:51:07am	C Gray	SHAD41 E.ssf
2963	-121.2670718	37.82713048	6340137.245	2124551.032	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,462	Geo 7X	Uncorrected	10/3/2017	11:51:09am	C Gray	SHAD41 E.ssf
2964	-121.2670703	37.82714422	6340137.707	2124555.296	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,687	Geo 7X	Uncorrected	10/3/2017	11:51:11am	C Gray	SHAD41 E.ssf
2965	-121.2670685	37.82715377	6340138.246	2124559.505	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,426	Geo 7X	Uncorrected	10/3/2017	11:51:13am	C Gray	SHAD41 E.ssf
2966	-121.2670681	37.82716555	6340138.393	2124563.774	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,933	Geo 7X	Uncorrected	10/3/2017	11:51:15am	C Gray	SHAD41 E.ssf
2967	-121.2670691	37.82717672	6340138.14	2124567.864	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,870	Geo 7X	Uncorrected	10/3/2017	11:51:17am	C Gray	SHAD41 E.ssf
2968	-121.2670695	37.82718676	6340138.065	2124571.518	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,431	Geo 7X	Uncorrected	10/3/2017	11:51:19am	C Gray	SHAD41 E.ssf
2969	-121.2670691	37.82719631	6340138.203	2124574.996	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,907	Geo 7X	Uncorrected	10/3/2017	11:51:21am	C Gray	SHAD41 E.ssf
2970	-121.2670692	37.82720381	6340138.213	2124577.726	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,699	Geo 7X	Uncorrected	10/3/2017	11:51:23am	C Gray	SHAD41 E.ssf
2971	-121.2670646	37.82720741	6340139.531	2124579.027	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73,322	Geo 7X	Uncorrected	10/3/2017	11:51:25am	C Gray	SHAD41 E.ssf
2972	-121.2670673	37.82721108	6340138.781	2124580.367	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,436	Geo 7X	Uncorrected	10/3/2017	11:51:27am	C Gray	SHAD41 E.ssf
2973	-121.2670665	37.82720968	6340139.011	2124579.857	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88,209	Geo 7X	Uncorrected	10/3/2017	11:51:28am	C Gray	SHAD41 E.ssf
2974	-121.2670669	37.82721044	6340138.874	2124580.134	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,626	Geo 7X	Uncorrected	10/3/2017	11:51:31am	C Gray	SHAD41 E.ssf
2975	-121.2670662	37.82720983	6340139.084	2124579.911	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	86,059	Geo 7X	Uncorrected	10/3/2017	11:51:33am	C Gray	SHAD41 E.ssf
2976	-121.2670664	37.8272096	6340139.018	2124579.826	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,841	Geo 7X	Uncorrected	10/3/2017	11:51:35am	C Gray	SHAD41 E.ssf
2977	-121.2670693	37.82721079	6340138.201	2124579.857	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	86,205	Geo 7X	Uncorrected	10/3/2017	11:51:37am	C Gray	SHAD41 E.ssf
2978	-121.2670663	37.82720913	6340138.454	2124566.525	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88,194	Geo 7X	Uncorrected	10/3/2017	11:51:39am	C Gray	SHAD41 E.ssf
2979	-121.2670661	37.8272093	6340139.128	2124579.717	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	86,664	Geo 7X	Uncorrected	10/3/2017	11:51:41am	C Gray	SHAD41 E.ssf
2980	-121.2670698	37.82720629	6340138.033	2124578.629	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,645	Geo 7X	Uncorrected	10/3/2017	11:51:43am	C Gray	SHAD41 E.ssf
2981	-121.2670698	37.82719854	6340138.023	2124575.809	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	84,294	Geo 7X	Uncorrected	10/3/2017	11:51:45am	C Gray	SHAD41 E.ssf
2982	-121.2670702	37.82719392	6340137.89	2124574.127	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90,737	Geo 7X	Uncorrected	10/3/2017	11:51:51am	C Gray	SHAD41 E.ssf
2983	-121.2670687	37.82718822	6340138.301	2124572.047	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	92,456	Geo 7X	Uncorrected	10/3/2017	11:51:53am	C Gray	SHAD41 E.ssf
2984	-121.2670688	37.82717934	6340138.489	2124568.812	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88,998	Geo 7X	Uncorrected	10/3/2017	11:51:55am	C Gray	SHAD41 E.ssf
2985	-121.2670688	37.82717306	6340138.454	2124566.525	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,552	Geo 7X	Uncorrected	10/3/2017	11:51:57am	C Gray	SHAD41 E.ssf
2986	-121.2670695	37.82716549	6340137.993	2124563.775	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,521	Geo 7X	Uncorrected	10/3/2017	11:51:59am	C Gray	SHAD41 E.ssf
2987	-121.2670703	37.82715605	6340137.74	2124560.34	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,793	Geo 7X	Uncorrected	10/3/2017	11:52:01am	C Gray	SHAD41 E.ssf
2988	-121.267071	37.82714698	6340137.52	2124557.036	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,718	Geo 7X	Uncorrected	10/3/2017	11:52:03am	C Gray	SHAD41 E.ssf
2989	-121.2670726	37.82713471	6340137.013	2124552.575	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,079	Geo 7X	Uncorrected	10/3/2017	11:52:05am	C Gray	SHAD41 E.ssf
2990	-121.2670717	37.82712513	6340135.721	2124549.095	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,527	Geo 7X	Uncorrected	10/3/2017	11:52:07am	C Gray	SHAD41 E.ssf
2991	-121.2670912	37.82709818	6340131.527	2124539.315	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,866	Geo 7X	Uncorrected	10/3/2017	11:52:09am	C Gray	SHAD41 E.ssf
2992	-121.2670924	37.8270894	6340131.161	2124536.123	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,659	Geo 7X	Uncorrected	10/3/2017	11:52:10am	C Gray	SHAD41 E.ssf
2993	-121.2670976	37.82707537	6340129.629	2124531.026	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,732	Geo 7X	Uncorrected	10/3/2017	11:52:13am	C Gray	SHAD41 E.ssf
2994	-121.2670955	37.82706556	6340130.186	2124527.451	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,233	Geo 7X	Uncorrected	10/3/2017	11:52:15am	C Gray	SHAD41 E.ssf
2995	-121.2670955	37.82705555	6340130.176	2124523.803	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,180	Geo 7X	Uncorrected	10/3/2017	11:52:17am	C Gray	SHAD41 E.ssf
2996	-121.2670961	37.82704627	6340129.95	2124520.427	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,534	Geo 7X	Uncorrected	10/3/2017	11:52:19am	C Gray	SHAD41 E.ssf
2997	-121.2670994	37.82703592	6340130.525	2124516.655	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,117	Geo 7X	Uncorrected	10/3/2017	11:52:21am	C Gray	SHAD41 E.ssf
2998	-121.2670927	37.8270254	6340130.892	2124512.82	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,195	Geo 7X	Uncorrected	10/3/2017	11:52:23am	C Gray	SHAD41 E.ssf
2999	-121.2670917	37.82701358	6340131.145	2124508.514	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,748	Geo 7X	Uncorrected	10/3/2017	11:52:25am	C Gray	SHAD41 E.ssf
3000	-121.2670923	37.82700434	6340130.933	2124505.151	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,188	Geo 7X	Uncorrected	10/3/2017	11:52:27am	C Gray	SHAD41 E.ssf
3001	-121.2670927	37.82699453	6340129.562	2124501.589	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,585	Geo 7X	Uncorrected	10/3/2017	11:52:33am	C Gray	SHAD41 E.ssf
3002	-121.2670952	37.82700453	6340130.11	2124505.228	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,910	Geo 7X	Uncorrected	10/3/2017	11:52:35am	C Gray	SHAD41 E.ssf
3003	-121.2670948	37.82701473	6340130.253	2124508.938	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,160	Geo 7X	Uncorrected	10/3/2017	11:52:37am	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
3004	-121.2670963	37.82702489	6340129.842	2124512.644	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,565	Geo 7X	Uncorrected	10/3/2017	11:52:39am	C Gray	SHAD41 E.ssf
3005	-121.2670966	37.82703424	6340129.778	2124516.049	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,885	Geo 7X	Uncorrected	10/3/2017	11:52:41am	C Gray	SHAD41 E.ssf
3006	-121.2670964	37.82704042	6340129.883	2124519.673	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,300	Geo 7X	Uncorrected	10/3/2017	11:52:43am	C Gray	SHAD41 E.ssf
3007	-121.2670963	37.82705416	6340129.94	2124523.299	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,795	Geo 7X	Uncorrected	10/3/2017	11:52:45am	C Gray	SHAD41 E.ssf
3008	-121.2670982	37.8270654	6340129.419	2124527.398	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	79,658	Geo 7X	Uncorrected	10/3/2017	11:52:47am	C Gray	SHAD41 E.ssf
3009	-121.2670969	37.82707332	6340129.809	2124530.277	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,018	Geo 7X	Uncorrected	10/3/2017	11:52:48am	C Gray	SHAD41 E.ssf
3010	-121.2670957	37.82708177	6340130.182	2124533.353	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,627	Geo 7X	Uncorrected	10/3/2017	11:52:51am	C Gray	SHAD41 E.ssf
3011	-121.26711345	37.82710127	6340130.781	2124507.772	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,103	Geo 7X	Uncorrected	10/3/2017	11:52:53am	C Gray	SHAD41 E.ssf
3012	-121.2671235	37.82698892	6340121.881	2124499.61	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,562	Geo 7X	Uncorrected	10/3/2017	11:52:55am	C Gray	SHAD41 E.ssf
3013	-121.2671235	37.82701525	6340121.951	2124509.198	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,479	Geo 7X	Uncorrected	10/3/2017	11:52:57am	C Gray	SHAD41 E.ssf
3014	-121.2671121	37.82704695	6340122.769	2124520.734	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,158	Geo 7X	Uncorrected	10/3/2017	11:52:58am	C Gray	SHAD41 E.ssf
3015	-121.2671179	37.82708059	6340123.786	2124534.91	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,082	Geo 7X	Uncorrected	10/3/2017	11:53:01am	C Gray	SHAD41 E.ssf
3016	-121.2671138	37.8271037	6340125.03	2124541.379	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,908	Geo 7X	Uncorrected	10/3/2017	11:53:02am	C Gray	SHAD41 E.ssf
3017	-121.2671066	37.82712886	6340127.184	2124550.524	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,434	Geo 7X	Uncorrected	10/3/2017	11:53:05am	C Gray	SHAD41 E.ssf
3018	-121.2671319	37.82713919	6340128.649	2124554.272	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,441	Geo 7X	Uncorrected	10/3/2017	11:53:06am	C Gray	SHAD41 E.ssf
3019	-121.267103	37.82715448	6340128.298	2124559.845	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68,555	Geo 7X	Uncorrected	10/3/2017	11:53:08am	C Gray	SHAD41 E.ssf
3020	-121.2671017	37.82716986	6340128.701	2124565.441	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,902	Geo 7X	Uncorrected	10/3/2017	11:53:11am	C Gray	SHAD41 E.ssf
3021	-121.2670973	37.8271823	6340130.016	2124569.959	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	92,918	Geo 7X	Uncorrected	10/3/2017	11:53:15am	C Gray	SHAD41 E.ssf
3022	-121.2670861	37.82718735	6340133.262	2124571.771	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	104,670	Geo 7X	Uncorrected	10/3/2017	11:53:21am	C Gray	SHAD41 E.ssf
3023	-121.2670804	37.82718669	6340134.909	2124571.593	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	91,939	Geo 7X	Uncorrected	10/3/2017	11:53:25am	C Gray	SHAD41 E.ssf
3024	-121.2670803	37.82718679	6340134.952	2124571.554	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,911	Geo 7X	Uncorrected	10/3/2017	11:53:27am	C Gray	SHAD41 E.ssf
3025	-121.2670799	37.82718651	6340135.068	2124571.451	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,392	Geo 7X	Uncorrected	10/3/2017	11:53:32am	C Gray	SHAD41 E.ssf
3026	-121.2670797	37.82718641	6340135.108	2124571.415	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,652	Geo 7X	Uncorrected	10/3/2017	11:53:34am	C Gray	SHAD41 E.ssf
3027	-121.2670796	37.82718631	6340135.148	2124571.379	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,726	Geo 7X	Uncorrected	10/3/2017	11:53:37am	C Gray	SHAD41 E.ssf
3028	-121.2670795	37.82718621	6340135.188	2124571.343	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,899	Geo 7X	Uncorrected	10/3/2017	11:53:39am	C Gray	SHAD41 E.ssf
3029	-121.2670747	37.82718612	6340135.228	2124571.307	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,925	Geo 7X	Uncorrected	10/3/2017	11:53:41am	C Gray	SHAD41 E.ssf
3030	-121.2670792	37.82718602	6340135.268	2124571.271	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,506	Geo 7X	Uncorrected	10/3/2017	11:53:43am	C Gray	SHAD41 E.ssf
3031	-121.2670762	37.82718303	6340136.116	2124570.177	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,375	Geo 7X	Uncorrected	10/3/2017	11:54:39am	C Gray	SHAD41 E.ssf
3032	-121.2670764	37.82718144	6340136.069	2124569.599	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,246	Geo 7X	Uncorrected	10/3/2017	11:54:41am	C Gray	SHAD41 E.ssf
3033	-121.2670757	37.82718039	6340136.256	2124569.213	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,293	Geo 7X	Uncorrected	10/3/2017	11:54:43am	C Gray	SHAD41 E.ssf
3034	-121.2670756	37.82718025	6340136.294	2124569.162	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,870	Geo 7X	Uncorrected	10/3/2017	11:54:43am	C Gray	SHAD41 E.ssf
3035	-121.2670738	37.82716642	6340136.771	2124564.121	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,662	Geo 7X	Uncorrected	10/3/2017	11:54:46am	C Gray	SHAD41 E.ssf
3036	-121.2670747	37.82715384	6340136.46	2124559.544	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,655	Geo 7X	Uncorrected	10/3/2017	11:54:48am	C Gray	SHAD41 E.ssf
3037	-121.2670757	37.8271423	6340136.137	2124555.343	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,973	Geo 7X	Uncorrected	10/3/2017	11:54:51am	C Gray	SHAD41 E.ssf
3038	-121.2670758	37.82712938	6340136.064	2124550.642	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,994	Geo 7X	Uncorrected	10/3/2017	11:54:53am	C Gray	SHAD41 E.ssf
3039	-121.2670743	37.82711842	6340136.465	2124546.646	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,645	Geo 7X	Uncorrected	10/3/2017	11:54:54am	C Gray	SHAD41 E.ssf
3040	-121.2670746	37.82710745	6340136.358	2124542.654	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,868	Geo 7X	Uncorrected	10/3/2017	11:54:57am	C Gray	SHAD41 E.ssf
3041	-121.267075	37.82709866	6340136.203	2124539.454	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,822	Geo 7X	Uncorrected	10/3/2017	11:54:58am	C Gray	SHAD41 E.ssf
3042	-121.2670665	37.8270675	6340135.684	2124528.113	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,753	Geo 7X	Uncorrected	10/3/2017	11:55:05am	C Gray	SHAD41 E.ssf
3043	-121.2670766	37.82705874	6340135.63	2124524.921	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,757	Geo 7X	Uncorrected	10/3/2017	11:55:06am	C Gray	SHAD41 E.ssf
3044	-121.2670758	37.82704464	6340135.811	2124519.784	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73,198	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:55:09am	C Gray	SHAD41 E.ssf
3045	-121.2670784	37.82703445	6340135.03	2124516.082	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,224	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:55:11am	C Gray	SHAD41 E.ssf
3046	-121.2670786	37.82702572	6340134.959	2124512.902	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,284	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:55:12am	C Gray	SHAD41 E.ssf
3047	-121.2670901	37.82703591	6340131.653	2124516.641	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,765	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:55:23am	C Gray	SHAD41 E.ssf
3048	-121.2670915	37.82705612	6340131.318	2124524.002	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	79,777	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:55:26am	C Gray	SHAD41 E.ssf
3049	-121.267091	37.82706598	6340131.507	2124527.593	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	79,803	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:55:28am	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
3050	-121.26709	37.82707638	6340131.814	2124531.377	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	85,796	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:55:31am	C Gray	SHAD41 E.ssf
3051	-121.2670923	37.82715211	6340131.367	2124558.957	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,538	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:55:44am	C Gray	SHAD41 E.ssf
3052	-121.2670916	37.82718383	6340131.673	2124570.505	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	72,282	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:55:50am	C Gray	SHAD41 E.ssf
3053	-121.2670899	37.82717676	6340132.146	2124567.927	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	127,164	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:56:06am	C Gray	SHAD41 E.ssf
3054	-121.2670895	37.82710062	6340132.033	2124540.203	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	65,414	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:56:21am	C Gray	SHAD41 E.ssf
3055	-121.2670901	37.82708197	6340131.794	2124533.411	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,609	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:56:25am	C Gray	SHAD41 E.ssf
3056	-121.2670908	37.82706012	6340131.554	2124525.458	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	82,968	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:56:29am	C Gray	SHAD41 E.ssf
3057	-121.2670904	37.82702185	6340131.155	2124511.521	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	62,187	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:56:36am	C Gray	SHAD41 E.ssf
3058	-121.2670975	37.82701019	6340129.463	2124507.551	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	55,995	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:56:40am	C Gray	SHAD41 E.ssf
3059	-121.2670996	37.82702212	6340128.894	2124511.642	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,395	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:56:44am	C Gray	SHAD41 E.ssf
3060	-121.2670985	37.82715204	6340129.596	2124558.944	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	67,593	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:57:11am	C Gray	SHAD41 E.ssf
3061	-121.2670974	37.82719756	6340130.041	2124575.518	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	141,341	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:57:19am	C Gray	SHAD41 E.ssf
3062	-121.2670997	37.82720466	6340130.185	2124578.102	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	168,142	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:57:26am	C Gray	SHAD41 E.ssf
3063	-121.2670968	37.82719562	6340130.218	2124574.809	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	162,435	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:57:28am	C Gray	SHAD41 E.ssf
3064	-121.2670972	37.82718435	6340130.057	2124570.706	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	149,530	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:57:30am	C Gray	SHAD41 E.ssf
3065	-121.2670977	37.82717162	6340129.872	2124566.071	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	131,038	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:57:32am	C Gray	SHAD41 E.ssf
3066	-121.2670973	37.8271621	6340129.965	2124562.603	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	111,173	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:57:34am	C Gray	SHAD41 E.ssf
3067	-121.2670977	37.82713938	6340129.789	2124554.335	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	91,654	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:57:38am	C Gray	SHAD41 E.ssf
3068	-121.2670978	37.82711705	6340129.688	2124546.202	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,220	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:57:42am	C Gray	SHAD41 E.ssf
3069	-121.2670986	37.82710422	6340129.411	2124541.532	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	67,382	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:57:45am	C Gray	SHAD41 E.ssf
3070	-121.2670958	37.82709605	6340129.467	2124538.559	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	64,658	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:57:46am	C Gray	SHAD41 E.ssf
3071	-121.2670958	37.82704292	6340130.04	2124519.207	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	83,092	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:57:57am	C Gray	SHAD41 E.ssf
3072	-121.2670974	37.82703418	6340129.549	2124516.026	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	73,593	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:57:59am	C Gray	SHAD41 E.ssf
3073	-121.2670978	37.82702406	6340129.401	2124512.345	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	63,008	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:01am	C Gray	SHAD41 E.ssf
3074	-121.2671072	37.82701504	6340129.564	2124509.057	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,228	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:03am	C Gray	SHAD41 E.ssf
3075	-121.2671093	37.82701875	6340126.618	2124510.431	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,631	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:06am	C Gray	SHAD41 E.ssf
3076	-121.2671093	37.82703661	6340126.135	2124516.939	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	57,901	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:10am	C Gray	SHAD41 E.ssf
3077	-121.267109	37.82704599	6340126.241	2124520.355	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,103	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:12am	C Gray	SHAD41 E.ssf
3078	-121.2671093	37.82705509	6340126.182	2124523.668	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	80,985	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:15am	C Gray	SHAD41 E.ssf
3079	-121.2671097	37.82706393	6340126.1	2124526.89	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	92,439	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:16am	C Gray	SHAD41 E.ssf
3080	-121.2671102	37.82707376	6340125.964	2124530.47	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	88,479	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:18am	C Gray	SHAD41 E.ssf
3081	-121.267111	37.82708215	6340126.052	2124533.524	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	84,372	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:20am	C Gray	SHAD41 E.ssf
3082	-121.2671097	37.82709144	6340126.166	2124536.905	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	79,234	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:22am	C Gray	SHAD41 E.ssf
3083	-121.2671094	37.82710069	6340126.271	2124540.273	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	64,602	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:24am	C Gray	SHAD41 E.ssf
3084	-121.2671082	37.82713006	6340126.716	2124550.966	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	65,085	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:30am	C Gray	SHAD41 E.ssf
3085	-121.2671067	37.82715221	6340127.209	2124559.028	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	73,990	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:34am	C Gray	SHAD41 E.ssf
3086	-121.2671057	37.82716282	6340127.534	2124562.887	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	93,761	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:37am	C Gray	SHAD41 E.ssf
3087	-121.2671055	37.82717177	6340127.629	2124566.51	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	94,971	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:38am	C Gray	SHAD41 E.ssf
3088	-121.2671089	37.827211289	6340127.613	2124581.12	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	192,398	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:58:48am	C Gray	SHAD41 E.ssf
3089	-121.2671078	37.82706857	6340126.643	2124528.575	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	79,784	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:59:14am	C Gray	SHAD41 E.ssf
3090	-121.2671071	37.82705684	6340126.812	2124524.301	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	99,190	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:59:16am	C Gray	SHAD41 E.ssf
3091	-121.2671036	37.82702054	6340127.711	2124511.076	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	65,156	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:59:23am	C Gray	SHAD41 E.ssf
3092	-121.2671163	37.82702061	6340124.003	2124511.131	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	57,867	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:59:26am	C Gray	SHAD41 E.ssf
3093	-121.2671171	37.82703333	6340123.868	2124515.764	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,987	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:59:29am	C Gray	SHAD41 E.ssf
3094	-121.2671166	37.82705667	6340124.073	2124524.261	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	83,187	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:59:32am	C Gray	SHAD41 E.ssf
3095	-121.2671162	37.82706637	6340124.212	2124527.792	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	99,624	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:59:34am	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3096	-121.2671116	37.82708675	6340124.345	2124535.214	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	86,986	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:59:38am	C Gray	SHAD41 E.ssf
3097	-121.2671148	37.82715249	6340124.865	2124559.136	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	90,244	Geo 7X	Real-time SBAS Corrected	10/3/2017	11:59:50am	C Gray	SHAD41 E.ssf
3098	-121.2671171	37.82720784	6340124.371	2124579.305	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	145,778	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:00pm	C Gray	SHAD41 E.ssf
3099	-121.2671304	37.82720852	6340120.537	2124579.585	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	191,571	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:02pm	C Gray	SHAD41 E.ssf
3100	-121.2671477	37.82720524	6340115.528	2124578.434	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	133,152	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:04pm	C Gray	SHAD41 E.ssf
3101	-121.2671678	37.82720467	6340109.737	2124578.271	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	99,254	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:06pm	C Gray	SHAD41 E.ssf
3102	-121.2671827	37.82720498	6340105.421	2124578.419	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	83,185	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:08pm	C Gray	SHAD41 E.ssf
3103	-121.2671958	37.82720407	6340110.629	2124578.119	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	67,822	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:10pm	C Gray	SHAD41 E.ssf
3104	-121.2672556	37.82719165	6340084.203	2124573.74	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	50,223	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:18pm	C Gray	SHAD41 E.ssf
3105	-121.2672712	37.82719259	6340079.842	2124574.117	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	63,890	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:20pm	C Gray	SHAD41 E.ssf
3106	-121.2672838	37.82719327	6340076.187	2124574.395	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	55,212	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:22pm	C Gray	SHAD41 E.ssf
3107	-121.2673023	37.82719275	6340070.839	2124574.249	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	52,102	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:24pm	C Gray	SHAD41 E.ssf
3108	-121.2673083	37.82719363	6340069.117	2124574.585	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	56,058	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:26pm	C Gray	SHAD41 E.ssf
3109	-121.2673173	37.82719119	6340066.516	2124573.718	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	58,358	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:28pm	C Gray	SHAD41 E.ssf
3110	-121.2673203	37.82718554	6340065.618	2124571.667	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	67,919	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:30pm	C Gray	SHAD41 E.ssf
3111	-121.2673205	37.82717612	6340065.531	2124568.24	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	101,548	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:32pm	C Gray	SHAD41 E.ssf
3112	-121.2673202	37.82716663	6340065.274	2124564.661	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	131,235	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:34pm	C Gray	SHAD41 E.ssf
3113	-121.2673199	37.82715054	6340065.64	2124558.922	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	100,112	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:36pm	C Gray	SHAD41 E.ssf
3114	-121.2673209	37.82713898	6340065.315	2124554.716	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	91,224	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:38pm	C Gray	SHAD41 E.ssf
3115	-121.2673199	37.82712754	6340065.57	2124550.55	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	109,793	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:40pm	C Gray	SHAD41 E.ssf
3116	-121.2673208	37.82711249	6340065.274	2124545.072	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	108,852	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:43pm	C Gray	SHAD41 E.ssf
3117	-121.2673208	37.82709995	6340065.23	2124540.505	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	99,706	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:45pm	C Gray	SHAD41 E.ssf
3118	-121.2673206	37.82708835	6340065.241	2124536.281	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	108,134	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:47pm	C Gray	SHAD41 E.ssf
3119	-121.2673211	37.82704203	6340064.969	2124519.416	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	95,682	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:00:54pm	C Gray	SHAD41 E.ssf
3120	-121.2672868	37.82703818	6340074.875	2124517.933	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	91,099	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:01:03pm	C Gray	SHAD41 E.ssf
3121	-121.2671264	37.82707442	6340121.311	2124530.747	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	113,840	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:01:30pm	C Gray	SHAD41 E.ssf
3122	-121.2671287	37.82712659	6340120.781	2124549.749	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	75,980	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:01:40pm	C Gray	SHAD41 E.ssf
3123	-121.2671282	37.82713974	6340120.964	2124554.535	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	85,464	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:01:42pm	C Gray	SHAD41 E.ssf
3124	-121.2671282	37.82715019	6340121.017	2124558.342	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	98,507	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:01:44pm	C Gray	SHAD41 E.ssf
3125	-121.2671264	37.82716661	6340121.565	2124564.129	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	115,702	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:01:47pm	C Gray	SHAD41 E.ssf
3126	-121.2671263	37.82717595	6340121.614	2124567.717	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	199,356	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:01:48pm	C Gray	SHAD41 E.ssf
3127	-121.2671277	37.82718511	6340121.26	2124571.057	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	218,860	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:01:50pm	C Gray	SHAD41 E.ssf
3128	-121.2671275	37.82719595	6340121.341	2124575.002	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	154,147	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:01:52pm	C Gray	SHAD41 E.ssf
3129	-121.2671616	37.82719792	6340111.491	2124575.799	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	91,036	Geo 7X	Uncorrected	10/3/2017	12:01:58pm	C Gray	SHAD41 E.ssf
3130	-121.2671951	37.82721062	6340101.859	2124580.503	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	96,795	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:02pm	C Gray	SHAD41 E.ssf
3131	-121.2672045	37.82727069	6340099.142	2124579.172	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	73,632	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:04pm	C Gray	SHAD41 E.ssf
3132	-121.2672169	37.82720413	6340095.55	2124578.193	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	67,779	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:06pm	C Gray	SHAD41 E.ssf
3133	-121.2672795	37.82719672	6340077.457	2124575.642	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	68,111	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:15pm	C Gray	SHAD41 E.ssf
3134	-121.2673084	37.82719346	6340069.087	2124574.522	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	50,444	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:18pm	C Gray	SHAD41 E.ssf
3135	-121.2673209	37.82719215	6340065.481	2124574.078	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	55,140	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:20pm	C Gray	SHAD41 E.ssf
3136	-121.2673238	37.82718755	6340064.631	2124572.408	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	67,264	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:22pm	C Gray	SHAD41 E.ssf
3137	-121.2673209	37.82717644	6340065.421	2124568.355	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	96,696	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:24pm	C Gray	SHAD41 E.ssf
3138	-121.2673196	37.82716424	6340065.762	2124563.909	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	132,432	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:26pm	C Gray	SHAD41 E.ssf
3139	-121.2673198	37.82715403	6340065.668	2124560.193	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	105,911	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:28pm	C Gray	SHAD41 E.ssf
3140	-121.2673208	37.82714364	6340065.363	2124556.412	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	83,783	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:30pm	C Gray	SHAD41 E.ssf
3141	-121.2673191	37.82713139	6340065.808	2124551.95	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	111,280	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:32pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3142	-121.2673186	37.82711075	6340065.894	2124544.433	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	104,490	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:36pm	C Gray	SHAD41 E.ssf
3143	-121.2673197	37.82710069	6340065.553	2124540.773	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	97,935	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:38pm	C Gray	SHAD41 E.ssf
3144	-121.2673193	37.82708921	6340065.629	2124536.59	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	109,423	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:40pm	C Gray	SHAD41 E.ssf
3145	-121.2673194	37.82707735	6340065.575	2124532.271	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	122,497	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:42pm	C Gray	SHAD41 E.ssf
3146	-121.2673196	37.82706556	6340065.468	2124527.993	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	142,334	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:44pm	C Gray	SHAD41 E.ssf
3147	-121.2673197	37.82705045	6340065.406	2124523.79	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	125,327	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:46pm	C Gray	SHAD41 E.ssf
3148	-121.267314	37.82704402	6340065.296	2124520.138	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	93,345	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:48pm	C Gray	SHAD41 E.ssf
3149	-121.2673312	37.82704065	6340067.778	2124518.89	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,267	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:50pm	C Gray	SHAD41 E.ssf
3150	-121.2672976	37.82704018	6340071.741	2124519.278	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,375	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:52pm	C Gray	SHAD41 E.ssf
3151	-121.2672857	37.82704173	6340075.201	2124519.222	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	107,286	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:54pm	C Gray	SHAD41 E.ssf
3152	-121.2672706	37.82704327	6340079.553	2124519.747	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	92,542	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:56pm	C Gray	SHAD41 E.ssf
3153	-121.2672596	37.82704391	6340082.726	2124519.956	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	99,414	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:02:58pm	C Gray	SHAD41 E.ssf
3154	-121.2672487	37.82704593	6340085.898	2124520.665	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	94,478	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:00pm	C Gray	SHAD41 E.ssf
3155	-121.2672335	37.82704793	6340089.86	2124521.361	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	92,723	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:02pm	C Gray	SHAD41 E.ssf
3156	-121.2672209	37.82704853	6340093.528	2124521.549	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	84,700	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:04pm	C Gray	SHAD41 E.ssf
3157	-121.2672049	37.82704849	6340098.535	2124521.494	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	94,134	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:06pm	C Gray	SHAD41 E.ssf
3158	-121.2671888	37.82704965	6340103.194	2124521.876	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,145	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:08pm	C Gray	SHAD41 E.ssf
3159	-121.2671736	37.82705657	6340107.62	2124524.361	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	84,207	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:10pm	C Gray	SHAD41 E.ssf
3160	-121.2671596	37.82705996	6340111.678	2124525.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	111,053	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:12pm	C Gray	SHAD41 E.ssf
3161	-121.2671466	37.82706151	6340115.428	2124526.093	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	98,559	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:14pm	C Gray	SHAD41 E.ssf
3162	-121.2671371	37.82707063	6340118.869	2124527.885	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	102,440	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:17pm	C Gray	SHAD41 E.ssf
3163	-121.2671398	37.82707169	6340117.439	2124529.786	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	124,040	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:18pm	C Gray	SHAD41 E.ssf
3164	-121.2671398	37.82709325	6340117.484	2124537.637	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	112,090	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:22pm	C Gray	SHAD41 E.ssf
3165	-121.2671358	37.82710731	6340117.515	2124542.755	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	96,481	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:25pm	C Gray	SHAD41 E.ssf
3166	-121.2671373	37.82713351	6340118.337	2124552.29	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,932	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:28pm	C Gray	SHAD41 E.ssf
3167	-121.2671355	37.82714488	6340118.889	2124556.425	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,952	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:30pm	C Gray	SHAD41 E.ssf
3168	-121.2671375	37.82716464	6340118.351	2124563.626	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	95,475	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:34pm	C Gray	SHAD41 E.ssf
3169	-121.2671371	37.82717678	6340118.503	2124568.045	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	123,816	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:36pm	C Gray	SHAD41 E.ssf
3170	-121.2671354	37.82718516	6340119.036	2124571.091	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	272,045	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:38pm	C Gray	SHAD41 E.ssf
3171	-121.2671363	37.82719846	6340118.798	2124575.938	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	237,316	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:40pm	C Gray	SHAD41 E.ssf
3172	-121.2671395	37.82720343	6340117.889	2124577.754	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	158,116	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:42pm	C Gray	SHAD41 E.ssf
3173	-121.2671627	37.82720313	6340111.185	2124577.699	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	93,652	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:46pm	C Gray	SHAD41 E.ssf
3174	-121.2671715	37.82720386	6340108.659	2124577.984	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,070	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:48pm	C Gray	SHAD41 E.ssf
3175	-121.2671826	37.82720321	6340105.462	2124577.775	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,709	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:03:50pm	C Gray	SHAD41 E.ssf
3176	-121.26719	37.82720419	6340103.329	2124578.15	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,429	Geo 7X	Uncorrected	10/3/2017	12:03:52pm	C Gray	SHAD41 E.ssf
3177	-121.26719	37.82720449	6340103.328	2124578.261	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,272	Geo 7X	Uncorrected	10/3/2017	12:03:54pm	C Gray	SHAD41 E.ssf
3178	-121.26719	37.82720479	6340103.326	2124578.37	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,512	Geo 7X	Uncorrected	10/3/2017	12:03:56pm	C Gray	SHAD41 E.ssf
3179	-121.26719	37.8272051	6340103.325	2124578.48	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,719	Geo 7X	Uncorrected	10/3/2017	12:03:58pm	C Gray	SHAD41 E.ssf
3180	-121.26719	37.8272056	6340103.324	2124578.589	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,870	Geo 7X	Uncorrected	10/3/2017	12:04:00pm	C Gray	SHAD41 E.ssf
3181	-121.26719	37.8272064	6340103.321	2124578.809	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	92,313	Geo 7X	Uncorrected	10/3/2017	12:04:04pm	C Gray	SHAD41 E.ssf
3182	-121.2671915	37.82720911	6340102.882	2124579.946	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	95,209	Geo 7X	Uncorrected	10/3/2017	12:05:03pm	C Gray	SHAD41 E.ssf
3183	-121.2671928	37.82720763	6340102.51	2124579.41	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	93,173	Geo 7X	Uncorrected	10/3/2017	12:05:04pm	C Gray	SHAD41 E.ssf
3184	-121.2672035	37.82720356	6340099.426	2124577.952	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,657	Geo 7X	Uncorrected	10/3/2017	12:05:08pm	C Gray	SHAD41 E.ssf
3185	-121.2672184	37.82720076	6340095.108	2124576.97	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,462	Geo 7X	Uncorrected	10/3/2017	12:05:10pm	C Gray	SHAD41 E.ssf
3186	-121.2672301	37.82719875	6340091.705	2124576.266	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,622	Geo 7X	Uncorrected	10/3/2017	12:05:12pm	C Gray	SHAD41 E.ssf
3187	-121.2672465	37.82719784	6340086.983	2124575.972	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,305	Geo 7X	Uncorrected	10/3/2017	12:05:14pm	C Gray	SHAD41 E.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3188	-121.2672574	37.82719705	6340083.832	2124575.71	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	86,821	Geo 7X	Uncorrected	10/3/2017	12:05:16pm	C Gray	SHAD41 E.ssf
3189	-121.2672746	37.82719705	6340078.928	2124575.702	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,529	Geo 7X	Uncorrected	10/3/2017	12:05:18pm	C Gray	SHAD41 E.ssf
3190	-121.2672906	37.82719546	6340074.243	2124575.258	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,631	Geo 7X	Uncorrected	10/3/2017	12:05:20pm	C Gray	SHAD41 E.ssf
3191	-121.2673007	37.82719521	6340071.324	2124575.144	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,736	Geo 7X	Uncorrected	10/3/2017	12:05:22pm	C Gray	SHAD41 E.ssf
3192	-121.2673039	37.82718941	6340070.389	2124573.037	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,295	Geo 7X	Uncorrected	10/3/2017	12:05:24pm	C Gray	SHAD41 E.ssf
3193	-121.2673055	37.82718292	6340069.908	2124570.679	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	105,579	Geo 7X	Uncorrected	10/3/2017	12:05:26pm	C Gray	SHAD41 E.ssf
3194	-121.2673081	37.82716729	6340069.96	2124564.987	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	140,263	Geo 7X	Uncorrected	10/3/2017	12:05:28pm	C Gray	SHAD41 E.ssf
3195	-121.2673052	37.82715834	6340069.055	2124561.736	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	97,401	Geo 7X	Uncorrected	10/3/2017	12:05:30pm	C Gray	SHAD41 E.ssf
3196	-121.2673096	37.82714969	6340068.597	2124558.59	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90,577	Geo 7X	Uncorrected	10/3/2017	12:05:32pm	C Gray	SHAD41 E.ssf
3197	-121.2673097	37.82713675	6340068.536	2124553.879	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	117,822	Geo 7X	Uncorrected	10/3/2017	12:05:34pm	C Gray	SHAD41 E.ssf
3198	-121.2673099	37.82712758	6340068.459	2124550.538	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	110,423	Geo 7X	Uncorrected	10/3/2017	12:05:36pm	C Gray	SHAD41 E.ssf
3199	-121.2673103	37.82711629	6340068.301	2124546.43	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	104,100	Geo 7X	Uncorrected	10/3/2017	12:05:38pm	C Gray	SHAD41 E.ssf
3200	-121.2673106	37.82710589	6340068.287	2124542.643	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	101,767	Geo 7X	Uncorrected	10/3/2017	12:05:40pm	C Gray	SHAD41 E.ssf
3201	-121.2673106	37.8270962	6340068.149	2124539.115	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	131,490	Geo 7X	Uncorrected	10/3/2017	12:05:42pm	C Gray	SHAD41 E.ssf
3202	-121.2673097	37.82708399	6340068.394	2124534.666	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	155,140	Geo 7X	Uncorrected	10/3/2017	12:05:44pm	C Gray	SHAD41 E.ssf
3203	-121.2673096	37.82707137	6340068.383	2124530.071	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	184,353	Geo 7X	Uncorrected	10/3/2017	12:05:46pm	C Gray	SHAD41 E.ssf
3204	-121.2673094	37.82706184	6340068.411	2124526.602	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	133,590	Geo 7X	Uncorrected	10/3/2017	12:05:48pm	C Gray	SHAD41 E.ssf
3205	-121.2673081	37.82705511	6340068.755	2124524.147	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	98,358	Geo 7X	Uncorrected	10/3/2017	12:05:50pm	C Gray	SHAD41 E.ssf
3206	-121.2672981	37.82705102	6340071.646	2124522.634	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,973	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:05:52pm	C Gray	SHAD41 E.ssf
3207	-121.2672895	37.82704993	6340074.129	2124522.219	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	137,650	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:05:54pm	C Gray	SHAD41 E.ssf
3208	-121.2672765	37.82705025	6340077.879	2124522.302	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	127,731	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:05:56pm	C Gray	SHAD41 E.ssf
3209	-121.2672639	37.82705007	6340081.519	2124522.21	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	105,238	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:05:58pm	C Gray	SHAD41 E.ssf
3210	-121.2672501	37.82705006	6340085.497	2124522.37	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	110,555	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:00pm	C Gray	SHAD41 E.ssf
3211	-121.2672413	37.82704956	6340088.046	2124521.968	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	103,543	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:02pm	C Gray	SHAD41 E.ssf
3212	-121.2672246	37.82705041	6340092.85	2124522.237	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	97,301	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:04pm	C Gray	SHAD41 E.ssf
3213	-121.2672135	37.82705127	6340096.071	2124522.524	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	89,710	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:06pm	C Gray	SHAD41 E.ssf
3214	-121.2672025	37.82705095	6340099.246	2124522.382	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90,535	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:08pm	C Gray	SHAD41 E.ssf
3215	-121.267187	37.8270499	6340103.729	2124521.965	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	92,239	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:10pm	C Gray	SHAD41 E.ssf
3216	-121.2671765	37.82704927	6340106.742	2124521.71	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,720	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:12pm	C Gray	SHAD41 E.ssf
3217	-121.2671607	37.82705122	6340111.322	2124522.383	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90,483	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:14pm	C Gray	SHAD41 E.ssf
3218	-121.2671487	37.82705397	6340114.793	2124523.355	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	111,547	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:16pm	C Gray	SHAD41 E.ssf
3219	-121.2671395	37.82705819	6340117.456	2124524.871	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	113,562	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:18pm	C Gray	SHAD41 E.ssf
3220	-121.2671362	37.82706724	6340118.431	2124528.158	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	129,262	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:20pm	C Gray	SHAD41 E.ssf
3221	-121.2671358	37.82707819	6340118.593	2124532.143	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	120,149	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:22pm	C Gray	SHAD41 E.ssf
3222	-121.2671361	37.82708938	6340118.549	2124536.217	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	111,051	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:24pm	C Gray	SHAD41 E.ssf
3223	-121.2671346	37.82709831	6340118.985	2124539.467	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	103,259	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:26pm	C Gray	SHAD41 E.ssf
3224	-121.2671354	37.82711044	6340118.809	2124543.886	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	92,198	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:28pm	C Gray	SHAD41 E.ssf
3225	-121.2671347	37.82712233	6340119.054	2124548.213	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	86,748	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:30pm	C Gray	SHAD41 E.ssf
3226	-121.2671342	37.82713342	6340119.231	2124552.251	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,217	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:32pm	C Gray	SHAD41 E.ssf
3227	-121.2671335	37.8271415	6340119.436	2124555.188	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	99,157	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:34pm	C Gray	SHAD41 E.ssf
3228	-121.2671345	37.82715155	6340119.182	2124558.852	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	93,623	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:36pm	C Gray	SHAD41 E.ssf
3229	-121.267135	37.82716141	6340119.078	2124562.445	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	98,103	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:38pm	C Gray	SHAD41 E.ssf
3230	-121.2671339	37.82717186	6340119.423	2124566.247	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	159,902	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:40pm	C Gray	SHAD41 E.ssf
3231	-121.2671337	37.82718339	6340119.633	2124570.441	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	389,351	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:42pm	C Gray	SHAD41 E.ssf
3232	-121.2671339	37.82719071	6340119.483	2124573.108	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	311,183	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:44pm	C Gray	SHAD41 E.ssf
3233	-121.2671406	37.82719314	6340117.543	2124574.01	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	177,102	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:46pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
3234	-121.2671528	37.82719264	6340114.024	2124573.857	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	121.077	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:48pm	C Gray	SHAD41 E.ssf
3235	-121.2671648	37.82719272	6340110.548	2124573.914	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	103.051	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:50pm	C Gray	SHAD41 E.ssf
3236	-121.2671801	37.8271932	6340106.145	2124574.125	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	87.922	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:52pm	C Gray	SHAD41 E.ssf
3237	-121.2671925	37.82719376	6340102.568	2124574.359	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	70.360	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:54pm	C Gray	SHAD41 E.ssf
3238	-121.2672074	37.8271938	6340098.266	2124574.409	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	65.283	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:56pm	C Gray	SHAD41 E.ssf
3239	-121.2672198	37.82719395	6340094.666	2124574.494	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	64.263	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:06:58pm	C Gray	SHAD41 E.ssf
3240	-121.2672346	37.8271954	6340090.397	2124575.056	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	55.999	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:00pm	C Gray	SHAD41 E.ssf
3241	-121.2672656	37.82719058	6340081.441	2124573.374	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	64.467	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:04pm	C Gray	SHAD41 E.ssf
3242	-121.2672777	37.82719137	6340077.945	2124573.69	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	67.792	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:06pm	C Gray	SHAD41 E.ssf
3243	-121.2672931	37.82719058	6340073.51	2124573.438	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	55.368	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:08pm	C Gray	SHAD41 E.ssf
3244	-121.2673038	37.82719203	6340070.422	2124573.993	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	64.124	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:10pm	C Gray	SHAD41 E.ssf
3245	-121.2673081	37.82718908	6340069.176	2124572.929	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	75.390	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:12pm	C Gray	SHAD41 E.ssf
3246	-121.2673096	37.8271796	6340068.699	2124569.481	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	92.571	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:14pm	C Gray	SHAD41 E.ssf
3247	-121.2673101	37.8271686	6340068.515	2124565.475	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	133.423	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:16pm	C Gray	SHAD41 E.ssf
3248	-121.2673107	37.82715445	6340068.312	2124560.324	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	113.488	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:19pm	C Gray	SHAD41 E.ssf
3249	-121.2673124	37.8271453	6340067.786	2124556.996	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	92.308	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:20pm	C Gray	SHAD41 E.ssf
3250	-121.2673137	37.82713237	6340067.382	2124552.294	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	127.848	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:23pm	C Gray	SHAD41 E.ssf
3251	-121.267312	37.82712306	6340067.835	2124548.899	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	125.270	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:24pm	C Gray	SHAD41 E.ssf
3252	-121.2673132	37.82711076	6340067.459	2124544.423	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	117.590	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:26pm	C Gray	SHAD41 E.ssf
3253	-121.2673123	37.82709998	6340067.681	2124540.496	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	114.532	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:28pm	C Gray	SHAD41 E.ssf
3254	-121.267311	37.82708724	6340068.012	2124535.854	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	148.642	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:30pm	C Gray	SHAD41 E.ssf
3255	-121.2673117	37.82707632	6340067.798	2124531.881	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	221.535	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:32pm	C Gray	SHAD41 E.ssf
3256	-121.2673111	37.82706526	6340067.939	2124527.851	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	225.357	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:34pm	C Gray	SHAD41 E.ssf
3257	-121.2673098	37.82705688	6340068.268	2124524.797	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	163.832	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:36pm	C Gray	SHAD41 E.ssf
3258	-121.2673014	37.82705253	6340070.683	2124523.193	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	116.065	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:38pm	C Gray	SHAD41 E.ssf
3259	-121.26729	37.82705233	6340073.973	2124523.093	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	140.065	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:40pm	C Gray	SHAD41 E.ssf
3260	-121.2672584	37.82705399	6340083.107	2124523.622	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	127.033	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:44pm	C Gray	SHAD41 E.ssf
3261	-121.2672422	37.82705403	6340087.802	2124523.599	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	135.533	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:47pm	C Gray	SHAD41 E.ssf
3262	-121.267273	37.82705422	6340091.308	2124523.638	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	116.495	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:48pm	C Gray	SHAD41 E.ssf
3263	-121.2672166	37.82705411	6340095.191	2124523.569	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	102.739	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:50pm	C Gray	SHAD41 E.ssf
3264	-121.2672026	37.82705456	6340099.243	2124523.698	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	101.198	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:52pm	C Gray	SHAD41 E.ssf
3265	-121.2671864	37.82705485	6340103.899	2124523.766	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	93.997	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:54pm	C Gray	SHAD41 E.ssf
3266	-121.2671717	37.82705504	6340108.157	2124523.798	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	97.594	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:56pm	C Gray	SHAD41 E.ssf
3267	-121.2671547	37.82705588	6340113.057	2124524.065	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	127.500	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:07:58pm	C Gray	SHAD41 E.ssf
3268	-121.2671434	37.82705562	6340116.342	2124524.155	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	145.491	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:00pm	C Gray	SHAD41 E.ssf
3269	-121.2671383	37.82705617	6340117.819	2124524.13	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	140.019	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:02pm	C Gray	SHAD41 E.ssf
3270	-121.267137	37.82706429	6340118.203	2124527.085	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	143.779	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:04pm	C Gray	SHAD41 E.ssf
3271	-121.2671368	37.82707515	6340118.298	2124531.037	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	125.694	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:06pm	C Gray	SHAD41 E.ssf
3272	-121.2671362	37.82708836	6340118.541	2124535.846	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	120.391	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:08pm	C Gray	SHAD41 E.ssf
3273	-121.2671361	37.82709309	6340118.541	2124539.755	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	105.806	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:10pm	C Gray	SHAD41 E.ssf
3274	-121.2671359	37.82711019	6340118.645	2124543.795	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	98.266	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:12pm	C Gray	SHAD41 E.ssf
3275	-121.2671357	37.82712112	6340118.743	2124547.774	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	89.045	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:14pm	C Gray	SHAD41 E.ssf
3276	-121.2671373	37.82713103	6340118.647	2124551.383	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	85.847	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:16pm	C Gray	SHAD41 E.ssf
3277	-121.2671372	37.82714242	6340118.345	2124555.533	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	96.855	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:18pm	C Gray	SHAD41 E.ssf
3278	-121.2671379	37.82715396	6340118.218	2124559.737	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	85.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:20pm	C Gray	SHAD41 E.ssf
3279	-121.267138	37.8271752	6340118.246	2124567.473	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	229.305	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:24pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3280	-121.267138	37.82718516	6340118.279	2124571.098	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	470.756	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:26pm	C Gray	SHAD41 E.ssf
3281	-121.2671426	37.82718843	6340116.959	2124572.3	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	316.734	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:28pm	C Gray	SHAD41 E.ssf
3282	-121.2671549	37.82718936	6340113.402	2124572.666	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	184.033	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:30pm	C Gray	SHAD41 E.ssf
3283	-121.2671681	37.82718922	6340109.605	2124572.648	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	134.924	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:32pm	C Gray	SHAD41 E.ssf
3284	-121.267182	37.82718872	6340105.569	2124572.5	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	102.257	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:34pm	C Gray	SHAD41 E.ssf
3285	-121.2671966	37.82718917	6340101.377	2124572.698	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	72.143	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:36pm	C Gray	SHAD41 E.ssf
3286	-121.2672239	37.82718899	6340099.488	2124573.026	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	56.765	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:40pm	C Gray	SHAD41 E.ssf
3287	-121.2672385	37.82718943	6340085.267	2124572.829	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	56.694	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:42pm	C Gray	SHAD41 E.ssf
3288	-121.2672532	37.82718874	6340085.01	2124572.673	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	54.026	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:44pm	C Gray	SHAD41 E.ssf
3289	-121.2672669	37.82718853	6340081.067	2124572.63	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	65.421	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:46pm	C Gray	SHAD41 E.ssf
3290	-121.2673014	37.82718839	6340071.098	2124572.659	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	76.183	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:52pm	C Gray	SHAD41 E.ssf
3291	-121.2673045	37.82718365	6340070.192	2124570.94	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	82.090	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:54pm	C Gray	SHAD41 E.ssf
3292	-121.2673046	37.827177	6340070.139	2124568.52	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	102.894	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:56pm	C Gray	SHAD41 E.ssf
3293	-121.2673065	37.8271702	6340069.574	2124566.05	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	132.620	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:08:58pm	C Gray	SHAD41 E.ssf
3294	-121.2673077	37.8271587	6340069.174	2124561.865	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	123.992	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:00pm	C Gray	SHAD41 E.ssf
3295	-121.2673063	37.82714815	6340069.55	2124558.019	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	94.238	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:02pm	C Gray	SHAD41 E.ssf
3296	-121.2673072	37.82717031	6340069.274	2124555.205	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	106.017	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:04pm	C Gray	SHAD41 E.ssf
3297	-121.2673064	37.82712576	6340069.464	2124549.868	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	158.257	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:06pm	C Gray	SHAD41 E.ssf
3298	-121.2673066	37.82711187	6340069.378	2124544.811	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	137.760	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:08pm	C Gray	SHAD41 E.ssf
3299	-121.2673052	37.82710064	6340069.665	2124540.719	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	125.849	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:10pm	C Gray	SHAD41 E.ssf
3300	-121.2673064	37.82707854	6340069.403	2124535.185	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	147.144	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:12pm	C Gray	SHAD41 E.ssf
3301	-121.2673053	37.82707313	6340069.612	2124530.704	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	316.535	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:14pm	C Gray	SHAD41 E.ssf
3302	-121.2673042	37.82706192	6340069.909	2124526.617	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	255.454	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:16pm	C Gray	SHAD41 E.ssf
3303	-121.2673011	37.82705664	6340070.792	2124524.689	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	195.449	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:18pm	C Gray	SHAD41 E.ssf
3304	-121.2672907	37.82705615	6340073.804	2124524.484	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	133.098	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:20pm	C Gray	SHAD41 E.ssf
3305	-121.2672744	37.82705821	6340078.499	2124525.198	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	116.180	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:22pm	C Gray	SHAD41 E.ssf
3306	-121.2672618	37.82705796	6340082.142	2124525.076	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	123.484	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:24pm	C Gray	SHAD41 E.ssf
3307	-121.267245	37.8270578	6340086.987	2124524.978	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	156.643	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:26pm	C Gray	SHAD41 E.ssf
3308	-121.2672328	37.82705836	6340090.526	2124525.151	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	152.377	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:28pm	C Gray	SHAD41 E.ssf
3309	-121.2672177	37.82705904	6340094.885	2124525.364	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	122.885	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:30pm	C Gray	SHAD41 E.ssf
3310	-121.2672001	37.82705897	6340099.698	2124525.299	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	115.971	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:32pm	C Gray	SHAD41 E.ssf
3311	-121.2671858	37.82705898	6340104.097	2124525.269	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	108.715	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:34pm	C Gray	SHAD41 E.ssf
3312	-121.2671739	37.8270596	6340107.531	2124525.465	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	111.115	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:36pm	C Gray	SHAD41 E.ssf
3313	-121.2671552	37.82706011	6340112.927	2124525.608	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	148.245	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:38pm	C Gray	SHAD41 E.ssf
3314	-121.2671443	37.82706038	6340116.059	2124525.679	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	183.597	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:40pm	C Gray	SHAD41 E.ssf
3315	-121.2671416	37.82707131	6340116.895	2124529.651	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	166.597	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:43pm	C Gray	SHAD41 E.ssf
3316	-121.2671398	37.82707918	6340117.451	2124532.515	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	136.838	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:44pm	C Gray	SHAD41 E.ssf
3317	-121.2671405	37.82709119	6340117.272	2124536.887	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	130.591	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:46pm	C Gray	SHAD41 E.ssf
3318	-121.2671412	37.82710503	6340117.115	2124541.931	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	118.155	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:48pm	C Gray	SHAD41 E.ssf
3319	-121.2671419	37.82711575	6340116.946	2124545.832	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	104.523	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:50pm	C Gray	SHAD41 E.ssf
3320	-121.2671414	37.82712742	6340117.125	2124550.083	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	96.523	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:52pm	C Gray	SHAD41 E.ssf
3321	-121.267141	37.82714237	6340117.288	2124555.524	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	96.513	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:54pm	C Gray	SHAD41 E.ssf
3322	-121.2671408	37.82715448	6340117.373	2124559.934	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	86.354	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:56pm	C Gray	SHAD41 E.ssf
3323	-121.2671409	37.82716545	6340117.386	2124563.928	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	88.911	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:09:58pm	C Gray	SHAD41 E.ssf
3324	-121.2671412	37.82717625	6340117.318	2124567.861	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	362.128	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:00pm	C Gray	SHAD41 E.ssf
3325	-121.2671429	37.82718377	6340116.847	2124570.603	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	407.242	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:02pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3326	-121.2671519	37.82718278	6340114.244	2124570.264	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	337.735	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:04pm	C Gray	SHAD41 E.ssf
3327	-121.2671675	37.82718127	6340109.74	2124569.751	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	252.682	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:06pm	C Gray	SHAD41 E.ssf
3328	-121.2671778	37.82718157	6340106.768	2124569.885	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	165.688	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:08pm	C Gray	SHAD41 E.ssf
3329	-121.2671912	37.82718184	6340102.915	2124570.017	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	118.581	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:10pm	C Gray	SHAD41 E.ssf
3330	-121.2672053	37.82718135	6340098.83	2124569.868	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88.937	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:12pm	C Gray	SHAD41 E.ssf
3331	-121.2672194	37.82718102	6340094.752	2124569.784	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69.335	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:14pm	C Gray	SHAD41 E.ssf
3332	-121.2672341	37.82718131	6340090.522	2124569.922	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57.574	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:16pm	C Gray	SHAD41 E.ssf
3333	-121.2672468	37.82717936	6340086.829	2124569.244	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53.914	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:18pm	C Gray	SHAD41 E.ssf
3334	-121.2672635	37.82717968	6340081.998	2124569.037	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53.222	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:20pm	C Gray	SHAD41 E.ssf
3335	-121.2672785	37.82717927	6340077.681	2124569.287	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56.343	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:22pm	C Gray	SHAD41 E.ssf
3336	-121.2672933	37.82717914	6340073.396	2124569.275	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68.957	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:24pm	C Gray	SHAD41 E.ssf
3337	-121.2672987	37.82718057	6340071.844	2124569.809	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	101.995	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:26pm	C Gray	SHAD41 E.ssf
3338	-121.2672998	37.8271776	6340071.527	2124568.727	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	108.891	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:28pm	C Gray	SHAD41 E.ssf
3339	-121.2673004	37.82716981	6340071.324	2124565.894	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	124.075	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:30pm	C Gray	SHAD41 E.ssf
3340	-121.2673009	37.82715932	6340071.141	2124562.074	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	125.236	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:32pm	C Gray	SHAD41 E.ssf
3341	-121.2673012	37.82714793	6340071.025	2124557.927	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	99.307	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:34pm	C Gray	SHAD41 E.ssf
3342	-121.2673011	37.82713584	6340071.334	2124553.526	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	114.315	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:36pm	C Gray	SHAD41 E.ssf
3343	-121.267302	37.82712633	6340070.773	2124550.064	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	163.714	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:38pm	C Gray	SHAD41 E.ssf
3344	-121.2673023	37.82711135	6340070.608	2124544.612	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	147.612	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:40pm	C Gray	SHAD41 E.ssf
3345	-121.2673022	37.82709945	6340070.559	2124546.248	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	128.184	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:42pm	C Gray	SHAD41 E.ssf
3346	-121.2673023	37.82708838	6340070.854	2124536.244	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	147.709	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:44pm	C Gray	SHAD41 E.ssf
3347	-121.2672986	37.82707496	6340071.556	2124531.352	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	192.319	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:46pm	C Gray	SHAD41 E.ssf
3348	-121.2672993	37.82706402	6340071.332	2124527.37	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	207.369	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:48pm	C Gray	SHAD41 E.ssf
3349	-121.2673002	37.82705799	6340071.039	2124525.178	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	166.514	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:50pm	C Gray	SHAD41 E.ssf
3350	-121.2672922	37.82705739	6340073.359	2124524.94	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	122.124	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:52pm	C Gray	SHAD41 E.ssf
3351	-121.2672805	37.82705074	6340076.736	2124524.918	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	109.031	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:54pm	C Gray	SHAD41 E.ssf
3352	-121.2672652	37.82705847	6340081.165	2124525.269	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	113.962	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:56pm	C Gray	SHAD41 E.ssf
3353	-121.2672466	37.82705879	6340086.549	2124525.341	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	167.717	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:10:58pm	C Gray	SHAD41 E.ssf
3354	-121.2672285	37.82705822	6340091.753	2124525.092	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	170.239	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:00pm	C Gray	SHAD41 E.ssf
3355	-121.2672172	37.82706033	6340095.018	2124525.822	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	129.367	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:02pm	C Gray	SHAD41 E.ssf
3356	-121.2671984	37.82706143	6340100.469	2124526.19	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	120.958	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:04pm	C Gray	SHAD41 E.ssf
3357	-121.2671812	37.82706041	6340105.42	2124525.776	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	111.477	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:06pm	C Gray	SHAD41 E.ssf
3358	-121.2671671	37.82706043	6340109.486	2124525.751	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	124.159	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:08pm	C Gray	SHAD41 E.ssf
3359	-121.2671516	37.82705922	6340113.985	2124525.273	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	162.062	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:10pm	C Gray	SHAD41 E.ssf
3360	-121.2671437	37.82706061	6340116.261	2124525.76	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	213.212	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:12pm	C Gray	SHAD41 E.ssf
3361	-121.2671431	37.82706851	6340116.45	2124528.636	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	178.222	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:14pm	C Gray	SHAD41 E.ssf
3362	-121.2671437	37.82707979	6340116.309	2124532.744	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	148.285	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:16pm	C Gray	SHAD41 E.ssf
3363	-121.2671424	37.82708926	6340116.725	2124536.19	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	131.269	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:18pm	C Gray	SHAD41 E.ssf
3364	-121.2671429	37.82710133	6340116.61	2124540.587	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	127.874	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:20pm	C Gray	SHAD41 E.ssf
3365	-121.2671436	37.82711094	6340116.439	2124544.088	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	124.954	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:22pm	C Gray	SHAD41 E.ssf
3366	-121.2671445	37.82712572	6340116.214	2124549.471	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	110.978	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:24pm	C Gray	SHAD41 E.ssf
3367	-121.2671433	37.82715056	6340116.656	2124558.511	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	91.645	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:28pm	C Gray	SHAD41 E.ssf
3368	-121.2671429	37.82716158	6340116.78	2124562.525	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	94.837	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:30pm	C Gray	SHAD41 E.ssf
3369	-121.2671425	37.82717154	6340116.943	2124566.257	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	478.822	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:32pm	C Gray	SHAD41 E.ssf
3370	-121.2671427	37.82717505	6340116.903	2124567.427	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	410.391	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:34pm	C Gray	SHAD41 E.ssf
3371	-121.2671537	37.82717595	6340113.722	2124567.78	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	351.986	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:36pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3372	-121.267166	37.82717602	6340110.159	2124567.835	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	253,801	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:38pm	C Gray	SHAD41 E.ssf
3373	-121.267197	37.82717545	6340106.415	2124567.609	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	157,644	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:40pm	C Gray	SHAD41 E.ssf
3374	-121.267194	37.82717548	6340101.879	2124567.766	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	133,087	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:42pm	C Gray	SHAD41 E.ssf
3375	-121.267207	37.82717511	6340098.106	2124567.605	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	91,681	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:44pm	C Gray	SHAD41 E.ssf
3376	-121.267199	37.82717538	6340094.585	2124567.731	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73,782	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:46pm	C Gray	SHAD41 E.ssf
3377	-121.2672385	37.82717428	6340089.208	2124567.373	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,895	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:48pm	C Gray	SHAD41 E.ssf
3378	-121.2672535	37.82717465	6340084.886	2124567.545	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,595	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:50pm	C Gray	SHAD41 E.ssf
3379	-121.2672651	37.82717525	6340081.527	2124567.799	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,060	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:52pm	C Gray	SHAD41 E.ssf
3380	-121.2672805	37.82717399	6340077.087	2124567.369	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,802	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:54pm	C Gray	SHAD41 E.ssf
3381	-121.2672916	37.82717294	6340073.892	2124567.012	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,539	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:56pm	C Gray	SHAD41 E.ssf
3382	-121.2673	37.82717344	6340071.441	2124567.216	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	104,823	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:11:58pm	C Gray	SHAD41 E.ssf
3383	-121.2673014	37.82716388	6340071.031	2124563.738	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	124,847	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:00pm	C Gray	SHAD41 E.ssf
3384	-121.2673024	37.82715257	6340070.685	2124559.622	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	113,192	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:02pm	C Gray	SHAD41 E.ssf
3385	-121.2673019	37.82714352	6340070.819	2124556.323	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	97,552	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:04pm	C Gray	SHAD41 E.ssf
3386	-121.2673026	37.82712783	6340070.567	2124550.611	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	152,941	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:06pm	C Gray	SHAD41 E.ssf
3387	-121.267302	37.82711624	6340070.715	2124546.397	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	154,744	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:08pm	C Gray	SHAD41 E.ssf
3388	-121.2673022	37.82710357	6340070.624	2124541.411	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	141,933	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:10pm	C Gray	SHAD41 E.ssf
3389	-121.2673018	37.82708718	6340070.679	2124535.809	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	143,970	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:12pm	C Gray	SHAD41 E.ssf
3390	-121.2673005	37.82707387	6340071.016	2124530.961	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	157,221	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:14pm	C Gray	SHAD41 E.ssf
3391	-121.2673006	37.82706630	6340070.965	2124527.022	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	178,565	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:16pm	C Gray	SHAD41 E.ssf
3392	-121.2672983	37.82705861	6340071.61	2124525.4	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	154,844	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:18pm	C Gray	SHAD41 E.ssf
3393	-121.2672739	37.82705853	6340078.645	2124525.311	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	112,529	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:22pm	C Gray	SHAD41 E.ssf
3394	-121.2672582	37.8270571	6340083.181	2124524.754	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	139,407	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:24pm	C Gray	SHAD41 E.ssf
3395	-121.2672404	37.82705812	6340088.332	2124525.083	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	193,773	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:26pm	C Gray	SHAD41 E.ssf
3396	-121.2672257	37.82705982	6340092.684	2124525.666	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	160,732	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:28pm	C Gray	SHAD41 E.ssf
3397	-121.2672093	37.82705955	6340097.192	2124525.533	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	130,330	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:30pm	C Gray	SHAD41 E.ssf
3398	-121.2671922	37.82705953	6340102.237	2124525.483	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	117,513	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:32pm	C Gray	SHAD41 E.ssf
3399	-121.2671762	37.82706181	6340106.872	2124526.276	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	117,142	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:34pm	C Gray	SHAD41 E.ssf
3400	-121.2671652	37.82706046	6340110.047	2124525.759	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	160,596	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:36pm	C Gray	SHAD41 E.ssf
3401	-121.2671514	37.82706059	6340114.023	2124525.774	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	247,571	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:38pm	C Gray	SHAD41 E.ssf
3402	-121.2671517	37.82706913	6340113.964	2124528.881	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	232,178	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:40pm	C Gray	SHAD41 E.ssf
3403	-121.2671499	37.82707872	6340114.528	2124532.372	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	182,904	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:42pm	C Gray	SHAD41 E.ssf
3404	-121.2671499	37.82709186	6340114.548	2124537.153	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	145,055	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:44pm	C Gray	SHAD41 E.ssf
3405	-121.2671533	37.8271104	6340113.616	2124541.584	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	152,641	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:46pm	C Gray	SHAD41 E.ssf
3406	-121.2671519	37.82711326	6340114.036	2124544.951	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	156,731	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:48pm	C Gray	SHAD41 E.ssf
3407	-121.2671512	37.82712722	6340114.075	2124550.033	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	134,264	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:50pm	C Gray	SHAD41 E.ssf
3408	-121.2671532	37.82713994	6340113.764	2124554.668	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	104,782	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:52pm	C Gray	SHAD41 E.ssf
3409	-121.2671521	37.82715216	6340114.106	2124559.112	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	95,807	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:54pm	C Gray	SHAD41 E.ssf
3410	-121.2671517	37.82716569	6340114.261	2124564.042	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	160,353	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:56pm	C Gray	SHAD41 E.ssf
3411	-121.2671428	37.82717128	6340113.508	2124566.084	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	290,833	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:12:58pm	C Gray	SHAD41 E.ssf
3412	-121.2671658	37.82716959	6340110.215	2124565.496	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	234,368	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:00pm	C Gray	SHAD41 E.ssf
3413	-121.2671803	37.82717018	6340106.017	2124565.744	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	154,401	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:02pm	C Gray	SHAD41 E.ssf
3414	-121.2672132	37.82716998	6340096.52	2124565.748	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	91,133	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:06pm	C Gray	SHAD41 E.ssf
3415	-121.2672265	37.82717693	6340092.664	2124565.436	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,221	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:10pm	C Gray	SHAD41 E.ssf
3416	-121.2672427	37.82716917	6340087.979	2124565.522	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,547	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:13pm	C Gray	SHAD41 E.ssf
3417	-121.2672564	37.82716942	6340084.031	2124565.647	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,591	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:14pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3418	-121.2672733	37.82716866	6340079.161	2124565.412	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,712	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:14pm	C Gray	SHAD41 E.ssf
3419	-121.2672858	37.8271685	6340075.538	2124565.38	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,327	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:16pm	C Gray	SHAD41 E.ssf
3420	-121.2672955	37.82716794	6340072.727	2124565.202	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	93,881	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:18pm	C Gray	SHAD41 E.ssf
3421	-121.2672977	37.82716292	6340072.085	2124563.38	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	110,038	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:20pm	C Gray	SHAD41 E.ssf
3422	-121.2672982	37.82715272	6340071.924	2124559.664	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	110,335	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:22pm	C Gray	SHAD41 E.ssf
3423	-121.2672988	37.82714259	6340071.704	2124555.978	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	101,913	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:24pm	C Gray	SHAD41 E.ssf
3424	-121.2672992	37.82713065	6340071.416	2124551.633	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	127,304	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:26pm	C Gray	SHAD41 E.ssf
3425	-121.2672997	37.82711761	6340071.505	2124546.884	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	167,507	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:28pm	C Gray	SHAD41 E.ssf
3426	-121.2672978	37.82710413	6340071.88	2124541.973	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	167,483	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:30pm	C Gray	SHAD41 E.ssf
3427	-121.2672967	37.82709302	6340072.167	2124537.922	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	142,652	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:32pm	C Gray	SHAD41 E.ssf
3428	-121.267297	37.82708045	6340072.035	2124533.347	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	146,975	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:34pm	C Gray	SHAD41 E.ssf
3429	-121.2672975	37.82706872	6340071.851	2124529.079	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	157,613	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:36pm	C Gray	SHAD41 E.ssf
3430	-121.2672979	37.82706079	6340071.984	2124526.189	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	145,138	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:38pm	C Gray	SHAD41 E.ssf
3431	-121.2672904	37.82706031	6340073.898	2124526	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	122,706	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:40pm	C Gray	SHAD41 E.ssf
3432	-121.2672782	37.82706181	6340077.42	2124526.515	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	127,660	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:42pm	C Gray	SHAD41 E.ssf
3433	-121.2672611	37.82706181	6340082.359	2124526.475	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	152,955	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:44pm	C Gray	SHAD41 E.ssf
3434	-121.2672448	37.8270621	6340087.652	2124526.542	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	283,213	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:46pm	C Gray	SHAD41 E.ssf
3435	-121.2672279	37.82706267	6340091.945	2124526.71	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	237,384	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:48pm	C Gray	SHAD41 E.ssf
3436	-121.2672152	37.82706172	6340095.606	2124526.333	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	173,137	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:50pm	C Gray	SHAD41 E.ssf
3437	-121.2672016	37.82706466	6340093.552	2124527.372	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	147,787	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:52pm	C Gray	SHAD41 E.ssf
3438	-121.2671874	37.82706505	6340099.652	2124527.48	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	147,282	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:54pm	C Gray	SHAD41 E.ssf
3439	-121.2671765	37.82706462	6340106.791	2124527.3	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	173,403	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:56pm	C Gray	SHAD41 E.ssf
3440	-121.2671611	37.82706476	6340111.283	2124527.313	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	239,798	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:13:58pm	C Gray	SHAD41 E.ssf
3441	-121.2671547	37.82706396	6340113.102	2124527.008	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	245,185	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:00pm	C Gray	SHAD41 E.ssf
3442	-121.2671505	37.82706558	6340114.319	2124527.585	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	220,358	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:02pm	C Gray	SHAD41 E.ssf
3443	-121.2671519	37.82707402	6340113.934	2124530.663	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	167,759	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:04pm	C Gray	SHAD41 E.ssf
3444	-121.2671507	37.82708569	6340114.321	2124534.91	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	149,008	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:06pm	C Gray	SHAD41 E.ssf
3445	-121.2671518	37.82709858	6340114.03	2124539.605	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	137,600	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:08pm	C Gray	SHAD41 E.ssf
3446	-121.2671523	37.82711157	6340113.934	2124544.337	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	164,031	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:10pm	C Gray	SHAD41 E.ssf
3447	-121.2671518	37.82712424	6340114.109	2124548.95	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	150,138	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:12pm	C Gray	SHAD41 E.ssf
3448	-121.2671568	37.82713801	6340112.694	2124553.975	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	120,669	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:14pm	C Gray	SHAD41 E.ssf
3449	-121.2671572	37.82714971	6340112.632	2124558.234	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	113,379	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:16pm	C Gray	SHAD41 E.ssf
3450	-121.2671549	37.82716313	6340113.332	2124563.117	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	114,649	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:18pm	C Gray	SHAD41 E.ssf
3451	-121.2671542	37.82716876	6340113.552	2124565.164	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	195,788	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:20pm	C Gray	SHAD41 E.ssf
3452	-121.2671638	37.8271675	6340110.775	2124564.73	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	197,336	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:22pm	C Gray	SHAD41 E.ssf
3453	-121.2671798	37.82716727	6340106.148	2124564.681	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	137,743	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:24pm	C Gray	SHAD41 E.ssf
3454	-121.2671968	37.82716824	6340101.233	2124565.077	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	115,161	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:26pm	C Gray	SHAD41 E.ssf
3455	-121.2672114	37.82716823	6340097.014	2124565.106	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	92,099	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:28pm	C Gray	SHAD41 E.ssf
3456	-121.2672284	37.82716803	6340092.123	2124565.074	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,675	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:30pm	C Gray	SHAD41 E.ssf
3457	-121.2672438	37.827167	6340087.671	2124564.737	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,047	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:32pm	C Gray	SHAD41 E.ssf
3458	-121.2672591	37.82716678	6340083.251	2124564.694	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,200	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:34pm	C Gray	SHAD41 E.ssf
3459	-121.2672743	37.82716587	6340078.853	2124564.396	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,632	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:36pm	C Gray	SHAD41 E.ssf
3460	-121.2672838	37.82716541	6340076.1	2124564.252	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	84,346	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:37pm	C Gray	SHAD41 E.ssf
3461	-121.2672954	37.82716498	6340072.617	2124564.124	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	106,314	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:40pm	C Gray	SHAD41 E.ssf
3462	-121.2672924	37.82716462	6340073.62	2124563.986	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	115,340	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:42pm	C Gray	SHAD41 E.ssf
3463	-121.2672813	37.82716448	6340076.83	2124563.908	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	113,761	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:44pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3464	-121.2672638	37.82716492	6340081.893	2124564.025	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	100.755	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:46pm	C Gray	SHAD41 E.ssf
3465	-121.2672499	37.82716561	6340085.913	2124564.244	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	86.511	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:48pm	C Gray	SHAD41 E.ssf
3466	-121.2672371	37.82716742	6340089.519	2124564.874	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	74.749	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:50pm	C Gray	SHAD41 E.ssf
3467	-121.2672195	37.82716647	6340094.685	2124564.487	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	66.660	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:52pm	C Gray	SHAD41 E.ssf
3468	-121.2672036	37.82716674	6340099.267	2124564.546	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	64.758	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:54pm	C Gray	SHAD41 E.ssf
3469	-121.2671903	37.82716635	6340103.129	2124564.371	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	74.554	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:56pm	C Gray	SHAD41 E.ssf
3470	-121.2671716	37.82716659	6340108.393	2124564.418	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	84.699	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:14:58pm	C Gray	SHAD41 E.ssf
3471	-121.2671578	37.82716668	6340112.497	2124564.417	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	94.252	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:00pm	C Gray	SHAD41 E.ssf
3472	-121.267148	37.82716784	6340115.322	2124564.816	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	199.162	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:02pm	C Gray	SHAD41 E.ssf
3473	-121.267151	37.82716034	6340114.443	2124562.09	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	301.938	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:04pm	C Gray	SHAD41 E.ssf
3474	-121.267162	37.82715947	6340111.275	2124561.802	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	192.189	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:06pm	C Gray	SHAD41 E.ssf
3475	-121.2671703	37.82715944	6340108.879	2124561.808	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	126.163	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:08pm	C Gray	SHAD41 E.ssf
3476	-121.2671725	37.82715497	6340108.231	2124560.189	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	106.150	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:10pm	C Gray	SHAD41 E.ssf
3477	-121.2671679	37.82714652	6340109.527	2124557.1	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	105.556	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:12pm	C Gray	SHAD41 E.ssf
3478	-121.267166	37.82713903	6340111.774	2124554.352	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	117.560	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:14pm	C Gray	SHAD41 E.ssf
3479	-121.2671552	37.82713472	6340113.148	2124552.771	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	113.060	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:16pm	C Gray	SHAD41 E.ssf
3480	-121.267156	37.82716068	6340112.933	2124554.27	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	101.324	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:18pm	C Gray	SHAD41 E.ssf
3481	-121.2671636	37.8271465	6340110.78	2124557.08	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	120.559	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:20pm	C Gray	SHAD41 E.ssf
3482	-121.267174	37.82715558	6340107.798	2124560.411	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	136.453	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:22pm	C Gray	SHAD41 E.ssf
3483	-121.267171	37.82716515	6340106.658	2124563.906	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	106.243	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:24pm	C Gray	SHAD41 E.ssf
3484	-121.2671711	37.82716857	6340108.659	2124565.135	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	99.117	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:26pm	C Gray	SHAD41 E.ssf
3485	-121.2671661	37.82716068	6340110.075	2124562.251	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	95.944	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:28pm	C Gray	SHAD41 E.ssf
3486	-121.2671593	37.82715265	6340112.034	2124559.312	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	100.599	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:30pm	C Gray	SHAD41 E.ssf
3487	-121.2671528	37.82714448	6340113.873	2124556.439	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	122.403	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:32pm	C Gray	SHAD41 E.ssf
3488	-121.2671464	37.82714016	6340115.717	2124554.732	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	105.268	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:34pm	C Gray	SHAD41 E.ssf
3489	-121.2671448	37.82714472	6340115.264	2124556.395	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	86.647	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:36pm	C Gray	SHAD41 E.ssf
3490	-121.2671561	37.82715182	6340112.943	2124559	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	86.877	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:38pm	C Gray	SHAD41 E.ssf
3491	-121.2671623	37.82715819	6340111.179	2124561.337	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	99.962	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:40pm	C Gray	SHAD41 E.ssf
3492	-121.2671692	37.82716751	6340109.202	2124564.744	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	100.646	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:42pm	C Gray	SHAD41 E.ssf
3493	-121.2671668	37.82717478	6340109.931	2124567.388	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	116.691	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:44pm	C Gray	SHAD41 E.ssf
3494	-121.2671592	37.82716943	6340112.095	2124565.421	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	123.204	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:46pm	C Gray	SHAD41 E.ssf
3495	-121.2671515	37.82716143	6340114.298	2124562.489	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	111.789	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:48pm	C Gray	SHAD41 E.ssf
3496	-121.2671448	37.82716136	6340115.304	2124562.457	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	122.759	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:50pm	C Gray	SHAD41 E.ssf
3497	-121.2671479	37.82716714	6340115.376	2124564.561	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	537.851	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:52pm	C Gray	SHAD41 E.ssf
3498	-121.26715	37.8271669	6340114.76	2124565.241	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	406.772	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:54pm	C Gray	SHAD41 E.ssf
3499	-121.2671605	37.82716344	6340111.701	2124563.241	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	268.348	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:56pm	C Gray	SHAD41 E.ssf
3500	-121.2671759	37.82716081	6340107.266	2124562.32	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	157.610	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:15:58pm	C Gray	SHAD41 E.ssf
3501	-121.2671919	37.82716107	6340108.623	2124562.455	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	113.810	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:00pm	C Gray	SHAD41 E.ssf
3502	-121.2672049	37.8271624	6340098.895	2124562.968	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	92.799	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:02pm	C Gray	SHAD41 E.ssf
3503	-121.2672169	37.82716118	6340095.425	2124562.553	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	76.791	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:04pm	C Gray	SHAD41 E.ssf
3504	-121.2672324	37.8271599	6340090.944	2124562.123	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	65.967	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:06pm	C Gray	SHAD41 E.ssf
3505	-121.267272	37.82712983	6340079.408	2124551.269	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	130.027	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:14pm	C Gray	SHAD41 E.ssf
3506	-121.267283	37.82712423	6340076.231	2124549.256	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	325.200	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:16pm	C Gray	SHAD41 E.ssf
3507	-121.2672953	37.82711791	6340072.64	2124546.195	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	369.253	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:18pm	C Gray	SHAD41 E.ssf
3508	-121.2673054	37.82711842	6340069.728	2124547.182	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	236.860	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:20pm	C Gray	SHAD41 E.ssf
3509	-121.267308	37.82712873	6340069.02	2124550.955	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	181.214	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:22pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3510	-121.2673075	37.8271403	6340069.181	2124555.164	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	187,718	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:24pm	C Gray	SHAD41 E.ssf
3511	-121.2673089	37.82716245	6340069.994	2124563.225	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	102,062	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:28pm	C Gray	SHAD41 E.ssf
3512	-121.2672889	37.82716389	6340074.64	2124563.71	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	116,234	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:30pm	C Gray	SHAD41 E.ssf
3513	-121.2672747	37.82716396	6340078.747	2124563.701	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	110,883	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:32pm	C Gray	SHAD41 E.ssf
3514	-121.2672443	37.82716359	6340087.5	2124563.495	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,748	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:36pm	C Gray	SHAD41 E.ssf
3515	-121.2672486	37.82715604	6340086.261	2124560.756	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,032	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:38pm	C Gray	SHAD41 E.ssf
3516	-121.2672961	37.82711192	6340072.414	2124547.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	265,784	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:48pm	C Gray	SHAD41 E.ssf
3517	-121.2673009	37.82712474	6340071.044	2124549.483	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	204,540	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:50pm	C Gray	SHAD41 E.ssf
3518	-121.2672987	37.82713353	6340071.708	2124553.323	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	216,090	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:52pm	C Gray	SHAD41 E.ssf
3519	-121.2672986	37.8271451	6340071.774	2124556.89	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	157,819	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:54pm	C Gray	SHAD41 E.ssf
3520	-121.2672999	37.82715499	6340071.685	2124560.495	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	111,418	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:56pm	C Gray	SHAD41 E.ssf
3521	-121.2672906	37.82715827	6340074.126	2124561.667	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	101,280	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:16:58pm	C Gray	SHAD41 E.ssf
3522	-121.2672792	37.82715749	6340077.423	2124561.357	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	96,646	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:00pm	C Gray	SHAD41 E.ssf
3523	-121.2672516	37.82715905	6340085.378	2124561.861	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,794	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:04pm	C Gray	SHAD41 E.ssf
3524	-121.2672542	37.82715552	6340084.63	2124560.463	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	84,087	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:06pm	C Gray	SHAD41 E.ssf
3525	-121.2672725	37.82714249	6340079.308	2124555.88	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	86,734	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:10pm	C Gray	SHAD41 E.ssf
3526	-121.2672799	37.82713696	6340077.137	2124553.886	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	106,977	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:12pm	C Gray	SHAD41 E.ssf
3527	-121.2672869	37.82713075	6340075.098	2124551.641	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	159,316	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:14pm	C Gray	SHAD41 E.ssf
3528	-121.2672974	37.82713001	6340072.059	2124551.394	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	203,842	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:16pm	C Gray	SHAD41 E.ssf
3529	-121.2672943	37.82713355	6340075.971	2124553.385	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	192,415	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:18pm	C Gray	SHAD41 E.ssf
3530	-121.2672782	37.82714238	6340075.031	2124555.874	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	166,668	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:20pm	C Gray	SHAD41 E.ssf
3531	-121.2672787	37.82715012	6340077.532	2124558.673	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	122,650	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:22pm	C Gray	SHAD41 E.ssf
3532	-121.2672721	37.82715386	6340079.784	2124560.016	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	95,101	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:24pm	C Gray	SHAD41 E.ssf
3533	-121.2672583	37.82716387	6340083.478	2124563.632	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88,840	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:26pm	C Gray	SHAD41 E.ssf
3534	-121.2672615	37.82716633	6340082.542	2124564.589	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,593	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:32pm	C Gray	SHAD41 E.ssf
3535	-121.2672724	37.82715954	6340079.375	2124562.033	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,516	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:34pm	C Gray	SHAD41 E.ssf
3537	-121.2672919	37.82714335	6340073.713	2124556.239	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,788	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:38pm	C Gray	SHAD41 E.ssf
3538	-121.2673016	37.82714598	6340070.911	2124557.221	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	98,548	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:40pm	C Gray	SHAD41 E.ssf
3539	-121.2672977	37.82715228	6340072.053	2124559.506	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	95,327	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:42pm	C Gray	SHAD41 E.ssf
3540	-121.2672866	37.82715798	6340075.287	2124561.552	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	93,745	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:44pm	C Gray	SHAD41 E.ssf
3541	-121.2672775	37.82716521	6340077.934	2124564.166	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	94,234	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:46pm	C Gray	SHAD41 E.ssf
3542	-121.2672694	37.8271698	6340080.279	2124565.817	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,981	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:48pm	C Gray	SHAD41 E.ssf
3543	-121.2672629	37.82717609	6340082.176	2124568.092	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,538	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:50pm	C Gray	SHAD41 E.ssf
3544	-121.2672668	37.82717562	6340081.049	2124569.45	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,038	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:52pm	C Gray	SHAD41 E.ssf
3545	-121.2672829	37.827176789	6340076.339	2124565.151	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,849	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:56pm	C Gray	SHAD41 E.ssf
3547	-121.2672919	37.82716066	6340073.766	2124562.543	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	96,279	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:17:58pm	C Gray	SHAD41 E.ssf
3548	-121.2673013	37.82715549	6340071.016	2124560.682	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	107,592	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:00pm	C Gray	SHAD41 E.ssf
3549	-121.2673075	37.82716161	6340069.256	2124562.924	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	102,466	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:02pm	C Gray	SHAD41 E.ssf
3550	-121.2673003	37.82716187	6340071.365	2124565.185	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	131,914	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:04pm	C Gray	SHAD41 E.ssf
3551	-121.2672905	37.82717245	6340074.197	2124566.83	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	125,479	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:06pm	C Gray	SHAD41 E.ssf
3552	-121.2672805	37.827171714	6340077.099	2124568.516	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	102,038	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:08pm	C Gray	SHAD41 E.ssf
3553	-121.2672678	37.82718179	6340080.773	2124570.177	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,933	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:10pm	C Gray	SHAD41 E.ssf
3554	-121.2672642	37.82718016	6340081.808	2124569.577	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,826	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:12pm	C Gray	SHAD41 E.ssf
3555	-121.2672607	37.82717437	6340082.807	2124567.46	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,407	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:14pm	C Gray	SHAD41 E.ssf
3556	-121.2672527	37.82716609	6340085.104	2124564.425	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,218	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:16pm	C Gray	SHAD41 E.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3557	-121.2672529	37.82715776	6340084.999	2124561.392	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,629	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:18pm	C Gray	SHAD41 E.ssf
3558	-121.2672659	37.82715837	6340081.253	2124561.645	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,576	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:20pm	C Gray	SHAD41 E.ssf
3559	-121.2672773	37.82716119	6340077.991	2124563.791	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,763	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:22pm	C Gray	SHAD41 E.ssf
3560	-121.2672814	37.82716188	6340076.798	2124562.962	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,191	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:24pm	C Gray	SHAD41 E.ssf
3561	-121.2672727	37.82715658	6340078.056	2124561.021	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	97,255	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:26pm	C Gray	SHAD41 E.ssf
3562	-121.2672654	37.82715099	6340081.378	2124558.958	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	91,976	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:28pm	C Gray	SHAD41 E.ssf
3563	-121.2672659	37.82714428	6340083.809	2124556.494	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88,593	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:30pm	C Gray	SHAD41 E.ssf
3564	-121.2672655	37.827110621	6340081.299	2124553.897	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	108,633	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:32pm	C Gray	SHAD41 E.ssf
3565	-121.2672756	37.8271405	6340078.417	2124555.163	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	111,573	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:34pm	C Gray	SHAD41 E.ssf
3566	-121.2672851	37.82714688	6340075.657	2124557.508	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	99,417	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:36pm	C Gray	SHAD41 E.ssf
3567	-121.2672891	37.82714964	6340073.101	2124558.523	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,671	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:38pm	C Gray	SHAD41 E.ssf
3568	-121.2672909	37.82714215	6340073.991	2124555.8	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	95,280	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:40pm	C Gray	SHAD41 E.ssf
3569	-121.2672919	37.82713095	6340073.657	2124551.722	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	115,875	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:42pm	C Gray	SHAD41 E.ssf
3570	-121.2672938	37.8271209	6340073.101	2124548.069	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	205,462	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:44pm	C Gray	SHAD41 E.ssf
3571	-121.2672927	37.82710621	6340073.368	2124542.719	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	232,638	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:46pm	C Gray	SHAD41 E.ssf
3572	-121.2672911	37.82709288	6340073.78	2124537.859	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	175,688	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:48pm	C Gray	SHAD41 E.ssf
3573	-121.2672912	37.82708093	6340073.953	2124533.51	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	177,454	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:50pm	C Gray	SHAD41 E.ssf
3574	-121.2672908	37.82705512	6340073.769	2124524.109	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	142,457	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:54pm	C Gray	SHAD41 E.ssf
3575	-121.2672896	37.82705186	6340074.107	2124522.922	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	115,638	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:56pm	C Gray	SHAD41 E.ssf
3576	-121.2672888	37.82705897	6340074.339	2124525.508	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	110,043	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:18:58pm	C Gray	SHAD41 E.ssf
3577	-121.2672903	37.82706953	6340073.953	2124529.357	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	153,916	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:00pm	C Gray	SHAD41 E.ssf
3578	-121.267291	37.82707927	6340073.787	2124532.904	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	223,480	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:02pm	C Gray	SHAD41 E.ssf
3579	-121.2672907	37.82709188	6340073.885	2124537.496	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	265,537	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:04pm	C Gray	SHAD41 E.ssf
3580	-121.2672901	37.82711289	6340074.141	2124545.143	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	226,762	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:08pm	C Gray	SHAD41 E.ssf
3581	-121.2672855	37.82712995	6340075.512	2124551.343	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	344,081	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:12pm	C Gray	SHAD41 E.ssf
3582	-121.2672836	37.82712536	6340076.081	2124549.668	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	350,625	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:14pm	C Gray	SHAD41 E.ssf
3583	-121.2672832	37.82711244	6340076.126	2124544.963	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	404,987	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:16pm	C Gray	SHAD41 E.ssf
3584	-121.2672832	37.82710294	6340076.091	2124541.506	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	304,275	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:18pm	C Gray	SHAD41 E.ssf
3585	-121.2672844	37.82709183	6340075.725	2124537.462	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	222,831	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:20pm	C Gray	SHAD41 E.ssf
3586	-121.2672843	37.82708107	6340075.716	2124533.544	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	269,255	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:22pm	C Gray	SHAD41 E.ssf
3587	-121.2672824	37.82707047	6340076.218	2124529.679	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	238,611	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:24pm	C Gray	SHAD41 E.ssf
3588	-121.2672842	37.82705926	6340075.674	2124525.604	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	243,267	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:26pm	C Gray	SHAD41 E.ssf
3589	-121.2672842	37.82705211	6340075.646	2124522.999	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	163,581	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:28pm	C Gray	SHAD41 E.ssf
3590	-121.2672822	37.82705432	6340076.253	2124523.797	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	116,341	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:30pm	C Gray	SHAD41 E.ssf
3591	-121.2672846	37.82706534	6340075.576	2124527.818	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	131,822	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:32pm	C Gray	SHAD41 E.ssf
3592	-121.2672837	37.82707382	6340075.86	2124530.904	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	218,381	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:34pm	C Gray	SHAD41 E.ssf
3593	-121.2672835	37.82708561	6340075.966	2124535.194	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	308,867	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:36pm	C Gray	SHAD41 E.ssf
3594	-121.2672851	37.82709587	6340075.519	2124538.935	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	448,912	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:38pm	C Gray	SHAD41 E.ssf
3595	-121.2672826	37.82710437	6340074.822	2124542.034	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	302,822	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:40pm	C Gray	SHAD41 E.ssf
3596	-121.2672876	37.82710826	6340076.288	2124543.441	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	279,560	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:42pm	C Gray	SHAD41 E.ssf
3597	-121.2672782	37.82710005	6340077.521	2124540.439	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	275,417	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:44pm	C Gray	SHAD41 E.ssf
3598	-121.2672774	37.82709042	6340077.72	2124536.931	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	256,183	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:46pm	C Gray	SHAD41 E.ssf
3599	-121.2672783	37.82708135	6340077.444	2124533.633	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	574,594	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:48pm	C Gray	SHAD41 E.ssf
3600	-121.2672803	37.82706591	6340076.834	2124529.472	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	426,175	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:50pm	C Gray	SHAD41 E.ssf
3601	-121.2672835	37.82705793	6340075.863	2124524.805	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	292,321	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:52pm	C Gray	SHAD41 E.ssf
3602	-121.2672825	37.82705546	6340076.168	2124524.215	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	170,632	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:54pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3603	-121.2672823	37.82706197	6340076.246	2124526.584	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	141.764	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:56pm	C Gray	SHAD41 E.ssf
3604	-121.2672814	37.82707093	6340076.521	2124529.846	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	169.451	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:19:58pm	C Gray	SHAD41 E.ssf
3605	-121.2672828	37.82708038	6340076.141	2124533.29	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	328.507	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:00pm	C Gray	SHAD41 E.ssf
3606	-121.2672813	37.82708814	6340076.61	2124536.11	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	426.656	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:02pm	C Gray	SHAD41 E.ssf
3607	-121.2672833	37.82709663	6340076.054	2124539.208	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	410.427	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:04pm	C Gray	SHAD41 E.ssf
3608	-121.2672852	37.82710684	6340075.312	2124542.928	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	313.534	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:06pm	C Gray	SHAD41 E.ssf
3609	-121.2672862	37.82711446	6340075.313	2124545.707	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	305.429	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:08pm	C Gray	SHAD41 E.ssf
3610	-121.2672822	37.82711133	6340076.422	2124544.557	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	304.181	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:10pm	C Gray	SHAD41 E.ssf
3611	-121.2672797	37.82710198	6340077.115	2124541.145	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	290.089	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:12pm	C Gray	SHAD41 E.ssf
3612	-121.2672772	37.82709101	6340077.806	2124537.146	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	258.302	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:14pm	C Gray	SHAD41 E.ssf
3613	-121.2672759	37.82708242	6340078.155	2124534.016	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	520.362	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:16pm	C Gray	SHAD41 E.ssf
3614	-121.2672822	37.82707739	6340080.132	2124532.169	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	474.692	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:18pm	C Gray	SHAD41 E.ssf
3615	-121.2672552	37.82707451	6340084.092	2124531.085	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	428.872	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:20pm	C Gray	SHAD41 E.ssf
3616	-121.267245	37.82707053	6340087.039	2124529.612	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	353.984	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:22pm	C Gray	SHAD41 E.ssf
3617	-121.2672304	37.82706633	6340091.232	2124528.048	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	288.553	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:24pm	C Gray	SHAD41 E.ssf
3618	-121.2672866	37.82706059	6340094.618	2124525.933	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	205.382	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:26pm	C Gray	SHAD41 E.ssf
3619	-121.2672186	37.82705541	6340095.191	2124523.311	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	154.021	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:28pm	C Gray	SHAD41 E.ssf
3620	-121.2672274	37.82704907	6340092.049	2124521.757	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	125.624	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:30pm	C Gray	SHAD41 E.ssf
3621	-121.2672449	37.82705157	6340086.996	2124522.71	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	129.306	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:32pm	C Gray	SHAD41 E.ssf
3622	-121.2672582	37.82705046	6340083.164	2124523.843	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	179.572	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:34pm	C Gray	SHAD41 E.ssf
3623	-121.2672688	37.82706914	6340083.306	2124523.853	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	269.093	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:36pm	C Gray	SHAD41 E.ssf
3624	-121.2672834	37.82705554	6340075.901	2124524.196	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	185.534	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:38pm	C Gray	SHAD41 E.ssf
3625	-121.2672902	37.82706203	6340073.963	2124526.626	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	161.635	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:40pm	C Gray	SHAD41 E.ssf
3626	-121.2672887	37.82707153	6340074.418	2124530.081	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	198.420	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:42pm	C Gray	SHAD41 E.ssf
3627	-121.2672807	37.82707482	6340076.747	2124531.258	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	284.888	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:44pm	C Gray	SHAD41 E.ssf
3628	-121.2672675	37.82707344	6340080.552	2124530.727	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	402.326	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:46pm	C Gray	SHAD41 E.ssf
3629	-121.2672579	37.82706914	6340083.306	2124529.139	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	307.848	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:48pm	C Gray	SHAD41 E.ssf
3630	-121.267247	37.82706495	6340086.424	2124527.587	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	312.004	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:50pm	C Gray	SHAD41 E.ssf
3631	-121.2672352	37.82706172	6340089.823	2124526.381	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	285.829	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:52pm	C Gray	SHAD41 E.ssf
3632	-121.2672244	37.82705946	6340092.937	2124525.534	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	191.145	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:54pm	C Gray	SHAD41 E.ssf
3633	-121.2672131	37.82705452	6340096.185	2124523.707	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	142.390	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:56pm	C Gray	SHAD41 E.ssf
3634	-121.2672166	37.82704944	6340095.169	2124521.866	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	118.758	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:20:58pm	C Gray	SHAD41 E.ssf
3635	-121.2672289	37.82705211	6340091.64	2124522.867	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	108.530	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:00pm	C Gray	SHAD41 E.ssf
3636	-121.2672411	37.82705705	6340088.116	2124524.695	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	113.935	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:02pm	C Gray	SHAD41 E.ssf
3637	-121.2672536	37.82706611	6340084.52	2124526.201	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	200.235	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:04pm	C Gray	SHAD41 E.ssf
3638	-121.2672662	37.82706469	6340080.897	2124527.536	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	305.735	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:06pm	C Gray	SHAD41 E.ssf
3639	-121.2672795	37.82706846	6340077.073	2124528.94	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	255.694	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:08pm	C Gray	SHAD41 E.ssf
3640	-121.2672863	37.82707186	6340075.103	2124530.196	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	287.405	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:10pm	C Gray	SHAD41 E.ssf
3641	-121.2672882	37.82706922	6340074.547	2124529.237	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	231.174	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:12pm	C Gray	SHAD41 E.ssf
3642	-121.2672767	37.82706544	6340077.851	2124527.506	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	223.819	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:14pm	C Gray	SHAD41 E.ssf
3643	-121.2672516	37.82705901	6340085.077	2124525.434	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	287.215	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:18pm	C Gray	SHAD41 E.ssf
3644	-121.2672397	37.82705491	6340088.509	2124523.914	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	290.350	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:20pm	C Gray	SHAD41 E.ssf
3645	-121.2672305	37.82705469	6340088.838	2124520.554	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	175.132	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:22pm	C Gray	SHAD41 E.ssf
3646	-121.2672586	37.82704728	6340085.358	2124521.159	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	141.409	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:24pm	C Gray	SHAD41 E.ssf
3647	-121.2672616	37.82705283	6340082.172	2124523.206	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	188.539	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:26pm	C Gray	SHAD41 E.ssf
3648	-121.2672722	37.82705788	6340079.126	2124525.071	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	221.346	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:28pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3649	-121.2672828	37.82706265	6340076.08	2124526.835	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	183.605	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:30pm	C Gray	SHAD41 E.ssf
3650	-121.2672877	37.8270641	6340071.728	2124527.398	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	168.811	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:34pm	C Gray	SHAD41 E.ssf
3651	-121.2672589	37.82705177	6340083.02	2124522.814	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	126.633	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:40pm	C Gray	SHAD41 E.ssf
3652	-121.2672448	37.8270501	6340087.022	2124522.174	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	150.879	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:42pm	C Gray	SHAD41 E.ssf
3653	-121.2672274	37.82705105	6340092.071	2124522.479	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	127.635	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:44pm	C Gray	SHAD41 E.ssf
3654	-121.2671173	37.82705485	6340094.988	2124523.837	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	112.429	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:46pm	C Gray	SHAD41 E.ssf
3655	-121.2671071	37.82706022	6340097.936	2124525.771	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	124.351	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:48pm	C Gray	SHAD41 E.ssf
3656	-121.2671954	37.8270666	6340101.34	2124527.846	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	148.151	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:50pm	C Gray	SHAD41 E.ssf
3657	-121.2671835	37.82707249	6340104.806	2124530.181	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	212.830	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:52pm	C Gray	SHAD41 E.ssf
3658	-121.2671714	37.82707848	6340108.316	2124532.334	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	247.888	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:54pm	C Gray	SHAD41 E.ssf
3659	-121.267157	37.82708059	6340112.483	2124533.068	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	237.248	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:56pm	C Gray	SHAD41 E.ssf
3660	-121.2671458	37.82707815	6340115.709	2124532.152	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	178.313	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:21:58pm	C Gray	SHAD41 E.ssf
3661	-121.2671438	37.82707373	6340116.262	2124530.537	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	142.758	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:00pm	C Gray	SHAD41 E.ssf
3662	-121.2671432	37.827069306	6340116.41	2124526.654	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	138.908	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:02pm	C Gray	SHAD41 E.ssf
3663	-121.2671441	37.82705226	6340116.131	2124522.722	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	165.279	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:04pm	C Gray	SHAD41 E.ssf
3664	-121.2671532	37.82704985	6340113.488	2124521.866	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	211.166	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:06pm	C Gray	SHAD41 E.ssf
3665	-121.2671656	37.82705156	6340109.908	2124522.516	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	222.347	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:08pm	C Gray	SHAD41 E.ssf
3666	-121.267191	37.82705082	6340102.572	2124522.307	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	148.282	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:12pm	C Gray	SHAD41 E.ssf
3667	-121.2672006	37.82705865	6340099.807	2124525.181	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	122.653	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:16pm	C Gray	SHAD41 E.ssf
3668	-121.2671908	37.82706694	6340104.774	2124527.237	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	140.632	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:18pm	C Gray	SHAD41 E.ssf
3669	-121.2671798	37.82706314	6340105.844	2124528.953	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	196.184	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:20pm	C Gray	SHAD41 E.ssf
3670	-121.2671475	37.82707759	6340115.213	2124531.952	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	185.355	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:26pm	C Gray	SHAD41 E.ssf
3671	-121.2671486	37.82707456	6340114.892	2124530.852	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	145.007	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:28pm	C Gray	SHAD41 E.ssf
3672	-121.26716	37.82707129	6340111.572	2124529.689	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	157.756	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:30pm	C Gray	SHAD41 E.ssf
3673	-121.2671713	37.82706657	6340108.314	2124527.996	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	241.038	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:32pm	C Gray	SHAD41 E.ssf
3674	-121.2671836	37.82706284	6340104.74	2124526.667	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	263.485	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:34pm	C Gray	SHAD41 E.ssf
3675	-121.2671966	37.82705494	6340100.976	2124523.823	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	210.526	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:36pm	C Gray	SHAD41 E.ssf
3676	-121.2672006	37.82705202	6340099.789	2124522.768	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	147.786	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:38pm	C Gray	SHAD41 E.ssf
3677	-121.2671943	37.82705386	6340101.623	2124523.423	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	110.217	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:40pm	C Gray	SHAD41 E.ssf
3678	-121.2671823	37.82705945	6340105.1	2124525.432	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	116.234	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:42pm	C Gray	SHAD41 E.ssf
3679	-121.2671719	37.82706243	6340108.126	2124526.492	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	171.783	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:44pm	C Gray	SHAD41 E.ssf
3680	-121.2671548	37.82706813	6340113.074	2124528.527	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	242.799	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:46pm	C Gray	SHAD41 E.ssf
3681	-121.2671443	37.82707	6340116.481	2124529.179	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	187.755	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:48pm	C Gray	SHAD41 E.ssf
3682	-121.2671475	37.82706327	6340116.908	2124526.723	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	151.230	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:50pm	C Gray	SHAD41 E.ssf
3683	-121.2671545	37.82705923	6340113.143	2124525.285	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	156.005	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:52pm	C Gray	SHAD41 E.ssf
3684	-121.2671663	37.82705445	6340109.703	2124523.571	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	209.256	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:54pm	C Gray	SHAD41 E.ssf
3685	-121.267177	37.82704962	6340106.599	2124521.837	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	195.292	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:56pm	C Gray	SHAD41 E.ssf
3686	-121.2671823	37.82704622	6340105.069	2124520.611	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	134.560	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:58pm	C Gray	SHAD41 E.ssf
3687	-121.2671709	37.8270747	6340107.782	2124520.873	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	104.650	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:22:00pm	C Gray	SHAD41 E.ssf
3688	-121.2671623	37.82705105	6340111.443	2124522.73	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	126.874	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:02pm	C Gray	SHAD41 E.ssf
3689	-121.2671515	37.82705512	6340113.996	2124523.78	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	174.078	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:04pm	C Gray	SHAD41 E.ssf
3690	-121.2671474	37.82706122	6340115.18	2124525.992	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	193.921	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:06pm	C Gray	SHAD41 E.ssf
3691	-121.2671493	37.82707204	6340114.898	2124529.935	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	163.185	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:08pm	C Gray	SHAD41 E.ssf
3692	-121.2671485	37.82708352	6340114.698	2124534.116	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	139.098	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:10pm	C Gray	SHAD41 E.ssf
3693	-121.2671529	37.8271073	6340113.73	2124542.783	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	164.082	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:14pm	C Gray	SHAD41 E.ssf
3694	-121.2671532	37.82711685	6340113.685	2124546.26	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	155.449	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:16pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3695	-121.2671567	37.82712978	6340112.724	2124550.978	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	126,317	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:18pm	C Gray	SHAD41 E.ssf
3696	-121.2671633	37.8271368	6340110.817	2124553.551	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	106,897	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:20pm	C Gray	SHAD41 E.ssf
3697	-121.2671751	37.82714749	6340107.44	2124557.47	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	115,489	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:22pm	C Gray	SHAD41 E.ssf
3698	-121.2671825	37.82715716	6340105.329	2124561.007	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	106,703	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:24pm	C Gray	SHAD41 E.ssf
3699	-121.2671895	37.82716018	6340103.325	2124562.126	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	97,624	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:26pm	C Gray	SHAD41 E.ssf
3700	-121.2671943	37.82715333	6340101.917	2124559.643	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90,286	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:28pm	C Gray	SHAD41 E.ssf
3701	-121.2672076	37.8271526	6340098.073	2124559.406	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,605	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:30pm	C Gray	SHAD41 E.ssf
3702	-121.2672194	37.82715249	6340094.667	2124559.399	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,111	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:32pm	C Gray	SHAD41 E.ssf
3703	-121.2672296	37.8271515	6340091.733	2124559.059	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,400	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:34pm	C Gray	SHAD41 E.ssf
3704	-121.2672397	37.82714751	6340088.784	2124557.629	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,717	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:36pm	C Gray	SHAD41 E.ssf
3705	-121.2672461	37.82714461	6340086.946	2124556.588	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	93,578	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:38pm	C Gray	SHAD41 E.ssf
3706	-121.2672523	37.82713756	6340085.132	2124554.035	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	106,107	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:40pm	C Gray	SHAD41 E.ssf
3707	-121.2672619	37.82712888	6340082.333	2124550.9	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	145,166	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:42pm	C Gray	SHAD41 E.ssf
3708	-121.2672746	37.82712027	6340078.643	2124547.793	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	217,742	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:44pm	C Gray	SHAD41 E.ssf
3709	-121.2672772	37.8271197	6340077.621	2124544.778	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	435,528	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:46pm	C Gray	SHAD41 E.ssf
3710	-121.2672772	37.82710264	6340077.826	2124541.38	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	345,158	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:48pm	C Gray	SHAD41 E.ssf
3711	-121.2672762	37.82709227	6340078.086	2124537.604	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	296,296	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:50pm	C Gray	SHAD41 E.ssf
3712	-121.2672708	37.82708266	6340079.619	2124534.09	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	441,267	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:52pm	C Gray	SHAD41 E.ssf
3713	-121.2672624	37.82707845	6340082.035	2124532.539	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	451,597	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:54pm	C Gray	SHAD41 E.ssf
3714	-121.2672725	37.82707295	6340085.581	2124530.506	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	374,724	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:56pm	C Gray	SHAD41 E.ssf
3715	-121.2672365	37.82706932	6340089.491	2124529.153	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	332,291	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:23:58pm	C Gray	SHAD41 E.ssf
3716	-121.2672111	37.82706479	6340096.798	2124527.444	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	262,008	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:00pm	C Gray	SHAD41 E.ssf
3717	-121.2671854	37.82707039	6340104.255	2124530.699	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	257,473	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:02pm	C Gray	SHAD41 E.ssf
3718	-121.2671737	37.82707935	6340107.854	2124532.655	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	269,237	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:04pm	C Gray	SHAD41 E.ssf
3719	-121.2671662	37.82708556	6340111.043	2124534.889	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	237,384	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:06pm	C Gray	SHAD41 E.ssf
3720	-121.2671594	37.82709239	6340111.809	2124537.369	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	200,272	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:08pm	C Gray	SHAD41 E.ssf
3721	-121.2671587	37.82710343	6340112.065	2124541.388	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	206,267	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:10pm	C Gray	SHAD41 E.ssf
3722	-121.2671652	37.82711438	6340111.427	2124545.382	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	272,242	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:12pm	C Gray	SHAD41 E.ssf
3723	-121.2671652	37.82712428	6340110.242	2124549.186	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	204,867	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:14pm	C Gray	SHAD41 E.ssf
3724	-121.2671709	37.82713389	6340108.624	2124552.507	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	142,644	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:16pm	C Gray	SHAD41 E.ssf
3725	-121.2671719	37.82714461	6340106.32	2124556.431	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	127,709	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:18pm	C Gray	SHAD41 E.ssf
3726	-121.2671837	37.82714999	6340104.959	2124558.4	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	111,476	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:20pm	C Gray	SHAD41 E.ssf
3727	-121.2671963	37.82715077	6340101.343	2124558.713	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	96,152	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:22pm	C Gray	SHAD41 E.ssf
3728	-121.2672114	37.82714933	6340096.985	2124558.225	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,348	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:24pm	C Gray	SHAD41 E.ssf
3729	-121.2672252	37.82714786	6340093.044	2124557.723	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	86,177	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:26pm	C Gray	SHAD41 E.ssf
3730	-121.2672377	37.82714581	6340089.352	2124557.006	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,637	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:28pm	C Gray	SHAD41 E.ssf
3731	-121.2672443	37.82714128	6340087.434	2124555.374	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	96,515	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:30pm	C Gray	SHAD41 E.ssf
3732	-121.2672525	37.82713479	6340085.193	2124553.029	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	125,344	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:32pm	C Gray	SHAD41 E.ssf
3733	-121.2672618	37.82712622	6340082.336	2124549.931	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	162,598	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:34pm	C Gray	SHAD41 E.ssf
3734	-121.2672704	37.82711471	6340079.826	2124545.76	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	275,278	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:36pm	C Gray	SHAD41 E.ssf
3735	-121.2672712	37.82710549	6340079.582	2124542.405	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	405,869	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:38pm	C Gray	SHAD41 E.ssf
3736	-121.2672676	37.82709317	6340080.561	2124537.919	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	431,249	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:40pm	C Gray	SHAD41 E.ssf
3737	-121.2672624	37.82708437	6340081.577	2124534.698	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	494,981	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:42pm	C Gray	SHAD41 E.ssf
3738	-121.2672543	37.82707971	6340084.379	2124532.977	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	470,093	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:44pm	C Gray	SHAD41 E.ssf
3739	-121.2672399	37.82707411	6340088.784	2124530.902	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	394,827	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:46pm	C Gray	SHAD41 E.ssf
3740	-121.2672399	37.82707411	6340088.784	2124530.902	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	394,827	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:50pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3741	-121.2672248	37.8277069	6340092.856	2124529.008	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	318,991	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:52pm	C Gray	SHAD41 E.ssf
3742	-121.2672137	37.82706643	6340096.058	2124528.048	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	250,792	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:54pm	C Gray	SHAD41 E.ssf
3743	-121.2671172	37.82707126	6340100.848	2124529.765	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	227,620	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:56pm	C Gray	SHAD41 E.ssf
3744	-121.2671866	37.82707638	6340103.925	2124531.604	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	289,507	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:24:58pm	C Gray	SHAD41 E.ssf
3745	-121.2671739	37.82708108	6340107.612	2124533.284	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	299,214	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:00pm	C Gray	SHAD41 E.ssf
3746	-121.2671628	37.82708724	6340110.835	2124535.503	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	256,085	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:02pm	C Gray	SHAD41 E.ssf
3747	-121.2671631	37.82709423	6340110.766	2124538.047	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	224,144	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:04pm	C Gray	SHAD41 E.ssf
3748	-121.2671625	37.82711293	6340110.956	2124541.214	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	235,901	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:06pm	C Gray	SHAD41 E.ssf
3749	-121.2671651	37.82711383	6340110.241	2124545.19	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	456,143	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:08pm	C Gray	SHAD41 E.ssf
3750	-121.2671695	37.82712323	6340108.996	2124548.621	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	271,259	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:10pm	C Gray	SHAD41 E.ssf
3751	-121.2671788	37.82713642	6340106.334	2124553.446	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	170,315	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:12pm	C Gray	SHAD41 E.ssf
3752	-121.2671836	37.82714445	6340104.984	2124556.382	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	153,218	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:14pm	C Gray	SHAD41 E.ssf
3753	-121.2671946	37.82715033	6340101.813	2124558.549	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	116,136	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:16pm	C Gray	SHAD41 E.ssf
3754	-121.2672077	37.8271498	6340098.048	2124558.39	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	94,646	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:18pm	C Gray	SHAD41 E.ssf
3755	-121.2672232	37.82714779	6340093.57	2124557.691	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	90,400	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:20pm	C Gray	SHAD41 E.ssf
3756	-121.2672345	37.82714382	6340080.282	2124556.272	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	86,869	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:22pm	C Gray	SHAD41 E.ssf
3757	-121.2672442	37.82713976	6340087.473	2124554.818	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	95,696	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:24pm	C Gray	SHAD41 E.ssf
3758	-121.2672521	37.82713251	6340085.154	2124552.198	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	121,992	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:26pm	C Gray	SHAD41 E.ssf
3759	-121.2672623	37.82712344	6340082.182	2124548.917	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	189,482	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:28pm	C Gray	SHAD41 E.ssf
3760	-121.2672704	37.82711514	6340079.912	2124545.915	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	317,570	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:30pm	C Gray	SHAD41 E.ssf
3761	-121.2672671	37.82710715	6340080.669	2124542.999	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	449,226	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:32pm	C Gray	SHAD41 E.ssf
3762	-121.2672648	37.82709414	6340081.377	2124538.256	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	596,737	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:34pm	C Gray	SHAD41 E.ssf
3763	-121.2672611	37.82708538	6340082.439	2124535.059	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	587,757	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:36pm	C Gray	SHAD41 E.ssf
3764	-121.2672546	37.82708003	6340084.292	2124533.094	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	592,501	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:38pm	C Gray	SHAD41 E.ssf
3765	-121.2672093	37.82707014	6340097.298	2124529.847	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	307,174	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:44pm	C Gray	SHAD41 E.ssf
3766	-121.2671725	37.82708569	6340108.442	2124534.961	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	322,814	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:50pm	C Gray	SHAD41 E.ssf
3767	-121.2671662	37.82709225	6340109.848	2124537.336	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	284,511	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:52pm	C Gray	SHAD41 E.ssf
3768	-121.2671654	37.8271019	6340110.121	2124540.846	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	272,827	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:54pm	C Gray	SHAD41 E.ssf
3769	-121.2671659	37.82711238	6340110.002	2124544.664	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	375,115	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:25:56pm	C Gray	SHAD41 E.ssf
3770	-121.2671732	37.82712795	6340107.93	2124550.35	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	195,921	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:00pm	C Gray	SHAD41 E.ssf
3771	-121.2671723	37.82712721	6340108.186	2124550.08	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	135,507	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:02pm	C Gray	SHAD41 E.ssf
3772	-121.2671715	37.8271261	6340108.424	2124549.672	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	118,375	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:04pm	C Gray	SHAD41 E.ssf
3773	-121.2671714	37.82712578	6340108.442	2124549.556	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	115,312	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:06pm	C Gray	SHAD41 E.ssf
3774	-121.2671717	37.82712566	6340108.365	2124549.513	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	113,354	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:08pm	C Gray	SHAD41 E.ssf
3775	-121.2671719	37.82712571	6340108.305	2124549.533	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	112,625	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:10pm	C Gray	SHAD41 E.ssf
3776	-121.2671718	37.82712559	6340108.339	2124549.486	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	110,959	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:12pm	C Gray	SHAD41 E.ssf
3777	-121.2671718	37.82712574	6340108.334	2124549.544	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	111,593	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:14pm	C Gray	SHAD41 E.ssf
3778	-121.2671716	37.82712588	6340108.401	2124549.593	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	112,627	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:16pm	C Gray	SHAD41 E.ssf
3779	-121.2671715	37.82712641	6340108.442	2124549.785	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	112,372	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:18pm	C Gray	SHAD41 E.ssf
3780	-121.2671714	37.82712632	6340108.456	2124549.753	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	112,064	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:20pm	C Gray	SHAD41 E.ssf
3781	-121.2671721	37.82712629	6340108.266	2124549.965	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	112,514	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:22pm	C Gray	SHAD41 E.ssf
3782	-121.2671757	37.82713013	6340107.225	2124551.149	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	110,113	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:24pm	C Gray	SHAD41 E.ssf
3783	-121.2671733	37.82712929	6340106.759	2124550.849	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	111,940	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:28pm	C Gray	SHAD41 E.ssf
3784	-121.2671711	37.82713665	6340105.678	2124553.537	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	141,199	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:30pm	C Gray	SHAD41 E.ssf
3785	-121.2671896	37.82714376	6340103.26	2124556.147	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	168,717	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:32pm	C Gray	SHAD41 E.ssf
3786	-121.2672015	37.82714741	6340099.828	2124557.501	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	131,706	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:34pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
3787	-121.2672127	37.82714641	6340096.579	2124557.166	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	117.753	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:36pm	C Gray	SHAD41 E.ssf
3788	-121.2672235	37.82714472	6340093.427	2124556.575	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	110.182	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:38pm	C Gray	SHAD41 E.ssf
3789	-121.2672347	37.82714114	6340090.225	2124555.29	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	102.619	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:40pm	C Gray	SHAD41 E.ssf
3790	-121.2672445	37.82713358	6340087.378	2124552.569	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	117.253	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:42pm	C Gray	SHAD41 E.ssf
3791	-121.2672524	37.82712687	6340085.071	2124550.144	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	189.932	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:44pm	C Gray	SHAD41 E.ssf
3792	-121.2672602	37.82711185	6340082.794	2124547.115	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	336.287	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:46pm	C Gray	SHAD41 E.ssf
3793	-121.2672692	37.82711019	6340082.175	2124544.095	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	597.580	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:48pm	C Gray	SHAD41 E.ssf
3794	-121.2672597	37.82709834	6340082.882	2124539.772	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	959.440	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:50pm	C Gray	SHAD41 E.ssf
3795	-121.2672545	37.82709133	6340084.353	2124537.208	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	945.996	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:52pm	C Gray	SHAD41 E.ssf
3796	-121.2672468	37.82708826	6340086.559	2124534.013	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:54pm	C Gray	SHAD41 E.ssf
3797	-121.2672368	37.82707966	6340089.413	2124532.918	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	615.661	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:56pm	C Gray	SHAD41 E.ssf
3798	-121.2672244	37.82707691	6340092.995	2124531.887	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	486.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:26:58pm	C Gray	SHAD41 E.ssf
3799	-121.2672114	37.82707052	6340096.007	2124531.239	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	393.173	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:00pm	C Gray	SHAD41 E.ssf
3800	-121.2672045	37.82707879	6340098.755	2124532.524	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	342.242	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:02pm	C Gray	SHAD41 E.ssf
3801	-121.2671918	37.82708162	6340102.443	2124533.526	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	389.655	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:04pm	C Gray	SHAD41 E.ssf
3802	-121.267182	37.82708407	6340105.269	2124534.394	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	366.914	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:06pm	C Gray	SHAD41 E.ssf
3803	-121.2671732	37.82708998	6340107.831	2124536.524	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	308.766	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:08pm	C Gray	SHAD41 E.ssf
3804	-121.2671768	37.82709614	6340106.799	2124538.776	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	351.885	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:10pm	C Gray	SHAD41 E.ssf
3805	-121.2671792	37.82710748	6340106.148	2124542.913	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	384.395	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:12pm	C Gray	SHAD41 E.ssf
3806	-121.2671777	37.82712007	6340106.303	2124547.488	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	339.832	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:14pm	C Gray	SHAD41 E.ssf
3807	-121.2671789	37.827121275	6340105.407	2124550.205	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	233.529	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:16pm	C Gray	SHAD41 E.ssf
3808	-121.2671866	37.82713814	6340104.106	2124554.091	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	193.181	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:18pm	C Gray	SHAD41 E.ssf
3809	-121.2671934	37.82714385	6340102.144	2124556.188	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	157.068	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:20pm	C Gray	SHAD41 E.ssf
3810	-121.2672139	37.82714218	6340096.216	2124555.628	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	144.091	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:22pm	C Gray	SHAD41 E.ssf
3811	-121.2672255	37.82713951	6340092.87	2124554.682	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	131.357	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:24pm	C Gray	SHAD41 E.ssf
3812	-121.2672339	37.82713484	6340089.926	2124553.005	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	133.350	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:26pm	C Gray	SHAD41 E.ssf
3813	-121.2672444	37.82712909	6340087.381	2124550.934	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	175.507	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:28pm	C Gray	SHAD41 E.ssf
3814	-121.2672548	37.82712171	6340084.349	2124548.272	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	262.877	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:30pm	C Gray	SHAD41 E.ssf
3815	-121.2672603	37.82711146	6340082.753	2124545.695	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	492.449	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:32pm	C Gray	SHAD41 E.ssf
3816	-121.2672586	37.82710786	6340083.228	2124543.237	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	844.979	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:34pm	C Gray	SHAD41 E.ssf
3817	-121.2672559	37.82709085	6340083.934	2124537.038	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:36pm	C Gray	SHAD41 E.ssf
3818	-121.2672473	37.82708944	6340086.431	2124536.504	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:38pm	C Gray	SHAD41 E.ssf
3819	-121.2672339	37.82708613	6340090.298	2124535.267	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	793.638	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:40pm	C Gray	SHAD41 E.ssf
3820	-121.2672221	37.8270813	6340093.68	2124533.479	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	662.744	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:42pm	C Gray	SHAD41 E.ssf
3821	-121.2672142	37.82707886	6340096.464	2124532.57	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	629.111	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:44pm	C Gray	SHAD41 E.ssf
3822	-121.2672033	37.82708126	6340099.093	2124533.423	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	491.407	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:46pm	C Gray	SHAD41 E.ssf
3823	-121.2671925	37.82708379	6340102.22	2124534.318	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	440.822	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:48pm	C Gray	SHAD41 E.ssf
3824	-121.2671784	37.82709015	6340106.312	2124536.6	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	390.694	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:50pm	C Gray	SHAD41 E.ssf
3825	-121.2671748	37.82709725	6340107.396	2124539.176	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	385.749	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:52pm	C Gray	SHAD41 E.ssf
3826	-121.2671742	37.82710629	6340107.59	2124542.467	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	377.060	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:54pm	C Gray	SHAD41 E.ssf
3827	-121.2671748	37.82711689	6340107.434	2124546.326	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	347.400	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:56pm	C Gray	SHAD41 E.ssf
3828	-121.2671765	37.82712554	6340106.991	2124549.481	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	231.469	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:27:58pm	C Gray	SHAD41 E.ssf
3829	-121.2671836	37.82713499	6340104.972	2124552.939	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	191.360	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:00pm	C Gray	SHAD41 E.ssf
3830	-121.2671901	37.82714068	6340105.023	2124555.025	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	180.376	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:02pm	C Gray	SHAD41 E.ssf
3831	-121.2672016	37.82714003	6340099.793	2124554.817	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	167.745	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:04pm	C Gray	SHAD41 E.ssf
3832	-121.2672158	37.82713656	6340095.674	2124553.585	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	182.702	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:06pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3833	-121.2672274	37.82713365	6340092.317	2124552.554	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	177.973	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:12pm	C Gray	SHAD41 E.ssf
3834	-121.2672385	37.82712878	6340089.077	2124550.806	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	181.652	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:14pm	C Gray	SHAD41 E.ssf
3835	-121.2672478	37.82712331	6340086.373	2124548.838	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	257.658	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:16pm	C Gray	SHAD41 E.ssf
3836	-121.2672544	37.82711501	6340084.449	2124545.83	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	400.781	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:18pm	C Gray	SHAD41 E.ssf
3837	-121.2672587	37.82710789	6340083.172	2124543.25	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	933.116	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:20pm	C Gray	SHAD41 E.ssf
3838	-121.2672537	37.82709806	6340084.587	2124539.659	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	921.761	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:22pm	C Gray	SHAD41 E.ssf
3839	-121.2672028	37.82708822	6340086.836	2124536.42	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:24pm	C Gray	SHAD41 E.ssf
3840	-121.2672358	37.82708428	6340089.717	2124534.599	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	806.711	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:26pm	C Gray	SHAD41 E.ssf
3841	-121.2672254	37.82708322	6340092.73	2124534.186	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	645.852	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:28pm	C Gray	SHAD41 E.ssf
3842	-121.267215	37.82708333	6340095.741	2124534.204	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	752.890	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:30pm	C Gray	SHAD41 E.ssf
3843	-121.2672028	37.82708527	6340099.259	2124534.388	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	750.471	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:32pm	C Gray	SHAD41 E.ssf
3844	-121.2671935	37.82709189	6340101.982	2124537.269	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	543.872	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:34pm	C Gray	SHAD41 E.ssf
3845	-121.2671895	37.82709968	6340103.139	2124540.095	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	530.164	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:36pm	C Gray	SHAD41 E.ssf
3846	-121.2671862	37.8271031	6340104.123	2124541.334	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	433.094	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:38pm	C Gray	SHAD41 E.ssf
3847	-121.2671898	37.82709424	6340103.337	2124538.113	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	370.581	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:40pm	C Gray	SHAD41 E.ssf
3848	-121.2671819	37.82709669	6340105.346	2124538.989	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	433.806	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:42pm	C Gray	SHAD41 E.ssf
3849	-121.2671766	37.827102	6340106.867	2124540.91	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	439.411	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:44pm	C Gray	SHAD41 E.ssf
3850	-121.267175	37.82711066	6340107.357	2124544.058	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	403.309	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:46pm	C Gray	SHAD41 E.ssf
3851	-121.2671795	37.82712031	6340106.099	2124547.583	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	320.805	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:48pm	C Gray	SHAD41 E.ssf
3852	-121.2671841	37.82712818	6340104.807	2124540.458	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	270.149	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:50pm	C Gray	SHAD41 E.ssf
3853	-121.2671919	37.82713443	6340102.551	2124552.755	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	231.783	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:52pm	C Gray	SHAD41 E.ssf
3854	-121.2671014	37.82713806	6340099.82	2124554.097	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	195.962	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:54pm	C Gray	SHAD41 E.ssf
3855	-121.2672121	37.82713919	6340096.738	2124554.534	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	198.552	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:56pm	C Gray	SHAD41 E.ssf
3856	-121.267222	37.82713598	6340094.441	2124553.386	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	163.086	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:28:58pm	C Gray	SHAD41 E.ssf
3857	-121.2672319	37.82712975	6340090.979	2124551.158	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	183.511	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:00pm	C Gray	SHAD41 E.ssf
3858	-121.2672412	37.82712369	6340088.287	2124548.946	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	245.019	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:02pm	C Gray	SHAD41 E.ssf
3859	-121.2672551	37.82711049	6340084.242	2124544.187	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:06pm	C Gray	SHAD41 E.ssf
3860	-121.2672582	37.82710063	6340083.319	2124540.606	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:08pm	C Gray	SHAD41 E.ssf
3861	-121.2672533	37.82709393	6340084.717	2124538.153	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:10pm	C Gray	SHAD41 E.ssf
3862	-121.2672438	37.82708799	6340087.565	2124535.965	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:12pm	C Gray	SHAD41 E.ssf
3863	-121.2672338	37.82708332	6340090.313	2124534.242	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	772.459	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:14pm	C Gray	SHAD41 E.ssf
3864	-121.2672239	37.82707998	6340093.159	2124532.937	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	599.621	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:16pm	C Gray	SHAD41 E.ssf
3865	-121.2672146	37.82707876	6340095.85	2124532.539	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	534.804	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:18pm	C Gray	SHAD41 E.ssf
3866	-121.2672045	37.82708166	6340098.747	2124533.569	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	521.182	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:20pm	C Gray	SHAD41 E.ssf
3867	-121.2671962	37.82708651	6340101.187	2124535.316	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	499.362	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:22pm	C Gray	SHAD41 E.ssf
3868	-121.2671909	37.82709247	6340102.714	2124537.474	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	455.082	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:24pm	C Gray	SHAD41 E.ssf
3869	-121.2671892	37.82710003	6340103.226	2124540.222	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	464.976	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:26pm	C Gray	SHAD41 E.ssf
3870	-121.2671898	37.82710914	6340103.088	2124543.54	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	513.716	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:28pm	C Gray	SHAD41 E.ssf
3871	-121.2671928	37.82711695	6340102.258	2124546.39	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	768.549	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:30pm	C Gray	SHAD41 E.ssf
3872	-121.2671946	37.82712405	6340100.767	2124548.99	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	912.631	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:32pm	C Gray	SHAD41 E.ssf
3873	-121.2672065	37.82712573	6340098.304	2124549.621	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	668.111	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:34pm	C Gray	SHAD41 E.ssf
3874	-121.2672149	37.82712602	6340095.889	2124549.745	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	482.197	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:36pm	C Gray	SHAD41 E.ssf
3875	-121.2672225	37.82712588	6340092.973	2124549.72	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	361.684	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:38pm	C Gray	SHAD41 E.ssf
3876	-121.2672362	37.82712377	6340089.733	2124548.977	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	304.824	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:40pm	C Gray	SHAD41 E.ssf
3877	-121.2672466	37.82712179	6340086.744	2124550.246	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	321.829	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:42pm	C Gray	SHAD41 E.ssf
3878	-121.2672365	37.82712983	6340089.674	2124551.185	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	262.231	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:44pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3879	-121.2672255	37.82712699	6340092.845	2124550.125	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	209,898	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:46pm	C Gray	SHAD41 E.ssf
3880	-121.2672132	37.82712483	6340096.392	2124549.307	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	306,919	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:48pm	C Gray	SHAD41 E.ssf
3881	-121.2672030	37.82712645	6340099.946	2124549.869	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	686,885	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:50pm	C Gray	SHAD41 E.ssf
3882	-121.2671868	37.82712684	6340104.023	2124549.977	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	934,142	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:52pm	C Gray	SHAD41 E.ssf
3883	-121.2671771	37.82712181	6340106.794	2124548.124	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	575,749	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:54pm	C Gray	SHAD41 E.ssf
3884	-121.2671771	37.82711304	6340106.78	2124544.93	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	344,444	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:56pm	C Gray	SHAD41 E.ssf
3885	-121.2671873	37.82711127	6340109.807	2124544.311	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	388,751	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:29:58pm	C Gray	SHAD41 E.ssf
3886	-121.2672020	37.82711319	6340096.578	2124545.044	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:00pm	C Gray	SHAD41 E.ssf
3887	-121.2672148	37.82711436	6340095.876	2124545.5	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:02pm	C Gray	SHAD41 E.ssf
3888	-121.2672267	37.82711355	6340092.434	2124545.234	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	936,873	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:04pm	C Gray	SHAD41 E.ssf
3889	-121.2672424	37.82711384	6340087.924	2124545.378	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	788,663	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:06pm	C Gray	SHAD41 E.ssf
3890	-121.2672153	37.82711453	6340083.853	2124545.659	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:08pm	C Gray	SHAD41 E.ssf
3891	-121.2672628	37.82711132	6340082.011	2124545.193	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	889,233	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:10pm	C Gray	SHAD41 E.ssf
3892	-121.2672579	37.8271107	6340083.425	2124544.272	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:12pm	C Gray	SHAD41 E.ssf
3893	-121.2672465	37.82711118	6340086.736	2124544.643	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:13pm	C Gray	SHAD41 E.ssf
3894	-121.2672294	37.82711181	6340091.649	2124544.608	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:16pm	C Gray	SHAD41 E.ssf
3895	-121.2672139	37.82711262	6340096.128	2124544.866	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:18pm	C Gray	SHAD41 E.ssf
3896	-121.2671995	37.82711173	6340100.3	2124544.507	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:20pm	C Gray	SHAD41 E.ssf
3897	-121.2671844	37.82711073	6340104.655	2124544.108	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:22pm	C Gray	SHAD41 E.ssf
3898	-121.2671736	37.82710767	6340107.75	2124542.733	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	987,458	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:24pm	C Gray	SHAD41 E.ssf
3899	-121.2672635	37.82710492	6340081.798	2124542.179	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:26pm	C Gray	SHAD41 E.ssf
3900	-121.2671927	37.82710263	6340105.119	2124541.168	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	569,428	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:28pm	C Gray	SHAD41 E.ssf
3901	-121.2672077	37.82710439	6340097.91	2124541.855	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	640,020	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:30pm	C Gray	SHAD41 E.ssf
3902	-121.2672196	37.82710355	6340094.458	2124541.576	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:32pm	C Gray	SHAD41 E.ssf
3903	-121.2672357	37.8271039	6340089.809	2124541.74	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:34pm	C Gray	SHAD41 E.ssf
3904	-121.2672477	37.82710447	6340086.056	2124541.979	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:36pm	C Gray	SHAD41 E.ssf
3905	-121.2672635	37.82710492	6340081.798	2124542.179	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:38pm	C Gray	SHAD41 E.ssf
3906	-121.2672671	37.82710472	6340080.738	2124542.116	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:40pm	C Gray	SHAD41 E.ssf
3907	-121.2672614	37.82710303	6340082.394	2124541.484	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	953,211	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:42pm	C Gray	SHAD41 E.ssf
3908	-121.2672485	37.82710304	6340086.107	2124541.458	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:44pm	C Gray	SHAD41 E.ssf
3909	-121.2672352	37.82710448	6340089.952	2124541.952	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:46pm	C Gray	SHAD41 E.ssf
3910	-121.2672163	37.82710376	6340095.413	2124541.644	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:48pm	C Gray	SHAD41 E.ssf
3911	-121.2672047	37.82710479	6340098.765	2124541.993	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:50pm	C Gray	SHAD41 E.ssf
3912	-121.2671899	37.82710569	6340103.231	2124542.065	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:52pm	C Gray	SHAD41 E.ssf
3913	-121.2671774	37.82710266	6340106.64	2124541.151	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	715,525	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:54pm	C Gray	SHAD41 E.ssf
3914	-121.2671782	37.82709776	6340106.411	2124539.371	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	464,565	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:56pm	C Gray	SHAD41 E.ssf
3915	-121.2671897	37.82709546	6340103.071	2124538.56	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	391,049	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:30:58pm	C Gray	SHAD41 E.ssf
3916	-121.267204	37.82709469	6340098.952	2124538.313	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	551,388	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:00pm	C Gray	SHAD41 E.ssf
3917	-121.2672168	37.82709504	6340095.238	2124538.472	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	660,066	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:02pm	C Gray	SHAD41 E.ssf
3918	-121.2672334	37.82709611	6340090.472	2124538.899	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	891,898	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:04pm	C Gray	SHAD41 E.ssf
3919	-121.2672448	37.82709555	6340087.153	2124538.722	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:06pm	C Gray	SHAD41 E.ssf
3920	-121.2672539	37.82709441	6340084.522	2124538.327	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:08pm	C Gray	SHAD41 E.ssf
3921	-121.2672522	37.8270917	6340085.012	2124537.337	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:10pm	C Gray	SHAD41 E.ssf
3922	-121.2672427	37.8270894	6340087.742	2124536.477	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999,960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:12pm	C Gray	SHAD41 E.ssf
3923	-121.2672324	37.82708897	6340090.738	2124536.298	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	878,703	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:14pm	C Gray	SHAD41 E.ssf
3924	-121.2672167	37.82709155	6340095.258	2124537.198	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	896,557	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:16pm	C Gray	SHAD41 E.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
3925	-121.2672006	37.82709335	6340099.918	2124537.818	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	963.439	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:18pm	C Gray	SHAD41 E.ssf
3926	-121.2671873	37.82709502	6340103.776	2124538.392	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	605.821	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:20pm	C Gray	SHAD41 E.ssf
3927	-121.2671776	37.82709489	6340106.575	2124538.332	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	526.893	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:22pm	C Gray	SHAD41 E.ssf
3928	-121.2671768	37.82710412	6340106.82	2124541.682	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	472.185	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:24pm	C Gray	SHAD41 E.ssf
3929	-121.2671784	37.82711286	6340106.399	2124544.867	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	400.350	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:26pm	C Gray	SHAD41 E.ssf
3930	-121.2671791	37.82712159	6340106.222	2124549.617	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	355.078	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:28pm	C Gray	SHAD41 E.ssf
3931	-121.2671807	37.82713678	6340105.997	2124545.581	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	240.240	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:30pm	C Gray	SHAD41 E.ssf
3932	-121.2671801	37.82714247	6340105.827	2124555.654	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	191.646	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:32pm	C Gray	SHAD41 E.ssf
3933	-121.2671811	37.82713468	6340105.681	2124552.819	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	147.592	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:34pm	C Gray	SHAD41 E.ssf
3934	-121.2671801	37.82712128	6340105.93	2124548.491	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	229.636	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:36pm	C Gray	SHAD41 E.ssf
3935	-121.26718	37.82710973	6340105.907	2124543.731	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	663.385	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:38pm	C Gray	SHAD41 E.ssf
3936	-121.2671787	37.82709917	6340106.262	2124539.885	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	695.613	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:40pm	C Gray	SHAD41 E.ssf
3937	-121.2671769	37.82708589	6340106.736	2124535.043	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	543.061	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:42pm	C Gray	SHAD41 E.ssf
3938	-121.2671817	37.82707684	6340105.341	2124531.759	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	401.858	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:44pm	C Gray	SHAD41 E.ssf
3939	-121.267191	37.82708156	6340102.96	2124533.497	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	348.144	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:46pm	C Gray	SHAD41 E.ssf
3940	-121.2671901	37.82709348	6340102.954	2124537.841	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	325.973	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:48pm	C Gray	SHAD41 E.ssf
3941	-121.2671913	37.8271033	6340102.641	2124541.418	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	409.611	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:50pm	C Gray	SHAD41 E.ssf
3942	-121.2671904	37.827116	6340102.949	2124546.039	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	554.388	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:52pm	C Gray	SHAD41 E.ssf
3943	-121.2671897	37.82713033	6340103.177	2124551.258	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	780.131	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:54pm	C Gray	SHAD41 E.ssf
3944	-121.26719	37.82714255	6340103.117	2124555.54	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	428.775	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:56pm	C Gray	SHAD41 E.ssf
3945	-121.2671916	37.82714955	6340102.677	2124558.258	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	214.204	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:31:58pm	C Gray	SHAD41 E.ssf
3946	-121.2671913	37.82714486	6340102.775	2124556.549	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	119.963	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:00pm	C Gray	SHAD41 E.ssf
3947	-121.2671905	37.82713498	6340102.974	2124552.951	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	153.198	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:02pm	C Gray	SHAD41 E.ssf
3948	-121.2671894	37.827121207	6340103.23	2124548.248	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	284.259	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:04pm	C Gray	SHAD41 E.ssf
3949	-121.2671893	37.82711121	6340103.238	2124544.294	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:06pm	C Gray	SHAD41 E.ssf
3950	-121.2671905	37.82709809	6340102.841	2124539.521	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:08pm	C Gray	SHAD41 E.ssf
3951	-121.2671913	37.82708518	6340102.593	2124534.819	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	816.464	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:10pm	C Gray	SHAD41 E.ssf
3952	-121.267193	37.82707307	6340102.064	2124530.415	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	575.003	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:12pm	C Gray	SHAD41 E.ssf
3953	-121.2672039	37.827077307	6340098.909	2124531.506	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	449.487	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:14pm	C Gray	SHAD41 E.ssf
3954	-121.267201	37.82708729	6340099.782	2124535.612	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	458.799	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:16pm	C Gray	SHAD41 E.ssf
3955	-121.2671995	37.8270988	6340100.244	2124539.798	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	445.237	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:18pm	C Gray	SHAD41 E.ssf
3956	-121.2671999	37.82711249	6340100.175	2124544.784	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	730.072	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:20pm	C Gray	SHAD41 E.ssf
3957	-121.2672011	37.8271266	6340099.875	2124549.925	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:22pm	C Gray	SHAD41 E.ssf
3958	-121.267201	37.82713955	6340099.957	2124554.639	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:24pm	C Gray	SHAD41 E.ssf
3959	-121.2672005	37.82714682	6340100.11	2124557.285	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	447.232	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:26pm	C Gray	SHAD41 E.ssf
3960	-121.2672022	37.82714038	6340099.608	2124554.946	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	214.253	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:28pm	C Gray	SHAD41 E.ssf
3961	-121.2672027	37.82712841	6340099.412	2124550.586	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	192.269	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:30pm	C Gray	SHAD41 E.ssf
3962	-121.2672051	37.82711486	6340098.687	2124545.66	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	597.819	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:32pm	C Gray	SHAD41 E.ssf
3963	-121.2672056	37.82709936	6340098.492	2124540.016	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:34pm	C Gray	SHAD41 E.ssf
3964	-121.2672046	37.82708502	6340098.74	2124534.793	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	982.984	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:36pm	C Gray	SHAD41 E.ssf
3965	-121.2672071	37.82707295	6340097.988	2124530.404	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	866.286	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:38pm	C Gray	SHAD41 E.ssf
3966	-121.2672159	37.82706882	6340095.435	2124528.92	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	479.293	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:40pm	C Gray	SHAD41 E.ssf
3967	-121.2672168	37.82707821	6340095.195	2124532.343	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	355.705	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:42pm	C Gray	SHAD41 E.ssf
3968	-121.2672162	37.82709086	6340095.406	2124536.946	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	770.670	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:44pm	C Gray	SHAD41 E.ssf
3969	-121.2672164	37.82711991	6340095.445	2124547.526	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:46pm	C Gray	SHAD41 E.ssf
3970	-121.2672152	37.82713523	6340095.829	2124553.099	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	816.893	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:50pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
3971	-121.2672168	37.82714546	6340095.39	2124556.831	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	381.456	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:52pm	C Gray	SHAD41 E.ssf
3972	-121.2672187	37.82714472	6340094.813	2124556.556	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	181.105	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:54pm	C Gray	SHAD41 E.ssf
3973	-121.2672197	37.82713616	6340094.532	2124553.451	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	123.861	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:56pm	C Gray	SHAD41 E.ssf
3974	-121.2672219	37.82712583	6340094.713	2124549.686	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	184.452	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:32:57pm	C Gray	SHAD41 E.ssf
3975	-121.2672193	37.82710922	6340094.576	2124543.638	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	292.393	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:00pm	C Gray	SHAD41 E.ssf
3976	-121.2672217	37.82709182	6340093.831	2124537.311	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	883.102	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:02pm	C Gray	SHAD41 E.ssf
3977	-121.2672223	37.82707772	6340093.609	2124532.178	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	971.475	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:04pm	C Gray	SHAD41 E.ssf
3978	-121.2672226	37.82706939	6340091.776	2124529.16	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	658.248	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:06pm	C Gray	SHAD41 E.ssf
3979	-121.2672344	37.82707996	6340090.133	2124533.02	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	507.755	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:08pm	C Gray	SHAD41 E.ssf
3980	-121.2672364	37.82709039	6340089.571	2124538.102	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	585.702	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:10pm	C Gray	SHAD41 E.ssf
3981	-121.2672361	37.82710766	6340089.712	2124543.113	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:12pm	C Gray	SHAD41 E.ssf
3982	-121.2672312	37.82712149	6340090.947	2124548.137	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:14pm	C Gray	SHAD41 E.ssf
3983	-121.2672334	37.8271135	6340090.403	2124553.062	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	677.940	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:16pm	C Gray	SHAD41 E.ssf
3984	-121.2672356	37.82714282	6340089.969	2124555.914	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	298.645	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:18pm	C Gray	SHAD41 E.ssf
3985	-121.2672391	37.82713858	6340088.941	2124554.377	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	175.517	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:20pm	C Gray	SHAD41 E.ssf
3986	-121.2672376	37.82712275	6340089.328	2124550.43	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	141.871	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:22pm	C Gray	SHAD41 E.ssf
3987	-121.2672361	37.82711295	6340089.728	2124545.039	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	224.045	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:24pm	C Gray	SHAD41 E.ssf
3988	-121.2672355	37.82709713	6340089.852	2124539.274	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:26pm	C Gray	SHAD41 E.ssf
3989	-121.2672357	37.82708434	6340089.763	2124534.619	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:28pm	C Gray	SHAD41 E.ssf
3990	-121.2672456	37.82707728	6340086.826	2124532.072	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:30pm	C Gray	SHAD41 E.ssf
3991	-121.2672498	37.82708848	6340085.757	2124536.16	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	677.320	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:32pm	C Gray	SHAD41 E.ssf
3992	-121.2672474	37.82709098	6340086.418	2124540.013	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	937.521	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:34pm	C Gray	SHAD41 E.ssf
3993	-121.2672463	37.82711218	6340086.79	2124544.78	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:36pm	C Gray	SHAD41 E.ssf
3994	-121.2672469	37.82712563	6340086.643	2124549.678	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:38pm	C Gray	SHAD41 E.ssf
3995	-121.2672491	37.82713097	6340086.04	2124551.63	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	959.196	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:40pm	C Gray	SHAD41 E.ssf
3996	-121.2672514	37.82712467	6340085.341	2124549.341	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	433.006	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:42pm	C Gray	SHAD41 E.ssf
3997	-121.2672533	37.82711013	6340084.742	2124544.05	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	457.227	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:44pm	C Gray	SHAD41 E.ssf
3998	-121.2672521	37.82709817	6340085.064	2124539.692	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	883.688	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:46pm	C Gray	SHAD41 E.ssf
3999	-121.2672479	37.82708707	6340086.249	2124535.641	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:48pm	C Gray	SHAD41 E.ssf
4000	-121.2672417	37.82708663	6340088.021	2124535.348	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:50pm	C Gray	SHAD41 E.ssf
4001	-121.2672326	37.8270984	6340090.692	2124539.732	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	730.110	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:52pm	C Gray	SHAD41 E.ssf
4002	-121.2672224	37.82711704	6340093.25	2124546.496	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	999.960	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:54pm	C Gray	SHAD41 E.ssf
4003	-121.2672231	37.82713485	6340093.546	2124552.982	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	656.957	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:56pm	C Gray	SHAD41 E.ssf
4004	-121.2672205	37.82714832	6340094.329	2124557.879	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	345.349	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:33:58pm	C Gray	SHAD41 E.ssf
4005	-121.2672234	37.82716136	6340093.544	2124562.633	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	165.821	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:00pm	C Gray	SHAD41 E.ssf
4006	-121.2672266	37.82717603	6340092.664	2124567.984	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90.244	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:02pm	C Gray	SHAD41 E.ssf
4007	-121.2672263	37.82718874	6340092.784	2124572.609	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67.790	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:04pm	C Gray	SHAD41 E.ssf
4008	-121.2672148	37.82718529	6340096.097	2124571.327	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57.174	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:06pm	C Gray	SHAD41 E.ssf
4009	-121.2672093	37.8271828	6340097.176	2124570.403	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54.750	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:08pm	C Gray	SHAD41 E.ssf
4010	-121.267194	37.82718394	6340102.104	2124570.787	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58.852	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:10pm	C Gray	SHAD41 E.ssf
4011	-121.267201	37.82717916	6340100.061	2124569.061	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64.677	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:12pm	C Gray	SHAD41 E.ssf
4012	-121.2672257	37.82719432	6340092.969	2124574.641	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57.470	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:14pm	C Gray	SHAD41 E.ssf
4013	-121.2672119	37.82720483	6340094.943	2124578.452	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49.207	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:16pm	C Gray	SHAD41 E.ssf
4014	-121.2672158	37.82720593	6340096.172	2124578.841	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45.140	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:18pm	C Gray	SHAD41 E.ssf
4015	-121.2672142	37.82720691	6340096.058	2124579.2	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44.104	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:20pm	C Gray	SHAD41 E.ssf
4016	-121.2672142	37.82720686	6340096.333	2124579.181	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42.870	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:24pm	C Gray	SHAD41 E.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4017	-121.2672151	37.82720704	6340096.078	2124579.246	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,671	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:26pm	C Gray	SHAD41 E.ssf
4018	-121.2672151	37.82720442	6340094.94	2124578.303	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,381	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:28pm	C Gray	SHAD41 E.ssf
4019	-121.2672194	37.82720486	6340094.838	2124578.463	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,097	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:30pm	C Gray	SHAD41 E.ssf
4020	-121.2672193	37.82720496	6340094.854	2124578.5	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,626	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:32pm	C Gray	SHAD41 E.ssf
4021	-121.2672179	37.82720505	6340095.275	2124578.529	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,062	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:34pm	C Gray	SHAD41 E.ssf
4022	-121.2672106	37.82720446	6340097.376	2124578.298	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,974	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:36pm	C Gray	SHAD41 E.ssf
4023	-121.2672135	37.82720692	6340095.391	2124579.207	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,387	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:46pm	C Gray	SHAD41 E.ssf
4024	-121.2672152	37.82721158	6340091.64	2124580.937	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,098	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:48pm	C Gray	SHAD41 E.ssf
4025	-121.2672482	37.82721292	6340086.519	2124581.467	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,126	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:50pm	C Gray	SHAD41 E.ssf
4026	-121.2672623	37.8272167	6340082.48	2124582.877	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,976	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:52pm	C Gray	SHAD41 E.ssf
4027	-121.2672657	37.82721507	6340081.476	2124582.289	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,898	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:54pm	C Gray	SHAD41 E.ssf
4028	-121.2672655	37.82721552	6340081.554	2124582.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,752	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:56pm	C Gray	SHAD41 E.ssf
4029	-121.2672655	37.82721552	6340081.554	2124582.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,460	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:34:58pm	C Gray	SHAD41 E.ssf
4030	-121.2672655	37.82721552	6340081.554	2124582.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,694	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:35:00pm	C Gray	SHAD41 E.ssf
4031	-121.2672655	37.82721552	6340081.554	2124582.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,707	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:35:00pm	C Gray	SHAD41 E.ssf
4032	-121.2672655	37.82721552	6340081.554	2124582.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,573	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:35:02pm	C Gray	SHAD41 E.ssf
4033	-121.2672655	37.82721552	6340081.554	2124582.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,530	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:35:06pm	C Gray	SHAD41 E.ssf
4034	-121.2672655	37.82721552	6340081.554	2124582.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,402	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:35:08pm	C Gray	SHAD41 E.ssf
4035	-121.2672655	37.82721552	6340081.554	2124582.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,013	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:35:10pm	C Gray	SHAD41 E.ssf
4036	-121.2672655	37.82721552	6340081.554	2124582.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,536	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:35:12pm	C Gray	SHAD41 E.ssf
4037	-121.2672655	37.82721552	6340081.554	2124582.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,889	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:35:14pm	C Gray	SHAD41 E.ssf
4038	-121.2677258	37.82745822	6339949.328	2124671.914	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,900	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:38:47pm	C Gray	SHAD41 G.ssf
4039	-121.2677258	37.82745822	6339949.328	2124671.914	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,103	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:38:49pm	C Gray	SHAD41 G.ssf
4041	-121.2677258	37.82745837	6339949.317	2124671.969	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,973	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:38:56pm	C Gray	SHAD41 G.ssf
4042	-121.2677258	37.82745801	6339949.336	2124671.84	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,323	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:38:58pm	C Gray	SHAD41 G.ssf
4043	-121.2677262	37.82746038	6339949.225	2124671.868	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,952	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:00pm	C Gray	SHAD41 G.ssf
4044	-121.2677261	37.82745823	6339949.249	2124671.918	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,943	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:02pm	C Gray	SHAD41 G.ssf
4045	-121.2677258	37.82745765	6339949.333	2124671.708	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,868	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:04pm	C Gray	SHAD41 G.ssf
4046	-121.2677255	37.82745798	6339949.402	2124671.829	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,118	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:05pm	C Gray	SHAD41 G.ssf
4047	-121.2677258	37.82745782	6339949.32	2124671.77	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,720	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:08pm	C Gray	SHAD41 G.ssf
4048	-121.2677259	37.82745785	6339949.298	2124671.782	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,549	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:10pm	C Gray	SHAD41 G.ssf
4049	-121.2677259	37.82745795	6339949.296	2124671.815	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,788	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:12pm	C Gray	SHAD41 G.ssf
4050	-121.2677269	37.82746038	6339949.018	2124672.703	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,875	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:14pm	C Gray	SHAD41 G.ssf
4051	-121.2677272	37.82746089	6339948.932	2124672.891	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,123	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:16pm	C Gray	SHAD41 G.ssf
4052	-121.2677273	37.82746108	6339948.902	2124672.961	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,646	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:17pm	C Gray	SHAD41 G.ssf
4053	-121.2677274	37.82746151	6339948.866	2124673.116	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,549	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:19pm	C Gray	SHAD41 G.ssf
4054	-121.2677274	37.8274611	6339948.886	2124672.966	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,668	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:22pm	C Gray	SHAD41 G.ssf
4055	-121.2677272	37.82746124	6339948.924	2124673.017	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,628	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:23pm	C Gray	SHAD41 G.ssf
4056	-121.2677269	37.82746002	6339949.221	2124672.572	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,324	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:25pm	C Gray	SHAD41 G.ssf
4057	-121.2677262	37.82746021	6339949.031	2124672.641	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,944	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:28pm	C Gray	SHAD41 G.ssf
4058	-121.2677273	37.82745959	6339948.908	2124672.415	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,966	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:30pm	C Gray	SHAD41 G.ssf
4059	-121.2677268	37.82746007	6339949.06	2124672.589	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,314	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:31pm	C Gray	SHAD41 G.ssf
4060	-121.2677274	37.82746115	6339948.882	2124672.985	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,047	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:34pm	C Gray	SHAD41 G.ssf
4061	-121.2677261	37.8274616	6339949.242	2124673.146	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,606	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:35pm	C Gray	SHAD41 G.ssf
4062	-121.2677273	37.8274619	6339948.917	2124673.257	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,470	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:38pm	C Gray	SHAD41 G.ssf
4063	-121.2677297	37.82746051	6339948.217	2124672.757	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,311	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:41pm	C Gray	SHAD41 G.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4064	-121.2677294	37.82746161	6339948.305	2124673.159	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,617	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:44pm	C Gray	SHAD41 G.ssf
4065	-121.2677288	37.8274618	6339948.481	2124673.226	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,492	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:45pm	C Gray	SHAD41 G.ssf
4066	-121.2677277	37.82746217	6339948.791	2124673.356	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,108	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:48pm	C Gray	SHAD41 G.ssf
4067	-121.2677326	37.82746051	6339947.372	2124672.763	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,430	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:49pm	C Gray	SHAD41 G.ssf
4068	-121.267731	37.82746171	6339947.839	2124673.196	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,285	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:51pm	C Gray	SHAD41 G.ssf
4069	-121.2677304	37.82746207	6339948.023	2124673.329	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,023	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:53pm	C Gray	SHAD41 G.ssf
4070	-121.26773	37.82746195	6339948.121	2124673.283	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,478	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:55pm	C Gray	SHAD41 G.ssf
4071	-121.2677298	37.82746215	6339948.195	2124673.357	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,272	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:39:58pm	C Gray	SHAD41 G.ssf
4072	-121.2677288	37.82746248	6339948.468	2124673.475	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,339	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:00pm	C Gray	SHAD41 G.ssf
4073	-121.2677285	37.82746231	6339948.562	2124673.41	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,508	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:02pm	C Gray	SHAD41 G.ssf
4074	-121.2677278	37.82746282	6339948.759	2124673.593	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,735	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:04pm	C Gray	SHAD41 G.ssf
4075	-121.2677284	37.82746287	6339948.591	2124673.615	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,163	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:06pm	C Gray	SHAD41 G.ssf
4076	-121.267728	37.827463	6339948.723	2124673.659	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,903	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:08pm	C Gray	SHAD41 G.ssf
4077	-121.2677278	37.82746331	6339948.755	2124673.773	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,520	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:10pm	C Gray	SHAD41 G.ssf
4078	-121.2677281	37.82746299	6339948.677	2124673.657	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,770	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:11pm	C Gray	SHAD41 G.ssf
4079	-121.2677274	37.82746378	6339948.871	2124673.944	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,164	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:13pm	C Gray	SHAD41 G.ssf
4080	-121.2677269	37.82746418	6339949.032	2124674.088	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,472	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:16pm	C Gray	SHAD41 G.ssf
4081	-121.2677273	37.82746376	6339948.904	2124673.936	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,280	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:17pm	C Gray	SHAD41 G.ssf
4082	-121.2677296	37.82746375	6339948.238	2124673.938	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,507	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:21pm	C Gray	SHAD41 G.ssf
4083	-121.2677339	37.82745853	6339946.748	2124672.048	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,976	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:24pm	C Gray	SHAD41 G.ssf
4084	-121.2677339	37.82744663	6339945.479	2124667.725	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,682	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:26pm	C Gray	SHAD41 G.ssf
4085	-121.2677463	37.82743928	6339943.352	2124665.068	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,622	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:28pm	C Gray	SHAD41 G.ssf
4086	-121.2677525	37.82742906	6339941.536	2124661.362	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	57,118	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:29pm	C Gray	SHAD41 G.ssf
4087	-121.2677616	37.82741993	6339938.864	2124658.058	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	57,003	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:32pm	C Gray	SHAD41 G.ssf
4088	-121.2677668	37.82740656	6339937.333	2124653.203	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	81,747	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:34pm	C Gray	SHAD41 G.ssf
4089	-121.2677959	37.82739977	6339936.416	2124650.739	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	91,644	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:36pm	C Gray	SHAD41 G.ssf
4090	-121.2677828	37.82738233	6339932.632	2124644.419	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	116,549	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:40pm	C Gray	SHAD41 G.ssf
4091	-121.2677907	37.82737332	6339930.33	2124641.154	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	143,394	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:42pm	C Gray	SHAD41 G.ssf
4092	-121.2678024	37.82737144	6339926.961	2124640.498	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	103,117	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:44pm	C Gray	SHAD41 G.ssf
4093	-121.2678158	37.82737541	6339923.102	2124641.977	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	82,790	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:46pm	C Gray	SHAD41 G.ssf
4094	-121.2678323	37.82738094	6339918.349	2124644.027	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	73,322	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:48pm	C Gray	SHAD41 G.ssf
4095	-121.2678631	37.82739261	6339909.492	2124648.35	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	65,861	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:52pm	C Gray	SHAD41 G.ssf
4097	-121.2679095	37.82740724	6339896.116	2124653.786	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	76,321	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:40:58pm	C Gray	SHAD41 G.ssf
4098	-121.2679332	37.8274029	6339889.337	2124652.262	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,873	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:03pm	C Gray	SHAD41 G.ssf
4099	-121.2679446	37.827373245	6339885.89	2124641.202	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,267	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:09pm	C Gray	SHAD41 G.ssf
4100	-121.2679487	37.82735805	6339884.645	2124635.971	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,936	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:11pm	C Gray	SHAD41 G.ssf
4101	-121.2679514	37.82735019	6339883.858	2124633.113	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,026	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:14pm	C Gray	SHAD41 G.ssf
4102	-121.2679534	37.82734667	6339883.272	2124631.837	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,536	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:16pm	C Gray	SHAD41 G.ssf
4103	-121.2679534	37.82734637	6339883.272	2124631.728	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,281	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:17pm	C Gray	SHAD41 G.ssf
4104	-121.2679534	37.82734601	6339883.272	2124631.598	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,636	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:19pm	C Gray	SHAD41 G.ssf
4105	-121.2679528	37.82734652	6339883.448	2124631.781	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,602	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:21pm	C Gray	SHAD41 G.ssf
4106	-121.2679526	37.82734696	6339883.499	2124631.939	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,640	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:24pm	C Gray	SHAD41 G.ssf
4107	-121.2679525	37.8273471	6339883.552	2124631.992	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,534	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:25pm	C Gray	SHAD41 G.ssf
4108	-121.2679524	37.82734697	6339883.555	2124631.945	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,258	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:27pm	C Gray	SHAD41 G.ssf
4109	-121.2679519	37.82734673	6339883.69	2124631.857	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,374	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:29pm	C Gray	SHAD41 G.ssf
4110	-121.2679524	37.82734588	6339883.56	2124631.548	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,386	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:32pm	C Gray	SHAD41 G.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
4111	-121.2679519	37.82734633	6339883.703	2124631.708	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,822	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:34pm	C Gray	SHAD41 G.ssf
4112	-121.2679514	37.82734696	6339883.839	2124631.937	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,706	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:35pm	C Gray	SHAD41 G.ssf
4113	-121.2679513	37.82734713	6339883.886	2124632	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,204	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:38pm	C Gray	SHAD41 G.ssf
4114	-121.2679511	37.82734856	6339883.938	2124632.519	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,392	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:40pm	C Gray	SHAD41 G.ssf
4115	-121.2679519	37.8273519	6339883.72	2124633.738	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,921	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:42pm	C Gray	SHAD41 G.ssf
4116	-121.2679518	37.8273457	6339883.714	2124631.481	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,851	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:44pm	C Gray	SHAD41 G.ssf
4117	-121.2679546	37.82732546	6339882.632	2124624.119	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,421	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:48pm	C Gray	SHAD41 G.ssf
4118	-121.267955	37.82731428	6339882.717	2124620.046	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,870	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:50pm	C Gray	SHAD41 G.ssf
4119	-121.2679564	37.82730482	6339882.276	2124616.608	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,890	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:51pm	C Gray	SHAD41 G.ssf
4120	-121.2679596	37.8272914	6339881.316	2124611.728	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,381	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:54pm	C Gray	SHAD41 G.ssf
4121	-121.2679639	37.82728101	6339880.031	2124607.953	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,253	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:41:55pm	C Gray	SHAD41 G.ssf
4122	-121.2679657	37.827274002	6339875.628	2124593.065	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,710	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:02pm	C Gray	SHAD41 G.ssf
4123	-121.2679787	37.8272683	6339877.33	2124597.973	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,777	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:00pm	C Gray	SHAD41 G.ssf
4124	-121.2679825	37.82725354	6339877.33	2124597.973	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,710	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:02pm	C Gray	SHAD41 G.ssf
4125	-121.2679825	37.82722747	6339874.5	2124588.505	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,172	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:04pm	C Gray	SHAD41 G.ssf
4126	-121.2679856	37.82721632	6339873.579	2124584.453	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,042	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:06pm	C Gray	SHAD41 G.ssf
4127	-121.2679935	37.82720832	6339871.265	2124581.556	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,895	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:08pm	C Gray	SHAD41 G.ssf
4128	-121.2680029	37.82720993	6339862.771	2124582.215	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,711	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:12pm	C Gray	SHAD41 G.ssf
4129	-121.2680372	37.82721501	6339858.674	2124584.095	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,404	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:13pm	C Gray	SHAD41 G.ssf
4130	-121.2680458	37.82722791	6339856.214	2124588.813	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,151	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:16pm	C Gray	SHAD41 G.ssf
4131	-121.2680508	37.8272401	6339854.948	2124597.236	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,295	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:18pm	C Gray	SHAD41 G.ssf
4132	-121.2680509	37.82726592	6339854.868	2124602.667	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,126	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:22pm	C Gray	SHAD41 G.ssf
4133	-121.2680552	37.82727272	6339853.662	2124606.783	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,340	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:23pm	C Gray	SHAD41 G.ssf
4134	-121.2680557	37.82729083	6339853.551	2124611.749	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,059	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:26pm	C Gray	SHAD41 G.ssf
4135	-121.2680564	37.82730465	6339853.393	2124616.78	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,935	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:28pm	C Gray	SHAD41 G.ssf
4137	-121.2680587	37.8273185	6339852.766	2124621.831	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,882	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:30pm	C Gray	SHAD41 G.ssf
4138	-121.2680574	37.8273288	6339853.177	2124625.576	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,919	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:31pm	C Gray	SHAD41 G.ssf
4139	-121.2680601	37.82734106	6339852.421	2124630.046	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,980	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:33pm	C Gray	SHAD41 G.ssf
4140	-121.2680599	37.82735646	6339852.548	2124635.656	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,230	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:36pm	C Gray	SHAD41 G.ssf
4141	-121.2680611	37.82736988	6339852.223	2124640.545	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,286	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:37pm	C Gray	SHAD41 G.ssf
4142	-121.2680646	37.82738458	6339851.252	2124645.906	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,520	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:40pm	C Gray	SHAD41 G.ssf
4143	-121.2680645	37.8273921	6339851.326	2124648.643	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,018	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:41pm	C Gray	SHAD41 G.ssf
4144	-121.2680663	37.82741025	6339850.691	2124655.255	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,155	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:46pm	C Gray	SHAD41 G.ssf
4145	-121.2680648	37.82742409	6339851.463	2124660.289	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,522	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:48pm	C Gray	SHAD41 G.ssf
4146	-121.2680666	37.82746357	6339851.089	2124674.668	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,524	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:53pm	C Gray	SHAD41 G.ssf
4147	-121.2680646	37.82747694	6339851.525	2124679.535	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,067	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:55pm	C Gray	SHAD41 G.ssf
4148	-121.2680618	37.82749359	6339852.391	2124685.591	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,431	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:58pm	C Gray	SHAD41 G.ssf
4149	-121.2680599	37.82750439	6339852.987	2124689.517	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,945	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:42:59pm	C Gray	SHAD41 G.ssf
4150	-121.2680547	37.82753385	6339886.055	2124699.973	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,056	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:19pm	C Gray	SHAD41 G.ssf
4151	-121.2678933	37.8275201	6339901.141	2124694.844	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,674	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:26pm	C Gray	SHAD41 G.ssf
4152	-121.2678652	37.82750801	6339909.208	2124690.373	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,579	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:29pm	C Gray	SHAD41 G.ssf
4153	-121.2678467	37.82750288	6339914.535	2124688.464	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,495	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:32pm	C Gray	SHAD41 G.ssf
4154	-121.2678312	37.82749996	6339919.619	2124687.363	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,033	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:33pm	C Gray	SHAD41 G.ssf
4155	-121.267815	37.82749403	6339923.071	2124685.166	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,922	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:35pm	C Gray	SHAD41 G.ssf
4156	-121.2677994	37.82748942	6339928.165	2124683.448	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,867	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:37pm	C Gray	SHAD41 G.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4157	-121.2677813	37.82748359	6339933.388	2124681.282	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,291	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:40pm	C Gray	SHAD41 G.ssf
4158	-121.2677691	37.82747867	6339936.897	2124679.465	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,119	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:41pm	C Gray	SHAD41 G.ssf
4159	-121.2677531	37.82747531	6339942.05	2124678.196	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,507	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:44pm	C Gray	SHAD41 G.ssf
4160	-121.267736	37.82747178	6339946.432	2124676.876	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,671	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:46pm	C Gray	SHAD41 G.ssf
4161	-121.2677259	37.82746788	6339949.331	2124675.431	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,789	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:48pm	C Gray	SHAD41 G.ssf
4162	-121.2677392	37.82746502	6339945.481	2124674.422	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,228	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:52pm	C Gray	SHAD41 G.ssf
4163	-121.2677526	37.82746815	6339941.624	2124675.592	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,379	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:53pm	C Gray	SHAD41 G.ssf
4164	-121.2677667	37.82747321	6339937.577	2124671.468	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,854	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:55pm	C Gray	SHAD41 G.ssf
4165	-121.2677787	37.82747478	6339934.119	2124679.242	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,417	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:43:57pm	C Gray	SHAD41 G.ssf
4166	-121.2677959	37.82748338	6339929.152	2124681.243	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,904	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:00pm	C Gray	SHAD41 G.ssf
4167	-121.2678124	37.82748742	6339924.482	2124682.753	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,542	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:02pm	C Gray	SHAD41 G.ssf
4168	-121.2678274	37.82749041	6339920.088	2124683.876	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,996	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:03pm	C Gray	SHAD41 G.ssf
4169	-121.267858	37.8275011	6339911.28	2124687.841	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,810	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:07pm	C Gray	SHAD41 G.ssf
4170	-121.2678764	37.82750705	6339905.979	2124690.05	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,422	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:10pm	C Gray	SHAD41 G.ssf
4171	-121.2678938	37.82751145	6339900.956	2124691.693	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,625	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:12pm	C Gray	SHAD41 G.ssf
4172	-121.2679081	37.82751523	6339896.863	2124693.105	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,456	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:13pm	C Gray	SHAD41 G.ssf
4173	-121.2679255	37.82752193	6339891.844	2124695.584	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,546	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:16pm	C Gray	SHAD41 G.ssf
4174	-121.2679377	37.8275263	6339888.341	2124697.207	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,839	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:17pm	C Gray	SHAD41 G.ssf
4175	-121.2679528	37.82752924	6339883.969	2124698.312	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,354	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:20pm	C Gray	SHAD41 G.ssf
4176	-121.2679689	37.82753306	6339879.332	2124699.743	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,359	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:22pm	C Gray	SHAD41 G.ssf
4177	-121.2679988	37.82753816	6339875.643	2124701.629	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,406	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:23pm	C Gray	SHAD41 G.ssf
4178	-121.2679847	37.82754272	6339870.769	2124703.331	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,008	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:26pm	C Gray	SHAD41 G.ssf
4179	-121.2680295	37.82754989	6339861.888	2124706.013	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,730	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:29pm	C Gray	SHAD41 G.ssf
4180	-121.2680381	37.82754519	6339859.382	2124704.323	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,028	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:31pm	C Gray	SHAD41 G.ssf
4181	-121.2680484	37.82751917	6339856.338	2124694.872	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,784	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:35pm	C Gray	SHAD41 G.ssf
4182	-121.2680485	37.82749111	6339856.277	2124684.652	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,206	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:39pm	C Gray	SHAD41 G.ssf
4183	-121.2680532	37.8274633	6339854.714	2124674.54	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	57,045	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:43pm	C Gray	SHAD41 G.ssf
4184	-121.2680533	37.8274517	6339854.714	2124670.316	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	57,132	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:45pm	C Gray	SHAD41 G.ssf
4185	-121.2680514	37.82742163	6339855.196	2124659.362	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,121	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:50pm	C Gray	SHAD41 G.ssf
4186	-121.2680507	37.8274078	6339855.354	2124654.327	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,653	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:53pm	C Gray	SHAD41 G.ssf
4187	-121.2680513	37.82739552	6339855.14	2124649.856	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,885	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:44:53pm	C Gray	SHAD41 G.ssf
4188	-121.2680485	37.82735246	6339855.817	2124634.169	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,996	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:00pm	C Gray	SHAD41 G.ssf
4189	-121.2680461	37.82733949	6339856.477	2124629.443	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,845	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:02pm	C Gray	SHAD41 G.ssf
4190	-121.2680445	37.82733229	6339856.919	2124627.039	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,721	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:03pm	C Gray	SHAD41 G.ssf
4191	-121.2680435	37.82731105	6339857.123	2124619.083	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,337	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:06pm	C Gray	SHAD41 G.ssf
4192	-121.2680417	37.82729596	6339857.619	2124613.583	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,258	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:08pm	C Gray	SHAD41 G.ssf
4193	-121.2680375	37.82728569	6339858.802	2124609.834	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,367	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:09pm	C Gray	SHAD41 G.ssf
4194	-121.2680379	37.82726986	6339858.621	2124604.068	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,766	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:11pm	C Gray	SHAD41 G.ssf
4195	-121.2680356	37.82725821	6339859.26	2124599.822	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,159	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:13pm	C Gray	SHAD41 G.ssf
4196	-121.2680364	37.82724288	6339858.973	2124594.242	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,523	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:15pm	C Gray	SHAD41 G.ssf
4197	-121.2680363	37.82722753	6339858.975	2124588.653	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,063	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:18pm	C Gray	SHAD41 G.ssf
4198	-121.2680361	37.82721951	6339859	2124585.731	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,751	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:19pm	C Gray	SHAD41 G.ssf
4199	-121.2680337	37.82721633	6339859.695	2124584.57	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,212	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:21pm	C Gray	SHAD41 G.ssf
4200	-121.2680342	37.82722443	6339859.563	2124587.519	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,211	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:23pm	C Gray	SHAD41 G.ssf
4201	-121.2680361	37.82724028	6339859.052	2124593.295	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,418	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:26pm	C Gray	SHAD41 G.ssf
4202	-121.2680365	37.8272503	6339858.977	2124596.946	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,358	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:27pm	C Gray	SHAD41 G.ssf

ID	Longitude	Latitude	Eastng	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4203	-121.2680385	37.82726655	6339858.455	2124602.865	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,966	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:29pm	C Gray	SHAD41 G.ssf
4204	-121.2680403	37.82727837	6339857.961	2124607.175	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,246	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:31pm	C Gray	SHAD41 G.ssf
4205	-121.2680411	37.82729475	6339857.782	2124613.139	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,132	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:33pm	C Gray	SHAD41 G.ssf
4206	-121.2680432	37.82731	6339857.219	2124618.698	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,226	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:36pm	C Gray	SHAD41 G.ssf
4207	-121.2680451	37.82731977	6339856.706	2124622.259	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,467	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:37pm	C Gray	SHAD41 G.ssf
4208	-121.2680457	37.82733337	6339856.57	2124627.334	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,906	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:39pm	C Gray	SHAD41 G.ssf
4209	-121.2680466	37.82734451	6339856.337	2124631.273	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,859	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:41pm	C Gray	SHAD41 G.ssf
4210	-121.2680502	37.82736005	6339855.968	2124636.937	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,253	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:44pm	C Gray	SHAD41 G.ssf
4211	-121.2680503	37.82737319	6339855.372	2124641.721	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,324	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:46pm	C Gray	SHAD41 G.ssf
4212	-121.2680527	37.82738305	6339854.689	2124645.318	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,478	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:47pm	C Gray	SHAD41 G.ssf
4213	-121.2680552	37.82739319	6339854.918	2124649.01	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,525	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:49pm	C Gray	SHAD41 G.ssf
4214	-121.2680567	37.82740357	6339855.068	2124654.608	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,734	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:51pm	C Gray	SHAD41 G.ssf
4215	-121.2680536	37.82742027	6339854.552	2124659.527	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,265	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:53pm	C Gray	SHAD41 G.ssf
4216	-121.2680538	37.82743448	6339854.518	2124664.049	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,828	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:55pm	C Gray	SHAD41 G.ssf
4217	-121.2680523	37.82744879	6339855.002	2124669.257	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,644	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:45:58pm	C Gray	SHAD41 G.ssf
4218	-121.268054	37.82746368	6339854.551	2124674.681	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,411	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:00pm	C Gray	SHAD41 G.ssf
4219	-121.2680528	37.82747747	6339854.936	2124679.698	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,090	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:02pm	C Gray	SHAD41 G.ssf
4220	-121.2680497	37.82749056	6339855.883	2124684.459	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,298	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:04pm	C Gray	SHAD41 G.ssf
4221	-121.2680498	37.82750402	6339855.887	2124689.359	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,412	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:06pm	C Gray	SHAD41 G.ssf
4222	-121.2680456	37.82751557	6339857.134	2124693.555	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,746	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:07pm	C Gray	SHAD41 G.ssf
4223	-121.2680436	37.82753168	6339857.766	2124699.414	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,285	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:10pm	C Gray	SHAD41 G.ssf
4224	-121.2680395	37.82754416	6339860.273	2124703.317	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,678	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:12pm	C Gray	SHAD41 G.ssf
4225	-121.2680119	37.82754255	6339864.889	2124703.317	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,733	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:14pm	C Gray	SHAD41 G.ssf
4226	-121.2680004	37.82753866	6339869.235	2124701.863	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,295	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:15pm	C Gray	SHAD41 G.ssf
4227	-121.2679872	37.82753541	6339874.065	2124700.642	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,081	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:18pm	C Gray	SHAD41 G.ssf
4228	-121.2679797	37.82753009	6339877.006	2124698.68	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,963	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:19pm	C Gray	SHAD41 G.ssf
4229	-121.2679581	37.82752729	6339882.443	2124697.613	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,466	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:22pm	C Gray	SHAD41 G.ssf
4230	-121.2679445	37.82752395	6339886.352	2124696.366	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,141	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:23pm	C Gray	SHAD41 G.ssf
4231	-121.2679269	37.82751919	6339891.43	2124694.591	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,549	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:25pm	C Gray	SHAD41 G.ssf
4232	-121.2679105	37.82751395	6339896.147	2124692.646	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,087	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:27pm	C Gray	SHAD41 G.ssf
4233	-121.267893	37.82750779	6339901.181	2124690.362	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,935	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:30pm	C Gray	SHAD41 G.ssf
4234	-121.2678752	37.82750317	6339906.307	2124688.635	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,912	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:32pm	C Gray	SHAD41 G.ssf
4235	-121.2678627	37.82749752	6339909.914	2124686.548	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,778	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:33pm	C Gray	SHAD41 G.ssf
4236	-121.2678483	37.82749284	6339914.053	2124684.81	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,815	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:35pm	C Gray	SHAD41 G.ssf
4237	-121.2678429	37.8274896	6339919.631	2124683.586	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,930	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:37pm	C Gray	SHAD41 G.ssf
4238	-121.2678151	37.82748279	6339923.608	2124681.072	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,414	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:40pm	C Gray	SHAD41 G.ssf
4239	-121.2677985	37.82747878	6339928.39	2124679.575	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,455	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:42pm	C Gray	SHAD41 G.ssf
4240	-121.2677822	37.82747438	6339933.075	2124677.934	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,817	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:44pm	C Gray	SHAD41 G.ssf
4241	-121.2677653	37.82747002	6339937.953	2124676.305	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,698	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:46pm	C Gray	SHAD41 G.ssf
4242	-121.267751	37.82746663	6339942.071	2124675.036	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,799	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:48pm	C Gray	SHAD41 G.ssf
4243	-121.2677374	37.82746337	6339945.988	2124673.817	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,115	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:49pm	C Gray	SHAD41 G.ssf
4244	-121.2677315	37.82745497	6339947.672	2124670.744	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,192	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:51pm	C Gray	SHAD41 G.ssf
4245	-121.267742	37.82745243	6339944.642	2124669.846	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,146	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:53pm	C Gray	SHAD41 G.ssf
4246	-121.2677588	37.82745486	6339939.776	2124670.771	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,021	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:55pm	C Gray	SHAD41 G.ssf
4247	-121.267737	37.82746076	6339935.508	2124672.954	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,922	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:57pm	C Gray	SHAD41 G.ssf
4248	-121.2677911	37.827465	6339930.477	2124674.54	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,699	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:46:59pm	C Gray	SHAD41 G.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
4249	-121.2678072	37.82747031	6339925.85	2124676.508	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,089	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:04pm	C Gray	SHAD41 G.ssf
4250	-121.2678232	37.82747805	6339921.254	2124679.365	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,270	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:04pm	C Gray	SHAD41 G.ssf
4251	-121.2678336	37.82748252	6339917.587	2124681.024	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,818	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:05pm	C Gray	SHAD41 G.ssf
4252	-121.2678545	37.82748613	6339912.234	2124682.381	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,084	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:08pm	C Gray	SHAD41 G.ssf
4253	-121.2678702	37.82749155	6339907.74	2124684.393	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,069	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:10pm	C Gray	SHAD41 G.ssf
4254	-121.2678861	37.8274958	6339903.155	2124685.979	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,990	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:11pm	C Gray	SHAD41 G.ssf
4255	-121.2679005	37.82750033	6339899.009	2124687.661	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,900	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:13pm	C Gray	SHAD41 G.ssf
4256	-121.2679177	37.82750538	6339894.045	2124689.54	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,585	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:16pm	C Gray	SHAD41 G.ssf
4257	-121.2679344	37.82751071	6339889.255	2124691.523	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,013	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:18pm	C Gray	SHAD41 G.ssf
4258	-121.2679514	37.8275143	6339884.348	2124692.869	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,972	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:19pm	C Gray	SHAD41 G.ssf
4259	-121.2679671	37.82751899	6339879.834	2124694.612	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,807	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:21pm	C Gray	SHAD41 G.ssf
4260	-121.2679831	37.82752488	6339875.207	2124696.795	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,167	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:24pm	C Gray	SHAD41 G.ssf
4261	-121.2679999	37.8275271	6339870.364	2124697.643	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,504	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:25pm	C Gray	SHAD41 G.ssf
4262	-121.2680126	37.82753239	6339866.728	2124699.602	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,754	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:27pm	C Gray	SHAD41 G.ssf
4263	-121.2680219	37.82753703	6339864.037	2124698.888	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,535	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:29pm	C Gray	SHAD41 G.ssf
4264	-121.2680332	37.82754204	6339860.721	2124695.285	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,360	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:32pm	C Gray	SHAD41 G.ssf
4265	-121.2680407	37.82754875	6339858.525	2124691.06	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,077	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:34pm	C Gray	SHAD41 G.ssf
4266	-121.2680434	37.82749836	6339857.738	2124687.284	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,816	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:35pm	C Gray	SHAD41 G.ssf
4267	-121.2680421	37.82748442	6339858.051	2124682.206	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,920	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:37pm	C Gray	SHAD41 G.ssf
4268	-121.2680432	37.82747347	6339857.703	2124678.221	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,831	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:39pm	C Gray	SHAD41 G.ssf
4269	-121.2680437	37.82746245	6339857.52	2124674.208	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,751	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:41pm	C Gray	SHAD41 G.ssf
4270	-121.2680443	37.82744741	6339857.68	2124668.729	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,925	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:44pm	C Gray	SHAD41 G.ssf
4271	-121.2680409	37.82743329	6339858.269	2124664.314	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,050	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:45pm	C Gray	SHAD41 G.ssf
4272	-121.2680394	37.82742095	6339858.657	2124659.089	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,600	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:47pm	C Gray	SHAD41 G.ssf
4273	-121.2680412	37.82740941	6339858.102	2124654.892	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,520	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:49pm	C Gray	SHAD41 G.ssf
4274	-121.2680402	37.82739621	6339858.337	2124650.082	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,503	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:51pm	C Gray	SHAD41 G.ssf
4275	-121.26804	37.82738423	6339858.37	2124645.718	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,638	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:53pm	C Gray	SHAD41 G.ssf
4276	-121.2680391	37.82736682	6339858.57	2124639.377	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,915	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:56pm	C Gray	SHAD41 G.ssf
4277	-121.2680371	37.82735427	6339859.125	2124634.803	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,317	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:57pm	C Gray	SHAD41 G.ssf
4278	-121.2680344	37.82733896	6339859.858	2124629.223	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,772	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:47:59pm	C Gray	SHAD41 G.ssf
4279	-121.2680343	37.82732674	6339859.847	2124624.772	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,562	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:01pm	C Gray	SHAD41 G.ssf
4280	-121.2680313	37.82731126	6339860.672	2124619.129	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,490	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:04pm	C Gray	SHAD41 G.ssf
4281	-121.2680292	37.8272974	6339861.237	2124614.077	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,002	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:06pm	C Gray	SHAD41 G.ssf
4282	-121.2680287	37.82728536	6339861.338	2124609.694	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,823	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:07pm	C Gray	SHAD41 G.ssf
4283	-121.2680264	37.82727017	6339861.945	2124604.157	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,305	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:09pm	C Gray	SHAD41 G.ssf
4284	-121.2680271	37.82725641	6339861.702	2124599.148	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,074	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:11pm	C Gray	SHAD41 G.ssf
4285	-121.2680257	37.82724102	6339862.063	2124593.54	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,105	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:13pm	C Gray	SHAD41 G.ssf
4286	-121.2680281	37.82722873	6339861.17	2124589.073	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,911	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:15pm	C Gray	SHAD41 G.ssf
4287	-121.2680285	37.82721417	6339861.17	2124583.769	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,205	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:17pm	C Gray	SHAD41 G.ssf
4288	-121.2680277	37.82720777	6339861.973	2124581.433	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,132	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:19pm	C Gray	SHAD41 G.ssf
4289	-121.2680204	37.82721572	6339863.52	2124584.317	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,595	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:22pm	C Gray	SHAD41 G.ssf
4290	-121.2680233	37.82722913	6339862.73	2124589.205	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,942	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:24pm	C Gray	SHAD41 G.ssf
4291	-121.2680227	37.82723919	6339862.94	2124592.868	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,901	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:25pm	C Gray	SHAD41 G.ssf
4292	-121.2680273	37.82725439	6339862.505	2124598.406	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,607	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:27pm	C Gray	SHAD41 G.ssf
4293	-121.2680243	37.8272665	6339861.68	2124602.822	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,240	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:29pm	C Gray	SHAD41 G.ssf
4294	-121.2680309	37.82728006	6339860.695	2124607.768	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,359	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:31pm	C Gray	SHAD41 G.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile	
4295	-121.2680323	37.82729366	6339860.31	2124612.724	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,812	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:33pm	C Gray	SHAD41 G.ssf	
4296	-121.2680311	37.82730551	6339860.713	2124617.034	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,753	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:35pm	C Gray	SHAD41 G.ssf	
4297	-121.2680333	37.82732105	6339860.118	2124622.699	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,948	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:38pm	C Gray	SHAD41 G.ssf	
4298	-121.2680372	37.827332	6339859.029	2124626.695	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,116	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:39pm	C Gray	SHAD41 G.ssf	
4299	-121.2680395	37.8273453	6339858.398	2124631.541	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,844	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:41pm	C Gray	SHAD41 G.ssf	
4300	-121.2680387	37.82736055	6339858.666	2124637.093	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,292	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:44pm	C Gray	SHAD41 G.ssf	
4301	-121.2680403	37.82737203	6339858.231	2124641.276	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,329	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:45pm	C Gray	SHAD41 G.ssf	
4302	-121.2680431	37.82738775	6339857.488	2124647.008	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,417	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:47pm	C Gray	SHAD41 G.ssf	
4303	-121.2680435	37.82740196	6339857.398	2124652.181	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,095	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:49pm	C Gray	SHAD41 G.ssf	
4304	-121.2680437	37.82741706	6339857.394	2124657.68	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,392	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:51pm	C Gray	SHAD41 G.ssf	
4305	-121.2680447	37.82743111	6339857.156	2124662.799	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,739	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:53pm	C Gray	SHAD41 G.ssf	
4306	-121.2680454	37.82744843	6339856.988	2124669.107	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,538	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:55pm	C Gray	SHAD41 G.ssf	
4307	-121.2680438	37.82746279	6339857.495	2124674.332	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,217	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:57pm	C Gray	SHAD41 G.ssf	
4308	-121.2680479	37.82747703	6339856.353	2124679.527	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,744	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:48:59pm	C Gray	SHAD41 G.ssf	
4309	-121.26804	37.82749463	6339858.697	2124685.917	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,322	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:02pm	C Gray	SHAD41 G.ssf	
4310	-121.2680362	37.82750864	6339859.842	2124691.009	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,294	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:04pm	C Gray	SHAD41 G.ssf	
4311	-121.2680335	37.82752024	6339860.657	2124695.226	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,596	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:05pm	C Gray	SHAD41 G.ssf	
4312	-121.2680238	37.82752816	6339863.475	2124698.087	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,398	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:07pm	C Gray	SHAD41 G.ssf	
4313	-121.2680109	37.82752969	6339867.2	2124698.614	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,765	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:09pm	C Gray	SHAD41 G.ssf	
4314	-121.2679889	37.82752581	6339873.244	2124697.152	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,982	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:12pm	C Gray	SHAD41 G.ssf	
4315	-121.2679783	37.82752187	6339876.589	2124695.629	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,714	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:13pm	C Gray	SHAD41 G.ssf	
4316	-121.2679598	37.82751558	6339881.914	2124693.356	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,308	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:15pm	C Gray	SHAD41 G.ssf	
4317	-121.2679442	37.82751188	6339886.415	2124691.972	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,338	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:17pm	C Gray	SHAD41 G.ssf	
4318	-121.2679286	37.82750738	6339890.895	2124690.294	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,129	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:19pm	C Gray	SHAD41 G.ssf	
4319	-121.2679126	37.82750181	6339895.502	2124688.226	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,113	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:21pm	C Gray	SHAD41 G.ssf	
4320	-121.2678962	37.82749532	6339900.225	2124686.828	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,863	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:23pm	C Gray	SHAD41 G.ssf	
4321	-121.2678794	37.82749025	6339905.067	2124683.942	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,510	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:25pm	C Gray	SHAD41 G.ssf	
4322	-121.2678627	37.82748696	6339909.875	2124682.705	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,226	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:27pm	C Gray	SHAD41 G.ssf	
4323	-121.2678458	37.82748082	6339914.727	2124680.429	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,888	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:29pm	C Gray	SHAD41 G.ssf	
4324	-121.2678301	37.82747676	6339919.256	2124678.913	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,217	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:31pm	C Gray	SHAD41 G.ssf	
4325	-121.2678095	37.82747188	6339925.209	2124677.088	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,660	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:36pm	C Gray	SHAD41 G.ssf	
4326	-121.2677928	37.82746842	6339929.999	2124675.786	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,353	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:37pm	C Gray	SHAD41 G.ssf	
4327	-121.2677782	37.82746141	6339934.214	2124673.199	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,590	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:39pm	C Gray	SHAD41 G.ssf	
4328	-121.2677628	37.82745768	6339938.633	2124671.806	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,196	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:42pm	C Gray	SHAD41 G.ssf	
4329	-121.2677473	37.82745199	6339943.097	2124669.698	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,878	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:43pm	C Gray	SHAD41 G.ssf	
4330	-121.2677502	37.82744666	6339942.263	2124667.762	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,945	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:46pm	C Gray	SHAD41 G.ssf	
4331	-121.2677573	37.82744384	6339940.177	2124666.754	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,378	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:48pm	C Gray	SHAD41 G.ssf	
4332	-121.2677177	37.82744673	6339936.036	2124667.84	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,229	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:49pm	C Gray	SHAD41 G.ssf	
4333	-121.2677881	37.82745212	6339931.302	2124669.84	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,763	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:51pm	C Gray	SHAD41 G.ssf	
4334	-121.2678027	37.82745604	6339927.125	2124671.302	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,778	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:54pm	C Gray	SHAD41 G.ssf	
4335	-121.2678194	37.82745985	6339922.299	2124672.729	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,821	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:56pm	C Gray	SHAD41 G.ssf	
4336	-121.2678344	37.8274667	6339917.999	2124675.259	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,716	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:57pm	C Gray	SHAD41 G.ssf	
4337	-121.2678478	37.82747199	6339914.135	2124677.217	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,422	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:49:59pm	C Gray	SHAD41 G.ssf	
4338	-121.2678652	37.82747616	6339908.918	2124678.728	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,258	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:01pm	C Gray	SHAD41 G.ssf	
4339	-121.2678819	37.82748085	6339904.519	2124680.522	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,262	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:04pm	C Gray	SHAD41 G.ssf	
4340	-121.2679011	37.8274866	6339898.789	2124682.662	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017		Geo 7X	Real-time SBAS Corrected	10/3/2017				

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4341	-121.2679152	37.82749083	6339894.723	2124684.239	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,983	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:05pm	C Gray	SHAD41 G.ssf
4342	-121.2679352	37.82749573	6339889.907	2124686.062	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,259	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:07pm	C Gray	SHAD41 G.ssf
4343	-121.2679545	37.82750162	6339883.417	2124688.26	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,579	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:10pm	C Gray	SHAD41 G.ssf
4344	-121.2679714	37.82750751	6339878.549	2124690.446	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,894	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:12pm	C Gray	SHAD41 G.ssf
4345	-121.2679873	37.82751006	6339873.962	2124691.41	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,411	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:13pm	C Gray	SHAD41 G.ssf
4346	-121.2680028	37.82751175	6339869.594	2124692.063	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,682	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:15pm	C Gray	SHAD41 G.ssf
4347	-121.2680051	37.82750577	6339865.92	2124689.914	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,324	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:17pm	C Gray	SHAD41 G.ssf
4348	-121.2680199	37.82749164	6339864.506	2124684.781	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,519	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:20pm	C Gray	SHAD41 G.ssf
4349	-121.2680199	37.82747658	6339864.454	2124679.296	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,253	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:22pm	C Gray	SHAD41 G.ssf
4350	-121.2680218	37.82746398	6339863.858	2124674.712	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,850	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:24pm	C Gray	SHAD41 G.ssf
4351	-121.2680021	37.82745233	6339864.064	2124670.468	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,672	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:25pm	C Gray	SHAD41 G.ssf
4352	-121.2680204	37.82743521	6339864.18	2124664.236	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,072	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:28pm	C Gray	SHAD41 G.ssf
4353	-121.2680196	37.82742173	6339864.356	2124659.323	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,405	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:30pm	C Gray	SHAD41 G.ssf
4354	-121.2680169	37.82740685	6339865.094	2124653.901	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,864	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:31pm	C Gray	SHAD41 G.ssf
4355	-121.2680191	37.82739631	6339864.445	2124650.068	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,479	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:33pm	C Gray	SHAD41 G.ssf
4356	-121.2680193	37.8273802	6339864.334	2124644.202	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,218	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:35pm	C Gray	SHAD41 G.ssf
4357	-121.2680153	37.82736446	6339865.446	2124638.461	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,760	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:38pm	C Gray	SHAD41 G.ssf
4358	-121.2680139	37.82734985	6339865.799	2124633.137	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,243	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:40pm	C Gray	SHAD41 G.ssf
4359	-121.2680156	37.82733701	6339865.276	2124628.466	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,860	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:41pm	C Gray	SHAD41 G.ssf
4360	-121.2680151	37.82732274	6339865.369	2124623.271	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,995	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:43pm	C Gray	SHAD41 G.ssf
4361	-121.2680118	37.82730859	6339865.904	2124618.112	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,115	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:45pm	C Gray	SHAD41 G.ssf
4362	-121.2680118	37.82729391	6339866.229	2124612.764	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,214	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:47pm	C Gray	SHAD41 G.ssf
4363	-121.2680124	37.82727983	6339866.033	2124607.64	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,648	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:49pm	C Gray	SHAD41 G.ssf
4364	-121.2680093	37.82726494	6339866.861	2124602.211	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,963	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:51pm	C Gray	SHAD41 G.ssf
4365	-121.2680103	37.82724914	6339866.551	2124596.46	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,943	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:54pm	C Gray	SHAD41 G.ssf
4366	-121.2680109	37.82723497	6339866.031	2124591.303	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,601	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:55pm	C Gray	SHAD41 G.ssf
4367	-121.2680096	37.82721941	6339866.641	2124585.635	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,962	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:57pm	C Gray	SHAD41 G.ssf
4368	-121.2680093	37.82720842	6339866.702	2124581.629	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,630	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:50:59pm	C Gray	SHAD41 G.ssf
4369	-121.2680044	37.82720904	6339868.113	2124581.845	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,877	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:01pm	C Gray	SHAD41 G.ssf
4370	-121.2680054	37.8272189	6339867.872	2124585.438	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,161	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:03pm	C Gray	SHAD41 G.ssf
4371	-121.2680067	37.82723028	6339867.519	2124589.583	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,679	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:05pm	C Gray	SHAD41 G.ssf
4372	-121.2680061	37.82724617	6339867.757	2124595.367	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,192	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:08pm	C Gray	SHAD41 G.ssf
4373	-121.2680087	37.82726047	6339867.021	2124600.582	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,030	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:09pm	C Gray	SHAD41 G.ssf
4374	-121.2680076	37.8272725	6339867.383	2124604.959	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,199	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:11pm	C Gray	SHAD41 G.ssf
4375	-121.2680105	37.82728758	6339866.594	2124610.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,391	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:13pm	C Gray	SHAD41 G.ssf
4376	-121.2680111	37.82730301	6339866.477	2124616.077	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,897	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:15pm	C Gray	SHAD41 G.ssf
4377	-121.2680125	37.82731998	6339866.117	2124622.261	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,090	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:17pm	C Gray	SHAD41 G.ssf
4378	-121.2680108	37.82733398	6339866.648	2124627.352	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,780	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:19pm	C Gray	SHAD41 G.ssf
4379	-121.2680110	37.82735088	6339866.614	2124633.505	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,598	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:21pm	C Gray	SHAD41 G.ssf
4380	-121.2680102	37.82736342	6339866.919	2124638.071	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,122	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:23pm	C Gray	SHAD41 G.ssf
4381	-121.2680125	37.82738198	6339866.298	2124644.835	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,859	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:26pm	C Gray	SHAD41 G.ssf
4382	-121.2680131	37.82739539	6339866.166	2124649.719	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,781	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:27pm	C Gray	SHAD41 G.ssf
4383	-121.2680165	37.82741155	6339865.222	2124655.611	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,622	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:29pm	C Gray	SHAD41 G.ssf
4384	-121.2680160	37.82742878	6339865.269	2124661.883	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,750	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:31pm	C Gray	SHAD41 G.ssf
4385	-121.2680169	37.82744829	6339865.218	2124668.988	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,972	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:34pm	C Gray	SHAD41 G.ssf
4386	-121.2680147	37.82746177	6339865.893	2124673.891	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,576	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:35pm	C Gray	SHAD41 G.ssf

ID	Longitude	Latitude	Eastng	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
4387	-121.26800134	37.827479382	6339866.341	2124680.462	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,315	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:38pm	C Gray	SHAD41 G.ssf
4388	-121.26800124	37.82749372	6339866.653	2124685.521	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,940	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:39pm	C Gray	SHAD41 G.ssf
4389	-121.26800104	37.82750604	6339869.135	2124689.984	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,640	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:41pm	C Gray	SHAD41 G.ssf
4390	-121.2679825	37.8275098	6339875.361	2124691.304	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,790	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:44pm	C Gray	SHAD41 G.ssf
4391	-121.2679675	37.82750726	6339879.661	2124690.342	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,079	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:45pm	C Gray	SHAD41 G.ssf
4392	-121.2679474	37.82750337	6339885.47	2124688.878	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,456	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:47pm	C Gray	SHAD41 G.ssf
4393	-121.2679277	37.82749347	6339891.134	2124688.955	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,569	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:49pm	C Gray	SHAD41 G.ssf
4394	-121.2679207	37.8274896	6339897.005	2124683.769	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,942	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:51pm	C Gray	SHAD41 G.ssf
4395	-121.2678908	37.82748165	6339901.733	2124680.836	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,909	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:53pm	C Gray	SHAD41 G.ssf
4396	-121.2678694	37.82747539	6339907.913	2124678.506	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,802	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:55pm	C Gray	SHAD41 G.ssf
4397	-121.267845	37.8274679	6339914.923	2124675.722	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,419	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:51:58pm	C Gray	SHAD41 G.ssf
4398	-121.2678257	37.82746215	6339920.502	2124673.583	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,628	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:00pm	C Gray	SHAD41 G.ssf
4399	-121.2678056	37.8274558	6339926.277	2124671.223	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,519	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:02pm	C Gray	SHAD41 G.ssf
4400	-121.2677877	37.82745112	6339931.431	2124669.477	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,826	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:03pm	C Gray	SHAD41 G.ssf
4401	-121.2677671	37.82744316	6339937.345	2124666.53	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,790	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:05pm	C Gray	SHAD41 G.ssf
4402	-121.2677557	37.82743574	6339940.621	2124663.802	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,740	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:07pm	C Gray	SHAD41 G.ssf
4403	-121.2677665	37.82742693	6339937.493	2124660.617	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,587	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:09pm	C Gray	SHAD41 G.ssf
4404	-121.2677845	37.82742879	6339932.277	2124661.339	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,313	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:11pm	C Gray	SHAD41 G.ssf
4405	-121.2678036	37.82743628	6339926.714	2124664.113	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,082	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:13pm	C Gray	SHAD41 G.ssf
4406	-121.2678216	37.82744283	6339921.629	2124666.537	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,173	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:15pm	C Gray	SHAD41 G.ssf
4407	-121.2678447	37.82744935	6339919.957	2124668.967	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,883	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:17pm	C Gray	SHAD41 G.ssf
4408	-121.2678634	37.82745311	6339909.586	2124670.379	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,898	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:19pm	C Gray	SHAD41 G.ssf
4409	-121.2678846	37.82745943	6339903.477	2124672.732	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,225	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:21pm	C Gray	SHAD41 G.ssf
4410	-121.2679069	37.82746727	6339897.067	2124675.638	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,342	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:24pm	C Gray	SHAD41 G.ssf
4411	-121.2679247	37.82747241	6339891.922	2124677.554	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,222	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:25pm	C Gray	SHAD41 G.ssf
4412	-121.2679453	37.82747761	6339885.994	2124679.494	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,324	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:27pm	C Gray	SHAD41 G.ssf
4413	-121.267966	37.82748428	6339880.046	2124681.974	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,326	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:29pm	C Gray	SHAD41 G.ssf
4414	-121.2679872	37.82748877	6339873.924	2124683.658	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,103	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:31pm	C Gray	SHAD41 G.ssf
4415	-121.2680015	37.82748763	6339869.807	2124683.277	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,611	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:33pm	C Gray	SHAD41 G.ssf
4416	-121.2680149	37.82747252	6339866.736	2124677.798	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,237	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:36pm	C Gray	SHAD41 G.ssf
4417	-121.2680159	37.82745776	6339865.846	2124672.432	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,237	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:37pm	C Gray	SHAD41 G.ssf
4418	-121.2680121	37.82744145	6339866.591	2124666.485	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,073	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:39pm	C Gray	SHAD41 G.ssf
4419	-121.2680102	37.82742246	6339867.075	2124659.57	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,468	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:41pm	C Gray	SHAD41 G.ssf
4420	-121.2680096	37.82740462	6339867.202	2124653.07	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,300	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:43pm	C Gray	SHAD41 G.ssf
4421	-121.26800101	37.82738619	6339867.015	2124646.361	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,322	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:45pm	C Gray	SHAD41 G.ssf
4422	-121.2680083	37.82736708	6339867.473	2124639.397	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,015	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:47pm	C Gray	SHAD41 G.ssf
4423	-121.2680079	37.82735263	6339867.538	2124634.135	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,372	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:49pm	C Gray	SHAD41 G.ssf
4424	-121.2680068	37.82733175	6339867.802	2124626.531	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,647	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:51pm	C Gray	SHAD41 G.ssf
4425	-121.2680058	37.82731435	6339867.734	2124620.194	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,207	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:53pm	C Gray	SHAD41 G.ssf
4426	-121.2680054	37.82729669	6339868.109	2124613.763	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,300	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:55pm	C Gray	SHAD41 G.ssf
4427	-121.2680055	37.82727956	6339868.016	2124607.525	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,737	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:57pm	C Gray	SHAD41 G.ssf
4428	-121.2680036	37.82726089	6339868.508	2124600.723	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,208	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:52:59pm	C Gray	SHAD41 G.ssf
4429	-121.2680042	37.82724404	6339868.277	2124594.589	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,222	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:01pm	C Gray	SHAD41 G.ssf
4430	-121.2680032	37.82722255	6339868.673	2124587.126	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,092	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:03pm	C Gray	SHAD41 G.ssf
4431	-121.2680036	37.82721035	6339868.467	2124582.32	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,016	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:05pm	C Gray	SHAD41 G.ssf
4432	-121.2679969	37.82721005	6339870.286	2124582.197	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,320	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:07pm	C Gray	SHAD41 G.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4433	-121.2679937	37.82722305	6339871.253	2124586.923	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,461	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:09pm	C Gray	SHAD41 G.ssf
4434	-121.2679937	37.82723948	6339871.238	2124592.904	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,211	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:11pm	C Gray	SHAD41 G.ssf
4435	-121.2679937	37.82725807	6339871.059	2124599.675	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,836	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:13pm	C Gray	SHAD41 G.ssf
4436	-121.2679938	37.82727549	6339870.796	2124606.02	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,774	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:15pm	C Gray	SHAD41 G.ssf
4437	-121.2679962	37.82729215	6339870.749	2124612.089	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,693	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:17pm	C Gray	SHAD41 G.ssf
4438	-121.2679963	37.82731073	6339870.757	2124618.854	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,123	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:19pm	C Gray	SHAD41 G.ssf
4439	-121.2679981	37.82732756	6339870.302	2124624.984	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,804	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:21pm	C Gray	SHAD41 G.ssf
4440	-121.2679962	37.82734558	6339870.907	2124631.579	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,906	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:23pm	C Gray	SHAD41 G.ssf
4441	-121.2679993	37.82736425	6339870.055	2124638.348	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,801	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:25pm	C Gray	SHAD41 G.ssf
4442	-121.2680009	37.82738484	6339869.654	2124645.85	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,751	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:28pm	C Gray	SHAD41 G.ssf
4443	-121.2680039	37.82740304	6339868.835	2124652.483	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,406	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:30pm	C Gray	SHAD41 G.ssf
4444	-121.2680038	37.82741903	6339868.929	2124658.304	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,866	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:31pm	C Gray	SHAD41 G.ssf
4445	-121.2680056	37.82744055	6339868.467	2124666.145	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,633	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:33pm	C Gray	SHAD41 G.ssf
4446	-121.2680061	37.82745666	6339868.377	2124672.01	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,387	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:35pm	C Gray	SHAD41 G.ssf
4447	-121.2680044	37.82747217	6339868.922	2124677.653	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,995	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:37pm	C Gray	SHAD41 G.ssf
4448	-121.2679936	37.82748981	6339872.071	2124684.053	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,336	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:39pm	C Gray	SHAD41 G.ssf
4449	-121.2679937	37.82749904	6339871.797	2124687.368	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,824	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:41pm	C Gray	SHAD41 G.ssf
4450	-121.2679529	37.82749704	6339883.864	2124686.589	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,003	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:43pm	C Gray	SHAD41 G.ssf
4451	-121.2679315	37.82748959	6339890.028	2124683.826	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,290	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:45pm	C Gray	SHAD41 G.ssf
4452	-121.2679937	37.82748406	6339896.296	2124681.759	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,587	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:47pm	C Gray	SHAD41 G.ssf
4453	-121.2678875	37.82747607	6339902.692	2124678.796	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,211	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:49pm	C Gray	SHAD41 G.ssf
4454	-121.2678653	37.82746834	6339909.072	2124675.932	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,649	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:51pm	C Gray	SHAD41 G.ssf
4455	-121.267846	37.82746215	6339914.621	2124673.631	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,857	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:53pm	C Gray	SHAD41 G.ssf
4456	-121.2678257	37.82745496	6339920.459	2124670.963	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,897	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:55pm	C Gray	SHAD41 G.ssf
4457	-121.2678029	37.82744588	6339927.031	2124667.605	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,824	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:58pm	C Gray	SHAD41 G.ssf
4458	-121.26743818	6339932.216	2124664.757	2124667.84	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,397	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:53:59pm	C Gray	SHAD41 G.ssf
4459	-121.2677683	37.82743193	6339936.982	2124662.442	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,427	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:01pm	C Gray	SHAD41 G.ssf
4460	-121.2677693	37.82741777	6339936.634	2124657.288	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,245	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:04pm	C Gray	SHAD41 G.ssf
4461	-121.267788	37.82741869	6339931.261	2124657.669	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,462	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:05pm	C Gray	SHAD41 G.ssf
4462	-121.2678064	37.82742674	6339925.951	2124660.644	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	149,443	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:07pm	C Gray	SHAD41 G.ssf
4463	-121.2678257	37.82743351	6339920.412	2124663.153	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	166,044	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:09pm	C Gray	SHAD41 G.ssf
4464	-121.2678458	37.82743396	6339914.625	2124665.42	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	130,300	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:11pm	C Gray	SHAD41 G.ssf
4465	-121.2678704	37.82744609	6339907.529	2124667.84	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	86,345	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:13pm	C Gray	SHAD41 G.ssf
4466	-121.2678899	37.82745382	6339901.913	2124670.7	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,882	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:15pm	C Gray	SHAD41 G.ssf
4467	-121.2679122	37.82746062	6339895.514	2124673.23	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,481	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:17pm	C Gray	SHAD41 G.ssf
4468	-121.2679378	37.82746948	6339888.148	2124676.518	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,196	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:19pm	C Gray	SHAD41 G.ssf
4469	-121.2679604	37.82747739	6339881.634	2124679.449	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,007	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:21pm	C Gray	SHAD41 G.ssf
4470	-121.2679796	37.82748214	6339876.114	2124681.225	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,555	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:23pm	C Gray	SHAD41 G.ssf
4471	-121.2679888	37.82748113	6339875.673	2124680.876	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,448	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:25pm	C Gray	SHAD41 G.ssf
4472	-121.2679793	37.82747445	6339877.976	2124678.412	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,603	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:27pm	C Gray	SHAD41 G.ssf
4473	-121.2679508	37.82746883	6339884.388	2124676.313	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,606	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:29pm	C Gray	SHAD41 G.ssf
4474	-121.267928	37.82746294	6339890.959	2124674.114	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,663	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:31pm	C Gray	SHAD41 G.ssf
4475	-121.2679809	37.82745649	6339896.878	2124671.717	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,010	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:33pm	C Gray	SHAD41 G.ssf
4476	-121.2679074	37.82744905	6339904.519	2124668.944	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,178	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:36pm	C Gray	SHAD41 G.ssf
4477	-121.267865	37.82744551	6339909.104	2124667.615	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,110	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:37pm	C Gray	SHAD41 G.ssf
4478	-121.2678364	37.82743675	6339917.328	2124664.361	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	96,334	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:40pm	C Gray	SHAD41 G.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datatile
4479	-121.26781174	37.82743143	6339922.808	2124662.378	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	104,179	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:41pm	C Gray	SHAD41 G.ssf
4480	-121.26779774	37.82742241	6339928.535	2124659.049	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	120,674	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:43pm	C Gray	SHAD41 G.ssf
4481	-121.26777173	37.82741816	6339934.331	2124657.446	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	146,162	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:45pm	C Gray	SHAD41 G.ssf
4482	-121.2677681	37.82740618	6339936.962	2124653.066	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	129,837	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:47pm	C Gray	SHAD41 G.ssf
4483	-121.2677889	37.8273998	6339930.942	2124650.794	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	144,817	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:49pm	C Gray	SHAD41 G.ssf
4484	-121.2678091	37.82740871	6339925.127	2124654.084	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	173,329	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:52pm	C Gray	SHAD41 G.ssf
4485	-121.2678281	37.82741517	6339919.496	2124656.482	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	155,671	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:53pm	C Gray	SHAD41 G.ssf
4486	-121.2678487	37.82742175	6339913.903	2124658.924	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	128,598	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:55pm	C Gray	SHAD41 G.ssf
4487	-121.2678697	37.82742897	6339907.689	2124661.605	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	116,175	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:57pm	C Gray	SHAD41 G.ssf
4488	-121.2678918	37.82743436	6339901.304	2124663.708	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	151,998	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:54:59pm	C Gray	SHAD41 G.ssf
4489	-121.2679107	37.82744136	6339895.889	2124666.214	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	114,674	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:01pm	C Gray	SHAD41 G.ssf
4490	-121.2679379	37.82744924	6339888.035	2124669.149	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	95,155	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:03pm	C Gray	SHAD41 G.ssf
4491	-121.2679577	37.82745635	6339882.343	2124671.784	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	70,823	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:05pm	C Gray	SHAD41 G.ssf
4492	-121.2679814	37.8274628	6339875.515	2124674.189	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	87,049	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:07pm	C Gray	SHAD41 G.ssf
4493	-121.2679982	37.82746401	6339870.662	2124674.667	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	73,897	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:09pm	C Gray	SHAD41 G.ssf
4494	-121.2679976	37.82745819	6339870.818	2124672.549	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	69,569	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:11pm	C Gray	SHAD41 G.ssf
4495	-121.2679791	37.82745174	6339876.153	2124670.157	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	65,177	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:13pm	C Gray	SHAD41 G.ssf
4496	-121.2679545	37.82744389	6339883.223	2124667.237	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	71,258	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:15pm	C Gray	SHAD41 G.ssf
4497	-121.2679328	37.82743885	6339889.493	2124665.353	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	75,155	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:17pm	C Gray	SHAD41 G.ssf
4498	-121.2679107	37.82743174	6339895.844	2124662.713	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	75,911	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:19pm	C Gray	SHAD41 G.ssf
4499	-121.2678893	37.82742701	6339902.012	2124660.937	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	119,878	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:21pm	C Gray	SHAD41 G.ssf
4500	-121.2678694	37.82742295	6339907.752	2124659.417	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	110,642	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:23pm	C Gray	SHAD41 G.ssf
4501	-121.267848	37.82741531	6339913.905	2124656.579	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	104,542	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:25pm	C Gray	SHAD41 G.ssf
4502	-121.2678213	37.82741293	6339921.621	2124655.652	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	121,654	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:27pm	C Gray	SHAD41 G.ssf
4503	-121.2677797	37.82740665	6339928.26	2124653.306	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	132,351	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:29pm	C Gray	SHAD41 G.ssf
4504	-121.2677676	37.82740415	6339934.188	2124651.375	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	151,474	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:31pm	C Gray	SHAD41 G.ssf
4505	-121.2677632	37.82739141	6339938.326	2124647.677	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	115,780	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:33pm	C Gray	SHAD41 G.ssf
4506	-121.267775	37.82738147	6339934.899	2124644.086	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	94,789	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:35pm	C Gray	SHAD41 G.ssf
4507	-121.2677987	37.82738788	6339928.061	2124646.474	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	121,829	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:37pm	C Gray	SHAD41 G.ssf
4508	-121.2678211	37.8273937	6339921.617	2124648.646	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	116,805	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:39pm	C Gray	SHAD41 G.ssf
4509	-121.267839	37.82739675	6339916.459	2124649.802	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	108,808	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:41pm	C Gray	SHAD41 G.ssf
4510	-121.2678663	37.82740154	6339909.531	2124651.603	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	90,462	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:43pm	C Gray	SHAD41 G.ssf
4511	-121.267885	37.82740591	6339903.203	2124653.246	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	82,858	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:45pm	C Gray	SHAD41 G.ssf
4512	-121.2679089	37.82741205	6339896.319	2124655.538	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	76,713	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:47pm	C Gray	SHAD41 G.ssf
4513	-121.2679323	37.82741169	6339889.574	2124657.359	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	77,556	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:49pm	C Gray	SHAD41 G.ssf
4514	-121.2679539	37.82742231	6339883.336	2124659.379	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	100,377	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:51pm	C Gray	SHAD41 G.ssf
4515	-121.2679763	37.82742694	6339876.893	2124661.118	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	81,627	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:53pm	C Gray	SHAD41 G.ssf
4516	-121.2679883	37.82742494	6339873.409	2124660.419	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	76,052	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:55pm	C Gray	SHAD41 G.ssf
4517	-121.267999	37.82740934	6339878.891	2124654.743	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	56,294	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:57pm	C Gray	SHAD41 G.ssf
4518	-121.2679861	37.82738978	6339873.961	2124647.612	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	44,021	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:55:59pm	C Gray	SHAD41 G.ssf
4519	-121.2679838	37.82736957	6339874.555	2124640.248	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,148	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:01pm	C Gray	SHAD41 G.ssf
4520	-121.2679847	37.82735464	6339874.243	2124634.815	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,632	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:03pm	C Gray	SHAD41 G.ssf
4521	-121.2679832	37.82733328	6339874.77	2124627.03	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	39,250	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:05pm	C Gray	SHAD41 G.ssf
4522	-121.2679833	37.82731442	6339874.547	2124620.168	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	35,200	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:07pm	C Gray	SHAD41 G.ssf
4523	-121.2679831	37.82729276	6339874.523	2124612.28	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	37,275	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:09pm	C Gray	SHAD41 G.ssf
4524	-121.2679824	37.82727378	6339874.67	2124605.366	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,452	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:11pm	C Gray	SHAD41 G.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4525	-121.2679852	37.82725043	6339873.794	2124596.871	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,433	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:13pm	C Gray	SHAD41 G.ssf
4526	-121.2679855	37.82723227	6339873.363	2124590.261	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,779	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:15pm	C Gray	SHAD41 G.ssf
4527	-121.2679815	37.82722675	6339874.795	2124588.24	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,522	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:17pm	C Gray	SHAD41 G.ssf
4528	-121.2679716	37.82723413	6339877.678	2124590.903	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,998	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:19pm	C Gray	SHAD41 G.ssf
4529	-121.2679684	37.82724935	6339878.633	2124596.439	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,440	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:21pm	C Gray	SHAD41 G.ssf
4530	-121.2679647	37.8272687	6339879.768	2124603.475	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,186	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:23pm	C Gray	SHAD41 G.ssf
4531	-121.2679627	37.82728771	6339880.388	2124610.393	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,071	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:25pm	C Gray	SHAD41 G.ssf
4532	-121.2679612	37.82730842	6339880.885	2124617.999	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,133	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:27pm	C Gray	SHAD41 G.ssf
4533	-121.2679611	37.82733112	6339880.999	2124626.193	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,790	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:29pm	C Gray	SHAD41 G.ssf
4534	-121.2679594	37.82734916	6339881.538	2124632.758	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,807	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:31pm	C Gray	SHAD41 G.ssf
4535	-121.2679553	37.82736925	6339882.797	2124640.063	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,386	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:33pm	C Gray	SHAD41 G.ssf
4536	-121.2679546	37.82740776	6339883.512	2124645.843	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,072	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:35pm	C Gray	SHAD41 G.ssf
4537	-121.2679532	37.82740776	6339883.512	2124654.08	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,119	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:37pm	C Gray	SHAD41 G.ssf
4538	-121.2679397	37.82741919	6339887.446	2124658.209	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,498	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:39pm	C Gray	SHAD41 G.ssf
4539	-121.2679339	37.82741923	6339889.668	2124658.205	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,251	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:41pm	C Gray	SHAD41 G.ssf
4540	-121.2679339	37.82741798	6339889.116	2124657.755	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,051	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:43pm	C Gray	SHAD41 G.ssf
4541	-121.2679338	37.82741715	6339889.129	2124657.452	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	70,918	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:45pm	C Gray	SHAD41 G.ssf
4542	-121.2679342	37.82741742	6339889.022	2124657.553	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	72,787	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:47pm	C Gray	SHAD41 G.ssf
4543	-121.2679342	37.82741767	6339889.02	2124657.645	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	70,820	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:49pm	C Gray	SHAD41 G.ssf
4544	-121.2679342	37.82741767	6339889.02	2124679.39	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	73,802	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:51pm	C Gray	SHAD41 G.ssf
4545	-121.2678752	37.82741773	6339906.241	2124679.373	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	74,342	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:53pm	C Gray	SHAD41 G.ssf
4546	-121.2679342	37.82741767	6339889.02	2124657.645	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	74,777	Geo 7X	Real-time SBAS Corrected	10/3/2017	12:56:55pm	C Gray	SHAD41 G.ssf
4547	-121.2678755	37.82747778	6339906.148	2124679.39	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,471	Geo 7X	Uncorrected	10/2/2017	11:55:43am	C Gray	SHAD41a.ssf
4548	-121.2678755	37.82747778	6339906.148	2124679.39	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,507	Geo 7X	Uncorrected	10/2/2017	11:55:44am	C Gray	SHAD41a.ssf
4549	-121.2678755	37.82747778	6339906.148	2124679.39	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,767	Geo 7X	Uncorrected	10/2/2017	11:55:47am	C Gray	SHAD41a.ssf
4550	-121.2678755	37.82747778	6339906.148	2124679.39	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,206	Geo 7X	Uncorrected	10/2/2017	11:55:52am	C Gray	SHAD41a.ssf
4551	-121.2678753	37.82747806	6339906.2	2124679.494	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,328	Geo 7X	Uncorrected	10/2/2017	11:55:54am	C Gray	SHAD41a.ssf
4552	-121.2678752	37.82747773	6339906.241	2124679.373	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,202	Geo 7X	Uncorrected	10/2/2017	11:55:56am	C Gray	SHAD41a.ssf
4553	-121.2678751	37.82747762	6339906.281	2124679.331	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,883	Geo 7X	Uncorrected	10/2/2017	11:55:57am	C Gray	SHAD41a.ssf
4554	-121.2678752	37.82747764	6339906.24	2124679.341	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,669	Geo 7X	Uncorrected	10/2/2017	11:56:00am	C Gray	SHAD41a.ssf
4555	-121.2678752	37.82747774	6339906.295	2124679.253	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,101	Geo 7X	Uncorrected	10/2/2017	11:56:02am	C Gray	SHAD41a.ssf
4556	-121.2678751	37.82747772	6339906.255	2124679.179	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,287	Geo 7X	Uncorrected	10/2/2017	11:56:04am	C Gray	SHAD41a.ssf
4557	-121.2678747	37.82747642	6339906.385	2124678.895	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,036	Geo 7X	Uncorrected	10/2/2017	11:56:05am	C Gray	SHAD41a.ssf
4558	-121.2678753	37.82747572	6339906.214	2124678.639	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,910	Geo 7X	Uncorrected	10/2/2017	11:56:08am	C Gray	SHAD41a.ssf
4559	-121.2678753	37.82747572	6339906.257	2124677.239	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,342	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:10am	C Gray	SHAD41a.ssf
4560	-121.2678753	37.82747187	6339906.205	2124676.963	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,015	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:11am	C Gray	SHAD41a.ssf
4561	-121.2678753	37.82747111	6339906.115	2124676.96	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,282	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:13am	C Gray	SHAD41a.ssf
4562	-121.2678756	37.8274711	6339906.218	2124676.909	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,687	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:15am	C Gray	SHAD41a.ssf
4563	-121.2678752	37.82747096	6339906.253	2124676.866	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,493	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:17am	C Gray	SHAD41a.ssf
4564	-121.2678751	37.82747085	6339906.272	2124676.867	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,375	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:19am	C Gray	SHAD41a.ssf
4565	-121.2678753	37.82747187	6339906.257	2124676.867	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,803	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:21am	C Gray	SHAD41a.ssf
4566	-121.2678751	37.82747093	6339906.257	2124676.896	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,505	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:24am	C Gray	SHAD41a.ssf
4567	-121.2678748	37.82747025	6339906.345	2124676.647	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,177	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:25am	C Gray	SHAD41a.ssf
4568	-121.2678741	37.8274707	6339906.524	2124676.812	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,076	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:27am	C Gray	SHAD41a.ssf
4569	-121.2678741	37.82747053	6339906.525	2124676.747	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,076	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:27am	C Gray	SHAD41a.ssf
4570	-121.2678751	37.82746947	6339906.263	2124676.364	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,594	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:28am	C Gray	SHAD41a.ssf
4571	-121.2678754	37.82746653	6339906.161	2124675.296	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,512	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:31am	C Gray	SHAD41a.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4572	-121.2678811	37.82746362	6339904.502	2124674.25	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,550	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:33am	C Gray	SHAD41a.ssf
4573	-121.2678905	37.82744541	6339901.747	2124670.941	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,327	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:35am	C Gray	SHAD41a.ssf
4574	-121.2678972	37.82745481	6339899.779	2124667.802	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,365	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:37am	C Gray	SHAD41a.ssf
4575	-121.2679054	37.82743395	6339897.378	2124663.503	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	100,601	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:40am	C Gray	SHAD41a.ssf
4576	-121.2679132	37.82742513	6339895.122	2124660.312	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	98,056	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:41am	C Gray	SHAD41a.ssf
4577	-121.2679161	37.82741725	6339894.257	2124657.446	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88,716	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:43am	C Gray	SHAD41a.ssf
4578	-121.2679263	37.82740572	6339891.262	2124653.275	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,296	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:45am	C Gray	SHAD41a.ssf
4579	-121.2679325	37.82739301	6339889.43	2124648.66	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,628	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:48am	C Gray	SHAD41a.ssf
4580	-121.2679358	37.82738375	6339888.449	2124645.297	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,385	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:49am	C Gray	SHAD41a.ssf
4581	-121.2679405	37.82737553	6339887.081	2124642.314	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,553	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:51am	C Gray	SHAD41a.ssf
4582	-121.2679477	37.82736329	6339884.97	2124637.877	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,487	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:54am	C Gray	SHAD41a.ssf
4583	-121.2679534	37.82735097	6339883.264	2124633.403	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,066	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:56am	C Gray	SHAD41a.ssf
4584	-121.2679577	37.82734184	6339882.014	2124630.087	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,476	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:57am	C Gray	SHAD41a.ssf
4585	-121.2679637	37.82733047	6339880.229	2124625.964	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,040	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:56:59am	C Gray	SHAD41a.ssf
4586	-121.2679702	37.82732312	6339878.35	2124623.302	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,536	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:57:01am	C Gray	SHAD41a.ssf
4587	-121.2679792	37.82730987	6339875.691	2124618.5	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,342	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:57:03am	C Gray	SHAD41a.ssf
4588	-121.2679853	37.82729752	6339873.906	2124614.018	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,622	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:57:05am	C Gray	SHAD41a.ssf
4589	-121.2679904	37.82728854	6339872.392	2124610.761	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,226	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:57:07am	C Gray	SHAD41a.ssf
4590	-121.2679952	37.82727991	6339871.004	2124607.628	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,567	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:57:09am	C Gray	SHAD41a.ssf
4591	-121.2680021	37.82726655	6339868.953	2124602.78	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,448	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:57:12am	C Gray	SHAD41a.ssf
4592	-121.2680075	37.82725789	6339867.384	2124599.641	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,056	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:57:13am	C Gray	SHAD41a.ssf
4593	-121.2679995	37.82724309	6339869.647	2124594.23	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,700	Geo 7X	Real-time SBAS Corrected	10/2/2017	11:57:15am	C Gray	SHAD41a.ssf
4594	-121.268013	37.82724414	6339865.735	2124593.647	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,962	Geo 7X	Uncorrected	10/2/2017	11:57:18am	C Gray	SHAD41a.ssf
4595	-121.2680127	37.82724216	6339865.822	2124593.923	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,869	Geo 7X	Uncorrected	10/2/2017	11:57:20am	C Gray	SHAD41a.ssf
4596	-121.2680124	37.82724289	6339865.906	2124594.191	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,284	Geo 7X	Uncorrected	10/2/2017	11:57:22am	C Gray	SHAD41a.ssf
4597	-121.2680121	37.82724365	6339865.992	2124594.466	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,786	Geo 7X	Uncorrected	10/2/2017	11:57:24am	C Gray	SHAD41a.ssf
4598	-121.2680119	37.82724433	6339866.069	2124594.712	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,621	Geo 7X	Uncorrected	10/2/2017	11:57:25am	C Gray	SHAD41a.ssf
4599	-121.2680116	37.82724517	6339866.165	2124595.018	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,858	Geo 7X	Uncorrected	10/2/2017	11:57:28am	C Gray	SHAD41a.ssf
4600	-121.2680113	37.82724593	6339866.25	2124595.292	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,483	Geo 7X	Uncorrected	10/2/2017	11:57:30am	C Gray	SHAD41a.ssf
4601	-121.267981	37.82732525	6339875.241	2124624.014	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,758	Geo 7X	Uncorrected	10/2/2017	12:00:59pm	C Gray	SHAD41a.ssf
4602	-121.2679807	37.82732568	6339875.317	2124624.258	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,897	Geo 7X	Uncorrected	10/2/2017	12:01:01pm	C Gray	SHAD41a.ssf
4603	-121.2679804	37.82732644	6339875.404	2124624.535	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,114	Geo 7X	Uncorrected	10/2/2017	12:01:03pm	C Gray	SHAD41a.ssf
4604	-121.2679801	37.8273272	6339875.491	2124624.812	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,250	Geo 7X	Uncorrected	10/2/2017	12:01:05pm	C Gray	SHAD41a.ssf
4605	-121.2679798	37.82732798	6339875.579	2124625.093	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,148	Geo 7X	Uncorrected	10/2/2017	12:01:07pm	C Gray	SHAD41a.ssf
4606	-121.2679795	37.82732874	6339875.666	2124625.371	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,195	Geo 7X	Uncorrected	10/2/2017	12:01:09pm	C Gray	SHAD41a.ssf
4607	-121.2679792	37.82732951	6339875.753	2124625.649	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,005	Geo 7X	Uncorrected	10/2/2017	12:01:11pm	C Gray	SHAD41a.ssf
4608	-121.2679789	37.82733027	6339875.84	2124625.926	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,233	Geo 7X	Uncorrected	10/2/2017	12:01:13pm	C Gray	SHAD41a.ssf
4609	-121.2679786	37.82733103	6339875.927	2124626.204	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,523	Geo 7X	Uncorrected	10/2/2017	12:01:15pm	C Gray	SHAD41a.ssf
4610	-121.2679784	37.82733157	6339876.014	2124626.482	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,711	Geo 7X	Uncorrected	10/2/2017	12:01:17pm	C Gray	SHAD41a.ssf
4611	-121.2679781	37.82733252	6339876.101	2124626.76	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,724	Geo 7X	Uncorrected	10/2/2017	12:01:19pm	C Gray	SHAD41a.ssf
4612	-121.2679778	37.82733333	6339876.188	2124627.038	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,343	Geo 7X	Uncorrected	10/2/2017	12:01:21pm	C Gray	SHAD41a.ssf
4613	-121.2679775	37.8273341	6339876.275	2124627.316	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,540	Geo 7X	Uncorrected	10/2/2017	12:01:23pm	C Gray	SHAD41a.ssf
4614	-121.2679772	37.82733486	6339876.362	2124627.594	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,299	Geo 7X	Uncorrected	10/2/2017	12:01:26pm	C Gray	SHAD41a.ssf
4615	-121.2679769	37.82733563	6339876.449	2124627.872	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,661	Geo 7X	Uncorrected	10/2/2017	12:01:28pm	C Gray	SHAD41a.ssf
4616	-121.2679766	37.82733639	6339876.536	2124628.15	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,244	Geo 7X	Uncorrected	10/2/2017	12:01:30pm	C Gray	SHAD41a.ssf
4617	-121.2679763	37.82733716	6339876.623	2124628.429	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017		Geo 7X	Uncorrected				

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4618	-121.267976	37.82733793	6339876.71	2124628.707	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,688	Geo 7X	Uncorrected	10/2/2017	12:01:32pm	C Gray	SHAD41a.ssf
4619	-121.2679757	37.82733386	6339876.786	2124628.95	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,015	Geo 7X	Uncorrected	10/2/2017	12:01:33pm	C Gray	SHAD41a.ssf
4620	-121.2679755	37.82733936	6339876.874	2124629.229	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,226	Geo 7X	Uncorrected	10/2/2017	12:01:35pm	C Gray	SHAD41a.ssf
4621	-121.2679752	37.82734013	6339876.961	2124629.507	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,398	Geo 7X	Uncorrected	10/2/2017	12:01:37pm	C Gray	SHAD41a.ssf
4622	-121.2679749	37.82734089	6339877.048	2124629.785	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,409	Geo 7X	Uncorrected	10/2/2017	12:01:39pm	C Gray	SHAD41a.ssf
4623	-121.2679746	37.82734167	6339877.136	2124630.067	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,317	Geo 7X	Uncorrected	10/2/2017	12:01:41pm	C Gray	SHAD41a.ssf
4624	-121.2679743	37.82734244	6339877.223	2124630.346	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,798	Geo 7X	Uncorrected	10/2/2017	12:01:43pm	C Gray	SHAD41a.ssf
4625	-121.267974	37.82734322	6339877.313	2124630.632	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,656	Geo 7X	Uncorrected	10/2/2017	12:01:45pm	C Gray	SHAD41a.ssf
4626	-121.2679737	37.82734399	6339877.4	2124630.909	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,429	Geo 7X	Uncorrected	10/2/2017	12:01:47pm	C Gray	SHAD41a.ssf
4627	-121.2679734	37.82734476	6339877.488	2124631.191	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,212	Geo 7X	Uncorrected	10/2/2017	12:01:50pm	C Gray	SHAD41a.ssf
4628	-121.2679731	37.82734544	6339877.564	2124631.435	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,046	Geo 7X	Uncorrected	10/2/2017	12:01:51pm	C Gray	SHAD41a.ssf
4629	-121.2679728	37.82734621	6339877.652	2124631.715	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,216	Geo 7X	Uncorrected	10/2/2017	12:01:53pm	C Gray	SHAD41a.ssf
4630	-121.2679725	37.82734697	6339877.739	2124631.993	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,021	Geo 7X	Uncorrected	10/2/2017	12:01:55pm	C Gray	SHAD41a.ssf
4631	-121.2679722	37.82734774	6339877.826	2124632.27	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,428	Geo 7X	Uncorrected	10/2/2017	12:01:57pm	C Gray	SHAD41a.ssf
4632	-121.2679719	37.8273485	6339877.913	2124632.548	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,247	Geo 7X	Uncorrected	10/2/2017	12:01:59pm	C Gray	SHAD41a.ssf
4633	-121.2679717	37.82734927	6339877.999	2124632.825	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,288	Geo 7X	Uncorrected	10/2/2017	12:02:01pm	C Gray	SHAD41a.ssf
4634	-121.2679714	37.82735003	6339878.087	2124633.105	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,500	Geo 7X	Uncorrected	10/2/2017	12:02:03pm	C Gray	SHAD41a.ssf
4635	-121.2679711	37.8273508	6339878.174	2124633.382	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,146	Geo 7X	Uncorrected	10/2/2017	12:02:05pm	C Gray	SHAD41a.ssf
4636	-121.2679708	37.82735158	6339878.263	2124633.668	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,941	Geo 7X	Uncorrected	10/2/2017	12:02:07pm	C Gray	SHAD41a.ssf
4637	-121.2679705	37.82735237	6339878.352	2124633.952	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,824	Geo 7X	Uncorrected	10/2/2017	12:02:10pm	C Gray	SHAD41a.ssf
4638	-121.2679702	37.82735305	6339878.439	2124634.201	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,745	Geo 7X	Uncorrected	10/2/2017	12:02:11pm	C Gray	SHAD41a.ssf
4639	-121.2679699	37.82735382	6339878.517	2124634.478	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,789	Geo 7X	Uncorrected	10/2/2017	12:02:13pm	C Gray	SHAD41a.ssf
4640	-121.2679696	37.82735458	6339878.604	2124634.756	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,922	Geo 7X	Uncorrected	10/2/2017	12:02:15pm	C Gray	SHAD41a.ssf
4641	-121.2679693	37.82735534	6339878.691	2124635.033	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,136	Geo 7X	Uncorrected	10/2/2017	12:02:17pm	C Gray	SHAD41a.ssf
4642	-121.267969	37.82735612	6339878.779	2124635.315	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,314	Geo 7X	Uncorrected	10/2/2017	12:02:19pm	C Gray	SHAD41a.ssf
4643	-121.2679687	37.82735689	6339878.866	2124635.595	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,949	Geo 7X	Uncorrected	10/2/2017	12:02:21pm	C Gray	SHAD41a.ssf
4644	-121.2679684	37.82735767	6339878.956	2124635.88	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,527	Geo 7X	Uncorrected	10/2/2017	12:02:23pm	C Gray	SHAD41a.ssf
4645	-121.2679681	37.82735844	6339879.043	2124636.159	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,819	Geo 7X	Uncorrected	10/2/2017	12:02:26pm	C Gray	SHAD41a.ssf
4646	-121.2679678	37.82735922	6339879.131	2124636.44	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,941	Geo 7X	Uncorrected	10/2/2017	12:02:28pm	C Gray	SHAD41a.ssf
4647	-121.2679675	37.82735999	6339879.21	2124636.692	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,168	Geo 7X	Uncorrected	10/2/2017	12:02:29pm	C Gray	SHAD41a.ssf
4648	-121.2679673	37.82736073	6339879.303	2124636.989	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,829	Geo 7X	Uncorrected	10/2/2017	12:02:32pm	C Gray	SHAD41a.ssf
4649	-121.267967	37.8273614	6339879.38	2124637.235	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,564	Geo 7X	Uncorrected	10/2/2017	12:02:33pm	C Gray	SHAD41a.ssf
4650	-121.2679667	37.8273622	6339879.47	2124637.522	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,112	Geo 7X	Uncorrected	10/2/2017	12:02:35pm	C Gray	SHAD41a.ssf
4651	-121.2679664	37.82736297	6339879.557	2124637.802	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,624	Geo 7X	Uncorrected	10/2/2017	12:02:37pm	C Gray	SHAD41a.ssf
4652	-121.2679661	37.82736376	6339879.647	2124638.089	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,738	Geo 7X	Uncorrected	10/2/2017	12:02:39pm	C Gray	SHAD41a.ssf
4653	-121.2679658	37.82736449	6339879.731	2124638.357	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,657	Geo 7X	Uncorrected	10/2/2017	12:02:41pm	C Gray	SHAD41a.ssf
4654	-121.2679655	37.82736527	6339879.819	2124638.638	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,517	Geo 7X	Uncorrected	10/2/2017	12:02:43pm	C Gray	SHAD41a.ssf
4655	-121.2679652	37.82736607	6339879.91	2124638.928	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,171	Geo 7X	Uncorrected	10/2/2017	12:02:46pm	C Gray	SHAD41a.ssf
4656	-121.267965	37.82736674	6339879.986	2124639.171	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,113	Geo 7X	Uncorrected	10/2/2017	12:02:47pm	C Gray	SHAD41a.ssf
4657	-121.2679647	37.8273675	6339880.073	2124639.449	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,221	Geo 7X	Uncorrected	10/2/2017	12:02:49pm	C Gray	SHAD41a.ssf
4658	-121.2679644	37.82736827	6339880.16	2124639.726	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,667	Geo 7X	Uncorrected	10/2/2017	12:02:51pm	C Gray	SHAD41a.ssf
4659	-121.2679641	37.82736906	6339880.25	2124640.014	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,916	Geo 7X	Uncorrected	10/2/2017	12:02:53pm	C Gray	SHAD41a.ssf
4660	-121.2679638	37.82736977	6339880.331	2124640.273	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,247	Geo 7X	Uncorrected	10/2/2017	12:02:55pm	C Gray	SHAD41a.ssf
4661	-121.2679635	37.82737054	6339880.418	2124640.552	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,051	Geo 7X	Uncorrected	10/2/2017	12:02:57pm	C Gray	SHAD41a.ssf
4662	-121.2679632	37.82737131	6339880.506	2124640.832	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,335	Geo 7X	Uncorrected	10/2/2017	12:02:59pm	C Gray	SHAD41a.ssf
4663	-121.2679629	37.82737211	6339880.596	2124641.121	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,167	Geo 7X	Uncorrected	10/2/2017	12:03:01pm	C Gray	SHAD41a.ssf



ID	Longitude	Latitude	Easting	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4664	-121.2679626	37.82737305	6339880.695	2124641.465	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,759	Geo 7X	Uncorrected	10/2/2017	12:03:04pm	C Gray	SHAD41a.ssf
4665	-121.2679532	37.82737996	6339881.658	2124643.973	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,310	Geo 7X	Uncorrected	10/2/2017	12:03:05pm	C Gray	SHAD41a.ssf
4666	-121.2679527	37.82738935	6339883.583	2124647.375	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,845	Geo 7X	Uncorrected	10/2/2017	12:03:08pm	C Gray	SHAD41a.ssf
4667	-121.2679533	37.82739467	6339883.51	2124649.313	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,359	Geo 7X	Uncorrected	10/2/2017	12:03:09pm	C Gray	SHAD41a.ssf
4668	-121.2679438	37.82740582	6339886.222	2124653.351	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,604	Geo 7X	Uncorrected	10/2/2017	12:03:11pm	C Gray	SHAD41a.ssf
4669	-121.2679347	37.82741791	6339888.865	2124657.731	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,691	Geo 7X	Uncorrected	10/2/2017	12:03:13pm	C Gray	SHAD41a.ssf
4670	-121.2679232	37.82742682	6339890.283	2124660.966	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,859	Geo 7X	Uncorrected	10/2/2017	12:03:15pm	C Gray	SHAD41a.ssf
4671	-121.2679239	37.82743544	6339892.264	2124664.088	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,330	Geo 7X	Uncorrected	10/2/2017	12:03:17pm	C Gray	SHAD41a.ssf
4672	-121.2679213	37.82744148	6339892.824	2124666.281	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,492	Geo 7X	Uncorrected	10/2/2017	12:03:19pm	C Gray	SHAD41a.ssf
4673	-121.2679195	37.82744761	6339893.356	2124668.511	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,758	Geo 7X	Uncorrected	10/2/2017	12:03:21pm	C Gray	SHAD41a.ssf
4674	-121.2679157	37.82745416	6339894.475	2124670.887	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,293	Geo 7X	Uncorrected	10/2/2017	12:03:23pm	C Gray	SHAD41a.ssf
4675	-121.2679113	37.82746145	6339895.776	2124673.532	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,449	Geo 7X	Uncorrected	10/2/2017	12:03:25pm	C Gray	SHAD41a.ssf
4676	-121.2679073	37.8274666	6339896.948	2124675.395	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,773	Geo 7X	Uncorrected	10/2/2017	12:03:27pm	C Gray	SHAD41a.ssf
4677	-121.2679023	37.82747642	6339898.405	2124678.958	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,997	Geo 7X	Uncorrected	10/2/2017	12:03:29pm	C Gray	SHAD41a.ssf
4678	-121.2678976	37.82748404	6339899.785	2124681.724	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,229	Geo 7X	Uncorrected	10/2/2017	12:03:31pm	C Gray	SHAD41a.ssf
4679	-121.2678941	37.82749109	6339900.823	2124684.282	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,922	Geo 7X	Uncorrected	10/2/2017	12:03:33pm	C Gray	SHAD41a.ssf
4680	-121.2678902	37.82749846	6339901.97	2124686.956	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,429	Geo 7X	Uncorrected	10/2/2017	12:03:35pm	C Gray	SHAD41a.ssf
4681	-121.267885	37.82750376	6339903.5	2124688.873	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,835	Geo 7X	Uncorrected	10/2/2017	12:03:37pm	C Gray	SHAD41a.ssf
4682	-121.2678759	37.82749854	6339906.109	2124686.951	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,301	Geo 7X	Uncorrected	10/2/2017	12:03:39pm	C Gray	SHAD41a.ssf
4683	-121.2678769	37.82748707	6339905.773	2124682.777	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,516	Geo 7X	Uncorrected	10/2/2017	12:03:42pm	C Gray	SHAD41a.ssf
4684	-121.2678801	37.82748029	6339904.82	2124680.315	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,519	Geo 7X	Uncorrected	10/2/2017	12:03:43pm	C Gray	SHAD41a.ssf
4685	-121.2678855	37.82747177	6339903.25	2124677.228	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,821	Geo 7X	Uncorrected	10/2/2017	12:03:45pm	C Gray	SHAD41a.ssf
4686	-121.2678929	37.82746253	6339901.096	2124673.879	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,651	Geo 7X	Uncorrected	10/2/2017	12:03:48pm	C Gray	SHAD41a.ssf
4687	-121.2678969	37.82745583	6339899.922	2124671.451	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,965	Geo 7X	Uncorrected	10/2/2017	12:03:49pm	C Gray	SHAD41a.ssf
4688	-121.2679005	37.82744772	6339898.832	2124668.325	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	92,767	Geo 7X	Uncorrected	10/2/2017	12:03:51pm	C Gray	SHAD41a.ssf
4689	-121.2679048	37.82743764	6339897.583	2124664.844	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	104,323	Geo 7X	Uncorrected	10/2/2017	12:03:53pm	C Gray	SHAD41a.ssf
4690	-121.2679078	37.82742775	6339896.673	2124661.251	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	158,950	Geo 7X	Uncorrected	10/2/2017	12:03:55pm	C Gray	SHAD41a.ssf
4691	-121.2679104	37.82742004	6339895.914	2124658.449	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	105,072	Geo 7X	Uncorrected	10/2/2017	12:03:57pm	C Gray	SHAD41a.ssf
4692	-121.2679147	37.82740928	6339894.642	2124654.543	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,104	Geo 7X	Uncorrected	10/2/2017	12:03:59pm	C Gray	SHAD41a.ssf
4693	-121.2679195	37.82740077	6339893.207	2124651.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,505	Geo 7X	Uncorrected	10/2/2017	12:04:01pm	C Gray	SHAD41a.ssf
4694	-121.2679243	37.82738964	6339891.794	2124647.413	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,054	Geo 7X	Uncorrected	10/2/2017	12:04:03pm	C Gray	SHAD41a.ssf
4695	-121.2679297	37.82738003	6339890.213	2124643.927	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,455	Geo 7X	Uncorrected	10/2/2017	12:04:05pm	C Gray	SHAD41a.ssf
4696	-121.2679345	37.82736883	6339888.801	2124639.86	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,505	Geo 7X	Uncorrected	10/2/2017	12:04:07pm	C Gray	SHAD41a.ssf
4697	-121.2679445	37.82735515	6339885.857	2124634.904	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,471	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:09pm	C Gray	SHAD41a.ssf
4698	-121.2679487	37.82734615	6339884.609	2124631.636	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,211	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:11pm	C Gray	SHAD41a.ssf
4699	-121.2679531	37.82733487	6339883.316	2124627.542	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,644	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:13pm	C Gray	SHAD41a.ssf
4700	-121.2679562	37.82732664	6339882.39	2124624.549	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,383	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:15pm	C Gray	SHAD41a.ssf
4701	-121.2679625	37.82731526	6339880.538	2124620.421	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,444	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:17pm	C Gray	SHAD41a.ssf
4702	-121.2679673	37.82730694	6339879.138	2124617.403	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,614	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:19pm	C Gray	SHAD41a.ssf
4703	-121.2679738	37.82729329	6339877.205	2124612.448	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,769	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:22pm	C Gray	SHAD41a.ssf
4704	-121.2679781	37.82728307	6339875.933	2124608.737	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,945	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:24pm	C Gray	SHAD41a.ssf
4705	-121.2679834	37.82727331	6339874.368	2124605.198	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,745	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:26pm	C Gray	SHAD41a.ssf
4706	-121.2679839	37.82727236	6339874.238	2124604.852	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,931	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:28pm	C Gray	SHAD41a.ssf
4707	-121.2679922	37.82725572	6339871.786	2124598.812	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,866	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:29pm	C Gray	SHAD41a.ssf
4708	-121.2679952	37.82723931	6339870.864	2124592.844	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,257	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:31pm	C Gray	SHAD41a.ssf
4709	-121.2679985	37.82722655	6339869.878	2124588.206	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,718	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:33pm	C Gray	SHAD41a.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4710	-121.2680022	37.82721513	6339868.763	2124584.057	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,132	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:35pm	C Gray	SHAD41a.ssf
4711	-121.2680069	37.82720627	6339867.404	2124580.844	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,331	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:37pm	C Gray	SHAD41a.ssf
4712	-121.2680107	37.82719338	6339866.257	2124576.31	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,967	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:39pm	C Gray	SHAD41a.ssf
4713	-121.2680111	37.8271936	6339866.145	2124576.237	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,886	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:41pm	C Gray	SHAD41a.ssf
4714	-121.2680085	37.82720228	6339866.911	2124579.394	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,671	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:43pm	C Gray	SHAD41a.ssf
4715	-121.2680066	37.82721048	6339867.483	2124582.376	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,720	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:45pm	C Gray	SHAD41a.ssf
4716	-121.2680043	37.82722067	6339868.176	2124586.082	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,063	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:47pm	C Gray	SHAD41a.ssf
4717	-121.2680029	37.82723068	6339868.626	2124589.722	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,928	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:49pm	C Gray	SHAD41a.ssf
4718	-121.2679985	37.8272422	6339869.926	2124593.906	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,201	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:51pm	C Gray	SHAD41a.ssf
4719	-121.2679936	37.82725178	6339871.36	2124597.381	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,254	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:53pm	C Gray	SHAD41a.ssf
4720	-121.2679887	37.82726184	6339872.807	2124601.032	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,675	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:55pm	C Gray	SHAD41a.ssf
4721	-121.2679861	37.82726976	6339873.583	2124603.91	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,459	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:57pm	C Gray	SHAD41a.ssf
4722	-121.2679822	37.82727817	6339874.747	2124608.251	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,518	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:04:59pm	C Gray	SHAD41a.ssf
4723	-121.2679799	37.82729189	6339875.442	2124611.954	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,323	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:01pm	C Gray	SHAD41a.ssf
4724	-121.2679771	37.82730241	6339876.287	2124615.179	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,626	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:03pm	C Gray	SHAD41a.ssf
4725	-121.2679524	37.82731177	6339877.668	2124619.173	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,440	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:05pm	C Gray	SHAD41a.ssf
4726	-121.2679688	37.82732083	6339878.739	2124622.466	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,786	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:07pm	C Gray	SHAD41a.ssf
4727	-121.2679651	37.82733119	6339879.841	2124626.229	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,169	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:09pm	C Gray	SHAD41a.ssf
4728	-121.267962	37.82733881	6339880.757	2124628.997	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,419	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:11pm	C Gray	SHAD41a.ssf
4729	-121.267957	37.82734805	6339882.217	2124632.349	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,126	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:13pm	C Gray	SHAD41a.ssf
4730	-121.2679524	37.82735979	6339883.586	2124636.613	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,917	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:16pm	C Gray	SHAD41a.ssf
4731	-121.2679492	37.82736905	6339884.55	2124639.977	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,428	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:17pm	C Gray	SHAD41a.ssf
4732	-121.267945	37.82737816	6339885.771	2124643.284	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,997	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:19pm	C Gray	SHAD41a.ssf
4733	-121.2679378	37.82739168	6339887.897	2124648.19	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,914	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:21pm	C Gray	SHAD41a.ssf
4734	-121.2679342	37.82740018	6339888.962	2124651.275	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,534	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:23pm	C Gray	SHAD41a.ssf
4735	-121.267928	37.82741003	6339890.782	2124654.847	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,859	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:25pm	C Gray	SHAD41a.ssf
4736	-121.2679217	37.82742016	6339892.626	2124658.522	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,212	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:27pm	C Gray	SHAD41a.ssf
4737	-121.2679164	37.82743009	6339894.192	2124662.125	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,801	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:29pm	C Gray	SHAD41a.ssf
4738	-121.2679099	37.82744051	6339896.115	2124665.902	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	93,295	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:31pm	C Gray	SHAD41a.ssf
4739	-121.2679092	37.82745156	6339898.418	2124669.909	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	113,229	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:33pm	C Gray	SHAD41a.ssf
4740	-121.2678935	37.8274592	6339900.888	2124672.668	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	96,685	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:35pm	C Gray	SHAD41a.ssf
4741	-121.2678865	37.82746986	6339902.939	2124676.535	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,243	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:37pm	C Gray	SHAD41a.ssf
4742	-121.2678769	37.82747257	6339905.724	2124677.497	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,926	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:39pm	C Gray	SHAD41a.ssf
4743	-121.2678741	37.82746639	6339906.512	2124675.243	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,779	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:41pm	C Gray	SHAD41a.ssf
4744	-121.2678783	37.82745499	6339905.227	2124671.1	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,634	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:43pm	C Gray	SHAD41a.ssf
4745	-121.2678833	37.82744605	6339903.799	2124667.856	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,646	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:45pm	C Gray	SHAD41a.ssf
4746	-121.2678876	37.82743643	6339902.525	2124664.364	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90,970	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:47pm	C Gray	SHAD41a.ssf
4747	-121.2678915	37.82742591	6339901.374	2124660.542	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	94,220	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:49pm	C Gray	SHAD41a.ssf
4748	-121.2678959	37.82741508	6339900.067	2124656.609	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,642	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:51pm	C Gray	SHAD41a.ssf
4749	-121.2679007	37.82740387	6339898.65	2124652.54	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,568	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:53pm	C Gray	SHAD41a.ssf
4750	-121.2679082	37.82739387	6339896.473	2124648.914	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,295	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:55pm	C Gray	SHAD41a.ssf
4751	-121.2679127	37.82738674	6339895.129	2124646.329	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,391	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:57pm	C Gray	SHAD41a.ssf
4752	-121.2679177	37.8273764	6339893.666	2124642.58	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,646	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:05:59pm	C Gray	SHAD41a.ssf
4753	-121.2679237	37.82736676	6339891.89	2124639.082	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,877	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:01pm	C Gray	SHAD41a.ssf
4754	-121.2679304	37.82735692	6339889.943	2124635.514	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,499	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:03pm	C Gray	SHAD41a.ssf
4755	-121.2679341	37.82734871	6339888.856	2124632.534	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,682	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:05pm	C Gray	SHAD41a.ssf

ID	Longitude	Latitude	Eastng	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4756	-121.2679381	37.82733922	6339887.653	2124629.088	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,798	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:07pm	C Gray	SHAD41a.ssf
4757	-121.2679434	37.82732004	6339886.104	2124625.759	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,179	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:09pm	C Gray	SHAD41a.ssf
4758	-121.2679476	37.82730075	6339884.849	2124622.385	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,888	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:11pm	C Gray	SHAD41a.ssf
4759	-121.2679526	37.82731011	6339883.389	2124618.525	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,346	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:13pm	C Gray	SHAD41a.ssf
4760	-121.2679567	37.82729948	6339882.161	2124614.663	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,604	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:15pm	C Gray	SHAD41a.ssf
4761	-121.2679663	37.82728775	6339880.33	2124610.408	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,302	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:17pm	C Gray	SHAD41a.ssf
4762	-121.2679687	37.82727275	6339878.641	2124605.777	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,587	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:19pm	C Gray	SHAD41a.ssf
4763	-121.2679742	37.82726564	6339877.013	2124602.384	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,817	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:21pm	C Gray	SHAD41a.ssf
4764	-121.2679774	37.82725552	6339876.07	2124598.705	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,730	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:23pm	C Gray	SHAD41a.ssf
4765	-121.2679825	37.82724528	6339874.567	2124594.988	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,454	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:25pm	C Gray	SHAD41a.ssf
4766	-121.2679864	37.82723628	6339873.346	2124591.723	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,881	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:27pm	C Gray	SHAD41a.ssf
4767	-121.2679916	37.82722702	6339871.942	2124588.361	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,238	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:29pm	C Gray	SHAD41a.ssf
4768	-121.2679953	37.82721808	6339870.764	2124585.115	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,885	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:31pm	C Gray	SHAD41a.ssf
4769	-121.2679987	37.8272076	6339869.762	2124581.307	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,922	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:33pm	C Gray	SHAD41a.ssf
4770	-121.2680038	37.82719815	6339868.258	2124577.88	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,240	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:35pm	C Gray	SHAD41a.ssf
4771	-121.2680093	37.82718883	6339866.639	2124574.497	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,146	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:37pm	C Gray	SHAD41a.ssf
4772	-121.2680102	37.82718734	6339866.379	2124573.957	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,850	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:39pm	C Gray	SHAD41a.ssf
4773	-121.2680059	37.82719069	6339867.636	2124575.168	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,588	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:41pm	C Gray	SHAD41a.ssf
4774	-121.2680026	37.8271986	6339868.622	2124578.039	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,037	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:43pm	C Gray	SHAD41a.ssf
4775	-121.2679989	37.827209	6339869.708	2124581.818	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,205	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:45pm	C Gray	SHAD41a.ssf
4776	-121.2679963	37.82721656	6339870.487	2124584.565	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,267	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:47pm	C Gray	SHAD41a.ssf
4777	-121.2679898	37.82722932	6339872.396	2124589.196	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,736	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:49pm	C Gray	SHAD41a.ssf
4778	-121.2679866	37.82723784	6339873.338	2124592.289	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,190	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:51pm	C Gray	SHAD41a.ssf
4779	-121.2679806	37.8272496	6339875.11	2124596.556	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,204	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:53pm	C Gray	SHAD41a.ssf
4780	-121.2679765	37.82725907	6339876.325	2124599.998	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,477	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:55pm	C Gray	SHAD41a.ssf
4781	-121.2679793	37.82726837	6339877.376	2124603.375	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,651	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:57pm	C Gray	SHAD41a.ssf
4782	-121.2679687	37.82727762	6339878.647	2124606.73	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,082	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:06:59pm	C Gray	SHAD41a.ssf
4783	-121.2679639	37.82728708	6339880.067	2124610.163	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,175	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:01pm	C Gray	SHAD41a.ssf
4784	-121.2679612	37.82729515	6339880.859	2124613.096	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,381	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:03pm	C Gray	SHAD41a.ssf
4785	-121.2679605	37.82729982	6339881.089	2124614.794	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,555	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:05pm	C Gray	SHAD41a.ssf
4786	-121.2679573	37.8273	6339881.989	2124614.855	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,796	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:07pm	C Gray	SHAD41a.ssf
4787	-121.2679558	37.82730645	6339882.443	2124617.198	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,393	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:09pm	C Gray	SHAD41a.ssf
4788	-121.2679513	37.82731416	6339883.763	2124619.996	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,165	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:11pm	C Gray	SHAD41a.ssf
4789	-121.2679476	37.82732197	6339884.878	2124622.832	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,877	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:13pm	C Gray	SHAD41a.ssf
4790	-121.2679639	37.82733151	6339885.961	2124626.295	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,761	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:15pm	C Gray	SHAD41a.ssf
4791	-121.2679394	37.82734027	6339887.289	2124629.472	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,446	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:17pm	C Gray	SHAD41a.ssf
4792	-121.2679344	37.82734831	6339888.767	2124632.391	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,103	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:19pm	C Gray	SHAD41a.ssf
4793	-121.2679278	37.82735708	6339890.683	2124635.569	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,285	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:21pm	C Gray	SHAD41a.ssf
4794	-121.2679241	37.82736464	6339891.794	2124638.31	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,786	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:23pm	C Gray	SHAD41a.ssf
4795	-121.2679195	37.82737345	6339893.144	2124641.509	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,002	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:25pm	C Gray	SHAD41a.ssf
4796	-121.2679141	37.82738182	6339894.734	2124644.542	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,242	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:27pm	C Gray	SHAD41a.ssf
4797	-121.2679094	37.82739113	6339896.104	2124647.92	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,969	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:29pm	C Gray	SHAD41a.ssf
4798	-121.2679042	37.8274007	6339897.53	2124650.899	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,609	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:31pm	C Gray	SHAD41a.ssf
4799	-121.2679892	37.827407	6339899.03	2124653.678	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,174	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:33pm	C Gray	SHAD41a.ssf
4800	-121.2678944	37.82741834	6339900.512	2124657.793	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,407	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:35pm	C Gray	SHAD41a.ssf
4801	-121.2678892	37.82742631	6339902.055	2124660.684	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,221	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:37pm	C Gray	SHAD41a.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4802	-121.267884	37.82743352	6339903.562	2124663.298	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	91,931	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:39pm	C Gray	SHAD41a.ssf
4803	-121.2678786	37.827445326	6339905.166	2124667.558	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	111,147	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:41pm	C Gray	SHAD41a.ssf
4804	-121.2678734	37.82745432	6339906.688	2124670.843	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	110,572	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:43pm	C Gray	SHAD41a.ssf
4805	-121.2678672	37.82746128	6339908.503	2124673.366	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88,081	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:45pm	C Gray	SHAD41a.ssf
4806	-121.2678588	37.82746033	6339910.926	2124672.997	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,671	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:47pm	C Gray	SHAD41a.ssf
4807	-121.2678613	37.82745112	6339910.188	2124669.65	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,104	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:49pm	C Gray	SHAD41a.ssf
4808	-121.2678632	37.82744265	6339909.437	2124666.572	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	105,457	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:51pm	C Gray	SHAD41a.ssf
4809	-121.2678678	37.82743426	6339908.429	2124663.524	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	156,543	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:53pm	C Gray	SHAD41a.ssf
4810	-121.2678714	37.82742584	6339907.17	2124660.468	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	126,751	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:55pm	C Gray	SHAD41a.ssf
4811	-121.2678775	37.82741546	6339905.396	2124656.704	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	99,123	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:57pm	C Gray	SHAD41a.ssf
4812	-121.2678831	37.82740584	6339903.731	2124653.216	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,998	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:07:59pm	C Gray	SHAD41a.ssf
4813	-121.2678932	37.82739623	6339901.854	2124649.733	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,091	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:01pm	C Gray	SHAD41a.ssf
4814	-121.2678959	37.8273856	6339899.988	2124645.876	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,379	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:03pm	C Gray	SHAD41a.ssf
4815	-121.267901	37.82737643	6339898.494	2124642.548	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,864	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:05pm	C Gray	SHAD41a.ssf
4816	-121.2679027	37.82736646	6339896.737	2124638.934	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,607	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:07pm	C Gray	SHAD41a.ssf
4817	-121.2679123	37.82735648	6339895.152	2124635.311	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,193	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:09pm	C Gray	SHAD41a.ssf
4818	-121.2679157	37.82734786	6339894.167	2124632.182	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,140	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:11pm	C Gray	SHAD41a.ssf
4819	-121.2679232	37.82733603	6339891.946	2124627.891	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,815	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:13pm	C Gray	SHAD41a.ssf
4820	-121.267929	37.82732632	6339890.259	2124624.368	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,562	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:15pm	C Gray	SHAD41a.ssf
4821	-121.2679342	37.82731652	6339888.728	2124620.815	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,672	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:17pm	C Gray	SHAD41a.ssf
4822	-121.2679423	37.82730551	6339886.355	2124616.823	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,011	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:19pm	C Gray	SHAD41a.ssf
4823	-121.2679473	37.82729593	6339884.884	2124613.349	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,944	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:21pm	C Gray	SHAD41a.ssf
4824	-121.2679533	37.82728501	6339883.111	2124609.385	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,334	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:23pm	C Gray	SHAD41a.ssf
4825	-121.2679565	37.82727624	6339882.157	2124606.2	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,101	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:25pm	C Gray	SHAD41a.ssf
4826	-121.2679636	37.82726598	6339880.073	2124602.481	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,720	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:27pm	C Gray	SHAD41a.ssf
4827	-121.2679701	37.82725572	6339878.159	2124598.76	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,676	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:29pm	C Gray	SHAD41a.ssf
4828	-121.2679776	37.8272459	6339876.446	2124595.2	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,373	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:31pm	C Gray	SHAD41a.ssf
4829	-121.2679825	37.82723738	6339874.52	2124592.111	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,394	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:33pm	C Gray	SHAD41a.ssf
4830	-121.2679879	37.82722709	6339872.948	2124588.379	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,916	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:35pm	C Gray	SHAD41a.ssf
4831	-121.2679929	37.82721869	6339871.483	2124585.331	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,328	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:37pm	C Gray	SHAD41a.ssf
4832	-121.2679998	37.82720986	6339869.979	2124582.128	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,332	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:39pm	C Gray	SHAD41a.ssf
4833	-121.2680011	37.82720145	6339869.052	2124579.072	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,659	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:41pm	C Gray	SHAD41a.ssf
4834	-121.2680049	37.82719428	6339867.937	2124576.47	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,517	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:43pm	C Gray	SHAD41a.ssf
4835	-121.2680046	37.82719082	6339867.999	2124575.213	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,972	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:45pm	C Gray	SHAD41a.ssf
4836	-121.2680024	37.82719584	6339868.675	2124577.033	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,533	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:47pm	C Gray	SHAD41a.ssf
4837	-121.2679987	37.82720178	6339869.738	2124579.188	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,946	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:49pm	C Gray	SHAD41a.ssf
4838	-121.2679926	37.82721189	6339871.548	2124582.855	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,276	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:51pm	C Gray	SHAD41a.ssf
4839	-121.2679887	37.82722324	6339872.695	2124586.98	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,757	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:53pm	C Gray	SHAD41a.ssf
4840	-121.2679858	37.82723537	6339873.56	2124591.388	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,899	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:55pm	C Gray	SHAD41a.ssf
4841	-121.2679823	37.82724472	6339874.608	2124594.786	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,865	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:57pm	C Gray	SHAD41a.ssf
4842	-121.2679778	37.82725407	6339875.942	2124598.179	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,373	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:08:59pm	C Gray	SHAD41a.ssf
4843	-121.2679743	37.82726399	6339876.977	2124601.782	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,081	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:01pm	C Gray	SHAD41a.ssf
4844	-121.267971	37.82727184	6339877.957	2124604.634	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,847	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:03pm	C Gray	SHAD41a.ssf
4845	-121.2679644	37.82728113	6339879.879	2124608	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,111	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:05pm	C Gray	SHAD41a.ssf
4846	-121.2679559	37.82728955	6339881.467	2124611.052	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,897	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:07pm	C Gray	SHAD41a.ssf
4847	-121.2679542	37.82729832	6339882.882	2124614.234	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,130	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:09pm	C Gray	SHAD41a.ssf

ID	Longitude	Latitude	Easting	Northing	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4848	-121.2679492	37.82730652	6339884.371	2124617.207	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,275	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:11pm	C Gray	SHAD41a.ssf
4849	-121.2679448	37.82731325	6339885.653	2124619.648	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,442	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:13pm	C Gray	SHAD41a.ssf
4850	-121.2679386	37.82732116	6339887.468	2124622.675	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,116	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:15pm	C Gray	SHAD41a.ssf
4851	-121.2679329	37.82732857	6339889.133	2124625.2	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,935	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:17pm	C Gray	SHAD41a.ssf
4852	-121.2679254	37.8273402	6339891.322	2124629.414	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,736	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:19pm	C Gray	SHAD41a.ssf
4853	-121.2679216	37.82734762	6339892.461	2124632.106	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,613	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:21pm	C Gray	SHAD41a.ssf
4854	-121.2679114	37.82735581	6339895.654	2124635.082	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,450	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:23pm	C Gray	SHAD41a.ssf
4855	-121.2679175	37.82736673	6339895.457	2124639.042	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,574	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:25pm	C Gray	SHAD41a.ssf
4856	-121.2679061	37.82737497	6339896.998	2124642.029	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,048	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:27pm	C Gray	SHAD41a.ssf
4857	-121.2678994	37.82738468	6339898.969	2124645.55	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,671	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:29pm	C Gray	SHAD41a.ssf
4858	-121.2678919	37.82739488	6339901.176	2124649.246	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,858	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:31pm	C Gray	SHAD41a.ssf
4859	-121.2678849	37.8274037	6339905.221	2124652.442	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	67,105	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:33pm	C Gray	SHAD41a.ssf
4860	-121.2678779	37.82741358	6339905.283	2124656.021	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	67,782	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:35pm	C Gray	SHAD41a.ssf
4861	-121.2678725	37.8274224	6339906.859	2124659.221	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	78,658	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:37pm	C Gray	SHAD41a.ssf
4862	-121.2678649	37.82743263	6339909.071	2124662.929	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	98,089	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:39pm	C Gray	SHAD41a.ssf
4863	-121.2678569	37.82744508	6339911.474	2124667.441	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	101,421	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:41pm	C Gray	SHAD41a.ssf
4864	-121.2678506	37.82745193	6339913.272	2124669.919	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	84,715	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:43pm	C Gray	SHAD41a.ssf
4865	-121.2678438	37.82746056	6339915.264	2124673.045	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	68,055	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:45pm	C Gray	SHAD41a.ssf
4866	-121.2678336	37.82745885	6339918.211	2124672.399	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	60,018	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:47pm	C Gray	SHAD41a.ssf
4867	-121.2678314	37.82745235	6339918.816	2124670.027	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,242	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:49pm	C Gray	SHAD41a.ssf
4868	-121.2678358	37.82744327	6339917.53	2124666.733	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	66,345	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:51pm	C Gray	SHAD41a.ssf
4869	-121.26784	37.82743351	6339916.266	2124663.188	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	94,455	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:53pm	C Gray	SHAD41a.ssf
4870	-121.2678449	37.82742481	6339914.84	2124660.032	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	111,307	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:55pm	C Gray	SHAD41a.ssf
4871	-121.2678547	37.82741484	6339913.418	2124656.413	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	118,689	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:57pm	C Gray	SHAD41a.ssf
4872	-121.2678548	37.82740535	6339911.906	2124652.969	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	107,413	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:09:59pm	C Gray	SHAD41a.ssf
4873	-121.2678601	37.82739653	6339910.365	2124649.772	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	84,528	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:01pm	C Gray	SHAD41a.ssf
4874	-121.2678652	37.82738756	6339908.869	2124646.518	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	64,838	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:03pm	C Gray	SHAD41a.ssf
4875	-121.2678694	37.82737822	6339907.62	2124643.124	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,319	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:05pm	C Gray	SHAD41a.ssf
4876	-121.2678741	37.82736805	6339906.226	2124639.433	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,457	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:07pm	C Gray	SHAD41a.ssf
4877	-121.2678788	37.82736015	6339904.86	2124636.57	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,419	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:09pm	C Gray	SHAD41a.ssf
4878	-121.2678837	37.82734985	6339903.391	2124632.829	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,220	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:11pm	C Gray	SHAD41a.ssf
4879	-121.2678882	37.82734162	6339902.085	2124629.843	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,620	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:13pm	C Gray	SHAD41a.ssf
4880	-121.267892	37.82733317	6339900.949	2124626.775	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,793	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:15pm	C Gray	SHAD41a.ssf
4881	-121.2679004	37.82732521	6339899.661	2124623.888	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,756	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:17pm	C Gray	SHAD41a.ssf
4882	-121.2679053	37.8273185	6339898.487	2124621.456	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,762	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:19pm	C Gray	SHAD41a.ssf
4883	-121.2679053	37.82731025	6339897.042	2124618.464	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,962	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:21pm	C Gray	SHAD41a.ssf
4884	-121.2679095	37.82730305	6339895.811	2124615.852	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,012	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:23pm	C Gray	SHAD41a.ssf
4885	-121.2679114	37.82729545	6339894.485	2124613.095	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,841	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:25pm	C Gray	SHAD41a.ssf
4886	-121.2679155	37.82728804	6339894.021	2124610.401	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,646	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:27pm	C Gray	SHAD41a.ssf
4887	-121.2679178	37.82727935	6339893.336	2124607.24	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	98,815	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:29pm	C Gray	SHAD41a.ssf
4888	-121.267922	37.82727143	6339892.113	2124604.366	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	72,297	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:31pm	C Gray	SHAD41a.ssf
4889	-121.2679272	37.8272655	6339890.588	2124602.222	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,702	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:33pm	C Gray	SHAD41a.ssf
4890	-121.2679333	37.82725622	6339888.8	2124598.857	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,021	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:35pm	C Gray	SHAD41a.ssf
4891	-121.2679383	37.82724601	6339887.325	2124595.128	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,146	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:37pm	C Gray	SHAD41a.ssf
4892	-121.2679446	37.82723767	6339885.474	2124592.148	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,163	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:39pm	C Gray	SHAD41a.ssf
4893	-121.2679497	37.82722967	6339883.98	2124589.226	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,345	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:41pm	C Gray	SHAD41a.ssf

ID	Longitude	Latitude	Eastng	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4894	-121.2679551	37.82722092	6339882.393	2124586.055	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,210	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:43pm	C Gray	SHAD41a.ssf
4895	-121.2679603	37.82721158	6339880.878	2124582.665	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,827	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:45pm	C Gray	SHAD41a.ssf
4896	-121.2679657	37.82720478	6339879.278	2124580.202	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,877	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:47pm	C Gray	SHAD41a.ssf
4897	-121.2679675	37.82719825	6339878.755	2124577.829	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,911	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:49pm	C Gray	SHAD41a.ssf
4898	-121.2679659	37.82719485	6339879.214	2124576.587	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,431	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:51pm	C Gray	SHAD41a.ssf
4899	-121.2679624	37.82719692	6339880.213	2124577.332	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,251	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:53pm	C Gray	SHAD41a.ssf
4900	-121.2679612	37.82720427	6339880.595	2124580.008	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,108	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:55pm	C Gray	SHAD41a.ssf
4901	-121.2679582	37.82720874	6339881.221	2124581.627	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,339	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:57pm	C Gray	SHAD41a.ssf
4902	-121.2679592	37.82721539	6339881.195	2124584.051	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,992	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:10:59pm	C Gray	SHAD41a.ssf
4903	-121.2679607	37.82722455	6339880.795	2124587.39	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,634	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:01pm	C Gray	SHAD41a.ssf
4904	-121.2679579	37.82723342	6339881.634	2124590.612	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,843	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:03pm	C Gray	SHAD41a.ssf
4905	-121.2679528	37.82724413	6339883.131	2124594.136	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,677	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:05pm	C Gray	SHAD41a.ssf
4906	-121.2679492	37.82725146	6339884.189	2124597.16	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,096	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:07pm	C Gray	SHAD41a.ssf
4907	-121.2679456	37.82726114	6339885.262	2124600.677	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,549	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:09pm	C Gray	SHAD41a.ssf
4908	-121.2679424	37.82726885	6339886.21	2124603.476	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,262	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:11pm	C Gray	SHAD41a.ssf
4909	-121.2679386	37.82727709	6339887.335	2124606.466	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,423	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:13pm	C Gray	SHAD41a.ssf
4910	-121.2679343	37.82728546	6339888.555	2124609.504	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,826	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:15pm	C Gray	SHAD41a.ssf
4911	-121.2679306	37.82729318	6339889.675	2124612.306	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,081	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:17pm	C Gray	SHAD41a.ssf
4912	-121.2679262	37.82730217	6339891.001	2124615.57	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,663	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:19pm	C Gray	SHAD41a.ssf
4913	-121.2679203	37.82731152	6339892.704	2124618.959	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,344	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:21pm	C Gray	SHAD41a.ssf
4914	-121.2678952	37.82732254	6339894.222	2124622.962	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,236	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:23pm	C Gray	SHAD41a.ssf
4915	-121.2679105	37.82732959	6339895.606	2124625.518	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,341	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:25pm	C Gray	SHAD41a.ssf
4916	-121.2679039	37.82733914	6339897.531	2124628.98	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,064	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:27pm	C Gray	SHAD41a.ssf
4917	-121.2678999	37.82734944	6339898.728	2124632.718	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,735	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:29pm	C Gray	SHAD41a.ssf
4918	-121.2678957	37.82735852	6339899.952	2124636.016	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,493	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:31pm	C Gray	SHAD41a.ssf
4919	-121.2678907	37.82736622	6339901.38	2124638.44	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,673	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:33pm	C Gray	SHAD41a.ssf
4920	-121.2678852	37.82737364	6339903.035	2124641.496	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,119	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:35pm	C Gray	SHAD41a.ssf
4921	-121.26788	37.82738253	6339904.57	2124644.72	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,813	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:37pm	C Gray	SHAD41a.ssf
4922	-121.2678683	37.82739124	6339906.196	2124647.88	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,043	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:39pm	C Gray	SHAD41a.ssf
4923	-121.2678637	37.82740075	6339907.993	2124651.328	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,070	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:41pm	C Gray	SHAD41a.ssf
4924	-121.2678637	37.82741106	6339909.352	2124654.903	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,344	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:43pm	C Gray	SHAD41a.ssf
4925	-121.2678592	37.82741936	6339910.683	2124658.081	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	86,743	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:45pm	C Gray	SHAD41a.ssf
4926	-121.2678538	37.82742815	6339912.281	2124661.269	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	105,966	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:47pm	C Gray	SHAD41a.ssf
4927	-121.2678471	37.82743613	6339914.231	2124664.16	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	109,035	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:49pm	C Gray	SHAD41a.ssf
4928	-121.2678383	37.82744338	6339916.777	2124663.308	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	114,058	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:51pm	C Gray	SHAD41a.ssf
4929	-121.2678389	37.82742973	6339916.576	2124661.809	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	117,068	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:53pm	C Gray	SHAD41a.ssf
4930	-121.2678424	37.82742124	6339915.538	2124658.725	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	114,246	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:55pm	C Gray	SHAD41a.ssf
4931	-121.2678452	37.82741335	6339914.702	2124655.861	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	121,780	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:57pm	C Gray	SHAD41a.ssf
4932	-121.2678493	37.82740547	6339913.506	2124653	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	102,822	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:11:59pm	C Gray	SHAD41a.ssf
4933	-121.267853	37.82739998	6339912.41	2124651.009	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	83,117	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:01pm	C Gray	SHAD41a.ssf
4934	-121.2678587	37.82739056	6339910.759	2124647.595	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,135	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:03pm	C Gray	SHAD41a.ssf
4935	-121.2678622	37.827382	6339909.695	2124644.485	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,938	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:05pm	C Gray	SHAD41a.ssf
4936	-121.2678663	37.82737342	6339908.483	2124641.007	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,601	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:07pm	C Gray	SHAD41a.ssf
4937	-121.2678701	37.82736289	6339907.345	2124637.545	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,786	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:09pm	C Gray	SHAD41a.ssf
4938	-121.2678739	37.82735611	6339906.279	2124635.086	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,429	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:11pm	C Gray	SHAD41a.ssf
4939	-121.2678803	37.82734694	6339904.381	2124631.763	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,382	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:13pm	C Gray	SHAD41a.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4940	-121.2678849	37.82733875	6339903.035	2124628.79	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,414	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:15pm	C Gray	SHAD41a.ssf
4941	-121.2678884	37.82732959	6339901.982	2124625.463	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,604	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:17pm	C Gray	SHAD41a.ssf
4942	-121.2678917	37.82732113	6339901.016	2124622.454	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,617	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:19pm	C Gray	SHAD41a.ssf
4943	-121.267895	37.82731348	6339900.018	2124619.613	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,160	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:21pm	C Gray	SHAD41a.ssf
4944	-121.2678999	37.8273052	6339898.579	2124616.611	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,807	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:23pm	C Gray	SHAD41a.ssf
4945	-121.2679023	37.82729596	6339897.869	2124613.254	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,747	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:25pm	C Gray	SHAD41a.ssf
4946	-121.2679044	37.82728104	6339896.673	2124611.108	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,503	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:27pm	C Gray	SHAD41a.ssf
4947	-121.2679105	37.8272728112	6339895.452	2124607.867	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,224	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:29pm	C Gray	SHAD41a.ssf
4948	-121.2679149	37.82727278	6339894.172	2124604.851	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,992	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:31pm	C Gray	SHAD41a.ssf
4949	-121.2679204	37.82726641	6339892.538	2124601.694	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,320	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:33pm	C Gray	SHAD41a.ssf
4950	-121.2679274	37.8272555	6339890.496	2124598.581	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,828	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:35pm	C Gray	SHAD41a.ssf
4951	-121.2679319	37.82724523	6339889.182	2124594.852	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,762	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:37pm	C Gray	SHAD41a.ssf
4952	-121.2679386	37.8272357	6339887.217	2124591.396	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,468	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:39pm	C Gray	SHAD41a.ssf
4953	-121.2679455	37.82722792	6339885.203	2124588.579	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,462	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:41pm	C Gray	SHAD41a.ssf
4954	-121.2679518	37.82721851	6339883.353	2124585.168	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,427	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:43pm	C Gray	SHAD41a.ssf
4955	-121.2679567	37.82721013	6339881.913	2124582.128	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,392	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:45pm	C Gray	SHAD41a.ssf
4956	-121.2679636	37.82720131	6339879.871	2124578.935	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,864	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:47pm	C Gray	SHAD41a.ssf
4957	-121.2679693	37.82719386	6339878.222	2124576.234	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,943	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:49pm	C Gray	SHAD41a.ssf
4958	-121.2679792	37.82718353	6339875.315	2124572.497	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,187	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:51pm	C Gray	SHAD41a.ssf
4959	-121.2679873	37.82717676	6339872.962	2124570.053	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,564	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:53pm	C Gray	SHAD41a.ssf
4960	-121.2679954	37.82716703	6339870.593	2124566.527	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,178	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:55pm	C Gray	SHAD41a.ssf
4961	-121.2679929	37.82716507	6339871.303	2124565.806	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,121	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:57pm	C Gray	SHAD41a.ssf
4962	-121.2679873	37.82717078	6339872.943	2124567.873	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,384	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:12:59pm	C Gray	SHAD41a.ssf
4963	-121.2679833	37.82717896	6339874.123	2124570.843	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,203	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:01pm	C Gray	SHAD41a.ssf
4964	-121.2679795	37.82718779	6339875.253	2124574.035	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,958	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:03pm	C Gray	SHAD41a.ssf
4965	-121.2679759	37.82719171	6339876.316	2124577.439	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,910	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:05pm	C Gray	SHAD41a.ssf
4966	-121.2679735	37.82720368	6339877.018	2124579.82	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,609	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:07pm	C Gray	SHAD41a.ssf
4967	-121.2679696	37.82721326	6339878.201	2124583.301	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,144	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:09pm	C Gray	SHAD41a.ssf
4968	-121.2679654	37.82722292	6339879.427	2124586.806	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,440	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:11pm	C Gray	SHAD41a.ssf
4969	-121.2679624	37.82723086	6339880.317	2124589.692	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,836	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:13pm	C Gray	SHAD41a.ssf
4970	-121.2679562	37.82723934	6339882.123	2124592.763	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,968	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:15pm	C Gray	SHAD41a.ssf
4971	-121.2679505	37.8272461	6339883.793	2124595.212	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,876	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:17pm	C Gray	SHAD41a.ssf
4972	-121.2679454	37.82725503	6339885.291	2124598.451	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,178	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:19pm	C Gray	SHAD41a.ssf
4973	-121.2679399	37.8272626	6339886.907	2124601.194	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,308	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:21pm	C Gray	SHAD41a.ssf
4974	-121.2679335	37.82727168	6339888.783	2124604.485	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,882	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:23pm	C Gray	SHAD41a.ssf
4975	-121.2679283	37.82728037	6339890.328	2124607.635	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,788	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:25pm	C Gray	SHAD41a.ssf
4976	-121.2679243	37.82729024	6339891.496	2124611.222	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,590	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:27pm	C Gray	SHAD41a.ssf
4977	-121.2679196	37.82729944	6339892.888	2124614.559	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,251	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:29pm	C Gray	SHAD41a.ssf
4978	-121.2679136	37.82730632	6339894.635	2124617.051	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,309	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:31pm	C Gray	SHAD41a.ssf
4979	-121.2679068	37.82731395	6339896.287	2124619.815	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,202	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:33pm	C Gray	SHAD41a.ssf
4980	-121.2679039	37.82732319	6339897.492	2124623.171	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,538	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:35pm	C Gray	SHAD41a.ssf
4981	-121.2678978	37.82733246	6339899.266	2124626.533	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,030	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:37pm	C Gray	SHAD41a.ssf
4982	-121.2678895	37.82733952	6339900.253	2124629.095	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,839	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:39pm	C Gray	SHAD41a.ssf
4983	-121.2678849	37.82734851	6339901.895	2124632.355	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,044	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:41pm	C Gray	SHAD41a.ssf
4984	-121.2678832	37.82735744	6339903.578	2124635.592	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,083	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:43pm	C Gray	SHAD41a.ssf
4985	-121.2678775	37.82736656	6339905.246	2124638.9	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,825	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:45pm	C Gray	SHAD41a.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
4986	-121.2678721	37.82737297	6339906.811	2124641.221	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,990	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:47pm	C Gray	SHAD41a.ssf
4987	-121.2678662	37.827388258	6339908.543	2124644.705	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,380	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:49pm	C Gray	SHAD41a.ssf
4988	-121.2678597	37.82739973	6339910.442	2124647.295	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,571	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:51pm	C Gray	SHAD41a.ssf
4989	-121.2678529	37.82739937	6339912.455	2124650.786	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,820	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:53pm	C Gray	SHAD41a.ssf
4990	-121.2678476	37.82740759	6339914.011	2124653.769	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,318	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:55pm	C Gray	SHAD41a.ssf
4991	-121.2678399	37.82741677	6339916.257	2124657.092	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,340	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:57pm	C Gray	SHAD41a.ssf
4992	-121.2678292	37.82742034	6339919.364	2124658.369	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	103,268	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:13:59pm	C Gray	SHAD41a.ssf
4993	-121.2678247	37.82741839	6339920.654	2124657.648	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	115,390	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:01pm	C Gray	SHAD41a.ssf
4994	-121.2678283	37.82741012	6339919.585	2124654.646	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	120,435	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:03pm	C Gray	SHAD41a.ssf
4995	-121.2678323	37.82740325	6339918.406	2124652.151	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	92,609	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:05pm	C Gray	SHAD41a.ssf
4996	-121.2678388	37.82739346	6339916.49	2124648.602	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,030	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:07pm	C Gray	SHAD41a.ssf
4997	-121.2678436	37.82738537	6339915.084	2124645.667	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,388	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:09pm	C Gray	SHAD41a.ssf
4998	-121.2678483	37.82737626	6339913.701	2124642.364	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,785	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:11pm	C Gray	SHAD41a.ssf
4999	-121.2678561	37.82739671	6339911.427	2124639.047	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,825	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:13pm	C Gray	SHAD41a.ssf
5000	-121.2678614	37.82737359	6339909.884	2124636.107	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,263	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:15pm	C Gray	SHAD41a.ssf
5001	-121.2678685	37.82734992	6339907.791	2124632.556	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,015	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:17pm	C Gray	SHAD41a.ssf
5002	-121.2678743	37.82733962	6339906.074	2124629.084	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,852	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:19pm	C Gray	SHAD41a.ssf
5003	-121.2678784	37.82733133	6339904.882	2124626.075	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,295	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:21pm	C Gray	SHAD41a.ssf
5004	-121.2678841	37.82732275	6339903.221	2124622.964	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,681	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:23pm	C Gray	SHAD41a.ssf
5005	-121.2678894	37.8273151	6339900.291	2124617.378	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,748	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:25pm	C Gray	SHAD41a.ssf
5006	-121.2679313	37.82730713	6339900.221	2124617.378	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,446	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:27pm	C Gray	SHAD41a.ssf
5007	-121.2678994	37.82729907	6339898.795	2124611.11	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,616	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:29pm	C Gray	SHAD41a.ssf
5008	-121.2679056	37.82729005	6339896.913	2124611.11	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,746	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:31pm	C Gray	SHAD41a.ssf
5009	-121.2679106	37.82727954	6339895.428	2124607.293	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,745	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:33pm	C Gray	SHAD41a.ssf
5010	-121.2679176	37.82727156	6339893.373	2124604.402	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,475	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:35pm	C Gray	SHAD41a.ssf
5011	-121.2679235	37.82726643	6339891.641	2124601.786	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,659	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:37pm	C Gray	SHAD41a.ssf
5012	-121.2679302	37.82725477	6339889.678	2124598.32	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,420	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:39pm	C Gray	SHAD41a.ssf
5013	-121.2679367	37.82724708	6339887.779	2124595.538	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,307	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:41pm	C Gray	SHAD41a.ssf
5014	-121.2679431	37.82723862	6339885.913	2124592.472	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,537	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:43pm	C Gray	SHAD41a.ssf
5015	-121.2679535	37.82722185	6339882.259	2124589.536	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,171	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:45pm	C Gray	SHAD41a.ssf
5016	-121.2679585	37.82721536	6339881.389	2124586.39	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,373	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:47pm	C Gray	SHAD41a.ssf
5017	-121.2679632	37.82720664	6339880.021	2124584.038	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,026	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:49pm	C Gray	SHAD41a.ssf
5018	-121.2679687	37.82719436	6339878.397	2124576.414	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,405	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:51pm	C Gray	SHAD41a.ssf
5019	-121.2679733	37.82718556	6339877.025	2124573.224	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,239	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:53pm	C Gray	SHAD41a.ssf
5020	-121.2679788	37.82717788	6339876.443	2124570.443	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,248	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:55pm	C Gray	SHAD41a.ssf
5021	-121.2679828	37.82718012	6339877.173	2124571.24	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,580	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:14:57pm	C Gray	SHAD41a.ssf
5022	-121.2679677	37.82718821	6339878.652	2124574.172	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,524	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:01pm	C Gray	SHAD41a.ssf
5023	-121.2679637	37.82719593	6339879.837	2124576.976	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,823	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:03pm	C Gray	SHAD41a.ssf
5024	-121.2679585	37.82720414	6339881.362	2124579.953	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,094	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:05pm	C Gray	SHAD41a.ssf
5025	-121.2679545	37.82721172	6339882.555	2124582.703	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,373	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:07pm	C Gray	SHAD41a.ssf
5026	-121.2679484	37.82722143	6339884.323	2124586.225	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,942	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:09pm	C Gray	SHAD41a.ssf
5027	-121.2679435	37.82722296	6339885.772	2124589.187	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,200	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:11pm	C Gray	SHAD41a.ssf
5028	-121.2679373	37.82723833	6339887.594	2124592.35	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,733	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:13pm	C Gray	SHAD41a.ssf
5029	-121.2679315	37.82724727	6339889.304	2124595.594	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,511	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:15pm	C Gray	SHAD41a.ssf
5030	-121.2679268	37.82725495	6339890.68	2124598.378	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,659	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:17pm	C Gray	SHAD41a.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5032	-121.2679208	37.82726513	6339892.44	2124602.069	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,941	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:19pm	C Gray	SHAD41a.ssf
5033	-121.2679151	37.82727191	6339894.067	2124604.524	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,243	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:21pm	C Gray	SHAD41a.ssf
5034	-121.2679101	37.82727828	6339895.568	2124608.187	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,247	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:23pm	C Gray	SHAD41a.ssf
5035	-121.2679044	37.82729013	6339897.26	2124611.135	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	77,359	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:25pm	C Gray	SHAD41a.ssf
5036	-121.2679001	37.82729861	6339898.513	2124614.213	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,456	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:27pm	C Gray	SHAD41a.ssf
5037	-121.2678944	37.82730864	6339900.176	2124617.849	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,525	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:29pm	C Gray	SHAD41a.ssf
5038	-121.2678877	37.82731893	6339902.154	2124621.582	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,342	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:31pm	C Gray	SHAD41a.ssf
5039	-121.2678853	37.82732825	6339903.256	2124625.058	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,655	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:33pm	C Gray	SHAD41a.ssf
5040	-121.2678771	37.82733974	6339905.287	2124629.135	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,842	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:35pm	C Gray	SHAD41a.ssf
5041	-121.2678692	37.827348	6339907.597	2124632.12	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,548	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:37pm	C Gray	SHAD41a.ssf
5042	-121.2678621	37.82735649	6339909.662	2124635.198	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,833	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:39pm	C Gray	SHAD41a.ssf
5043	-121.2678553	37.82736486	6339911.656	2124638.23	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,977	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:41pm	C Gray	SHAD41a.ssf
5044	-121.2678468	37.82737488	6339914.129	2124641.856	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,466	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:43pm	C Gray	SHAD41a.ssf
5045	-121.2678395	37.82738481	6339916.263	2124645.454	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,565	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:45pm	C Gray	SHAD41a.ssf
5046	-121.2678323	37.827393231	6339918.363	2124648.169	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,614	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:47pm	C Gray	SHAD41a.ssf
5047	-121.2678246	37.82740126	6339920.616	2124651.408	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,129	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:49pm	C Gray	SHAD41a.ssf
5048	-121.2678189	37.82740971	6339922.262	2124654.474	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	74,533	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:51pm	C Gray	SHAD41a.ssf
5049	-121.2678139	37.82741734	6339923.759	2124657.239	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	112,361	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:53pm	C Gray	SHAD41a.ssf
5050	-121.2678059	37.82742658	6339926.103	2124660.585	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	136,428	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:55pm	C Gray	SHAD41a.ssf
5051	-121.2677976	37.82743517	6339928.502	2124663.381	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	156,084	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:57pm	C Gray	SHAD41a.ssf
5052	-121.2677926	37.82744263	6339929.947	2124666.496	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	153,311	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:15:59pm	C Gray	SHAD41a.ssf
5053	-121.2677972	37.82744895	6339928.6	2124657.785	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	154,220	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:01pm	C Gray	SHAD41a.ssf
5054	-121.2678025	37.82740955	6339927.041	2124654.375	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	159,345	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:03pm	C Gray	SHAD41a.ssf
5055	-121.2678089	37.82740251	6339925.166	2124651.826	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	142,854	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:05pm	C Gray	SHAD41a.ssf
5056	-121.2678153	37.82739352	6339923.292	2124648.57	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	101,321	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:07pm	C Gray	SHAD41a.ssf
5057	-121.2678214	37.82738552	6339921.491	2124645.49	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	72,054	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:09pm	C Gray	SHAD41a.ssf
5058	-121.2678268	37.82737797	6339919.915	2124642.933	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,852	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:11pm	C Gray	SHAD41a.ssf
5059	-121.2678359	37.82736767	6339917.255	2124639.205	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,386	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:13pm	C Gray	SHAD41a.ssf
5060	-121.2678414	37.82735988	6339915.664	2124636.382	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,048	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:15pm	C Gray	SHAD41a.ssf
5061	-121.2678499	37.82739501	6339913.178	2124632.84	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,452	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:17pm	C Gray	SHAD41a.ssf
5062	-121.2678557	37.8273415	6339911.46	2124629.724	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,419	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:19pm	C Gray	SHAD41a.ssf
5063	-121.2678631	37.82733315	6339909.292	2124626.701	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,400	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:21pm	C Gray	SHAD41a.ssf
5064	-121.2678704	37.82732701	6339907.172	2124624.484	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,455	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:23pm	C Gray	SHAD41a.ssf
5065	-121.2678755	37.82731899	6339905.679	2124621.574	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,107	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:25pm	C Gray	SHAD41a.ssf
5066	-121.2678784	37.82731313	6339904.819	2124619.401	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,413	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:27pm	C Gray	SHAD41a.ssf
5067	-121.2678846	37.82730581	6339903.01	2124616.798	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,970	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:29pm	C Gray	SHAD41a.ssf
5068	-121.2678897	37.82729896	6339901.507	2124614.315	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,528	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:31pm	C Gray	SHAD41a.ssf
5069	-121.2678947	37.82729238	6339900.049	2124611.93	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,903	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:33pm	C Gray	SHAD41a.ssf
5070	-121.2679017	37.82728433	6339897.959	2124609.016	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,915	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:35pm	C Gray	SHAD41a.ssf
5071	-121.2679077	37.82727559	6339896.238	2124605.847	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	89,985	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:37pm	C Gray	SHAD41a.ssf
5072	-121.2679132	37.82726629	6339894.628	2124602.474	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	60,040	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:39pm	C Gray	SHAD41a.ssf
5073	-121.2679182	37.82725755	6339893.173	2124599.305	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,966	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:41pm	C Gray	SHAD41a.ssf
5074	-121.2679234	37.82724872	6339891.638	2124595.945	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,774	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:43pm	C Gray	SHAD41a.ssf
5075	-121.2679287	37.82723872	6339890.081	2124592.474	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,511	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:45pm	C Gray	SHAD41a.ssf
5076	-121.2679346	37.82722877	6339888.342	2124588.863	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,865	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:47pm	C Gray	SHAD41a.ssf
5077	-121.2679398	37.82722076	6339886.825	2124585.959	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,561	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:49pm	C Gray	SHAD41a.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5078	-121.2679436	37.82721027	6339885.685	2124582.15	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,177	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:51pm	C Gray	SHAD41a.ssf
5079	-121.2679479	37.82720274	6339884.427	2124579.418	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,195	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:53pm	C Gray	SHAD41a.ssf
5080	-121.2679528	37.82719376	6339882.986	2124576.158	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,807	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:55pm	C Gray	SHAD41a.ssf
5081	-121.2679552	37.82718883	6339882.271	2124574.37	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,452	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:57pm	C Gray	SHAD41a.ssf
5082	-121.2679532	37.82718025	6339882.822	2124571.24	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,760	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:16:59pm	C Gray	SHAD41a.ssf
5083	-121.2679494	37.82718688	6339883.944	2124573.646	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,304	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:01pm	C Gray	SHAD41a.ssf
5084	-121.2679457	37.82719594	6339885.051	2124576.938	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,633	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:03pm	C Gray	SHAD41a.ssf
5085	-121.2679416	37.82720334	6339886.245	2124579.641	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,231	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:05pm	C Gray	SHAD41a.ssf
5086	-121.2679365	37.82721498	6339887.754	2124583.847	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,582	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:07pm	C Gray	SHAD41a.ssf
5087	-121.2679303	37.82722378	6339889.579	2124587.035	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,292	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:09pm	C Gray	SHAD41a.ssf
5088	-121.2679255	37.82723187	6339890.988	2124589.972	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,310	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:11pm	C Gray	SHAD41a.ssf
5089	-121.2679193	37.827204139	6339892.784	2124593.424	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,103	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:13pm	C Gray	SHAD41a.ssf
5090	-121.2679112	37.82725092	6339895.153	2124596.873	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,485	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:15pm	C Gray	SHAD41a.ssf
5091	-121.2679065	37.82725918	6339896.543	2124599.871	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,434	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:17pm	C Gray	SHAD41a.ssf
5092	-121.2679041	37.82726844	6339898.118	2124603.229	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,744	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:19pm	C Gray	SHAD41a.ssf
5093	-121.2678941	37.82727721	6339900.195	2124606.404	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,026	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:21pm	C Gray	SHAD41a.ssf
5094	-121.2678909	37.82728542	6339901.143	2124609.385	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,771	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:23pm	C Gray	SHAD41a.ssf
5095	-121.2678853	37.82729482	6339902.763	2124612.798	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,568	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:25pm	C Gray	SHAD41a.ssf
5096	-121.2678813	37.82730147	6339903.947	2124615.21	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,273	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:27pm	C Gray	SHAD41a.ssf
5097	-121.2678763	37.82730959	6339905.977	2124618.154	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,043	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:29pm	C Gray	SHAD41a.ssf
5098	-121.267871	37.82731777	6339906.914	2124621.119	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,191	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:31pm	C Gray	SHAD41a.ssf
5099	-121.2678681	37.82732416	6339907.841	2124623.438	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,005	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:33pm	C Gray	SHAD41a.ssf
5100	-121.2678634	37.82733274	6339909.216	2124626.552	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,690	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:35pm	C Gray	SHAD41a.ssf
5101	-121.2678572	37.82734119	6339911.032	2124629.613	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,661	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:37pm	C Gray	SHAD41a.ssf
5102	-121.267851	37.82734897	6339912.269	2124632.435	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,969	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:39pm	C Gray	SHAD41a.ssf
5103	-121.2678457	37.82735757	6339914.387	2124635.534	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,012	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:41pm	C Gray	SHAD41a.ssf
5104	-121.267839	37.82736576	6339916.37	2124638.519	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,898	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:43pm	C Gray	SHAD41a.ssf
5105	-121.2678319	37.82737649	6339918.435	2124642.407	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,027	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:45pm	C Gray	SHAD41a.ssf
5106	-121.2678265	37.82738348	6339920.029	2124644.941	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,133	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:47pm	C Gray	SHAD41a.ssf
5107	-121.2678212	37.82739323	6339921.579	2124648.476	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,690	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:49pm	C Gray	SHAD41a.ssf
5108	-121.2678158	37.82740339	6339923.176	2124652.164	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	64,023	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:51pm	C Gray	SHAD41a.ssf
5109	-121.2678083	37.82741287	6339925.365	2124655.598	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	106,137	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:53pm	C Gray	SHAD41a.ssf
5110	-121.2678018	37.82742149	6339927.269	2124658.722	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	145,732	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:55pm	C Gray	SHAD41a.ssf
5111	-121.2677923	37.82742697	6339930.029	2124660.693	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	156,179	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:57pm	C Gray	SHAD41a.ssf
5112	-121.2677861	37.82743274	6339931.82	2124659.505	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	152,043	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:17:59pm	C Gray	SHAD41a.ssf
5113	-121.2677906	37.827441831	6339930.502	2124657.535	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	153,899	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:01pm	C Gray	SHAD41a.ssf
5114	-121.2677961	37.82744106	6339928.884	2124654.742	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	167,176	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:03pm	C Gray	SHAD41a.ssf
5115	-121.2678016	37.82740236	6339927.275	2124651.754	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	142,466	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:05pm	C Gray	SHAD41a.ssf
5116	-121.2678068	37.82739567	6339925.75	2124648.603	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	115,916	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:07pm	C Gray	SHAD41a.ssf
5117	-121.2678116	37.82738815	6339924.335	2124646.604	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	82,346	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:09pm	C Gray	SHAD41a.ssf
5118	-121.2678174	37.82737678	6339922.638	2124642.478	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	66,140	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:11pm	C Gray	SHAD41a.ssf
5119	-121.267824	37.82737027	6339920.71	2124640.122	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,755	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:13pm	C Gray	SHAD41a.ssf
5120	-121.267829	37.82736301	6339919.234	2124637.492	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,284	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:15pm	C Gray	SHAD41a.ssf
5121	-121.2678362	37.82735327	6339917.133	2124633.961	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,059	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:17pm	C Gray	SHAD41a.ssf
5122	-121.2678466	37.827342	6339914.039	2124629.884	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,271	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:19pm	C Gray	SHAD41a.ssf
5123	-121.2678525	37.82733354	6339912.352	2124626.818	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,551	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:21pm	C Gray	SHAD41a.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5124	-121.2678594	37.827325338	6339910.354	2124623.862	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,380	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:23pm	C Gray	SHAD41a.ssf
5125	-121.2678675	37.82731766	6339909.297	2124621.036	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,548	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:25pm	C Gray	SHAD41a.ssf
5126	-121.2678675	37.82730933	6339907.991	2124618.036	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,615	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:27pm	C Gray	SHAD41a.ssf
5127	-121.2678727	37.82730055	6339906.421	2124614.852	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,206	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:29pm	C Gray	SHAD41a.ssf
5128	-121.2678808	37.82729028	6339904.069	2124611.132	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,471	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:31pm	C Gray	SHAD41a.ssf
5129	-121.2678865	37.82728149	6339902.379	2124607.945	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,921	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:33pm	C Gray	SHAD41a.ssf
5130	-121.2678925	37.82727128	6339900.619	2124604.243	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,625	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:35pm	C Gray	SHAD41a.ssf
5131	-121.2678952	37.82726185	6339898.673	2124600.825	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,333	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:37pm	C Gray	SHAD41a.ssf
5132	-121.2679046	37.82725081	6339897.083	2124596.817	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,069	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:39pm	C Gray	SHAD41a.ssf
5133	-121.26791	37.82724161	6339895.48	2124593.48	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,991	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:41pm	C Gray	SHAD41a.ssf
5134	-121.2679151	37.82723357	6339893.994	2124590.564	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,061	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:43pm	C Gray	SHAD41a.ssf
5135	-121.2679202	37.82722243	6339892.48	2124587.203	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,751	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:45pm	C Gray	SHAD41a.ssf
5136	-121.2679246	37.82721535	6339891.202	2124583.955	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,610	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:47pm	C Gray	SHAD41a.ssf
5137	-121.2679295	37.82720638	6339889.739	2124580.7	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,471	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:49pm	C Gray	SHAD41a.ssf
5138	-121.2679359	37.82719802	6339887.887	2124577.672	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,453	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:51pm	C Gray	SHAD41a.ssf
5139	-121.2679443	37.82718794	6339885.426	2124574.02	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,803	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:53pm	C Gray	SHAD41a.ssf
5140	-121.2679492	37.82718036	6339883.979	2124570.905	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,016	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:55pm	C Gray	SHAD41a.ssf
5141	-121.267951	37.8271721	6339883.43	2124568.269	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,191	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:57pm	C Gray	SHAD41a.ssf
5142	-121.2679544	37.82716941	6339882.453	2124567.297	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,998	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:18:59pm	C Gray	SHAD41a.ssf
5143	-121.2679492	37.82717426	6339883.954	2124569.05	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,900	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:01pm	C Gray	SHAD41a.ssf
5144	-121.2679436	37.82718036	6339885.119	2124571.262	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,350	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:03pm	C Gray	SHAD41a.ssf
5145	-121.2679408	37.82718891	6339886.42	2124574.364	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,316	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:05pm	C Gray	SHAD41a.ssf
5146	-121.2679361	37.82719641	6339887.806	2124577.086	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,723	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:07pm	C Gray	SHAD41a.ssf
5147	-121.2679295	37.82720753	6339889.761	2124581.119	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,688	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:09pm	C Gray	SHAD41a.ssf
5148	-121.2679227	37.82721644	6339891.752	2124584.373	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,565	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:11pm	C Gray	SHAD41a.ssf
5149	-121.2679181	37.82722533	6339893.096	2124587.548	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,886	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:13pm	C Gray	SHAD41a.ssf
5150	-121.267914	37.8272337	6339894.31	2124590.609	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,878	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:15pm	C Gray	SHAD41a.ssf
5151	-121.2679089	37.82724275	6339895.812	2124593.893	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,754	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:17pm	C Gray	SHAD41a.ssf
5152	-121.2679035	37.82725163	6339897.379	2124597.115	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,005	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:19pm	C Gray	SHAD41a.ssf
5153	-121.2678994	37.82725865	6339898.598	2124599.066	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,121	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:21pm	C Gray	SHAD41a.ssf
5154	-121.2678942	37.82726701	6339900.114	2124602.692	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,133	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:23pm	C Gray	SHAD41a.ssf
5155	-121.2678857	37.82727678	6339902.606	2124606.23	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,520	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:25pm	C Gray	SHAD41a.ssf
5156	-121.2678795	37.82728546	6339904.414	2124609.376	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,922	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:27pm	C Gray	SHAD41a.ssf
5157	-121.2678751	37.82729362	6339905.729	2124612.337	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,001	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:29pm	C Gray	SHAD41a.ssf
5158	-121.2678697	37.82730348	6339914.145	2124627.072	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,016	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:31pm	C Gray	SHAD41a.ssf
5159	-121.2678662	37.82731113	6339908.356	2124618.688	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,225	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:33pm	C Gray	SHAD41a.ssf
5160	-121.2678614	37.82731838	6339909.741	2124621.317	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,333	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:35pm	C Gray	SHAD41a.ssf
5161	-121.2678551	37.82732633	6339911.579	2124624.198	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,177	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:37pm	C Gray	SHAD41a.ssf
5162	-121.2678463	37.82733428	6339914.145	2124627.072	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,708	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:39pm	C Gray	SHAD41a.ssf
5163	-121.2678424	37.82734314	6339915.323	2124630.29	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,545	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:41pm	C Gray	SHAD41a.ssf
5164	-121.2678343	37.82735305	6339917.693	2124633.879	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,631	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:43pm	C Gray	SHAD41a.ssf
5165	-121.267825	37.82736257	6339920.404	2124637.321	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,517	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:45pm	C Gray	SHAD41a.ssf
5166	-121.2678177	37.82737096	6339922.515	2124640.359	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,443	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:47pm	C Gray	SHAD41a.ssf
5167	-121.2678123	37.82737863	6339924.111	2124643.141	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,465	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:49pm	C Gray	SHAD41a.ssf
5168	-121.2678081	37.82738682	6339925.345	2124646.112	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,914	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:51pm	C Gray	SHAD41a.ssf
5169	-121.267801	37.82739541	6339927.423	2124649.223	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,001	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:53pm	C Gray	SHAD41a.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5170	-121.267789	37.82740341	6339930.926	2124652.109	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	104,066	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:55pm	C Gray	SHAD41a.ssf
5171	-121.267785	37.8274038	6339932.08	2124652.239	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	114,579	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:57pm	C Gray	SHAD41a.ssf
5172	-121.2677894	37.82739981	6339930.774	2124650.799	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	118,076	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:19:59pm	C Gray	SHAD41a.ssf
5173	-121.2677961	37.82739259	6339928.831	2124648.186	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	120,617	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:01pm	C Gray	SHAD41a.ssf
5174	-121.267802	37.82738583	6339927.104	2124645.738	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	97,935	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:03pm	C Gray	SHAD41a.ssf
5175	-121.2678079	37.82737976	6339925.372	2124643.539	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,735	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:05pm	C Gray	SHAD41a.ssf
5176	-121.2678121	37.82736662	6339924.134	2124638.767	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,892	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:07pm	C Gray	SHAD41a.ssf
5177	-121.2678177	37.82735753	6339922.5	2124635.471	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,713	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:09pm	C Gray	SHAD41a.ssf
5178	-121.2678241	37.82734963	6339920.629	2124632.608	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,985	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:11pm	C Gray	SHAD41a.ssf
5179	-121.2678313	37.82734082	6339918.518	2124629.417	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,236	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:13pm	C Gray	SHAD41a.ssf
5180	-121.2678388	37.82733218	6339916.459	2124626.289	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,961	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:15pm	C Gray	SHAD41a.ssf
5181	-121.2678448	37.82732353	6339914.555	2124623.156	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,469	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:17pm	C Gray	SHAD41a.ssf
5182	-121.2678485	37.82731562	6339913.467	2124620.283	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,255	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:19pm	C Gray	SHAD41a.ssf
5183	-121.2678538	37.82730709	6339911.911	2124617.188	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,858	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:21pm	C Gray	SHAD41a.ssf
5184	-121.2678609	37.82729878	6339909.829	2124614.181	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,785	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:23pm	C Gray	SHAD41a.ssf
5185	-121.2678665	37.82729061	6339908.208	2124611.221	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,042	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:25pm	C Gray	SHAD41a.ssf
5186	-121.2678727	37.82728194	6339906.364	2124608.075	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,492	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:27pm	C Gray	SHAD41a.ssf
5187	-121.2678797	37.82727304	6339904.334	2124604.852	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,907	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:29pm	C Gray	SHAD41a.ssf
5188	-121.267888	37.82726342	6339901.906	2124601.37	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,833	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:31pm	C Gray	SHAD41a.ssf
5189	-121.267894	37.82725645	6339900.151	2124598.847	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,750	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:33pm	C Gray	SHAD41a.ssf
5190	-121.267932	37.82719696	6339888.653	2124577.279	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,112	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:35pm	C Gray	SHAD41a.ssf
5191	-121.2679051	37.82723837	6339896.899	2124592.288	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,053	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:37pm	C Gray	SHAD41a.ssf
5192	-121.2679135	37.82722806	6339894.439	2124588.554	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,282	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:39pm	C Gray	SHAD41a.ssf
5193	-121.2679187	37.82722225	6339892.904	2124586.544	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,391	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:41pm	C Gray	SHAD41a.ssf
5194	-121.267924	37.82721453	6339891.16	2124583.652	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,683	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:43pm	C Gray	SHAD41a.ssf
5195	-121.2679282	37.82720489	6339890.125	2124580.154	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,491	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:45pm	C Gray	SHAD41a.ssf
5196	-121.2679332	37.82719696	6339888.653	2124577.279	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,112	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:47pm	C Gray	SHAD41a.ssf
5197	-121.2679382	37.82718986	6339887.189	2124574.704	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,861	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:49pm	C Gray	SHAD41a.ssf
5198	-121.2679441	37.82718436	6339885.474	2124572.717	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,842	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:51pm	C Gray	SHAD41a.ssf
5199	-121.2679457	37.8271768	6339884.987	2124569.966	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,566	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:53pm	C Gray	SHAD41a.ssf
5200	-121.267947	37.82717627	6339884.605	2124569.778	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,788	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:55pm	C Gray	SHAD41a.ssf
5201	-121.2679443	37.82718014	6339885.393	2124571.18	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,807	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:57pm	C Gray	SHAD41a.ssf
5202	-121.2679398	37.82718627	6339886.716	2124573.401	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,226	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:20:59pm	C Gray	SHAD41a.ssf
5203	-121.2679358	37.82719273	6339887.878	2124575.745	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,246	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:01pm	C Gray	SHAD41a.ssf
5204	-121.2679315	37.82719828	6339889.141	2124577.753	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,458	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:03pm	C Gray	SHAD41a.ssf
5205	-121.2679258	37.82720615	6339890.815	2124580.608	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,881	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:05pm	C Gray	SHAD41a.ssf
5206	-121.2679214	37.82721403	6339892.113	2124583.465	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,881	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:07pm	C Gray	SHAD41a.ssf
5207	-121.2679151	37.82722161	6339893.953	2124586.211	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,345	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:09pm	C Gray	SHAD41a.ssf
5208	-121.2679106	37.82722967	6339895.267	2124589.135	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,903	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:11pm	C Gray	SHAD41a.ssf
5209	-121.2679038	37.82723821	6339897.272	2124592.228	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,122	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:13pm	C Gray	SHAD41a.ssf
5210	-121.2678993	37.82724532	6339898.594	2124594.804	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,508	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:15pm	C Gray	SHAD41a.ssf
5211	-121.2678931	37.82725357	6339900.4	2124597.797	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,470	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:17pm	C Gray	SHAD41a.ssf
5212	-121.2678879	37.82726051	6339901.915	2124600.31	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,051	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:19pm	C Gray	SHAD41a.ssf
5213	-121.2678832	37.82726756	6339903.314	2124602.865	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,697	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:21pm	C Gray	SHAD41a.ssf
5214	-121.2678767	37.82727469	6339905.205	2124605.446	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,990	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:23pm	C Gray	SHAD41a.ssf
5215	-121.2678705	37.82728305	6339907.023	2124608.475	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,952	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:25pm	C Gray	SHAD41a.ssf

ID	Longitude	Latitude	Eastng	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5216	-121.2678644	37.82729073	6339908.793	2124611.259	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,528	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:27pm	C Gray	SHAD41a.ssf
5217	-121.2678592	37.82729075	6339910.327	2124613.876	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,839	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:29pm	C Gray	SHAD41a.ssf
5218	-121.2678562	37.82730495	6339911.212	2124616.415	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,171	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:13pm	C Gray	SHAD41a.ssf
5219	-121.2678479	37.82731628	6339913.648	2124620.522	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,208	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:13pm	C Gray	SHAD41a.ssf
5220	-121.2678397	37.82732446	6339916.024	2124623.482	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,515	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:13pm	C Gray	SHAD41a.ssf
5221	-121.2678353	37.82733344	6339917.996	2124626.736	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,099	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:17pm	C Gray	SHAD41a.ssf
5222	-121.2678255	37.82734498	6339920.202	2124630.918	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,486	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:19pm	C Gray	SHAD41a.ssf
5223	-121.2678203	37.82735530	6339921.729	2124633.853	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,368	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:41pm	C Gray	SHAD41a.ssf
5224	-121.2678129	37.82736337	6339923.906	2124637.585	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,067	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:43pm	C Gray	SHAD41a.ssf
5225	-121.2678077	37.82737016	6339925.413	2124640.045	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,267	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:45pm	C Gray	SHAD41a.ssf
5226	-121.2678018	37.82737917	6339927.138	2124643.31	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,081	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:47pm	C Gray	SHAD41a.ssf
5227	-121.2677966	37.82738813	6339928.661	2124646.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68,404	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:49pm	C Gray	SHAD41a.ssf
5228	-121.2677951	37.82739641	6339930.743	2124649.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	123,111	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:51pm	C Gray	SHAD41a.ssf
5229	-121.2677835	37.82740439	6339932.498	2124652.452	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	122,280	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:53pm	C Gray	SHAD41a.ssf
5230	-121.2677789	37.82741335	6339933.862	2124655.703	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	129,187	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:55pm	C Gray	SHAD41a.ssf
5231	-121.2677718	37.8274223	6339935.947	2124658.946	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	130,632	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:57pm	C Gray	SHAD41a.ssf
5232	-121.2677717	37.82742265	6339935.967	2124659.073	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	114,576	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:21:59pm	C Gray	SHAD41a.ssf
5233	-121.2677728	37.82742163	6339935.638	2124658.702	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	107,557	Geo 7X	Uncorrected	10/2/2017	12:22:01pm	C Gray	SHAD41a.ssf
5234	-121.2677605	37.82741372	6339939.181	2124655.792	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,044	Geo 7X	Uncorrected	10/2/2017	12:35:37pm	C Gray	SHAD41a.ssf
5235	-121.2677602	37.8274137	6339939.181	2124655.785	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,628	Geo 7X	Uncorrected	10/2/2017	12:35:39pm	C Gray	SHAD41a.ssf
5236	-121.2677592	37.8274129	6339939.538	2124655.499	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,351	Geo 7X	Uncorrected	10/2/2017	12:36:59pm	C Gray	SHAD41a.ssf
5237	-121.2677592	37.8274129	6339939.547	2124655.499	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,244	Geo 7X	Uncorrected	10/2/2017	12:37:01pm	C Gray	SHAD41a.ssf
5238	-121.2677592	37.82741288	6339939.556	2124655.485	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,873	Geo 7X	Uncorrected	10/2/2017	12:37:03pm	C Gray	SHAD41a.ssf
5239	-121.2677603	37.82741114	6339939.217	2124654.948	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	79,729	Geo 7X	Uncorrected	10/2/2017	12:37:05pm	C Gray	SHAD41a.ssf
5240	-121.2677624	37.82740855	6339938.604	2124654.026	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,560	Geo 7X	Uncorrected	10/2/2017	12:37:07pm	C Gray	SHAD41a.ssf
5241	-121.2677624	37.82740855	6339938.737	2124655.821	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	83,948	Geo 7X	Uncorrected	10/2/2017	12:37:09pm	C Gray	SHAD41a.ssf
5242	-121.2677633	37.82740323	6339938.324	2124651.982	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90,175	Geo 7X	Uncorrected	10/2/2017	12:37:11pm	C Gray	SHAD41a.ssf
5243	-121.2677677	37.82739775	6339937.051	2124649.995	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	97,162	Geo 7X	Uncorrected	10/2/2017	12:37:13pm	C Gray	SHAD41a.ssf
5244	-121.2677745	37.82738902	6339935.047	2124646.835	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	110,098	Geo 7X	Uncorrected	10/2/2017	12:37:15pm	C Gray	SHAD41a.ssf
5245	-121.2677788	37.8273798	6339937.788	2124643.487	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	131,321	Geo 7X	Uncorrected	10/2/2017	12:37:17pm	C Gray	SHAD41a.ssf
5246	-121.2677849	37.82737193	6339932.001	2124640.636	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	119,658	Geo 7X	Uncorrected	10/2/2017	12:37:19pm	C Gray	SHAD41a.ssf
5247	-121.2677865	37.82736533	6339931.509	2124638.237	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	135,721	Geo 7X	Uncorrected	10/2/2017	12:37:21pm	C Gray	SHAD41a.ssf
5248	-121.2677944	37.8273596	6339929.215	2124636.17	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	117,991	Geo 7X	Uncorrected	10/2/2017	12:37:23pm	C Gray	SHAD41a.ssf
5249	-121.2677965	37.82735275	6339927.995	2124633.684	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	84,980	Geo 7X	Uncorrected	10/2/2017	12:37:25pm	C Gray	SHAD41a.ssf
5250	-121.2678055	37.82734408	6339925.963	2124630.545	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,122	Geo 7X	Uncorrected	10/2/2017	12:37:26pm	C Gray	SHAD41a.ssf
5251	-121.267845	37.82726453	6339914.327	2124601.671	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,046	Geo 7X	Uncorrected	10/2/2017	12:37:29pm	C Gray	SHAD41a.ssf
5252	-121.2678004	37.82727593	6339927.227	2124605.717	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,068	Geo 7X	Uncorrected	10/2/2017	12:37:31pm	C Gray	SHAD41a.ssf
5253	-121.2678103	37.82728718	6339924.428	2124609.836	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,165	Geo 7X	Uncorrected	10/2/2017	12:37:33pm	C Gray	SHAD41a.ssf
5254	-121.2678188	37.82729972	6339922.005	2124614.423	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,143	Geo 7X	Uncorrected	10/2/2017	12:37:35pm	C Gray	SHAD41a.ssf
5255	-121.2678287	37.82729826	6339919.123	2124613.916	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,513	Geo 7X	Uncorrected	10/2/2017	12:37:37pm	C Gray	SHAD41a.ssf
5256	-121.2678362	37.82729233	6339916.961	2124611.772	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,596	Geo 7X	Uncorrected	10/2/2017	12:37:39pm	C Gray	SHAD41a.ssf
5257	-121.2678421	37.8272861	6339915.218	2124609.52	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,025	Geo 7X	Uncorrected	10/2/2017	12:37:41pm	C Gray	SHAD41a.ssf
5258	-121.2678502	37.82727474	6339912.664	2124603.404	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,561	Geo 7X	Uncorrected	10/2/2017	12:37:43pm	C Gray	SHAD41a.ssf
5259	-121.2678549	37.82726991	6339911.688	2124603.654	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,309	Geo 7X	Uncorrected	10/2/2017	12:37:44pm	C Gray	SHAD41a.ssf
5260	-121.2678628	37.82726025	6339909.185	2124600.156	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,084	Geo 7X	Uncorrected	10/2/2017	12:37:47pm	C Gray	SHAD41a.ssf
5261	-121.2678706	37.82724909	6339906.874	2124596.113	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,572	Geo 7X	Uncorrected	10/2/2017	12:37:49pm	C Gray	SHAD41a.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5308	-121.267942	37.82715575	6339885.985	2124562.293	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,053	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:05pm	C Gray	SHAD-41b.ssf
5309	-121.267942	37.82715575	6339885.985	2124562.293	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,065	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:08pm	C Gray	SHAD-41b.ssf
5311	-121.2679425	37.82715554	6339885.843	2124562.166	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,676	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:14pm	C Gray	SHAD-41b.ssf
5312	-121.2679389	37.82715684	6339886.89	2124562.683	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,438	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:16pm	C Gray	SHAD-41b.ssf
5313	-121.267938	37.82715716	6339887.132	2124562.798	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,901	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:18pm	C Gray	SHAD-41b.ssf
5314	-121.2679377	37.82716396	6339887.253	2124565.272	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,083	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:24pm	C Gray	SHAD-41b.ssf
5315	-121.2679376	37.82716732	6339888.443	2124566.488	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,364	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:25pm	C Gray	SHAD-41b.ssf
5316	-121.2679232	37.82717382	6339890.298	2124568.84	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,435	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:26pm	C Gray	SHAD-41b.ssf
5317	-121.2679256	37.82717901	6339890.781	2124570.726	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,215	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:28pm	C Gray	SHAD-41b.ssf
5318	-121.2679174	37.82718564	6339893.186	2124573.118	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,564	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:31pm	C Gray	SHAD-41b.ssf
5319	-121.2679116	37.82719175	6339894.87	2124575.33	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,155	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:32pm	C Gray	SHAD-41b.ssf
5320	-121.2679098	37.82719327	6339895.384	2124575.879	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,220	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:35pm	C Gray	SHAD-41b.ssf
5321	-121.2679097	37.82719326	6339895.419	2124575.877	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,647	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:37pm	C Gray	SHAD-41b.ssf
5322	-121.2679095	37.82719289	6339895.487	2124575.74	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,884	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:38pm	C Gray	SHAD-41b.ssf
5323	-121.2679096	37.82719249	6339895.457	2124575.595	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,538	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:41pm	C Gray	SHAD-41b.ssf
5324	-121.2679099	37.82719197	6339895.447	2124575.404	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,555	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:42pm	C Gray	SHAD-41b.ssf
5325	-121.2679096	37.82719188	6339895.367	2124575.373	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,257	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:45pm	C Gray	SHAD-41b.ssf
5326	-121.2679101	37.82719261	6339895.303	2124575.638	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,224	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:47pm	C Gray	SHAD-41b.ssf
5327	-121.2679102	37.827193	6339895.294	2124575.782	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,518	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:49pm	C Gray	SHAD-41b.ssf
5328	-121.2679097	37.8271932	6339895.427	2124575.855	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,478	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:50pm	C Gray	SHAD-41b.ssf
5329	-121.2679099	37.82719357	6339895.479	2124575.988	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,704	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:53pm	C Gray	SHAD-41b.ssf
5330	-121.2679101	37.8271926	6339895.313	2124575.636	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,233	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:54pm	C Gray	SHAD-41b.ssf
5331	-121.267911	37.82719325	6339895.059	2124575.875	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,516	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:56pm	C Gray	SHAD-41b.ssf
5332	-121.2679113	37.82719454	6339894.96	2124576.344	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,759	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:44:59pm	C Gray	SHAD-41b.ssf
5333	-121.2679122	37.82719523	6339894.721	2124576.597	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,101	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:00pm	C Gray	SHAD-41b.ssf
5334	-121.2679136	37.82719047	6339894.86	2124576.323	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,415	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:02pm	C Gray	SHAD-41b.ssf
5335	-121.2679136	37.82719374	6339894.297	2124576.06	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,878	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:05pm	C Gray	SHAD-41b.ssf
5336	-121.2679136	37.82719341	6339894.29	2124575.938	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,440	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:07pm	C Gray	SHAD-41b.ssf
5337	-121.2679137	37.82719318	6339894.281	2124575.856	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,228	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:08pm	C Gray	SHAD-41b.ssf
5338	-121.2679129	37.82719371	6339894.22	2124576.048	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,230	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:11pm	C Gray	SHAD-41b.ssf
5339	-121.2679127	37.82719238	6339894.566	2124575.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,672	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:12pm	C Gray	SHAD-41b.ssf
5340	-121.2679116	37.82719081	6339894.872	2124574.988	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,087	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:14pm	C Gray	SHAD-41b.ssf
5341	-121.2679116	37.82719047	6339894.86	2124574.864	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,791	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:16pm	C Gray	SHAD-41b.ssf
5342	-121.2679118	37.82719076	6339894.809	2124574.97	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,748	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:18pm	C Gray	SHAD-41b.ssf
5343	-121.2679118	37.82719107	6339894.8	2124575.081	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,182	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:21pm	C Gray	SHAD-41b.ssf
5344	-121.2679118	37.82719092	6339894.803	2124575.03	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,405	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:22pm	C Gray	SHAD-41b.ssf
5345	-121.2679121	37.8271918	6339894.743	2124575.348	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,374	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:24pm	C Gray	SHAD-41b.ssf
5346	-121.2679112	37.82719256	6339894.752	2124575.625	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,855	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:27pm	C Gray	SHAD-41b.ssf
5347	-121.2679113	37.82719371	6339894.964	2124576.043	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,911	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:28pm	C Gray	SHAD-41b.ssf
5348	-121.2679105	37.82719178	6339896.805	2124577.516	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,845	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:30pm	C Gray	SHAD-41b.ssf
5349	-121.2679038	37.82720485	6339897.168	2124580.081	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,569	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:32pm	C Gray	SHAD-41b.ssf
5350	-121.2678988	37.82721362	6339898.641	2124583.261	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,118	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:34pm	C Gray	SHAD-41b.ssf
5351	-121.2678924	37.82722398	6339900.528	2124587.021	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,019	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:36pm	C Gray	SHAD-41b.ssf
5352	-121.2678895	37.82723371	6339902.827	2124590.544	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,109	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:39pm	C Gray	SHAD-41b.ssf
5353	-121.2678793	37.82724372	6339904.36	2124594.177	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,426	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:41pm	C Gray	SHAD-41b.ssf
5354	-121.2678727	37.82725305	6339906.285	2124597.559	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,258	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:42pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5355	-121.2678659	37.82726083	6339908.268	2124600.376	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,240	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:44pm	C Gray	SHAD-41b.ssf
5356	-121.2678508	37.82727156	6339910.659	2124604.269	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,096	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:46pm	C Gray	SHAD-41b.ssf
5357	-121.2678508	37.82728201	6339912.699	2124608.042	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,505	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:48pm	C Gray	SHAD-41b.ssf
5358	-121.2678447	37.82729276	6339914.498	2124611.949	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,152	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:51pm	C Gray	SHAD-41b.ssf
5359	-121.2678405	37.82730086	6339915.738	2124614.889	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,702	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:52pm	C Gray	SHAD-41b.ssf
5360	-121.2678349	37.82730975	6339917.381	2124618.113	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,742	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:54pm	C Gray	SHAD-41b.ssf
5361	-121.2678261	37.8273218	6339919.969	2124622.481	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,035	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:56pm	C Gray	SHAD-41b.ssf
5362	-121.2678166	37.82733278	6339922.346	2124626.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,144	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:45:59pm	C Gray	SHAD-41b.ssf
5363	-121.2678093	37.82734172	6339924.874	2124629.694	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,847	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:01pm	C Gray	SHAD-41b.ssf
5364	-121.267801	37.8273509	6339929.291	2124633.016	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,700	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:03pm	C Gray	SHAD-41b.ssf
5365	-121.267794	37.82736032	6339929.346	2124636.43	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,430	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:04pm	C Gray	SHAD-41b.ssf
5366	-121.2677854	37.82737016	6339931.446	2124639.992	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,523	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:06pm	C Gray	SHAD-41b.ssf
5367	-121.2677769	37.82737983	6339934.326	2124643.492	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,660	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:08pm	C Gray	SHAD-41b.ssf
5368	-121.2677688	37.82738901	6339936.698	2124646.818	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	144,680	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:11pm	C Gray	SHAD-41b.ssf
5369	-121.2677582	37.82739726	6339939.777	2124649.794	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	121,583	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:13pm	C Gray	SHAD-41b.ssf
5370	-121.2677484	37.8274052	6339942.703	2124652.663	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,779	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:14pm	C Gray	SHAD-41b.ssf
5371	-121.2677382	37.82741338	6339945.553	2124655.618	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,465	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:16pm	C Gray	SHAD-41b.ssf
5372	-121.2677281	37.8274223	6339948.552	2124658.842	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,260	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:19pm	C Gray	SHAD-41b.ssf
5373	-121.2677184	37.82743248	6339951.402	2124662.527	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,113	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:21pm	C Gray	SHAD-41b.ssf
5374	-121.2677111	37.827442688	6339953.434	2124666.468	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,892	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:23pm	C Gray	SHAD-41b.ssf
5375	-121.2677159	37.82745235	6339955.083	2124669.233	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,172	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:24pm	C Gray	SHAD-41b.ssf
5376	-121.2677125	37.82746171	6339957.462	2124672.911	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,603	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:26pm	C Gray	SHAD-41b.ssf
5377	-121.2677296	37.82747069	6339948.091	2124653.238	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,848	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:29pm	C Gray	SHAD-41b.ssf
5378	-121.2677371	37.82739714	6339945.891	2124649.702	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,937	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:31pm	C Gray	SHAD-41b.ssf
5379	-121.267744	37.82738739	6339943.852	2124646.166	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,544	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:32pm	C Gray	SHAD-41b.ssf
5380	-121.2677514	37.82737845	6339941.687	2124642.931	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,119	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:34pm	C Gray	SHAD-41b.ssf
5381	-121.2677603	37.82736891	6339939.104	2124639.477	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,193	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:37pm	C Gray	SHAD-41b.ssf
5382	-121.2677667	37.827356113	6339937.231	2124636.658	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,206	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:38pm	C Gray	SHAD-41b.ssf
5383	-121.2677729	37.82735235	6339935.413	2124633.478	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,836	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:40pm	C Gray	SHAD-41b.ssf
5384	-121.2677808	37.82734357	6339933.102	2124630.3	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,905	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:42pm	C Gray	SHAD-41b.ssf
5385	-121.2677933	37.82733416	6339930.896	2124626.891	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,181	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:44pm	C Gray	SHAD-41b.ssf
5386	-121.2677993	37.82732177	6339927.685	2124622.405	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,552	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:47pm	C Gray	SHAD-41b.ssf
5387	-121.2678063	37.82731476	6339925.636	2124618.779	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,424	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:48pm	C Gray	SHAD-41b.ssf
5388	-121.2678155	37.82730118	6339922.942	2124614.946	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,112	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:51pm	C Gray	SHAD-41b.ssf
5389	-121.2678224	37.82729411	6339920.955	2124612.389	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,423	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:52pm	C Gray	SHAD-41b.ssf
5390	-121.2678293	37.82728505	6339918.911	2124609.108	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,605	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:54pm	C Gray	SHAD-41b.ssf
5391	-121.2678404	37.82727167	6339915.684	2124604.259	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,253	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:57pm	C Gray	SHAD-41b.ssf
5392	-121.2678478	37.82726155	6339913.516	2124600.593	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,634	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:46:59pm	C Gray	SHAD-41b.ssf
5393	-121.2678572	37.82725264	6339910.758	2124597.371	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,240	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:00pm	C Gray	SHAD-41b.ssf
5394	-121.2678628	37.82724567	6339909.139	2124594.869	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,149	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:02pm	C Gray	SHAD-41b.ssf
5395	-121.2678709	37.82723241	6339906.748	2124590.037	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,138	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:05pm	C Gray	SHAD-41b.ssf
5396	-121.2678808	37.82722356	6339903.85	2124586.84	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,729	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:06pm	C Gray	SHAD-41b.ssf
5397	-121.2678889	37.82721494	6339901.462	2124583.72	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,080	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:08pm	C Gray	SHAD-41b.ssf
5398	-121.2678938	37.82720859	6339900.066	2124581.42	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,417	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:10pm	C Gray	SHAD-41b.ssf
5399	-121.2679032	37.82719482	6339897.355	2124576.428	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,173	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:13pm	C Gray	SHAD-41b.ssf
5400	-121.2679107	37.82718193	6339895.108	2124571.754	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,672	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:14pm	C Gray	SHAD-41b.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5401	-121.2679191	37.82717192	6339892.66	2124568.127	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,560	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:16pm	C Gray	SHAD-41b.ssf
5402	-121.2679253	37.82716137	6339890.839	2124564.298	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,626	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:18pm	C Gray	SHAD-41b.ssf
5403	-121.2679311	37.82715072	6339889.135	2124560.439	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,581	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:20pm	C Gray	SHAD-41b.ssf
5404	-121.26793	37.82714551	6339889.425	2124558.538	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,285	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:22pm	C Gray	SHAD-41b.ssf
5405	-121.2679227	37.82715633	6339891.562	2124562.458	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,068	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:25pm	C Gray	SHAD-41b.ssf
5406	-121.2679203	37.82716243	6339892.263	2124564.675	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,061	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:27pm	C Gray	SHAD-41b.ssf
5407	-121.2679159	37.82717192	6339895.161	2124568.115	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,547	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:28pm	C Gray	SHAD-41b.ssf
5408	-121.2679106	37.82718	6339895.125	2124571.08	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,844	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:30pm	C Gray	SHAD-41b.ssf
5409	-121.2679051	37.82718772	6339896.742	2124573.845	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,804	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:32pm	C Gray	SHAD-41b.ssf
5410	-121.2678965	37.8271985	6339899.259	2124577.752	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,308	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:34pm	C Gray	SHAD-41b.ssf
5411	-121.2678912	37.82720762	6339900.822	2124581.06	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,663	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:36pm	C Gray	SHAD-41b.ssf
5412	-121.2678835	37.8272187	6339903.079	2124585.076	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,381	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:39pm	C Gray	SHAD-41b.ssf
5413	-121.2678772	37.82722851	6339904.921	2124588.633	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,563	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:41pm	C Gray	SHAD-41b.ssf
5414	-121.267872	37.82723594	6339906.455	2124591.325	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,210	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:42pm	C Gray	SHAD-41b.ssf
5415	-121.2678666	37.8272441	6339908.079	2124594.286	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,023	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:44pm	C Gray	SHAD-41b.ssf
5416	-121.2678601	37.82725195	6339909.941	2124597.127	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,032	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:46pm	C Gray	SHAD-41b.ssf
5417	-121.2678524	37.82726254	6339912.183	2124600.966	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,568	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:49pm	C Gray	SHAD-41b.ssf
5418	-121.2678476	37.8272729	6339913.598	2124604.726	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,632	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:51pm	C Gray	SHAD-41b.ssf
5419	-121.2678419	37.82728016	6339915.259	2124607.356	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,272	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:52pm	C Gray	SHAD-41b.ssf
5420	-121.2678347	37.82729168	6339917.369	2124611.535	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,086	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:55pm	C Gray	SHAD-41b.ssf
5421	-121.2677825	37.82729908	6339919.196	2124614.214	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,574	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:56pm	C Gray	SHAD-41b.ssf
5422	-121.2678287	37.82730793	6339920.907	2124617.422	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,751	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:47:58pm	C Gray	SHAD-41b.ssf
5423	-121.2678185	37.82731568	6339922.132	2124620.235	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,293	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:00pm	C Gray	SHAD-41b.ssf
5424	-121.2678111	37.82732654	6339924.309	2124624.17	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,242	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:02pm	C Gray	SHAD-41b.ssf
5425	-121.2678023	37.82733662	6339926.88	2124627.82	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,388	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:05pm	C Gray	SHAD-41b.ssf
5426	-121.2677971	37.82734395	6339928.391	2124630.477	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,371	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:06pm	C Gray	SHAD-41b.ssf
5427	-121.2677918	37.8273524	6339929.958	2124633.542	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,862	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:08pm	C Gray	SHAD-41b.ssf
5428	-121.2677845	37.82736383	6339932.086	2124637.685	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,005	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:10pm	C Gray	SHAD-41b.ssf
5429	-121.2677782	37.8273742	6339933.937	2124641.445	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,272	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:12pm	C Gray	SHAD-41b.ssf
5430	-121.2677705	37.82738443	6339936.186	2124645.151	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,419	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:14pm	C Gray	SHAD-41b.ssf
5431	-121.2677650	37.82739597	6339939.135	2124649.331	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	91,346	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:16pm	C Gray	SHAD-41b.ssf
5432	-121.2677506	37.82740517	6339942.015	2124652.658	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	79,880	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:19pm	C Gray	SHAD-41b.ssf
5433	-121.267742	37.82741353	6339944.505	2124655.682	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,295	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:21pm	C Gray	SHAD-41b.ssf
5434	-121.2677375	37.82742125	6339945.828	2124658.481	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,869	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:22pm	C Gray	SHAD-41b.ssf
5435	-121.267732	37.82742967	6339947.45	2124661.534	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,465	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:24pm	C Gray	SHAD-41b.ssf
5436	-121.267722	37.82743924	6339950.378	2124664.994	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,839	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:26pm	C Gray	SHAD-41b.ssf
5437	-121.2677165	37.8274298	6339951.919	2124661.546	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,276	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:29pm	C Gray	SHAD-41b.ssf
5438	-121.2677211	37.8274213	6339950.572	2124658.46	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,977	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:30pm	C Gray	SHAD-41b.ssf
5439	-121.2677285	37.8274097	6339946.419	2124654.256	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,125	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:32pm	C Gray	SHAD-41b.ssf
5440	-121.2677354	37.82740287	6339948.405	2124651.782	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,316	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:34pm	C Gray	SHAD-41b.ssf
5441	-121.2677443	37.82738949	6339943.795	2124646.932	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,867	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:36pm	C Gray	SHAD-41b.ssf
5442	-121.2677509	37.82738128	6339941.857	2124643.958	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,769	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:38pm	C Gray	SHAD-41b.ssf
5443	-121.2677597	37.82737104	6339939.265	2124640.251	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,708	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:40pm	C Gray	SHAD-41b.ssf
5444	-121.2677661	37.8273616	6339937.415	2124636.831	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,063	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:42pm	C Gray	SHAD-41b.ssf
5445	-121.2677731	37.82735118	6339935.354	2124633.053	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,407	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:44pm	C Gray	SHAD-41b.ssf
5446	-121.2677802	37.82734043	6339933.275	2124629.156	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,739	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:46pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5447	-121.2677861	37.82732973	6339931.542	2124625.274	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,863	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:48pm	C Gray	SHAD-41b.ssf
5448	-121.2677910	37.82732157	6339929.832	2124622.314	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,569	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:50pm	C Gray	SHAD-41b.ssf
5449	-121.2678012	37.82730927	6339927.117	2124617.858	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,055	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:53pm	C Gray	SHAD-41b.ssf
5450	-121.2678081	37.82729893	6339925.087	2124614.109	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,676	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:54pm	C Gray	SHAD-41b.ssf
5451	-121.2678162	37.82728822	6339922.715	2124610.23	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,496	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:56pm	C Gray	SHAD-41b.ssf
5452	-121.2678258	37.8272757	6339919.913	2124605.695	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,170	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:48:59pm	C Gray	SHAD-41b.ssf
5453	-121.2678323	37.82726555	6339918.006	2124602.015	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,506	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:00pm	C Gray	SHAD-41b.ssf
5454	-121.2678395	37.82725614	6339915.897	2124598.604	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,602	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:02pm	C Gray	SHAD-41b.ssf
5455	-121.267848	37.82724795	6339913.406	2124595.641	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,481	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:04pm	C Gray	SHAD-41b.ssf
5456	-121.267858	37.82723865	6339910.507	2124592.281	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,544	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:06pm	C Gray	SHAD-41b.ssf
5457	-121.2678657	37.82723057	6339908.245	2124589.355	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,343	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:08pm	C Gray	SHAD-41b.ssf
5458	-121.2678732	37.82722084	6339906.041	2124585.833	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,817	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:10pm	C Gray	SHAD-41b.ssf
5459	-121.2678789	37.82721452	6339904.374	2124583.542	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,002	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:12pm	C Gray	SHAD-41b.ssf
5460	-121.2678897	37.82720348	6339901.243	2124579.548	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,753	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:14pm	C Gray	SHAD-41b.ssf
5461	-121.2678989	37.82719422	6339898.545	2124576.199	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,300	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:17pm	C Gray	SHAD-41b.ssf
5462	-121.2679054	37.82718631	6339896.651	2124573.365	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,643	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:18pm	C Gray	SHAD-41b.ssf
5463	-121.2679113	37.82717866	6339894.919	2124570.552	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,593	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:20pm	C Gray	SHAD-41b.ssf
5464	-121.2679212	37.82716786	6339892.028	2124566.653	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,721	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:22pm	C Gray	SHAD-41b.ssf
5465	-121.2679293	37.82715573	6339889.651	2124562.257	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,574	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:25pm	C Gray	SHAD-41b.ssf
5466	-121.2679351	37.82714827	6339887.966	2124556.194	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,132	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:26pm	C Gray	SHAD-41b.ssf
5467	-121.2679393	37.82713903	6339886.784	2124556.583	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,596	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:28pm	C Gray	SHAD-41b.ssf
5468	-121.2679353	37.82714381	6339887.874	2124557.932	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,340	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:31pm	C Gray	SHAD-41b.ssf
5469	-121.267931	37.82714923	6339889.133	2124559.893	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,897	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:32pm	C Gray	SHAD-41b.ssf
5470	-121.2679231	37.82715825	6339891.445	2124563.16	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,445	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:35pm	C Gray	SHAD-41b.ssf
5471	-121.2679171	37.82716664	6339893.223	2124566.199	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,908	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:36pm	C Gray	SHAD-41b.ssf
5472	-121.2679112	37.82715573	6339894.943	2124569.143	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,121	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:38pm	C Gray	SHAD-41b.ssf
5473	-121.2679065	37.82718282	6339896.329	2124572.066	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,098	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:40pm	C Gray	SHAD-41b.ssf
5474	-121.2678959	37.82719321	6339898.512	2124575.833	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,586	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:42pm	C Gray	SHAD-41b.ssf
5475	-121.267892	37.82720233	6339900.555	2124579.137	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,922	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:45pm	C Gray	SHAD-41b.ssf
5476	-121.2678821	37.82721228	6339903.462	2124582.735	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,361	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:47pm	C Gray	SHAD-41b.ssf
5477	-121.2678779	37.82721877	6339904.686	2124585.09	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,513	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:48pm	C Gray	SHAD-41b.ssf
5478	-121.2678713	37.82722812	6339906.607	2124588.479	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,490	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:50pm	C Gray	SHAD-41b.ssf
5479	-121.2678664	37.82723696	6339908.75	2124591.678	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,819	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:52pm	C Gray	SHAD-41b.ssf
5480	-121.2678567	37.82724492	6339910.882	2124594.561	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,618	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:54pm	C Gray	SHAD-41b.ssf
5481	-121.2678464	37.82725689	6339913.893	2124598.895	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,850	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:56pm	C Gray	SHAD-41b.ssf
5482	-121.2678407	37.82726343	6339915.572	2124601.261	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,003	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:49:58pm	C Gray	SHAD-41b.ssf
5483	-121.2678338	37.82727383	6339917.597	2124605.033	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,121	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:00pm	C Gray	SHAD-41b.ssf
5484	-121.2678276	37.82728269	6339919.397	2124608.242	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,246	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:02pm	C Gray	SHAD-41b.ssf
5485	-121.2678207	37.82729097	6339921.429	2124611.241	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,793	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:04pm	C Gray	SHAD-41b.ssf
5486	-121.2678135	37.82730178	6339923.529	2124615.159	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,492	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:07pm	C Gray	SHAD-41b.ssf
5487	-121.267808	37.82730957	6339925.132	2124617.985	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,506	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:08pm	C Gray	SHAD-41b.ssf
5488	-121.2677976	37.82731936	6339928.189	2124621.524	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,194	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:10pm	C Gray	SHAD-41b.ssf
5489	-121.2677903	37.82732954	6339930.328	2124625.283	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,149	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:12pm	C Gray	SHAD-41b.ssf
5490	-121.2677813	37.82733995	6339932.955	2124628.983	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,537	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:14pm	C Gray	SHAD-41b.ssf
5491	-121.2677772	37.8273495	6339934.14	2124630.811	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,055	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:16pm	C Gray	SHAD-41b.ssf
5492	-121.267767	37.82735894	6339937.141	2124635.864	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,057	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:18pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5493	-121.2677586	37.8273672	6339939.582	2124638.851	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,951	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:20pm	C Gray	SHAD-41b.ssf
5494	-121.2677421	37.82737352	6339940.902	2124641.14	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,845	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:22pm	C Gray	SHAD-41b.ssf
5495	-121.2677514	37.8273876	6339944.407	2124646.24	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,826	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:25pm	C Gray	SHAD-41b.ssf
5496	-121.2677347	37.82739785	6339946.569	2124649.956	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,602	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:27pm	C Gray	SHAD-41b.ssf
5497	-121.267727	37.8274085	6339948.823	2124653.816	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	79,056	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:29pm	C Gray	SHAD-41b.ssf
5498	-121.2677205	37.82741839	6339950.756	2124657.401	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,937	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:30pm	C Gray	SHAD-41b.ssf
5499	-121.2677118	37.82742004	6339953.25	2124657.236	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,792	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:33pm	C Gray	SHAD-41b.ssf
5500	-121.2677702	37.82741527	6339953.991	2124656.238	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,696	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:34pm	C Gray	SHAD-41b.ssf
5501	-121.2677165	37.82740447	6339951.855	2124652.322	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,402	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:37pm	C Gray	SHAD-41b.ssf
5502	-121.2677202	37.82739956	6339950.76	2124650.542	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,361	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:38pm	C Gray	SHAD-41b.ssf
5503	-121.2677279	37.82739059	6339948.513	2124647.294	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,258	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:40pm	C Gray	SHAD-41b.ssf
5504	-121.2677316	37.82738558	6339947.436	2124645.56	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	79,234	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:42pm	C Gray	SHAD-41b.ssf
5505	-121.2677421	37.8273734	6339944.365	2124641.069	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,734	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:44pm	C Gray	SHAD-41b.ssf
5506	-121.267746	37.82736501	6339943.226	2124638.025	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,440	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:46pm	C Gray	SHAD-41b.ssf
5507	-121.2677529	37.82735618	6339941.199	2124634.825	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,856	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:48pm	C Gray	SHAD-41b.ssf
5508	-121.2677601	37.82734648	6339939.08	2124631.309	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,023	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:50pm	C Gray	SHAD-41b.ssf
5509	-121.2677679	37.82733659	6339936.811	2124627.727	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,042	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:53pm	C Gray	SHAD-41b.ssf
5510	-121.2677744	37.82732967	6339934.903	2124625.222	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,909	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:54pm	C Gray	SHAD-41b.ssf
5511	-121.2677816	37.8273251	6339932.821	2124623.578	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,084	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:56pm	C Gray	SHAD-41b.ssf
5512	-121.2677886	37.8273137	6339930.756	2124619.444	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,707	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:50:58pm	C Gray	SHAD-41b.ssf
5513	-121.2677972	37.82730187	6339928.254	2124615.156	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,920	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:00pm	C Gray	SHAD-41b.ssf
5514	-121.2678058	37.82729264	6339925.744	2124611.813	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,600	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:02pm	C Gray	SHAD-41b.ssf
5515	-121.2678143	37.82728302	6339923.248	2124608.331	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,195	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:04pm	C Gray	SHAD-41b.ssf
5516	-121.2678209	37.82727555	6339921.329	2124605.627	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,154	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:06pm	C Gray	SHAD-41b.ssf
5517	-121.2678284	37.82726527	6339919.135	2124601.901	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,529	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:08pm	C Gray	SHAD-41b.ssf
5518	-121.2678346	37.82725682	6339917.435	2124598.839	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,472	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:10pm	C Gray	SHAD-41b.ssf
5519	-121.2678398	37.82724823	6339915.791	2124595.726	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,321	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:12pm	C Gray	SHAD-41b.ssf
5520	-121.267846	37.82723858	6339913.949	2124592.225	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,255	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:14pm	C Gray	SHAD-41b.ssf
5521	-121.2678519	37.82723096	6339912.245	2124589.465	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,015	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:16pm	C Gray	SHAD-41b.ssf
5522	-121.2678629	37.82721676	6339909.01	2124584.32	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,594	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:20pm	C Gray	SHAD-41b.ssf
5523	-121.2678643	37.82721323	6339908.594	2124583.037	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,467	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:20pm	C Gray	SHAD-41b.ssf
5524	-121.2678705	37.82720378	6339906.792	2124579.613	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,550	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:22pm	C Gray	SHAD-41b.ssf
5525	-121.2678761	37.82719369	6339905.134	2124575.954	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,048	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:24pm	C Gray	SHAD-41b.ssf
5526	-121.2678819	37.82718395	6339903.439	2124572.418	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,433	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:26pm	C Gray	SHAD-41b.ssf
5527	-121.2678878	37.82717383	6339901.688	2124568.748	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,410	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:29pm	C Gray	SHAD-41b.ssf
5528	-121.267892	37.82716544	6339900.443	2124565.703	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,815	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:30pm	C Gray	SHAD-41b.ssf
5529	-121.267898	37.82715468	6339898.678	2124561.798	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,056	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:33pm	C Gray	SHAD-41b.ssf
5530	-121.2679026	37.82714706	6339897.335	2124559.038	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,966	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:35pm	C Gray	SHAD-41b.ssf
5531	-121.2679095	37.82713878	6339895.324	2124556.037	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,161	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:37pm	C Gray	SHAD-41b.ssf
5532	-121.267915	37.82713051	6339893.701	2124553.039	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,091	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:38pm	C Gray	SHAD-41b.ssf
5533	-121.2679104	37.82712738	6339895.021	2124551.887	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,414	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:40pm	C Gray	SHAD-41b.ssf
5534	-121.2679092	37.82713204	6339895.387	2124553.583	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,473	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:42pm	C Gray	SHAD-41b.ssf
5535	-121.2679056	37.82713644	6339896.406	2124555.175	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,267	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:44pm	C Gray	SHAD-41b.ssf
5536	-121.26799	37.82714406	6339898.991	2124557.936	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,416	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:46pm	C Gray	SHAD-41b.ssf
5537	-121.2678936	37.82715135	6339899.955	2124560.575	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,648	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:48pm	C Gray	SHAD-41b.ssf
5538	-121.2678881	37.8271585	6339901.553	2124563.167	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,768	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:50pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5539	-121.2678823	37.827161729	6339905.261	2124566.353	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,835	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:52pm	C Gray	SHAD-41b.ssf
5540	-121.2678763	37.827175757	6339905.002	2124569.359	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,382	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:54pm	C Gray	SHAD-41b.ssf
5541	-121.2678695	37.827184114	6339907.05	2124572.454	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,026	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:56pm	C Gray	SHAD-41b.ssf
5542	-121.2678632	37.82719382	6339908.854	2124575.967	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,210	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:51:58pm	C Gray	SHAD-41b.ssf
5543	-121.2678584	37.82720076	6339910.262	2124578.484	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,857	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:00pm	C Gray	SHAD-41b.ssf
5544	-121.2678785	37.8272111	6339912.721	2124582.194	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,141	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:03pm	C Gray	SHAD-41b.ssf
5545	-121.2678448	37.82721864	6339914.245	2124584.964	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,654	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:04pm	C Gray	SHAD-41b.ssf
5546	-121.2678292	37.82722905	6339914.812	2124588.75	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,158	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:06pm	C Gray	SHAD-41b.ssf
5547	-121.2678392	37.82724057	6339915.939	2124592.936	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,104	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:08pm	C Gray	SHAD-41b.ssf
5548	-121.2678279	37.82725909	6339919.235	2124599.651	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,571	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:12pm	C Gray	SHAD-41b.ssf
5549	-121.2678258	37.82726357	6339919.875	2124601.276	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,421	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:14pm	C Gray	SHAD-41b.ssf
5550	-121.267882	37.82727024	6339921.574	2124603.694	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,320	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:16pm	C Gray	SHAD-41b.ssf
5551	-121.2678109	37.82727974	6339924.214	2124607.13	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,670	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:18pm	C Gray	SHAD-41b.ssf
5552	-121.2678065	37.82728821	6339925.505	2124610.203	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,991	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:20pm	C Gray	SHAD-41b.ssf
5553	-121.2678024	37.82729637	6339926.736	2124613.165	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,316	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:22pm	C Gray	SHAD-41b.ssf
5554	-121.2677983	37.82730521	6339927.981	2124616.375	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,296	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:24pm	C Gray	SHAD-41b.ssf
5555	-121.267791	37.82731376	6339930.082	2124619.469	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,675	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:26pm	C Gray	SHAD-41b.ssf
5556	-121.2677835	37.82732364	6339932.276	2124624.053	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,395	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:28pm	C Gray	SHAD-41b.ssf
5557	-121.2677748	37.82733622	6339934.803	2124627.608	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,373	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:30pm	C Gray	SHAD-41b.ssf
5558	-121.2677703	37.82734512	6339936.15	2124630.502	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,709	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:32pm	C Gray	SHAD-41b.ssf
5559	-121.2677628	37.82735622	6339938.331	2124634.865	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,047	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:35pm	C Gray	SHAD-41b.ssf
5560	-121.2677544	37.82736639	6339940.797	2124638.547	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,874	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:37pm	C Gray	SHAD-41b.ssf
5561	-121.2677492	37.82737443	6339942.328	2124641.463	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,822	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:38pm	C Gray	SHAD-41b.ssf
5562	-121.2677414	37.827376	6339944.571	2124642.016	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,309	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:40pm	C Gray	SHAD-41b.ssf
5563	-121.2677407	37.82737945	6339944.727	2124643.269	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,525	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:42pm	C Gray	SHAD-41b.ssf
5564	-121.2677427	37.82738558	6339944.228	2124645.505	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,915	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:44pm	C Gray	SHAD-41b.ssf
5565	-121.2677344	37.82739347	6339946.651	2124648.357	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,119	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:47pm	C Gray	SHAD-41b.ssf
5566	-121.2677289	37.8274006	6339948.275	2124650.942	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,023	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:48pm	C Gray	SHAD-41b.ssf
5567	-121.2677202	37.82741063	6339950.812	2124654.573	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,078	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:51pm	C Gray	SHAD-41b.ssf
5568	-121.2677128	37.8274196	6339952.976	2124657.824	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,058	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:53pm	C Gray	SHAD-41b.ssf
5569	-121.2677058	37.82742597	6339955.008	2124660.124	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,413	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:54pm	C Gray	SHAD-41b.ssf
5570	-121.2677009	37.82742321	6339956.412	2124659.109	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,912	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:56pm	C Gray	SHAD-41b.ssf
5571	-121.2677074	37.82741643	6339954.518	2124656.653	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,856	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:52:58pm	C Gray	SHAD-41b.ssf
5572	-121.2677136	37.82740915	6339952.694	2124654.018	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,267	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:00pm	C Gray	SHAD-41b.ssf
5573	-121.2677175	37.82740226	6339951.563	2124651.518	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,146	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:02pm	C Gray	SHAD-41b.ssf
5574	-121.2677265	37.82739218	6339948.933	2124647.871	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,103	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:04pm	C Gray	SHAD-41b.ssf
5575	-121.2677333	37.82738404	6339946.945	2124644.924	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,542	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:06pm	C Gray	SHAD-41b.ssf
5576	-121.2677387	37.8273768	6339945.364	2124642.299	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,822	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:08pm	C Gray	SHAD-41b.ssf
5577	-121.2677355	37.82737001	6339946.266	2124639.818	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,712	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:11pm	C Gray	SHAD-41b.ssf
5578	-121.2677443	37.82736625	6339943.722	2124638.472	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	84,945	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:12pm	C Gray	SHAD-41b.ssf
5579	-121.26775	37.82736264	6339942.048	2124637.171	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,947	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:14pm	C Gray	SHAD-41b.ssf
5580	-121.2677556	37.82735531	6339940.407	2124634.514	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,690	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:16pm	C Gray	SHAD-41b.ssf
5581	-121.2677626	37.82734708	6339938.361	2124631.535	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,143	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:18pm	C Gray	SHAD-41b.ssf
5582	-121.2677708	37.82733579	6339935.971	2124627.443	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,435	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:20pm	C Gray	SHAD-41b.ssf
5583	-121.2677716	37.82732722	6339933.971	2124624.337	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,829	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:22pm	C Gray	SHAD-41b.ssf
5584	-121.2677862	37.827318	6339931.458	2124621.002	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,957	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:24pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5585	-121.2677926	37.8273093	6339929.588	2124617.849	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,710	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:26pm	C Gray	SHAD-41b.ssf
5586	-121.2678003	37.82730055	6339927.354	2124614.689	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,852	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:28pm	C Gray	SHAD-41b.ssf
5587	-121.2678076	37.82729121	6339925.205	2124611.299	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,640	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:30pm	C Gray	SHAD-41b.ssf
5588	-121.2678155	37.82727953	6339922.876	2124607.063	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,897	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:32pm	C Gray	SHAD-41b.ssf
5589	-121.2678219	37.82727256	6339921.033	2124604.543	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,158	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:34pm	C Gray	SHAD-41b.ssf
5590	-121.2678286	37.82726292	6339919.059	2124601.048	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,790	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:36pm	C Gray	SHAD-41b.ssf
5591	-121.2678362	37.82725609	6339918.839	2124598.579	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,085	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:38pm	C Gray	SHAD-41b.ssf
5592	-121.267844	37.82724566	6339914.561	2124594.799	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	63,083	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:40pm	C Gray	SHAD-41b.ssf
5593	-121.2678501	37.82723903	6339912.779	2124592.399	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,346	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:42pm	C Gray	SHAD-41b.ssf
5594	-121.2678559	37.82722964	6339911.078	2124588.994	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,619	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:44pm	C Gray	SHAD-41b.ssf
5595	-121.2678628	37.82722091	6339909.042	2124585.831	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,903	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:46pm	C Gray	SHAD-41b.ssf
5596	-121.2678701	37.82721516	6339906.932	2124582.661	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,652	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:48pm	C Gray	SHAD-41b.ssf
5597	-121.2678758	37.8271997	6339905.238	2124578.141	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,372	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:50pm	C Gray	SHAD-41b.ssf
5598	-121.2678829	37.8271922	6339903.174	2124575.425	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,679	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:52pm	C Gray	SHAD-41b.ssf
5599	-121.2678883	37.82718344	6339901.579	2124572.248	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,613	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:54pm	C Gray	SHAD-41b.ssf
5600	-121.2678942	37.82717403	6339899.84	2124568.837	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,728	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:56pm	C Gray	SHAD-41b.ssf
5601	-121.2679024	37.82716261	6339897.451	2124564.698	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,677	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:53:58pm	C Gray	SHAD-41b.ssf
5602	-121.2679091	37.82715168	6339895.465	2124560.735	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,677	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:01pm	C Gray	SHAD-41b.ssf
5603	-121.2679152	37.82714374	6339893.688	2124557.859	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,297	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:02pm	C Gray	SHAD-41b.ssf
5604	-121.2679175	37.82713502	6339892.959	2124554.686	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,855	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:04pm	C Gray	SHAD-41b.ssf
5605	-121.2679286	37.82713469	6339892.706	2124554.569	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,630	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:06pm	C Gray	SHAD-41b.ssf
5606	-121.2679204	37.82713698	6339892.172	2124555.407	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,614	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:08pm	C Gray	SHAD-41b.ssf
5607	-121.2679158	37.82714342	6339893.511	2124557.744	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,079	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:10pm	C Gray	SHAD-41b.ssf
5608	-121.2679114	37.82714927	6339894.801	2124559.862	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,696	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:12pm	C Gray	SHAD-41b.ssf
5609	-121.2679046	37.8271577	6339896.851	2124562.162	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,529	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:14pm	C Gray	SHAD-41b.ssf
5610	-121.2678974	37.82716666	6339898.842	2124566.162	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,539	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:16pm	C Gray	SHAD-41b.ssf
5611	-121.2678925	37.82717437	6339900.337	2124568.957	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,198	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:18pm	C Gray	SHAD-41b.ssf
5612	-121.2678855	37.8271842	6339902.379	2124572.518	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,004	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:20pm	C Gray	SHAD-41b.ssf
5613	-121.2678789	37.8271918	6339904.327	2124575.269	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,013	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:22pm	C Gray	SHAD-41b.ssf
5614	-121.2678723	37.82720197	6339906.258	2124578.959	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,330	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:24pm	C Gray	SHAD-41b.ssf
5615	-121.2678655	37.82720976	6339908.374	2124581.777	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,165	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:26pm	C Gray	SHAD-41b.ssf
5616	-121.2678571	37.82721932	6339910.697	2124585.239	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,073	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:28pm	C Gray	SHAD-41b.ssf
5617	-121.267851	37.82722591	6339912.471	2124587.623	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,342	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:30pm	C Gray	SHAD-41b.ssf
5618	-121.2678458	37.82723234	6339913.984	2124589.955	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,555	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:32pm	C Gray	SHAD-41b.ssf
5619	-121.2678378	37.82724168	6339916.329	2124593.335	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,125	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:34pm	C Gray	SHAD-41b.ssf
5620	-121.2678326	37.82724956	6339917.854	2124596.193	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,471	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:36pm	C Gray	SHAD-41b.ssf
5621	-121.2678265	37.82725814	6339919.65	2124599.301	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	71,181	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:38pm	C Gray	SHAD-41b.ssf
5622	-121.2678201	37.82726532	6339921.51	2124601.902	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	64,596	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:40pm	C Gray	SHAD-41b.ssf
5623	-121.2678155	37.82727207	6339922.868	2124604.348	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	57,612	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:42pm	C Gray	SHAD-41b.ssf
5624	-121.2678078	37.82728211	6339925.136	2124607.983	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,113	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:44pm	C Gray	SHAD-41b.ssf
5625	-121.2678025	37.82729271	6339926.673	2124611.83	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,699	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:46pm	C Gray	SHAD-41b.ssf
5626	-121.2677961	37.82730027	6339928.556	2124614.57	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,147	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:48pm	C Gray	SHAD-41b.ssf
5627	-121.2677923	37.82730887	6339929.688	2124617.693	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,738	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:50pm	C Gray	SHAD-41b.ssf
5628	-121.2677868	37.82731539	6339931.273	2124620.054	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,746	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:52pm	C Gray	SHAD-41b.ssf
5629	-121.267778	37.82732462	6339933.848	2124623.394	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,776	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:54pm	C Gray	SHAD-41b.ssf
5630	-121.267772	37.82733276	6339935.614	2124626.343	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,481	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:56pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5631	-121.2677656	37.82734164	6339937.482	2124629.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,375	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:54:58pm	C Gray	SHAD-41b.ssf
5632	-121.2677592	37.82734941	6339939.36	2124632.374	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,327	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:00pm	C Gray	SHAD-41b.ssf
5633	-121.2677546	37.82735581	6339940.711	2124634.695	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,665	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:02pm	C Gray	SHAD-41b.ssf
5634	-121.2677474	37.82736433	6339942.81	2124637.778	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68,725	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:04pm	C Gray	SHAD-41b.ssf
5635	-121.2677404	37.82737227	6339944.863	2124640.654	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,303	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:06pm	C Gray	SHAD-41b.ssf
5636	-121.2677341	37.82738278	6339946.713	2124644.466	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,647	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:08pm	C Gray	SHAD-41b.ssf
5637	-121.2677266	37.82739446	6339948.915	2124648.699	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73,840	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:10pm	C Gray	SHAD-41b.ssf
5638	-121.2677194	37.8274039	6339951.03	2124652.121	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,635	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:12pm	C Gray	SHAD-41b.ssf
5639	-121.2677094	37.82741322	6339953.92	2124655.489	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,621	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:14pm	C Gray	SHAD-41b.ssf
5640	-121.2677037	37.82742056	6339955.587	2124658.149	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,619	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:16pm	C Gray	SHAD-41b.ssf
5641	-121.2676958	37.82742748	6339957.911	2124660.652	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,170	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:18pm	C Gray	SHAD-41b.ssf
5642	-121.2676929	37.82741804	6339958.719	2124657.206	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,348	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:20pm	C Gray	SHAD-41b.ssf
5643	-121.2676961	37.8274091	6339957.76	2124653.961	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,323	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:22pm	C Gray	SHAD-41b.ssf
5644	-121.2677017	37.82740199	6339956.135	2124651.385	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,081	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:24pm	C Gray	SHAD-41b.ssf
5645	-121.2677095	37.82739476	6339953.846	2124648.771	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,897	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:26pm	C Gray	SHAD-41b.ssf
5646	-121.2677183	37.82738544	6339951.283	2124645.397	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,214	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:28pm	C Gray	SHAD-41b.ssf
5647	-121.2677414	37.82737619	6339949.42	2124642.043	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,771	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:30pm	C Gray	SHAD-41b.ssf
5648	-121.2677322	37.82736667	6339947.217	2124638.594	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,665	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:32pm	C Gray	SHAD-41b.ssf
5649	-121.2677414	37.82735673	6339944.508	2124634.998	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88,559	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:34pm	C Gray	SHAD-41b.ssf
5650	-121.2677474	37.82734794	6339942.762	2124631.811	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	84,968	Geo 7X	Uncorrected	10/2/2017	12:55:36pm	C Gray	SHAD-41b.ssf
5651	-121.2677623	37.82733362	6339938.559	2124626.627	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,955	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:38pm	C Gray	SHAD-41b.ssf
5652	-121.2677748	37.82732362	6339938.559	2124627.573	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,997	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:40pm	C Gray	SHAD-41b.ssf
5653	-121.2677681	37.82732816	6339936.729	2124624.657	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,998	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:42pm	C Gray	SHAD-41b.ssf
5654	-121.2677744	37.82732043	6339934.896	2124621.858	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,057	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:44pm	C Gray	SHAD-41b.ssf
5655	-121.2677805	37.82731267	6339933.099	2124619.048	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,160	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:46pm	C Gray	SHAD-41b.ssf
5656	-121.2677878	37.82730343	6339930.962	2124615.701	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,404	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:48pm	C Gray	SHAD-41b.ssf
5657	-121.2677952	37.82729499	6339928.807	2124612.645	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,730	Geo 7X	Real-time SBAS Corrected	10/2/2017	12:55:50pm	C Gray	SHAD-41b.ssf
5658	-121.2677961	37.82729321	6339928.531	2124611.998	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,079	Geo 7X	Uncorrected	10/2/2017	12:55:52pm	C Gray	SHAD-41b.ssf
5659	-121.2677962	37.82729304	6339928.506	2124611.937	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,374	Geo 7X	Uncorrected	10/2/2017	12:55:54pm	C Gray	SHAD-41b.ssf
5660	-121.2677963	37.82729287	6339928.481	2124611.877	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,682	Geo 7X	Uncorrected	10/2/2017	12:55:56pm	C Gray	SHAD-41b.ssf
5661	-121.2677964	37.82729273	6339928.46	2124611.826	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,494	Geo 7X	Uncorrected	10/2/2017	12:55:58pm	C Gray	SHAD-41b.ssf
5662	-121.2677964	37.82729257	6339928.436	2124611.767	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,508	Geo 7X	Uncorrected	10/2/2017	12:56:00pm	C Gray	SHAD-41b.ssf
5663	-121.2677965	37.82729239	6339928.41	2124611.703	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,389	Geo 7X	Uncorrected	10/2/2017	12:56:02pm	C Gray	SHAD-41b.ssf
5664	-121.2677966	37.82729223	6339928.386	2124611.643	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,269	Geo 7X	Uncorrected	10/2/2017	12:56:04pm	C Gray	SHAD-41b.ssf
5665	-121.2677967	37.82729206	6339928.361	2124611.584	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,220	Geo 7X	Uncorrected	10/2/2017	12:56:06pm	C Gray	SHAD-41b.ssf
5666	-121.2677968	37.8272919	6339928.337	2124611.524	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,382	Geo 7X	Uncorrected	10/2/2017	12:56:08pm	C Gray	SHAD-41b.ssf
5667	-121.2677969	37.82729172	6339928.309	2124611.457	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,347	Geo 7X	Uncorrected	10/2/2017	12:56:11pm	C Gray	SHAD-41b.ssf
5668	-121.2677969	37.82729155	6339928.285	2124611.397	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,188	Geo 7X	Uncorrected	10/2/2017	12:56:13pm	C Gray	SHAD-41b.ssf
5669	-121.2677971	37.82729141	6339928.263	2124611.345	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,942	Geo 7X	Uncorrected	10/2/2017	12:56:14pm	C Gray	SHAD-41b.ssf
5670	-121.2677971	37.82729124	6339928.238	2124611.283	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,813	Geo 7X	Uncorrected	10/2/2017	12:56:16pm	C Gray	SHAD-41b.ssf
5671	-121.2677972	37.82729106	6339928.212	2124611.22	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,490	Geo 7X	Uncorrected	10/2/2017	12:56:18pm	C Gray	SHAD-41b.ssf
5672	-121.2677973	37.8272909	6339928.188	2124611.161	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,353	Geo 7X	Uncorrected	10/2/2017	12:56:20pm	C Gray	SHAD-41b.ssf
5673	-121.2677974	37.82729074	6339928.164	2124611.102	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,867	Geo 7X	Uncorrected	10/2/2017	12:56:22pm	C Gray	SHAD-41b.ssf
5674	-121.2677974	37.82729057	6339928.14	2124611.042	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,891	Geo 7X	Uncorrected	10/2/2017	12:56:24pm	C Gray	SHAD-41b.ssf
5675	-121.2677975	37.82729041	6339928.115	2124610.983	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,750	Geo 7X	Uncorrected	10/2/2017	12:56:26pm	C Gray	SHAD-41b.ssf
5676	-121.2677976	37.82729024	6339928.091	2124610.923	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,770	Geo 7X	Uncorrected	10/2/2017	12:56:28pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5677	-121.2677977	37.82729007	6339928.064	2124610.858	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,639	Geo 7X	Uncorrected	10/2/2017	12:56:31pm	C Gray	SHAD-41b.ssf
5678	-121.2677978	37.82728992	6339928.045	2124610.806	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,636	Geo 7X	Uncorrected	10/2/2017	12:56:32pm	C Gray	SHAD-41b.ssf
5679	-121.2677979	37.82728974	6339928.013	2124610.739	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,992	Geo 7X	Uncorrected	10/2/2017	12:56:33pm	C Gray	SHAD-41b.ssf
5680	-121.2677979	37.82728959	6339927.994	2124610.687	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,317	Geo 7X	Uncorrected	10/2/2017	12:56:36pm	C Gray	SHAD-41b.ssf
5681	-121.267798	37.82728943	6339927.969	2124610.627	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,345	Geo 7X	Uncorrected	10/2/2017	12:56:38pm	C Gray	SHAD-41b.ssf
5682	-121.2677981	37.82728927	6339927.945	2124610.568	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,698	Geo 7X	Uncorrected	10/2/2017	12:56:40pm	C Gray	SHAD-41b.ssf
5683	-121.2677982	37.8272891	6339927.921	2124610.508	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,395	Geo 7X	Uncorrected	10/2/2017	12:56:42pm	C Gray	SHAD-41b.ssf
5684	-121.2677983	37.82728894	6339927.896	2124610.448	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,876	Geo 7X	Uncorrected	10/2/2017	12:56:44pm	C Gray	SHAD-41b.ssf
5685	-121.2677983	37.82728877	6339927.871	2124610.388	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,311	Geo 7X	Uncorrected	10/2/2017	12:56:46pm	C Gray	SHAD-41b.ssf
5686	-121.2677984	37.82728859	6339927.845	2124610.324	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,701	Geo 7X	Uncorrected	10/2/2017	12:56:48pm	C Gray	SHAD-41b.ssf
5687	-121.2677985	37.82728845	6339927.823	2124610.271	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,703	Geo 7X	Uncorrected	10/2/2017	12:56:50pm	C Gray	SHAD-41b.ssf
5688	-121.2677986	37.82728829	6339927.799	2124610.212	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,460	Geo 7X	Uncorrected	10/2/2017	12:56:52pm	C Gray	SHAD-41b.ssf
5689	-121.2677987	37.82728812	6339927.775	2124610.152	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,692	Geo 7X	Uncorrected	10/2/2017	12:56:54pm	C Gray	SHAD-41b.ssf
5690	-121.2677988	37.82728794	6339927.749	2124610.088	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,848	Geo 7X	Uncorrected	10/2/2017	12:56:56pm	C Gray	SHAD-41b.ssf
5691	-121.2677989	37.82728777	6339927.723	2124610.026	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,604	Geo 7X	Uncorrected	10/2/2017	12:56:58pm	C Gray	SHAD-41b.ssf
5692	-121.2677989	37.82728761	6339927.699	2124609.966	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,714	Geo 7X	Uncorrected	10/2/2017	12:57:00pm	C Gray	SHAD-41b.ssf
5693	-121.267799	37.82728745	6339927.676	2124609.91	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,922	Geo 7X	Uncorrected	10/2/2017	12:57:02pm	C Gray	SHAD-41b.ssf
5694	-121.2677991	37.82728729	6339927.651	2124609.849	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,163	Geo 7X	Uncorrected	10/2/2017	12:57:04pm	C Gray	SHAD-41b.ssf
5695	-121.2677992	37.82728712	6339927.627	2124609.79	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,926	Geo 7X	Uncorrected	10/2/2017	12:57:06pm	C Gray	SHAD-41b.ssf
5696	-121.2677993	37.82728696	6339927.599	2124609.722	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,012	Geo 7X	Uncorrected	10/2/2017	12:57:09pm	C Gray	SHAD-41b.ssf
5697	-121.2678054	37.82727479	6339925.794	2124605.313	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,628	Geo 7X	Uncorrected	10/2/2017	12:59:36pm	C Gray	SHAD-41b.ssf
5698	-121.2678055	37.82727462	6339925.768	2124605.251	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,625	Geo 7X	Uncorrected	10/2/2017	12:59:38pm	C Gray	SHAD-41b.ssf
5699	-121.2678056	37.82727444	6339925.742	2124605.187	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,033	Geo 7X	Uncorrected	10/2/2017	12:59:40pm	C Gray	SHAD-41b.ssf
5700	-121.2678057	37.82727427	6339925.717	2124605.125	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,213	Geo 7X	Uncorrected	10/2/2017	12:59:42pm	C Gray	SHAD-41b.ssf
5701	-121.2678057	37.82727413	6339925.696	2124605.075	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,139	Geo 7X	Uncorrected	10/2/2017	12:59:44pm	C Gray	SHAD-41b.ssf
5702	-121.2678057	37.82727397	6339925.749	2124606.474	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,456	Geo 7X	Uncorrected	10/2/2017	12:59:46pm	C Gray	SHAD-41b.ssf
5703	-121.2678085	37.82728031	6339924.925	2124607.33	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,772	Geo 7X	Uncorrected	10/2/2017	12:59:48pm	C Gray	SHAD-41b.ssf
5704	-121.2678043	37.82727967	6339926.116	2124607.089	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,557	Geo 7X	Uncorrected	10/2/2017	12:59:50pm	C Gray	SHAD-41b.ssf
5705	-121.2678044	37.82727853	6339926.091	2124606.674	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,583	Geo 7X	Uncorrected	10/2/2017	12:59:52pm	C Gray	SHAD-41b.ssf
5706	-121.2678042	37.82727923	6339926.164	2124606.928	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,911	Geo 7X	Uncorrected	10/2/2017	12:59:54pm	C Gray	SHAD-41b.ssf
5707	-121.2678055	37.82727314	6339925.75	2124604.712	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,834	Geo 7X	Uncorrected	10/2/2017	12:59:56pm	C Gray	SHAD-41b.ssf
5708	-121.2678103	37.82726417	6339924.333	2124601.46	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,911	Geo 7X	Uncorrected	10/2/2017	12:59:58pm	C Gray	SHAD-41b.ssf
5709	-121.2678165	37.82725736	6339922.536	2124598.995	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,846	Geo 7X	Uncorrected	10/2/2017	01:00:00pm	C Gray	SHAD-41b.ssf
5710	-121.2678272	37.82725071	6339919.43	2124596.598	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,344	Geo 7X	Uncorrected	10/2/2017	01:00:02pm	C Gray	SHAD-41b.ssf
5711	-121.2678333	37.82724147	6339917.647	2124593.248	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,781	Geo 7X	Uncorrected	10/2/2017	01:00:04pm	C Gray	SHAD-41b.ssf
5712	-121.2678411	37.82723265	6339915.361	2124590.054	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,126	Geo 7X	Uncorrected	10/2/2017	01:00:06pm	C Gray	SHAD-41b.ssf
5713	-121.2678508	37.82722287	6339912.528	2124586.516	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,038	Geo 7X	Uncorrected	10/2/2017	01:00:08pm	C Gray	SHAD-41b.ssf
5714	-121.2678572	37.82721659	6339910.646	2124584.247	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,610	Geo 7X	Uncorrected	10/2/2017	01:00:10pm	C Gray	SHAD-41b.ssf
5715	-121.2678661	37.82720889	6339908.061	2124581.464	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,633	Geo 7X	Uncorrected	10/2/2017	01:00:12pm	C Gray	SHAD-41b.ssf
5716	-121.2678716	37.82719995	6339906.45	2124578.222	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,458	Geo 7X	Uncorrected	10/2/2017	01:00:14pm	C Gray	SHAD-41b.ssf
5717	-121.2678768	37.82718954	6339904.932	2124574.443	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,472	Geo 7X	Uncorrected	10/2/2017	01:00:16pm	C Gray	SHAD-41b.ssf
5718	-121.2678798	37.82718066	6339904.023	2124571.216	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,874	Geo 7X	Uncorrected	10/2/2017	01:00:18pm	C Gray	SHAD-41b.ssf
5719	-121.2678843	37.82716977	6339902.694	2124567.262	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,029	Geo 7X	Uncorrected	10/2/2017	01:00:20pm	C Gray	SHAD-41b.ssf
5720	-121.267891	37.82715901	6339901.019	2124563.358	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,131	Geo 7X	Uncorrected	10/2/2017	01:00:22pm	C Gray	SHAD-41b.ssf
5721	-121.2678956	37.82715343	6339899.38	2124561.339	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,821	Geo 7X	Uncorrected	10/2/2017	01:00:24pm	C Gray	SHAD-41b.ssf
5722	-121.2679026	37.82714504	6339897.319	2124558.3	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,607	Geo 7X	Uncorrected	10/2/2017	01:00:26pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastng	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5723	-121.2679057	37.82713731	6339896.402	2124555.494	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,858	Geo 7X	Uncorrected	10/2/2017	01:00:28pm	C Gray	SHAD-41b.ssf
5724	-121.267904	37.82713435	6339896.894	2124554.412	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,027	Geo 7X	Uncorrected	10/2/2017	01:00:30pm	C Gray	SHAD-41b.ssf
5725	-121.2679049	37.82713492	6339896.631	2124554.621	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,937	Geo 7X	Uncorrected	10/2/2017	01:00:32pm	C Gray	SHAD-41b.ssf
5726	-121.2679033	37.82713798	6339897.098	2124555.732	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,011	Geo 7X	Uncorrected	10/2/2017	01:00:34pm	C Gray	SHAD-41b.ssf
5727	-121.267903	37.82714453	6339898.096	2124558.109	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,110	Geo 7X	Uncorrected	10/2/2017	01:00:36pm	C Gray	SHAD-41b.ssf
5728	-121.2678956	37.82715183	6339899.387	2124560.758	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,804	Geo 7X	Uncorrected	10/2/2017	01:00:38pm	C Gray	SHAD-41b.ssf
5729	-121.2678872	37.8271617	6339901.844	2124564.33	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,890	Geo 7X	Uncorrected	10/2/2017	01:00:40pm	C Gray	SHAD-41b.ssf
5730	-121.2678812	37.82717054	6339903.557	2124567.537	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,876	Geo 7X	Uncorrected	10/2/2017	01:00:42pm	C Gray	SHAD-41b.ssf
5731	-121.2678734	37.82718069	6339905.863	2124571.211	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,297	Geo 7X	Uncorrected	10/2/2017	01:00:44pm	C Gray	SHAD-41b.ssf
5732	-121.2678665	37.82718897	6339907.877	2124574.209	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,666	Geo 7X	Uncorrected	10/2/2017	01:00:46pm	C Gray	SHAD-41b.ssf
5733	-121.2678605	37.82719821	6339909.648	2124577.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,444	Geo 7X	Uncorrected	10/2/2017	01:00:48pm	C Gray	SHAD-41b.ssf
5734	-121.2678538	37.82720697	6339911.61	2124580.736	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,122	Geo 7X	Uncorrected	10/2/2017	01:00:50pm	C Gray	SHAD-41b.ssf
5735	-121.2678467	37.82721586	6339913.699	2124583.954	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,855	Geo 7X	Uncorrected	10/2/2017	01:00:52pm	C Gray	SHAD-41b.ssf
5736	-121.2678415	37.82722258	6339915.223	2124586.39	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,618	Geo 7X	Uncorrected	10/2/2017	01:00:54pm	C Gray	SHAD-41b.ssf
5737	-121.267832	37.82723375	6339917.976	2124590.434	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,486	Geo 7X	Uncorrected	10/2/2017	01:00:56pm	C Gray	SHAD-41b.ssf
5738	-121.2678241	37.82724391	6339920.297	2124594.116	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,434	Geo 7X	Uncorrected	10/2/2017	01:00:58pm	C Gray	SHAD-41b.ssf
5739	-121.267818	37.82725106	6339922.096	2124596.705	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,294	Geo 7X	Uncorrected	10/2/2017	01:01:00pm	C Gray	SHAD-41b.ssf
5740	-121.26781	37.82726027	6339924.41	2124600.039	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,600	Geo 7X	Uncorrected	10/2/2017	01:01:02pm	C Gray	SHAD-41b.ssf
5741	-121.267803	37.82726841	6339926.455	2124602.986	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,039	Geo 7X	Uncorrected	10/2/2017	01:01:04pm	C Gray	SHAD-41b.ssf
5742	-121.2677949	37.82727872	6339928.836	2124606.721	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,012	Geo 7X	Uncorrected	10/2/2017	01:01:06pm	C Gray	SHAD-41b.ssf
5743	-121.2677932	37.82728907	6339930.214	2124610.477	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,184	Geo 7X	Uncorrected	10/2/2017	01:01:08pm	C Gray	SHAD-41b.ssf
5744	-121.267785	37.82729834	6339932.176	2124613.838	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,971	Geo 7X	Uncorrected	10/2/2017	01:01:10pm	C Gray	SHAD-41b.ssf
5745	-121.267765	37.82730875	6339934.23	2124617.61	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,296	Geo 7X	Uncorrected	10/2/2017	01:01:12pm	C Gray	SHAD-41b.ssf
5746	-121.267769	37.82731815	6339936.448	2124621.014	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,862	Geo 7X	Uncorrected	10/2/2017	01:01:14pm	C Gray	SHAD-41b.ssf
5747	-121.2677605	37.82732704	6339938.921	2124624.234	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,638	Geo 7X	Uncorrected	10/2/2017	01:01:16pm	C Gray	SHAD-41b.ssf
5748	-121.2677543	37.82733428	6339940.738	2124626.855	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,830	Geo 7X	Uncorrected	10/2/2017	01:01:18pm	C Gray	SHAD-41b.ssf
5749	-121.2677466	37.82734291	6339942.972	2124629.977	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,176	Geo 7X	Uncorrected	10/2/2017	01:01:20pm	C Gray	SHAD-41b.ssf
5750	-121.2677397	37.82735067	6339944.994	2124632.786	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,911	Geo 7X	Uncorrected	10/2/2017	01:01:22pm	C Gray	SHAD-41b.ssf
5751	-121.2677307	37.82735965	6339947.625	2124636.035	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73,130	Geo 7X	Uncorrected	10/2/2017	01:01:24pm	C Gray	SHAD-41b.ssf
5752	-121.2677242	37.82736713	6339949.526	2124638.744	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,811	Geo 7X	Uncorrected	10/2/2017	01:01:26pm	C Gray	SHAD-41b.ssf
5753	-121.2677168	37.82737628	6339951.678	2124642.06	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,298	Geo 7X	Uncorrected	10/2/2017	01:01:28pm	C Gray	SHAD-41b.ssf
5754	-121.2677084	37.82738715	6339954.147	2124645.996	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68,294	Geo 7X	Uncorrected	10/2/2017	01:01:30pm	C Gray	SHAD-41b.ssf
5755	-121.2676977	37.82739738	6339957.265	2124649.694	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,404	Geo 7X	Uncorrected	10/2/2017	01:01:32pm	C Gray	SHAD-41b.ssf
5756	-121.2676901	37.82740675	6339959.474	2124653.089	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,821	Geo 7X	Uncorrected	10/2/2017	01:01:34pm	C Gray	SHAD-41b.ssf
5757	-121.267683	37.82741518	6339961.556	2124656.141	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,638	Geo 7X	Uncorrected	10/2/2017	01:01:36pm	C Gray	SHAD-41b.ssf
5758	-121.2676757	37.82742052	6339963.678	2124658.068	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,373	Geo 7X	Uncorrected	10/2/2017	01:01:38pm	C Gray	SHAD-41b.ssf
5759	-121.2676675	37.82741209	6339966.036	2124654.978	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,280	Geo 7X	Uncorrected	10/2/2017	01:01:40pm	C Gray	SHAD-41b.ssf
5760	-121.2676673	37.82740789	6339966.071	2124653.451	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,597	Geo 7X	Uncorrected	10/2/2017	01:01:42pm	C Gray	SHAD-41b.ssf
5761	-121.2676691	37.82740007	6339963.973	2124650.849	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,598	Geo 7X	Uncorrected	10/2/2017	01:01:44pm	C Gray	SHAD-41b.ssf
5762	-121.2676824	37.82739571	6339961.682	2124649.051	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,467	Geo 7X	Uncorrected	10/2/2017	01:01:46pm	C Gray	SHAD-41b.ssf
5763	-121.2676904	37.82738855	6339959.342	2124646.464	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,501	Geo 7X	Uncorrected	10/2/2017	01:01:48pm	C Gray	SHAD-41b.ssf
5764	-121.2676991	37.82738166	6339956.815	2124643.975	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,204	Geo 7X	Uncorrected	10/2/2017	01:01:50pm	C Gray	SHAD-41b.ssf
5765	-121.2677066	37.82737497	6339954.636	2124641.557	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,815	Geo 7X	Uncorrected	10/2/2017	01:01:52pm	C Gray	SHAD-41b.ssf
5766	-121.2677155	37.82736796	6339952.037	2124639.026	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,897	Geo 7X	Uncorrected	10/2/2017	01:01:54pm	C Gray	SHAD-41b.ssf
5767	-121.2677239	37.82735937	6339949.575	2124635.917	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,908	Geo 7X	Uncorrected	10/2/2017	01:01:56pm	C Gray	SHAD-41b.ssf
5768	-121.267731	37.82735291	6339947.521	2124633.584	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,792	Geo 7X	Uncorrected	10/2/2017	01:01:58pm	C Gray	SHAD-41b.ssf



ID	Longitude	Latitude	Eastng	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5769	-121.2677389	37.82734232	6339945.204	2124629.746	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,385	Geo 7X	Uncorrected	10/2/2017	01:02:00pm	C Gray	SHAD-41b.ssf
5770	-121.2677472	37.82733338	6339942.765	2124626.573	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,385	Geo 7X	Uncorrected	10/2/2017	01:02:02pm	C Gray	SHAD-41b.ssf
5771	-121.2677571	37.82732525	6339939.88	2124623.509	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,830	Geo 7X	Uncorrected	10/2/2017	01:02:04pm	C Gray	SHAD-41b.ssf
5772	-121.2677647	37.82731712	6339937.679	2124620.632	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,220	Geo 7X	Uncorrected	10/2/2017	01:02:06pm	C Gray	SHAD-41b.ssf
5773	-121.2677689	37.8273077	6339936.426	2124617.21	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,329	Geo 7X	Uncorrected	10/2/2017	01:02:08pm	C Gray	SHAD-41b.ssf
5774	-121.2677767	37.82729798	6339934.159	2124613.69	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,330	Geo 7X	Uncorrected	10/2/2017	01:02:10pm	C Gray	SHAD-41b.ssf
5775	-121.2677804	37.82729005	6339933.066	2124610.812	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,007	Geo 7X	Uncorrected	10/2/2017	01:02:12pm	C Gray	SHAD-41b.ssf
5776	-121.2677889	37.82728337	6339930.577	2124608.399	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,127	Geo 7X	Uncorrected	10/2/2017	01:02:14pm	C Gray	SHAD-41b.ssf
5777	-121.2677959	37.82727548	6339928.53	2124605.544	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,084	Geo 7X	Uncorrected	10/2/2017	01:02:16pm	C Gray	SHAD-41b.ssf
5778	-121.2678006	37.82726398	6339927.153	2124601.367	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,292	Geo 7X	Uncorrected	10/2/2017	01:02:18pm	C Gray	SHAD-41b.ssf
5779	-121.2678061	37.82725282	6339925.534	2124597.315	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,477	Geo 7X	Uncorrected	10/2/2017	01:02:20pm	C Gray	SHAD-41b.ssf
5780	-121.267815	37.82724583	6339922.927	2124594.792	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,749	Geo 7X	Uncorrected	10/2/2017	01:02:22pm	C Gray	SHAD-41b.ssf
5781	-121.2678262	37.82723655	6339919.684	2124591.439	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	83,061	Geo 7X	Uncorrected	10/2/2017	01:02:24pm	C Gray	SHAD-41b.ssf
5782	-121.2678363	37.82722917	6339916.721	2124588.777	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,386	Geo 7X	Uncorrected	10/2/2017	01:02:26pm	C Gray	SHAD-41b.ssf
5783	-121.2678392	37.82722274	6339915.889	2124587.807	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,989	Geo 7X	Uncorrected	10/2/2017	01:02:28pm	C Gray	SHAD-41b.ssf
5784	-121.2678395	37.82722649	6339915.693	2124587.725	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,902	Geo 7X	Uncorrected	10/2/2017	01:02:30pm	C Gray	SHAD-41b.ssf
5785	-121.2678397	37.82722581	6339915.73	2124587.561	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,250	Geo 7X	Uncorrected	10/2/2017	01:02:32pm	C Gray	SHAD-41b.ssf
5786	-121.26784	37.82722516	6339915.653	2124587.327	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,447	Geo 7X	Uncorrected	10/2/2017	01:02:34pm	C Gray	SHAD-41b.ssf
5787	-121.267843	37.82721474	6339914.763	2124583.537	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,702	Geo 7X	Uncorrected	10/2/2017	01:03:08pm	C Gray	SHAD-41b.ssf
5788	-121.267845	37.82721426	6339914.668	2124583.365	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,639	Geo 7X	Uncorrected	10/2/2017	01:03:10pm	C Gray	SHAD-41b.ssf
5789	-121.2678501	37.82720848	6339912.693	2124581.274	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,646	Geo 7X	Uncorrected	10/2/2017	01:03:12pm	C Gray	SHAD-41b.ssf
5790	-121.2678557	37.82720144	6339911.033	2124578.725	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,204	Geo 7X	Uncorrected	10/2/2017	01:03:14pm	C Gray	SHAD-41b.ssf
5791	-121.2678656	37.82719302	6339908.16	2124575.683	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,303	Geo 7X	Uncorrected	10/2/2017	01:03:16pm	C Gray	SHAD-41b.ssf
5792	-121.2678718	37.82718591	6339906.34	2124573.108	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,211	Geo 7X	Uncorrected	10/2/2017	01:03:18pm	C Gray	SHAD-41b.ssf
5793	-121.2678782	37.82717606	6339904.283	2124569.338	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,014	Geo 7X	Uncorrected	10/2/2017	01:03:20pm	C Gray	SHAD-41b.ssf
5794	-121.2678859	37.82716721	6339902.408	2124566.335	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,382	Geo 7X	Uncorrected	10/2/2017	01:03:22pm	C Gray	SHAD-41b.ssf
5795	-121.2678932	37.82715884	6339900.076	2124563.303	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,926	Geo 7X	Uncorrected	10/2/2017	01:03:24pm	C Gray	SHAD-41b.ssf
5796	-121.267901	37.82715146	6339897.812	2124560.636	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,461	Geo 7X	Uncorrected	10/2/2017	01:03:26pm	C Gray	SHAD-41b.ssf
5797	-121.2679087	37.82714228	6339895.56	2124557.312	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,510	Geo 7X	Uncorrected	10/2/2017	01:03:28pm	C Gray	SHAD-41b.ssf
5798	-121.2679175	37.82713209	6339892.983	2124553.62	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,862	Geo 7X	Uncorrected	10/2/2017	01:03:30pm	C Gray	SHAD-41b.ssf
5799	-121.2679188	37.82712627	6339892.604	2124551.505	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,322	Geo 7X	Uncorrected	10/2/2017	01:03:32pm	C Gray	SHAD-41b.ssf
5800	-121.2679143	37.8271278	6339893.91	2124552.05	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,123	Geo 7X	Uncorrected	10/2/2017	01:03:34pm	C Gray	SHAD-41b.ssf
5801	-121.2679192	37.82713135	6339894.569	2124553.34	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,430	Geo 7X	Uncorrected	10/2/2017	01:03:36pm	C Gray	SHAD-41b.ssf
5802	-121.2679034	37.82713661	6339895.341	2124555.249	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,791	Geo 7X	Uncorrected	10/2/2017	01:03:38pm	C Gray	SHAD-41b.ssf
5803	-121.2679092	37.82714371	6339897.146	2124557.819	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,536	Geo 7X	Uncorrected	10/2/2017	01:03:40pm	C Gray	SHAD-41b.ssf
5804	-121.2678946	37.82714956	6339899.644	2124559.927	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,600	Geo 7X	Uncorrected	10/2/2017	01:03:42pm	C Gray	SHAD-41b.ssf
5805	-121.267888	37.82715615	6339901.584	2124562.313	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,550	Geo 7X	Uncorrected	10/2/2017	01:03:44pm	C Gray	SHAD-41b.ssf
5806	-121.2678813	37.82716184	6339903.547	2124564.367	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,862	Geo 7X	Uncorrected	10/2/2017	01:03:46pm	C Gray	SHAD-41b.ssf
5807	-121.2678747	37.82716921	6339905.463	2124567.034	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,674	Geo 7X	Uncorrected	10/2/2017	01:03:48pm	C Gray	SHAD-41b.ssf
5808	-121.2678654	37.82717794	6339908.189	2124570.193	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,068	Geo 7X	Uncorrected	10/2/2017	01:03:50pm	C Gray	SHAD-41b.ssf
5809	-121.2678589	37.82718461	6339910.073	2124572.604	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,788	Geo 7X	Uncorrected	10/2/2017	01:03:52pm	C Gray	SHAD-41b.ssf
5810	-121.2678527	37.82719169	6339911.883	2124575.167	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,898	Geo 7X	Uncorrected	10/2/2017	01:03:54pm	C Gray	SHAD-41b.ssf
5811	-121.2678453	37.82719882	6339914.003	2124577.747	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,464	Geo 7X	Uncorrected	10/2/2017	01:03:56pm	C Gray	SHAD-41b.ssf
5812	-121.2678366	37.82720851	6339916.579	2124581.254	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,176	Geo 7X	Uncorrected	10/2/2017	01:03:58pm	C Gray	SHAD-41b.ssf
5813	-121.2678296	37.8272165	6339918.621	2124584.146	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,482	Geo 7X	Uncorrected	10/2/2017	01:04:00pm	C Gray	SHAD-41b.ssf
5814	-121.2678228	37.82722456	6339920.605	2124587.065	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,648	Geo 7X	Uncorrected	10/2/2017	01:04:02pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5815	-121.2678183	37.82723133	6339921.951	2124589.518	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,260	Geo 7X	Uncorrected	10/2/2017	01:04:04pm	C Gray	SHAD-41b.ssf
5816	-121.2678106	37.82723996	6339924.201	2124592.653	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,284	Geo 7X	Uncorrected	10/2/2017	01:04:06pm	C Gray	SHAD-41b.ssf
5817	-121.2678026	37.82724882	6339926.513	2124595.845	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,895	Geo 7X	Uncorrected	10/2/2017	01:04:08pm	C Gray	SHAD-41b.ssf
5818	-121.2677961	37.82725602	6339928.437	2124598.458	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	89,734	Geo 7X	Uncorrected	10/2/2017	01:04:10pm	C Gray	SHAD-41b.ssf
5819	-121.2677895	37.82726329	6339930.35	2124601.089	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73,682	Geo 7X	Uncorrected	10/2/2017	01:04:12pm	C Gray	SHAD-41b.ssf
5820	-121.2677806	37.82727192	6339932.951	2124604.209	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,785	Geo 7X	Uncorrected	10/2/2017	01:04:14pm	C Gray	SHAD-41b.ssf
5821	-121.2677739	37.82727929	6339934.897	2124606.88	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,227	Geo 7X	Uncorrected	10/2/2017	01:04:16pm	C Gray	SHAD-41b.ssf
5822	-121.2677662	37.82728756	6339937.141	2124609.871	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,527	Geo 7X	Uncorrected	10/2/2017	01:04:18pm	C Gray	SHAD-41b.ssf
5823	-121.2677611	37.82729544	6339938.643	2124612.726	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,769	Geo 7X	Uncorrected	10/2/2017	01:04:20pm	C Gray	SHAD-41b.ssf
5824	-121.2677543	37.82730412	6339940.626	2124615.872	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,312	Geo 7X	Uncorrected	10/2/2017	01:04:22pm	C Gray	SHAD-41b.ssf
5825	-121.2677446	37.82731529	6339943.475	2124619.916	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,656	Geo 7X	Uncorrected	10/2/2017	01:04:24pm	C Gray	SHAD-41b.ssf
5826	-121.2677373	37.82732475	6339945.619	2124623.344	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,535	Geo 7X	Uncorrected	10/2/2017	01:04:26pm	C Gray	SHAD-41b.ssf
5827	-121.2677298	37.82733595	6339947.8	2124627.404	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,269	Geo 7X	Uncorrected	10/2/2017	01:04:28pm	C Gray	SHAD-41b.ssf
5828	-121.2677246	37.82734321	6339949.329	2124630.035	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,290	Geo 7X	Uncorrected	10/2/2017	01:04:30pm	C Gray	SHAD-41b.ssf
5829	-121.2677178	37.82735017	6339951.33	2124632.565	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,448	Geo 7X	Uncorrected	10/2/2017	01:04:32pm	C Gray	SHAD-41b.ssf
5830	-121.2677128	37.82735841	6339953.615	2124635.984	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,078	Geo 7X	Uncorrected	10/2/2017	01:04:34pm	C Gray	SHAD-41b.ssf
5831	-121.267711	37.82736323	6339955.313	2124636.958	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,270	Geo 7X	Uncorrected	10/2/2017	01:04:36pm	C Gray	SHAD-41b.ssf
5832	-121.2677026	37.82736846	6339955.762	2124639.177	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,714	Geo 7X	Uncorrected	10/2/2017	01:04:38pm	C Gray	SHAD-41b.ssf
5833	-121.267696	37.82737649	6339957.695	2124642.085	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73,181	Geo 7X	Uncorrected	10/2/2017	01:04:40pm	C Gray	SHAD-41b.ssf
5834	-121.2676845	37.82738536	6339961.053	2124645.289	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,782	Geo 7X	Uncorrected	10/2/2017	01:04:42pm	C Gray	SHAD-41b.ssf
5835	-121.2676767	37.82739201	6339963.313	2124647.659	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,970	Geo 7X	Uncorrected	10/2/2017	01:04:44pm	C Gray	SHAD-41b.ssf
5836	-121.2676664	37.82739846	6339966.295	2124650.015	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,117	Geo 7X	Uncorrected	10/2/2017	01:04:46pm	C Gray	SHAD-41b.ssf
5837	-121.2676561	37.82740758	6339969.313	2124653.312	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,192	Geo 7X	Uncorrected	10/2/2017	01:04:48pm	C Gray	SHAD-41b.ssf
5838	-121.2676509	37.82741148	6339970.832	2124654.72	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,295	Geo 7X	Uncorrected	10/2/2017	01:04:50pm	C Gray	SHAD-41b.ssf
5839	-121.2676431	37.82740962	6339973.073	2124654.024	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,194	Geo 7X	Uncorrected	10/2/2017	01:04:52pm	C Gray	SHAD-41b.ssf
5840	-121.2676397	37.82740028	6339974.033	2124650.613	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,832	Geo 7X	Uncorrected	10/2/2017	01:04:54pm	C Gray	SHAD-41b.ssf
5841	-121.2676462	37.82739994	6339972.142	2124648.323	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,105	Geo 7X	Uncorrected	10/2/2017	01:04:56pm	C Gray	SHAD-41b.ssf
5842	-121.2676536	37.82738916	6339969.972	2124646.597	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,908	Geo 7X	Uncorrected	10/2/2017	01:04:58pm	C Gray	SHAD-41b.ssf
5843	-121.2676622	37.82738439	6339967.464	2124644.883	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,103	Geo 7X	Uncorrected	10/2/2017	01:05:00pm	C Gray	SHAD-41b.ssf
5844	-121.26767	37.82737867	6339965.201	2124642.818	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,637	Geo 7X	Uncorrected	10/2/2017	01:05:02pm	C Gray	SHAD-41b.ssf
5845	-121.2676765	37.82737315	6339963.302	2124640.823	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,412	Geo 7X	Uncorrected	10/2/2017	01:05:04pm	C Gray	SHAD-41b.ssf
5846	-121.2676833	37.82736731	6339961.343	2124638.713	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,585	Geo 7X	Uncorrected	10/2/2017	01:05:06pm	C Gray	SHAD-41b.ssf
5847	-121.2676919	37.82735599	6339958.816	2124636.035	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,970	Geo 7X	Uncorrected	10/2/2017	01:05:08pm	C Gray	SHAD-41b.ssf
5848	-121.2677006	37.82735357	6339956.287	2124633.749	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,668	Geo 7X	Uncorrected	10/2/2017	01:05:10pm	C Gray	SHAD-41b.ssf
5849	-121.2677103	37.82734454	6339953.472	2124630.797	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,523	Geo 7X	Uncorrected	10/2/2017	01:05:12pm	C Gray	SHAD-41b.ssf
5850	-121.2677168	37.82733848	6339951.586	2124628.293	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,300	Geo 7X	Uncorrected	10/2/2017	01:05:14pm	C Gray	SHAD-41b.ssf
5851	-121.2677241	37.82733337	6339949.453	2124626.571	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68,124	Geo 7X	Uncorrected	10/2/2017	01:05:16pm	C Gray	SHAD-41b.ssf
5852	-121.2677308	37.82732737	6339947.494	2124624.282	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,349	Geo 7X	Uncorrected	10/2/2017	01:05:18pm	C Gray	SHAD-41b.ssf
5853	-121.2677373	37.82732055	6339945.594	2124621.815	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,415	Geo 7X	Uncorrected	10/2/2017	01:05:20pm	C Gray	SHAD-41b.ssf
5854	-121.2677467	37.82731174	6339942.853	2124618.631	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,929	Geo 7X	Uncorrected	10/2/2017	01:05:22pm	C Gray	SHAD-41b.ssf
5855	-121.2677549	37.82730534	6339940.464	2124616.317	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,546	Geo 7X	Uncorrected	10/2/2017	01:05:24pm	C Gray	SHAD-41b.ssf
5856	-121.2677663	37.82729622	6339938.1	2124613.018	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,075	Geo 7X	Uncorrected	10/2/2017	01:05:26pm	C Gray	SHAD-41b.ssf
5857	-121.2677697	37.82728938	6339936.147	2124610.543	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,457	Geo 7X	Uncorrected	10/2/2017	01:05:28pm	C Gray	SHAD-41b.ssf
5858	-121.2677717	37.82728316	6339934.007	2124608.296	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,429	Geo 7X	Uncorrected	10/2/2017	01:05:30pm	C Gray	SHAD-41b.ssf
5859	-121.2677851	37.82727609	6339931.672	2124605.739	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,190	Geo 7X	Uncorrected	10/2/2017	01:05:32pm	C Gray	SHAD-41b.ssf
5860	-121.2677953	37.82726867	6339928.695	2124603.06	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,990	Geo 7X	Uncorrected	10/2/2017	01:05:34pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5861	-121.2678054	37.82726214	6339925.76	2124600.708	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,611	Geo 7X	Uncorrected	10/2/2017	01:05:36pm	C Gray	SHAD-41b.ssf
5862	-121.2678133	37.82725373	6339923.443	2124597.968	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,739	Geo 7X	Uncorrected	10/2/2017	01:05:38pm	C Gray	SHAD-41b.ssf
5863	-121.2678205	37.82724345	6339921.337	2124593.938	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,332	Geo 7X	Uncorrected	10/2/2017	01:05:40pm	C Gray	SHAD-41b.ssf
5864	-121.2678339	37.82723318	6339917.447	2124590.231	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,643	Geo 7X	Uncorrected	10/2/2017	01:05:42pm	C Gray	SHAD-41b.ssf
5865	-121.2678412	37.82722453	6339915.307	2124587.099	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,102	Geo 7X	Uncorrected	10/2/2017	01:05:44pm	C Gray	SHAD-41b.ssf
5866	-121.2678515	37.82721355	6339912.299	2124583.126	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,500	Geo 7X	Uncorrected	10/2/2017	01:05:46pm	C Gray	SHAD-41b.ssf
5867	-121.2678618	37.82720445	6339909.283	2124579.835	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,758	Geo 7X	Uncorrected	10/2/2017	01:05:48pm	C Gray	SHAD-41b.ssf
5868	-121.2678693	37.82719623	6339907.029	2124576.861	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,266	Geo 7X	Uncorrected	10/2/2017	01:05:50pm	C Gray	SHAD-41b.ssf
5869	-121.2678802	37.82718493	6339903.915	2124572.771	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,675	Geo 7X	Uncorrected	10/2/2017	01:05:52pm	C Gray	SHAD-41b.ssf
5870	-121.2678902	37.82717857	6339901.004	2124570.48	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,857	Geo 7X	Uncorrected	10/2/2017	01:05:54pm	C Gray	SHAD-41b.ssf
5871	-121.2678951	37.82716976	6339899.565	2124567.283	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,848	Geo 7X	Uncorrected	10/2/2017	01:05:56pm	C Gray	SHAD-41b.ssf
5872	-121.2678939	37.82716657	6339899.921	2124566.12	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,222	Geo 7X	Uncorrected	10/2/2017	01:05:58pm	C Gray	SHAD-41b.ssf
5873	-121.2678926	37.82716857	6339900.285	2124566.844	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,367	Geo 7X	Uncorrected	10/2/2017	01:06:00pm	C Gray	SHAD-41b.ssf
5874	-121.2678894	37.82717052	6339901.215	2124567.547	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,688	Geo 7X	Uncorrected	10/2/2017	01:06:02pm	C Gray	SHAD-41b.ssf
5875	-121.2678851	37.82717344	6339901.712	2124568.606	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,864	Geo 7X	Uncorrected	10/2/2017	01:06:04pm	C Gray	SHAD-41b.ssf
5876	-121.2678801	37.82718011	6339902.481	2124571.03	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,222	Geo 7X	Uncorrected	10/2/2017	01:06:06pm	C Gray	SHAD-41b.ssf
5877	-121.2678788	37.82718837	6339904.34	2124574.021	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,107	Geo 7X	Uncorrected	10/2/2017	01:06:08pm	C Gray	SHAD-41b.ssf
5878	-121.2678715	37.82719651	6339906.456	2124576.967	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,770	Geo 7X	Uncorrected	10/2/2017	01:06:10pm	C Gray	SHAD-41b.ssf
5879	-121.2678671	37.82720436	6339907.772	2124579.814	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,601	Geo 7X	Uncorrected	10/2/2017	01:06:12pm	C Gray	SHAD-41b.ssf
5880	-121.2678598	37.82721255	6339909.854	2124582.781	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,607	Geo 7X	Uncorrected	10/2/2017	01:06:14pm	C Gray	SHAD-41b.ssf
5881	-121.2678548	37.82721928	6339911.359	2124585.218	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,592	Geo 7X	Uncorrected	10/2/2017	01:06:16pm	C Gray	SHAD-41b.ssf
5882	-121.2678456	37.82722754	6339914.049	2124588.207	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,277	Geo 7X	Uncorrected	10/2/2017	01:06:18pm	C Gray	SHAD-41b.ssf
5883	-121.2678379	37.82723262	6339916.277	2124590.035	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,448	Geo 7X	Uncorrected	10/2/2017	01:06:20pm	C Gray	SHAD-41b.ssf
5884	-121.2678295	37.82724044	6339918.72	2124592.864	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,103	Geo 7X	Uncorrected	10/2/2017	01:06:22pm	C Gray	SHAD-41b.ssf
5885	-121.2678214	37.82724844	6339920.809	2124595.761	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,557	Geo 7X	Uncorrected	10/2/2017	01:06:24pm	C Gray	SHAD-41b.ssf
5886	-121.2678114	37.82725596	6339924.7	2124598.474	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,926	Geo 7X	Uncorrected	10/2/2017	01:06:26pm	C Gray	SHAD-41b.ssf
5887	-121.2678039	37.82726336	6339926.181	2124601.148	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90,755	Geo 7X	Uncorrected	10/2/2017	01:06:28pm	C Gray	SHAD-41b.ssf
5888	-121.2677959	37.82727114	6339928.529	2124603.962	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,709	Geo 7X	Uncorrected	10/2/2017	01:06:30pm	C Gray	SHAD-41b.ssf
5889	-121.2677827	37.82727979	6339932.361	2124607.08	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,949	Geo 7X	Uncorrected	10/2/2017	01:06:32pm	C Gray	SHAD-41b.ssf
5890	-121.2677735	37.82728539	6339935.027	2124609.098	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,449	Geo 7X	Uncorrected	10/2/2017	01:06:34pm	C Gray	SHAD-41b.ssf
5891	-121.2677624	37.82729218	6339938.253	2124611.543	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,667	Geo 7X	Uncorrected	10/2/2017	01:06:36pm	C Gray	SHAD-41b.ssf
5892	-121.2677495	37.82730049	6339942.024	2124614.539	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,020	Geo 7X	Uncorrected	10/2/2017	01:06:38pm	C Gray	SHAD-41b.ssf
5893	-121.2677386	37.82730808	6339945.171	2124617.279	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,330	Geo 7X	Uncorrected	10/2/2017	01:06:40pm	C Gray	SHAD-41b.ssf
5894	-121.2677286	37.82731681	6339948.088	2124620.431	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,290	Geo 7X	Uncorrected	10/2/2017	01:06:42pm	C Gray	SHAD-41b.ssf
5895	-121.2677212	37.82732418	6339950.253	2124623.099	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,121	Geo 7X	Uncorrected	10/2/2017	01:06:44pm	C Gray	SHAD-41b.ssf
5896	-121.2677139	37.82733239	6339952.396	2124626.071	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,528	Geo 7X	Uncorrected	10/2/2017	01:06:46pm	C Gray	SHAD-41b.ssf
5897	-121.267707	37.82734008	6339954.41	2124628.852	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,002	Geo 7X	Uncorrected	10/2/2017	01:06:48pm	C Gray	SHAD-41b.ssf
5898	-121.2677008	37.82734703	6339956.211	2124631.37	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,600	Geo 7X	Uncorrected	10/2/2017	01:06:50pm	C Gray	SHAD-41b.ssf
5899	-121.2676911	37.82735655	6339959.035	2124634.813	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	84,180	Geo 7X	Uncorrected	10/2/2017	01:06:52pm	C Gray	SHAD-41b.ssf
5900	-121.2676819	37.82736604	6339961.725	2124638.248	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90,833	Geo 7X	Uncorrected	10/2/2017	01:06:54pm	C Gray	SHAD-41b.ssf
5901	-121.2676701	37.82737401	6339965.161	2124641.12	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,601	Geo 7X	Uncorrected	10/2/2017	01:06:56pm	C Gray	SHAD-41b.ssf
5902	-121.2676677	37.8273814	6339968.876	2124643.806	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,792	Geo 7X	Uncorrected	10/2/2017	01:06:58pm	C Gray	SHAD-41b.ssf
5903	-121.2676608	37.82739049	6339967.889	2124647.1	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,828	Geo 7X	Uncorrected	10/2/2017	01:07:00pm	C Gray	SHAD-41b.ssf
5904	-121.2676468	37.82740132	6339971.341	2124651.016	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,140	Geo 7X	Uncorrected	10/2/2017	01:07:02pm	C Gray	SHAD-41b.ssf
5905	-121.2676468	37.82740610	6339971.996	2124652.719	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,430	Geo 7X	Uncorrected	10/2/2017	01:07:04pm	C Gray	SHAD-41b.ssf
5906	-121.2676342	37.8274048	6339975.626	2124652.248	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,533	Geo 7X	Uncorrected	10/2/2017	01:07:06pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5907	-121.2676321	37.82739678	6339976.214	2124649.322	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,374	Geo 7X	Uncorrected	10/2/2017	01:07:08pm	C Gray	SHAD-41b.ssf
5908	-121.2676348	37.82739241	6339975.423	2124647.736	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,924	Geo 7X	Uncorrected	10/2/2017	01:07:10pm	C Gray	SHAD-41b.ssf
5909	-121.2676357	37.82738667	6339975.138	2124645.648	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,313	Geo 7X	Uncorrected	10/2/2017	01:07:12pm	C Gray	SHAD-41b.ssf
5910	-121.2676423	37.82737941	6339975.207	2124643.023	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,121	Geo 7X	Uncorrected	10/2/2017	01:07:14pm	C Gray	SHAD-41b.ssf
5911	-121.2676492	37.82737293	6339971.199	2124640.677	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,543	Geo 7X	Uncorrected	10/2/2017	01:07:16pm	C Gray	SHAD-41b.ssf
5912	-121.2676567	37.82736728	6339969.004	2124638.64	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,587	Geo 7X	Uncorrected	10/2/2017	01:07:18pm	C Gray	SHAD-41b.ssf
5913	-121.2676628	37.82736182	6339967.23	2124636.664	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,969	Geo 7X	Uncorrected	10/2/2017	01:07:20pm	C Gray	SHAD-41b.ssf
5914	-121.2676709	37.82735547	6339964.88	2124634.37	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,739	Geo 7X	Uncorrected	10/2/2017	01:07:22pm	C Gray	SHAD-41b.ssf
5915	-121.2676794	37.82734881	6339962.414	2124631.969	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,331	Geo 7X	Uncorrected	10/2/2017	01:07:24pm	C Gray	SHAD-41b.ssf
5916	-121.2676855	37.82734287	6339960.636	2124629.819	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,092	Geo 7X	Uncorrected	10/2/2017	01:07:26pm	C Gray	SHAD-41b.ssf
5917	-121.2676946	37.82733561	6339957.965	2124627.198	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	96,162	Geo 7X	Uncorrected	10/2/2017	01:07:28pm	C Gray	SHAD-41b.ssf
5918	-121.2677035	37.82733078	6339948.465	2124617.149	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,485	Geo 7X	Uncorrected	10/2/2017	01:07:30pm	C Gray	SHAD-41b.ssf
5919	-121.2677109	37.8273231	6339953.222	2124622.681	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,634	Geo 7X	Uncorrected	10/2/2017	01:07:32pm	C Gray	SHAD-41b.ssf
5920	-121.2677199	37.82731502	6339950.62	2124619.758	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,688	Geo 7X	Uncorrected	10/2/2017	01:07:34pm	C Gray	SHAD-41b.ssf
5921	-121.2677272	37.8273078	6339948.465	2124614.577	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,317	Geo 7X	Uncorrected	10/2/2017	01:07:36pm	C Gray	SHAD-41b.ssf
5922	-121.2677352	37.82730069	6339946.143	2124614.577	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,066	Geo 7X	Uncorrected	10/2/2017	01:07:38pm	C Gray	SHAD-41b.ssf
5923	-121.2677449	37.82729318	6339943.327	2124611.867	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,619	Geo 7X	Uncorrected	10/2/2017	01:07:40pm	C Gray	SHAD-41b.ssf
5924	-121.2677541	37.82728523	6339940.64	2124608.994	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,682	Geo 7X	Uncorrected	10/2/2017	01:07:42pm	C Gray	SHAD-41b.ssf
5925	-121.2677626	37.82727277	6339938.167	2124606.272	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,720	Geo 7X	Uncorrected	10/2/2017	01:07:44pm	C Gray	SHAD-41b.ssf
5926	-121.2677705	37.82726966	6339935.861	2124603.362	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,746	Geo 7X	Uncorrected	10/2/2017	01:07:46pm	C Gray	SHAD-41b.ssf
5927	-121.2677857	37.82726307	6339933.829	2124600.979	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,841	Geo 7X	Uncorrected	10/2/2017	01:07:48pm	C Gray	SHAD-41b.ssf
5928	-121.2677752	37.82725618	6339931.574	2124598.492	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,006	Geo 7X	Uncorrected	10/2/2017	01:07:50pm	C Gray	SHAD-41b.ssf
5929	-121.2677951	37.82724602	6339928.69	2124594.814	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,885	Geo 7X	Uncorrected	10/2/2017	01:07:52pm	C Gray	SHAD-41b.ssf
5930	-121.2678029	37.82723795	6339926.409	2124591.895	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,685	Geo 7X	Uncorrected	10/2/2017	01:07:54pm	C Gray	SHAD-41b.ssf
5931	-121.2678113	37.82723035	6339923.916	2124589.147	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	96,569	Geo 7X	Uncorrected	10/2/2017	01:07:56pm	C Gray	SHAD-41b.ssf
5932	-121.2678185	37.82722445	6339921.85	2124587.014	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,984	Geo 7X	Uncorrected	10/2/2017	01:07:58pm	C Gray	SHAD-41b.ssf
5933	-121.2678287	37.82721628	6339918.898	2124584.066	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,210	Geo 7X	Uncorrected	10/2/2017	01:08:00pm	C Gray	SHAD-41b.ssf
5934	-121.2678377	37.82720766	6339916.254	2124580.946	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,660	Geo 7X	Uncorrected	10/2/2017	01:08:02pm	C Gray	SHAD-41b.ssf
5935	-121.2678447	37.82719891	6339913.554	2124577.783	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,400	Geo 7X	Uncorrected	10/2/2017	01:08:04pm	C Gray	SHAD-41b.ssf
5936	-121.2678549	37.82719163	6339911.236	2124575.154	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,037	Geo 7X	Uncorrected	10/2/2017	01:08:06pm	C Gray	SHAD-41b.ssf
5937	-121.2678647	37.82718362	6339908.404	2124572.258	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,666	Geo 7X	Uncorrected	10/2/2017	01:08:08pm	C Gray	SHAD-41b.ssf
5938	-121.2678732	37.82717482	6339905.911	2124569.073	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,353	Geo 7X	Uncorrected	10/2/2017	01:08:10pm	C Gray	SHAD-41b.ssf
5939	-121.2678828	37.82716657	6339903.109	2124566.092	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,696	Geo 7X	Uncorrected	10/2/2017	01:08:12pm	C Gray	SHAD-41b.ssf
5940	-121.2678852	37.82715963	6339902.391	2124563.521	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,002	Geo 7X	Uncorrected	10/2/2017	01:08:14pm	C Gray	SHAD-41b.ssf
5941	-121.2678925	37.82715367	6339903.624	2124561.378	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,420	Geo 7X	Uncorrected	10/2/2017	01:08:16pm	C Gray	SHAD-41b.ssf
5942	-121.2678789	37.82715512	6339904.196	2124561.916	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,033	Geo 7X	Uncorrected	10/2/2017	01:08:18pm	C Gray	SHAD-41b.ssf
5943	-121.2678793	37.82715638	6339904.094	2124562.376	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,872	Geo 7X	Uncorrected	10/2/2017	01:08:20pm	C Gray	SHAD-41b.ssf
5944	-121.2678825	37.82714937	6339901.816	2124561.504	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,772	Geo 7X	Uncorrected	10/2/2017	01:08:22pm	C Gray	SHAD-41b.ssf
5945	-121.2678955	37.82714397	6339900.268	2124559.854	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,817	Geo 7X	Uncorrected	10/2/2017	01:08:24pm	C Gray	SHAD-41b.ssf
5946	-121.2678935	37.82715018	6339899.974	2124560.15	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,965	Geo 7X	Uncorrected	10/2/2017	01:08:26pm	C Gray	SHAD-41b.ssf
5947	-121.2678876	37.82715652	6339901.702	2124562.446	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,745	Geo 7X	Uncorrected	10/2/2017	01:08:28pm	C Gray	SHAD-41b.ssf
5948	-121.2678786	37.82716314	6339904.325	2124564.833	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,553	Geo 7X	Uncorrected	10/2/2017	01:08:30pm	C Gray	SHAD-41b.ssf
5949	-121.2678706	37.8271714	6339906.663	2124567.823	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,005	Geo 7X	Uncorrected	10/2/2017	01:08:32pm	C Gray	SHAD-41b.ssf
5950	-121.2678657	37.8271804	6339908.96	2124571.08	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,734	Geo 7X	Uncorrected	10/2/2017	01:08:34pm	C Gray	SHAD-41b.ssf
5951	-121.2678529	37.82718894	6339910.95	2124574.175	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,594	Geo 7X	Uncorrected	10/2/2017	01:08:36pm	C Gray	SHAD-41b.ssf
5952	-121.2678476	37.82719809	6339913.389	2124577.486	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,647	Geo 7X	Uncorrected	10/2/2017	01:08:38pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5953	-121.267784	37.82720536	6339915.601	2124580.117	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,272	Geo 7X	Uncorrected	10/2/2017	01:08:40pm	C Gray	SHAD-41b.ssf
5954	-121.2678314	37.82721331	6339918.088	2124583.018	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,782	Geo 7X	Uncorrected	10/2/2017	01:08:42pm	C Gray	SHAD-41b.ssf
5955	-121.2678234	37.82722011	6339920.428	2124585.446	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,277	Geo 7X	Uncorrected	10/2/2017	01:08:44pm	C Gray	SHAD-41b.ssf
5956	-121.2678156	37.82722674	6339922.697	2124587.842	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,312	Geo 7X	Uncorrected	10/2/2017	01:08:46pm	C Gray	SHAD-41b.ssf
5957	-121.267807	37.8272354	6339925.201	2124590.976	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,899	Geo 7X	Uncorrected	10/2/2017	01:08:48pm	C Gray	SHAD-41b.ssf
5958	-121.2677992	37.82724293	6339927.488	2124593.697	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,389	Geo 7X	Uncorrected	10/2/2017	01:08:50pm	C Gray	SHAD-41b.ssf
5959	-121.2677906	37.82725094	6339930	2124596.597	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,868	Geo 7X	Uncorrected	10/2/2017	01:08:52pm	C Gray	SHAD-41b.ssf
5960	-121.2677809	37.82725919	6339932.819	2124599.575	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,265	Geo 7X	Uncorrected	10/2/2017	01:08:54pm	C Gray	SHAD-41b.ssf
5961	-121.2677709	37.82726667	6339935.725	2124602.275	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,606	Geo 7X	Uncorrected	10/2/2017	01:08:56pm	C Gray	SHAD-41b.ssf
5962	-121.2677581	37.82727627	6339939.451	2124605.743	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,112	Geo 7X	Uncorrected	10/2/2017	01:08:58pm	C Gray	SHAD-41b.ssf
5963	-121.2677511	37.8272832	6339941.489	2124608.247	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,626	Geo 7X	Uncorrected	10/2/2017	01:09:00pm	C Gray	SHAD-41b.ssf
5964	-121.2677417	37.82729346	6339944.238	2124611.963	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,106	Geo 7X	Uncorrected	10/2/2017	01:09:02pm	C Gray	SHAD-41b.ssf
5965	-121.2677322	37.82730228	6339947.023	2124615.15	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,594	Geo 7X	Uncorrected	10/2/2017	01:09:04pm	C Gray	SHAD-41b.ssf
5966	-121.2677245	37.8273088	6339949.26	2124617.505	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,168	Geo 7X	Uncorrected	10/2/2017	01:09:06pm	C Gray	SHAD-41b.ssf
5967	-121.267717	37.82731643	6339951.451	2124620.267	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,710	Geo 7X	Uncorrected	10/2/2017	01:09:08pm	C Gray	SHAD-41b.ssf
5968	-121.2677071	37.82732489	6339954.326	2124623.325	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,654	Geo 7X	Uncorrected	10/2/2017	01:09:10pm	C Gray	SHAD-41b.ssf
5969	-121.2676984	37.82733302	6339956.866	2124626.265	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,029	Geo 7X	Uncorrected	10/2/2017	01:09:12pm	C Gray	SHAD-41b.ssf
5970	-121.2676895	37.82734202	6339959.453	2124629.519	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,101	Geo 7X	Uncorrected	10/2/2017	01:09:14pm	C Gray	SHAD-41b.ssf
5971	-121.2676795	37.82735166	6339962.376	2124633.006	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,887	Geo 7X	Uncorrected	10/2/2017	01:09:16pm	C Gray	SHAD-41b.ssf
5972	-121.2676702	37.82736069	6339965.103	2124636.271	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	115,817	Geo 7X	Uncorrected	10/2/2017	01:09:18pm	C Gray	SHAD-41b.ssf
5973	-121.2676618	37.82737018	6339968.526	2124639.698	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,198	Geo 7X	Uncorrected	10/2/2017	01:09:20pm	C Gray	SHAD-41b.ssf
5974	-121.2676501	37.82737662	6339970.953	2124642.026	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,585	Geo 7X	Uncorrected	10/2/2017	01:09:22pm	C Gray	SHAD-41b.ssf
5975	-121.26764	37.82738663	6339973.886	2124645.644	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,841	Geo 7X	Uncorrected	10/2/2017	01:09:24pm	C Gray	SHAD-41b.ssf
5976	-121.2676317	37.82739651	6339976.324	2124649.223	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,609	Geo 7X	Uncorrected	10/2/2017	01:09:26pm	C Gray	SHAD-41b.ssf
5977	-121.2676302	37.82740274	6339979.779	2124651.488	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,849	Geo 7X	Uncorrected	10/2/2017	01:09:28pm	C Gray	SHAD-41b.ssf
5978	-121.2676223	37.82739537	6339979.038	2124648.785	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,929	Geo 7X	Uncorrected	10/2/2017	01:09:30pm	C Gray	SHAD-41b.ssf
5979	-121.2676165	37.82738957	6339980.686	2124646.661	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,670	Geo 7X	Uncorrected	10/2/2017	01:09:32pm	C Gray	SHAD-41b.ssf
5980	-121.2676201	37.82738658	6339979.646	2124645.58	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,177	Geo 7X	Uncorrected	10/2/2017	01:09:34pm	C Gray	SHAD-41b.ssf
5981	-121.2676194	37.82738185	6339979.833	2124643.855	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,042	Geo 7X	Uncorrected	10/2/2017	01:09:36pm	C Gray	SHAD-41b.ssf
5982	-121.2676207	37.82737728	6339978.459	2124642.203	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,212	Geo 7X	Uncorrected	10/2/2017	01:09:38pm	C Gray	SHAD-41b.ssf
5983	-121.2676301	37.8273706	6339976.521	2124639.787	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,335	Geo 7X	Uncorrected	10/2/2017	01:09:40pm	C Gray	SHAD-41b.ssf
5984	-121.2676405	37.82736191	6339976.668	2124636.644	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,491	Geo 7X	Uncorrected	10/2/2017	01:09:42pm	C Gray	SHAD-41b.ssf
5985	-121.2676496	37.82735521	6339971.016	2124634.226	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,557	Geo 7X	Uncorrected	10/2/2017	01:09:44pm	C Gray	SHAD-41b.ssf
5986	-121.2676593	37.82734629	6339968.193	2124631.002	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,422	Geo 7X	Uncorrected	10/2/2017	01:09:46pm	C Gray	SHAD-41b.ssf
5987	-121.2676673	37.82734013	6339965.884	2124628.777	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	83,492	Geo 7X	Uncorrected	10/2/2017	01:09:48pm	C Gray	SHAD-41b.ssf
5988	-121.2676766	37.82733208	6339963.17	2124625.87	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	107,816	Geo 7X	Uncorrected	10/2/2017	01:09:50pm	C Gray	SHAD-41b.ssf
5989	-121.2676847	37.82732564	6339960.8	2124623.542	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	127,305	Geo 7X	Uncorrected	10/2/2017	01:09:52pm	C Gray	SHAD-41b.ssf
5990	-121.2676923	37.8273182	6339958.592	2124620.852	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	96,481	Geo 7X	Uncorrected	10/2/2017	01:09:54pm	C Gray	SHAD-41b.ssf
5991	-121.2677003	37.82731096	6339956.263	2124618.237	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,090	Geo 7X	Uncorrected	10/2/2017	01:09:56pm	C Gray	SHAD-41b.ssf
5992	-121.2677033	37.82730395	6339953.642	2124615.702	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,786	Geo 7X	Uncorrected	10/2/2017	01:09:58pm	C Gray	SHAD-41b.ssf
5993	-121.267716	37.82729693	6339951.683	2124613.163	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,067	Geo 7X	Uncorrected	10/2/2017	01:10:00pm	C Gray	SHAD-41b.ssf
5994	-121.2677249	37.82728946	6339949.082	2124610.464	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,301	Geo 7X	Uncorrected	10/2/2017	01:10:02pm	C Gray	SHAD-41b.ssf
5995	-121.2677326	37.82728241	6339946.847	2124607.914	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,599	Geo 7X	Uncorrected	10/2/2017	01:10:04pm	C Gray	SHAD-41b.ssf
5996	-121.2677416	37.82727416	6339944.071	2124604.934	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,660	Geo 7X	Uncorrected	10/2/2017	01:10:06pm	C Gray	SHAD-41b.ssf
5997	-121.2677521	37.82726524	6339941.306	2124601.708	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,521	Geo 7X	Uncorrected	10/2/2017	01:10:08pm	C Gray	SHAD-41b.ssf
5998	-121.2677607	37.8272569	6339938.643	2124598.694	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,021	Geo 7X	Uncorrected	10/2/2017	01:10:10pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
5999	-121.2677692	37.82724892	6339936.164	2124595.809	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,653	Geo 7X	Uncorrected	10/2/2017	01:10:12pm	C Gray	SHAD-41b.ssf
6000	-121.2677713	37.82724744	6339935.549	2124595.177	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	63,641	Geo 7X	Uncorrected	10/2/2017	01:10:14pm	C Gray	SHAD-41b.ssf
6001	-121.2677718	37.82724717	6339935.42	2124595.174	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	86,418	Geo 7X	Uncorrected	10/2/2017	01:10:16pm	C Gray	SHAD-41b.ssf
6002	-121.2677723	37.82724688	6339935.282	2124595.072	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,027	Geo 7X	Uncorrected	10/2/2017	01:10:18pm	C Gray	SHAD-41b.ssf
6003	-121.2677727	37.82724661	6339935.154	2124594.975	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	57,983	Geo 7X	Uncorrected	10/2/2017	01:10:20pm	C Gray	SHAD-41b.ssf
6004	-121.2677731	37.82724637	6339935.047	2124594.889	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,424	Geo 7X	Uncorrected	10/2/2017	01:10:22pm	C Gray	SHAD-41b.ssf
6005	-121.2677866	37.82724378	6339931.119	2124591.8	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,994	Geo 7X	Uncorrected	10/2/2017	01:11:24pm	C Gray	SHAD-41b.ssf
6006	-121.2677841	37.82723776	6339931.822	2124591.779	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,937	Geo 7X	Uncorrected	10/2/2017	01:11:26pm	C Gray	SHAD-41b.ssf
6007	-121.2677818	37.82723735	6339932.503	2124591.625	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,824	Geo 7X	Uncorrected	10/2/2017	01:11:28pm	C Gray	SHAD-41b.ssf
6008	-121.2677886	37.8272323	6339930.531	2124589.804	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	56,226	Geo 7X	Uncorrected	10/2/2017	01:11:30pm	C Gray	SHAD-41b.ssf
6009	-121.2677991	37.82722547	6339927.479	2124587.34	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,207	Geo 7X	Uncorrected	10/2/2017	01:11:32pm	C Gray	SHAD-41b.ssf
6010	-121.2678083	37.82721691	6339924.778	2124584.244	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,940	Geo 7X	Uncorrected	10/2/2017	01:11:34pm	C Gray	SHAD-41b.ssf
6011	-121.2678159	37.82721049	6339922.555	2124581.927	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,077	Geo 7X	Uncorrected	10/2/2017	01:11:36pm	C Gray	SHAD-41b.ssf
6012	-121.2678244	37.82720218	6339920.085	2124578.919	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,742	Geo 7X	Uncorrected	10/2/2017	01:11:38pm	C Gray	SHAD-41b.ssf
6013	-121.2678401	37.82719649	6339918.145	2124576.867	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,001	Geo 7X	Uncorrected	10/2/2017	01:11:40pm	C Gray	SHAD-41b.ssf
6014	-121.2678401	37.82718948	6339915.518	2124574.333	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,892	Geo 7X	Uncorrected	10/2/2017	01:11:42pm	C Gray	SHAD-41b.ssf
6015	-121.2678491	37.82718211	6339912.888	2124571.67	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,962	Geo 7X	Uncorrected	10/2/2017	01:11:44pm	C Gray	SHAD-41b.ssf
6016	-121.2678578	37.82717467	6339910.361	2124568.985	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,238	Geo 7X	Uncorrected	10/2/2017	01:11:46pm	C Gray	SHAD-41b.ssf
6017	-121.2678667	37.82716824	6339907.759	2124566.663	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,897	Geo 7X	Uncorrected	10/2/2017	01:11:48pm	C Gray	SHAD-41b.ssf
6018	-121.2678741	37.82716105	6339905.611	2124564.061	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,256	Geo 7X	Uncorrected	10/2/2017	01:11:50pm	C Gray	SHAD-41b.ssf
6019	-121.2678836	37.82715229	6339902.837	2124560.895	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,179	Geo 7X	Uncorrected	10/2/2017	01:11:52pm	C Gray	SHAD-41b.ssf
6020	-121.2678894	37.82714471	6339901.142	2124559.019	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,906	Geo 7X	Uncorrected	10/2/2017	01:11:54pm	C Gray	SHAD-41b.ssf
6021	-121.2678955	37.82714162	6339899.37	2124557.038	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,502	Geo 7X	Uncorrected	10/2/2017	01:11:56pm	C Gray	SHAD-41b.ssf
6022	-121.2678987	37.82714284	6339898.459	2124557.491	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,527	Geo 7X	Uncorrected	10/2/2017	01:11:58pm	C Gray	SHAD-41b.ssf
6023	-121.2678922	37.82713948	6339900.319	2124556.252	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,175	Geo 7X	Uncorrected	10/2/2017	01:12:00pm	C Gray	SHAD-41b.ssf
6024	-121.2678911	37.82713939	6339900.626	2124556.215	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,942	Geo 7X	Uncorrected	10/2/2017	01:12:02pm	C Gray	SHAD-41b.ssf
6025	-121.2678904	37.82714106	6339900.856	2124556.824	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,591	Geo 7X	Uncorrected	10/2/2017	01:12:04pm	C Gray	SHAD-41b.ssf
6026	-121.2678895	37.82714338	6339901.105	2124557.666	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,091	Geo 7X	Uncorrected	10/2/2017	01:12:06pm	C Gray	SHAD-41b.ssf
6027	-121.2678836	37.82714867	6339902.838	2124559.578	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,123	Geo 7X	Uncorrected	10/2/2017	01:12:08pm	C Gray	SHAD-41b.ssf
6028	-121.2678764	37.82715316	6339904.931	2124561.196	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,949	Geo 7X	Uncorrected	10/2/2017	01:12:10pm	C Gray	SHAD-41b.ssf
6029	-121.2678704	37.82715852	6339906.684	2124563.132	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,016	Geo 7X	Uncorrected	10/2/2017	01:12:12pm	C Gray	SHAD-41b.ssf
6030	-121.2678629	37.82716618	6339908.848	2124565.903	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,963	Geo 7X	Uncorrected	10/2/2017	01:12:14pm	C Gray	SHAD-41b.ssf
6031	-121.267854	37.82717403	6339911.443	2124568.742	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,863	Geo 7X	Uncorrected	10/2/2017	01:12:16pm	C Gray	SHAD-41b.ssf
6032	-121.2678467	37.82718206	6339913.576	2124571.647	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,758	Geo 7X	Uncorrected	10/2/2017	01:12:18pm	C Gray	SHAD-41b.ssf
6033	-121.2678388	37.82718911	6339915.884	2124574.195	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,480	Geo 7X	Uncorrected	10/2/2017	01:12:20pm	C Gray	SHAD-41b.ssf
6034	-121.2678336	37.82719755	6339917.596	2124577.256	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,242	Geo 7X	Uncorrected	10/2/2017	01:12:22pm	C Gray	SHAD-41b.ssf
6035	-121.2678249	37.82720565	6339919.959	2124580.185	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,961	Geo 7X	Uncorrected	10/2/2017	01:12:24pm	C Gray	SHAD-41b.ssf
6036	-121.2678177	37.82721198	6339922.064	2124582.474	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,901	Geo 7X	Uncorrected	10/2/2017	01:12:26pm	C Gray	SHAD-41b.ssf
6037	-121.2678098	37.827221	6339924.361	2124585.739	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,879	Geo 7X	Uncorrected	10/2/2017	01:12:28pm	C Gray	SHAD-41b.ssf
6038	-121.2678207	37.82722916	6339926.44	2124588.692	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,577	Geo 7X	Uncorrected	10/2/2017	01:12:30pm	C Gray	SHAD-41b.ssf
6039	-121.2677957	37.82723557	6339928.481	2124591.009	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,578	Geo 7X	Uncorrected	10/2/2017	01:12:32pm	C Gray	SHAD-41b.ssf
6040	-121.2677863	37.82724119	6339931.203	2124593.036	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,029	Geo 7X	Uncorrected	10/2/2017	01:12:34pm	C Gray	SHAD-41b.ssf
6041	-121.267777	37.82724853	6339933.915	2124595.758	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,985	Geo 7X	Uncorrected	10/2/2017	01:12:36pm	C Gray	SHAD-41b.ssf
6042	-121.2677674	37.82725571	6339936.7	2124598.204	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	65,809	Geo 7X	Uncorrected	10/2/2017	01:12:38pm	C Gray	SHAD-41b.ssf
6043	-121.2677575	37.82726071	6339939.58	2124600.075	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	65,681	Geo 7X	Uncorrected	10/2/2017	01:12:40pm	C Gray	SHAD-41b.ssf
6044	-121.2677472	37.82726747	6339942.587	2124602.512	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,294	Geo 7X	Uncorrected	10/2/2017	01:12:42pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6045	-121.2677381	37.8272814	6339945.227	2124605.013	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,342	Geo 7X	Uncorrected	10/2/2017	01:12:44pm	C Gray	SHAD-41b.ssf
6046	-121.2677195	37.82728137	6339947.746	2124607.528	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,964	Geo 7X	Uncorrected	10/2/2017	01:12:46pm	C Gray	SHAD-41b.ssf
6047	-121.2677921	37.82728976	6339950.776	2124610.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,795	Geo 7X	Uncorrected	10/2/2017	01:12:48pm	C Gray	SHAD-41b.ssf
6048	-121.2677089	37.82729855	6339953.742	2124613.738	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,157	Geo 7X	Uncorrected	10/2/2017	01:12:50pm	C Gray	SHAD-41b.ssf
6049	-121.2676999	37.82730587	6339956.346	2124616.382	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,847	Geo 7X	Uncorrected	10/2/2017	01:12:52pm	C Gray	SHAD-41b.ssf
6050	-121.2676937	37.82731304	6339958.153	2124618.977	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,781	Geo 7X	Uncorrected	10/2/2017	01:12:54pm	C Gray	SHAD-41b.ssf
6051	-121.2676841	37.82732072	6339960.963	2124621.752	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,744	Geo 7X	Uncorrected	10/2/2017	01:12:56pm	C Gray	SHAD-41b.ssf
6052	-121.2676753	37.82732813	6339963.532	2124624.429	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,221	Geo 7X	Uncorrected	10/2/2017	01:12:58pm	C Gray	SHAD-41b.ssf
6053	-121.2676657	37.82733716	6339966.333	2124627.694	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,534	Geo 7X	Uncorrected	10/2/2017	01:13:00pm	C Gray	SHAD-41b.ssf
6054	-121.2676567	37.82734652	6339968.951	2124631.079	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	106,629	Geo 7X	Uncorrected	10/2/2017	01:13:02pm	C Gray	SHAD-41b.ssf
6055	-121.2676471	37.82735733	6339971.765	2124634.992	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	112,239	Geo 7X	Uncorrected	10/2/2017	01:13:04pm	C Gray	SHAD-41b.ssf
6056	-121.2676388	37.82736571	6339974.186	2124638.026	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,365	Geo 7X	Uncorrected	10/2/2017	01:13:06pm	C Gray	SHAD-41b.ssf
6057	-121.26763	37.8273731	6339976.748	2124640.693	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,677	Geo 7X	Uncorrected	10/2/2017	01:13:08pm	C Gray	SHAD-41b.ssf
6058	-121.2676224	37.82738052	6339978.952	2124643.38	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,908	Geo 7X	Uncorrected	10/2/2017	01:13:10pm	C Gray	SHAD-41b.ssf
6059	-121.2676156	37.82738628	6339980.93	2124645.459	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,390	Geo 7X	Uncorrected	10/2/2017	01:13:12pm	C Gray	SHAD-41b.ssf
6060	-121.2676144	37.82739159	6339981.3	2124647.391	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,089	Geo 7X	Uncorrected	10/2/2017	01:13:14pm	C Gray	SHAD-41b.ssf
6061	-121.2676048	37.82739566	6339984.092	2124648.85	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,614	Geo 7X	Uncorrected	10/2/2017	01:13:16pm	C Gray	SHAD-41b.ssf
6062	-121.2675982	37.82738623	6339985.961	2124645.401	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,821	Geo 7X	Uncorrected	10/2/2017	01:13:18pm	C Gray	SHAD-41b.ssf
6063	-121.2675989	37.82738304	6339985.743	2124644.241	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,886	Geo 7X	Uncorrected	10/2/2017	01:13:20pm	C Gray	SHAD-41b.ssf
6064	-121.2676007	37.82738198	6339985.221	2124643.859	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,400	Geo 7X	Uncorrected	10/2/2017	01:13:22pm	C Gray	SHAD-41b.ssf
6065	-121.2676022	37.82738454	6339985.378	2124644.788	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,619	Geo 7X	Uncorrected	10/2/2017	01:13:24pm	C Gray	SHAD-41b.ssf
6066	-121.2676027	37.82738427	6339984.673	2124644.697	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,785	Geo 7X	Uncorrected	10/2/2017	01:13:26pm	C Gray	SHAD-41b.ssf
6067	-121.2676096	37.82738015	6339982.653	2124643.215	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,051	Geo 7X	Uncorrected	10/2/2017	01:13:28pm	C Gray	SHAD-41b.ssf
6068	-121.2676184	37.82737342	6339980.099	2124641.067	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,813	Geo 7X	Uncorrected	10/2/2017	01:13:30pm	C Gray	SHAD-41b.ssf
6069	-121.267626	37.82736756	6339977.883	2124638.669	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,346	Geo 7X	Uncorrected	10/2/2017	01:13:32pm	C Gray	SHAD-41b.ssf
6070	-121.267634	37.82735919	6339975.551	2124635.638	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,237	Geo 7X	Uncorrected	10/2/2017	01:13:34pm	C Gray	SHAD-41b.ssf
6071	-121.2676415	37.82735286	6339973.37	2124633.35	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,927	Geo 7X	Uncorrected	10/2/2017	01:13:36pm	C Gray	SHAD-41b.ssf
6072	-121.2676526	37.82734358	6339970.138	2124630	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,108	Geo 7X	Uncorrected	10/2/2017	01:13:38pm	C Gray	SHAD-41b.ssf
6073	-121.2676626	37.827333501	6339967.227	2124626.903	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	106,517	Geo 7X	Uncorrected	10/2/2017	01:13:40pm	C Gray	SHAD-41b.ssf
6074	-121.2676718	37.8273266	6339964.526	2124623.863	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	114,508	Geo 7X	Uncorrected	10/2/2017	01:13:42pm	C Gray	SHAD-41b.ssf
6075	-121.267681	37.82731905	6339961.849	2124621.134	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,392	Geo 7X	Uncorrected	10/2/2017	01:13:44pm	C Gray	SHAD-41b.ssf
6076	-121.267679	37.82731109	6339959.225	2124618.258	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,785	Geo 7X	Uncorrected	10/2/2017	01:13:46pm	C Gray	SHAD-41b.ssf
6077	-121.2676986	37.82730355	6339956.717	2124615.533	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,346	Geo 7X	Uncorrected	10/2/2017	01:13:48pm	C Gray	SHAD-41b.ssf
6078	-121.2677079	37.8272948	6339954.009	2124612.368	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,924	Geo 7X	Uncorrected	10/2/2017	01:13:50pm	C Gray	SHAD-41b.ssf
6079	-121.2677173	37.82728587	6339951.275	2124609.139	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,968	Geo 7X	Uncorrected	10/2/2017	01:13:52pm	C Gray	SHAD-41b.ssf
6080	-121.2677275	37.82727649	6339948.302	2124605.749	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,164	Geo 7X	Uncorrected	10/2/2017	01:13:54pm	C Gray	SHAD-41b.ssf
6081	-121.2677367	37.82726874	6339945.613	2124602.948	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,284	Geo 7X	Uncorrected	10/2/2017	01:13:56pm	C Gray	SHAD-41b.ssf
6082	-121.2677453	37.82726032	6339943.344	2124599.902	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,936	Geo 7X	Uncorrected	10/2/2017	01:13:58pm	C Gray	SHAD-41b.ssf
6083	-121.2677523	37.82725064	6339941.051	2124596.396	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,757	Geo 7X	Uncorrected	10/2/2017	01:14:00pm	C Gray	SHAD-41b.ssf
6084	-121.2677605	37.82724143	6339938.649	2124593.061	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,276	Geo 7X	Uncorrected	10/2/2017	01:14:02pm	C Gray	SHAD-41b.ssf
6085	-121.2677731	37.82723037	6339934.99	2124589.065	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,583	Geo 7X	Uncorrected	10/2/2017	01:14:04pm	C Gray	SHAD-41b.ssf
6086	-121.2677816	37.82722193	6339932.508	2124586.01	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,254	Geo 7X	Uncorrected	10/2/2017	01:14:06pm	C Gray	SHAD-41b.ssf
6087	-121.2677909	37.82721403	6339929.8	2124583.158	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,346	Geo 7X	Uncorrected	10/2/2017	01:14:08pm	C Gray	SHAD-41b.ssf
6088	-121.2678012	37.82720636	6339926.807	2124580.388	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,804	Geo 7X	Uncorrected	10/2/2017	01:14:10pm	C Gray	SHAD-41b.ssf
6089	-121.2678121	37.82719639	6339923.631	2124576.784	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,936	Geo 7X	Uncorrected	10/2/2017	01:14:12pm	C Gray	SHAD-41b.ssf
6090	-121.2678222	37.82718609	6339920.666	2124573.056	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,108	Geo 7X	Uncorrected	10/2/2017	01:14:14pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6091	-121.2678328	37.8271173	6339917.603	2124570.136	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,670	Geo 7X	Uncorrected	10/2/2017	01:14:16pm	C Gray	SHAD-41b.ssf
6092	-121.2678413	37.82716973	6339915.059	2124567.143	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,330	Geo 7X	Uncorrected	10/2/2017	01:14:18pm	C Gray	SHAD-41b.ssf
6093	-121.2678518	37.82716078	6339912.059	2124563.913	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,582	Geo 7X	Uncorrected	10/2/2017	01:14:20pm	C Gray	SHAD-41b.ssf
6094	-121.2678615	37.82715235	6339909.211	2124560.866	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,917	Geo 7X	Uncorrected	10/2/2017	01:14:22pm	C Gray	SHAD-41b.ssf
6095	-121.2678724	37.82714213	6339906.033	2124557.17	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,972	Geo 7X	Uncorrected	10/2/2017	01:14:24pm	C Gray	SHAD-41b.ssf
6096	-121.2678804	37.82713499	6339903.707	2124554.59	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,492	Geo 7X	Uncorrected	10/2/2017	01:14:26pm	C Gray	SHAD-41b.ssf
6097	-121.2678882	37.82713131	6339902.941	2124553.232	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,991	Geo 7X	Uncorrected	10/2/2017	01:14:28pm	C Gray	SHAD-41b.ssf
6098	-121.2678923	37.82712576	6339903.153	2124551.232	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,406	Geo 7X	Uncorrected	10/2/2017	01:14:30pm	C Gray	SHAD-41b.ssf
6099	-121.2678775	37.82713088	6339904.539	2124553.087	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,881	Geo 7X	Uncorrected	10/2/2017	01:14:32pm	C Gray	SHAD-41b.ssf
6100	-121.2678761	37.82713293	6339904.94	2124553.828	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,022	Geo 7X	Uncorrected	10/2/2017	01:14:34pm	C Gray	SHAD-41b.ssf
6101	-121.2678765	37.82713273	6339904.847	2124553.757	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,581	Geo 7X	Uncorrected	10/2/2017	01:14:36pm	C Gray	SHAD-41b.ssf
6102	-121.2678822	37.82713449	6339905.207	2124554.393	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,316	Geo 7X	Uncorrected	10/2/2017	01:14:38pm	C Gray	SHAD-41b.ssf
6103	-121.2678671	37.82714007	6339907.558	2124556.406	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,341	Geo 7X	Uncorrected	10/2/2017	01:14:40pm	C Gray	SHAD-41b.ssf
6104	-121.2678603	37.82714606	6339909.542	2124558.571	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,573	Geo 7X	Uncorrected	10/2/2017	01:14:42pm	C Gray	SHAD-41b.ssf
6105	-121.2678519	37.82715468	6339912.005	2124561.69	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,129	Geo 7X	Uncorrected	10/2/2017	01:14:44pm	C Gray	SHAD-41b.ssf
6106	-121.2678438	37.82716253	6339914.366	2124564.531	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,853	Geo 7X	Uncorrected	10/2/2017	01:14:46pm	C Gray	SHAD-41b.ssf
6107	-121.2678332	37.82717134	6339917.466	2124567.713	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,255	Geo 7X	Uncorrected	10/2/2017	01:14:48pm	C Gray	SHAD-41b.ssf
6108	-121.2678263	37.82717745	6339919.476	2124569.922	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,938	Geo 7X	Uncorrected	10/2/2017	01:14:50pm	C Gray	SHAD-41b.ssf
6109	-121.2678161	37.8271849	6339922.427	2124572.611	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,683	Geo 7X	Uncorrected	10/2/2017	01:14:52pm	C Gray	SHAD-41b.ssf
6110	-121.2678084	37.82719118	6339924.524	2124574.88	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,692	Geo 7X	Uncorrected	10/2/2017	01:14:54pm	C Gray	SHAD-41b.ssf
6111	-121.2677925	37.82720486	6339929.316	2124579.82	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,561	Geo 7X	Uncorrected	10/2/2017	01:14:56pm	C Gray	SHAD-41b.ssf
6112	-121.2677853	37.82721233	6339931.423	2124582.524	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,015	Geo 7X	Uncorrected	10/2/2017	01:15:00pm	C Gray	SHAD-41b.ssf
6113	-121.2677763	37.82721918	6339934.032	2124585.223	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,414	Geo 7X	Uncorrected	10/2/2017	01:15:02pm	C Gray	SHAD-41b.ssf
6114	-121.2677666	37.82722735	6339936.862	2124587.95	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,479	Geo 7X	Uncorrected	10/2/2017	01:15:04pm	C Gray	SHAD-41b.ssf
6115	-121.2677577	37.82723498	6339939.442	2124590.707	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,168	Geo 7X	Uncorrected	10/2/2017	01:15:06pm	C Gray	SHAD-41b.ssf
6117	-121.2677504	37.82724168	6339941.59	2124593.126	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,217	Geo 7X	Uncorrected	10/2/2017	01:15:08pm	C Gray	SHAD-41b.ssf
6118	-121.2677408	37.82724902	6339944.383	2124595.778	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,722	Geo 7X	Uncorrected	10/2/2017	01:15:10pm	C Gray	SHAD-41b.ssf
6119	-121.2677333	37.82725492	6339946.568	2124597.908	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,340	Geo 7X	Uncorrected	10/2/2017	01:15:12pm	C Gray	SHAD-41b.ssf
6120	-121.2677247	37.82726232	6339949.001	2124600.914	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,970	Geo 7X	Uncorrected	10/2/2017	01:15:14pm	C Gray	SHAD-41b.ssf
6121	-121.2677119	37.82727012	6339951.117	2124603.405	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,237	Geo 7X	Uncorrected	10/2/2017	01:15:16pm	C Gray	SHAD-41b.ssf
6122	-121.267709	37.82727944	6339953.649	2124606.779	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,625	Geo 7X	Uncorrected	10/2/2017	01:15:18pm	C Gray	SHAD-41b.ssf
6123	-121.2676991	37.82728881	6339956.526	2124610.167	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,207	Geo 7X	Uncorrected	10/2/2017	01:15:20pm	C Gray	SHAD-41b.ssf
6124	-121.2676908	37.82729775	6339958.972	2124613.401	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,462	Geo 7X	Uncorrected	10/2/2017	01:15:22pm	C Gray	SHAD-41b.ssf
6125	-121.2676823	37.82730574	6339961.448	2124616.291	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,234	Geo 7X	Uncorrected	10/2/2017	01:15:24pm	C Gray	SHAD-41b.ssf
6126	-121.2676748	37.82731398	6339963.626	2124619.274	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,131	Geo 7X	Uncorrected	10/2/2017	01:15:26pm	C Gray	SHAD-41b.ssf
6127	-121.2676645	37.82732343	6339966.618	2124622.692	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,281	Geo 7X	Uncorrected	10/2/2017	01:15:28pm	C Gray	SHAD-41b.ssf
6128	-121.2676578	37.82733122	6339968.578	2124625.511	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,725	Geo 7X	Uncorrected	10/2/2017	01:15:30pm	C Gray	SHAD-41b.ssf
6129	-121.2676477	37.82734117	6339971.537	2124629.11	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,448	Geo 7X	Uncorrected	10/2/2017	01:15:32pm	C Gray	SHAD-41b.ssf
6130	-121.2676395	37.82735074	6339973.928	2124631.751	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	104,715	Geo 7X	Uncorrected	10/2/2017	01:15:34pm	C Gray	SHAD-41b.ssf
6131	-121.2676309	37.82735679	6339976.421	2124634.758	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	118,575	Geo 7X	Uncorrected	10/2/2017	01:15:36pm	C Gray	SHAD-41b.ssf
6132	-121.2676219	37.82736579	6339979.062	2124638.015	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,607	Geo 7X	Uncorrected	10/2/2017	01:15:38pm	C Gray	SHAD-41b.ssf
6133	-121.2676132	37.82737541	6339981.55	2124641.494	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,730	Geo 7X	Uncorrected	10/2/2017	01:15:40pm	C Gray	SHAD-41b.ssf
6134	-121.2676056	37.82738308	6339983.833	2124644.27	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,059	Geo 7X	Uncorrected	10/2/2017	01:15:42pm	C Gray	SHAD-41b.ssf
6135	-121.267602	37.82738977	6339984.885	2124646.697	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,422	Geo 7X	Uncorrected	10/2/2017	01:15:44pm	C Gray	SHAD-41b.ssf
6136	-121.2675985	37.82739449	6339985.892	2124648.408	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,372	Geo 7X	Uncorrected	10/2/2017	01:15:46pm	C Gray	SHAD-41b.ssf



ID	Longitude	Latitude	Easting	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6137	-121.2675865	37.82739176	6339989.354	2124647.385	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,302	Geo 7X	Uncorrected	10/2/2017	01:15:48pm	C Gray	SHAD-41b.ssf
6138	-121.2675836	37.82738367	6339990.419	2124644.43	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,371	Geo 7X	Uncorrected	10/2/2017	01:15:50pm	C Gray	SHAD-41b.ssf
6139	-121.2675836	37.82738022	6339990.165	2124643.178	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,785	Geo 7X	Uncorrected	10/2/2017	01:15:52pm	C Gray	SHAD-41b.ssf
6140	-121.2675874	37.82737642	6339989.049	2124641.802	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,683	Geo 7X	Uncorrected	10/2/2017	01:15:54pm	C Gray	SHAD-41b.ssf
6141	-121.2675902	37.82737265	6339988.247	2124640.436	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,277	Geo 7X	Uncorrected	10/2/2017	01:15:56pm	C Gray	SHAD-41b.ssf
6142	-121.2675971	37.82736684	6339986.236	2124638.904	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,886	Geo 7X	Uncorrected	10/2/2017	01:15:58pm	C Gray	SHAD-41b.ssf
6143	-121.2676053	37.82736142	6339988.844	2124636.384	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,643	Geo 7X	Uncorrected	10/2/2017	01:16:00pm	C Gray	SHAD-41b.ssf
6144	-121.2676129	37.82735476	6339981.663	2124633.975	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,806	Geo 7X	Uncorrected	10/2/2017	01:16:02pm	C Gray	SHAD-41b.ssf
6145	-121.2676221	37.82734637	6339978.946	2124630.941	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,448	Geo 7X	Uncorrected	10/2/2017	01:16:04pm	C Gray	SHAD-41b.ssf
6146	-121.2676319	37.82733777	6339976.101	2124627.836	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,440	Geo 7X	Uncorrected	10/2/2017	01:16:06pm	C Gray	SHAD-41b.ssf
6147	-121.2676406	37.82732997	6339973.55	2124625.016	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	94,433	Geo 7X	Uncorrected	10/2/2017	01:16:08pm	C Gray	SHAD-41b.ssf
6148	-121.2676507	37.82732152	6339970.608	2124621.962	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	97,207	Geo 7X	Uncorrected	10/2/2017	01:16:10pm	C Gray	SHAD-41b.ssf
6149	-121.2676605	37.82731338	6339967.766	2124619.021	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	79,845	Geo 7X	Uncorrected	10/2/2017	01:16:12pm	C Gray	SHAD-41b.ssf
6150	-121.26767	37.82730547	6339964.99	2124616.164	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,832	Geo 7X	Uncorrected	10/2/2017	01:16:14pm	C Gray	SHAD-41b.ssf
6151	-121.2676787	37.82729853	6339962.46	2124613.657	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,406	Geo 7X	Uncorrected	10/2/2017	01:16:16pm	C Gray	SHAD-41b.ssf
6152	-121.2676857	37.82729069	6339960.409	2124610.821	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,371	Geo 7X	Uncorrected	10/2/2017	01:16:18pm	C Gray	SHAD-41b.ssf
6153	-121.2676933	37.82728263	6339958.182	2124607.904	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,901	Geo 7X	Uncorrected	10/2/2017	01:16:20pm	C Gray	SHAD-41b.ssf
6154	-121.2677023	37.82727354	6339955.559	2124604.616	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,599	Geo 7X	Uncorrected	10/2/2017	01:16:22pm	C Gray	SHAD-41b.ssf
6155	-121.2677136	37.82726376	6339952.265	2124601.081	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,439	Geo 7X	Uncorrected	10/2/2017	01:16:24pm	C Gray	SHAD-41b.ssf
6156	-121.2677332	37.82725474	6339949.453	2124597.821	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,556	Geo 7X	Uncorrected	10/2/2017	01:16:26pm	C Gray	SHAD-41b.ssf
6157	-121.2677382	37.82724516	6339945.982	2124594.36	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,000	Geo 7X	Uncorrected	10/2/2017	01:16:28pm	C Gray	SHAD-41b.ssf
6158	-121.2677457	37.82723574	6339942.925	2124590.954	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,227	Geo 7X	Uncorrected	10/2/2017	01:16:30pm	C Gray	SHAD-41b.ssf
6159	-121.2677559	37.82722701	6339939.937	2124587.799	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,294	Geo 7X	Uncorrected	10/2/2017	01:16:32pm	C Gray	SHAD-41b.ssf
6160	-121.2677683	37.82721718	6339936.331	2124584.251	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,969	Geo 7X	Uncorrected	10/2/2017	01:16:34pm	C Gray	SHAD-41b.ssf
6161	-121.2677788	37.82720692	6339933.28	2124580.537	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,392	Geo 7X	Uncorrected	10/2/2017	01:16:36pm	C Gray	SHAD-41b.ssf
6162	-121.2677918	37.8271957	6339930.076	2124576.478	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,014	Geo 7X	Uncorrected	10/2/2017	01:16:38pm	C Gray	SHAD-41b.ssf
6163	-121.2677998	37.82718683	6339927.138	2124573.273	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,026	Geo 7X	Uncorrected	10/2/2017	01:16:40pm	C Gray	SHAD-41b.ssf
6164	-121.267811	37.82717681	6339923.88	2124569.653	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,784	Geo 7X	Uncorrected	10/2/2017	01:16:42pm	C Gray	SHAD-41b.ssf
6165	-121.2678219	37.82716846	6339920.698	2124566.639	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,347	Geo 7X	Uncorrected	10/2/2017	01:16:44pm	C Gray	SHAD-41b.ssf
6166	-121.2678349	37.82715747	6339916.93	2124562.668	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,176	Geo 7X	Uncorrected	10/2/2017	01:16:46pm	C Gray	SHAD-41b.ssf
6167	-121.2678453	37.82714978	6339913.884	2124559.892	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,340	Geo 7X	Uncorrected	10/2/2017	01:16:48pm	C Gray	SHAD-41b.ssf
6168	-121.267856	37.82714051	6339910.769	2124556.543	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,105	Geo 7X	Uncorrected	10/2/2017	01:16:50pm	C Gray	SHAD-41b.ssf
6169	-121.2678651	37.82713113	6339908.117	2124553.148	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,767	Geo 7X	Uncorrected	10/2/2017	01:16:52pm	C Gray	SHAD-41b.ssf
6170	-121.2678696	37.82712534	6339906.812	2124551.051	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,466	Geo 7X	Uncorrected	10/2/2017	01:16:54pm	C Gray	SHAD-41b.ssf
6171	-121.2678724	37.82712086	6339905.993	2124549.426	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,861	Geo 7X	Uncorrected	10/2/2017	01:16:56pm	C Gray	SHAD-41b.ssf
6172	-121.2678768	37.82711779	6339904.699	2124548.316	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,293	Geo 7X	Uncorrected	10/2/2017	01:16:58pm	C Gray	SHAD-41b.ssf
6173	-121.2678762	37.82711543	6339904.867	2124547.457	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,041	Geo 7X	Uncorrected	10/2/2017	01:17:00pm	C Gray	SHAD-41b.ssf
6174	-121.2678776	37.82711167	6339904.94	2124547.918	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,837	Geo 7X	Uncorrected	10/2/2017	01:17:02pm	C Gray	SHAD-41b.ssf
6175	-121.2678756	37.82711615	6339905.047	2124547.178	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,192	Geo 7X	Uncorrected	10/2/2017	01:17:04pm	C Gray	SHAD-41b.ssf
6176	-121.2678755	37.82711174	6339905.066	2124548.172	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,945	Geo 7X	Uncorrected	10/2/2017	01:17:06pm	C Gray	SHAD-41b.ssf
6177	-121.2678699	37.82712336	6339906.7	2124550.331	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,551	Geo 7X	Uncorrected	10/2/2017	01:17:08pm	C Gray	SHAD-41b.ssf
6178	-121.2678627	37.82712791	6339908.799	2124551.97	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,960	Geo 7X	Uncorrected	10/2/2017	01:17:10pm	C Gray	SHAD-41b.ssf
6179	-121.2678559	37.82713539	6339910.797	2124554.677	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,247	Geo 7X	Uncorrected	10/2/2017	01:17:12pm	C Gray	SHAD-41b.ssf
6180	-121.2678467	37.82714275	6339913.463	2124557.335	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,286	Geo 7X	Uncorrected	10/2/2017	01:17:14pm	C Gray	SHAD-41b.ssf
6181	-121.2678372	37.82715066	6339916.247	2124560.19	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,306	Geo 7X	Uncorrected	10/2/2017	01:17:16pm	C Gray	SHAD-41b.ssf
6182	-121.2678301	37.82715816	6339918.309	2124562.904	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,152	Geo 7X	Uncorrected	10/2/2017	01:17:18pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6183	-121.2678216	37.82716565	6339920.8	2124565.614	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,317	Geo 7X	Uncorrected	10/2/2017	01:17:20pm	C Gray	SHAD-41b.ssf
6184	-121.2678129	37.82717237	6339923.34	2124568.039	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,670	Geo 7X	Uncorrected	10/2/2017	01:17:22pm	C Gray	SHAD-41b.ssf
6185	-121.2678049	37.8271806	6339925.652	2124571.016	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,959	Geo 7X	Uncorrected	10/2/2017	01:17:24pm	C Gray	SHAD-41b.ssf
6186	-121.2677957	37.82718958	6339928.33	2124574.264	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,230	Geo 7X	Uncorrected	10/2/2017	01:17:26pm	C Gray	SHAD-41b.ssf
6187	-121.267788	37.82719696	6339930.59	2124576.935	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,525	Geo 7X	Uncorrected	10/2/2017	01:17:28pm	C Gray	SHAD-41b.ssf
6188	-121.2677815	37.82720329	6339932.489	2124579.224	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,023	Geo 7X	Uncorrected	10/2/2017	01:17:30pm	C Gray	SHAD-41b.ssf
6189	-121.2677711	37.82721139	6339935.509	2124582.147	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,734	Geo 7X	Uncorrected	10/2/2017	01:17:32pm	C Gray	SHAD-41b.ssf
6190	-121.2677642	37.82721835	6339937.533	2124584.665	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,143	Geo 7X	Uncorrected	10/2/2017	01:17:34pm	C Gray	SHAD-41b.ssf
6191	-121.267754	37.82722615	6339940.495	2124587.481	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,549	Geo 7X	Uncorrected	10/2/2017	01:17:36pm	C Gray	SHAD-41b.ssf
6192	-121.2677462	37.82723338	6339942.766	2124590.096	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,975	Geo 7X	Uncorrected	10/2/2017	01:17:38pm	C Gray	SHAD-41b.ssf
6193	-121.2677374	37.82724216	6339945.326	2124593.274	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,484	Geo 7X	Uncorrected	10/2/2017	01:17:40pm	C Gray	SHAD-41b.ssf
6194	-121.2677281	37.82725034	6339947.877	2124596.228	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,389	Geo 7X	Uncorrected	10/2/2017	01:17:42pm	C Gray	SHAD-41b.ssf
6195	-121.2677202	37.82725837	6339950.364	2124599.134	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,775	Geo 7X	Uncorrected	10/2/2017	01:17:44pm	C Gray	SHAD-41b.ssf
6196	-121.2677118	37.82726653	6339952.79	2124602.084	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,897	Geo 7X	Uncorrected	10/2/2017	01:17:46pm	C Gray	SHAD-41b.ssf
6197	-121.2677012	37.82727361	6339955.892	2124604.639	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,775	Geo 7X	Uncorrected	10/2/2017	01:17:48pm	C Gray	SHAD-41b.ssf
6198	-121.267691	37.8272826	6339958.861	2124607.885	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,730	Geo 7X	Uncorrected	10/2/2017	01:17:50pm	C Gray	SHAD-41b.ssf
6199	-121.2676812	37.82729318	6339961.732	2124611.715	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,693	Geo 7X	Uncorrected	10/2/2017	01:17:52pm	C Gray	SHAD-41b.ssf
6200	-121.267672	37.82730046	6339964.42	2124615.854	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,544	Geo 7X	Uncorrected	10/2/2017	01:17:54pm	C Gray	SHAD-41b.ssf
6201	-121.2676632	37.82731254	6339966.967	2124618.724	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,712	Geo 7X	Uncorrected	10/2/2017	01:17:56pm	C Gray	SHAD-41b.ssf
6202	-121.2676539	37.82732145	6339969.673	2124621.946	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,107	Geo 7X	Uncorrected	10/2/2017	01:17:58pm	C Gray	SHAD-41b.ssf
6203	-121.267645	37.82732926	6339972.284	2124624.767	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,267	Geo 7X	Uncorrected	10/2/2017	01:18:00pm	C Gray	SHAD-41b.ssf
6204	-121.2676323	37.82733929	6339975.979	2124628.389	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,433	Geo 7X	Uncorrected	10/2/2017	01:18:02pm	C Gray	SHAD-41b.ssf
6205	-121.2676207	37.82734728	6339979.365	2124631.272	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	95,628	Geo 7X	Uncorrected	10/2/2017	01:18:04pm	C Gray	SHAD-41b.ssf
6206	-121.2676077	37.82735799	6339983.138	2124635.14	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,888	Geo 7X	Uncorrected	10/2/2017	01:18:06pm	C Gray	SHAD-41b.ssf
6207	-121.267598	37.82736812	6339985.981	2124638.806	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,860	Geo 7X	Uncorrected	10/2/2017	01:18:08pm	C Gray	SHAD-41b.ssf
6208	-121.2675882	37.82737667	6339988.834	2124641.894	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,571	Geo 7X	Uncorrected	10/2/2017	01:18:10pm	C Gray	SHAD-41b.ssf
6209	-121.2675811	37.82738294	6339990.904	2124644.162	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,359	Geo 7X	Uncorrected	10/2/2017	01:18:12pm	C Gray	SHAD-41b.ssf
6210	-121.2675764	37.82738765	6339992.282	2124645.866	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,891	Geo 7X	Uncorrected	10/2/2017	01:18:14pm	C Gray	SHAD-41b.ssf
6211	-121.2675655	37.82738707	6339995.423	2124645.629	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,421	Geo 7X	Uncorrected	10/2/2017	01:18:16pm	C Gray	SHAD-41b.ssf
6212	-121.2675609	37.82737785	6339996.42	2124642.264	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,737	Geo 7X	Uncorrected	10/2/2017	01:18:18pm	C Gray	SHAD-41b.ssf
6213	-121.2675607	37.82737443	6339996.765	2124641.016	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,515	Geo 7X	Uncorrected	10/2/2017	01:18:20pm	C Gray	SHAD-41b.ssf
6214	-121.2675621	37.82737277	6339996.345	2124640.412	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,716	Geo 7X	Uncorrected	10/2/2017	01:18:22pm	C Gray	SHAD-41b.ssf
6215	-121.2675651	37.82736716	6339995.464	2124638.378	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,142	Geo 7X	Uncorrected	10/2/2017	01:18:24pm	C Gray	SHAD-41b.ssf
6216	-121.2675742	37.82736123	6339993.553	2124636.236	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,155	Geo 7X	Uncorrected	10/2/2017	01:18:26pm	C Gray	SHAD-41b.ssf
6217	-121.2675824	37.82735382	6339990.439	2124633.56	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,588	Geo 7X	Uncorrected	10/2/2017	01:18:28pm	C Gray	SHAD-41b.ssf
6218	-121.2675892	37.82734706	6339988.457	2124631.115	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,511	Geo 7X	Uncorrected	10/2/2017	01:18:30pm	C Gray	SHAD-41b.ssf
6219	-121.267595	37.827341	6339986.754	2124628.922	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,543	Geo 7X	Uncorrected	10/2/2017	01:18:32pm	C Gray	SHAD-41b.ssf
6220	-121.2676037	37.82733217	6339984.203	2124625.728	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,290	Geo 7X	Uncorrected	10/2/2017	01:18:34pm	C Gray	SHAD-41b.ssf
6221	-121.2676097	37.82732517	6339982.468	2124623.195	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,133	Geo 7X	Uncorrected	10/2/2017	01:18:36pm	C Gray	SHAD-41b.ssf
6222	-121.2676169	37.82732007	6339980.358	2124621.355	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,812	Geo 7X	Uncorrected	10/2/2017	01:18:38pm	C Gray	SHAD-41b.ssf
6223	-121.2676279	37.82731082	6339977.166	2124618.013	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,208	Geo 7X	Uncorrected	10/2/2017	01:18:40pm	C Gray	SHAD-41b.ssf
6224	-121.2676366	37.82730334	6339974.638	2124615.31	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,767	Geo 7X	Uncorrected	10/2/2017	01:18:42pm	C Gray	SHAD-41b.ssf
6225	-121.2676461	37.82729735	6339971.872	2124613.151	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,457	Geo 7X	Uncorrected	10/2/2017	01:18:44pm	C Gray	SHAD-41b.ssf
6226	-121.2676547	37.82729097	6339969.364	2124610.849	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,595	Geo 7X	Uncorrected	10/2/2017	01:18:46pm	C Gray	SHAD-41b.ssf
6227	-121.2676626	37.8272837	6339967.051	2124608.217	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,998	Geo 7X	Uncorrected	10/2/2017	01:18:48pm	C Gray	SHAD-41b.ssf
6228	-121.2676707	37.82727543	6339964.706	2124605.23	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,454	Geo 7X	Uncorrected	10/2/2017	01:18:50pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6229	-121.2676794	37.82726743	6339962.173	2124602.335	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,810	Geo 7X	Uncorrected	10/2/2017	01:18:52pm	C Gray	SHAD-41b.ssf
6230	-121.2676909	37.82725853	6339958.882	2124599.122	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,186	Geo 7X	Uncorrected	10/2/2017	01:18:54pm	C Gray	SHAD-41b.ssf
6231	-121.2676999	37.82724963	6339956.182	2124595.903	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,591	Geo 7X	Uncorrected	10/2/2017	01:18:56pm	C Gray	SHAD-41b.ssf
6232	-121.2677104	37.82724067	6339953.126	2124592.665	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,049	Geo 7X	Uncorrected	10/2/2017	01:18:58pm	C Gray	SHAD-41b.ssf
6233	-121.2677206	37.82723431	6339950.17	2124590.374	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,524	Geo 7X	Uncorrected	10/2/2017	01:19:00pm	C Gray	SHAD-41b.ssf
6234	-121.2677302	37.82722637	6339947.369	2124587.505	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,310	Geo 7X	Uncorrected	10/2/2017	01:19:02pm	C Gray	SHAD-41b.ssf
6235	-121.2677381	37.8272181	6339945.074	2124584.512	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,129	Geo 7X	Uncorrected	10/2/2017	01:19:04pm	C Gray	SHAD-41b.ssf
6236	-121.2677469	37.82721069	6339942.489	2124581.837	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,376	Geo 7X	Uncorrected	10/2/2017	01:19:06pm	C Gray	SHAD-41b.ssf
6237	-121.2677564	37.82720217	6339939.727	2124578.757	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,789	Geo 7X	Uncorrected	10/2/2017	01:19:08pm	C Gray	SHAD-41b.ssf
6238	-121.2677678	37.82719331	6339936.395	2124575.558	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,330	Geo 7X	Uncorrected	10/2/2017	01:19:10pm	C Gray	SHAD-41b.ssf
6239	-121.2677761	37.82718563	6339933.989	2124572.779	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,202	Geo 7X	Uncorrected	10/2/2017	01:19:12pm	C Gray	SHAD-41b.ssf
6240	-121.2677871	37.82717525	6339930.774	2124569.026	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,818	Geo 7X	Uncorrected	10/2/2017	01:19:14pm	C Gray	SHAD-41b.ssf
6241	-121.2677994	37.82716592	6339927.212	2124565.657	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,761	Geo 7X	Uncorrected	10/2/2017	01:19:16pm	C Gray	SHAD-41b.ssf
6242	-121.2678072	37.82715833	6339924.931	2124562.912	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,930	Geo 7X	Uncorrected	10/2/2017	01:19:18pm	C Gray	SHAD-41b.ssf
6243	-121.2678205	37.82714785	6339921.045	2124559.13	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,786	Geo 7X	Uncorrected	10/2/2017	01:19:20pm	C Gray	SHAD-41b.ssf
6244	-121.2678331	37.82713935	6339918.277	2124556.059	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,308	Geo 7X	Uncorrected	10/2/2017	01:19:22pm	C Gray	SHAD-41b.ssf
6245	-121.2678381	37.82713099	6339915.932	2124553.031	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,623	Geo 7X	Uncorrected	10/2/2017	01:19:24pm	C Gray	SHAD-41b.ssf
6246	-121.267852	37.82712123	6339911.879	2124549.511	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,551	Geo 7X	Uncorrected	10/2/2017	01:19:26pm	C Gray	SHAD-41b.ssf
6247	-121.2678664	37.82711127	6339908.389	2124546.434	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,525	Geo 7X	Uncorrected	10/2/2017	01:19:28pm	C Gray	SHAD-41b.ssf
6248	-121.2678657	37.82711087	6339907.894	2124544.752	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,773	Geo 7X	Uncorrected	10/2/2017	01:19:30pm	C Gray	SHAD-41b.ssf
6249	-121.2678663	37.82711037	6339907.708	2124543.176	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,973	Geo 7X	Uncorrected	10/2/2017	01:19:32pm	C Gray	SHAD-41b.ssf
6250	-121.2678642	37.827110057	6339908.295	2124542.019	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,612	Geo 7X	Uncorrected	10/2/2017	01:19:34pm	C Gray	SHAD-41b.ssf
6251	-121.2678652	37.82710246	6339908.001	2124542.709	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,506	Geo 7X	Uncorrected	10/2/2017	01:19:36pm	C Gray	SHAD-41b.ssf
6252	-121.2678664	37.82710664	6339907.687	2124544.232	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,441	Geo 7X	Uncorrected	10/2/2017	01:19:38pm	C Gray	SHAD-41b.ssf
6253	-121.2678621	37.82711152	6339909.258	2124545.996	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,234	Geo 7X	Uncorrected	10/2/2017	01:19:40pm	C Gray	SHAD-41b.ssf
6254	-121.267853	37.82711825	6339911.784	2124548.428	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,750	Geo 7X	Uncorrected	10/2/2017	01:19:42pm	C Gray	SHAD-41b.ssf
6255	-121.2678455	37.82712526	6339913.771	2124550.964	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,145	Geo 7X	Uncorrected	10/2/2017	01:19:44pm	C Gray	SHAD-41b.ssf
6256	-121.2678382	37.827134	6339915.912	2124554.129	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,988	Geo 7X	Uncorrected	10/2/2017	01:19:46pm	C Gray	SHAD-41b.ssf
6257	-121.267831	37.82713973	6339917.99	2124556.199	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,574	Geo 7X	Uncorrected	10/2/2017	01:19:48pm	C Gray	SHAD-41b.ssf
6258	-121.2678225	37.82714314	6339920.472	2124557.421	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,995	Geo 7X	Uncorrected	10/2/2017	01:19:50pm	C Gray	SHAD-41b.ssf
6259	-121.2678116	37.82715087	6339923.638	2124560.209	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,650	Geo 7X	Uncorrected	10/2/2017	01:19:52pm	C Gray	SHAD-41b.ssf
6260	-121.2678023	37.82715663	6339926.349	2124562.282	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,959	Geo 7X	Uncorrected	10/2/2017	01:19:54pm	C Gray	SHAD-41b.ssf
6261	-121.2677905	37.82716592	6339929.784	2124565.638	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,972	Geo 7X	Uncorrected	10/2/2017	01:19:56pm	C Gray	SHAD-41b.ssf
6262	-121.2677834	37.8271746	6339931.907	2124568.779	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,414	Geo 7X	Uncorrected	10/2/2017	01:19:58pm	C Gray	SHAD-41b.ssf
6263	-121.2677732	37.82718436	6339934.774	2124572.313	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,117	Geo 7X	Uncorrected	10/2/2017	01:20:00pm	C Gray	SHAD-41b.ssf
6264	-121.2677663	37.82719331	6339937.785	2124575.546	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,811	Geo 7X	Uncorrected	10/2/2017	01:20:02pm	C Gray	SHAD-41b.ssf
6265	-121.2677552	37.82720045	6339940.082	2124578.127	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,743	Geo 7X	Uncorrected	10/2/2017	01:20:04pm	C Gray	SHAD-41b.ssf
6266	-121.2677463	37.82721039	6339942.68	2124581.726	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,613	Geo 7X	Uncorrected	10/2/2017	01:20:06pm	C Gray	SHAD-41b.ssf
6267	-121.2677378	37.82721808	6339945.16	2124584.505	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,302	Geo 7X	Uncorrected	10/2/2017	01:20:08pm	C Gray	SHAD-41b.ssf
6268	-121.2677327	37.82722618	6339948.08	2124587.432	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,715	Geo 7X	Uncorrected	10/2/2017	01:20:10pm	C Gray	SHAD-41b.ssf
6269	-121.2677192	37.82723598	6339950.577	2124590.978	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,886	Geo 7X	Uncorrected	10/2/2017	01:20:12pm	C Gray	SHAD-41b.ssf
6270	-121.267709	37.82724442	6339953.555	2124594.026	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,289	Geo 7X	Uncorrected	10/2/2017	01:20:14pm	C Gray	SHAD-41b.ssf
6271	-121.2676981	37.82725458	6339959.523	2124597.699	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,126	Geo 7X	Uncorrected	10/2/2017	01:20:16pm	C Gray	SHAD-41b.ssf
6272	-121.2676884	37.82726193	6339959.533	2124600.356	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,231	Geo 7X	Uncorrected	10/2/2017	01:20:18pm	C Gray	SHAD-41b.ssf
6273	-121.2676794	37.82726994	6339962.177	2124603.25	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,710	Geo 7X	Uncorrected	10/2/2017	01:20:20pm	C Gray	SHAD-41b.ssf
6274	-121.2676735	37.82727815	6339963.885	2124606.225	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,571	Geo 7X	Uncorrected	10/2/2017	01:20:22pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6275	-121.2676656	37.82728526	6339966.211	2124608.796	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,428	Geo 7X	Uncorrected	10/2/2017	01:20:24pm	C Gray	SHAD-41b.ssf
6276	-121.2676577	37.82729172	6339968.505	2124611.129	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,798	Geo 7X	Uncorrected	10/2/2017	01:20:26pm	C Gray	SHAD-41b.ssf
6277	-121.2676471	37.82730006	6339971.412	2124614.14	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,069	Geo 7X	Uncorrected	10/2/2017	01:20:28pm	C Gray	SHAD-41b.ssf
6278	-121.2676376	37.82730874	6339974.343	2124617.28	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,150	Geo 7X	Uncorrected	10/2/2017	01:20:30pm	C Gray	SHAD-41b.ssf
6279	-121.2676264	37.82731652	6339977.602	2124620.085	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,567	Geo 7X	Uncorrected	10/2/2017	01:20:32pm	C Gray	SHAD-41b.ssf
6280	-121.2676205	37.82732242	6339979.35	2124622.218	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68,055	Geo 7X	Uncorrected	10/2/2017	01:20:34pm	C Gray	SHAD-41b.ssf
6281	-121.2676093	37.82733362	6339982.618	2124626.27	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,354	Geo 7X	Uncorrected	10/2/2017	01:20:36pm	C Gray	SHAD-41b.ssf
6282	-121.2675999	37.82734154	6339985.348	2124629.131	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,794	Geo 7X	Uncorrected	10/2/2017	01:20:38pm	C Gray	SHAD-41b.ssf
6283	-121.2675873	37.82735179	6339989.006	2124632.833	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,642	Geo 7X	Uncorrected	10/2/2017	01:20:40pm	C Gray	SHAD-41b.ssf
6284	-121.2675788	37.827356153	6339991.487	2124636.362	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,545	Geo 7X	Uncorrected	10/2/2017	01:20:42pm	C Gray	SHAD-41b.ssf
6285	-121.2675687	37.8273689	6339994.422	2124639.021	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,832	Geo 7X	Uncorrected	10/2/2017	01:20:44pm	C Gray	SHAD-41b.ssf
6286	-121.2675584	37.82737466	6339996.513	2124641.101	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,674	Geo 7X	Uncorrected	10/2/2017	01:20:46pm	C Gray	SHAD-41b.ssf
6287	-121.2675544	37.82737933	6339998.587	2124642.785	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,303	Geo 7X	Uncorrected	10/2/2017	01:20:48pm	C Gray	SHAD-41b.ssf
6288	-121.2675431	37.82737386	6340001.855	2124640.765	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,086	Geo 7X	Uncorrected	10/2/2017	01:20:50pm	C Gray	SHAD-41b.ssf
6289	-121.2675419	37.82736937	6340002.187	2124639.128	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,823	Geo 7X	Uncorrected	10/2/2017	01:20:52pm	C Gray	SHAD-41b.ssf
6290	-121.2675455	37.82736318	6340001.118	2124636.881	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,308	Geo 7X	Uncorrected	10/2/2017	01:20:54pm	C Gray	SHAD-41b.ssf
6291	-121.2675503	37.82735865	6339999.719	2124635.246	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,612	Geo 7X	Uncorrected	10/2/2017	01:20:56pm	C Gray	SHAD-41b.ssf
6292	-121.2675596	37.82735191	6339997.008	2124632.812	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,755	Geo 7X	Uncorrected	10/2/2017	01:20:58pm	C Gray	SHAD-41b.ssf
6293	-121.2675688	37.82734706	6339994.353	2124631.069	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,635	Geo 7X	Uncorrected	10/2/2017	01:21:00pm	C Gray	SHAD-41b.ssf
6294	-121.2675763	37.8273404	6339992.154	2124628.659	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,827	Geo 7X	Uncorrected	10/2/2017	01:21:02pm	C Gray	SHAD-41b.ssf
6295	-121.2675935	37.82733335	6339989.771	2124626.167	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,535	Geo 7X	Uncorrected	10/2/2017	01:21:04pm	C Gray	SHAD-41b.ssf
6296	-121.2675586	37.82732453	6339987.097	2124622.923	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,077	Geo 7X	Uncorrected	10/2/2017	01:21:06pm	C Gray	SHAD-41b.ssf
6297	-121.2676008	37.82731839	6339985.019	2124620.706	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,652	Geo 7X	Uncorrected	10/2/2017	01:21:08pm	C Gray	SHAD-41b.ssf
6298	-121.2676101	37.82730392	6339982.32	2124618.229	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,089	Geo 7X	Uncorrected	10/2/2017	01:21:10pm	C Gray	SHAD-41b.ssf
6299	-121.2676175	37.82730392	6339980.15	2124615.476	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,590	Geo 7X	Uncorrected	10/2/2017	01:21:12pm	C Gray	SHAD-41b.ssf
6300	-121.2676258	37.82729744	6339977.744	2124613.125	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,587	Geo 7X	Uncorrected	10/2/2017	01:21:14pm	C Gray	SHAD-41b.ssf
6301	-121.2676362	37.8272916	6339974.697	2124611.034	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,750	Geo 7X	Uncorrected	10/2/2017	01:21:16pm	C Gray	SHAD-41b.ssf
6302	-121.2676415	37.82728583	6339973.148	2124608.947	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,534	Geo 7X	Uncorrected	10/2/2017	01:21:18pm	C Gray	SHAD-41b.ssf
6303	-121.2676521	37.82727918	6339970.093	2124606.549	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,709	Geo 7X	Uncorrected	10/2/2017	01:21:20pm	C Gray	SHAD-41b.ssf
6304	-121.2676615	37.82727158	6339967.349	2124603.805	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,024	Geo 7X	Uncorrected	10/2/2017	01:21:22pm	C Gray	SHAD-41b.ssf
6305	-121.2676696	37.82726301	6339964.983	2124600.703	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,704	Geo 7X	Uncorrected	10/2/2017	01:21:24pm	C Gray	SHAD-41b.ssf
6306	-121.2676784	37.82725158	6339962.404	2124596.563	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,845	Geo 7X	Uncorrected	10/2/2017	01:21:26pm	C Gray	SHAD-41b.ssf
6307	-121.2676889	37.82724512	6339959.354	2124594.234	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,254	Geo 7X	Uncorrected	10/2/2017	01:21:28pm	C Gray	SHAD-41b.ssf
6308	-121.2676993	37.82723641	6339956.319	2124591.087	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,043	Geo 7X	Uncorrected	10/2/2017	01:21:30pm	C Gray	SHAD-41b.ssf
6309	-121.2677089	37.82722895	6339953.526	2124588.396	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,696	Geo 7X	Uncorrected	10/2/2017	01:21:32pm	C Gray	SHAD-41b.ssf
6310	-121.2677187	37.82722138	6339950.663	2124585.66	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,881	Geo 7X	Uncorrected	10/2/2017	01:21:34pm	C Gray	SHAD-41b.ssf
6311	-121.2677286	37.82721248	6339947.799	2124582.444	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,466	Geo 7X	Uncorrected	10/2/2017	01:21:36pm	C Gray	SHAD-41b.ssf
6312	-121.2677393	37.82720268	6339944.657	2124578.901	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,393	Geo 7X	Uncorrected	10/2/2017	01:21:38pm	C Gray	SHAD-41b.ssf
6313	-121.2677508	37.82719408	6339941.308	2124575.797	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,671	Geo 7X	Uncorrected	10/2/2017	01:21:40pm	C Gray	SHAD-41b.ssf
6314	-121.2677586	37.82718687	6339939.039	2124573.19	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,445	Geo 7X	Uncorrected	10/2/2017	01:21:42pm	C Gray	SHAD-41b.ssf
6315	-121.2677676	37.82717737	6339936.426	2124569.751	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,722	Geo 7X	Uncorrected	10/2/2017	01:21:44pm	C Gray	SHAD-41b.ssf
6316	-121.2677773	37.82716869	6339933.583	2124566.614	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,265	Geo 7X	Uncorrected	10/2/2017	01:21:46pm	C Gray	SHAD-41b.ssf
6317	-121.2677857	37.8271615	6339931.157	2124564.016	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,497	Geo 7X	Uncorrected	10/2/2017	01:21:48pm	C Gray	SHAD-41b.ssf
6318	-121.2677971	37.82715081	6339927.832	2124560.15	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,773	Geo 7X	Uncorrected	10/2/2017	01:21:50pm	C Gray	SHAD-41b.ssf
6319	-121.2678066	37.82714129	6339925.058	2124557.037	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,683	Geo 7X	Uncorrected	10/2/2017	01:21:52pm	C Gray	SHAD-41b.ssf
6320	-121.2678166	37.82713366	6339922.142	2124553.954	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,482	Geo 7X	Uncorrected	10/2/2017	01:21:54pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6321	-121.26786269	37.82712562	6339919.141	2124551.05	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,382	Geo 7X	Uncorrected	10/2/2017	01:21:56pm	C Gray	SHAD-41b.ssf
6322	-121.2678362	37.82711799	6339916.418	2124548.293	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,261	Geo 7X	Uncorrected	10/2/2017	01:21:58pm	C Gray	SHAD-41b.ssf
6323	-121.2678495	37.82710928	6339912.557	2124545.153	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,234	Geo 7X	Uncorrected	10/2/2017	01:22:00pm	C Gray	SHAD-41b.ssf
6324	-121.2678596	37.8271015	6339909.625	2124542.346	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,403	Geo 7X	Uncorrected	10/2/2017	01:22:02pm	C Gray	SHAD-41b.ssf
6325	-121.2678625	37.82709624	6339908.772	2124540.436	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,479	Geo 7X	Uncorrected	10/2/2017	01:22:04pm	C Gray	SHAD-41b.ssf
6326	-121.2678611	37.82709379	6339909.757	2124539.542	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,981	Geo 7X	Uncorrected	10/2/2017	01:22:06pm	C Gray	SHAD-41b.ssf
6327	-121.2678594	37.82709404	6339909.752	2124539.629	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,030	Geo 7X	Uncorrected	10/2/2017	01:22:08pm	C Gray	SHAD-41b.ssf
6328	-121.2678591	37.82709415	6339909.961	2124539.666	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,371	Geo 7X	Uncorrected	10/2/2017	01:22:10pm	C Gray	SHAD-41b.ssf
6329	-121.2678618	37.82709649	6339908.985	2124540.528	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,290	Geo 7X	Uncorrected	10/2/2017	01:22:12pm	C Gray	SHAD-41b.ssf
6330	-121.2678574	37.82709935	6339910.245	2124541.557	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,290	Geo 7X	Uncorrected	10/2/2017	01:22:14pm	C Gray	SHAD-41b.ssf
6331	-121.2678512	37.82710678	6339912.077	2124544.247	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,167	Geo 7X	Uncorrected	10/2/2017	01:22:16pm	C Gray	SHAD-41b.ssf
6332	-121.2678484	37.82711414	6339914.756	2124546.904	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,693	Geo 7X	Uncorrected	10/2/2017	01:22:18pm	C Gray	SHAD-41b.ssf
6333	-121.2678337	37.82712297	6339917.178	2124550.101	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,646	Geo 7X	Uncorrected	10/2/2017	01:22:20pm	C Gray	SHAD-41b.ssf
6334	-121.2678233	37.82713358	6339920.19	2124553.941	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,640	Geo 7X	Uncorrected	10/2/2017	01:22:22pm	C Gray	SHAD-41b.ssf
6335	-121.2678169	37.82714115	6339922.078	2124556.68	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,683	Geo 7X	Uncorrected	10/2/2017	01:22:24pm	C Gray	SHAD-41b.ssf
6336	-121.2678063	37.82715033	6339925.167	2124559.997	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,017	Geo 7X	Uncorrected	10/2/2017	01:22:26pm	C Gray	SHAD-41b.ssf
6337	-121.2677997	37.82715912	6339927.08	2124563.183	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,274	Geo 7X	Uncorrected	10/2/2017	01:22:28pm	C Gray	SHAD-41b.ssf
6338	-121.2677915	37.82716845	6339929.487	2124566.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,634	Geo 7X	Uncorrected	10/2/2017	01:22:30pm	C Gray	SHAD-41b.ssf
6339	-121.2677798	37.82717682	6339932.89	2124569.581	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,442	Geo 7X	Uncorrected	10/2/2017	01:22:32pm	C Gray	SHAD-41b.ssf
6340	-121.2677711	37.82718273	6339935.43	2124571.711	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,888	Geo 7X	Uncorrected	10/2/2017	01:22:34pm	C Gray	SHAD-41b.ssf
6341	-121.2677626	37.82719009	6339937.889	2124574.372	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,298	Geo 7X	Uncorrected	10/2/2017	01:22:36pm	C Gray	SHAD-41b.ssf
6342	-121.267755	37.82719623	6339940.121	2124576.591	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,315	Geo 7X	Uncorrected	10/2/2017	01:22:38pm	C Gray	SHAD-41b.ssf
6343	-121.2677472	37.82720252	6339942.375	2124578.861	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,792	Geo 7X	Uncorrected	10/2/2017	01:22:40pm	C Gray	SHAD-41b.ssf
6344	-121.2677394	37.82720904	6339944.654	2124581.219	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,273	Geo 7X	Uncorrected	10/2/2017	01:22:42pm	C Gray	SHAD-41b.ssf
6345	-121.2677295	37.82721723	6339947.552	2124584.176	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,666	Geo 7X	Uncorrected	10/2/2017	01:22:44pm	C Gray	SHAD-41b.ssf
6346	-121.2677185	37.82722654	6339950.748	2124587.539	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,451	Geo 7X	Uncorrected	10/2/2017	01:22:46pm	C Gray	SHAD-41b.ssf
6347	-121.2677069	37.82723601	6339954.124	2124590.962	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,252	Geo 7X	Uncorrected	10/2/2017	01:22:48pm	C Gray	SHAD-41b.ssf
6348	-121.2676987	37.82724211	6339956.517	2124593.164	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,390	Geo 7X	Uncorrected	10/2/2017	01:22:50pm	C Gray	SHAD-41b.ssf
6349	-121.2676914	37.82724972	6339958.631	2124595.916	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,929	Geo 7X	Uncorrected	10/2/2017	01:22:52pm	C Gray	SHAD-41b.ssf
6350	-121.2676803	37.827263	6339961.896	2124600.724	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,803	Geo 7X	Uncorrected	10/2/2017	01:22:54pm	C Gray	SHAD-41b.ssf
6351	-121.2676709	37.8272715	6339964.62	2124603.798	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,810	Geo 7X	Uncorrected	10/2/2017	01:22:56pm	C Gray	SHAD-41b.ssf
6352	-121.2676599	37.82728156	6339967.83	2124607.433	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,238	Geo 7X	Uncorrected	10/2/2017	01:22:58pm	C Gray	SHAD-41b.ssf
6353	-121.2676477	37.82728402	6339971.361	2124608.303	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,268	Geo 7X	Uncorrected	10/2/2017	01:23:00pm	C Gray	SHAD-41b.ssf
6354	-121.267636	37.8272874	6339974.765	2124609.504	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,895	Geo 7X	Uncorrected	10/2/2017	01:23:02pm	C Gray	SHAD-41b.ssf
6355	-121.2676261	37.82729389	6339977.621	2124611.844	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,999	Geo 7X	Uncorrected	10/2/2017	01:23:04pm	C Gray	SHAD-41b.ssf
6356	-121.2676156	37.82730311	6339980.69	2124615.175	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,508	Geo 7X	Uncorrected	10/2/2017	01:23:06pm	C Gray	SHAD-41b.ssf
6357	-121.2676045	37.82731231	6339983.933	2124618.499	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,229	Geo 7X	Uncorrected	10/2/2017	01:23:08pm	C Gray	SHAD-41b.ssf
6358	-121.2675964	37.82732087	6339986.3	2124621.598	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,837	Geo 7X	Uncorrected	10/2/2017	01:23:10pm	C Gray	SHAD-41b.ssf
6359	-121.2675863	37.82732961	6339989.23	2124624.756	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,845	Geo 7X	Uncorrected	10/2/2017	01:23:12pm	C Gray	SHAD-41b.ssf
6360	-121.2675726	37.8273396	6339993.217	2124628.36	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73,806	Geo 7X	Uncorrected	10/2/2017	01:23:14pm	C Gray	SHAD-41b.ssf
6361	-121.2675647	37.82734786	6339995.535	2124631.351	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,131	Geo 7X	Uncorrected	10/2/2017	01:23:16pm	C Gray	SHAD-41b.ssf
6362	-121.2675562	37.82735728	6339998.019	2124634.759	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,950	Geo 7X	Uncorrected	10/2/2017	01:23:18pm	C Gray	SHAD-41b.ssf
6363	-121.2675457	37.82736679	6340001.075	2124638.196	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,105	Geo 7X	Uncorrected	10/2/2017	01:23:20pm	C Gray	SHAD-41b.ssf
6364	-121.2675359	37.82737154	6340003.904	2124639.904	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,083	Geo 7X	Uncorrected	10/2/2017	01:23:22pm	C Gray	SHAD-41b.ssf
6365	-121.2675352	37.82736956	6340004.121	2124639.18	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,696	Geo 7X	Uncorrected	10/2/2017	01:23:24pm	C Gray	SHAD-41b.ssf
6366	-121.2675281	37.82736782	6340006.156	2124638.53	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,914	Geo 7X	Uncorrected	10/2/2017	01:23:26pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6367	-121.2675266	37.82736526	6340006.581	2124637.596	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,703	Geo 7X	Uncorrected	10/2/2017	01:23:28pm	C Gray	SHAD-41b.ssf
6368	-121.2675252	37.82736217	6340006.852	2124636.468	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,057	Geo 7X	Uncorrected	10/2/2017	01:23:30pm	C Gray	SHAD-41b.ssf
6369	-121.2675216	37.82736112	6340008.134	2124636.103	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,882	Geo 7X	Uncorrected	10/2/2017	01:23:32pm	C Gray	SHAD-41b.ssf
6370	-121.2675214	37.82736118	6340008.079	2124636.096	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,024	Geo 7X	Uncorrected	10/2/2017	01:23:34pm	C Gray	SHAD-41b.ssf
6371	-121.2675104	37.82732403	6340011.136	2124622.544	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,743	Geo 7X	Uncorrected	10/2/2017	01:42:59pm	C Gray	SHAD-41b.ssf
6372	-121.2675074	37.82732321	6340012.013	2124622.0	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,939	Geo 7X	Uncorrected	10/2/2017	01:43:01pm	C Gray	SHAD-41b.ssf
6373	-121.26751073	37.82732143	6340012.022	2124621.591	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,302	Geo 7X	Uncorrected	10/2/2017	01:43:03pm	C Gray	SHAD-41b.ssf
6374	-121.2675128	37.82732044	6340010.426	2124621.243	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,258	Geo 7X	Uncorrected	10/2/2017	01:43:05pm	C Gray	SHAD-41b.ssf
6375	-121.2675134	37.82732038	6340010.266	2124621.221	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,111	Geo 7X	Uncorrected	10/2/2017	01:43:07pm	C Gray	SHAD-41b.ssf
6376	-121.2675183	37.82731874	6340008.835	2124620.635	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,956	Geo 7X	Uncorrected	10/2/2017	01:43:09pm	C Gray	SHAD-41b.ssf
6377	-121.2675279	37.82731113	6340006.056	2124617.888	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,700	Geo 7X	Uncorrected	10/2/2017	01:43:12pm	C Gray	SHAD-41b.ssf
6378	-121.2675342	37.82730689	6340010.422	2124616.359	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,280	Geo 7X	Uncorrected	10/2/2017	01:43:13pm	C Gray	SHAD-41b.ssf
6379	-121.2675448	37.82729993	6340001.129	2124613.85	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,094	Geo 7X	Uncorrected	10/2/2017	01:43:15pm	C Gray	SHAD-41b.ssf
6380	-121.2675526	37.82729414	6339998.847	2124611.761	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,354	Geo 7X	Uncorrected	10/2/2017	01:43:17pm	C Gray	SHAD-41b.ssf
6381	-121.2675675	37.82729191	6339994.538	2124610.983	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,155	Geo 7X	Uncorrected	10/2/2017	01:43:19pm	C Gray	SHAD-41b.ssf
6382	-121.2675892	37.82728811	6339991.176	2124609.628	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,113	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:21pm	C Gray	SHAD-41b.ssf
6383	-121.2675897	37.82728423	6339988.125	2124608.241	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	79,636	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:23pm	C Gray	SHAD-41b.ssf
6384	-121.2675989	37.82727899	6339985.453	2124606.353	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,505	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:25pm	C Gray	SHAD-41b.ssf
6385	-121.2676059	37.82727402	6339983.405	2124604.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,739	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:27pm	C Gray	SHAD-41b.ssf
6386	-121.2676157	37.82727656	6339980.548	2124601.517	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,036	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:29pm	C Gray	SHAD-41b.ssf
6387	-121.2676285	37.82725822	6339977.424	2124598.857	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,749	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:31pm	C Gray	SHAD-41b.ssf
6388	-121.2676395	37.82725308	6339973.642	2124597.075	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,710	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:33pm	C Gray	SHAD-41b.ssf
6389	-121.2676501	37.82725317	6339970.577	2124597.075	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,480	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:35pm	C Gray	SHAD-41b.ssf
6390	-121.2676633	37.82724901	6339966.755	2124595.589	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,524	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:37pm	C Gray	SHAD-41b.ssf
6391	-121.2676738	37.82724228	6339963.315	2124593.164	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,661	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:39pm	C Gray	SHAD-41b.ssf
6392	-121.2676854	37.82723225	6339960.721	2124589.631	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,392	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:41pm	C Gray	SHAD-41b.ssf
6393	-121.2676921	37.82722674	6339958.369	2124587.549	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,207	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:43pm	C Gray	SHAD-41b.ssf
6394	-121.2677044	37.8272146	6339954.782	2124583.158	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,015	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:45pm	C Gray	SHAD-41b.ssf
6395	-121.2677157	37.82720622	6339951.494	2124580.133	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,783	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:47pm	C Gray	SHAD-41b.ssf
6396	-121.267723	37.8271993	6339949.352	2124577.633	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,634	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:49pm	C Gray	SHAD-41b.ssf
6397	-121.2677355	37.82718851	6339945.731	2124573.733	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,528	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:51pm	C Gray	SHAD-41b.ssf
6398	-121.2677458	37.82717968	6339942.712	2124570.541	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,504	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:53pm	C Gray	SHAD-41b.ssf
6399	-121.2677559	37.82717226	6339939.772	2124567.864	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,385	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:55pm	C Gray	SHAD-41b.ssf
6400	-121.2677665	37.82716327	6339936.681	2124564.617	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,889	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:57pm	C Gray	SHAD-41b.ssf
6401	-121.2677745	37.82715772	6339934.367	2124562.616	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,042	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:43:59pm	C Gray	SHAD-41b.ssf
6402	-121.2677848	37.8271473	6339931.36	2124558.846	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,809	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:01pm	C Gray	SHAD-41b.ssf
6403	-121.2677942	37.82713893	6339928.633	2124555.818	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,795	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:03pm	C Gray	SHAD-41b.ssf
6404	-121.2678043	37.8271318	6339922.78	2124550.242	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,969	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:05pm	C Gray	SHAD-41b.ssf
6405	-121.2678143	37.82712284	6339922.78	2124550.01	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,891	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:07pm	C Gray	SHAD-41b.ssf
6406	-121.2678254	37.82711344	6339919.53	2124546.61	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,439	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:09pm	C Gray	SHAD-41b.ssf
6407	-121.2678372	37.82710332	6339916.089	2124542.956	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,289	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:11pm	C Gray	SHAD-41b.ssf
6408	-121.2678453	37.82709724	6339913.739	2124540.761	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,181	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:13pm	C Gray	SHAD-41b.ssf
6409	-121.2678575	37.82708566	6339910.171	2124536.573	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,492	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:15pm	C Gray	SHAD-41b.ssf
6410	-121.2678545	37.8270842	6339911.043	2124536.034	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,203	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:17pm	C Gray	SHAD-41b.ssf
6411	-121.2678546	37.82708321	6339910.998	2124535.675	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,916	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:19pm	C Gray	SHAD-41b.ssf
6412	-121.267853	37.82707955	6339911.461	2124534.339	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,835	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:21pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6413	-121.2678516	37.82707923	6339911.97	2124534.217	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,874	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:23pm	C Gray	SHAD-41b.ssf
6414	-121.2678516	37.82708202	6339912.155	2124535.217	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,793	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:25pm	C Gray	SHAD-41b.ssf
6415	-121.2678445	37.82708558	6339913.923	2124536.543	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,797	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:27pm	C Gray	SHAD-41b.ssf
6416	-121.2678388	37.82709294	6339915.615	2124539.18	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,856	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:29pm	C Gray	SHAD-41b.ssf
6417	-121.2678308	37.82710149	6339917.948	2124542.273	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,346	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:31pm	C Gray	SHAD-41b.ssf
6418	-121.2678206	37.82710967	6339920.911	2124545.226	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,046	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:33pm	C Gray	SHAD-41b.ssf
6419	-121.2678116	37.82711762	6339923.665	2124548.102	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,673	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:35pm	C Gray	SHAD-41b.ssf
6420	-121.2678004	37.82712642	6339926.794	2124551.278	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,496	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:37pm	C Gray	SHAD-41b.ssf
6421	-121.2677899	37.82713483	6339929.845	2124554.315	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,461	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:39pm	C Gray	SHAD-41b.ssf
6422	-121.2677801	37.8271428	6339932.693	2124557.196	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,104	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:41pm	C Gray	SHAD-41b.ssf
6423	-121.2677712	37.82715147	6339935.298	2124560.33	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,449	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:43pm	C Gray	SHAD-41b.ssf
6424	-121.2677622	37.82716011	6339938.114	2124563.454	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,194	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:45pm	C Gray	SHAD-41b.ssf
6425	-121.2677522	37.82716685	6339940.83	2124565.885	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,688	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:47pm	C Gray	SHAD-41b.ssf
6426	-121.2677414	37.82717344	6339943.979	2124568.258	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,708	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:49pm	C Gray	SHAD-41b.ssf
6427	-121.2677315	37.82717825	6339946.861	2124569.987	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,539	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:51pm	C Gray	SHAD-41b.ssf
6428	-121.2677227	37.82718573	6339949.402	2124572.689	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,047	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:53pm	C Gray	SHAD-41b.ssf
6429	-121.2677147	37.82719676	6339952.694	2124576.681	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,064	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:55pm	C Gray	SHAD-41b.ssf
6430	-121.2677003	37.82720596	6339955.954	2124580.002	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,969	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:58pm	C Gray	SHAD-41b.ssf
6431	-121.2676936	37.82721017	6339957.894	2124581.519	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,398	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:44:59pm	C Gray	SHAD-41b.ssf
6432	-121.2676871	37.82721662	6339959.172	2124583.854	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,873	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:01pm	C Gray	SHAD-41b.ssf
6433	-121.2676823	37.82722242	6339961.194	2124585.953	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,606	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:03pm	C Gray	SHAD-41b.ssf
6434	-121.2676751	37.8272292	6339963.294	2124588.407	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,632	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:05pm	C Gray	SHAD-41b.ssf
6435	-121.2676669	37.82723761	6339965.67	2124591.447	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,125	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:07pm	C Gray	SHAD-41b.ssf
6436	-121.2676567	37.82724783	6339968.646	2124595.144	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,557	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:09pm	C Gray	SHAD-41b.ssf
6437	-121.2676489	37.82725498	6339970.928	2124597.732	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,191	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:11pm	C Gray	SHAD-41b.ssf
6438	-121.2676373	37.82726566	6339974.322	2124601.591	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,420	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:13pm	C Gray	SHAD-41b.ssf
6439	-121.2676281	37.82727263	6339977.001	2124604.109	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,888	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:15pm	C Gray	SHAD-41b.ssf
6440	-121.2676164	37.8272823	6339980.41	2124607.6	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,349	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:17pm	C Gray	SHAD-41b.ssf
6441	-121.2676059	37.82729132	6339983.454	2124610.862	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,886	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:19pm	C Gray	SHAD-41b.ssf
6442	-121.2675968	37.82730038	6339986.12	2124614.138	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,641	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:21pm	C Gray	SHAD-41b.ssf
6443	-121.2675865	37.82731043	6339989.127	2124617.774	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,985	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:23pm	C Gray	SHAD-41b.ssf
6444	-121.267575	37.82732013	6339992.458	2124621.279	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,258	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:25pm	C Gray	SHAD-41b.ssf
6445	-121.2675645	37.82733023	6339995.525	2124624.93	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,979	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:27pm	C Gray	SHAD-41b.ssf
6446	-121.2675578	37.82733537	6339997.493	2124626.787	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,980	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:29pm	C Gray	SHAD-41b.ssf
6447	-121.2675427	37.82734042	6339998.763	2124628.613	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,966	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:31pm	C Gray	SHAD-41b.ssf
6448	-121.2675352	37.82734651	6340001.89	2124630.806	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,919	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:33pm	C Gray	SHAD-41b.ssf
6449	-121.2675384	37.82735664	6340003.157	2124634.485	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,560	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:35pm	C Gray	SHAD-41b.ssf
6450	-121.2675545	37.82734802	6340001.763	2124631.361	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,228	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:37pm	C Gray	SHAD-41b.ssf
6451	-121.2675534	37.82734042	6339998.373	2124628.613	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88,241	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:39pm	C Gray	SHAD-41b.ssf
6452	-121.2675584	37.82733431	6339997.318	2124626.4	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,626	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:41pm	C Gray	SHAD-41b.ssf
6453	-121.2675687	37.82732655	6339994.295	2124623.599	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,206	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:43pm	C Gray	SHAD-41b.ssf
6454	-121.2675778	37.82731763	6339991.646	2124620.374	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,535	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:45pm	C Gray	SHAD-41b.ssf
6455	-121.2675876	37.82731012	6339988.789	2124617.663	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,391	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:47pm	C Gray	SHAD-41b.ssf
6456	-121.2675968	37.8273029	6339986.119	2124615.135	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,858	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:49pm	C Gray	SHAD-41b.ssf
6457	-121.2676061	37.82729482	6339983.425	2124612.105	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,626	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:51pm	C Gray	SHAD-41b.ssf
6458	-121.2676186	37.82728491	6339979.778	2124608.556	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,829	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:53pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6459	-121.2676257	37.82727873	6339977.695	2124606.324	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,078	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:55pm	C Gray	SHAD-41b.ssf
6460	-121.2676387	37.82726653	6339979.025	2124601.911	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,245	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:57pm	C Gray	SHAD-41b.ssf
6461	-121.2676486	37.82725702	6339971.033	2124598.474	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,178	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:45:59pm	C Gray	SHAD-41b.ssf
6462	-121.2676589	37.82724809	6339968.011	2124595.244	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,439	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:01pm	C Gray	SHAD-41b.ssf
6463	-121.2676683	37.82724035	6339965.285	2124592.449	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,700	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:03pm	C Gray	SHAD-41b.ssf
6464	-121.2676824	37.82722963	6339961.168	2124588.58	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,372	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:05pm	C Gray	SHAD-41b.ssf
6465	-121.2677039	37.82721891	6339957.835	2124584.703	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,694	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:07pm	C Gray	SHAD-41b.ssf
6466	-121.2677199	37.82721143	6339954.918	2124581.484	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,946	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:09pm	C Gray	SHAD-41b.ssf
6467	-121.2677165	37.82719806	6339951.249	2124577.164	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,403	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:12pm	C Gray	SHAD-41b.ssf
6468	-121.2677278	37.82718945	6339947.942	2124574.055	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,671	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:13pm	C Gray	SHAD-41b.ssf
6469	-121.267736	37.82718142	6339945.572	2124571.151	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,071	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:15pm	C Gray	SHAD-41b.ssf
6470	-121.2677478	37.82717143	6339942.132	2124567.542	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,212	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:17pm	C Gray	SHAD-41b.ssf
6471	-121.2677579	37.82716278	6339939.168	2124564.417	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,197	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:19pm	C Gray	SHAD-41b.ssf
6472	-121.2677694	37.82715151	6339935.814	2124560.342	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,532	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:21pm	C Gray	SHAD-41b.ssf
6473	-121.2677799	37.82714231	6339932.768	2124557.018	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,575	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:23pm	C Gray	SHAD-41b.ssf
6474	-121.2677928	37.82713022	6339928.992	2124552.644	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,665	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:25pm	C Gray	SHAD-41b.ssf
6475	-121.2678007	37.82712333	6339926.688	2124550.153	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,805	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:27pm	C Gray	SHAD-41b.ssf
6476	-121.2678168	37.82710898	6339922.006	2124544.967	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,379	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:29pm	C Gray	SHAD-41b.ssf
6477	-121.2678273	37.82710051	6339918.942	2124541.91	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,893	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:31pm	C Gray	SHAD-41b.ssf
6478	-121.2678392	37.82709182	6339915.478	2124538.771	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,997	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:33pm	C Gray	SHAD-41b.ssf
6479	-121.2678538	37.82708182	6339911.228	2124535.166	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,384	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:35pm	C Gray	SHAD-41b.ssf
6480	-121.2678707	37.82707599	6339910.908	2124533.046	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,517	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:37pm	C Gray	SHAD-41b.ssf
6481	-121.26788492	37.82707278	6339912.551	2124531.864	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,950	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:39pm	C Gray	SHAD-41b.ssf
6482	-121.2678468	37.82707145	6339913.225	2124531.374	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,029	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:41pm	C Gray	SHAD-41b.ssf
6483	-121.2678457	37.82707308	6339911.823	2124531.963	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,376	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:43pm	C Gray	SHAD-41b.ssf
6484	-121.2678482	37.82707536	6339912.827	2124532.8	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,730	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:45pm	C Gray	SHAD-41b.ssf
6485	-121.2678434	37.82708138	6339914.238	2124534.981	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,524	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:47pm	C Gray	SHAD-41b.ssf
6486	-121.2678349	37.82708936	6339916.722	2124537.868	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,533	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:49pm	C Gray	SHAD-41b.ssf
6487	-121.2678258	37.82709785	6339919.382	2124540.935	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,064	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:51pm	C Gray	SHAD-41b.ssf
6488	-121.2678167	37.82710632	6339922.072	2124544	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,452	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:53pm	C Gray	SHAD-41b.ssf
6489	-121.2678008	37.82711415	6339924.524	2124546.83	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,097	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:55pm	C Gray	SHAD-41b.ssf
6490	-121.2677992	37.82712147	6339927.134	2124549.474	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,143	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:57pm	C Gray	SHAD-41b.ssf
6491	-121.2677892	37.82713083	6339930.031	2124552.857	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,825	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:46:59pm	C Gray	SHAD-41b.ssf
6492	-121.2677796	37.82713894	6339932.83	2124555.787	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,601	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:01pm	C Gray	SHAD-41b.ssf
6493	-121.2677702	37.82714661	6339935.587	2124558.559	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,432	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:03pm	C Gray	SHAD-41b.ssf
6494	-121.2677608	37.82715294	6339938.301	2124560.843	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,875	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:05pm	C Gray	SHAD-41b.ssf
6495	-121.2677528	37.82716119	6339940.639	2124563.827	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,497	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:07pm	C Gray	SHAD-41b.ssf
6496	-121.2677435	37.82716983	6339943.356	2124566.949	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,970	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:09pm	C Gray	SHAD-41b.ssf
6497	-121.2677353	37.82717766	6339945.744	2124569.747	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,450	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:11pm	C Gray	SHAD-41b.ssf
6498	-121.2677272	37.82718777	6339948.831	2124573.437	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,480	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:13pm	C Gray	SHAD-41b.ssf
6499	-121.2677162	37.82719654	6339951.33	2124576.609	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,980	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:15pm	C Gray	SHAD-41b.ssf
6500	-121.2677068	37.82720572	6339954.07	2124579.933	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,651	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:17pm	C Gray	SHAD-41b.ssf
6501	-121.2676972	37.82721269	6339956.854	2124582.445	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,330	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:19pm	C Gray	SHAD-41b.ssf
6502	-121.2676821	37.82722092	6339959.235	2124585.424	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,828	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:21pm	C Gray	SHAD-41b.ssf
6503	-121.2676822	37.82722799	6339961.244	2124587.983	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,801	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:23pm	C Gray	SHAD-41b.ssf
6504	-121.2676712	37.82723789	6339964.443	2124591.561	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,910	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:25pm	C Gray	SHAD-41b.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6505	-121.2676628	37.82724605	6339966.902	2124594.511	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,524	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:27pm	C Gray	SHAD-41b.ssf
6506	-121.2676589	37.82725611	6339970.52	2124598.144	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,506	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:29pm	C Gray	SHAD-41b.ssf
6507	-121.2676383	37.82726387	6339973.851	2124600.944	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,274	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:31pm	C Gray	SHAD-41b.ssf
6508	-121.2676277	37.82727319	6339977.113	2124604.312	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,268	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:33pm	C Gray	SHAD-41b.ssf
6509	-121.2676188	37.82728114	6339979.709	2124607.185	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,550	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:35pm	C Gray	SHAD-41b.ssf
6510	-121.2676073	37.82729204	6339983.061	2124611.124	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,591	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:37pm	C Gray	SHAD-41b.ssf
6511	-121.2675983	37.82730003	6339985.692	2124614.185	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,621	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:39pm	C Gray	SHAD-41b.ssf
6512	-121.2675857	37.82731043	6339989.362	2124617.771	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,965	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:41pm	C Gray	SHAD-41b.ssf
6513	-121.2675753	37.8273203	6339992.398	2124621.338	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,881	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:43pm	C Gray	SHAD-41b.ssf
6514	-121.2675664	37.82732933	6339994.982	2124624.607	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,689	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:45pm	C Gray	SHAD-41b.ssf
6515	-121.2675546	37.82733845	6339998.413	2124627.901	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,815	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:47pm	C Gray	SHAD-41b.ssf
6516	-121.2675427	37.82734931	6340001.883	2124631.826	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,390	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:49pm	C Gray	SHAD-41b.ssf
6517	-121.2675365	37.82735594	6340003.704	2124634.223	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,203	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:51pm	C Gray	SHAD-41b.ssf
6518	-121.2675258	37.82735755	6340006.78	2124634.785	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,922	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:53pm	C Gray	SHAD-41b.ssf
6519	-121.2675171	37.82735274	6340008.14	2124633.022	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,382	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:55pm	C Gray	SHAD-41b.ssf
6520	-121.2675521	37.8273352	6340009.276	2124632.744	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,742	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:57pm	C Gray	SHAD-41b.ssf
6521	-121.2675186	37.82735058	6340008.843	2124632.23	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,881	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:47:59pm	C Gray	SHAD-41b.ssf
6522	-121.2675224	37.82735066	6340007.742	2124632.268	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,055	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:01pm	C Gray	SHAD-41b.ssf
6523	-121.2675268	37.82734721	6340006.464	2124631.025	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,130	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:03pm	C Gray	SHAD-41b.ssf
6524	-121.2675376	37.82733796	6340003.475	2124627.68	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,321	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:05pm	C Gray	SHAD-41b.ssf
6525	-121.2675456	37.82733319	6340001.076	2124625.517	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,906	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:07pm	C Gray	SHAD-41b.ssf
6526	-121.2675564	37.82732127	6339997.837	2124621.65	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,507	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:09pm	C Gray	SHAD-41b.ssf
6527	-121.267566	37.82731427	6339995.066	2124619.121	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,560	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:11pm	C Gray	SHAD-41b.ssf
6528	-121.2675779	37.82730393	6339991.598	2124615.386	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,703	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:13pm	C Gray	SHAD-41b.ssf
6529	-121.2675867	37.82729614	6339989.008	2124612.568	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,681	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:15pm	C Gray	SHAD-41b.ssf
6530	-121.2675981	37.82728681	6339985.71	2124609.22	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,779	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:17pm	C Gray	SHAD-41b.ssf
6531	-121.2676053	37.82727947	6339983.599	2124606.544	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,415	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:19pm	C Gray	SHAD-41b.ssf
6532	-121.2676144	37.82727271	6339980.954	2124604.102	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,680	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:21pm	C Gray	SHAD-41b.ssf
6533	-121.267623	37.827265	6339978.447	2124601.318	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,603	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:23pm	C Gray	SHAD-41b.ssf
6534	-121.2676333	37.827256	6339975.448	2124598.066	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,262	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:25pm	C Gray	SHAD-41b.ssf
6535	-121.2676423	37.82724892	6339972.808	2124595.509	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,174	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:27pm	C Gray	SHAD-41b.ssf
6536	-121.267652	37.8272388	6339969.98	2124591.846	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,339	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:29pm	C Gray	SHAD-41b.ssf
6537	-121.2676657	37.82722743	6339965.992	2124587.74	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,012	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:31pm	C Gray	SHAD-41b.ssf
6538	-121.2676754	37.82721759	6339963.166	2124584.18	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,660	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:33pm	C Gray	SHAD-41b.ssf
6539	-121.2677428	37.82717013	6339947.319	2124567.029	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,470	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:35pm	C Gray	SHAD-41b.ssf
6540	-121.2676958	37.82720104	6339957.225	2124578.202	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,956	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:37pm	C Gray	SHAD-41b.ssf
6541	-121.2677095	37.82718941	6339953.24	2124573.998	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,610	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:39pm	C Gray	SHAD-41b.ssf
6542	-121.2677189	37.82718011	6339950.485	2124570.636	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,681	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:41pm	C Gray	SHAD-41b.ssf
6543	-121.2677293	37.82717013	6339947.319	2124567.029	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,250	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:43pm	C Gray	SHAD-41b.ssf
6544	-121.2677423	37.82715979	6339943.686	2124563.29	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,318	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:45pm	C Gray	SHAD-41b.ssf
6545	-121.2677518	37.82715195	6339940.903	2124560.458	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,015	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:47pm	C Gray	SHAD-41b.ssf
6546	-121.2677626	37.82714188	6339937.755	2124556.819	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,887	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:49pm	C Gray	SHAD-41b.ssf
6547	-121.2677743	37.82713125	6339934.357	2124552.974	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,760	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:51pm	C Gray	SHAD-41b.ssf
6548	-121.2677849	37.82712115	6339931.253	2124549.323	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,316	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:53pm	C Gray	SHAD-41b.ssf
6549	-121.2677946	37.82711243	6339928.432	2124546.173	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,879	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:55pm	C Gray	SHAD-41b.ssf
6550	-121.2678052	37.8271032	6339925.351	2124542.835	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,845	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:57pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6551	-121.2678163	37.82709282	6339922.088	2124539.084	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,337	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:48:59pm	C Gray	SHAD-41b.ssf
6552	-121.2678274	37.82708479	6339918.884	2124536.186	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,142	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:03pm	C Gray	SHAD-41b.ssf
6553	-121.2678393	37.82707511	6339915.408	2124532.687	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,897	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:03pm	C Gray	SHAD-41b.ssf
6554	-121.2678419	37.82707006	6339914.631	2124530.857	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,361	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:05pm	C Gray	SHAD-41b.ssf
6555	-121.2678406	37.82706913	6339915.019	2124530.512	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,621	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:07pm	C Gray	SHAD-41b.ssf
6556	-121.2678371	37.827070661	6339916.022	2124529.478	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,674	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:09pm	C Gray	SHAD-41b.ssf
6557	-121.2678354	37.82706522	6339916.387	2124529.073	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,084	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:11pm	C Gray	SHAD-41b.ssf
6558	-121.2678358	37.82706519	6339916.398	2124529.068	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,756	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:13pm	C Gray	SHAD-41b.ssf
6559	-121.2678294	37.82707149	6339918.253	2124531.346	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,534	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:15pm	C Gray	SHAD-41b.ssf
6560	-121.2678207	37.82707956	6339920.794	2124534.265	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,804	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:17pm	C Gray	SHAD-41b.ssf
6561	-121.2678125	37.8270875	6339923.194	2124537.137	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,072	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:19pm	C Gray	SHAD-41b.ssf
6562	-121.2678031	37.82709593	6339925.928	2124540.182	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,263	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:21pm	C Gray	SHAD-41b.ssf
6563	-121.2677949	37.82710326	6339928.325	2124542.833	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,527	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:23pm	C Gray	SHAD-41b.ssf
6564	-121.2677841	37.82711461	6339931.464	2124546.941	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,797	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:25pm	C Gray	SHAD-41b.ssf
6565	-121.2677746	37.82712221	6339934.246	2124549.685	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,684	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:27pm	C Gray	SHAD-41b.ssf
6566	-121.2677652	37.82712989	6339936.97	2124552.46	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,177	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:29pm	C Gray	SHAD-41b.ssf
6567	-121.2677558	37.82713844	6339939.702	2124555.551	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,078	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:31pm	C Gray	SHAD-41b.ssf
6568	-121.2677444	37.82714667	6339943.029	2124558.519	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,295	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:33pm	C Gray	SHAD-41b.ssf
6569	-121.2677351	37.82715496	6339945.744	2124561.517	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,485	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:35pm	C Gray	SHAD-41b.ssf
6570	-121.2677244	37.82716292	6339948.849	2124564.781	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,909	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:37pm	C Gray	SHAD-41b.ssf
6571	-121.2677105	37.82717292	6339951.882	2124568.005	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,005	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:39pm	C Gray	SHAD-41b.ssf
6572	-121.2677055	37.8271808	6339954.353	2124570.855	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,126	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:41pm	C Gray	SHAD-41b.ssf
6573	-121.2676947	37.82719087	6339957.524	2124574.496	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,374	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:43pm	C Gray	SHAD-41b.ssf
6574	-121.2676874	37.82719968	6339959.643	2124577.687	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,852	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:45pm	C Gray	SHAD-41b.ssf
6575	-121.2676756	37.82721017	6339963.156	2124581.478	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,755	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:47pm	C Gray	SHAD-41b.ssf
6576	-121.2676654	37.82721731	6339965.674	2124584.058	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,620	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:49pm	C Gray	SHAD-41b.ssf
6577	-121.2676566	37.82722557	6339968.631	2124587.04	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,215	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:51pm	C Gray	SHAD-41b.ssf
6578	-121.2676487	37.82723336	6339970.926	2124589.858	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,274	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:53pm	C Gray	SHAD-41b.ssf
6579	-121.2676358	37.82724366	6339974.691	2124593.578	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,647	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:55pm	C Gray	SHAD-41b.ssf
6580	-121.2676287	37.8272518	6339976.747	2124596.526	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,651	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:57pm	C Gray	SHAD-41b.ssf
6581	-121.2676196	37.82725907	6339979.416	2124599.15	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,690	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:49:59pm	C Gray	SHAD-41b.ssf
6582	-121.2676103	37.82726807	6339982.106	2124602.407	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,144	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:01pm	C Gray	SHAD-41b.ssf
6583	-121.2676019	37.82727676	6339984.562	2124605.549	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,542	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:03pm	C Gray	SHAD-41b.ssf
6584	-121.2675917	37.82728757	6339987.559	2124609.459	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,447	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:05pm	C Gray	SHAD-41b.ssf
6585	-121.2675831	37.82729439	6339990.047	2124611.923	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,760	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:07pm	C Gray	SHAD-41b.ssf
6586	-121.2675757	37.82730505	6339993.875	2124615.775	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,775	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:09pm	C Gray	SHAD-41b.ssf
6587	-121.2675617	37.82731195	6339996.287	2124618.266	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	94,038	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:11pm	C Gray	SHAD-41b.ssf
6588	-121.2675496	37.82732179	6339999.798	2124621.822	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68,855	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:13pm	C Gray	SHAD-41b.ssf
6589	-121.2675392	37.8273313	6340002.823	2124625.261	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,829	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:15pm	C Gray	SHAD-41b.ssf
6590	-121.2675283	37.82733969	6340006.025	2124628.29	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,171	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:17pm	C Gray	SHAD-41b.ssf
6591	-121.2675175	37.82734909	6340009.173	2124631.685	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,456	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:19pm	C Gray	SHAD-41b.ssf
6592	-121.267513	37.82735344	6340010.474	2124633.26	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,792	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:21pm	C Gray	SHAD-41b.ssf
6593	-121.267499	37.82734992	6340014.51	2124631.944	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,685	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:23pm	C Gray	SHAD-41b.ssf
6594	-121.2674889	37.82734412	6340017.4	2124629.81	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,136	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:25pm	C Gray	SHAD-41b.ssf
6595	-121.2674885	37.82733842	6340017.5	2124627.732	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,077	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:27pm	C Gray	SHAD-41b.ssf
6596	-121.2674937	37.82733678	6340016	2124627.148	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,007	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:29pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6597	-121.2674997	37.82733199	6340014.242	2124625.416	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,060	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:31pm	C Gray	SHAD-41b.ssf
6598	-121.2675092	37.82732474	6340011.475	2124622.799	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,844	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:33pm	C Gray	SHAD-41b.ssf
6599	-121.2675177	37.82731869	6340009.017	2124620.617	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,441	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:35pm	C Gray	SHAD-41b.ssf
6600	-121.2675261	37.82731306	6340006.557	2124618.587	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,154	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:37pm	C Gray	SHAD-41b.ssf
6601	-121.267539	37.82730806	6340002.84	2124616.795	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,791	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:39pm	C Gray	SHAD-41b.ssf
6602	-121.2675508	37.82730161	6339999.395	2124614.477	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,077	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:41pm	C Gray	SHAD-41b.ssf
6603	-121.2675625	37.82729365	6339996.406	2124611.607	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	57,849	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:43pm	C Gray	SHAD-41b.ssf
6604	-121.2675748	37.82728562	6339992.434	2124608.71	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	67,231	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:45pm	C Gray	SHAD-41b.ssf
6605	-121.2675819	37.82728016	6339990.368	2124606.74	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	57,506	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:47pm	C Gray	SHAD-41b.ssf
6606	-121.2675943	37.82727146	6339986.739	2124603.601	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,349	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:49pm	C Gray	SHAD-41b.ssf
6607	-121.2676043	37.82726457	6339983.851	2124601.116	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,496	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:51pm	C Gray	SHAD-41b.ssf
6608	-121.2676152	37.82725473	6339980.664	2124597.559	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,073	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:53pm	C Gray	SHAD-41b.ssf
6609	-121.2676253	37.82724642	6339977.725	2124594.557	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,474	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:55pm	C Gray	SHAD-41b.ssf
6610	-121.267636	37.82723702	6339974.609	2124591.162	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,857	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:57pm	C Gray	SHAD-41b.ssf
6611	-121.2676544	37.82722962	6339972.209	2124588.484	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,554	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:50:59pm	C Gray	SHAD-41b.ssf
6612	-121.2676656	37.82721826	6339968.661	2124584.377	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,810	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:01pm	C Gray	SHAD-41b.ssf
6613	-121.2676656	37.82721047	6339965.966	2124581.563	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,380	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:03pm	C Gray	SHAD-41b.ssf
6614	-121.2676767	37.82720037	6339962.747	2124577.911	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,907	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:05pm	C Gray	SHAD-41b.ssf
6615	-121.2676872	37.82719176	6339959.671	2124574.803	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,970	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:07pm	C Gray	SHAD-41b.ssf
6616	-121.2676978	37.82718236	6339956.592	2124571.403	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,960	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:09pm	C Gray	SHAD-41b.ssf
6617	-121.2677038	37.82717368	6339953.109	2124568.274	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,352	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:11pm	C Gray	SHAD-41b.ssf
6618	-121.2677182	37.82716517	6339950.641	2124565.195	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,726	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:13pm	C Gray	SHAD-41b.ssf
6619	-121.2677271	37.82715718	6339948.061	2124562.304	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,373	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:15pm	C Gray	SHAD-41b.ssf
6620	-121.2677331	37.82714523	6339946.321	2124560.544	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,573	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:17pm	C Gray	SHAD-41b.ssf
6621	-121.2677446	37.82714378	6339942.971	2124557.467	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,425	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:19pm	C Gray	SHAD-41b.ssf
6622	-121.2677474	37.82714137	6339943.078	2124558.028	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,180	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:21pm	C Gray	SHAD-41b.ssf
6623	-121.2677418	37.82714882	6339943.789	2124559.296	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,361	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:23pm	C Gray	SHAD-41b.ssf
6624	-121.2677399	37.82714742	6339944.328	2124558.782	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,718	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:25pm	C Gray	SHAD-41b.ssf
6625	-121.2677401	37.82714656	6339944.274	2124558.47	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,507	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:27pm	C Gray	SHAD-41b.ssf
6626	-121.2677399	37.82714567	6339944.334	2124558.143	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,389	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:29pm	C Gray	SHAD-41b.ssf
6627	-121.2677395	37.82714506	6339944.438	2124557.923	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,417	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:31pm	C Gray	SHAD-41b.ssf
6628	-121.2677401	37.82714422	6339944.253	2124557.617	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,396	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:33pm	C Gray	SHAD-41b.ssf
6629	-121.2677474	37.82713864	6339942.144	2124555.603	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,621	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:35pm	C Gray	SHAD-41b.ssf
6630	-121.2677305	37.8271305	6339939.577	2124552.66	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,702	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:37pm	C Gray	SHAD-41b.ssf
6631	-121.2677633	37.82712317	6339937.498	2124550.008	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,681	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:39pm	C Gray	SHAD-41b.ssf
6632	-121.2677759	37.82711178	6339933.827	2124545.892	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,971	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:41pm	C Gray	SHAD-41b.ssf
6633	-121.2677855	37.82710345	6339931.019	2124542.878	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,538	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:43pm	C Gray	SHAD-41b.ssf
6634	-121.2677935	37.82709648	6339928.684	2124540.36	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,149	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:45pm	C Gray	SHAD-41b.ssf
6635	-121.2678034	37.82708823	6339925.82	2124537.38	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,059	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:47pm	C Gray	SHAD-41b.ssf
6636	-121.2678138	37.82707846	6339922.794	2124533.848	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,891	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:49pm	C Gray	SHAD-41b.ssf
6637	-121.2678229	37.82707147	6339920.14	2124531.324	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,885	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:51pm	C Gray	SHAD-41b.ssf
6638	-121.2678274	37.82706393	6339918.823	2124528.591	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,252	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:53pm	C Gray	SHAD-41b.ssf
6639	-121.2678274	37.82706511	6339918.813	2124529.018	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,551	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:55pm	C Gray	SHAD-41b.ssf
6640	-121.2678197	37.82706133	6339921.035	2124527.625	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,565	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:57pm	C Gray	SHAD-41b.ssf
6641	-121.2678265	37.82706082	6339919.069	2124527.453	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,882	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:51:59pm	C Gray	SHAD-41b.ssf
6642	-121.2678211	37.82706583	6339920.648	2124529.264	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,432	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:01pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6643	-121.2678153	37.82707133	6339922.334	2124531.257	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,410	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:03pm	C Gray	SHAD-41b.ssf
6644	-121.2678065	37.82707946	6339924.885	2124534.195	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,941	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:05pm	C Gray	SHAD-41b.ssf
6645	-121.2677986	37.82708707	6339927.202	2124536.947	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,969	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:07pm	C Gray	SHAD-41b.ssf
6646	-121.2677901	37.82709441	6339929.678	2124539.599	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,232	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:09pm	C Gray	SHAD-41b.ssf
6647	-121.2677819	37.82710219	6339932.077	2124542.411	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,791	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:11pm	C Gray	SHAD-41b.ssf
6648	-121.2677721	37.82711004	6339934.908	2124545.248	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,983	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:13pm	C Gray	SHAD-41b.ssf
6649	-121.2677657	37.82711862	6339937.955	2124548.346	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,969	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:15pm	C Gray	SHAD-41b.ssf
6650	-121.2677533	37.82712608	6339939.806	2124551.049	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,956	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:17pm	C Gray	SHAD-41b.ssf
6651	-121.2677436	37.82713378	6339943.229	2124555.062	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,921	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:19pm	C Gray	SHAD-41b.ssf
6652	-121.267734	37.82714496	6339946.033	2124557.87	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,046	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:21pm	C Gray	SHAD-41b.ssf
6653	-121.2677239	37.82715387	6339948.963	2124561.094	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,181	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:23pm	C Gray	SHAD-41b.ssf
6654	-121.2677144	37.82716181	6339951.739	2124563.962	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,386	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:25pm	C Gray	SHAD-41b.ssf
6655	-121.2677044	37.82717107	6339954.645	2124567.31	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,229	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:27pm	C Gray	SHAD-41b.ssf
6656	-121.2676948	37.82717891	6339957.458	2124570.139	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,214	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:29pm	C Gray	SHAD-41b.ssf
6657	-121.2676878	37.82718595	6339959.486	2124572.688	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,011	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:31pm	C Gray	SHAD-41b.ssf
6658	-121.2676766	37.82719499	6339962.761	2124575.933	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,922	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:33pm	C Gray	SHAD-41b.ssf
6659	-121.2676669	37.82720434	6339965.582	2124579.353	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,699	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:35pm	C Gray	SHAD-41b.ssf
6660	-121.2676579	37.82721302	6339968.2	2124582.474	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,256	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:37pm	C Gray	SHAD-41b.ssf
6661	-121.2676487	37.82722253	6339970.885	2124585.914	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,329	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:39pm	C Gray	SHAD-41b.ssf
6662	-121.2676401	37.82723006	6339973.401	2124588.832	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,606	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:41pm	C Gray	SHAD-41b.ssf
6663	-121.2676329	37.82723902	6339976.08	2124591.875	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,911	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:43pm	C Gray	SHAD-41b.ssf
6664	-121.2676214	37.82724754	6339978.865	2124594.955	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,212	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:45pm	C Gray	SHAD-41b.ssf
6665	-121.2676109	37.82725616	6339981.904	2124598.07	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,807	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:47pm	C Gray	SHAD-41b.ssf
6666	-121.2676028	37.82726432	6339984.266	2124601.021	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,631	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:49pm	C Gray	SHAD-41b.ssf
6667	-121.2675936	37.82727101	6339986.954	2124603.434	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,670	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:51pm	C Gray	SHAD-41b.ssf
6668	-121.2675811	37.82728223	6339990.628	2124607.498	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,760	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:53pm	C Gray	SHAD-41b.ssf
6669	-121.26757	37.82729026	6339993.827	2124610.391	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,367	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:55pm	C Gray	SHAD-41b.ssf
6670	-121.2675589	37.82729818	6339997.052	2124613.245	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,675	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:57pm	C Gray	SHAD-41b.ssf
6671	-121.2675505	37.82730626	6339999.511	2124616.17	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,705	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:52:59pm	C Gray	SHAD-41b.ssf
6672	-121.2675394	37.82731573	6340002.736	2124619.59	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,100	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:01pm	C Gray	SHAD-41b.ssf
6673	-121.2675292	37.82732324	6340005.759	2124622.3	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,437	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:03pm	C Gray	SHAD-41b.ssf
6674	-121.2675197	37.8273325	6340008.478	2124625.651	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,898	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:05pm	C Gray	SHAD-41b.ssf
6675	-121.2675101	37.82734166	6340011.265	2124628.962	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,905	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:07pm	C Gray	SHAD-41b.ssf
6676	-121.2674977	37.82735358	6340014.887	2124633.272	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,717	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:09pm	C Gray	SHAD-41b.ssf
6677	-121.2674897	37.82736469	6340017.419	2124637.743	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,309	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:11pm	C Gray	SHAD-41b.ssf
6678	-121.2674856	37.827375018	6340020.915	2124641.565	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,283	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:13pm	C Gray	SHAD-41b.ssf
6679	-121.2674768	37.827384957	6340024.915	2124645.763	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,064	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:15pm	C Gray	SHAD-41b.ssf
6680	-121.2674682	37.827395093	6340028.794	2124650.276	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,972	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:17pm	C Gray	SHAD-41b.ssf
6681	-121.2674589	37.82740669	6340032.419	2124654.743	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,309	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:19pm	C Gray	SHAD-41b.ssf
6682	-121.267452	37.82741818	6340036.135	2124658.389	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,952	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:21pm	C Gray	SHAD-41b.ssf
6683	-121.2674456	37.82742963	6340040.915	2124662.65	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,305	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:23pm	C Gray	SHAD-41b.ssf
6684	-121.2674382	37.82744113	6340044.546	2124666.082	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,899	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:25pm	C Gray	SHAD-41b.ssf
6685	-121.2674316	37.82745267	6340048.142	2124669.382	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,211	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:27pm	C Gray	SHAD-41b.ssf
6686	-121.2674252	37.82746416	6340052.643	2124672.486	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,876	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:29pm	C Gray	SHAD-41b.ssf
6687	-121.2674181	37.82747565	6340056.915	2124675.475	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,601	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:31pm	C Gray	SHAD-41b.ssf
6688	-121.2674115	37.82748715	6339998.517	2124678.95	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,577	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:33pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6689	-121.2675576	37.82728473	6339997.396	2124608.345	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,912	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:35pm	C Gray	SHAD-41b.ssf
6690	-121.2675567	37.8272848	6339997.646	2124608.37	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,919	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:37pm	C Gray	SHAD-41b.ssf
6691	-121.2675566	37.82728474	6339997.689	2124608.348	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,067	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:39pm	C Gray	SHAD-41b.ssf
6692	-121.2675564	37.82728444	6339997.742	2124608.239	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,057	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:41pm	C Gray	SHAD-41b.ssf
6693	-121.2675578	37.82728325	6339997.322	2124607.808	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,598	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:43pm	C Gray	SHAD-41b.ssf
6694	-121.2675602	37.82728055	6339996.618	2124606.831	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,689	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:45pm	C Gray	SHAD-41b.ssf
6695	-121.267561	37.82728073	6339996.894	2124606.894	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,487	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:47pm	C Gray	SHAD-41b.ssf
6696	-121.2675601	37.82728065	6339996.663	2124606.867	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,748	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:49pm	C Gray	SHAD-41b.ssf
6697	-121.2675598	37.82728061	6339996.739	2124606.85	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,051	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:51pm	C Gray	SHAD-41b.ssf
6698	-121.2675598	37.82728064	6339996.729	2124606.863	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,223	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:53pm	C Gray	SHAD-41b.ssf
6699	-121.2675597	37.82728071	6339996.758	2124606.887	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,564	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:55pm	C Gray	SHAD-41b.ssf
6700	-121.2675597	37.82728058	6339996.761	2124606.842	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,230	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:57pm	C Gray	SHAD-41b.ssf
6701	-121.2675597	37.82728055	6339996.776	2124606.828	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,580	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:53:59pm	C Gray	SHAD-41b.ssf
6702	-121.2675597	37.8272802	6339996.763	2124606.702	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,849	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:01pm	C Gray	SHAD-41b.ssf
6703	-121.2675605	37.82728041	6339996.546	2124606.813	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,131	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:03pm	C Gray	SHAD-41b.ssf
6704	-121.2675599	37.8272805	6339996.706	2124606.813	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,472	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:05pm	C Gray	SHAD-41b.ssf
6705	-121.2675589	37.82728149	6339997.005	2124607.171	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,189	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:07pm	C Gray	SHAD-41b.ssf
6706	-121.26756	37.82728215	6339996.687	2124607.413	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,774	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:09pm	C Gray	SHAD-41b.ssf
6707	-121.2675648	37.82727274	6339995.291	2124605.693	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,714	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:11pm	C Gray	SHAD-41b.ssf
6708	-121.2675711	37.82727272	6339993.459	2124603.815	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,323	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:13pm	C Gray	SHAD-41b.ssf
6709	-121.2675819	37.82726197	6339990.293	2124600.117	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,864	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:15pm	C Gray	SHAD-41b.ssf
6710	-121.2675592	37.82724515	6339985.249	2124594.032	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,329	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:17pm	C Gray	SHAD-41b.ssf
6711	-121.2676076	37.82723746	6339982.797	2124591.254	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,909	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:21pm	C Gray	SHAD-41b.ssf
6712	-121.2676191	37.82722824	6339979.46	2124587.925	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,999	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:23pm	C Gray	SHAD-41b.ssf
6713	-121.2676279	37.82721818	6339976.885	2124584.281	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,582	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:25pm	C Gray	SHAD-41b.ssf
6714	-121.2676374	37.82721261	6339974.12	2124582.277	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,826	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:27pm	C Gray	SHAD-41b.ssf
6715	-121.2676374	37.82721261	6339974.12	2124582.277	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,826	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:27pm	C Gray	SHAD-41b.ssf
6716	-121.2676453	37.82720413	6339971.824	2124579.208	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,509	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:29pm	C Gray	SHAD-41b.ssf
6717	-121.2676547	37.82719522	6339969.085	2124575.986	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,688	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:31pm	C Gray	SHAD-41b.ssf
6718	-121.2676617	37.8271887	6339967.033	2124573.626	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,247	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:33pm	C Gray	SHAD-41b.ssf
6719	-121.2676696	37.8271823	6339964.725	2124571.317	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,448	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:35pm	C Gray	SHAD-41b.ssf
6720	-121.2676781	37.8271747	6339962.26	2124568.568	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,579	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:37pm	C Gray	SHAD-41b.ssf
6721	-121.2676879	37.82716629	6339959.401	2124565.528	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,832	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:39pm	C Gray	SHAD-41b.ssf
6722	-121.2676963	37.82715835	6339956.944	2124562.659	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,970	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:41pm	C Gray	SHAD-41b.ssf
6723	-121.2677052	37.82715177	6339954.354	2124560.282	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,959	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:43pm	C Gray	SHAD-41b.ssf
6724	-121.2677157	37.82714228	6339951.317	2124556.853	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,030	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:45pm	C Gray	SHAD-41b.ssf
6725	-121.2677225	37.82713583	6339949.313	2124554.522	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,964	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:47pm	C Gray	SHAD-41b.ssf
6726	-121.2677336	37.82712664	6339946.091	2124551.113	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,985	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:49pm	C Gray	SHAD-41b.ssf
6727	-121.2677416	37.82711924	6339943.767	2124548.524	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,679	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:51pm	C Gray	SHAD-41b.ssf
6728	-121.2677512	37.82711135	6339940.949	2124545.673	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,405	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:53pm	C Gray	SHAD-41b.ssf
6729	-121.2677612	37.82710273	6339938.049	2124542.56	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,277	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:55pm	C Gray	SHAD-41b.ssf
6730	-121.2677669	37.82709622	6339935.761	2124540.208	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,790	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:57pm	C Gray	SHAD-41b.ssf
6731	-121.2677789	37.82708704	6339932.892	2124536.886	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,865	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:54:59pm	C Gray	SHAD-41b.ssf
6732	-121.2677865	37.82707944	6339930.655	2124534.74	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,442	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:01pm	C Gray	SHAD-41b.ssf
6733	-121.2677971	37.82707004	6339927.574	2124530.142	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,678	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:03pm	C Gray	SHAD-41b.ssf
6734	-121.2678065	37.8270619	6339924.845	2124527.802	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,566	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:05pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6735	-121.2678149	37.82705264	6339922.385	2124524.449	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,383	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:07pm	C Gray	SHAD-41b.ssf
6736	-121.2678151	37.82705407	6339922.329	2124524.969	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,692	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:09pm	C Gray	SHAD-41b.ssf
6737	-121.2678159	37.82705452	6339922.11	2124525.137	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,232	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:11pm	C Gray	SHAD-41b.ssf
6738	-121.2678108	37.82705054	6339923.568	2124523.674	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,838	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:13pm	C Gray	SHAD-41b.ssf
6739	-121.2678041	37.82705014	6339925.497	2124523.511	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,867	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:15pm	C Gray	SHAD-41b.ssf
6740	-121.2678126	37.82705071	6339923.739	2124523.739	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,121	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:17pm	C Gray	SHAD-41b.ssf
6741	-121.2678068	37.82705516	6339924.047	2124525.345	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,772	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:19pm	C Gray	SHAD-41b.ssf
6742	-121.2677984	37.82706233	6339927.183	2124527.949	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,103	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:21pm	C Gray	SHAD-41b.ssf
6743	-121.2677903	37.82707032	6339929.553	2124530.83	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,461	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:23pm	C Gray	SHAD-41b.ssf
6744	-121.2677828	37.82707724	6339931.738	2124533.332	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	30,721	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:25pm	C Gray	SHAD-41b.ssf
6745	-121.2677806	37.82707924	6339932.374	2124534.053	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,364	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:26pm	C Gray	SHAD-41b.ssf
6746	-121.2677684	37.82709147	6339936.214	2124538.474	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,275	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:29pm	C Gray	SHAD-41b.ssf
6747	-121.2677588	37.82710014	6339938.73	2124541.612	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,291	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:31pm	C Gray	SHAD-41b.ssf
6748	-121.2677492	37.82710727	6339941.528	2124544.184	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,286	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:33pm	C Gray	SHAD-41b.ssf
6749	-121.2677406	37.82711363	6339944.02	2124546.479	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,141	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:35pm	C Gray	SHAD-41b.ssf
6750	-121.2677317	37.82712211	6339946.614	2124549.547	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,312	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:37pm	C Gray	SHAD-41b.ssf
6751	-121.2677248	37.82712911	6339948.623	2124552.079	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,775	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:39pm	C Gray	SHAD-41b.ssf
6752	-121.2677152	37.82713837	6339951.442	2124555.429	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,267	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:41pm	C Gray	SHAD-41b.ssf
6753	-121.2677054	37.82714473	6339954.294	2124557.721	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,369	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:43pm	C Gray	SHAD-41b.ssf
6754	-121.2676947	37.82715389	6339957.399	2124561.031	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,949	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:45pm	C Gray	SHAD-41b.ssf
6755	-121.2676864	37.827161	6339959.822	2124563.599	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,712	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:47pm	C Gray	SHAD-41b.ssf
6756	-121.2676749	37.82716882	6339963.165	2124566.414	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,724	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:49pm	C Gray	SHAD-41b.ssf
6757	-121.2676686	37.82717668	6339965.009	2124569.266	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,956	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:51pm	C Gray	SHAD-41b.ssf
6758	-121.2676588	37.82718548	6339967.853	2124572.446	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,218	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:53pm	C Gray	SHAD-41b.ssf
6759	-121.2676493	37.82719497	6339970.639	2124575.882	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,633	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:55pm	C Gray	SHAD-41b.ssf
6760	-121.2676330	37.82720343	6339973.641	2124579.279	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,856	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:57pm	C Gray	SHAD-41b.ssf
6761	-121.2676229	37.82721498	6339976.561	2124583.118	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,983	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:55:59pm	C Gray	SHAD-41b.ssf
6762	-121.2676199	37.82722207	6339979.202	2124585.677	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,397	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:01pm	C Gray	SHAD-41b.ssf
6763	-121.267608	37.82723306	6339982.671	2124589.651	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,316	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:03pm	C Gray	SHAD-41b.ssf
6764	-121.2675992	37.82724023	6339985.245	2124592.24	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,694	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:05pm	C Gray	SHAD-41b.ssf
6765	-121.2675835	37.82725229	6339989.805	2124596.595	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,960	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:09pm	C Gray	SHAD-41b.ssf
6767	-121.2675745	37.82726204	6339992.435	2124600.124	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,535	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:11pm	C Gray	SHAD-41b.ssf
6768	-121.2675651	37.82727097	6339995.193	2124603.353	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,120	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:13pm	C Gray	SHAD-41b.ssf
6769	-121.2675523	37.82727904	6339998.894	2124606.263	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,917	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:15pm	C Gray	SHAD-41b.ssf
6770	-121.2675425	37.82728744	6340001.761	2124609.298	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,299	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:17pm	C Gray	SHAD-41b.ssf
6771	-121.267533	37.82729392	6340004.514	2124611.636	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,445	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:19pm	C Gray	SHAD-41b.ssf
6772	-121.2675274	37.82730083	6340006.146	2124614.139	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,527	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:21pm	C Gray	SHAD-41b.ssf
6773	-121.2675164	37.82731194	6340009.378	2124618.157	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,797	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:23pm	C Gray	SHAD-41b.ssf
6774	-121.2675072	37.82732126	6340012.045	2124621.529	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,894	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:25pm	C Gray	SHAD-41b.ssf
6775	-121.267498	37.82732831	6340014.739	2124624.073	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,660	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:27pm	C Gray	SHAD-41b.ssf
6776	-121.267449	37.82733703	6340017.07	2124627.231	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,867	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:29pm	C Gray	SHAD-41b.ssf
6777	-121.2674808	37.82734691	6340019.754	2124630.805	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,277	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:31pm	C Gray	SHAD-41b.ssf
6778	-121.267474	37.82735021	6340021.72	2124631.902	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,587	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:33pm	C Gray	SHAD-41b.ssf
6779	-121.267464	37.8273607	6340024.653	2124635.787	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,793	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:35pm	C Gray	SHAD-41b.ssf
6780	-121.267456	37.82736394	6340026.966	2124636.947	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,701	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:37pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6781	-121.2674477	37.82736018	6340029.364	2124635.559	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,452	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:39pm	C Gray	SHAD-41b.ssf
6782	-121.2674434	37.82735913	6340030.597	2124635.167	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,878	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:43pm	C Gray	SHAD-41b.ssf
6783	-121.2674487	37.82735789	6340029.047	2124634.725	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,410	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:43pm	C Gray	SHAD-41b.ssf
6784	-121.2674473	37.82735616	6340029.466	2124634.093	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,152	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:45pm	C Gray	SHAD-41b.ssf
6785	-121.2674531	37.82734991	6340027.758	2124631.83	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,969	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:47pm	C Gray	SHAD-41b.ssf
6786	-121.2674613	37.82734295	6340025.365	2124629.316	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,366	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:49pm	C Gray	SHAD-41b.ssf
6787	-121.2674703	37.82733551	6340022.765	2124626.978	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,145	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:51pm	C Gray	SHAD-41b.ssf
6788	-121.2674758	37.82732817	6340020.075	2124623.978	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,659	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:53pm	C Gray	SHAD-41b.ssf
6789	-121.2674911	37.82731952	6340016.708	2124620.493	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,103	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:55pm	C Gray	SHAD-41b.ssf
6790	-121.267499	37.82731255	6340014.394	2124618.338	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,805	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:57pm	C Gray	SHAD-41b.ssf
6791	-121.2675097	37.82732029	6340011.29	2124614.85	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,464	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:56:59pm	C Gray	SHAD-41b.ssf
6792	-121.2675188	37.82729585	6340008.629	2124612.302	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,827	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:01pm	C Gray	SHAD-41b.ssf
6793	-121.2675237	37.82728822	6340005.942	2124609.548	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,779	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:03pm	C Gray	SHAD-41b.ssf
6794	-121.2675372	37.82728016	6340003.273	2124606.632	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,440	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:05pm	C Gray	SHAD-41b.ssf
6795	-121.2675467	37.82727643	6340000.485	2124603.484	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,455	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:07pm	C Gray	SHAD-41b.ssf
6796	-121.2675556	37.82726632	6339997.779	2124600.911	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,323	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:09pm	C Gray	SHAD-41b.ssf
6797	-121.2675659	37.82725535	6339994.916	2124597.668	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,424	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:11pm	C Gray	SHAD-41b.ssf
6798	-121.2675757	37.82724494	6339992.033	2124593.902	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,448	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:13pm	C Gray	SHAD-41b.ssf
6799	-121.2675855	37.82723707	6339989.198	2124591.058	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,825	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:15pm	C Gray	SHAD-41b.ssf
6800	-121.2675932	37.82723032	6339986.956	2124588.576	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,818	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:17pm	C Gray	SHAD-41b.ssf
6801	-121.2676034	37.82721943	6339983.981	2124584.679	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,187	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:19pm	C Gray	SHAD-41b.ssf
6802	-121.2676137	37.82721052	6339980.958	2124581.458	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,392	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:21pm	C Gray	SHAD-41b.ssf
6803	-121.2676247	37.82720198	6339977.778	2124578.375	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,445	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:23pm	C Gray	SHAD-41b.ssf
6804	-121.2676326	37.82719473	6339975.452	2124575.756	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,457	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:25pm	C Gray	SHAD-41b.ssf
6805	-121.2676424	37.82718611	6339972.618	2124572.638	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,067	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:27pm	C Gray	SHAD-41b.ssf
6806	-121.2676512	37.82717716	6339970.03	2124569.402	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,054	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:29pm	C Gray	SHAD-41b.ssf
6807	-121.2676605	37.82716811	6339967.319	2124566.127	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,981	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:31pm	C Gray	SHAD-41b.ssf
6808	-121.2676744	37.82715698	6339963.267	2124562.109	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,614	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:33pm	C Gray	SHAD-41b.ssf
6809	-121.2676813	37.82714927	6339961.253	2124559.317	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,198	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:35pm	C Gray	SHAD-41b.ssf
6810	-121.2676917	37.82714058	6339958.229	2124556.176	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,178	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:37pm	C Gray	SHAD-41b.ssf
6811	-121.2676984	37.82713377	6339956.265	2124553.714	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,428	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:39pm	C Gray	SHAD-41b.ssf
6812	-121.267708	37.82712524	6339953.473	2124550.631	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,084	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:41pm	C Gray	SHAD-41b.ssf
6813	-121.2677184	37.82711547	6339950.431	2124547.097	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,529	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:43pm	C Gray	SHAD-41b.ssf
6814	-121.2677277	37.82710818	6339947.729	2124544.464	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,501	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:45pm	C Gray	SHAD-41b.ssf
6815	-121.2677365	37.82707113	6339935.83	2124541.942	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,131	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:47pm	C Gray	SHAD-41b.ssf
6816	-121.2677445	37.82706449	6339942.838	2124539.159	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,412	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:49pm	C Gray	SHAD-41b.ssf
6817	-121.2677537	37.82708431	6339940.168	2124535.836	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,162	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:51pm	C Gray	SHAD-41b.ssf
6818	-121.2677601	37.82707845	6339938.278	2124533.716	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,177	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:53pm	C Gray	SHAD-41b.ssf
6819	-121.2677685	37.82707113	6339935.83	2124531.071	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,139	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:55pm	C Gray	SHAD-41b.ssf
6820	-121.2677753	37.82706649	6339933.854	2124528.67	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,199	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:57pm	C Gray	SHAD-41b.ssf
6821	-121.2677841	37.82705762	6339931.285	2124526.19	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,824	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:57:59pm	C Gray	SHAD-41b.ssf
6822	-121.2677904	37.82705349	6339929.458	2124524.699	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,110	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:01pm	C Gray	SHAD-41b.ssf
6823	-121.2677921	37.82704019	6339928.937	2124520.485	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,400	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:03pm	C Gray	SHAD-41b.ssf
6824	-121.2677955	37.82704277	6339930.853	2124520.786	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,154	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:05pm	C Gray	SHAD-41b.ssf
6825	-121.2677857	37.82704545	6339927.91	2124521.786	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,706	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:07pm	C Gray	SHAD-41b.ssf
6826	-121.2677967	37.82704584	6339927.62	2124521.931	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,982	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:09pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6827	-121.2677918	37.82705003	6339929.054	2124523.442	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,946	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:11pm	C Gray	SHAD-41b.ssf
6828	-121.2677847	37.82705534	6339931.13	2124525.805	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,412	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:13pm	C Gray	SHAD-41b.ssf
6829	-121.2677778	37.82706237	6339933.079	2124527.896	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,502	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:15pm	C Gray	SHAD-41b.ssf
6830	-121.2677692	37.82707044	6339935.65	2124530.823	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,847	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:17pm	C Gray	SHAD-41b.ssf
6831	-121.2677581	37.82707938	6339938.871	2124534.051	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,677	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:19pm	C Gray	SHAD-41b.ssf
6832	-121.2677502	37.82708432	6339941.163	2124535.829	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,714	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:21pm	C Gray	SHAD-41b.ssf
6833	-121.2677302	37.82709463	6339944.38	2124539.559	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,761	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:23pm	C Gray	SHAD-41b.ssf
6834	-121.2677397	37.82710078	6339946.856	2124541.779	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,834	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:25pm	C Gray	SHAD-41b.ssf
6835	-121.2677213	37.82710884	6339949.58	2124544.689	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,486	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:27pm	C Gray	SHAD-41b.ssf
6836	-121.2677145	37.82711512	6339951.562	2124546.961	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,961	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:29pm	C Gray	SHAD-41b.ssf
6837	-121.2677052	37.82712308	6339954.276	2124549.835	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,442	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:31pm	C Gray	SHAD-41b.ssf
6838	-121.2676969	37.82712978	6339956.697	2124552.258	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,965	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:33pm	C Gray	SHAD-41b.ssf
6839	-121.2676871	37.82713766	6339959.555	2124555.104	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,505	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:35pm	C Gray	SHAD-41b.ssf
6840	-121.2676793	37.82714556	6339961.82	2124557.962	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,000	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:37pm	C Gray	SHAD-41b.ssf
6841	-121.2676687	37.82715476	6339964.914	2124561.286	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,701	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:39pm	C Gray	SHAD-41b.ssf
6842	-121.2676606	37.82716257	6339967.291	2124564.11	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,665	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:41pm	C Gray	SHAD-41b.ssf
6843	-121.2676509	37.82717038	6339970.115	2124566.929	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,353	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:43pm	C Gray	SHAD-41b.ssf
6844	-121.2676422	37.82717939	6339972.648	2124570.192	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,080	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:45pm	C Gray	SHAD-41b.ssf
6845	-121.2676339	37.82718947	6339975.065	2124573.843	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,179	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:47pm	C Gray	SHAD-41b.ssf
6846	-121.2676241	37.82719594	6339977.925	2124576.175	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,575	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:49pm	C Gray	SHAD-41b.ssf
6847	-121.2676132	37.82720467	6339981.366	2124579.325	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,193	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:51pm	C Gray	SHAD-41b.ssf
6848	-121.2676022	37.82721381	6339984.285	2124582.63	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,650	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:53pm	C Gray	SHAD-41b.ssf
6849	-121.2675907	37.82722215	6339987.669	2124587.46	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,263	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:55pm	C Gray	SHAD-41b.ssf
6850	-121.2675799	37.82723579	6339990.813	2124590.581	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,300	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:57pm	C Gray	SHAD-41b.ssf
6851	-121.2675692	37.82724386	6339996.424	2124593.492	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,319	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:58:59pm	C Gray	SHAD-41b.ssf
6852	-121.2675605	37.82725133	6339996.952	2124596.191	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,765	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:01pm	C Gray	SHAD-41b.ssf
6853	-121.2675505	37.82726132	6339999.371	2124599.805	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,929	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:03pm	C Gray	SHAD-41b.ssf
6854	-121.2675406	37.82726923	6340002.249	2124602.664	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,068	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:05pm	C Gray	SHAD-41b.ssf
6855	-121.2675315	37.82727884	6340004.991	2124606.139	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,742	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:07pm	C Gray	SHAD-41b.ssf
6856	-121.2675233	37.82728601	6340007.299	2124608.732	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,438	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:09pm	C Gray	SHAD-41b.ssf
6857	-121.2675126	37.82729755	6340010.426	2124612.909	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,601	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:11pm	C Gray	SHAD-41b.ssf
6858	-121.2675007	37.82730577	6340013.879	2124615.873	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,251	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:13pm	C Gray	SHAD-41b.ssf
6859	-121.2674884	37.82731552	6340017.461	2124619.395	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,367	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:15pm	C Gray	SHAD-41b.ssf
6860	-121.2674783	37.82732452	6340020.399	2124622.647	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,361	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:17pm	C Gray	SHAD-41b.ssf
6861	-121.2674702	37.82733427	6340022.787	2124626.178	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,982	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:19pm	C Gray	SHAD-41b.ssf
6862	-121.2674553	37.82734554	6340027.103	2124630.246	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,423	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:21pm	C Gray	SHAD-41b.ssf
6863	-121.2674477	37.82735063	6340029.324	2124632.082	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,973	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:23pm	C Gray	SHAD-41b.ssf
6864	-121.2674422	37.82735802	6340030.937	2124634.758	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,277	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:25pm	C Gray	SHAD-41b.ssf
6865	-121.2674359	37.82736318	6340032.775	2124636.623	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,332	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:27pm	C Gray	SHAD-41b.ssf
6866	-121.2674237	37.82736665	6340036.306	2124637.856	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,229	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:29pm	C Gray	SHAD-41b.ssf
6867	-121.2674171	37.827375984	6340038.18	2124635.364	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,446	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:31pm	C Gray	SHAD-41b.ssf
6868	-121.2674148	37.827386017	6340038.867	2124635.477	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,112	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:33pm	C Gray	SHAD-41b.ssf
6869	-121.2674191	37.827390616	6340037.605	2124635.654	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,753	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:35pm	C Gray	SHAD-41b.ssf
6870	-121.2674188	37.827396016	6340037.704	2124635.481	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,395	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:37pm	C Gray	SHAD-41b.ssf
6871	-121.2674197	37.827395951	6340037.439	2124635.246	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,287	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:39pm	C Gray	SHAD-41b.ssf
6872	-121.2674252	37.827395485	6340035.827	2124633.563	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,893	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:41pm	C Gray	SHAD-41b.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6873	-121.2674348	37.82734751	6340033.036	2124630.915	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,778	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:43pm	C Gray	SHAD-41b.ssf
6874	-121.2674438	37.827333952	6340030.699	2124628.024	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,750	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:45pm	C Gray	SHAD-41b.ssf
6875	-121.2674518	37.82733164	6340028.094	2124625.175	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,033	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:47pm	C Gray	SHAD-41b.ssf
6876	-121.2674621	37.8273218	6340025.082	2124621.618	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,703	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:49pm	C Gray	SHAD-41b.ssf
6877	-121.2674686	37.82731497	6340023.189	2124619.146	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,051	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:51pm	C Gray	SHAD-41b.ssf
6878	-121.2674798	37.82730574	6340019.912	2124615.812	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,288	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:53pm	C Gray	SHAD-41b.ssf
6879	-121.2674908	37.82729597	6340016.705	2124612.28	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,614	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:55pm	C Gray	SHAD-41b.ssf
6880	-121.2674999	37.82728875	6340014.05	2124609.22	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,640	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:57pm	C Gray	SHAD-41b.ssf
6881	-121.267507	37.82728087	6340011.995	2124606.822	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,146	Geo 7X	Real-time SBAS Corrected	10/2/2017	01:59:59pm	C Gray	SHAD-41b.ssf
6882	-121.2675174	37.82727197	6340008.952	2124603.606	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,352	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:01pm	C Gray	SHAD-41b.ssf
6883	-121.267527	37.82726223	6340006.166	2124600.081	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,986	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:03pm	C Gray	SHAD-41b.ssf
6884	-121.2675366	37.8272536	6340003.349	2124596.963	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,939	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:05pm	C Gray	SHAD-41b.ssf
6885	-121.2675456	37.82724623	6340000.74	2124594.301	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,264	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:07pm	C Gray	SHAD-41b.ssf
6886	-121.267555	37.82723687	6339997.993	2124590.915	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,742	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:09pm	C Gray	SHAD-41b.ssf
6887	-121.2675635	37.82722983	6339995.519	2124588.37	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,907	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:11pm	C Gray	SHAD-41b.ssf
6888	-121.2675718	37.82722125	6339993.104	2124585.267	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,177	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:13pm	C Gray	SHAD-41b.ssf
6889	-121.2675846	37.82720982	6339989.373	2124581.134	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,077	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:15pm	C Gray	SHAD-41b.ssf
6890	-121.2675955	37.82719955	6339986.178	2124577.42	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,600	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:17pm	C Gray	SHAD-41b.ssf
6891	-121.2676064	37.82718911	6339983.021	2124573.646	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,272	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:19pm	C Gray	SHAD-41b.ssf
6892	-121.2676185	37.82717879	6339979.482	2124569.912	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,923	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:21pm	C Gray	SHAD-41b.ssf
6893	-121.2676307	37.82717007	6339976.418	2124566.768	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,342	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:23pm	C Gray	SHAD-41b.ssf
6894	-121.2676393	37.8271604	6339973.422	2124563.271	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,138	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:25pm	C Gray	SHAD-41b.ssf
6895	-121.2676507	37.82715177	6339970.098	2124560.155	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,138	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:27pm	C Gray	SHAD-41b.ssf
6896	-121.2676615	37.82714224	6339966.97	2124556.711	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,071	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:29pm	C Gray	SHAD-41b.ssf
6897	-121.2676714	37.82713386	6339964.084	2124553.682	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,448	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:31pm	C Gray	SHAD-41b.ssf
6898	-121.2676817	37.82712448	6339961.07	2124550.29	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,112	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:33pm	C Gray	SHAD-41b.ssf
6899	-121.2676925	37.82711521	6339957.911	2124546.943	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,185	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:35pm	C Gray	SHAD-41b.ssf
6900	-121.267701	37.8271071	6339955.457	2124544.01	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,328	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:37pm	C Gray	SHAD-41b.ssf
6901	-121.2677129	37.82709752	6339951.987	2124540.548	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,447	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:39pm	C Gray	SHAD-41b.ssf
6902	-121.2677201	37.82708916	6339949.873	2124537.522	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,932	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:41pm	C Gray	SHAD-41b.ssf
6903	-121.2677314	37.82707885	6339946.568	2124533.668	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,490	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:43pm	C Gray	SHAD-41b.ssf
6904	-121.2677413	37.82707005	6339943.692	2124530.612	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,713	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:45pm	C Gray	SHAD-41b.ssf
6905	-121.2677517	37.82705998	6339940.667	2124526.972	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,779	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:47pm	C Gray	SHAD-41b.ssf
6906	-121.2677638	37.82705087	6339937.145	2124523.682	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,459	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:49pm	C Gray	SHAD-41b.ssf
6907	-121.2677759	37.82704334	6339934.214	2124520.965	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,344	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:51pm	C Gray	SHAD-41b.ssf
6908	-121.2677765	37.82703579	6339933.413	2124518.223	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,509	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:53pm	C Gray	SHAD-41b.ssf
6909	-121.2677776	37.82703813	6339933.585	2124519.072	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,450	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:55pm	C Gray	SHAD-41b.ssf
6910	-121.2677727	37.82703865	6339934.542	2124519.254	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,555	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:57pm	C Gray	SHAD-41b.ssf
6911	-121.2677681	37.82703833	6339935.853	2124519.125	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,072	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:00:59pm	C Gray	SHAD-41b.ssf
6912	-121.2677745	37.82703847	6339934.016	2124519.198	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	27,542	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:01pm	C Gray	SHAD-41b.ssf
6913	-121.267772	37.82703994	6339934.735	2124519.526	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,069	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:03pm	C Gray	SHAD-41b.ssf
6914	-121.2677647	37.82704466	6339936.847	2124521.423	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,505	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:05pm	C Gray	SHAD-41b.ssf
6915	-121.2677581	37.82705213	6339939.43	2124524.123	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,382	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:07pm	C Gray	SHAD-41b.ssf
6916	-121.2677459	37.82706044	6339941.713	2124527.13	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,320	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:09pm	C Gray	SHAD-41b.ssf
6917	-121.2677379	37.82706844	6339944.663	2124530.018	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,944	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:11pm	C Gray	SHAD-41b.ssf
6918	-121.2677249	37.82707968	6339948.463	2124534.082	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,477	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:13pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6919	-121.26771168	37.82708544	6339950.814	2124536.159	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,278	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:15pm	C Gray	SHAD-41b.ssf
6920	-121.26770662	37.82709964	6339953.907	2124540.126	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,063	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:17pm	C Gray	SHAD-41b.ssf
6921	-121.26769533	37.82710555	6339957.091	2124543.412	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,058	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:19pm	C Gray	SHAD-41b.ssf
6922	-121.26768855	37.82711211	6339959.948	2124545.796	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,422	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:21pm	C Gray	SHAD-41b.ssf
6923	-121.26767676	37.82712112	6339962.72	2124549.055	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,466	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:23pm	C Gray	SHAD-41b.ssf
6924	-121.26766652	37.82713169	6339965.852	2124552.876	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,335	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:25pm	C Gray	SHAD-41b.ssf
6925	-121.26765544	37.82714095	6339968.722	2124556.226	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,925	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:27pm	C Gray	SHAD-41b.ssf
6926	-121.26764616	37.82714873	6339971.413	2124559.038	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,308	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:29pm	C Gray	SHAD-41b.ssf
6927	-121.2676382	37.82715619	6339973.724	2124561.735	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,484	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:31pm	C Gray	SHAD-41b.ssf
6928	-121.2676288	37.82716444	6339976.47	2124564.717	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,941	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:33pm	C Gray	SHAD-41b.ssf
6929	-121.2676195	37.82717225	6339979.175	2124567.536	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,851	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:35pm	C Gray	SHAD-41b.ssf
6930	-121.267609	37.82718188	6339982.25	2124571.018	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,278	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:37pm	C Gray	SHAD-41b.ssf
6931	-121.2676	37.82718886	6339984.848	2124573.541	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,766	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:39pm	C Gray	SHAD-41b.ssf
6932	-121.2675909	37.82719655	6339987.52	2124576.316	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,018	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:41pm	C Gray	SHAD-41b.ssf
6933	-121.2675791	37.82720659	6339990.94	2124579.947	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,094	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:43pm	C Gray	SHAD-41b.ssf
6934	-121.2675692	37.82721453	6339993.829	2124582.812	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,466	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:45pm	C Gray	SHAD-41b.ssf
6935	-121.2675568	37.82722472	6339997.428	2124586.494	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,730	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:47pm	C Gray	SHAD-41b.ssf
6936	-121.2675493	37.8272331	6339999.631	2124589.527	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,996	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:49pm	C Gray	SHAD-41b.ssf
6937	-121.2675426	37.82724009	6340001.577	2124592.057	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,758	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:51pm	C Gray	SHAD-41b.ssf
6938	-121.2675331	37.82724841	6340004.389	2124595.064	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,676	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:53pm	C Gray	SHAD-41b.ssf
6939	-121.2675231	37.82725577	6340007.278	2124597.721	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,572	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:55pm	C Gray	SHAD-41b.ssf
6940	-121.2675108	37.82726686	6340010.825	2124601.73	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,578	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:57pm	C Gray	SHAD-41b.ssf
6941	-121.2675025	37.82727342	6340013.275	2124604.825	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,853	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:01:59pm	C Gray	SHAD-41b.ssf
6942	-121.2674939	37.82728196	6340015.765	2124607.189	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,780	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:01pm	C Gray	SHAD-41b.ssf
6943	-121.2674857	37.82729	6340018.17	2124610.096	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,447	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:03pm	C Gray	SHAD-41b.ssf
6944	-121.2674745	37.82730088	6340021.45	2124614.03	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,448	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:05pm	C Gray	SHAD-41b.ssf
6945	-121.2674645	37.82730944	6340024.355	2124617.125	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,711	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:07pm	C Gray	SHAD-41b.ssf
6946	-121.2674556	37.8273177	6340026.956	2124620.111	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,539	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:09pm	C Gray	SHAD-41b.ssf
6947	-121.2674484	37.82732534	6340029.038	2124622.875	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,939	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:11pm	C Gray	SHAD-41b.ssf
6948	-121.2674354	37.82733744	6340032.825	2124627.251	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,277	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:13pm	C Gray	SHAD-41b.ssf
6949	-121.2674262	37.82734451	6340035.49	2124629.801	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,183	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:15pm	C Gray	SHAD-41b.ssf
6950	-121.2674181	37.82735138	6340037.867	2124632.284	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,840	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:17pm	C Gray	SHAD-41b.ssf
6951	-121.267412	37.82735846	6340039.649	2124634.848	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,649	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:19pm	C Gray	SHAD-41b.ssf
6952	-121.2674101	37.82735661	6340040.084	2124633.986	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,376	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:21pm	C Gray	SHAD-41b.ssf
6953	-121.2674105	37.82735388	6340040.205	2124633.175	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,896	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:23pm	C Gray	SHAD-41b.ssf
6954	-121.2673936	37.82735366	6340044.967	2124633.055	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,725	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:25pm	C Gray	SHAD-41b.ssf
6955	-121.2673986	37.8273543	6340043.529	2124633.302	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,193	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:27pm	C Gray	SHAD-41b.ssf
6956	-121.2673967	37.82735527	6340044.629	2124633.651	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,542	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:29pm	C Gray	SHAD-41b.ssf
6957	-121.2673982	37.82735299	6340043.628	2124632.825	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,563	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:31pm	C Gray	SHAD-41b.ssf
6958	-121.2674065	37.827354613	6340041.219	2124630.343	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,606	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:33pm	C Gray	SHAD-41b.ssf
6959	-121.2674149	37.82733705	6340038.754	2124627.06	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,461	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:35pm	C Gray	SHAD-41b.ssf
6960	-121.267425	37.8273287	6340035.817	2124624.044	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,660	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:37pm	C Gray	SHAD-41b.ssf
6961	-121.267436	37.82732017	6340032.609	2124620.961	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,333	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:39pm	C Gray	SHAD-41b.ssf
6962	-121.2674471	37.82731087	6340029.385	2124617.601	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,863	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:41pm	C Gray	SHAD-41b.ssf
6963	-121.2674578	37.82730139	6340026.256	2124614.177	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,826	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:43pm	C Gray	SHAD-41b.ssf
6964	-121.2674689	37.82729165	6340023.038	2124610.655	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,504	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:45pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
6965	-121.2674767	37.82728515	6340020.755	2124608.307	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,973	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:47pm	C Gray	SHAD-41b.ssf
6966	-121.2674868	37.82727628	6340017.815	2124605.103	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,003	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:49pm	C Gray	SHAD-41b.ssf
6967	-121.267497	37.82726698	6340014.841	2124601.741	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,170	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:51pm	C Gray	SHAD-41b.ssf
6968	-121.2675085	37.82725767	6340011.493	2124598.378	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,584	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:53pm	C Gray	SHAD-41b.ssf
6969	-121.2675169	37.82724932	6340009.034	2124595.358	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,030	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:55pm	C Gray	SHAD-41b.ssf
6970	-121.2675245	37.82724156	6340006.825	2124592.547	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,776	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:57pm	C Gray	SHAD-41b.ssf
6971	-121.2675352	37.82723293	6340003.79	2124589.432	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,979	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:02:59pm	C Gray	SHAD-41b.ssf
6972	-121.2675456	37.82722565	6340000.59	2124586.806	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,234	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:01pm	C Gray	SHAD-41b.ssf
6973	-121.2675556	37.82721609	6339997.769	2124583.347	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,047	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:03pm	C Gray	SHAD-41b.ssf
6974	-121.267565	37.82720824	6339995.021	2124580.512	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,492	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:05pm	C Gray	SHAD-41b.ssf
6975	-121.2675755	37.82719828	6339991.951	2124576.911	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,239	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:07pm	C Gray	SHAD-41b.ssf
6976	-121.2675851	37.82718913	6339989.158	2124573.603	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,659	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:09pm	C Gray	SHAD-41b.ssf
6977	-121.2675969	37.82717882	6339985.716	2124569.875	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,598	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:11pm	C Gray	SHAD-41b.ssf
6978	-121.2676067	37.82717137	6339982.877	2124567.187	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,665	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:13pm	C Gray	SHAD-41b.ssf
6979	-121.2676182	37.82716117	6339979.526	2124563.499	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,503	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:15pm	C Gray	SHAD-41b.ssf
6980	-121.2676274	37.82715256	6339976.844	2124560.386	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,121	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:17pm	C Gray	SHAD-41b.ssf
6981	-121.2676379	37.82714358	6339973.786	2124557.142	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,112	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:19pm	C Gray	SHAD-41b.ssf
6982	-121.2676503	37.82713183	6339970.166	2124552.893	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,718	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:21pm	C Gray	SHAD-41b.ssf
6983	-121.2676612	37.82712154	6339966.982	2124549.173	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,132	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:23pm	C Gray	SHAD-41b.ssf
6984	-121.2676697	37.82711417	6339964.651	2124546.507	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,537	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:25pm	C Gray	SHAD-41b.ssf
6985	-121.2676829	37.82710358	6339960.674	2124542.685	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,888	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:27pm	C Gray	SHAD-41b.ssf
6986	-121.2676917	37.82709455	6339958.093	2124539.416	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,053	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:29pm	C Gray	SHAD-41b.ssf
6987	-121.2676976	37.82708987	6339956.379	2124537.727	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,757	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:30pm	C Gray	SHAD-41b.ssf
6988	-121.2677145	37.82707494	6339951.457	2124532.331	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,904	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:33pm	C Gray	SHAD-41b.ssf
6989	-121.2677329	37.82706654	6339948.698	2124529.258	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,678	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:35pm	C Gray	SHAD-41b.ssf
6990	-121.2677361	37.82705655	6339945.162	2124525.685	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,185	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:37pm	C Gray	SHAD-41b.ssf
6991	-121.2677456	37.82704746	6339942.328	2124522.398	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,473	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:39pm	C Gray	SHAD-41b.ssf
6992	-121.2677538	37.82703708	6339938.613	2124518.651	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,207	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:41pm	C Gray	SHAD-41b.ssf
6993	-121.2677559	37.82703609	6339938.49	2124518.289	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,681	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:43pm	C Gray	SHAD-41b.ssf
6994	-121.2677603	37.82704213	6339938.12	2124518.492	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,381	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:45pm	C Gray	SHAD-41b.ssf
6995	-121.2677476	37.82703775	6339941.774	2124518.868	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,002	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:47pm	C Gray	SHAD-41b.ssf
6996	-121.2677563	37.82703624	6339939.26	2124518.339	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,245	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:49pm	C Gray	SHAD-41b.ssf
6997	-121.2677564	37.82703639	6339939.22	2124518.392	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,934	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:51pm	C Gray	SHAD-41b.ssf
6998	-121.2677539	37.82703738	6339939.957	2124518.747	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,980	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:53pm	C Gray	SHAD-41b.ssf
6999	-121.2677533	37.82704056	6339940.152	2124519.904	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,075	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:55pm	C Gray	SHAD-41b.ssf
7000	-121.2677487	37.82704036	6339941.468	2124520.804	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,928	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:57pm	C Gray	SHAD-41b.ssf
7001	-121.2677425	37.82704878	6339943.29	2124522.871	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,039	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:03:59pm	C Gray	SHAD-41b.ssf
7002	-121.2677353	37.82705687	6339945.398	2124525.801	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,795	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:01pm	C Gray	SHAD-41b.ssf
7003	-121.2677327	37.82706628	6339948.2	2124529.203	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,010	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:03pm	C Gray	SHAD-41b.ssf
7004	-121.2677157	37.82707429	6339951.664	2124532.094	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,340	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:05pm	C Gray	SHAD-41b.ssf
7005	-121.2677027	37.82708235	6339954.892	2124534.999	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,484	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:07pm	C Gray	SHAD-41b.ssf
7006	-121.2676924	37.82708097	6339957.877	2124537.651	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,680	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:09pm	C Gray	SHAD-41b.ssf
7007	-121.2676814	37.82709944	6339961.085	2124541.174	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,833	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:11pm	C Gray	SHAD-41b.ssf
7008	-121.2676714	37.82710908	6339964.001	2124544.66	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,376	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:13pm	C Gray	SHAD-41b.ssf
7009	-121.2676604	37.82711876	6339967.212	2124548.16	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,009	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:15pm	C Gray	SHAD-41b.ssf
7010	-121.2676501	37.82712777	6339970.197	2124551.415	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,060	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:17pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7011	-121.2676396	37.82713646	6339973.252	2124554.555	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,903	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:19pm	C Gray	SHAD-41b.ssf
7012	-121.2676292	37.82714576	6339976.284	2124557.915	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,525	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:21pm	C Gray	SHAD-41b.ssf
7013	-121.2676197	37.82715387	6339979.059	2124560.846	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,277	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:23pm	C Gray	SHAD-41b.ssf
7014	-121.2676101	37.82716097	6339981.87	2124563.409	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,774	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:25pm	C Gray	SHAD-41b.ssf
7015	-121.2676011	37.8271682	6339984.486	2124566.018	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,470	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:27pm	C Gray	SHAD-41b.ssf
7016	-121.2675907	37.82717643	6339987.501	2124568.993	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,700	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:29pm	C Gray	SHAD-41b.ssf
7017	-121.2675812	37.82718615	6339990.885	2124572.507	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,112	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:31pm	C Gray	SHAD-41b.ssf
7018	-121.2675725	37.82719412	6339992.215	2124575.39	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,423	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:33pm	C Gray	SHAD-41b.ssf
7019	-121.2675605	37.82720239	6339996.295	2124578.373	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,305	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:35pm	C Gray	SHAD-41b.ssf
7020	-121.2675515	37.82721087	6339998.939	2124581.439	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,084	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:37pm	C Gray	SHAD-41b.ssf
7021	-121.2675401	37.82722096	6340002.255	2124585.085	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,259	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:39pm	C Gray	SHAD-41b.ssf
7022	-121.2675296	37.82722941	6340005.315	2124588.138	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,183	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:41pm	C Gray	SHAD-41b.ssf
7023	-121.2675175	37.82723999	6340008.848	2124591.96	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,808	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:43pm	C Gray	SHAD-41b.ssf
7024	-121.2675072	37.82724777	6340011.832	2124594.769	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,090	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:45pm	C Gray	SHAD-41b.ssf
7025	-121.2674989	37.82725532	6340014.261	2124597.497	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	64,768	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:47pm	C Gray	SHAD-41b.ssf
7026	-121.2674875	37.82726493	6340017.569	2124600.972	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	60,824	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:49pm	C Gray	SHAD-41b.ssf
7027	-121.2674749	37.82727402	6340020.045	2124604.262	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	51,154	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:51pm	C Gray	SHAD-41b.ssf
7028	-121.2674674	37.82728079	6340023.436	2124606.699	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,434	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:53pm	C Gray	SHAD-41b.ssf
7029	-121.2674612	37.82728897	6340025.254	2124609.661	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,351	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:55pm	C Gray	SHAD-41b.ssf
7030	-121.2674551	37.82729712	6340027.616	2124612.609	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,447	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:57pm	C Gray	SHAD-41b.ssf
7031	-121.2674439	37.82730378	6340030.288	2124615.013	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,448	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:04:59pm	C Gray	SHAD-41b.ssf
7032	-121.267434	37.82731458	6340033.178	2124618.923	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,045	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:05:01pm	C Gray	SHAD-41b.ssf
7033	-121.2674238	37.82732246	6340036.141	2124621.768	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,651	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:05:03pm	C Gray	SHAD-41b.ssf
7034	-121.2674164	37.82733091	6340038.298	2124624.828	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,182	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:05:05pm	C Gray	SHAD-41b.ssf
7035	-121.2674091	37.82733631	6340040.399	2124626.775	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,909	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:05:07pm	C Gray	SHAD-41b.ssf
7036	-121.2674022	37.82734293	6340042.757	2124629.167	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,124	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:05:09pm	C Gray	SHAD-41b.ssf
7037	-121.2673923	37.82735316	6340045.34	2124632.871	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,552	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:05:11pm	C Gray	SHAD-41b.ssf
7038	-121.2673894	37.827355114	6340046.163	2124632.13	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,654	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:05:13pm	C Gray	SHAD-41b.ssf
7039	-121.2673801	37.82734936	6340048.855	2124631.459	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,711	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:05:15pm	C Gray	SHAD-41b.ssf
7040	-121.2673812	37.82734849	6340048.535	2124631.145	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,834	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:05:17pm	C Gray	SHAD-41b.ssf
7041	-121.2673821	37.82734117	6340048.236	2124628.676	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,689	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:05:19pm	C Gray	SHAD-41b.ssf
7042	-121.2673803	37.82734245	6340048.776	2124628.942	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,435	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:05:21pm	C Gray	SHAD-41b.ssf
7043	-121.2673804	37.82734315	6340048.754	2124629.2	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,823	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:05:23pm	C Gray	SHAD-41b.ssf
7044	-121.2673802	37.82734177	6340048.785	2124628.695	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,809	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:05:25pm	C Gray	SHAD-41b.ssf
7045	-121.2673785	37.82734764	6340049.317	2124630.828	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,701	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:03pm	C Gray	SHAD-41b.ssf
7046	-121.2673789	37.82734765	6340049.175	2124630.832	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,349	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:05pm	C Gray	SHAD-41b.ssf
7047	-121.2673788	37.82734821	6340049.215	2124631.038	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,960	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:07pm	C Gray	SHAD-41b.ssf
7048	-121.2673783	37.82734889	6340049.368	2124631.285	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,425	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:09pm	C Gray	SHAD-41b.ssf
7049	-121.2673779	37.82734897	6340049.45	2124631.31	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,748	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:11pm	C Gray	SHAD-41b.ssf
7050	-121.2673778	37.82734888	6340049.472	2124631.281	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,229	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:13pm	C Gray	SHAD-41b.ssf
7051	-121.2673782	37.82734934	6340049.383	2124631.445	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,935	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:15pm	C Gray	SHAD-41b.ssf
7052	-121.2673782	37.82734894	6340049.394	2124631.302	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,734	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:17pm	C Gray	SHAD-41b.ssf
7053	-121.2673781	37.82734915	6340049.443	2124631.376	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,952	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:19pm	C Gray	SHAD-41b.ssf
7054	-121.2673781	37.82734881	6340049.415	2124631.252	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,730	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:20pm	C Gray	SHAD-41b.ssf
7055	-121.2673785	37.82734593	6340049.288	2124630.205	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,595	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:22pm	C Gray	SHAD-41b.ssf
7056	-121.2673734	37.82734251	6340050.753	2124628.95	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,388	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:25pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7057	-121.2673788	37.82734512	6340049.207	2124629.912	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,060	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:27pm	C Gray	SHAD-41b.ssf
7058	-121.2673817	37.82734304	6340048.354	2124629.161	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,870	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:29pm	C Gray	SHAD-41b.ssf
7059	-121.2673893	37.82733376	6340046.16	2124627.2	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,770	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:31pm	C Gray	SHAD-41b.ssf
7060	-121.2673946	37.82733229	6340044.616	2124625.278	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,465	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:33pm	C Gray	SHAD-41b.ssf
7061	-121.2674034	37.82732421	6340042.043	2124622.355	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,027	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:35pm	C Gray	SHAD-41b.ssf
7062	-121.2674133	37.82731567	6340039.145	2124619.269	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,508	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:37pm	C Gray	SHAD-41b.ssf
7063	-121.2674216	37.82730864	6340036.775	2124616.731	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,719	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:39pm	C Gray	SHAD-41b.ssf
7064	-121.2674315	37.82730068	6340033.841	2124613.857	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,198	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:41pm	C Gray	SHAD-41b.ssf
7065	-121.2674441	37.82729446	6340031.096	2124611.612	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,977	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:43pm	C Gray	SHAD-41b.ssf
7066	-121.2674502	37.82728628	6340028.422	2124608.655	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,453	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:45pm	C Gray	SHAD-41b.ssf
7067	-121.2674602	37.82727872	6340025.501	2124605.927	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,799	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:47pm	C Gray	SHAD-41b.ssf
7068	-121.2674672	37.8272718	6340023.451	2124603.423	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,166	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:49pm	C Gray	SHAD-41b.ssf
7069	-121.2674717	37.82726294	6340020.59	2124600.221	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,625	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:51pm	C Gray	SHAD-41b.ssf
7070	-121.267486	37.8272547	6340017.977	2124597.243	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,352	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:53pm	C Gray	SHAD-41b.ssf
7071	-121.267494	37.82724729	6340015.632	2124594.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,200	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:55pm	C Gray	SHAD-41b.ssf
7072	-121.2675032	37.82723874	6340012.962	2124591.473	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,736	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:57pm	C Gray	SHAD-41b.ssf
7073	-121.267512	37.82723131	6340010.413	2124588.786	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,057	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:10:59pm	C Gray	SHAD-41b.ssf
7074	-121.2675216	37.82722464	6340007.601	2124586.381	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,666	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:01pm	C Gray	SHAD-41b.ssf
7075	-121.2675319	37.8272165	6340004.618	2124583.443	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,264	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:03pm	C Gray	SHAD-41b.ssf
7076	-121.2675405	37.82720981	6340002.092	2124581.026	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,635	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:05pm	C Gray	SHAD-41b.ssf
7077	-121.2675505	37.82719142	6339999.202	2124574.381	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,469	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:07pm	C Gray	SHAD-41b.ssf
7078	-121.2675618	37.82718307	6339995.884	2124571.36	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,932	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:09pm	C Gray	SHAD-41b.ssf
7079	-121.2675701	37.82717526	6339993.486	2124568.488	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,183	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:11pm	C Gray	SHAD-41b.ssf
7080	-121.2675809	37.82716504	6339990.313	2124567.589	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,819	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:13pm	C Gray	SHAD-41b.ssf
7081	-121.267592	37.82715798	6339987.108	2124564.828	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,373	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:15pm	C Gray	SHAD-41b.ssf
7082	-121.2676015	37.82714687	6339984.328	2124562.249	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,720	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:17pm	C Gray	SHAD-41b.ssf
7083	-121.2676135	37.82713586	6339980.828	2124558.283	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,343	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:19pm	C Gray	SHAD-41b.ssf
7084	-121.2676242	37.82712656	6339977.699	2124554.298	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,108	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:21pm	C Gray	SHAD-41b.ssf
7085	-121.2676343	37.82711695	6339974.774	2124550.938	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,069	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:23pm	C Gray	SHAD-41b.ssf
7086	-121.2676469	37.8271086	6339968.462	2124547.465	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,884	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:25pm	C Gray	SHAD-41b.ssf
7087	-121.2676559	37.82710569	6339967.214	2124543.399	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,415	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:27pm	C Gray	SHAD-41b.ssf
7088	-121.2676602	37.82710487	6339967.429	2124543.1	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,707	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:29pm	C Gray	SHAD-41b.ssf
7089	-121.2676595	37.82710408	6339967.962	2124542.811	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,677	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:31pm	C Gray	SHAD-41b.ssf
7090	-121.2676599	37.82710528	6339966.962	2124543.251	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,154	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:33pm	C Gray	SHAD-41b.ssf
7091	-121.2676611	37.8271061	6339967.175	2124543.55	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,870	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:35pm	C Gray	SHAD-41b.ssf
7092	-121.2676604	37.82709947	6339965.131	2124541.151	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,494	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:37pm	C Gray	SHAD-41b.ssf
7093	-121.2676674	37.82709162	6339962.09	2124538.316	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,909	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:39pm	C Gray	SHAD-41b.ssf
7094	-121.2676884	37.82708051	6339958.996	2124534.298	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,256	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:41pm	C Gray	SHAD-41b.ssf
7095	-121.2676979	37.82707085	6339956.243	2124530.801	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,209	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:43pm	C Gray	SHAD-41b.ssf
7096	-121.2677011	37.82706171	6339953.322	2124527.497	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,859	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:45pm	C Gray	SHAD-41b.ssf
7097	-121.2677079	37.82705212	6339950.326	2124524.029	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,632	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:47pm	C Gray	SHAD-41b.ssf
7098	-121.2677182	37.82704403	6339947.749	2124519.758	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,928	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:49pm	C Gray	SHAD-41b.ssf
7099	-121.2677319	37.82703656	6339946.321	2124515.181	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,406	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:51pm	C Gray	SHAD-41b.ssf
7100	-121.2677365	37.82702805	6339945.098	2124515.31	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	28,646	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:53pm	C Gray	SHAD-41b.ssf
7101	-121.267736	37.82702805	6339945.098	2124515.31	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,813	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:55pm	C Gray	SHAD-41b.ssf
7102	-121.267736	37.82702805	6339945.098	2124515.31	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,813	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:57pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7103	-121.2677282	37.82703478	6339947.374	2124517.74	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	28,606	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:11:59pm	C Gray	SHAD-41b.ssf
7104	-121.2677369	37.82703523	6339944.874	2124517.924	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,912	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:03pm	C Gray	SHAD-41b.ssf
7105	-121.2677356	37.82703658	6339945.247	2124518.413	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,505	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:03pm	C Gray	SHAD-41b.ssf
7106	-121.2677276	37.82704068	6339947.575	2124519.887	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,070	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:05pm	C Gray	SHAD-41b.ssf
7107	-121.2677185	37.82704805	6339950.226	2124522.551	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	29,757	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:07pm	C Gray	SHAD-41b.ssf
7108	-121.2677104	37.82705505	6339952.564	2124525.078	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,854	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:09pm	C Gray	SHAD-41b.ssf
7109	-121.2677071	37.82706234	6339955.094	2124527.714	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,915	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:11pm	C Gray	SHAD-41b.ssf
7110	-121.2676905	37.82707162	6339958.36	2124531.066	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,415	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:13pm	C Gray	SHAD-41b.ssf
7111	-121.2676808	37.82707924	6339961.187	2124533.817	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,302	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:15pm	C Gray	SHAD-41b.ssf
7112	-121.2676711	37.82708671	6339964.037	2124536.513	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,186	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:17pm	C Gray	SHAD-41b.ssf
7113	-121.2676604	37.82709587	6339967.122	2124539.825	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,865	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:19pm	C Gray	SHAD-41b.ssf
7114	-121.2676512	37.82710562	6339970.183	2124543.348	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,918	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:21pm	C Gray	SHAD-41b.ssf
7115	-121.2676381	37.82711523	6339973.637	2124546.818	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,906	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:23pm	C Gray	SHAD-41b.ssf
7116	-121.2676285	37.82712338	6339976.423	2124549.763	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,469	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:25pm	C Gray	SHAD-41b.ssf
7117	-121.2676213	37.82712928	6339978.52	2124551.895	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,693	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:26pm	C Gray	SHAD-41b.ssf
7118	-121.267608	37.82713911	6339982.396	2124555.446	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,662	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:29pm	C Gray	SHAD-41b.ssf
7119	-121.2676044	37.82714463	6339983.442	2124557.446	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,509	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:30pm	C Gray	SHAD-41b.ssf
7120	-121.2675919	37.82715632	6339987.104	2124561.672	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,003	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:33pm	C Gray	SHAD-41b.ssf
7121	-121.2675817	37.82716502	6339990.066	2124564.814	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,515	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:34pm	C Gray	SHAD-41b.ssf
7122	-121.2675712	37.82717244	6339993.139	2124567.492	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,028	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:37pm	C Gray	SHAD-41b.ssf
7123	-121.2675635	37.82717858	6339995.382	2124569.709	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,041	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:38pm	C Gray	SHAD-41b.ssf
7124	-121.2675522	37.82718637	6339998.654	2124572.519	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,497	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:41pm	C Gray	SHAD-41b.ssf
7125	-121.2675443	37.82719497	6340000.958	2124575.631	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,908	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:42pm	C Gray	SHAD-41b.ssf
7126	-121.2675299	37.8272086	6340005.17	2124580.562	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,203	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:45pm	C Gray	SHAD-41b.ssf
7127	-121.2675102	37.8272167	6340007.988	2124583.486	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,203	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:47pm	C Gray	SHAD-41b.ssf
7128	-121.2675104	37.82722419	6340010.842	2124586.192	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,952	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:49pm	C Gray	SHAD-41b.ssf
7129	-121.2675006	37.82723537	6340013.718	2124590.24	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,748	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:51pm	C Gray	SHAD-41b.ssf
7130	-121.2674887	37.82724681	6340017.171	2124594.377	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	67,475	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:53pm	C Gray	SHAD-41b.ssf
7131	-121.2674774	37.82725621	6340020.472	2124597.773	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	68,756	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:55pm	C Gray	SHAD-41b.ssf
7132	-121.2674666	37.82726431	6340023.602	2124600.695	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,484	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:57pm	C Gray	SHAD-41b.ssf
7133	-121.2674552	37.82727493	6340026.942	2124604.534	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,293	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:12:59pm	C Gray	SHAD-41b.ssf
7134	-121.2674446	37.82728546	6340030.031	2124608.343	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,085	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:01pm	C Gray	SHAD-41b.ssf
7135	-121.2674342	37.82729639	6340033.068	2124612.3	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,181	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:03pm	C Gray	SHAD-41b.ssf
7136	-121.2674248	37.82730479	6340035.813	2124615.337	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,162	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:04pm	C Gray	SHAD-41b.ssf
7137	-121.2674121	37.82731536	6340039.492	2124619.155	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,741	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:07pm	C Gray	SHAD-41b.ssf
7138	-121.2674026	37.82732323	6340042.279	2124621.661	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,542	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:09pm	C Gray	SHAD-41b.ssf
7139	-121.2673931	37.82733119	6340045.027	2124624.872	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,787	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:11pm	C Gray	SHAD-41b.ssf
7140	-121.2673872	37.82733798	6340046.774	2124627.333	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,122	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:13pm	C Gray	SHAD-41b.ssf
7141	-121.2673828	37.82734275	6340048.054	2124629.065	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,977	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:15pm	C Gray	SHAD-41b.ssf
7142	-121.2673719	37.82734279	6340049.157	2124629.059	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,983	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:17pm	C Gray	SHAD-41b.ssf
7143	-121.2673721	37.827349	6340051.169	2124631.309	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,216	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:19pm	C Gray	SHAD-41b.ssf
7144	-121.2673547	37.82734602	6340056.166	2124630.181	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,314	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:21pm	C Gray	SHAD-41b.ssf
7145	-121.2673579	37.82734502	6340055.258	2124629.824	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,761	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:23pm	C Gray	SHAD-41b.ssf
7146	-121.2673559	37.82734514	6340055.803	2124628.553	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,997	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:25pm	C Gray	SHAD-41b.ssf
7147	-121.2673615	37.82733543	6340054.188	2124626.341	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,192	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:27pm	C Gray	SHAD-41b.ssf
7148	-121.26737	37.82732857	6340051.701	2124623.866	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,210	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:29pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7149	-121.267382	37.82731985	6340048.222	2124620.717	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,430	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:31pm	C Gray	SHAD-41b.ssf
7150	-121.267399	37.8273101	6340044.372	2124617.198	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,435	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:33pm	C Gray	SHAD-41b.ssf
7151	-121.267395	37.82730717	6340043.002	2124616.144	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,307	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:34pm	C Gray	SHAD-41b.ssf
7152	-121.2674183	37.82729341	6340037.652	2124611.178	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,525	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:37pm	C Gray	SHAD-41b.ssf
7153	-121.267427	37.82728551	6340035.101	2124608.323	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,411	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:39pm	C Gray	SHAD-41b.ssf
7154	-121.2674388	37.82727524	6340031.685	2124604.61	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,714	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:41pm	C Gray	SHAD-41b.ssf
7155	-121.2674437	37.82727141	6340030.353	2124603.224	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,664	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:42pm	C Gray	SHAD-41b.ssf
7156	-121.2674593	37.82725846	6340025.595	2124598.549	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,558	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:45pm	C Gray	SHAD-41b.ssf
7157	-121.2674655	37.82725112	6340023.891	2124595.889	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,143	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:46pm	C Gray	SHAD-41b.ssf
7158	-121.267477	37.82723945	6340020.539	2124591.67	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,807	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:49pm	C Gray	SHAD-41b.ssf
7159	-121.2674894	37.827229	6340016.929	2124587.893	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,314	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:51pm	C Gray	SHAD-41b.ssf
7160	-121.2675005	37.82722147	6340013.689	2124585.175	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,785	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:53pm	C Gray	SHAD-41b.ssf
7161	-121.2675078	37.82721508	6340011.563	2124582.868	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,430	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:55pm	C Gray	SHAD-41b.ssf
7162	-121.2675182	37.82720623	6340008.526	2124579.671	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,824	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:57pm	C Gray	SHAD-41b.ssf
7163	-121.2675274	37.82719564	6340005.849	2124575.837	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,349	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:13:59pm	C Gray	SHAD-41b.ssf
7164	-121.2675389	37.82718615	6340002.492	2124572.407	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,888	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:01pm	C Gray	SHAD-41b.ssf
7165	-121.2675491	37.82717887	6339999.53	2124569.781	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,946	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:03pm	C Gray	SHAD-41b.ssf
7166	-121.2675587	37.82716768	6339996.713	2124565.728	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,133	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:05pm	C Gray	SHAD-41b.ssf
7167	-121.2675707	37.82715741	6339993.217	2124562.018	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,800	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:07pm	C Gray	SHAD-41b.ssf
7168	-121.2675824	37.8271484	6339989.826	2124558.726	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,732	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:09pm	C Gray	SHAD-41b.ssf
7169	-121.2675916	37.82713862	6339987.131	2124555.225	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,146	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:11pm	C Gray	SHAD-41b.ssf
7170	-121.2675962	37.82713354	6339985.803	2124553.386	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,790	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:12pm	C Gray	SHAD-41b.ssf
7171	-121.2676128	37.82712113	6339980.953	2124548.908	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,375	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:15pm	C Gray	SHAD-41b.ssf
7172	-121.2676234	37.82711148	6339977.873	2124545.42	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,063	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:17pm	C Gray	SHAD-41b.ssf
7173	-121.2676356	37.82710196	6339974.311	2124541.982	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,300	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:19pm	C Gray	SHAD-41b.ssf
7174	-121.2676472	37.82709213	6339970.931	2124538.432	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,373	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:21pm	C Gray	SHAD-41b.ssf
7175	-121.2676595	37.82708249	6339967.359	2124534.948	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,541	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:23pm	C Gray	SHAD-41b.ssf
7176	-121.2676708	37.82707385	6339964.067	2124531.831	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,258	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:25pm	C Gray	SHAD-41b.ssf
7177	-121.267683	37.82706504	6339960.504	2124528.65	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,029	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:27pm	C Gray	SHAD-41b.ssf
7178	-121.2676933	37.8270551	6339957.507	2124525.057	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,020	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:29pm	C Gray	SHAD-41b.ssf
7179	-121.2677044	37.82704531	6339954.265	2124521.519	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,004	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:31pm	C Gray	SHAD-41b.ssf
7180	-121.2677182	37.82703646	6339950.263	2124518.33	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,068	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:33pm	C Gray	SHAD-41b.ssf
7181	-121.2677202	37.82703091	6339949.669	2124516.311	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,333	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:35pm	C Gray	SHAD-41b.ssf
7182	-121.267716	37.82703025	6339950.89	2124516.062	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,327	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:37pm	C Gray	SHAD-41b.ssf
7183	-121.2677074	37.82702886	6339953.356	2124515.534	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,278	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:39pm	C Gray	SHAD-41b.ssf
7184	-121.2677102	37.82702887	6339952.562	2124515.547	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,437	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:41pm	C Gray	SHAD-41b.ssf
7185	-121.2677147	37.82702878	6339951.259	2124515.525	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,535	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:43pm	C Gray	SHAD-41b.ssf
7186	-121.2677106	37.82703034	6339952.459	2124517.195	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,896	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:45pm	C Gray	SHAD-41b.ssf
7187	-121.2677035	37.827030961	6339954.513	2124519.439	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,063	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:47pm	C Gray	SHAD-41b.ssf
7188	-121.2676955	37.827040632	6339956.844	2124521.865	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,837	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:48pm	C Gray	SHAD-41b.ssf
7189	-121.2676873	37.82705413	6339959.247	2124524.688	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,059	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:51pm	C Gray	SHAD-41b.ssf
7190	-121.2676778	37.82706301	6339962.006	2124527.9	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,018	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:53pm	C Gray	SHAD-41b.ssf
7191	-121.2676687	37.82707286	6339964.664	2124531.465	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,421	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:55pm	C Gray	SHAD-41b.ssf
7192	-121.267658	37.82708245	6339967.782	2124534.931	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,371	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:57pm	C Gray	SHAD-41b.ssf
7193	-121.2676462	37.82709096	6339971.233	2124538.003	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,627	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:14:59pm	C Gray	SHAD-41b.ssf
7194	-121.2676372	37.82709779	6339973.832	2124540.467	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,552	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:01pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7195	-121.2676277	37.827110569	6339976.596	2124543.321	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,014	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:03pm	C Gray	SHAD-41b.ssf
7196	-121.2676177	37.82711466	6339979.525	2124546.564	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,073	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:05pm	C Gray	SHAD-41b.ssf
7197	-121.2676088	37.82712339	6339982.129	2124549.72	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,096	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:07pm	C Gray	SHAD-41b.ssf
7198	-121.2675986	37.82713109	6339985.091	2124552.5	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,589	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:09pm	C Gray	SHAD-41b.ssf
7199	-121.2675883	37.82714192	6339988.105	2124556.42	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,621	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:11pm	C Gray	SHAD-41b.ssf
7200	-121.2675814	37.82714486	6339990.109	2124558.835	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,824	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:12pm	C Gray	SHAD-41b.ssf
7201	-121.2675752	37.8271563	6339992.846	2124561.618	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,945	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:14pm	C Gray	SHAD-41b.ssf
7202	-121.2675605	37.82716682	6339996.206	2124565.42	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,636	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:17pm	C Gray	SHAD-41b.ssf
7203	-121.267551	37.82717685	6339998.987	2124569.05	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,182	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:19pm	C Gray	SHAD-41b.ssf
7204	-121.2675416	37.82718518	6340001.723	2124572.062	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,378	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:21pm	C Gray	SHAD-41b.ssf
7205	-121.2675307	37.82719594	6340004.887	2124575.952	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,131	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:23pm	C Gray	SHAD-41b.ssf
7206	-121.2675191	37.82720615	6340008.269	2124579.645	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,845	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:25pm	C Gray	SHAD-41b.ssf
7207	-121.2675104	37.82721391	6340010.821	2124582.45	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,693	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:26pm	C Gray	SHAD-41b.ssf
7208	-121.2674984	37.82722698	6340014.306	2124587.178	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,035	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:29pm	C Gray	SHAD-41b.ssf
7209	-121.2674871	37.82723704	6340017.608	2124590.814	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	54,646	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:31pm	C Gray	SHAD-41b.ssf
7210	-121.2674777	37.82724538	6340020.353	2124593.829	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	77,200	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:33pm	C Gray	SHAD-41b.ssf
7211	-121.2674666	37.82725319	6340023.565	2124596.647	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	87,223	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:34pm	C Gray	SHAD-41b.ssf
7212	-121.2674568	37.82726118	6340026.436	2124599.532	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	71,230	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:37pm	C Gray	SHAD-41b.ssf
7213	-121.2674456	37.82727074	6340029.695	2124602.988	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	57,054	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:39pm	C Gray	SHAD-41b.ssf
7214	-121.2674344	37.82728101	6340032.965	2124606.698	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,931	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:41pm	C Gray	SHAD-41b.ssf
7215	-121.2674253	37.82729015	6340035.623	2124610.006	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,422	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:43pm	C Gray	SHAD-41b.ssf
7216	-121.2674177	37.82729956	6340039.575	2124613.401	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,047	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:45pm	C Gray	SHAD-41b.ssf
7217	-121.2674019	37.82730507	6340042.408	2124615.385	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,039	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:47pm	C Gray	SHAD-41b.ssf
7218	-121.2673936	37.82731341	6340044.851	2124618.401	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,849	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:48pm	C Gray	SHAD-41b.ssf
7219	-121.2673832	37.82732595	6340047.894	2124622.941	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,737	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:51pm	C Gray	SHAD-41b.ssf
7220	-121.2673718	37.8273337	6340051.186	2124625.738	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,612	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:53pm	C Gray	SHAD-41b.ssf
7221	-121.267364	37.82734345	6340053.483	2124629.269	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,166	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:55pm	C Gray	SHAD-41b.ssf
7222	-121.2673581	37.82734717	6340055.206	2124630.61	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,707	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:56pm	C Gray	SHAD-41b.ssf
7223	-121.2673474	37.82734691	6340058.29	2124630.489	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,957	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:15:59pm	C Gray	SHAD-41b.ssf
7224	-121.2673456	37.82734805	6340059.816	2124630.899	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,448	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:01pm	C Gray	SHAD-41b.ssf
7225	-121.2673428	37.82734306	6340059.612	2124629.077	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,034	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:03pm	C Gray	SHAD-41b.ssf
7226	-121.2673442	37.82734095	6340059.177	2124628.313	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,992	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:04pm	C Gray	SHAD-41b.ssf
7227	-121.2673546	37.82732992	6340056.164	2124624.321	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,972	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:06pm	C Gray	SHAD-41b.ssf
7228	-121.2673671	37.82731907	6340052.507	2124620.398	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,843	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:09pm	C Gray	SHAD-41b.ssf
7229	-121.2673778	37.82731427	6340049.389	2124617.583	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,333	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:11pm	C Gray	SHAD-41b.ssf
7230	-121.2673895	37.82730185	6340045.992	2124614.183	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,983	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:13pm	C Gray	SHAD-41b.ssf
7231	-121.2673999	37.82729204	6340042.955	2124610.633	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,658	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:15pm	C Gray	SHAD-41b.ssf
7232	-121.2674092	37.82728143	6340040.225	2124606.794	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,199	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:17pm	C Gray	SHAD-41b.ssf
7233	-121.2674202	37.82727352	6340037.044	2124603.94	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,858	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:18pm	C Gray	SHAD-41b.ssf
7234	-121.2674308	37.82726583	6340033.957	2124601.165	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,141	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:21pm	C Gray	SHAD-41b.ssf
7235	-121.2674412	37.8272544	6340030.915	2124597.027	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,466	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:23pm	C Gray	SHAD-41b.ssf
7236	-121.2674509	37.82724648	6340028.097	2124594.168	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,243	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:25pm	C Gray	SHAD-41b.ssf
7237	-121.2674637	37.82723716	6340024.365	2124590.802	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	78,075	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:27pm	C Gray	SHAD-41b.ssf
7238	-121.2674742	37.82722952	6340021.557	2124588.046	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	103,087	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:29pm	C Gray	SHAD-41b.ssf
7239	-121.2674836	37.82721959	6340018.557	2124584.454	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	87,933	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:31pm	C Gray	SHAD-41b.ssf
7240	-121.267493	37.82721151	6340015.822	2124581.535	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	62,677	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:33pm	C Gray	SHAD-41b.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7241	-121.2675022	37.82720412	6340013.155	2124578.865	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,109	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:34pm	C Gray	SHAD-41b.ssf
7242	-121.2675167	37.82719111	6340009.2	2124574.157	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,750	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:37pm	C Gray	SHAD-41b.ssf
7243	-121.2675264	37.82718128	6340006.078	2124570.605	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,567	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:39pm	C Gray	SHAD-41b.ssf
7244	-121.2675376	37.82717429	6340002.826	2124568.085	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,750	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:40pm	C Gray	SHAD-41b.ssf
7245	-121.2675506	37.82716303	6339999.056	2124564.018	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,538	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:43pm	C Gray	SHAD-41b.ssf
7246	-121.267558	37.82715573	6339996.894	2124561.376	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,191	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:44pm	C Gray	SHAD-41b.ssf
7247	-121.2675742	37.82714294	6339992.603	2124556.795	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,085	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:47pm	C Gray	SHAD-41b.ssf
7248	-121.2675827	37.82713336	6339989.259	2124553.296	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,690	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:49pm	C Gray	SHAD-41b.ssf
7249	-121.267597	37.82712404	6339985.535	2124549.929	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,203	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:51pm	C Gray	SHAD-41b.ssf
7250	-121.2676074	37.82711559	6339982.512	2124546.991	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,432	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:53pm	C Gray	SHAD-41b.ssf
7251	-121.267616	37.8271073	6339980.005	2124543.879	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,602	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:55pm	C Gray	SHAD-41b.ssf
7252	-121.2676264	37.82709816	6339976.96	2124540.517	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,548	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:57pm	C Gray	SHAD-41b.ssf
7253	-121.2676392	37.82708916	6339973.246	2124537.328	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,995	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:16:59pm	C Gray	SHAD-41b.ssf
7254	-121.2676503	37.8270804	6339970	2124534.165	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,685	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:01pm	C Gray	SHAD-41b.ssf
7255	-121.2676596	37.82707175	6339967.282	2124531.04	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,474	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:03pm	C Gray	SHAD-41b.ssf
7256	-121.2676697	37.82706134	6339964.353	2124527.272	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,764	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:05pm	C Gray	SHAD-41b.ssf
7257	-121.2676792	37.8270548	6339961.574	2124524.912	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,168	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:07pm	C Gray	SHAD-41b.ssf
7258	-121.2676879	37.82704775	6339959.054	2124522.369	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,831	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:09pm	C Gray	SHAD-41b.ssf
7259	-121.2676954	37.82704034	6339956.875	2124519.685	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,079	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:11pm	C Gray	SHAD-41b.ssf
7260	-121.2677056	37.82703347	6339953.772	2124517.21	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,226	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:13pm	C Gray	SHAD-41b.ssf
7261	-121.267706	37.82702854	6339953.772	2124515.416	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,946	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:14pm	C Gray	SHAD-41b.ssf
7262	-121.2677092	37.82702849	6339952.845	2124515.404	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,045	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:17pm	C Gray	SHAD-41b.ssf
7263	-121.267697	37.82701956	6339956.35	2124512.124	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,377	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:19pm	C Gray	SHAD-41b.ssf
7264	-121.2677019	37.82702343	6339954.923	2124513.544	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,959	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:21pm	C Gray	SHAD-41b.ssf
7265	-121.2676944	37.82702018	6339957.1	2124512.345	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,790	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:22pm	C Gray	SHAD-41b.ssf
7266	-121.2676969	37.82702008	6339956.361	2124512.312	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,034	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:25pm	C Gray	SHAD-41b.ssf
7267	-121.267696	37.82702115	6339956.635	2124512.701	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,102	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:27pm	C Gray	SHAD-41b.ssf
7268	-121.2676925	37.8270252	6339957.643	2124514.167	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,477	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:29pm	C Gray	SHAD-41b.ssf
7269	-121.2676855	37.82703307	6339959.704	2124517.018	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,918	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:31pm	C Gray	SHAD-41b.ssf
7270	-121.2676756	37.827034298	6339962.593	2124520.6	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,147	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:33pm	C Gray	SHAD-41b.ssf
7271	-121.2676665	37.82705327	6339965.246	2124524.327	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,019	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:35pm	C Gray	SHAD-41b.ssf
7272	-121.2676586	37.82706128	6339967.541	2124527.223	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,498	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:37pm	C Gray	SHAD-41b.ssf
7273	-121.2676478	37.82706994	6339970.709	2124530.351	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,592	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:39pm	C Gray	SHAD-41b.ssf
7274	-121.2676376	37.82707881	6339973.675	2124533.556	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,788	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:41pm	C Gray	SHAD-41b.ssf
7275	-121.2676254	37.82708902	6339977.224	2124537.248	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,936	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:43pm	C Gray	SHAD-41b.ssf
7276	-121.2676157	37.82709734	6339980.046	2124540.253	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,481	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:45pm	C Gray	SHAD-41b.ssf
7277	-121.2676032	37.82710733	6339983.126	2124543.866	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,276	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:47pm	C Gray	SHAD-41b.ssf
7278	-121.2675974	37.82711375	6339985.379	2124546.185	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,062	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:48pm	C Gray	SHAD-41b.ssf
7279	-121.2675886	37.82712481	6339987.947	2124550.192	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,771	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:51pm	C Gray	SHAD-41b.ssf
7280	-121.2675777	37.82713139	6339991.137	2124552.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,219	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:53pm	C Gray	SHAD-41b.ssf
7281	-121.2675692	37.82713764	6339993.607	2124554.816	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,202	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:54pm	C Gray	SHAD-41b.ssf
7282	-121.267558	37.82714863	6339996.855	2124558.79	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,152	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:57pm	C Gray	SHAD-41b.ssf
7283	-121.2675461	37.82715615	6340000.324	2124561.502	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,282	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:17:59pm	C Gray	SHAD-41b.ssf
7284	-121.2675374	37.82716396	6340002.855	2124564.324	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,737	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:01pm	C Gray	SHAD-41b.ssf
7285	-121.2675296	37.82717367	6340005.155	2124567.842	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,567	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:02pm	C Gray	SHAD-41b.ssf
7286	-121.2675209	37.82718211	6340007.678	2124570.895	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,742	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:05pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7287	-121.2675084	37.82719012	6340011.321	2124573.781	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,077	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:07pm	C Gray	SHAD-41b.ssf
7288	-121.2674977	37.82719942	6340014.434	2124577.142	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,542	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:09pm	C Gray	SHAD-41b.ssf
7289	-121.2674889	37.82720783	6340017.015	2124580.185	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,356	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:11pm	C Gray	SHAD-41b.ssf
7290	-121.2674804	37.82721604	6340019.482	2124583.151	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,371	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:13pm	C Gray	SHAD-41b.ssf
7291	-121.2674753	37.8272216	6340020.971	2124585.165	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,401	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:14pm	C Gray	SHAD-41b.ssf
7292	-121.2674597	37.82723474	6340025.523	2124589.911	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	156,823	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:17pm	C Gray	SHAD-41b.ssf
7293	-121.2674502	37.82724321	6340028.291	2124592.973	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	158,909	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:19pm	C Gray	SHAD-41b.ssf
7294	-121.2674450	37.82725256	6340030.985	2124596.357	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	108,399	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:21pm	C Gray	SHAD-41b.ssf
7295	-121.2674316	37.82726118	6340033.714	2124599.472	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,698	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:23pm	C Gray	SHAD-41b.ssf
7296	-121.2674217	37.82727035	6340036.598	2124602.787	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,884	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:25pm	C Gray	SHAD-41b.ssf
7297	-121.2674105	37.82728016	6340039.856	2124606.332	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,063	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:27pm	C Gray	SHAD-41b.ssf
7298	-121.2674042	37.82728495	6340041.682	2124608.065	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,349	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:28pm	C Gray	SHAD-41b.ssf
7299	-121.2673923	37.82729623	6340045.16	2124612.141	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,553	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:31pm	C Gray	SHAD-41b.ssf
7300	-121.2673829	37.82730285	6340047.89	2124614.531	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,806	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:33pm	C Gray	SHAD-41b.ssf
7301	-121.2673747	37.82731121	6340050.303	2124617.554	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,683	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:35pm	C Gray	SHAD-41b.ssf
7302	-121.2673677	37.82731871	6340052.347	2124620.269	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,291	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:36pm	C Gray	SHAD-41b.ssf
7303	-121.2673562	37.82732495	6340055.749	2124624.152	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,741	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:39pm	C Gray	SHAD-41b.ssf
7304	-121.2673471	37.82733879	6340058.34	2124627.531	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,038	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:41pm	C Gray	SHAD-41b.ssf
7305	-121.2673418	37.82734472	6340059.892	2124629.677	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,987	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:43pm	C Gray	SHAD-41b.ssf
7306	-121.2673424	37.827349825	6340059.717	2124630.964	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,879	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:45pm	C Gray	SHAD-41b.ssf
7307	-121.2673721	37.827354993	6340063.587	2124631.51	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,272	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:46pm	C Gray	SHAD-41b.ssf
7308	-121.2673302	37.82734808	6340063.246	2124630.874	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,950	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:49pm	C Gray	SHAD-41b.ssf
7309	-121.2673309	37.82734593	6340063.046	2124630.094	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,955	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:51pm	C Gray	SHAD-41b.ssf
7310	-121.2673363	37.82734006	6340061.477	2124627.968	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,658	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:53pm	C Gray	SHAD-41b.ssf
7311	-121.2673456	37.82733104	6340058.638	2124624.708	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,124	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:54pm	C Gray	SHAD-41b.ssf
7312	-121.2673516	37.827331951	6340055.139	2124620.532	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,497	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:57pm	C Gray	SHAD-41b.ssf
7313	-121.2673649	37.82731334	6340053.139	2124618.307	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,680	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:18:58pm	C Gray	SHAD-41b.ssf
7314	-121.2673772	37.82730288	6340049.543	2124614.528	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,882	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:01pm	C Gray	SHAD-41b.ssf
7315	-121.2673888	37.82729224	6340046.168	2124610.681	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,359	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:03pm	C Gray	SHAD-41b.ssf
7316	-121.2673986	37.82728298	6340043.313	2124607.332	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,048	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:04pm	C Gray	SHAD-41b.ssf
7317	-121.2674082	37.82727366	6340040.499	2124603.962	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,436	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:06pm	C Gray	SHAD-41b.ssf
7318	-121.267417	37.82726523	6340037.928	2124600.912	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,001	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:08pm	C Gray	SHAD-41b.ssf
7319	-121.267425	37.82725833	6340035.596	2124598.421	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,169	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:10pm	C Gray	SHAD-41b.ssf
7320	-121.2674388	37.82724732	6340031.601	2124594.444	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,649	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:13pm	C Gray	SHAD-41b.ssf
7321	-121.2674478	37.82724007	6340028.956	2124591.824	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,813	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:14pm	C Gray	SHAD-41b.ssf
7322	-121.2674563	37.82723277	6340026.493	2124589.188	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	124,136	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:16pm	C Gray	SHAD-41b.ssf
7323	-121.2674696	37.82721948	6340022.613	2124584.378	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	188,248	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:19pm	C Gray	SHAD-41b.ssf
7324	-121.2674796	37.82721111	6340019.711	2124581.356	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	117,694	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:21pm	C Gray	SHAD-41b.ssf
7325	-121.2674884	37.82720238	6340017.127	2124578.198	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68,983	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:23pm	C Gray	SHAD-41b.ssf
7326	-121.2675006	37.82719299	6340013.59	2124574.807	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,564	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:25pm	C Gray	SHAD-41b.ssf
7327	-121.2675118	37.82718461	6340010.322	2124571.781	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,360	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:27pm	C Gray	SHAD-41b.ssf
7328	-121.2675204	37.82717761	6340007.827	2124569.255	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,809	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:28pm	C Gray	SHAD-41b.ssf
7329	-121.2675294	37.82716597	6340005.165	2124565.037	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,319	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:30pm	C Gray	SHAD-41b.ssf
7330	-121.267539	37.8271557	6340002.39	2124561.321	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,994	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:32pm	C Gray	SHAD-41b.ssf
7331	-121.2675491	37.82714576	6339999.436	2124557.727	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,272	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:33pm	C Gray	SHAD-41b.ssf
7332	-121.2675586	37.82713818	6339996.661	2124554.988	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,057	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:36pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7333	-121.2675712	37.82712696	6339992.984	2124550.933	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,410	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:39pm	C Gray	SHAD-41b.ssf
7334	-121.2675803	37.82712202	6339990.355	2124549.155	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,140	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:40pm	C Gray	SHAD-41b.ssf
7335	-121.2675907	37.82711245	6339987.31	2124545.696	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,238	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:43pm	C Gray	SHAD-41b.ssf
7336	-121.2676005	37.82710191	6339984.44	2124541.882	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,626	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:45pm	C Gray	SHAD-41b.ssf
7337	-121.2676064	37.82710004	6339982.751	2124541.213	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,504	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:46pm	C Gray	SHAD-41b.ssf
7338	-121.2676201	37.82708461	6339978.738	2124535.627	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,631	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:49pm	C Gray	SHAD-41b.ssf
7339	-121.2676308	37.82707664	6339975.619	2124532.751	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,484	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:51pm	C Gray	SHAD-41b.ssf
7340	-121.2676424	37.82706686	6339972.245	2124529.852	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,928	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:52pm	C Gray	SHAD-41b.ssf
7341	-121.2676523	37.82705761	6339969.367	2124525.875	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,528	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:55pm	C Gray	SHAD-41b.ssf
7342	-121.2676589	37.82705178	6339967.423	2124523.766	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,513	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:56pm	C Gray	SHAD-41b.ssf
7343	-121.2676706	37.82704416	6339964.047	2124521.018	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,972	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:19:59pm	C Gray	SHAD-41b.ssf
7344	-121.2676813	37.82703442	6339960.924	2124517.499	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,165	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:00pm	C Gray	SHAD-41b.ssf
7345	-121.2676919	37.82702774	6339957.828	2124515.092	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,793	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:02pm	C Gray	SHAD-41b.ssf
7346	-121.2676949	37.82701879	6339956.954	2124511.839	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,063	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:04pm	C Gray	SHAD-41b.ssf
7347	-121.2676934	37.82701916	6339957.374	2124511.971	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,563	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:06pm	C Gray	SHAD-41b.ssf
7348	-121.267692	37.82701727	6339957.784	2124511.28	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,757	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:08pm	C Gray	SHAD-41b.ssf
7349	-121.2676978	37.82701902	6339956.111	2124511.314	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,730	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:11pm	C Gray	SHAD-41b.ssf
7350	-121.267692	37.82701696	6339957.77	2124511.168	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,780	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:12pm	C Gray	SHAD-41b.ssf
7351	-121.2676809	37.82702476	6339961.015	2124513.981	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,041	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:15pm	C Gray	SHAD-41b.ssf
7352	-121.2676735	37.82703165	6339963.174	2124516.436	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,704	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:17pm	C Gray	SHAD-41b.ssf
7353	-121.267668	37.82703575	6339964.778	2124518.316	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,907	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:18pm	C Gray	SHAD-41b.ssf
7354	-121.2676572	37.82704506	6339967.906	2124521.314	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,333	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:20pm	C Gray	SHAD-41b.ssf
7355	-121.2676488	37.82705314	6339970.368	2124524.238	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,027	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:23pm	C Gray	SHAD-41b.ssf
7356	-121.2676764	37.82706132	6339972.918	2124527.196	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,069	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:25pm	C Gray	SHAD-41b.ssf
7357	-121.2676306	37.82706989	6339975.656	2124530.292	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,610	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:27pm	C Gray	SHAD-41b.ssf
7358	-121.2676218	37.82707311	6339978.231	2124533.333	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,001	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:29pm	C Gray	SHAD-41b.ssf
7359	-121.2676148	37.82708499	6339980.276	2124535.753	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,385	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:31pm	C Gray	SHAD-41b.ssf
7360	-121.2676036	37.82709315	6339983.535	2124538.698	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,811	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:33pm	C Gray	SHAD-41b.ssf
7361	-121.2675953	37.82710216	6339985.961	2124541.959	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,816	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:35pm	C Gray	SHAD-41b.ssf
7362	-121.2675859	37.82710911	6339988.691	2124544.466	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,511	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:36pm	C Gray	SHAD-41b.ssf
7363	-121.2675781	37.82711668	6339990.966	2124547.201	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,467	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:38pm	C Gray	SHAD-41b.ssf
7364	-121.2675675	37.82712485	6339994.041	2124550.155	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,131	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:40pm	C Gray	SHAD-41b.ssf
7365	-121.2675575	37.82713442	6339996.981	2124553.614	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,262	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:43pm	C Gray	SHAD-41b.ssf
7366	-121.267549	37.8271423	6339999.458	2124556.465	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,192	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:44pm	C Gray	SHAD-41b.ssf
7367	-121.2675397	37.8271484	6340002.139	2124558.665	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,387	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:46pm	C Gray	SHAD-41b.ssf
7368	-121.2675306	37.82715603	6340004.794	2124561.421	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,226	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:48pm	C Gray	SHAD-41b.ssf
7369	-121.2675209	37.82716372	6340007.627	2124564.197	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,951	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:50pm	C Gray	SHAD-41b.ssf
7370	-121.267514	37.82717273	6340009.647	2124567.461	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,838	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:52pm	C Gray	SHAD-41b.ssf
7371	-121.2675034	37.82718188	6340012.746	2124570.77	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,472	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:55pm	C Gray	SHAD-41b.ssf
7372	-121.2674973	37.82718817	6340014.524	2124573.046	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,219	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:56pm	C Gray	SHAD-41b.ssf
7373	-121.2674835	37.82720056	6340018.538	2124577.524	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,427	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:20:58pm	C Gray	SHAD-41b.ssf
7374	-121.2674735	37.82720927	6340021.452	2124580.67	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,926	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:01pm	C Gray	SHAD-41b.ssf
7375	-121.2674619	37.82721718	6340024.838	2124583.751	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,799	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:03pm	C Gray	SHAD-41b.ssf
7376	-121.2674508	37.82722843	6340028.078	2124587.594	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	182,422	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:05pm	C Gray	SHAD-41b.ssf
7377	-121.2674432	37.82723678	6340030.287	2124590.616	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	228,157	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:06pm	C Gray	SHAD-41b.ssf
7378	-121.2674361	37.82724292	6340032.368	2124592.836	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	148,109	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:08pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7379	-121.2674403	37.82723919	6340031.144	2124591.488	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	108,843	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:10pm	C Gray	SHAD-41b.ssf
7380	-121.2674325	37.8272745	6340033.408	2124593.584	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	105,157	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:13pm	C Gray	SHAD-41b.ssf
7381	-121.2674218	37.82725885	6340036.527	2124598.602	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,684	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:15pm	C Gray	SHAD-41b.ssf
7382	-121.2674145	37.82726865	6340038.67	2124602.152	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,357	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:17pm	C Gray	SHAD-41b.ssf
7383	-121.2674074	37.82727562	6340040.754	2124604.674	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,212	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:18pm	C Gray	SHAD-41b.ssf
7384	-121.2673965	37.82727921	6340043.914	2124605.956	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,300	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:20pm	C Gray	SHAD-41b.ssf
7385	-121.267388	37.82728538	6340046.362	2124608.181	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,718	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:22pm	C Gray	SHAD-41b.ssf
7386	-121.2673768	37.82729519	6340049.63	2124611.728	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,488	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:25pm	C Gray	SHAD-41b.ssf
7387	-121.2673686	37.82730562	6340052.027	2124615.506	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,394	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:27pm	C Gray	SHAD-41b.ssf
7388	-121.2673607	37.8273116	6340054.326	2124617.663	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,213	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:28pm	C Gray	SHAD-41b.ssf
7389	-121.2673481	37.82732231	6340058.005	2124621.533	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,848	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:31pm	C Gray	SHAD-41b.ssf
7390	-121.2673269	37.82733282	6340060.828	2124624.246	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,326	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:32pm	C Gray	SHAD-41b.ssf
7391	-121.2673287	37.82734113	6340063.657	2124628.34	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,416	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:34pm	C Gray	SHAD-41b.ssf
7392	-121.2673269	37.82734235	6340064.182	2124628.78	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,883	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:36pm	C Gray	SHAD-41b.ssf
7393	-121.2673222	37.82734525	6340065.545	2124629.827	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,375	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:38pm	C Gray	SHAD-41b.ssf
7394	-121.2673098	37.82734072	6340069.131	2124628.145	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,690	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:41pm	C Gray	SHAD-41b.ssf
7395	-121.2673128	37.82734209	6340068.26	2124628.653	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,826	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:42pm	C Gray	SHAD-41b.ssf
7396	-121.2673181	37.82733987	6340066.727	2124627.857	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,183	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:45pm	C Gray	SHAD-41b.ssf
7397	-121.2673256	37.82733064	6340064.532	2124624.514	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,056	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:47pm	C Gray	SHAD-41b.ssf
7398	-121.2673355	37.82733218	6340061.673	2124621.318	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,718	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:49pm	C Gray	SHAD-41b.ssf
7399	-121.2673436	37.82733149	6340059.272	2124618.825	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,692	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:50pm	C Gray	SHAD-41b.ssf
7400	-121.2673567	37.82730537	6340055.487	2124615.384	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,982	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:52pm	C Gray	SHAD-41b.ssf
7401	-121.2673676	37.82729603	6340052.292	2124612.01	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,242	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:54pm	C Gray	SHAD-41b.ssf
7402	-121.2673774	37.82728674	6340049.447	2124608.651	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,634	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:56pm	C Gray	SHAD-41b.ssf
7403	-121.2673872	37.8272777	6340046.568	2124605.127	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,956	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:21:58pm	C Gray	SHAD-41b.ssf
7404	-121.267394	37.82727021	6340044.593	2124602.67	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,973	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:00pm	C Gray	SHAD-41b.ssf
7405	-121.2673985	37.82726114	6340043.279	2124599.379	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,116	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:02pm	C Gray	SHAD-41b.ssf
7406	-121.2674084	37.8272562	6340040.384	2124597.605	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,837	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:04pm	C Gray	SHAD-41b.ssf
7407	-121.2674208	37.82724669	6340036.789	2124594.17	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,256	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:07pm	C Gray	SHAD-41b.ssf
7408	-121.2674298	37.82723917	6340034.155	2124591.454	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,756	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:08pm	C Gray	SHAD-41b.ssf
7409	-121.2674371	37.82722892	6340032.034	2124587.74	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90,189	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:10pm	C Gray	SHAD-41b.ssf
7410	-121.2674465	37.82721948	6340029.275	2124584.326	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	138,411	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:13pm	C Gray	SHAD-41b.ssf
7411	-121.2674539	37.82721338	6340027.123	2124582.122	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	156,931	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:14pm	C Gray	SHAD-41b.ssf
7412	-121.2674654	37.82720352	6340023.768	2124578.558	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	105,709	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:16pm	C Gray	SHAD-41b.ssf
7413	-121.2674772	37.82719454	6340020.349	2124575.316	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,479	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:19pm	C Gray	SHAD-41b.ssf
7414	-121.2674852	37.82718883	6340018.02	2124573.258	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,027	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:20pm	C Gray	SHAD-41b.ssf
7415	-121.2674937	37.8271796	6340015.524	2124569.916	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,448	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:22pm	C Gray	SHAD-41b.ssf
7416	-121.2675061	37.82716991	6340011.91	2124566.419	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,857	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:25pm	C Gray	SHAD-41b.ssf
7417	-121.2675125	37.82716449	6340010.068	2124564.458	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,539	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:26pm	C Gray	SHAD-41b.ssf
7418	-121.2675228	37.8271552	6340007.041	2124561.1	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,956	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:28pm	C Gray	SHAD-41b.ssf
7419	-121.2675329	37.82714438	6340004.108	2124557.184	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,332	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:30pm	C Gray	SHAD-41b.ssf
7420	-121.2675414	37.82713788	6340001.628	2124554.84	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,147	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:32pm	C Gray	SHAD-41b.ssf
7421	-121.2675522	37.82712753	6339998.489	2124551.095	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,226	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:35pm	C Gray	SHAD-41b.ssf
7422	-121.2675594	37.82711995	6339996.37	2124548.352	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,589	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:37pm	C Gray	SHAD-41b.ssf
7423	-121.2675683	37.82711286	6339993.781	2124545.79	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,997	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:38pm	C Gray	SHAD-41b.ssf
7424	-121.2675784	37.82710539	6339990.845	2124543.096	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,687	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:41pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7425	-121.2675892	37.82709636	6339987.696	2124539.834	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,109	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:43pm	C Gray	SHAD-41b.ssf
7426	-121.2675998	37.82708777	6339984.611	2124536.732	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,364	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:45pm	C Gray	SHAD-41b.ssf
7427	-121.2676096	37.82707079	6339981.765	2124533.161	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,770	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:47pm	C Gray	SHAD-41b.ssf
7428	-121.2676192	37.82706689	6339978.965	2124529.905	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,104	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:49pm	C Gray	SHAD-41b.ssf
7429	-121.267663	37.82706212	6339975.824	2124527.463	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,528	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:50pm	C Gray	SHAD-41b.ssf
7430	-121.2676387	37.82705579	6339973.272	2124525.177	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,452	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:52pm	C Gray	SHAD-41b.ssf
7431	-121.2676514	37.82704735	6339969.591	2124522.134	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,488	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:54pm	C Gray	SHAD-41b.ssf
7432	-121.2676615	37.82703836	6339966.651	2124518.886	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,779	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:56pm	C Gray	SHAD-41b.ssf
7433	-121.2676727	37.82702627	6339963.382	2124514.511	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,017	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:22:59pm	C Gray	SHAD-41b.ssf
7434	-121.267683	37.82701989	6339960.384	2124511.849	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,490	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:01pm	C Gray	SHAD-41b.ssf
7435	-121.2676889	37.82701697	6339958.636	2124511.163	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,506	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:03pm	C Gray	SHAD-41b.ssf
7436	-121.2676873	37.82701436	6339959.116	2124509.117	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,110	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:04pm	C Gray	SHAD-41b.ssf
7437	-121.2676863	37.82701113	6339959.402	2124509.091	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,681	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:07pm	C Gray	SHAD-41b.ssf
7438	-121.2676895	37.8270123	6339958.483	2124509.462	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,071	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:09pm	C Gray	SHAD-41b.ssf
7439	-121.2676887	37.82700854	6339958.699	2124508.094	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,020	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:10pm	C Gray	SHAD-41b.ssf
7440	-121.2676887	37.82700981	6339959.193	2124508.55	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,286	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:12pm	C Gray	SHAD-41b.ssf
7441	-121.2676804	37.82701637	6339961.134	2124510.922	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,028	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:14pm	C Gray	SHAD-41b.ssf
7442	-121.2676706	37.82702625	6339963.984	2124514.497	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,414	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:17pm	C Gray	SHAD-41b.ssf
7443	-121.2676605	37.82703544	6339966.933	2124517.819	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,190	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:19pm	C Gray	SHAD-41b.ssf
7444	-121.2676515	37.82704287	6339969.556	2124520.503	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,189	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:21pm	C Gray	SHAD-41b.ssf
7445	-121.2675767	37.82705104	6339972.717	2124523.455	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,039	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:23pm	C Gray	SHAD-41b.ssf
7446	-121.2676337	37.82705823	6339974.744	2124526.055	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,456	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:24pm	C Gray	SHAD-41b.ssf
7447	-121.2676234	37.82706623	6339977.741	2124528.943	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,422	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:26pm	C Gray	SHAD-41b.ssf
7448	-121.2676146	37.82707038	6339981.165	2124531.673	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,325	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:28pm	C Gray	SHAD-41b.ssf
7449	-121.2676042	37.82708283	6339983.338	2124534.943	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,001	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:30pm	C Gray	SHAD-41b.ssf
7450	-121.2675931	37.82709448	6339986.555	2124539.158	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,776	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:33pm	C Gray	SHAD-41b.ssf
7451	-121.2675852	37.82710188	6339988.875	2124541.835	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,539	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:35pm	C Gray	SHAD-41b.ssf
7452	-121.2675767	37.82710805	6339991.345	2124544.06	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,841	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:36pm	C Gray	SHAD-41b.ssf
7453	-121.2675669	37.82711647	6339994.188	2124547.104	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,242	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:38pm	C Gray	SHAD-41b.ssf
7454	-121.2675556	37.82712719	6339997.374	2124550.981	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,780	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:41pm	C Gray	SHAD-41b.ssf
7455	-121.2675452	37.82713755	6340000.522	2124554.728	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,826	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:43pm	C Gray	SHAD-41b.ssf
7456	-121.267536	37.82714482	6340003.206	2124557.353	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,046	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:44pm	C Gray	SHAD-41b.ssf
7457	-121.2675266	37.8271526	6340005.947	2124560.164	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,563	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:46pm	C Gray	SHAD-41b.ssf
7458	-121.2675174	37.82716144	6340008.623	2124563.36	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,610	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:49pm	C Gray	SHAD-41b.ssf
7459	-121.2675031	37.82716859	6340011.667	2124565.94	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,715	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:51pm	C Gray	SHAD-41b.ssf
7460	-121.2674983	37.82717626	6340014.204	2124568.712	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,949	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:52pm	C Gray	SHAD-41b.ssf
7461	-121.2674884	37.82718505	6340017.064	2124571.889	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,627	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:55pm	C Gray	SHAD-41b.ssf
7462	-121.2674776	37.82719456	6340020.218	2124575.327	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,481	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:57pm	C Gray	SHAD-41b.ssf
7463	-121.2674688	37.82720031	6340022.786	2124578.413	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,074	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:23:58pm	C Gray	SHAD-41b.ssf
7464	-121.2674603	37.82720956	6340025.259	2124580.746	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,473	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:00pm	C Gray	SHAD-41b.ssf
7465	-121.2674515	37.82721712	6340027.823	2124583.476	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	94,496	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:02pm	C Gray	SHAD-41b.ssf
7466	-121.2674418	37.82722215	6340030.663	2124587.108	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	120,129	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:04pm	C Gray	SHAD-41b.ssf
7467	-121.2674361	37.82723252	6340032.316	2124589.047	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	128,621	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:06pm	C Gray	SHAD-41b.ssf
7468	-121.2674283	37.82723873	6340034.604	2124591.292	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	108,500	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:08pm	C Gray	SHAD-41b.ssf
7469	-121.2674198	37.82724641	6340037.076	2124594.067	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,225	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:10pm	C Gray	SHAD-41b.ssf
7470	-121.2674136	37.82725563	6340038.898	2124597.411	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,362	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:12pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7471	-121.2674002	37.82726409	6340042.797	2124600.459	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,457	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:15pm	C Gray	SHAD-41b.ssf
7472	-121.2673893	37.82727192	6340045.964	2124603.283	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,350	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:17pm	C Gray	SHAD-41b.ssf
7473	-121.2673811	37.82727659	6340048.348	2124604.965	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,754	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:18pm	C Gray	SHAD-41b.ssf
7474	-121.2673713	37.82728639	6340051.203	2124608.509	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,757	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:21pm	C Gray	SHAD-41b.ssf
7475	-121.2673603	37.82729697	6340054.4	2124612.337	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,465	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:23pm	C Gray	SHAD-41b.ssf
7476	-121.2673515	37.82730304	6340056.954	2124614.524	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,094	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:24pm	C Gray	SHAD-41b.ssf
7477	-121.2673442	37.82731408	6340059.674	2124618.521	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,905	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:26pm	C Gray	SHAD-41b.ssf
7478	-121.2673345	37.82731943	6340061.934	2124620.451	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,998	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:28pm	C Gray	SHAD-41b.ssf
7479	-121.2673228	37.827328	6340065.323	2124623.545	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,867	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:30pm	C Gray	SHAD-41b.ssf
7480	-121.2673152	37.82733859	6340067.572	2124627.384	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,312	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:32pm	C Gray	SHAD-41b.ssf
7481	-121.2673076	37.82734238	6340069.75	2124628.747	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,107	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:34pm	C Gray	SHAD-41b.ssf
7482	-121.2673017	37.82733945	6340071.461	2124627.665	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,376	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:37pm	C Gray	SHAD-41b.ssf
7483	-121.2672999	37.82733735	6340071.982	2124626.895	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,167	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:39pm	C Gray	SHAD-41b.ssf
7484	-121.2673008	37.82733978	6340071.713	2124627.783	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,243	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:40pm	C Gray	SHAD-41b.ssf
7485	-121.2673007	37.82733924	6340071.745	2124627.585	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,138	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:42pm	C Gray	SHAD-41b.ssf
7486	-121.2673006	37.82733903	6340071.773	2124627.531	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,424	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:44pm	C Gray	SHAD-41b.ssf
7487	-121.2673021	37.82733939	6340071.34	2124627.512	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,276	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:47pm	C Gray	SHAD-41b.ssf
7488	-121.2673063	37.82733991	6340070.141	2124627.844	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,910	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:48pm	C Gray	SHAD-41b.ssf
7489	-121.2673049	37.82734019	6340070.523	2124628.94	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,739	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:50pm	C Gray	SHAD-41b.ssf
7490	-121.2673047	37.82734161	6340070.539	2124628.459	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,541	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:52pm	C Gray	SHAD-41b.ssf
7491	-121.2673049	37.82734173	6340070.539	2124628.5	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,740	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:54pm	C Gray	SHAD-41b.ssf
7492	-121.2673047	37.82734135	6340070.594	2124628.365	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,000	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:57pm	C Gray	SHAD-41b.ssf
7493	-121.2673075	37.8273435	6340069.803	2124629.153	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,684	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:24:59pm	C Gray	SHAD-41b.ssf
7494	-121.2673029	37.82734554	6340071.128	2124629.886	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,681	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:00pm	C Gray	SHAD-41b.ssf
7495	-121.2672985	37.82734429	6340072.1	2124629.421	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,110	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:02pm	C Gray	SHAD-41b.ssf
7496	-121.2672992	37.82734309	6340072.472	2124628.924	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,800	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:04pm	C Gray	SHAD-41b.ssf
7497	-121.2672974	37.82733841	6340072.696	2124627.277	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,993	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:06pm	C Gray	SHAD-41b.ssf
7498	-121.2672997	37.82733559	6340072.016	2124626.256	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,217	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:08pm	C Gray	SHAD-41b.ssf
7499	-121.2672964	37.82733426	6340072.988	2124625.762	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,855	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:10pm	C Gray	SHAD-41b.ssf
7500	-121.2672955	37.82733661	6340073.243	2124626.431	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,123	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:13pm	C Gray	SHAD-41b.ssf
7501	-121.2672988	37.82733699	6340072.276	2124626.762	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,984	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:14pm	C Gray	SHAD-41b.ssf
7502	-121.267299	37.82733692	6340072.222	2124626.738	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,490	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:16pm	C Gray	SHAD-41b.ssf
7503	-121.2672992	37.8273373	6340072.166	2124626.875	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,516	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:18pm	C Gray	SHAD-41b.ssf
7504	-121.2672992	37.82733727	6340072.172	2124626.866	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,307	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:20pm	C Gray	SHAD-41b.ssf
7505	-121.2672966	37.82733478	6340072.904	2124625.952	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,569	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:22pm	C Gray	SHAD-41b.ssf
7506	-121.267298	37.82733348	6340072.509	2124625.482	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,205	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:24pm	C Gray	SHAD-41b.ssf
7507	-121.2672976	37.82733437	6340072.636	2124625.806	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,142	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:26pm	C Gray	SHAD-41b.ssf
7508	-121.2673034	37.82732642	6340070.919	2124622.926	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,488	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:29pm	C Gray	SHAD-41b.ssf
7509	-121.267311	37.82731952	6340068.727	2124620.437	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,222	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:31pm	C Gray	SHAD-41b.ssf
7510	-121.2673175	37.82731348	6340066.804	2124618.241	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,505	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:32pm	C Gray	SHAD-41b.ssf
7511	-121.2673254	37.82730604	6340064.509	2124615.556	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,185	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:35pm	C Gray	SHAD-41b.ssf
7512	-121.267333	37.82729929	6340062.311	2124613.115	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,295	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:36pm	C Gray	SHAD-41b.ssf
7513	-121.2673387	37.82729236	6340060.633	2124610.606	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,199	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:39pm	C Gray	SHAD-41b.ssf
7514	-121.2673445	37.82728859	6340058.936	2124608.154	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,329	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:40pm	C Gray	SHAD-41b.ssf
7515	-121.2673484	37.82728234	6340057.793	2124606.979	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,937	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:42pm	C Gray	SHAD-41b.ssf
7516	-121.2673568	37.82727362	6340055.347	2124603.824	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,733	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:45pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7517	-121.2673616	37.82726778	6340053.956	2124601.709	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,358	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:46pm	C Gray	SHAD-41b.ssf
7518	-121.2673761	37.82725983	6340051.477	2124598.837	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,830	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:49pm	C Gray	SHAD-41b.ssf
7519	-121.2673760	37.82725506	6340049.536	2124597.113	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,003	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:50pm	C Gray	SHAD-41b.ssf
7520	-121.2673845	37.82724729	6340047.261	2124594.305	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,381	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:52pm	C Gray	SHAD-41b.ssf
7521	-121.2673907	37.82724138	6340045.463	2124592.167	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,208	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:54pm	C Gray	SHAD-41b.ssf
7522	-121.2673988	37.82723239	6340043.111	2124588.914	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,555	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:56pm	C Gray	SHAD-41b.ssf
7523	-121.2674056	37.82722523	6340040.826	2124586.324	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,836	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:25:58pm	C Gray	SHAD-41b.ssf
7524	-121.2674115	37.82721784	6340038.349	2124583.652	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	97,458	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:00pm	C Gray	SHAD-41b.ssf
7525	-121.2674253	37.82720804	6340035.37	2124580.109	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	119,641	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:03pm	C Gray	SHAD-41b.ssf
7526	-121.2674325	37.82720243	6340033.283	2124578.084	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	110,692	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:04pm	C Gray	SHAD-41b.ssf
7527	-121.2674409	37.82719754	6340030.847	2124576.322	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	90,402	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:06pm	C Gray	SHAD-41b.ssf
7528	-121.2674515	37.82718951	6340027.76	2124573.423	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,467	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:09pm	C Gray	SHAD-41b.ssf
7529	-121.2674611	37.82718082	6340024.953	2124570.284	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,404	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:10pm	C Gray	SHAD-41b.ssf
7530	-121.2674698	37.82717224	6340022.401	2124567.178	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,502	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:12pm	C Gray	SHAD-41b.ssf
7531	-121.2674782	37.82716523	6340019.964	2124564.647	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,913	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:14pm	C Gray	SHAD-41b.ssf
7532	-121.2674858	37.82715893	6340017.749	2124562.369	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,758	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:16pm	C Gray	SHAD-41b.ssf
7533	-121.2674954	37.82715086	6340014.944	2124559.456	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,875	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:18pm	C Gray	SHAD-41b.ssf
7534	-121.2675047	37.82714311	6340012.235	2124556.656	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,558	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:20pm	C Gray	SHAD-41b.ssf
7535	-121.2675137	37.82713711	6340009.622	2124554.493	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,824	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:22pm	C Gray	SHAD-41b.ssf
7536	-121.2675229	37.82713042	6340006.956	2124552.077	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,019	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:24pm	C Gray	SHAD-41b.ssf
7537	-121.2675317	37.82712339	6340004.327	2124549.541	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,023	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:26pm	C Gray	SHAD-41b.ssf
7538	-121.2675388	37.82711798	6340002.303	2124547.586	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,763	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:28pm	C Gray	SHAD-41b.ssf
7539	-121.2675491	37.82710981	6339999.331	2124544.635	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,470	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:30pm	C Gray	SHAD-41b.ssf
7540	-121.2675564	37.82710338	6339997.196	2124542.463	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,079	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:32pm	C Gray	SHAD-41b.ssf
7541	-121.2675629	37.82709794	6339995.812	2124540.345	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,165	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:34pm	C Gray	SHAD-41b.ssf
7542	-121.2675714	37.82709173	6339992.827	2124538.104	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,225	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:36pm	C Gray	SHAD-41b.ssf
7543	-121.2675771	37.82708658	6339991.173	2124536.245	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,701	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:38pm	C Gray	SHAD-41b.ssf
7544	-121.2675849	37.82708058	6339988.91	2124534.076	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,300	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:40pm	C Gray	SHAD-41b.ssf
7545	-121.2675919	37.82707642	6339986.874	2124532.578	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,098	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:42pm	C Gray	SHAD-41b.ssf
7546	-121.2675988	37.8270707	6339985.086	2124530.512	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,052	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:44pm	C Gray	SHAD-41b.ssf
7547	-121.2676026	37.82706628	6339983.739	2124528.912	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,038	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:46pm	C Gray	SHAD-41b.ssf
7548	-121.2676089	37.82706075	6339981.913	2124526.912	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,678	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:48pm	C Gray	SHAD-41b.ssf
7549	-121.2676151	37.8270557	6339980.086	2124525.091	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,765	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:50pm	C Gray	SHAD-41b.ssf
7550	-121.2676265	37.82704707	6339976.791	2124521.975	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,182	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:53pm	C Gray	SHAD-41b.ssf
7551	-121.267634	37.82704043	6339974.606	2124519.527	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,530	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:54pm	C Gray	SHAD-41b.ssf
7552	-121.2676435	37.82703332	6339971.827	2124517.007	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,686	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:57pm	C Gray	SHAD-41b.ssf
7553	-121.2676493	37.82702872	6339970.134	2124515.346	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,899	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:26:58pm	C Gray	SHAD-41b.ssf
7554	-121.2676579	37.82702063	6339967.632	2124512.422	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,242	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:00pm	C Gray	SHAD-41b.ssf
7555	-121.2676659	37.82701467	6339965.303	2124510.272	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,992	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:02pm	C Gray	SHAD-41b.ssf
7556	-121.2676738	37.82700747	6339963.011	2124507.669	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,708	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:04pm	C Gray	SHAD-41b.ssf
7557	-121.2676869	37.82700015	6339959.192	2124505.524	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,892	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:07pm	C Gray	SHAD-41b.ssf
7558	-121.2676886	37.82700539	6339958.714	2124506.947	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,965	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:09pm	C Gray	SHAD-41b.ssf
7559	-121.26770029	37.82700029	6339959.378	2124506.033	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,974	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:10pm	C Gray	SHAD-41b.ssf
7560	-121.2676862	37.82700042	6339959.412	2124506.513	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,612	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:12pm	C Gray	SHAD-41b.ssf
7561	-121.2676765	37.82701	6339962.654	2124508.591	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,649	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:14pm	C Gray	SHAD-41b.ssf
7562	-121.2676661	37.82701769	6339965.246	2124511.371	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,387	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:16pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7563	-121.267656	37.82702491	6339968.192	2124513.974	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,084	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:19pm	C Gray	SHAD-41b.ssf
7564	-121.2676499	37.82702952	6339969.966	2124515.641	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,951	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:20pm	C Gray	SHAD-41b.ssf
7565	-121.2676385	37.82703754	6339973.277	2124518.532	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,552	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:22pm	C Gray	SHAD-41b.ssf
7566	-121.2676285	37.82704494	6339976.191	2124521.204	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,530	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:24pm	C Gray	SHAD-41b.ssf
7567	-121.267621	37.8270528	6339978.375	2124524.047	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,841	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:26pm	C Gray	SHAD-41b.ssf
7568	-121.2676146	37.8270587	6339980.244	2124526.182	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,893	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:28pm	C Gray	SHAD-41b.ssf
7569	-121.2676062	37.82706468	6339982.656	2124528.337	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,463	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:30pm	C Gray	SHAD-41b.ssf
7570	-121.2675972	37.82707267	6339985.313	2124531.226	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,202	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:32pm	C Gray	SHAD-41b.ssf
7571	-121.2675874	37.82707981	6339988.165	2124533.803	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,393	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:35pm	C Gray	SHAD-41b.ssf
7572	-121.2675809	37.82708478	6339990.074	2124535.596	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,031	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:36pm	C Gray	SHAD-41b.ssf
7573	-121.2675718	37.82709124	6339992.7	2124537.927	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,483	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:38pm	C Gray	SHAD-41b.ssf
7574	-121.2675613	37.82710103	6339995.759	2124541.467	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,484	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:40pm	C Gray	SHAD-41b.ssf
7575	-121.2675511	37.82711053	6339998.74	2124544.902	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,969	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:43pm	C Gray	SHAD-41b.ssf
7576	-121.2675455	37.82711535	6340000.388	2124546.646	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,106	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:44pm	C Gray	SHAD-41b.ssf
7577	-121.2675244	37.82712613	6340003.53	2124550.545	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,115	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:46pm	C Gray	SHAD-41b.ssf
7578	-121.2675254	37.82713348	6340006.254	2124553.679	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,552	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:48pm	C Gray	SHAD-41b.ssf
7579	-121.2675168	37.82714116	6340008.759	2124556.132	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,245	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:50pm	C Gray	SHAD-41b.ssf
7580	-121.2675085	37.82714852	6340011.17	2124558.633	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,871	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:52pm	C Gray	SHAD-41b.ssf
7581	-121.2674981	37.827151752	6340014.184	2124561.886	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,965	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:54pm	C Gray	SHAD-41b.ssf
7582	-121.2674905	37.82716395	6340016.411	2124564.211	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,494	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:56pm	C Gray	SHAD-41b.ssf
7583	-121.2674738	37.82717241	6340019.823	2124567.261	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	65,204	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:27:58pm	C Gray	SHAD-41b.ssf
7584	-121.2674736	37.82717642	6340021.331	2124568.71	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	62,963	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:00pm	C Gray	SHAD-41b.ssf
7585	-121.2674629	37.8271856	6340024.445	2124572.027	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,710	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:02pm	C Gray	SHAD-41b.ssf
7586	-121.2674527	37.82719431	6340027.426	2124575.173	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,837	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:04pm	C Gray	SHAD-41b.ssf
7587	-121.2674434	37.82720269	6340030.117	2124578.203	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	55,855	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:06pm	C Gray	SHAD-41b.ssf
7588	-121.2674328	37.82721092	6340033.217	2124581.175	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	67,725	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:08pm	C Gray	SHAD-41b.ssf
7589	-121.2674224	37.82721966	6340036.255	2124584.335	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	88,493	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:10pm	C Gray	SHAD-41b.ssf
7590	-121.267414	37.82722528	6340038.673	2124586.358	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	149,652	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:12pm	C Gray	SHAD-41b.ssf
7591	-121.267411	37.82722977	6340039.841	2124587.984	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	158,329	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:13pm	C Gray	SHAD-41b.ssf
7592	-121.2674011	37.82723848	6340042.444	2124591.135	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	98,583	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:16pm	C Gray	SHAD-41b.ssf
7593	-121.267395	37.82724323	6340044.238	2124592.852	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	62,149	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:18pm	C Gray	SHAD-41b.ssf
7594	-121.2673856	37.82725025	6340046.968	2124595.386	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	53,433	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:21pm	C Gray	SHAD-41b.ssf
7595	-121.2673785	37.82725625	6340049.025	2124597.552	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,370	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:22pm	C Gray	SHAD-41b.ssf
7596	-121.2673688	37.82726399	6340051.847	2124600.346	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,190	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:24pm	C Gray	SHAD-41b.ssf
7597	-121.2673582	37.82727272	6340054.948	2124603.519	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,234	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:26pm	C Gray	SHAD-41b.ssf
7598	-121.2673501	37.82727903	6340057.29	2124605.779	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,715	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:28pm	C Gray	SHAD-41b.ssf
7599	-121.2673406	37.82728711	6340060.077	2124608.699	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,723	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:30pm	C Gray	SHAD-41b.ssf
7600	-121.2673319	37.82729451	6340062.613	2124611.373	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,279	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:32pm	C Gray	SHAD-41b.ssf
7601	-121.2673227	37.82730371	6340065.295	2124614.7	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,355	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:34pm	C Gray	SHAD-41b.ssf
7602	-121.2673168	37.82730951	6340067.005	2124616.799	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,685	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:36pm	C Gray	SHAD-41b.ssf
7603	-121.2673086	37.82731785	6340069.398	2124619.815	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,719	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:38pm	C Gray	SHAD-41b.ssf
7604	-121.2673042	37.82732429	6340070.691	2124622.371	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,537	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:40pm	C Gray	SHAD-41b.ssf
7605	-121.2672972	37.82733465	6340072.733	2124625.906	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,919	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:42pm	C Gray	SHAD-41b.ssf
7606	-121.2672845	37.82733842	6340076.269	2124627.25	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,502	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:44pm	C Gray	SHAD-41b.ssf
7607	-121.2672815	37.82733265	6340077.272	2124625.141	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,715	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:46pm	C Gray	SHAD-41b.ssf
7608	-121.2672867	37.82732899	6340075.758	2124623.822	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,804	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:48pm	C Gray	SHAD-41b.ssf



ID	Longitude	Latitude	Eastng	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7609	-121.267293	37.82732051	6340073.91	2124620.746	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,306	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:50pm	C Gray	SHAD-41b.ssf
7610	-121.2672997	37.82731119	6340071.883	2124617.37	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,211	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:52pm	C Gray	SHAD-41b.ssf
7611	-121.2673047	37.82730647	6340070.485	2124615.664	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,600	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:54pm	C Gray	SHAD-41b.ssf
7612	-121.2673137	37.82729709	6340067.863	2124612.267	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,272	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:56pm	C Gray	SHAD-41b.ssf
7613	-121.2673227	37.82728789	6340065.233	2124608.941	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,536	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:28:58pm	C Gray	SHAD-41b.ssf
7614	-121.2673306	37.82728174	6340062.951	2124606.721	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,940	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:00pm	C Gray	SHAD-41b.ssf
7615	-121.2673368	37.82727616	6340061.133	2124604.294	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,604	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:02pm	C Gray	SHAD-41b.ssf
7616	-121.2673454	37.82726675	6340058.609	2124601.798	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,968	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:04pm	C Gray	SHAD-41b.ssf
7617	-121.2673528	37.82725888	6340056.458	2124598.448	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,337	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:06pm	C Gray	SHAD-41b.ssf
7618	-121.2673604	37.82725113	6340054.245	2124595.645	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,136	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:08pm	C Gray	SHAD-41b.ssf
7619	-121.2673683	37.82724284	6340051.928	2124592.645	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,462	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:10pm	C Gray	SHAD-41b.ssf
7620	-121.2673765	37.82723492	6340049.548	2124589.779	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,852	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:12pm	C Gray	SHAD-41b.ssf
7621	-121.2673854	37.82722662	6340046.96	2124586.78	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,583	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:14pm	C Gray	SHAD-41b.ssf
7622	-121.2673942	37.82721826	6340044.372	2124583.756	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,032	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:16pm	C Gray	SHAD-41b.ssf
7623	-121.2674031	37.82721114	6340041.788	2124581.281	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	89,329	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:18pm	C Gray	SHAD-41b.ssf
7624	-121.2674114	37.82720412	6340039.372	2124578.649	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	118,750	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:20pm	C Gray	SHAD-41b.ssf
7625	-121.2674187	37.82719856	6340037.25	2124576.643	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	99,831	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:22pm	C Gray	SHAD-41b.ssf
7626	-121.2674266	37.82719163	6340034.952	2124574.138	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,353	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:24pm	C Gray	SHAD-41b.ssf
7627	-121.2674352	37.82718557	6340032.435	2124571.95	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,590	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:26pm	C Gray	SHAD-41b.ssf
7628	-121.2674437	37.82717852	6340030.959	2124569.403	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,913	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:28pm	C Gray	SHAD-41b.ssf
7629	-121.2674535	37.827171005	6340027.121	2124566.344	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,275	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:30pm	C Gray	SHAD-41b.ssf
7630	-121.2674619	37.82716281	6340024.655	2124563.727	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,855	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:32pm	C Gray	SHAD-41b.ssf
7631	-121.2674702	37.82715515	6340022.24	2124560.959	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,278	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:34pm	C Gray	SHAD-41b.ssf
7632	-121.2674789	37.8271477	6340019.719	2124558.265	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	79,631	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:36pm	C Gray	SHAD-41b.ssf
7633	-121.2674877	37.82713955	6340016.56	2124555.829	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,143	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:38pm	C Gray	SHAD-41b.ssf
7634	-121.2674976	37.82713284	6340014.27	2124552.395	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,048	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:40pm	C Gray	SHAD-41b.ssf
7635	-121.2675073	37.82712483	6340011.449	2124550.007	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,736	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:42pm	C Gray	SHAD-41b.ssf
7636	-121.2675166	37.82711795	6340008.728	2124547.522	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,711	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:44pm	C Gray	SHAD-41b.ssf
7637	-121.2675267	37.82710954	6340005.802	2124544.483	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,453	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:46pm	C Gray	SHAD-41b.ssf
7638	-121.2675362	37.82710191	6340003.021	2124541.728	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,333	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:48pm	C Gray	SHAD-41b.ssf
7639	-121.2675426	37.8270974	6340001.159	2124540.102	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,255	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:50pm	C Gray	SHAD-41b.ssf
7640	-121.2675528	37.82708948	6339998.183	2124537.243	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,105	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:52pm	C Gray	SHAD-41b.ssf
7641	-121.2675615	37.82708275	6339995.658	2124534.811	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,089	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:54pm	C Gray	SHAD-41b.ssf
7642	-121.2675717	37.82707483	6339992.7	2124531.952	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,860	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:56pm	C Gray	SHAD-41b.ssf
7643	-121.2675802	37.82706824	6339990.215	2124529.574	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,055	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:29:58pm	C Gray	SHAD-41b.ssf
7644	-121.2675914	37.82705809	6339986.941	2124525.903	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,777	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:01pm	C Gray	SHAD-41b.ssf
7645	-121.2675988	37.82705248	6339984.794	2124523.878	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29,851	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:02pm	C Gray	SHAD-41b.ssf
7646	-121.26761	37.82704341	6339981.547	2124520.601	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,342	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:04pm	C Gray	SHAD-41b.ssf
7647	-121.2676197	37.82703576	6339978.702	2124517.842	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,330	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:06pm	C Gray	SHAD-41b.ssf
7648	-121.267627	37.82703009	6339976.58	2124515.792	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,881	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:08pm	C Gray	SHAD-41b.ssf
7649	-121.267636	37.82702274	6339973.954	2124513.137	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,046	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:10pm	C Gray	SHAD-41b.ssf
7650	-121.2676453	37.82701632	6339971.257	2124510.821	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,621	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:12pm	C Gray	SHAD-41b.ssf
7651	-121.2676526	37.82701015	6339969.137	2124508.195	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,227	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:14pm	C Gray	SHAD-41b.ssf
7652	-121.2676608	37.82700337	6339966.753	2124506.145	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,478	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:16pm	C Gray	SHAD-41b.ssf
7653	-121.2676703	37.82699733	6339963.977	2124503.969	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,281	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:18pm	C Gray	SHAD-41b.ssf
7654	-121.2676774	37.82699913	6339961.946	2124504.64	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,710	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:20pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7655	-121.2676691	37.82699611	6339964.317	2124503.52	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,263	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:22pm	C Gray	SHAD-41b.ssf
7656	-121.2676733	37.82699444	6339963.093	2124502.92	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,664	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:24pm	C Gray	SHAD-41b.ssf
7657	-121.2676753	37.82698736	6339962.513	2124500.35	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,027	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:26pm	C Gray	SHAD-41b.ssf
7658	-121.2676779	37.82699074	6339961.766	2124501.587	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,928	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:28pm	C Gray	SHAD-41b.ssf
7659	-121.2676724	37.82699246	6339963.355	2124502.198	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,871	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:30pm	C Gray	SHAD-41b.ssf
7660	-121.2676657	37.82699785	6339965.326	2124504.146	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,020	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:32pm	C Gray	SHAD-41b.ssf
7661	-121.2676549	37.82700515	6339968.446	2124506.779	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,740	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:34pm	C Gray	SHAD-41b.ssf
7662	-121.2676445	37.82701219	6339971.477	2124509.318	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,773	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:36pm	C Gray	SHAD-41b.ssf
7663	-121.2676363	37.82701915	6339975.875	2124511.831	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,083	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:38pm	C Gray	SHAD-41b.ssf
7664	-121.267627	37.82702577	6339976.571	2124514.219	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,317	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:40pm	C Gray	SHAD-41b.ssf
7665	-121.2676167	37.82703182	6339979.564	2124516.399	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,937	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:42pm	C Gray	SHAD-41b.ssf
7666	-121.2676048	37.82704028	6339983.601	2124519.447	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,418	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:44pm	C Gray	SHAD-41b.ssf
7667	-121.2675948	37.82704658	6339985.923	2124521.722	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,202	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:46pm	C Gray	SHAD-41b.ssf
7668	-121.2675866	37.82705392	6339988.335	2124524.373	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,379	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:48pm	C Gray	SHAD-41b.ssf
7669	-121.2675777	37.82706043	6339990.923	2124526.722	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,538	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:50pm	C Gray	SHAD-41b.ssf
7670	-121.2675653	37.82707071	6339994.512	2124530.213	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,621	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:52pm	C Gray	SHAD-41b.ssf
7671	-121.2675571	37.82707585	6339996.909	2124532.289	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,341	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:54pm	C Gray	SHAD-41b.ssf
7672	-121.2675454	37.82708623	6340000.318	2124536.042	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,071	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:56pm	C Gray	SHAD-41b.ssf
7673	-121.2675338	37.82709304	6340003.687	2124538.494	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,072	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:30:58pm	C Gray	SHAD-41b.ssf
7674	-121.2675249	37.82710104	6340007.118	2124541.377	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,269	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:00pm	C Gray	SHAD-41b.ssf
7675	-121.2675149	37.82710781	6340009.182	2124543.828	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,111	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:02pm	C Gray	SHAD-41b.ssf
7676	-121.2675044	37.82711692	6340012.242	2124547.12	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,555	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:04pm	C Gray	SHAD-41b.ssf
7677	-121.2674963	37.82712398	6340014.625	2124549.669	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,787	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:06pm	C Gray	SHAD-41b.ssf
7678	-121.267487	37.82713063	6340017.311	2124552.071	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,929	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:08pm	C Gray	SHAD-41b.ssf
7679	-121.2674777	37.82713839	6340020.221	2124554.87	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,968	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:10pm	C Gray	SHAD-41b.ssf
7680	-121.2674656	37.82714541	6340023.557	2124558.295	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,524	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:13pm	C Gray	SHAD-41b.ssf
7681	-121.2674591	37.8271534	6340025.444	2124560.294	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,942	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:14pm	C Gray	SHAD-41b.ssf
7682	-121.2674476	37.82716221	6340028.789	2124563.476	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,604	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:17pm	C Gray	SHAD-41b.ssf
7683	-121.2674395	37.82717005	6340031.164	2124566.312	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73,285	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:18pm	C Gray	SHAD-41b.ssf
7684	-121.2674312	37.82717831	6340033.567	2124569.297	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,348	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:20pm	C Gray	SHAD-41b.ssf
7685	-121.2674241	37.82718452	6340035.651	2124571.543	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,873	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:22pm	C Gray	SHAD-41b.ssf
7686	-121.2674121	37.82719549	6340039.145	2124575.507	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	96,355	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:24pm	C Gray	SHAD-41b.ssf
7687	-121.2674029	37.82720416	6340041.836	2124578.644	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,701	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:26pm	C Gray	SHAD-41b.ssf
7688	-121.2673918	37.82721349	6340045.064	2124582.013	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	107,998	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:29pm	C Gray	SHAD-41b.ssf
7689	-121.2673848	37.82721968	6340047.102	2124584.253	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	117,740	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:30pm	C Gray	SHAD-41b.ssf
7690	-121.2673725	37.82723	6340050.691	2124587.979	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,875	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:32pm	C Gray	SHAD-41b.ssf
7691	-121.2673632	37.82723927	6340053.391	2124591.332	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,462	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:34pm	C Gray	SHAD-41b.ssf
7692	-121.2673544	37.827247	6340055.974	2124594.127	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,967	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:36pm	C Gray	SHAD-41b.ssf
7693	-121.2673433	37.82725862	6340059.204	2124598.33	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,288	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:39pm	C Gray	SHAD-41b.ssf
7694	-121.2673354	37.82726671	6340061.515	2124601.257	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,564	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:40pm	C Gray	SHAD-41b.ssf
7695	-121.2673277	37.827274	6340063.768	2124603.894	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,975	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:42pm	C Gray	SHAD-41b.ssf
7696	-121.2673186	37.82728214	6340066.414	2124606.837	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,262	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:44pm	C Gray	SHAD-41b.ssf
7697	-121.2673119	37.8272903	6340068.374	2124609.794	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,473	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:46pm	C Gray	SHAD-41b.ssf
7698	-121.2673042	37.82730151	6340071.485	2124613.85	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,448	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:48pm	C Gray	SHAD-41b.ssf
7699	-121.2672975	37.82731037	6340073.317	2124617.06	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,028	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:50pm	C Gray	SHAD-41b.ssf
7700	-121.2672876	37.82732116	6340075.472	2124620.972	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,207	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:52pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7701	-121.2672808	37.82733385	6340077.47	2124625.576	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,881	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:54pm	C Gray	SHAD-41b.ssf
7702	-121.2672689	37.82733033	6340080.891	2124624.265	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,254	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:56pm	C Gray	SHAD-41b.ssf
7703	-121.2672703	37.82732889	6340080.449	2124623.747	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73,896	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:31:58pm	C Gray	SHAD-41b.ssf
7704	-121.2672756	37.82732197	6340078.941	2124621.239	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,248	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:00pm	C Gray	SHAD-41b.ssf
7705	-121.2672856	37.82731182	6340076.039	2124617.566	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,376	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:02pm	C Gray	SHAD-41b.ssf
7706	-121.2672941	37.82730148	6340073.548	2124613.821	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,423	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:04pm	C Gray	SHAD-41b.ssf
7707	-121.2673026	37.82729053	6340071.096	2124609.854	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,130	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:06pm	C Gray	SHAD-41b.ssf
7708	-121.2673105	37.82728299	6340068.72	2124607.128	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,133	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:08pm	C Gray	SHAD-41b.ssf
7709	-121.2673221	37.82727138	6340065.373	2124602.926	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,557	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:10pm	C Gray	SHAD-41b.ssf
7710	-121.2673303	37.82726643	6340062.981	2124600.306	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,982	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:12pm	C Gray	SHAD-41b.ssf
7711	-121.2673397	37.82725643	6340060.237	2124597.524	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,556	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:14pm	C Gray	SHAD-41b.ssf
7712	-121.2673471	37.82724894	6340058.088	2124594.816	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,550	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:16pm	C Gray	SHAD-41b.ssf
7713	-121.2673567	37.82724088	6340055.268	2124591.906	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,672	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:18pm	C Gray	SHAD-41b.ssf
7714	-121.2673648	37.82723423	6340052.909	2124589.501	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,348	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:20pm	C Gray	SHAD-41b.ssf
7715	-121.2673731	37.82722611	6340050.494	2124586.566	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,531	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:22pm	C Gray	SHAD-41b.ssf
7716	-121.2673813	37.82721843	6340048.097	2124583.788	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,768	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:24pm	C Gray	SHAD-41b.ssf
7717	-121.2673911	37.82720997	6340045.245	2124580.731	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,063	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:26pm	C Gray	SHAD-41b.ssf
7718	-121.2674019	37.82720275	6340042.113	2124578.127	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	95,552	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:28pm	C Gray	SHAD-41b.ssf
7719	-121.2674097	37.8271963	6340039.846	2124575.798	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	96,358	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:30pm	C Gray	SHAD-41b.ssf
7720	-121.2674176	37.82718974	6340037.551	2124573.427	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,526	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:32pm	C Gray	SHAD-41b.ssf
7721	-121.2674259	37.82718368	6340035.207	2124571.241	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	89,898	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:34pm	C Gray	SHAD-41b.ssf
7722	-121.2674379	37.82717351	6340031.632	2124567.566	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,173	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:36pm	C Gray	SHAD-41b.ssf
7723	-121.2674445	37.82716643	6340029.549	2124565.006	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,671	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:38pm	C Gray	SHAD-41b.ssf
7724	-121.2674546	37.82715814	6340026.747	2124562.011	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,680	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:40pm	C Gray	SHAD-41b.ssf
7725	-121.2674635	37.82714947	6340024.164	2124558.874	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,395	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:42pm	C Gray	SHAD-41b.ssf
7726	-121.2674736	37.82713961	6340020.953	2124555.31	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,416	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:44pm	C Gray	SHAD-41b.ssf
7727	-121.2674819	37.82713272	6340018.808	2124552.819	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,427	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:46pm	C Gray	SHAD-41b.ssf
7728	-121.2674918	37.82712297	6340015.919	2124549.29	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,836	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:48pm	C Gray	SHAD-41b.ssf
7729	-121.267501	37.82711487	6340013.233	2124546.363	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,802	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:50pm	C Gray	SHAD-41b.ssf
7730	-121.2675107	37.82710483	6340010.387	2124542.73	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,428	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:53pm	C Gray	SHAD-41b.ssf
7731	-121.2675188	37.82709801	6340008.048	2124540.267	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,158	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:54pm	C Gray	SHAD-41b.ssf
7732	-121.2675269	37.82709207	6340005.676	2124538.125	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,418	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:56pm	C Gray	SHAD-41b.ssf
7733	-121.2675388	37.82708822	6340002.215	2124534.559	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,049	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:32:58pm	C Gray	SHAD-41b.ssf
7734	-121.2675476	37.82707535	6339999.642	2124532.085	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,503	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:00pm	C Gray	SHAD-41b.ssf
7735	-121.2675545	37.82706906	6339997.642	2124529.81	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,480	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:02pm	C Gray	SHAD-41b.ssf
7736	-121.2675632	37.82706187	6339995.098	2124527.214	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,757	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:04pm	C Gray	SHAD-41b.ssf
7737	-121.2675703	37.82705544	6339993.051	2124524.888	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,694	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:06pm	C Gray	SHAD-41b.ssf
7738	-121.2675784	37.82704815	6339990.675	2124522.254	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,581	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:08pm	C Gray	SHAD-41b.ssf
7739	-121.2675863	37.82704144	6339988.372	2124519.83	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,424	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:10pm	C Gray	SHAD-41b.ssf
7740	-121.2675938	37.82703538	6339986.177	2124517.64	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,964	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:12pm	C Gray	SHAD-41b.ssf
7741	-121.2676028	37.82702849	6339983.564	2124515.154	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,782	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:14pm	C Gray	SHAD-41b.ssf
7742	-121.2676128	37.8270203	6339980.657	2124512.195	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,674	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:16pm	C Gray	SHAD-41b.ssf
7743	-121.2676202	37.82701302	6339977.926	2124509.566	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,490	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:18pm	C Gray	SHAD-41b.ssf
7744	-121.2676302	37.8270076	6339975.582	2124507.613	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,805	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:20pm	C Gray	SHAD-41b.ssf
7745	-121.2676389	37.82700106	6339973.076	2124505.253	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,892	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:22pm	C Gray	SHAD-41b.ssf
7746	-121.2676475	37.82699554	6339970.571	2124503.261	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,370	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:24pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7747	-121.2676556	37.82698957	6339968.217	2124501.106	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,547	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:26pm	C Gray	SHAD-41b.ssf
7748	-121.2676625	37.82698437	6339966.203	2124499.229	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,150	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:28pm	C Gray	SHAD-41b.ssf
7749	-121.2676744	37.82697939	6339962.74	2124497.443	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,369	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:30pm	C Gray	SHAD-41b.ssf
7750	-121.2676756	37.82697998	6339962.388	2124497.663	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,385	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:32pm	C Gray	SHAD-41b.ssf
7751	-121.2676778	37.826978	6339961.773	2124496.945	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,481	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:34pm	C Gray	SHAD-41b.ssf
7752	-121.2676784	37.82697884	6339961.692	2124497.251	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,755	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:36pm	C Gray	SHAD-41b.ssf
7753	-121.2676778	37.82697913	6339961.746	2124497.358	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,217	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:38pm	C Gray	SHAD-41b.ssf
7754	-121.2676778	37.82697913	6339961.761	2124497.368	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,826	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:40pm	C Gray	SHAD-41b.ssf
7755	-121.2676778	37.82697928	6339961.773	2124497.411	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,156	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:42pm	C Gray	SHAD-41b.ssf
7756	-121.2676777	37.82697939	6339961.801	2124497.454	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,374	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:44pm	C Gray	SHAD-41b.ssf
7757	-121.2676777	37.82697939	6339961.785	2124497.452	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,021	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:46pm	C Gray	SHAD-41b.ssf
7758	-121.2676778	37.82697946	6339961.765	2124497.479	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,235	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:48pm	C Gray	SHAD-41b.ssf
7759	-121.2676779	37.82697932	6339961.732	2124497.382	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,834	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:50pm	C Gray	SHAD-41b.ssf
7760	-121.2676778	37.82697929	6339961.75	2124497.417	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,747	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:52pm	C Gray	SHAD-41b.ssf
7761	-121.2676778	37.82697946	6339961.765	2124497.479	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,118	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:54pm	C Gray	SHAD-41b.ssf
7762	-121.2676776	37.82697913	6339961.822	2124497.359	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,965	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:56pm	C Gray	SHAD-41b.ssf
7763	-121.2676772	37.82697848	6339961.928	2124497.121	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,260	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:33:58pm	C Gray	SHAD-41b.ssf
7764	-121.2676771	37.82697862	6339961.967	2124497.171	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,409	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:00pm	C Gray	SHAD-41b.ssf
7765	-121.2676756	37.82698185	6339962.412	2124498.341	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,192	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:02pm	C Gray	SHAD-41b.ssf
7766	-121.2676706	37.82697883	6339963.838	2124497.23	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,078	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:04pm	C Gray	SHAD-41b.ssf
7767	-121.2676716	37.82698151	6339963.56	2124498.21	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,191	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:06pm	C Gray	SHAD-41b.ssf
7768	-121.2676612	37.82698886	6339966.578	2124500.767	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,497	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:08pm	C Gray	SHAD-41b.ssf
7769	-121.2676504	37.82699947	6339969.723	2124502.964	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,895	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:10pm	C Gray	SHAD-41b.ssf
7770	-121.2676361	37.82700030	6339973.88	2124505.961	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,238	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:12pm	C Gray	SHAD-41b.ssf
7771	-121.2676237	37.82701142	6339977.478	2124508.987	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,258	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:14pm	C Gray	SHAD-41b.ssf
7772	-121.2676101	37.82702016	6339981.428	2124512.138	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,266	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:16pm	C Gray	SHAD-41b.ssf
7773	-121.2675995	37.82702693	6339984.524	2124514.577	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,727	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:18pm	C Gray	SHAD-41b.ssf
7774	-121.2675859	37.82703606	6339988.467	2124517.869	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,419	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:20pm	C Gray	SHAD-41b.ssf
7775	-121.2675749	37.82704448	6339991.686	2124520.908	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,817	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:22pm	C Gray	SHAD-41b.ssf
7776	-121.2675648	37.82705276	6339994.625	2124523.899	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,948	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:24pm	C Gray	SHAD-41b.ssf
7777	-121.2675535	37.82706069	6339997.904	2124526.76	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,335	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:26pm	C Gray	SHAD-41b.ssf
7778	-121.267543	37.82706778	6340000.962	2124529.318	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,086	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:28pm	C Gray	SHAD-41b.ssf
7779	-121.2675344	37.82707436	6340003.473	2124531.691	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,358	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:30pm	C Gray	SHAD-41b.ssf
7780	-121.2675238	37.82708508	6340006.545	2124535.571	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,631	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:32pm	C Gray	SHAD-41b.ssf
7781	-121.2675163	37.82709166	6340008.742	2124537.738	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,439	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:34pm	C Gray	SHAD-41b.ssf
7782	-121.2675009	37.82710313	6340013.212	2124542.091	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,496	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:36pm	C Gray	SHAD-41b.ssf
7783	-121.2674894	37.82711117	6340016.579	2124544.988	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,984	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:38pm	C Gray	SHAD-41b.ssf
7784	-121.2674789	37.82711946	6340019.632	2124547.982	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,164	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:40pm	C Gray	SHAD-41b.ssf
7785	-121.2674692	37.82712811	6340022.444	2124551.108	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,977	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:42pm	C Gray	SHAD-41b.ssf
7786	-121.2674607	37.82713591	6340024.934	2124553.928	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,455	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:44pm	C Gray	SHAD-41b.ssf
7787	-121.2674491	37.82714677	6340028.318	2124557.857	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,001	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:46pm	C Gray	SHAD-41b.ssf
7788	-121.2674385	37.82715593	6340031.412	2124561.168	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,890	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:48pm	C Gray	SHAD-41b.ssf
7789	-121.2674474	37.82716265	6340034.614	2124563.587	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88,125	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:51pm	C Gray	SHAD-41b.ssf
7790	-121.2674185	37.82717095	6340037.211	2124566.589	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,830	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:52pm	C Gray	SHAD-41b.ssf
7791	-121.2674087	37.82718012	6340040.085	2124569.904	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,255	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:54pm	C Gray	SHAD-41b.ssf
7792	-121.2673993	37.82718884	6340042.822	2124573.057	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,639	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:56pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7793	-121.2673883	37.827191774	6340046.039	2124576.27	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,997	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:34:58pm	C Gray	SHAD-41b.ssf
7794	-121.2673818	37.827205031	6340047.938	2124578.91	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	95,310	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:00pm	C Gray	SHAD-41b.ssf
7795	-121.2673684	37.827217161	6340051.835	2124583.46	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	111,136	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:02pm	C Gray	SHAD-41b.ssf
7796	-121.2673567	37.82722575	6340055.248	2124586.394	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,477	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:04pm	C Gray	SHAD-41b.ssf
7797	-121.2673487	37.82723404	6340057.579	2124589.395	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,731	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:06pm	C Gray	SHAD-41b.ssf
7798	-121.2673399	37.82724235	6340060.134	2124592.729	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,656	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:08pm	C Gray	SHAD-41b.ssf
7799	-121.2673288	37.82725454	6340063.413	2124596.817	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,576	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:10pm	C Gray	SHAD-41b.ssf
7800	-121.2673227	37.82726152	6340065.125	2124599.337	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,252	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:12pm	C Gray	SHAD-41b.ssf
7801	-121.267317	37.82726976	6340066.834	2124602.325	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,528	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:14pm	C Gray	SHAD-41b.ssf
7802	-121.267307	37.82727856	6340069.755	2124605.506	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,259	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:16pm	C Gray	SHAD-41b.ssf
7803	-121.2672997	37.82728688	6340071.89	2124608.519	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,532	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:18pm	C Gray	SHAD-41b.ssf
7804	-121.2672919	37.82729474	6340074.142	2124611.361	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,554	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:20pm	C Gray	SHAD-41b.ssf
7805	-121.2672844	37.82730288	6340076.347	2124614.308	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,251	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:22pm	C Gray	SHAD-41b.ssf
7806	-121.2672757	37.82731342	6340078.884	2124618.125	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,941	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:24pm	C Gray	SHAD-41b.ssf
7807	-121.2672688	37.82732188	6340080.89	2124620.314	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,090	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:26pm	C Gray	SHAD-41b.ssf
7808	-121.2672641	37.82732647	6340082.266	2124622.849	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,642	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:28pm	C Gray	SHAD-41b.ssf
7809	-121.2672542	37.827332178	6340085.136	2124621.118	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,185	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:30pm	C Gray	SHAD-41b.ssf
7810	-121.2672534	37.82732188	6340085.345	2124621.153	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,275	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:32pm	C Gray	SHAD-41b.ssf
7811	-121.2672581	37.827331984	6340083.982	2124620.42	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,675	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:34pm	C Gray	SHAD-41b.ssf
7812	-121.2672646	37.827331028	6340082.082	2124616.957	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,325	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:36pm	C Gray	SHAD-41b.ssf
7813	-121.2672724	37.82730257	6340079.81	2124614.166	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,583	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:38pm	C Gray	SHAD-41b.ssf
7814	-121.2672814	37.82729296	6340077.175	2124610.687	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,328	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:40pm	C Gray	SHAD-41b.ssf
7815	-121.2672907	37.82728404	6340074.469	2124607.464	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,052	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:42pm	C Gray	SHAD-41b.ssf
7816	-121.2672999	37.82727611	6340071.791	2124604.598	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,192	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:44pm	C Gray	SHAD-41b.ssf
7817	-121.2673187	37.82726779	6340069.23	2124601.63	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,936	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:46pm	C Gray	SHAD-41b.ssf
7818	-121.2673089	37.82725771	6340066.26	2124597.943	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,901	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:48pm	C Gray	SHAD-41b.ssf
7819	-121.2673285	37.82724813	6340063.437	2124594.476	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,733	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:50pm	C Gray	SHAD-41b.ssf
7820	-121.267337	37.82723917	6340060.951	2124591.234	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,308	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:52pm	C Gray	SHAD-41b.ssf
7821	-121.2673456	37.82723205	6340058.472	2124588.663	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,771	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:54pm	C Gray	SHAD-41b.ssf
7822	-121.2673554	37.82722385	6340055.613	2124585.699	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,338	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:56pm	C Gray	SHAD-41b.ssf
7823	-121.267364	37.82721552	6340053.097	2124582.687	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,410	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:35:58pm	C Gray	SHAD-41b.ssf
7824	-121.267372	37.82720793	6340050.775	2124579.941	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68,826	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:00pm	C Gray	SHAD-41b.ssf
7825	-121.2673804	37.82720018	6340048.309	2124577.14	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	101,734	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:02pm	C Gray	SHAD-41b.ssf
7826	-121.2673903	37.82719067	6340045.436	2124573.703	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	116,584	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:04pm	C Gray	SHAD-41b.ssf
7827	-121.2673991	37.82718263	6340042.858	2124570.794	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	81,155	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:06pm	C Gray	SHAD-41b.ssf
7828	-121.2674104	37.82717375	6340039.566	2124567.589	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,004	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:08pm	C Gray	SHAD-41b.ssf
7829	-121.2674173	37.82716728	6340037.559	2124565.251	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,743	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:10pm	C Gray	SHAD-41b.ssf
7830	-121.2674292	37.82715728	6340034.302	2124561.634	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,898	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:12pm	C Gray	SHAD-41b.ssf
7831	-121.2674388	37.82714915	6340031.302	2124558.698	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,824	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:14pm	C Gray	SHAD-41b.ssf
7832	-121.2674478	37.82714104	6340028.685	2124555.765	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	93,857	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:16pm	C Gray	SHAD-41b.ssf
7833	-121.2674559	37.82713364	6340026.296	2124553.091	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,411	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:18pm	C Gray	SHAD-41b.ssf
7834	-121.2674665	37.82712521	6340023.229	2124550.046	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,277	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:20pm	C Gray	SHAD-41b.ssf
7835	-121.2674786	37.8271159	6340019.718	2124546.688	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,728	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:22pm	C Gray	SHAD-41b.ssf
7836	-121.2674882	37.82710803	6340016.918	2124543.844	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,438	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:24pm	C Gray	SHAD-41b.ssf
7837	-121.2674976	37.82710128	6340014.17	2124541.406	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,828	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:26pm	C Gray	SHAD-41b.ssf
7838	-121.2675085	37.8270925	6340011.004	2124538.236	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,222	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:28pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7839	-121.26752	37.82708399	6340007.636	2124535.164	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,632	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:30pm	C Gray	SHAD-41b.ssf
7840	-121.2675308	37.82707526	6340004.461	2124532.01	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,754	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:32pm	C Gray	SHAD-41b.ssf
7841	-121.2675373	37.82706858	6340002.444	2124529.597	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,798	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:34pm	C Gray	SHAD-41b.ssf
7842	-121.2675507	37.82705924	6339998.717	2124526.227	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,994	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:36pm	C Gray	SHAD-41b.ssf
7843	-121.2675605	37.82705117	6339995.846	2124523.312	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,051	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:38pm	C Gray	SHAD-41b.ssf
7844	-121.2675692	37.82704046	6339993.332	2124520.939	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,510	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:40pm	C Gray	SHAD-41b.ssf
7845	-121.2675836	37.82703284	6339989.173	2124516.691	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,171	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:43pm	C Gray	SHAD-41b.ssf
7846	-121.2675919	37.82702589	6339986.709	2124514.545	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,057	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:44pm	C Gray	SHAD-41b.ssf
7847	-121.2676009	37.82701939	6339984.086	2124511.835	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,841	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:46pm	C Gray	SHAD-41b.ssf
7848	-121.2676107	37.82701124	6339981.244	2124508.889	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,866	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:48pm	C Gray	SHAD-41b.ssf
7849	-121.2676203	37.82700376	6339978.447	2124506.188	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,954	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:50pm	C Gray	SHAD-41b.ssf
7850	-121.2676299	37.82699558	6339975.651	2124503.316	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,312	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:52pm	C Gray	SHAD-41b.ssf
7851	-121.2676403	37.82698881	6339972.61	2124500.536	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,606	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:54pm	C Gray	SHAD-41b.ssf
7852	-121.2676472	37.82698219	6339970.61	2124498.399	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,355	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:56pm	C Gray	SHAD-41b.ssf
7853	-121.2676603	37.82697234	6339966.808	2124494.846	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,515	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:36:58pm	C Gray	SHAD-41b.ssf
7854	-121.2676694	37.82697161	6339964.164	2124494.601	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,309	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:00pm	C Gray	SHAD-41b.ssf
7855	-121.2676692	37.82697036	6339966.305	2124494.126	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,317	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:02pm	C Gray	SHAD-41b.ssf
7856	-121.267662	37.82697361	6339966.313	2124495.311	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,515	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:04pm	C Gray	SHAD-41b.ssf
7857	-121.2676513	37.82697857	6339969.413	2124497.093	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,628	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:06pm	C Gray	SHAD-41b.ssf
7858	-121.2676278	37.82698942	6339972.548	2124499.772	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,688	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:08pm	C Gray	SHAD-41b.ssf
7859	-121.2676405	37.82699498	6339976.252	2124503.013	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,593	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:10pm	C Gray	SHAD-41b.ssf
7860	-121.2676156	37.82700337	6339979.791	2124506.036	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,198	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:12pm	C Gray	SHAD-41b.ssf
7861	-121.2676035	37.82701215	6339983.307	2124509.204	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,300	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:14pm	C Gray	SHAD-41b.ssf
7862	-121.2675931	37.82701844	6339986.356	2124514.472	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,702	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:16pm	C Gray	SHAD-41b.ssf
7863	-121.2675802	37.82702783	6339990.083	2124514.859	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,504	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:18pm	C Gray	SHAD-41b.ssf
7864	-121.2675696	37.82703634	6339993.172	2124517.933	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,113	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:20pm	C Gray	SHAD-41b.ssf
7865	-121.2675593	37.82704475	6339996.196	2124520.97	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,685	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:22pm	C Gray	SHAD-41b.ssf
7866	-121.2675487	37.82705424	6339999.265	2124524.4	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,370	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:24pm	C Gray	SHAD-41b.ssf
7867	-121.2675387	37.82706223	6340002.192	2124527.285	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,324	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:26pm	C Gray	SHAD-41b.ssf
7868	-121.2675298	37.82706833	6340004.781	2124529.486	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,249	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:28pm	C Gray	SHAD-41b.ssf
7869	-121.2675165	37.82707734	6340008.644	2124532.734	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,721	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:30pm	C Gray	SHAD-41b.ssf
7870	-121.267505	37.82708658	6340011.991	2124536.073	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,351	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:32pm	C Gray	SHAD-41b.ssf
7871	-121.2674938	37.82709442	6340015.246	2124538.899	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,315	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:34pm	C Gray	SHAD-41b.ssf
7872	-121.2674844	37.82710083	6340017.971	2124541.213	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,635	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:36pm	C Gray	SHAD-41b.ssf
7873	-121.2674742	37.82710897	6340020.962	2124544.151	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,261	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:38pm	C Gray	SHAD-41b.ssf
7874	-121.2674623	37.8271178	6340024.414	2124547.339	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,302	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:40pm	C Gray	SHAD-41b.ssf
7875	-121.2674537	37.82712614	6340026.92	2124550.356	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,432	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:42pm	C Gray	SHAD-41b.ssf
7876	-121.2674425	37.82713593	6340030.187	2124553.892	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,315	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:44pm	C Gray	SHAD-41b.ssf
7877	-121.2674333	37.8271433	6340032.858	2124556.556	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,357	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:46pm	C Gray	SHAD-41b.ssf
7878	-121.2674202	37.82715402	6340036.693	2124560.426	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,102	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:48pm	C Gray	SHAD-41b.ssf
7879	-121.2674093	37.82716241	6340039.867	2124563.457	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,678	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:50pm	C Gray	SHAD-41b.ssf
7880	-121.2673966	37.82717141	6340043.555	2124567.687	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,787	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:52pm	C Gray	SHAD-41b.ssf
7881	-121.2673875	37.82718354	6340046.09	2124571.1	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,830	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:54pm	C Gray	SHAD-41b.ssf
7882	-121.2673759	37.82719545	6340049.719	2124575.407	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,400	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:56pm	C Gray	SHAD-41b.ssf
7883	-121.2673661	37.82720336	6340052.45	2124578.266	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	93,971	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:37:58pm	C Gray	SHAD-41b.ssf
7884	-121.2673551	37.82721157	6340055.666	2124581.23	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	100,604	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:00pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7885	-121.2673455	37.82722033	6340058.464	2124584.396	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,820	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:02pm	C Gray	SHAD-41b.ssf
7886	-121.2673346	37.82723035	6340065.226	2124588.016	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,625	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:04pm	C Gray	SHAD-41b.ssf
7887	-121.2673222	37.82724106	6340061.643	2124591.887	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,992	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:06pm	C Gray	SHAD-41b.ssf
7888	-121.2673155	37.82724793	6340067.188	2124594.373	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,587	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:08pm	C Gray	SHAD-41b.ssf
7889	-121.2673056	37.82725816	6340070.103	2124598.075	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,231	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:10pm	C Gray	SHAD-41b.ssf
7890	-121.2672974	37.82726592	6340072.473	2124600.883	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,827	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:12pm	C Gray	SHAD-41b.ssf
7891	-121.2672888	37.82727423	6340075.103	2124603.886	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,231	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:14pm	C Gray	SHAD-41b.ssf
7892	-121.2672754	37.82728257	6340077.908	2124606.901	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,231	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:16pm	C Gray	SHAD-41b.ssf
7893	-121.267272	37.82729212	6340079.883	2124610.026	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,870	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:18pm	C Gray	SHAD-41b.ssf
7894	-121.2672641	37.82730181	6340082.209	2124613.87	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,953	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:20pm	C Gray	SHAD-41b.ssf
7895	-121.2672575	37.8273092	6340084.146	2124616.547	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,804	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:22pm	C Gray	SHAD-41b.ssf
7896	-121.2672519	37.82732018	6340085.78	2124620.53	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,724	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:24pm	C Gray	SHAD-41b.ssf
7897	-121.2672488	37.82732304	6340086.678	2124621.565	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,483	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:26pm	C Gray	SHAD-41b.ssf
7898	-121.2672395	37.82731874	6340089.361	2124619.978	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,918	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:28pm	C Gray	SHAD-41b.ssf
7899	-121.2672421	37.82731691	6340088.618	2124619.315	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,789	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:30pm	C Gray	SHAD-41b.ssf
7900	-121.26731069	37.82731069	6340087.865	2124617.059	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,176	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:32pm	C Gray	SHAD-41b.ssf
7901	-121.2672534	37.82730405	6340085.306	2124614.662	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,187	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:34pm	C Gray	SHAD-41b.ssf
7902	-121.267262	37.82729973	6340082.787	2124611.286	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,738	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:36pm	C Gray	SHAD-41b.ssf
7903	-121.2672703	37.82728462	6340080.377	2124607.625	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,636	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:38pm	C Gray	SHAD-41b.ssf
7904	-121.2672808	37.82727472	6340077.305	2124604.401	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,594	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:40pm	C Gray	SHAD-41b.ssf
7905	-121.2673571	37.82727076	6340075.46	2124601.441	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,421	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:42pm	C Gray	SHAD-41b.ssf
7906	-121.2672972	37.82725809	6340072.529	2124598.029	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,113	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:44pm	C Gray	SHAD-41b.ssf
7907	-121.2673049	37.82725083	6340070.28	2124595.404	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,017	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:46pm	C Gray	SHAD-41b.ssf
7908	-121.2673171	37.82724054	6340066.709	2124591.687	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,262	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:48pm	C Gray	SHAD-41b.ssf
7909	-121.2673267	37.8272326	6340063.921	2124588.819	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,754	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:50pm	C Gray	SHAD-41b.ssf
7910	-121.2673371	37.82722378	6340060.9	2124585.619	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,524	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:52pm	C Gray	SHAD-41b.ssf
7911	-121.2673458	37.82721695	6340058.356	2124583.167	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,705	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:54pm	C Gray	SHAD-41b.ssf
7912	-121.2673571	37.82720776	6340055.057	2124579.845	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,728	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:56pm	C Gray	SHAD-41b.ssf
7913	-121.2673676	37.82719968	6340052.02	2124576.93	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,406	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:38:58pm	C Gray	SHAD-41b.ssf
7914	-121.2673766	37.82719104	6340049.388	2124573.803	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	101,948	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:00pm	C Gray	SHAD-41b.ssf
7915	-121.2673884	37.82717197	6340045.943	2124569.702	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88,546	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:02pm	C Gray	SHAD-41b.ssf
7916	-121.2673978	37.82717219	6340043.211	2124566.991	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,805	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:04pm	C Gray	SHAD-41b.ssf
7917	-121.2674114	37.82716021	6340039.231	2124562.661	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,758	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:06pm	C Gray	SHAD-41b.ssf
7918	-121.2674218	37.82715102	6340036.216	2124559.34	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,221	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:08pm	C Gray	SHAD-41b.ssf
7919	-121.2674296	37.82714295	6340033.938	2124556.42	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	83,737	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:10pm	C Gray	SHAD-41b.ssf
7920	-121.2674383	37.82713403	6340031.398	2124553.19	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88,670	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:12pm	C Gray	SHAD-41b.ssf
7921	-121.2674487	37.82712505	6340028.352	2124549.946	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,017	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:14pm	C Gray	SHAD-41b.ssf
7922	-121.2674592	37.82711627	6340025.293	2124546.775	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,982	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:16pm	C Gray	SHAD-41b.ssf
7923	-121.2674681	37.82711053	6340022.715	2124544.706	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,618	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:18pm	C Gray	SHAD-41b.ssf
7924	-121.2674806	37.82709977	6340019.075	2124540.819	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,654	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:20pm	C Gray	SHAD-41b.ssf
7925	-121.2674918	37.82709041	6340015.817	2124537.437	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,239	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:22pm	C Gray	SHAD-41b.ssf
7926	-121.2675019	37.82708118	6340012.864	2124534.1	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,227	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:24pm	C Gray	SHAD-41b.ssf
7927	-121.2675124	37.82707213	6340009.806	2124530.827	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,445	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:26pm	C Gray	SHAD-41b.ssf
7928	-121.2675248	37.82706217	6340006.195	2124527.012	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,685	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:28pm	C Gray	SHAD-41b.ssf
7929	-121.2675355	37.82705353	6340003.072	2124524.11	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,676	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:30pm	C Gray	SHAD-41b.ssf
7930	-121.2675466	37.82704473	6339999.863	2124520.933	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,115	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:32pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7931	-121.2675581	37.82703605	6339996.492	2124517.801	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,155	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:34pm	C Gray	SHAD-41b.ssf
7932	-121.2675617	37.82702878	6339999.865	2124515.175	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,100	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:36pm	C Gray	SHAD-41b.ssf
7933	-121.2675711	37.82701764	6339989.801	2124511.151	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,182	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:38pm	C Gray	SHAD-41b.ssf
7934	-121.2675899	37.82701098	6339987.244	2124508.747	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,179	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:40pm	C Gray	SHAD-41b.ssf
7935	-121.2676033	37.82699969	6339983.336	2124504.669	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,841	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:42pm	C Gray	SHAD-41b.ssf
7936	-121.2676114	37.82699232	6339980.229	2124502.01	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,995	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:44pm	C Gray	SHAD-41b.ssf
7937	-121.2676271	37.82698277	6339976.414	2124498.562	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,740	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:46pm	C Gray	SHAD-41b.ssf
7938	-121.2676343	37.82697635	6339974.306	2124496.244	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,695	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:48pm	C Gray	SHAD-41b.ssf
7939	-121.2676466	37.82696653	6339970.729	2124492.697	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,443	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:50pm	C Gray	SHAD-41b.ssf
7940	-121.2676593	37.82696635	6339967.067	2124491.635	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,465	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:52pm	C Gray	SHAD-41b.ssf
7941	-121.2676538	37.82696204	6339968.644	2124491.077	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,658	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:54pm	C Gray	SHAD-41b.ssf
7942	-121.2676553	37.82696116	6339968.204	2124490.76	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,753	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:56pm	C Gray	SHAD-41b.ssf
7943	-121.2676463	37.82696706	6339970.825	2124492.889	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,241	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:39:58pm	C Gray	SHAD-41b.ssf
7944	-121.2676335	37.82697371	6339974.537	2124495.279	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,138	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:00pm	C Gray	SHAD-41b.ssf
7945	-121.2676581	37.82698137	6339978.583	2124498.035	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,533	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:02pm	C Gray	SHAD-41b.ssf
7946	-121.2676081	37.82698811	6339981.917	2124500.462	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,781	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:04pm	C Gray	SHAD-41b.ssf
7947	-121.2675947	37.82699752	6339985.818	2124503.855	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,051	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:06pm	C Gray	SHAD-41b.ssf
7948	-121.2675821	37.82700686	6339989.493	2124507.23	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,275	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:08pm	C Gray	SHAD-41b.ssf
7949	-121.2675716	37.82701425	6339992.539	2124509.894	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,406	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:10pm	C Gray	SHAD-41b.ssf
7950	-121.2675581	37.82702517	6339996.467	2124513.84	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,616	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:12pm	C Gray	SHAD-41b.ssf
7951	-121.2675445	37.82703495	6340003.557	2124519.656	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,534	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:14pm	C Gray	SHAD-41b.ssf
7952	-121.2675187	37.82705074	6340007.917	2124523.055	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,845	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:16pm	C Gray	SHAD-41b.ssf
7953	-121.2675044	37.82706131	6340012.08	2124526.87	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,117	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:20pm	C Gray	SHAD-41b.ssf
7954	-121.2674904	37.82706795	6340014.936	2124529.266	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,457	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:22pm	C Gray	SHAD-41b.ssf
7955	-121.2674846	37.82707917	6340019.069	2124533.315	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,484	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:24pm	C Gray	SHAD-41b.ssf
7956	-121.2674719	37.82708538	6340021.539	2124535.556	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,330	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:26pm	C Gray	SHAD-41b.ssf
7957	-121.2674582	37.82709663	6340025.547	2124539.62	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,500	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:28pm	C Gray	SHAD-41b.ssf
7958	-121.2674456	37.82710677	6340029.217	2124543.285	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,519	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:30pm	C Gray	SHAD-41b.ssf
7959	-121.2674351	37.82711681	6340032.262	2124546.913	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,630	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:32pm	C Gray	SHAD-41b.ssf
7960	-121.2674248	37.82712546	6340035.256	2124550.038	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,468	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:34pm	C Gray	SHAD-41b.ssf
7961	-121.2674159	37.82713385	6340037.866	2124553.073	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,321	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:36pm	C Gray	SHAD-41b.ssf
7962	-121.2674055	37.82714473	6340040.895	2124557.009	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,022	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:38pm	C Gray	SHAD-41b.ssf
7963	-121.2673938	37.82715557	6340044.317	2124560.928	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	79,844	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:40pm	C Gray	SHAD-41b.ssf
7964	-121.2673887	37.82716595	6340050.102	2124564.686	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	84,111	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:42pm	C Gray	SHAD-41b.ssf
7965	-121.267374	37.82717576	6340053.56	2124572.854	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	86,044	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:44pm	C Gray	SHAD-41b.ssf
7966	-121.2673621	37.82718852	6340056.869	2124580.502	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,841	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:46pm	C Gray	SHAD-41b.ssf
7967	-121.2673508	37.82719862	6340060.379	2124587.734	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	97,594	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:48pm	C Gray	SHAD-41b.ssf
7968	-121.2673387	37.82721032	6340063.343	2124588.75	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	98,635	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:50pm	C Gray	SHAD-41b.ssf
7969	-121.2673286	37.82721867	6340068.379	2124583.75	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,538	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:52pm	C Gray	SHAD-41b.ssf
7970	-121.2673122	37.82722905	6340068.095	2124587.492	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,490	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:54pm	C Gray	SHAD-41b.ssf
7971	-121.2672996	37.82724096	6340071.761	2124591.798	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,269	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:56pm	C Gray	SHAD-41b.ssf
7972	-121.2672921	37.82725084	6340073.961	2124595.379	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,950	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:40:58pm	C Gray	SHAD-41b.ssf
7973	-121.2672845	37.82726132	6340077.053	2124599.169	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,664	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:00pm	C Gray	SHAD-41b.ssf
7974	-121.2672711	37.82727633	6340079.214	2124600.974	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,499	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:02pm	C Gray	SHAD-41b.ssf
7975	-121.2672623	37.827287801	6340082.654	2124605.201	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,759	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:04pm	C Gray	SHAD-41b.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
7977	-121.2672528	37.82728821	6340085.425	2124608.89	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,766	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:106pm	C Gray	SHAD-41b.ssf
7978	-121.2672439	37.82729791	6340088.032	2124612.402	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,777	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:08pm	C Gray	SHAD-41b.ssf
7979	-121.2672362	37.8273076	6340090.293	2124615.911	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,814	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:10pm	C Gray	SHAD-41b.ssf
7980	-121.2672352	37.82730994	6340090.581	2124616.76	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,094	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:12pm	C Gray	SHAD-41b.ssf
7981	-121.2672289	37.82730775	6340092.394	2124615.95	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,796	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:14pm	C Gray	SHAD-41b.ssf
7982	-121.2672264	37.8273074	6340093.113	2124615.815	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,310	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:16pm	C Gray	SHAD-41b.ssf
7983	-121.2672349	37.82729521	6340090.623	2124611.398	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,954	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:18pm	C Gray	SHAD-41b.ssf
7984	-121.2672438	37.82728687	6340088.023	2124608.382	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,676	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:20pm	C Gray	SHAD-41b.ssf
7985	-121.2672561	37.82727469	6340084.436	2124603.975	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,447	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:22pm	C Gray	SHAD-41b.ssf
7986	-121.2672673	37.82726601	6340081.186	2124600.844	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,911	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:24pm	C Gray	SHAD-41b.ssf
7987	-121.2672792	37.82725618	6340077.723	2124597.291	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,841	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:26pm	C Gray	SHAD-41b.ssf
7988	-121.2672911	37.82726498	6340074.258	2124593.961	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,893	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:28pm	C Gray	SHAD-41b.ssf
7989	-121.2673047	37.82723559	6340070.285	2124589.856	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,641	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:30pm	C Gray	SHAD-41b.ssf
7990	-121.2673156	37.82722729	6340067.121	2124586.858	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,573	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:32pm	C Gray	SHAD-41b.ssf
7991	-121.2673294	37.82721621	6340063.096	2124579.276	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,373	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:34pm	C Gray	SHAD-41b.ssf
7992	-121.2673415	37.82720663	6340059.569	2124575.743	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,485	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:36pm	C Gray	SHAD-41b.ssf
7993	-121.2673514	37.82719891	6340056.694	2124576.61	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,978	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:38pm	C Gray	SHAD-41b.ssf
7994	-121.2673623	37.82718946	6340053.516	2124573.196	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	94,168	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:40pm	C Gray	SHAD-41b.ssf
7995	-121.2673723	37.82717837	6340050.589	2124569.179	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	102,157	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:42pm	C Gray	SHAD-41b.ssf
7996	-121.2673812	37.82716945	6340047.986	2124565.953	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73,720	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:44pm	C Gray	SHAD-41b.ssf
7997	-121.2673939	37.82715771	6340044.276	2124561.71	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,093	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:46pm	C Gray	SHAD-41b.ssf
7998	-121.2674036	37.82714673	6340040.504	2124557.743	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	66,198	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:48pm	C Gray	SHAD-41b.ssf
7999	-121.2674136	37.82713735	6340038.539	2124554.343	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68,147	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:50pm	C Gray	SHAD-41b.ssf
8000	-121.267428	37.82712409	6340034.337	2124549.549	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77,843	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:52pm	C Gray	SHAD-41b.ssf
8001	-121.2674432	37.82711482	6340031.361	2124546.139	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,762	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:54pm	C Gray	SHAD-41b.ssf
8002	-121.2674592	37.82710415	6340028.067	2124542.008	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,148	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:56pm	C Gray	SHAD-41b.ssf
8003	-121.2674644	37.82709299	6340023.721	2124538.311	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,567	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:41:58pm	C Gray	SHAD-41b.ssf
8004	-121.2674741	37.8270838	6340020.892	2124534.989	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,768	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:00pm	C Gray	SHAD-41b.ssf
8005	-121.2674836	37.82707434	6340018.147	2124531.565	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,456	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:02pm	C Gray	SHAD-41b.ssf
8006	-121.2674944	37.82706594	6340014.993	2124528.533	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,310	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:04pm	C Gray	SHAD-41b.ssf
8007	-121.2675078	37.82705339	6340011.093	2124523.995	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,316	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:06pm	C Gray	SHAD-41b.ssf
8008	-121.2675188	37.82704516	6340007.881	2124521.023	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,647	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:08pm	C Gray	SHAD-41b.ssf
8009	-121.2675302	37.82703652	6340004.572	2124517.905	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,514	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:10pm	C Gray	SHAD-41b.ssf
8010	-121.2675438	37.82702718	6340000.605	2124514.535	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,290	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:12pm	C Gray	SHAD-41b.ssf
8011	-121.2675573	37.82701739	6339996.684	2124511.003	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30,378	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:14pm	C Gray	SHAD-41b.ssf
8012	-121.2675691	37.82700886	6339993.242	2124507.926	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,881	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:16pm	C Gray	SHAD-41b.ssf
8013	-121.2675811	37.82699988	6339989.766	2124504.686	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,487	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:18pm	C Gray	SHAD-41b.ssf
8014	-121.2675932	37.82699179	6339986.243	2124501.769	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,658	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:20pm	C Gray	SHAD-41b.ssf
8015	-121.2676031	37.82698417	6339983.347	2124499.017	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,591	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:22pm	C Gray	SHAD-41b.ssf
8016	-121.2676177	37.82697384	6339979.104	2124495.289	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,566	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:24pm	C Gray	SHAD-41b.ssf
8017	-121.2676274	37.82696421	6339976.264	2124491.805	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,442	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:26pm	C Gray	SHAD-41b.ssf
8018	-121.2676361	37.82695662	6339973.73	2124489.065	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,595	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:28pm	C Gray	SHAD-41b.ssf
8019	-121.2676488	37.8269508	6339970.072	2124488.534	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,362	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:30pm	C Gray	SHAD-41b.ssf
8020	-121.2676436	37.82695522	6339971.568	2124488.21	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,466	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:32pm	C Gray	SHAD-41b.ssf
8021	-121.2676416	37.82695222	6339972.127	2124487.475	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,608	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:34pm	C Gray	SHAD-41b.ssf
8022	-121.2676389	37.82695103	6339972.899	2124487.033	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,187	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:36pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8023	-121.2676385	37.82695066	6339973.015	2124486.9	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,774	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:38pm	C Gray	SHAD-41b.ssf
8024	-121.2676264	37.82695778	6339976.555	2124489.463	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,675	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:40pm	C Gray	SHAD-41b.ssf
8025	-121.2676102	37.82697003	6339981.26	2124493.883	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,420	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:43pm	C Gray	SHAD-41b.ssf
8026	-121.2676005	37.82697842	6339984.084	2124496.918	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,891	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:44pm	C Gray	SHAD-41b.ssf
8027	-121.2675878	37.82699013	6339987.782	2124501.15	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,600	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:46pm	C Gray	SHAD-41b.ssf
8028	-121.2675761	37.82700091	6339991.21	2124505.046	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,562	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:48pm	C Gray	SHAD-41b.ssf
8029	-121.2675646	37.82701021	6339994.545	2124508.405	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,262	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:50pm	C Gray	SHAD-41b.ssf
8030	-121.2675519	37.82702027	6339998.242	2124512.04	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,771	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:52pm	C Gray	SHAD-41b.ssf
8031	-121.2675404	37.82703031	6340001.598	2124515.667	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	31,784	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:54pm	C Gray	SHAD-41b.ssf
8032	-121.2675308	37.82703857	6340004.391	2124518.653	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,530	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:56pm	C Gray	SHAD-41b.ssf
8033	-121.2675177	37.8270508	6340008.223	2124523.076	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,301	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:42:58pm	C Gray	SHAD-41b.ssf
8034	-121.2675043	37.82706018	6340011.553	2124526.464	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,916	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:00pm	C Gray	SHAD-41b.ssf
8035	-121.2674943	37.82707045	6340015.024	2124530.175	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	32,327	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:02pm	C Gray	SHAD-41b.ssf
8036	-121.2674836	37.82707849	6340018.155	2124533.075	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,200	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:04pm	C Gray	SHAD-41b.ssf
8037	-121.2674719	37.82708877	6340021.56	2124536.791	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,546	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:06pm	C Gray	SHAD-41b.ssf
8038	-121.2674609	37.82709817	6340024.773	2124540.189	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,154	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:08pm	C Gray	SHAD-41b.ssf
8039	-121.2674497	37.82710896	6340028.039	2124544.091	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,928	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:10pm	C Gray	SHAD-41b.ssf
8040	-121.2674377	37.82712079	6340031.533	2124548.37	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,839	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:12pm	C Gray	SHAD-41b.ssf
8041	-121.2674275	37.82712825	6340034.497	2124551.063	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,317	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:14pm	C Gray	SHAD-41b.ssf
8042	-121.2674143	37.82714133	6340038.348	2124555.794	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,945	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:16pm	C Gray	SHAD-41b.ssf
8043	-121.2674045	37.82715105	6340041.197	2124559.108	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	77,718	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:18pm	C Gray	SHAD-41b.ssf
8044	-121.2673925	37.827163	6340044.703	2124563.631	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	79,334	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:20pm	C Gray	SHAD-41b.ssf
8045	-121.2673807	37.82717256	6340048.146	2124567.086	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	94,185	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:22pm	C Gray	SHAD-41b.ssf
8046	-121.2673685	37.82718138	6340051.714	2124570.922	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	76,385	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:24pm	C Gray	SHAD-41b.ssf
8047	-121.2673583	37.82719164	6340054.661	2124573.98	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	65,463	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:26pm	C Gray	SHAD-41b.ssf
8048	-121.2673492	37.82720031	6340057.334	2124577.114	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	102,627	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:28pm	C Gray	SHAD-41b.ssf
8049	-121.2673363	37.82720952	6340061.088	2124580.438	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	99,474	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:30pm	C Gray	SHAD-41b.ssf
8050	-121.2673252	37.82721527	6340064.313	2124582.506	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	68,553	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:32pm	C Gray	SHAD-41b.ssf
8051	-121.267313	37.8272252	6340067.861	2124586.091	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	55,624	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:34pm	C Gray	SHAD-41b.ssf
8052	-121.2673037	37.8272325	6340070.576	2124588.728	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,098	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:36pm	C Gray	SHAD-41b.ssf
8053	-121.2672953	37.82724082	6340073.026	2124591.738	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,406	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:38pm	C Gray	SHAD-41b.ssf
8054	-121.2672872	37.82724755	6340075.366	2124594.167	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,632	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:40pm	C Gray	SHAD-41b.ssf
8055	-121.2672737	37.82725737	6340079.301	2124597.712	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,140	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:42pm	C Gray	SHAD-41b.ssf
8056	-121.2672638	37.82726517	6340082.186	2124600.529	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	42,860	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:44pm	C Gray	SHAD-41b.ssf
8057	-121.2672515	37.82727446	6340085.75	2124603.934	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,651	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:46pm	C Gray	SHAD-41b.ssf
8058	-121.2672424	37.82728351	6340088.82	2124607.151	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,085	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:48pm	C Gray	SHAD-41b.ssf
8059	-121.2672318	37.82729354	6340091.519	2124610.783	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,588	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:50pm	C Gray	SHAD-41b.ssf
8060	-121.2672246	37.82730107	6340093.617	2124613.507	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,476	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:52pm	C Gray	SHAD-41b.ssf
8061	-121.2672118	37.82730712	6340094.435	2124615.705	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,152	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:54pm	C Gray	SHAD-41b.ssf
8062	-121.2672114	37.82730518	6340097.447	2124614.974	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,964	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:56pm	C Gray	SHAD-41b.ssf
8063	-121.2672096	37.82730221	6340097.95	2124613.888	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,195	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:43:58pm	C Gray	SHAD-41b.ssf
8064	-121.2672125	37.82729775	6340097.09	2124612.27	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,133	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:00pm	C Gray	SHAD-41b.ssf
8065	-121.2672157	37.82729442	6340096.164	2124611.064	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,787	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:02pm	C Gray	SHAD-41b.ssf
8066	-121.2672185	37.82729218	6340095.338	2124610.257	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,438	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:04pm	C Gray	SHAD-41b.ssf
8067	-121.2672254	37.82728699	6340093.35	2124608.383	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,342	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:06pm	C Gray	SHAD-41b.ssf
8068	-121.2672385	37.82727574	6340089.52	2124604.319	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,384	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:08pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8069	-121.2672498	37.8272673	6340086.238	2124601.269	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,973	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:10pm	C Gray	SHAD-41b.ssf
8070	-121.2672621	37.82725776	6340082.617	2124597.823	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,756	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:12pm	C Gray	SHAD-41b.ssf
8071	-121.2672732	37.82724947	6340079.411	2124594.835	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,384	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:14pm	C Gray	SHAD-41b.ssf
8072	-121.2672853	37.82723946	6340075.893	2124591.217	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,427	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:16pm	C Gray	SHAD-41b.ssf
8073	-121.2672976	37.827273	6340072.323	2124587.803	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,827	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:18pm	C Gray	SHAD-41b.ssf
8074	-121.2673099	37.82722046	6340068.724	2124584.357	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,620	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:20pm	C Gray	SHAD-41b.ssf
8075	-121.2673138	37.8272138	6340066.06	2124581.953	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,672	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:22pm	C Gray	SHAD-41b.ssf
8076	-121.2673311	37.82720381	6340062.555	2124578.345	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,289	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:24pm	C Gray	SHAD-41b.ssf
8077	-121.2673391	37.82719616	6340060.235	2124575.58	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,386	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:26pm	C Gray	SHAD-41b.ssf
8078	-121.2673483	37.82718724	6340057.552	2124572.352	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,801	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:28pm	C Gray	SHAD-41b.ssf
8079	-121.2673584	37.82717828	6340054.609	2124569.115	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	112,830	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:30pm	C Gray	SHAD-41b.ssf
8080	-121.2673674	37.82716863	6340051.985	2124565.622	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	79,448	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:32pm	C Gray	SHAD-41b.ssf
8081	-121.2673756	37.82715955	6340049.58	2124562.337	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,667	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:34pm	C Gray	SHAD-41b.ssf
8082	-121.2673866	37.82714927	6340046.358	2124558.62	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	116,709	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:36pm	C Gray	SHAD-41b.ssf
8083	-121.2673974	37.82713808	6340043.229	2124554.569	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	99,110	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:38pm	C Gray	SHAD-41b.ssf
8084	-121.2674068	37.82712778	6340040.477	2124550.842	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,881	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:40pm	C Gray	SHAD-41b.ssf
8085	-121.2674146	37.82711274	6340038.201	2124548.68	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	79,062	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:42pm	C Gray	SHAD-41b.ssf
8086	-121.2674257	37.82711	6340034.948	2124544.413	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,061	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:44pm	C Gray	SHAD-41b.ssf
8087	-121.2674355	37.82710104	6340032.114	2124541.173	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,604	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:46pm	C Gray	SHAD-41b.ssf
8088	-121.2674432	37.8270992	6340029.284	2124537.976	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,660	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:48pm	C Gray	SHAD-41b.ssf
8089	-121.2674533	37.8270884	6340026.349	2124535.015	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,447	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:50pm	C Gray	SHAD-41b.ssf
8090	-121.2674695	37.82707065	6340022.207	2124530.189	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,010	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:52pm	C Gray	SHAD-41b.ssf
8091	-121.2674804	37.82705977	6340019.005	2124526.252	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,677	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:54pm	C Gray	SHAD-41b.ssf
8092	-121.2674911	37.82704987	6340015.898	2124522.674	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,947	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:56pm	C Gray	SHAD-41b.ssf
8093	-121.2675026	37.82704001	6340012.542	2124519.143	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,313	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:44:58pm	C Gray	SHAD-41b.ssf
8094	-121.2675145	37.82703008	6340009.074	2124515.524	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,377	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:00pm	C Gray	SHAD-41b.ssf
8095	-121.2675255	37.82702039	6340005.861	2124512.021	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,967	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:02pm	C Gray	SHAD-41b.ssf
8096	-121.2675367	37.82701034	6340002.596	2124508.387	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,192	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:04pm	C Gray	SHAD-41b.ssf
8097	-121.2675481	37.82700086	6339999.279	2124504.962	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,385	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:06pm	C Gray	SHAD-41b.ssf
8098	-121.2675595	37.82699242	6339995.98	2124501.916	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,256	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:08pm	C Gray	SHAD-41b.ssf
8099	-121.26757	37.8269837	6339992.924	2124499.272	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,757	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:10pm	C Gray	SHAD-41b.ssf
8100	-121.2675794	37.82697837	6339990.19	2124496.85	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,208	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:12pm	C Gray	SHAD-41b.ssf
8101	-121.2675932	37.82696787	6339986.154	2124493.058	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,733	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:14pm	C Gray	SHAD-41b.ssf
8102	-121.2676024	37.82696027	6339983.48	2124490.312	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,340	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:16pm	C Gray	SHAD-41b.ssf
8103	-121.2676155	37.82694946	6339979.674	2124486.406	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,860	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:18pm	C Gray	SHAD-41b.ssf
8104	-121.2676265	37.82694178	6339976.461	2124483.638	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,087	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:20pm	C Gray	SHAD-41b.ssf
8105	-121.2676361	37.82693914	6339973.672	2124482.697	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,172	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:22pm	C Gray	SHAD-41b.ssf
8106	-121.2676316	37.82693718	6339974.991	2124481.974	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,438	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:24pm	C Gray	SHAD-41b.ssf
8107	-121.2676317	37.82693805	6339974.934	2124482.31	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,388	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:26pm	C Gray	SHAD-41b.ssf
8108	-121.2676204	37.82693401	6339976.232	2124484.083	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,050	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:28pm	C Gray	SHAD-41b.ssf
8109	-121.2676081	37.82695126	6339981.814	2124487.044	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,636	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:30pm	C Gray	SHAD-41b.ssf
8110	-121.2675942	37.82696119	6339985.865	2124490.627	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,956	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:32pm	C Gray	SHAD-41b.ssf
8111	-121.2675809	37.82696982	6339989.701	2124493.74	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,033	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:34pm	C Gray	SHAD-41b.ssf
8112	-121.2675672	37.82697972	6339997.311	2124497.11	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,074	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:36pm	C Gray	SHAD-41b.ssf
8113	-121.2675544	37.82698873	6339997.424	2124500.56	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,863	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:38pm	C Gray	SHAD-41b.ssf
8114	-121.2675398	37.82699988	6340001.693	2124504.585	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,547	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:40pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8115	-121.2675285	37.82700819	6340004.962	2124507.586	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,813	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:42pm	C Gray	SHAD-41b.ssf
8116	-121.2675145	37.82701859	6340009.078	2124511.839	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,375	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:44pm	C Gray	SHAD-41b.ssf
8117	-121.2675017	37.82702828	6340012.772	2124514.835	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,105	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:46pm	C Gray	SHAD-41b.ssf
8118	-121.2674891	37.82703769	6340016.442	2124518.232	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,490	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:48pm	C Gray	SHAD-41b.ssf
8119	-121.267478	37.82704634	6340019.662	2124521.356	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,787	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:50pm	C Gray	SHAD-41b.ssf
8120	-121.2674669	37.82705566	6340022.887	2124524.725	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,793	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:52pm	C Gray	SHAD-41b.ssf
8121	-121.2674467	37.82706347	6340025.869	2124527.544	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,789	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:54pm	C Gray	SHAD-41b.ssf
8122	-121.2674516	37.82707514	6340030.276	2124531.755	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,424	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:56pm	C Gray	SHAD-41b.ssf
8123	-121.2674293	37.82708492	6340033.843	2124535.288	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,215	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:45:58pm	C Gray	SHAD-41b.ssf
8124	-121.2674193	37.82709942	6340036.756	2124538.645	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,554	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:00pm	C Gray	SHAD-41b.ssf
8125	-121.2674049	37.82710654	6340040.951	2124543.104	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,667	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:02pm	C Gray	SHAD-41b.ssf
8126	-121.2673937	37.82711664	6340044.211	2124546.668	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,600	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:04pm	C Gray	SHAD-41b.ssf
8127	-121.2673827	37.82712717	6340047.428	2124550.561	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,533	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:06pm	C Gray	SHAD-41b.ssf
8128	-121.2673702	37.82713802	6340051.079	2124554.485	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,447	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:08pm	C Gray	SHAD-41b.ssf
8129	-121.2673585	37.82714903	6340054.479	2124558.464	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,146	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:10pm	C Gray	SHAD-41b.ssf
8130	-121.2673473	37.82716389	6340057.475	2124563.848	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,005	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:12pm	C Gray	SHAD-41b.ssf
8131	-121.2673358	37.82717395	6340060.495	2124567.491	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68,167	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:14pm	C Gray	SHAD-41b.ssf
8132	-121.2673238	37.82718354	6340061.72	2124570.972	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	108,321	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:16pm	C Gray	SHAD-41b.ssf
8133	-121.2673137	37.82720208	6340061.808	2124577.723	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	120,828	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:18pm	C Gray	SHAD-41b.ssf
8134	-121.2673245	37.82721155	6340064.197	2124581.148	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	83,545	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:20pm	C Gray	SHAD-41b.ssf
8135	-121.267318	37.82721034	6340068.154	2124580.678	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,387	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:22pm	C Gray	SHAD-41b.ssf
8136	-121.2673027	37.82721531	6340070.809	2124582.467	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,536	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:24pm	C Gray	SHAD-41b.ssf
8137	-121.2672889	37.82722809	6340074.836	2124587.085	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,210	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:26pm	C Gray	SHAD-41b.ssf
8138	-121.2672757	37.82723699	6340078.655	2124590.297	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,788	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:28pm	C Gray	SHAD-41b.ssf
8139	-121.2672674	37.82724487	6340082.058	2124593.139	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,575	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:30pm	C Gray	SHAD-41b.ssf
8140	-121.2672479	37.82725758	6340086.743	2124597.727	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,158	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:32pm	C Gray	SHAD-41b.ssf
8141	-121.2672361	37.82726781	6340090.193	2124601.425	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,463	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:34pm	C Gray	SHAD-41b.ssf
8142	-121.2672228	37.82727981	6340094.061	2124605.763	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,607	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:36pm	C Gray	SHAD-41b.ssf
8143	-121.2672136	37.82728884	6340096.743	2124609.03	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,195	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:38pm	C Gray	SHAD-41b.ssf
8144	-121.2672054	37.8272983	6340099.139	2124612.453	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,634	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:40pm	C Gray	SHAD-41b.ssf
8145	-121.2671998	37.82730101	6340100.765	2124613.426	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,487	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:42pm	C Gray	SHAD-41b.ssf
8146	-121.2671915	37.82730002	6340103.176	2124613.047	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,822	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:44pm	C Gray	SHAD-41b.ssf
8147	-121.2671951	37.82729355	6340102.112	2124610.698	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,364	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:46pm	C Gray	SHAD-41b.ssf
8148	-121.2672046	37.82728187	6340099.333	2124606.469	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,968	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:48pm	C Gray	SHAD-41b.ssf
8149	-121.2672157	37.82727197	6340096.102	2124602.889	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,850	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:50pm	C Gray	SHAD-41b.ssf
8150	-121.2672259	37.82727614	6340093.12	2124599.066	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,454	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:52pm	C Gray	SHAD-41b.ssf
8151	-121.2672409	37.82725087	6340088.751	2124595.269	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,139	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:54pm	C Gray	SHAD-41b.ssf
8152	-121.2672518	37.82724513	6340085.593	2124593.205	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,360	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:56pm	C Gray	SHAD-41b.ssf
8153	-121.2672643	37.82723253	6340081.937	2124588.645	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,803	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:46:58pm	C Gray	SHAD-41b.ssf
8154	-121.2672714	37.82722141	6340078.202	2124584.626	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,508	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:00pm	C Gray	SHAD-41b.ssf
8155	-121.2672889	37.82721456	6340074.781	2124582.161	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,588	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:02pm	C Gray	SHAD-41b.ssf
8156	-121.2673048	37.82720788	6340070.167	2124579.764	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,094	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:04pm	C Gray	SHAD-41b.ssf
8157	-121.2673119	37.82720732	6340068.213	2124579.578	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,048	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:06pm	C Gray	SHAD-41b.ssf
8158	-121.2673126	37.82720683	6340067.821	2124579.402	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,415	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:08pm	C Gray	SHAD-41b.ssf
8159	-121.2673055	37.82720901	6340069.96	2124580.179	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,176	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:10pm	C Gray	SHAD-41b.ssf
8160	-121.2673048	37.82720861	6340070.164	2124580.033	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,643	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:12pm	C Gray	SHAD-41b.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8161	-121.2672957	37.82721422	6340072.828	2124582.052	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,381	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:14pm	C Gray	SHAD-41b.ssf
8162	-121.2672843	37.82722138	6340076.121	2124584.681	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,605	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:16pm	C Gray	SHAD-41b.ssf
8163	-121.2672772	37.82722983	6340079.708	2124587.681	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,100	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:18pm	C Gray	SHAD-41b.ssf
8164	-121.2672598	37.82723812	6340083.271	2124590.671	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,623	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:20pm	C Gray	SHAD-41b.ssf
8165	-121.2672486	37.82724612	6340086.506	2124593.558	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,462	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:22pm	C Gray	SHAD-41b.ssf
8166	-121.2672396	37.82725534	6340089.142	2124596.184	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,487	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:24pm	C Gray	SHAD-41b.ssf
8167	-121.2672246	37.82726355	6340096.537	2124599.848	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,633	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:26pm	C Gray	SHAD-41b.ssf
8168	-121.2672142	37.82727291	6340096.105	2124603.23	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,760	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:28pm	C Gray	SHAD-41b.ssf
8169	-121.2672012	37.82728203	6340100.304	2124606.519	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,654	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:30pm	C Gray	SHAD-41b.ssf
8170	-121.2671919	37.82729015	6340103.015	2124609.455	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,517	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:32pm	C Gray	SHAD-41b.ssf
8171	-121.267183	37.82729846	6340105.615	2124612.457	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,777	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:34pm	C Gray	SHAD-41b.ssf
8172	-121.2671751	37.82730647	6340109.912	2124614.501	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,218	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:36pm	C Gray	SHAD-41b.ssf
8173	-121.2671687	37.82730422	6340109.762	2124614.52	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,546	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:38pm	C Gray	SHAD-41b.ssf
8174	-121.2671628	37.82730434	6340111.47	2124614.552	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,561	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:40pm	C Gray	SHAD-41b.ssf
8175	-121.267168	37.82730935	6340109.96	2124614.094	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,762	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:41pm	C Gray	SHAD-41b.ssf
8176	-121.267181	37.82730127	6340106.162	2124609.835	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,231	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:44pm	C Gray	SHAD-41b.ssf
8177	-121.267189	37.8272834	6340103.848	2124606.966	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,354	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:46pm	C Gray	SHAD-41b.ssf
8178	-121.267197	37.82727477	6340101.505	2124603.865	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,502	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:48pm	C Gray	SHAD-41b.ssf
8179	-121.2672067	37.82726647	6340098.66	2124600.137	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,223	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:50pm	C Gray	SHAD-41b.ssf
8180	-121.2672167	37.82725517	6340095.769	2124596.776	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,331	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:52pm	C Gray	SHAD-41b.ssf
8181	-121.2672363	37.82724492	6340092.957	2124593.066	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,992	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:54pm	C Gray	SHAD-41b.ssf
8182	-121.2672348	37.82723553	6340090.471	2124589.666	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,342	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:56pm	C Gray	SHAD-41b.ssf
8183	-121.2672451	37.82722528	6340087.473	2124585.961	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,797	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:47:58pm	C Gray	SHAD-41b.ssf
8184	-121.2672528	37.82721773	6340085.222	2124583.229	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,295	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:00pm	C Gray	SHAD-41b.ssf
8185	-121.2672641	37.82720835	6340081.939	2124579.842	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,849	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:02pm	C Gray	SHAD-41b.ssf
8186	-121.2672789	37.82720578	6340077.654	2124578.939	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,273	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:04pm	C Gray	SHAD-41b.ssf
8187	-121.2672739	37.82720872	6340079.106	2124579.999	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,758	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:06pm	C Gray	SHAD-41b.ssf
8188	-121.2672719	37.8272084	6340079.661	2124579.877	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,039	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:08pm	C Gray	SHAD-41b.ssf
8189	-121.2672654	37.82721381	6340081.574	2124581.83	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,694	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:10pm	C Gray	SHAD-41b.ssf
8190	-121.2672512	37.82722186	6340085.705	2124584.73	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,360	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:12pm	C Gray	SHAD-41b.ssf
8191	-121.2672369	37.82723004	6340089.836	2124587.674	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,806	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:14pm	C Gray	SHAD-41b.ssf
8192	-121.2672239	37.82724004	6340093.638	2124591.285	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,544	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:16pm	C Gray	SHAD-41b.ssf
8193	-121.2672141	37.82724945	6340096.484	2124594.688	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,820	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:18pm	C Gray	SHAD-41b.ssf
8194	-121.2672040	37.82725677	6340099.426	2124597.329	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,947	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:20pm	C Gray	SHAD-41b.ssf
8195	-121.2671999	37.82725922	6340100.625	2124598.209	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,213	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:22pm	C Gray	SHAD-41b.ssf
8196	-121.2671909	37.82727082	6340103.259	2124602.415	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,808	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:24pm	C Gray	SHAD-41b.ssf
8197	-121.2671805	37.82728248	6340106.297	2124606.636	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,572	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:26pm	C Gray	SHAD-41b.ssf
8198	-121.2671711	37.8272929	6340109.052	2124610.405	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,134	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:28pm	C Gray	SHAD-41b.ssf
8199	-121.2671622	37.82730234	6340111.635	2124613.823	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,303	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:30pm	C Gray	SHAD-41b.ssf
8200	-121.2671488	37.82730234	6340115.509	2124613.792	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,994	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:32pm	C Gray	SHAD-41b.ssf
8201	-121.2671537	37.82729752	6340114.083	2124612.045	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,565	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:34pm	C Gray	SHAD-41b.ssf
8202	-121.2671649	37.82728666	6340110.819	2124608.118	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,853	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:36pm	C Gray	SHAD-41b.ssf
8203	-121.2671752	37.82727696	6340107.815	2124604.61	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,654	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:38pm	C Gray	SHAD-41b.ssf
8204	-121.2671837	37.827276785	6340105.028	2124601.316	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,854	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:40pm	C Gray	SHAD-41b.ssf
8205	-121.2671937	37.82726011	6340102.407	2124598.52	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,350	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:42pm	C Gray	SHAD-41b.ssf
8206	-121.2672068	37.82724751	6340098.582	2124593.963	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,751	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:44pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8207	-121.2672181	37.82723709	6340095.292	2124590.195	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,2064	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:46pm	C Gray	SHAD-41b.ssf
8208	-121.2672288	37.8272265	6340092.187	2124586.128	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,7664	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:48pm	C Gray	SHAD-41b.ssf
8209	-121.2672401	37.82721754	6340088.895	2124583.365	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,993	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:50pm	C Gray	SHAD-41b.ssf
8210	-121.2672516	37.82720844	6340085.542	2124579.843	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,569	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:52pm	C Gray	SHAD-41b.ssf
8211	-121.2672607	37.82720844	6340082.899	2124579.864	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,851	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:54pm	C Gray	SHAD-41b.ssf
8212	-121.2672755	37.82720923	6340084.565	2124580.138	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,309	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:56pm	C Gray	SHAD-41b.ssf
8213	-121.2672534	37.82721606	6340085.044	2124582.624	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,396	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:48:58pm	C Gray	SHAD-41b.ssf
8214	-121.2672369	37.82722473	6340089.818	2124585.74	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,099	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:00pm	C Gray	SHAD-41b.ssf
8215	-121.2672216	37.82723222	6340094.276	2124588.431	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,473	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:02pm	C Gray	SHAD-41b.ssf
8216	-121.2672112	37.82723928	6340097.291	2124590.976	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,709	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:04pm	C Gray	SHAD-41b.ssf
8217	-121.2671979	37.82724731	6340101.155	2124593.868	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,829	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:06pm	C Gray	SHAD-41b.ssf
8218	-121.2671872	37.82725849	6340104.277	2124597.916	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,021	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:08pm	C Gray	SHAD-41b.ssf
8219	-121.2671755	37.82726905	6340107.69	2124601.733	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,155	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:10pm	C Gray	SHAD-41b.ssf
8220	-121.2671655	37.82727882	6340110.611	2124605.267	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,025	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:12pm	C Gray	SHAD-41b.ssf
8221	-121.2671553	37.82728741	6340113.585	2124608.369	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,553	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:14pm	C Gray	SHAD-41b.ssf
8222	-121.2671487	37.82729563	6340115.506	2124611.348	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	50,289	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:16pm	C Gray	SHAD-41b.ssf
8223	-121.2671473	37.82729886	6340115.918	2124612.521	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,496	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:17pm	C Gray	SHAD-41b.ssf
8224	-121.2671356	37.82730143	6340119.329	2124613.428	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,042	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:20pm	C Gray	SHAD-41b.ssf
8225	-121.2671399	37.82729576	6340118.056	2124611.372	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,129	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:22pm	C Gray	SHAD-41b.ssf
8226	-121.2671477	37.82728658	6340113.322	2124605.119	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,616	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:24pm	C Gray	SHAD-41b.ssf
8227	-121.2671561	37.82727846	6340113.322	2124605.119	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,030	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:26pm	C Gray	SHAD-41b.ssf
8228	-121.2671664	37.82726824	6340110.324	2124601.414	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,386	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:28pm	C Gray	SHAD-41b.ssf
8229	-121.2671772	37.82725908	6340107.19	2124598.104	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,821	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:30pm	C Gray	SHAD-41b.ssf
8230	-121.2671885	37.82725006	6340103.882	2124594.85	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,444	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:32pm	C Gray	SHAD-41b.ssf
8231	-121.2671987	37.82724122	6340100.916	2124591.653	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,026	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:34pm	C Gray	SHAD-41b.ssf
8232	-121.2672100	37.82721642	6340097.601	2124588.051	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,502	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:36pm	C Gray	SHAD-41b.ssf
8233	-121.2672201	37.82722214	6340094.673	2124584.759	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,015	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:38pm	C Gray	SHAD-41b.ssf
8234	-121.26723	37.82721383	6340091.787	2124581.756	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,241	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:40pm	C Gray	SHAD-41b.ssf
8235	-121.2672414	37.8272066	6340088.484	2124579.151	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,940	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:42pm	C Gray	SHAD-41b.ssf
8236	-121.2672497	37.82720714	6340086.078	2124579.367	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,287	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:44pm	C Gray	SHAD-41b.ssf
8237	-121.2672398	37.8272087	6340088.938	2124579.91	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,701	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:46pm	C Gray	SHAD-41b.ssf
8238	-121.2672403	37.82721053	6340088.799	2124580.578	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,669	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:48pm	C Gray	SHAD-41b.ssf
8239	-121.2672308	37.82721642	6340091.562	2124582.699	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,628	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:50pm	C Gray	SHAD-41b.ssf
8240	-121.2672192	37.82722338	6340094.948	2124585.205	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,782	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:52pm	C Gray	SHAD-41b.ssf
8241	-121.267206	37.82723144	6340098.781	2124588.11	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,132	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:54pm	C Gray	SHAD-41b.ssf
8242	-121.2671933	37.82724161	6340102.477	2124591.782	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,342	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:56pm	C Gray	SHAD-41b.ssf
8243	-121.2671795	37.82725149	6340106.503	2124595.349	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58,467	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:49:58pm	C Gray	SHAD-41b.ssf
8244	-121.2671669	37.82726016	6340109.552	2124598.48	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,097	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:00pm	C Gray	SHAD-41b.ssf
8245	-121.2671563	37.82727116	6340113.262	2124602.453	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,295	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:02pm	C Gray	SHAD-41b.ssf
8246	-121.267144	37.82728211	6340116.84	2124606.414	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,565	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:04pm	C Gray	SHAD-41b.ssf
8247	-121.2671323	37.82729548	6340120.265	2124611.253	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,513	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:06pm	C Gray	SHAD-41b.ssf
8248	-121.267119	37.82729631	6340124.084	2124611.524	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,228	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:08pm	C Gray	SHAD-41b.ssf
8249	-121.2671241	37.82729052	6340122.613	2124609.428	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,766	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:10pm	C Gray	SHAD-41b.ssf
8250	-121.2671369	37.82727837	6340118.872	2124605.033	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,220	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:12pm	C Gray	SHAD-41b.ssf
8251	-121.267146	37.82726973	6340116.21	2124601.911	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,827	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:14pm	C Gray	SHAD-41b.ssf
8252	-121.2671591	37.8272593	6340112.396	2124598.144	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,246	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:16pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8253	-121.26711721	37.82724904	6340108.606	2124594.438	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,013	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:18pm	C Gray	SHAD-41b.ssf
8254	-121.2671845	37.82723972	6340105.013	2124591.074	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,831	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:20pm	C Gray	SHAD-41b.ssf
8255	-121.267195	37.82723057	6340101.946	2124587.767	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,951	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:22pm	C Gray	SHAD-41b.ssf
8256	-121.2672107	37.82721988	6340097.396	2124583.91	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,729	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:24pm	C Gray	SHAD-41b.ssf
8257	-121.2672229	37.82721159	6340093.825	2124580.924	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,386	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:26pm	C Gray	SHAD-41b.ssf
8258	-121.2672298	37.82721097	6340091.841	2124580.713	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,973	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:28pm	C Gray	SHAD-41b.ssf
8259	-121.2672261	37.82721045	6340092.92	2124580.515	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,916	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:30pm	C Gray	SHAD-41b.ssf
8260	-121.2672201	37.82721553	6340094.644	2124582.351	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,651	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:32pm	C Gray	SHAD-41b.ssf
8261	-121.2672077	37.82722095	6340098.263	2124584.294	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,249	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:34pm	C Gray	SHAD-41b.ssf
8262	-121.2671904	37.82723095	6340103.279	2124587.896	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,819	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:36pm	C Gray	SHAD-41b.ssf
8263	-121.267178	37.82724066	6340106.902	2124591.399	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,642	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:38pm	C Gray	SHAD-41b.ssf
8264	-121.2671296	37.82724851	6340110.405	2124594.231	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,645	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:40pm	C Gray	SHAD-41b.ssf
8265	-121.2671527	37.82725768	6340114.242	2124597.538	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,963	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:42pm	C Gray	SHAD-41b.ssf
8266	-121.2671409	37.82726686	6340117.671	2124600.855	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,706	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:44pm	C Gray	SHAD-41b.ssf
8267	-121.2671296	37.82727719	6340120.983	2124604.589	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,061	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:46pm	C Gray	SHAD-41b.ssf
8268	-121.2671216	37.82728538	6340123.315	2124607.551	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,991	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:48pm	C Gray	SHAD-41b.ssf
8269	-121.267109	37.82729587	6340126.972	2124611.342	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,712	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:50pm	C Gray	SHAD-41b.ssf
8270	-121.2670983	37.82729276	6340130.069	2124610.181	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,912	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:52pm	C Gray	SHAD-41b.ssf
8271	-121.267108	37.82728707	6340127.239	2124608.134	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,959	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:54pm	C Gray	SHAD-41b.ssf
8272	-121.2671186	37.82727885	6340124.145	2124604.983	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,876	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:56pm	C Gray	SHAD-41b.ssf
8273	-121.2671208	37.82727068	6340121.181	2124602.213	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,365	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:50:58pm	C Gray	SHAD-41b.ssf
8274	-121.2671403	37.82726161	6340117.847	2124598.939	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,263	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:00pm	C Gray	SHAD-41b.ssf
8275	-121.2671534	37.82725241	6340114.028	2124595.62	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,752	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:02pm	C Gray	SHAD-41b.ssf
8276	-121.2671626	37.82724271	6340111.367	2124593.71	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,810	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:04pm	C Gray	SHAD-41b.ssf
8277	-121.2671755	37.82723859	6340107.598	2124590.642	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,353	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:06pm	C Gray	SHAD-41b.ssf
8278	-121.2671831	37.82722969	6340103.656	2124587.433	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,114	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:08pm	C Gray	SHAD-41b.ssf
8279	-121.2671987	37.82722267	6340100.86	2124584.901	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,488	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:10pm	C Gray	SHAD-41b.ssf
8280	-121.267107	37.82721506	6340097.359	2124582.159	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,040	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:12pm	C Gray	SHAD-41b.ssf
8281	-121.2672219	37.82720979	6340094.105	2124580.265	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,735	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:14pm	C Gray	SHAD-41b.ssf
8282	-121.2672151	37.82721256	6340096.091	2124581.257	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,923	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:16pm	C Gray	SHAD-41b.ssf
8283	-121.2672111	37.82721779	6340097.252	2124583.153	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,593	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:18pm	C Gray	SHAD-41b.ssf
8284	-121.2671986	37.82722329	6340100.894	2124585.126	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,370	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:20pm	C Gray	SHAD-41b.ssf
8285	-121.2671833	37.82723103	6340105.336	2124587.906	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,345	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:22pm	C Gray	SHAD-41b.ssf
8286	-121.2671707	37.82723874	6340109.002	2124590.684	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,969	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:24pm	C Gray	SHAD-41b.ssf
8287	-121.2671568	37.82724736	6340113.022	2124593.79	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,088	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:26pm	C Gray	SHAD-41b.ssf
8288	-121.2671447	37.8272547	6340116.54	2124596.436	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,526	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:28pm	C Gray	SHAD-41b.ssf
8289	-121.2671315	37.82726381	6340120.395	2124599.721	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,313	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:30pm	C Gray	SHAD-41b.ssf
8290	-121.2671188	37.82727255	6340124.097	2124602.873	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,172	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:32pm	C Gray	SHAD-41b.ssf
8291	-121.2671068	37.82728177	6340127.57	2124606.201	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,846	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:34pm	C Gray	SHAD-41b.ssf
8292	-121.2670963	37.82729303	6340130.654	2124610.278	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,136	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:36pm	C Gray	SHAD-41b.ssf
8293	-121.2670817	37.82729943	6340134.849	2124610.702	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,318	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:38pm	C Gray	SHAD-41b.ssf
8294	-121.2670846	37.82728859	6340134.005	2124608.633	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,397	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:40pm	C Gray	SHAD-41b.ssf
8295	-121.2670932	37.82727955	6340131.494	2124605.361	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,325	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:42pm	C Gray	SHAD-41b.ssf
8296	-121.2671013	37.82727251	6340129.148	2124602.815	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,411	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:44pm	C Gray	SHAD-41b.ssf
8297	-121.2671092	37.82726505	6340126.832	2124600.12	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,233	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:46pm	C Gray	SHAD-41b.ssf
8298	-121.2671233	37.82725611	6340122.722	2124596.897	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48,798	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:48pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8299	-121.26711345	37.82724916	6340119.497	2124594.394	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,147	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:50pm	C Gray	SHAD-41b.ssf
8300	-121.26711489	37.82723907	6340115.297	2124590.752	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,278	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:52pm	C Gray	SHAD-41b.ssf
8301	-121.2671614	37.82723052	6340111.653	2124587.669	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,302	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:54pm	C Gray	SHAD-41b.ssf
8302	-121.267178	37.82722094	6340106.843	2124584.222	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,536	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:56pm	C Gray	SHAD-41b.ssf
8303	-121.2671899	37.82721529	6340103.387	2124582.191	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,145	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:51:58pm	C Gray	SHAD-41b.ssf
8304	-121.2672056	37.82721265	6340098.838	2124581.266	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,102	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:00pm	C Gray	SHAD-41b.ssf
8305	-121.2671961	37.82721337	6340101.582	2124581.507	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,626	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:02pm	C Gray	SHAD-41b.ssf
8306	-121.26719	37.82721711	6340103.36	2124582.855	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,340	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:04pm	C Gray	SHAD-41b.ssf
8307	-121.2671762	37.82722404	6340107.364	2124585.344	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,268	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:06pm	C Gray	SHAD-41b.ssf
8308	-121.2671615	37.82723163	6340111.641	2124588.073	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,266	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:08pm	C Gray	SHAD-41b.ssf
8309	-121.26715	37.82723864	6340114.981	2124590.599	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,037	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:10pm	C Gray	SHAD-41b.ssf
8310	-121.2671367	37.82724652	6340118.848	2124593.438	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,320	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:12pm	C Gray	SHAD-41b.ssf
8311	-121.2671227	37.82725445	6340112.916	2124596.292	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,658	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:14pm	C Gray	SHAD-41b.ssf
8312	-121.2671116	37.82726249	6340126.129	2124599.193	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,408	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:16pm	C Gray	SHAD-41b.ssf
8313	-121.2671018	37.82727005	6340128.993	2124601.923	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,371	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:18pm	C Gray	SHAD-41b.ssf
8314	-121.2670904	37.82727961	6340132.297	2124605.376	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,389	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:20pm	C Gray	SHAD-41b.ssf
8315	-121.2670822	37.82728623	6340134.702	2124607.767	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,759	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:22pm	C Gray	SHAD-41b.ssf
8316	-121.2670728	37.82729291	6340137.435	2124610.178	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,620	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:24pm	C Gray	SHAD-41b.ssf
8317	-121.2670678	37.82728508	6340138.858	2124607.315	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,864	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:26pm	C Gray	SHAD-41b.ssf
8318	-121.2670776	37.82727854	6340135.987	2124604.957	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,473	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:28pm	C Gray	SHAD-41b.ssf
8319	-121.2670943	37.82727073	6340134.04	2124602.13	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,971	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:30pm	C Gray	SHAD-41b.ssf
8320	-121.2670957	37.8272625	6340130.714	2124599.159	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,129	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:32pm	C Gray	SHAD-41b.ssf
8321	-121.2671088	37.82725398	6340126.916	2124596.087	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,692	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:34pm	C Gray	SHAD-41b.ssf
8322	-121.2671192	37.82724709	6340123.898	2124593.602	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,225	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:36pm	C Gray	SHAD-41b.ssf
8323	-121.2671379	37.82723955	6340120.247	2124590.887	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,224	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:38pm	C Gray	SHAD-41b.ssf
8324	-121.2671429	37.82723218	6340116.989	2124588.232	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,534	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:40pm	C Gray	SHAD-41b.ssf
8325	-121.2671546	37.8272252	6340113.611	2124585.716	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60,664	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:42pm	C Gray	SHAD-41b.ssf
8326	-121.2671666	37.82721867	6340110.113	2124583.366	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,154	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:44pm	C Gray	SHAD-41b.ssf
8327	-121.2671767	37.82721196	6340107.187	2124580.947	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52,264	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:46pm	C Gray	SHAD-41b.ssf
8328	-121.2671882	37.82721251	6340103.873	2124581.177	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,984	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:48pm	C Gray	SHAD-41b.ssf
8329	-121.2671829	37.82721373	6340105.406	2124581.606	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,860	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:50pm	C Gray	SHAD-41b.ssf
8330	-121.2671763	37.82721838	6340107.323	2124583.283	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,124	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:52pm	C Gray	SHAD-41b.ssf
8331	-121.2671633	37.82722339	6340111.076	2124585.076	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	64,891	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:54pm	C Gray	SHAD-41b.ssf
8332	-121.2671513	37.82723163	6340114.575	2124588.051	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,209	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:56pm	C Gray	SHAD-41b.ssf
8333	-121.2671362	37.8272407	6340118.961	2124591.317	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,349	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:52:58pm	C Gray	SHAD-41b.ssf
8334	-121.2671236	37.82724825	6340122.618	2124594.036	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,656	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:00pm	C Gray	SHAD-41b.ssf
8335	-121.2671114	37.82725537	6340126.157	2124596.599	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,053	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:02pm	C Gray	SHAD-41b.ssf
8336	-121.2670969	37.82726574	6340130.388	2124600.34	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,707	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:04pm	C Gray	SHAD-41b.ssf
8337	-121.2670875	37.82727344	6340133.837	2124603.117	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,165	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:06pm	C Gray	SHAD-41b.ssf
8338	-121.2670737	37.82728137	6340137.135	2124605.978	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,082	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:08pm	C Gray	SHAD-41b.ssf
8339	-121.2670624	37.82728855	6340140.408	2124608.563	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,300	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:10pm	C Gray	SHAD-41b.ssf
8340	-121.2670547	37.82728295	6340142.636	2124606.507	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,339	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:12pm	C Gray	SHAD-41b.ssf
8341	-121.2670663	37.82727337	6340140.205	2124603.04	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,952	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:14pm	C Gray	SHAD-41b.ssf
8342	-121.2670763	37.82726466	6340136.334	2124599.9	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,271	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:16pm	C Gray	SHAD-41b.ssf
8343	-121.2670883	37.82725731	6340132.839	2124597.253	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41,932	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:18pm	C Gray	SHAD-41b.ssf
8344	-121.2670995	37.82725033	6340129.587	2124594.735	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,755	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:20pm	C Gray	SHAD-41b.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8345	-121.26711138	37.82724118	6340125.428	2124591.438	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	49,496	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:22pm	C Gray	SHAD-41b.ssf
8346	-121.26712344	37.82723493	6340122.362	2124589.188	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	54,957	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:24pm	C Gray	SHAD-41b.ssf
8347	-121.26713874	37.82722655	6340118.273	2124586.168	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	73,480	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:26pm	C Gray	SHAD-41b.ssf
8348	-121.26715111	37.82721882	6340114.599	2124583.384	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	84,232	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:28pm	C Gray	SHAD-41b.ssf
8349	-121.26716588	37.82721282	6340110.318	2124581.236	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	66,360	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:30pm	C Gray	SHAD-41b.ssf
8350	-121.26717143	37.82721297	6340107.885	2124581.31	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	69,660	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:32pm	C Gray	SHAD-41b.ssf
8351	-121.2671642	37.82721407	6340110.793	2124581.687	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	88,737	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:34pm	C Gray	SHAD-41b.ssf
8352	-121.2671568	37.82721823	6340112.944	2124583.185	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	92,175	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:36pm	C Gray	SHAD-41b.ssf
8353	-121.2671426	37.82722417	6340117.063	2124585.312	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	74,923	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:38pm	C Gray	SHAD-41b.ssf
8354	-121.2671273	37.82723148	6340121.519	2124587.939	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	87,195	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:40pm	C Gray	SHAD-41b.ssf
8355	-121.2671128	37.82723957	6340125.718	2124590.848	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	232,269	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:42pm	C Gray	SHAD-41b.ssf
8356	-121.2670957	37.82724816	6340129.649	2124593.947	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	145,368	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:44pm	C Gray	SHAD-41b.ssf
8357	-121.2670852	37.82725774	6340133.745	2124597.401	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	88,469	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:46pm	C Gray	SHAD-41b.ssf
8358	-121.2670731	37.82726539	6340137.272	2124600.156	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	65,378	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:48pm	C Gray	SHAD-41b.ssf
8359	-121.2670634	37.82727445	6340140.009	2124603.433	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	51,551	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:50pm	C Gray	SHAD-41b.ssf
8360	-121.2670478	37.82728455	6340144.617	2124607.073	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	40,572	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:52pm	C Gray	SHAD-41b.ssf
8361	-121.2670421	37.82727881	6340146.261	2124604.972	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,846	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:54pm	C Gray	SHAD-41b.ssf
8362	-121.2670547	37.82727057	6340142.591	2124601.998	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,625	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:56pm	C Gray	SHAD-41b.ssf
8363	-121.2670682	37.82726291	6340138.672	2124599.243	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	34,881	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:53:58pm	C Gray	SHAD-41b.ssf
8364	-121.2670827	37.82725457	6340134.449	2124596.24	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,329	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:00pm	C Gray	SHAD-41b.ssf
8365	-121.2670942	37.82727414	6340131.112	2124593.562	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	47,553	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:02pm	C Gray	SHAD-41b.ssf
8366	-121.267105	37.82723948	6340127.96	2124590.8	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	51,324	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:04pm	C Gray	SHAD-41b.ssf
8367	-121.267117	37.82723175	6340124.482	2124588.014	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	57,023	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:06pm	C Gray	SHAD-41b.ssf
8368	-121.2671297	37.82722247	6340120.789	2124585.475	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	108,568	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:08pm	C Gray	SHAD-41b.ssf
8369	-121.2671423	37.82721678	6340117.119	2124582.622	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	97,005	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:10pm	C Gray	SHAD-41b.ssf
8370	-121.2671564	37.82721126	6340113.405	2124580.647	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	87,748	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:12pm	C Gray	SHAD-41b.ssf
8371	-121.2671487	37.82721209	6340115.281	2124580.93	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	74,977	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:14pm	C Gray	SHAD-41b.ssf
8372	-121.2671468	37.82721417	6340115.818	2124581.68	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	75,821	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:16pm	C Gray	SHAD-41b.ssf
8373	-121.2671367	37.82721782	6340118.761	2124582.987	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	93,749	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:18pm	C Gray	SHAD-41b.ssf
8374	-121.2671254	37.82722239	6340122.023	2124585.178	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	141,182	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:20pm	C Gray	SHAD-41b.ssf
8375	-121.2671102	37.82723319	6340126.446	2124588.051	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	518,020	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:22pm	C Gray	SHAD-41b.ssf
8376	-121.2670957	37.82723395	6340130.648	2124590.784	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	481,863	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:24pm	C Gray	SHAD-41b.ssf
8377	-121.2670841	37.82724565	6340134.03	2124592.995	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	205,381	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:26pm	C Gray	SHAD-41b.ssf
8378	-121.2670733	37.82725344	6340137.158	2124595.807	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	108,859	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:28pm	C Gray	SHAD-41b.ssf
8379	-121.2670670	37.82726317	6340141.044	2124599.318	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	74,422	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:30pm	C Gray	SHAD-41b.ssf
8380	-121.2670477	37.82727226	6340144.606	2124602.599	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	57,928	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:32pm	C Gray	SHAD-41b.ssf
8381	-121.2670384	37.82727966	6340147.317	2124605.272	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	38,610	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:34pm	C Gray	SHAD-41b.ssf
8382	-121.2670268	37.82727424	6340140.672	2124603.27	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,318	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:36pm	C Gray	SHAD-41b.ssf
8383	-121.2670357	37.82726887	6340148.082	2124601.275	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	32,444	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:38pm	C Gray	SHAD-41b.ssf
8384	-121.2670504	37.82726004	6340143.81	2124598.157	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	33,123	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:40pm	C Gray	SHAD-41b.ssf
8385	-121.2670603	37.82725372	6340140.908	2124595.878	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	36,352	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:42pm	C Gray	SHAD-41b.ssf
8386	-121.2670719	37.8272471	6340137.558	2124593.493	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	40,435	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:44pm	C Gray	SHAD-41b.ssf
8387	-121.2670805	37.82724185	6340135.059	2124591.604	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	48,346	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:45pm	C Gray	SHAD-41b.ssf
8388	-121.2670965	37.8272324	6340130.400	2124588.2	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	54,435	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:48pm	C Gray	SHAD-41b.ssf
8389	-121.2671088	37.82722458	6340126.836	2124585.38	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	68,117	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:50pm	C Gray	SHAD-41b.ssf
8390	-121.2671199	37.82721682	6340123.601	2124582.583	Ludlum 2221	309548	Ludlum 44-20	PR362630	2/8/2017	698,350	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:52pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8391	-121.26711353	37.82721059	6340119.136	2124580.352	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	522.390	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:54pm	C Gray	SHAD-41b.ssf
8392	-121.26711357	37.82721194	6340119.033	2124580.847	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	245.004	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:56pm	C Gray	SHAD-41b.ssf
8393	-121.26713669	37.82721139	6340118.683	2124580.642	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	170.620	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:54:58pm	C Gray	SHAD-41b.ssf
8394	-121.2671279	37.82721871	6340121.288	2124583.291	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	186.420	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:00pm	C Gray	SHAD-41b.ssf
8395	-121.2671156	37.82722686	6340124.875	2124586.227	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	353.281	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:02pm	C Gray	SHAD-41b.ssf
8396	-121.2671037	37.82723213	6340128.317	2124588.119	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	428.963	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:04pm	C Gray	SHAD-41b.ssf
8397	-121.2670916	37.82723765	6340131.831	2124590.175	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	218.320	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:06pm	C Gray	SHAD-41b.ssf
8398	-121.2670768	37.82724344	6340136.112	2124592.102	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	125.404	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:08pm	C Gray	SHAD-41b.ssf
8399	-121.2670634	37.82724993	6340140.003	2124594.275	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	77.948	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:10pm	C Gray	SHAD-41b.ssf
8400	-121.26705	37.82725808	6340143.921	2124597.439	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60.492	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:12pm	C Gray	SHAD-41b.ssf
8401	-121.2670389	37.8272639	6340147.13	2124599.533	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53.864	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:14pm	C Gray	SHAD-41b.ssf
8402	-121.2670252	37.82726905	6340149.58	2124601.391	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41.960	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:16pm	C Gray	SHAD-41b.ssf
8403	-121.2670205	37.82727705	6340151.126	2124604.288	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34.646	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:18pm	C Gray	SHAD-41b.ssf
8404	-121.2670164	37.82727269	6340153.663	2124602.682	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30.248	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:20pm	C Gray	SHAD-41b.ssf
8405	-121.2670244	37.8272685	6340151.325	2124601.174	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30.708	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:22pm	C Gray	SHAD-41b.ssf
8406	-121.2670351	37.82726271	6340148.795	2124599.087	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30.453	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:24pm	C Gray	SHAD-41b.ssf
8407	-121.2670049	37.82725539	6340145.081	2124595.908	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33.320	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:26pm	C Gray	SHAD-41b.ssf
8408	-121.2670542	37.82724739	6340142.677	2124593.559	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45.138	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:28pm	C Gray	SHAD-41b.ssf
8409	-121.2670667	37.82723969	6340139.022	2124590.785	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52.423	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:30pm	C Gray	SHAD-41b.ssf
8410	-121.2670786	37.82723215	6340135.57	2124588.071	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55.102	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:32pm	C Gray	SHAD-41b.ssf
8411	-121.2670931	37.82722516	6340131.367	2124585.552	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72.469	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:34pm	C Gray	SHAD-41b.ssf
8412	-121.2671051	37.82721848	6340127.865	2124583.153	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	95.068	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:36pm	C Gray	SHAD-41b.ssf
8413	-121.2671156	37.82721297	6340124.832	2124581.172	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	276.364	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:38pm	C Gray	SHAD-41b.ssf
8414	-121.2671297	37.82721159	6340120.751	2124580.702	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	306.279	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:40pm	C Gray	SHAD-41b.ssf
8415	-121.2671169	37.82721515	6340124.456	2124581.966	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	288.784	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:42pm	C Gray	SHAD-41b.ssf
8416	-121.2671079	37.82721516	6340124.162	2124582.134	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	200.235	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:44pm	C Gray	SHAD-41b.ssf
8417	-121.2671044	37.82722039	6340128.084	2124583.847	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	211.758	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:46pm	C Gray	SHAD-41b.ssf
8418	-121.2670709	37.82722679	6340132.259	2124586.144	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	202.481	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:48pm	C Gray	SHAD-41b.ssf
8419	-121.2670782	37.82723385	6340135.706	2124588.684	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	190.502	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:50pm	C Gray	SHAD-41b.ssf
8420	-121.2670647	37.82723893	6340139.593	2124590.503	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	158.025	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:52pm	C Gray	SHAD-41b.ssf
8421	-121.2670511	37.82724617	6340143.544	2124593.107	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85.724	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:54pm	C Gray	SHAD-41b.ssf
8422	-121.2670355	37.82725492	6340148.098	2124596.257	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61.716	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:56pm	C Gray	SHAD-41b.ssf
8423	-121.2670206	37.82726386	6340152.431	2124599.477	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45.486	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:55:58pm	C Gray	SHAD-41b.ssf
8424	-121.2670149	37.82727154	6340154.809	2124602.253	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36.509	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:00pm	C Gray	SHAD-41b.ssf
8425	-121.2670025	37.82726587	6340157.642	2124600.165	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33.245	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:02pm	C Gray	SHAD-41b.ssf
8426	-121.2670077	37.82726085	6340156.136	2124598.35	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30.325	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:04pm	C Gray	SHAD-41b.ssf
8427	-121.2670207	37.82725029	6340152.355	2124594.537	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32.017	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:06pm	C Gray	SHAD-41b.ssf
8428	-121.2670303	37.82724448	6340149.555	2124592.559	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34.372	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:08pm	C Gray	SHAD-41b.ssf
8429	-121.2670433	37.82723821	6340145.861	2124590.191	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40.170	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:10pm	C Gray	SHAD-41b.ssf
8430	-121.2670533	37.82723173	6340142.865	2124587.856	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47.956	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:12pm	C Gray	SHAD-41b.ssf
8431	-121.2670652	37.82722605	6340139.433	2124585.814	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54.657	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:14pm	C Gray	SHAD-41b.ssf
8432	-121.2670749	37.82722133	6340136.606	2124584.117	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70.005	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:16pm	C Gray	SHAD-41b.ssf
8433	-121.2670886	37.82721514	6340132.644	2124581.895	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	109.479	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:18pm	C Gray	SHAD-41b.ssf
8434	-121.2670928	37.82727079	6340129.382	2124579.974	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	168.807	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:20pm	C Gray	SHAD-41b.ssf
8435	-121.2671155	37.82720699	6340125.71	2124578.987	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	178.556	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:22pm	C Gray	SHAD-41b.ssf
8436	-121.2671152	37.82721058	6340124.94	2124580.298	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	174.703	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:24pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8437	-121.2671129	37.82720604	6340125.602	2124578.641	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	152.466	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:26pm	C Gray	SHAD-41b.ssf
8438	-121.2671098	37.82720695	6340126.495	2124578.107	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	128.986	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:28pm	C Gray	SHAD-41b.ssf
8439	-121.2670946	37.82721293	6340130.893	2124581.176	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	144.715	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:30pm	C Gray	SHAD-41b.ssf
8440	-121.2670826	37.82721679	6340134.361	2124582.483	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	129.784	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:32pm	C Gray	SHAD-41b.ssf
8441	-121.2670696	37.82722274	6340138.134	2124584.618	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	94.095	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:34pm	C Gray	SHAD-41b.ssf
8442	-121.2670542	37.82723208	6340142.602	2124587.516	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85.344	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:36pm	C Gray	SHAD-41b.ssf
8443	-121.2670423	37.82723718	6340146.07	2124589.848	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72.729	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:38pm	C Gray	SHAD-41b.ssf
8444	-121.2670305	37.82724424	6340149.504	2124592.319	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67.057	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:40pm	C Gray	SHAD-41b.ssf
8445	-121.2670226	37.82724959	6340151.799	2124594.286	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49.084	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:41pm	C Gray	SHAD-41b.ssf
8446	-121.2670068	37.82726031	6340156.402	2124598.15	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38.459	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:44pm	C Gray	SHAD-41b.ssf
8447	-121.266997	37.82726605	6340159.251	2124600.216	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32.314	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:46pm	C Gray	SHAD-41b.ssf
8448	-121.2669983	37.82727278	6340158.84	2124595.911	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30.671	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:48pm	C Gray	SHAD-41b.ssf
8449	-121.2670024	37.82725242	6340157.648	2124595.265	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	29.137	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:50pm	C Gray	SHAD-41b.ssf
8450	-121.2670124	37.82724562	6340154.73	2124592.816	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	30.773	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:52pm	C Gray	SHAD-41b.ssf
8451	-121.2670249	37.82723644	6340151.084	2124589.503	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32.682	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:54pm	C Gray	SHAD-41b.ssf
8452	-121.2670373	37.82723035	6340147.481	2124587.316	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	41.049	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:56pm	C Gray	SHAD-41b.ssf
8453	-121.2670476	37.82722241	6340144.504	2124585.174	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56.293	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:56:58pm	C Gray	SHAD-41b.ssf
8454	-121.2670627	37.82721684	6340140.122	2124582.455	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	60.088	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:00pm	C Gray	SHAD-41b.ssf
8455	-121.2670761	37.82721076	6340136.239	2124580.274	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80.230	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:02pm	C Gray	SHAD-41b.ssf
8456	-121.2670887	37.82722079	6340132.564	2124578.123	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	86.074	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:04pm	C Gray	SHAD-41b.ssf
8457	-121.2670689	37.82720003	6340129.255	2124576.423	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	117.059	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:06pm	C Gray	SHAD-41b.ssf
8458	-121.2671146	37.82719864	6340125.076	2124575.951	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	143.629	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:08pm	C Gray	SHAD-41b.ssf
8459	-121.2671135	37.82719909	6340125.401	2124576.112	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	139.889	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:10pm	C Gray	SHAD-41b.ssf
8460	-121.2671177	37.82719874	6340125.342	2124575.985	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	130.592	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:12pm	C Gray	SHAD-41b.ssf
8461	-121.2671036	37.82720243	6340127.12	2124577.995	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	126.337	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:14pm	C Gray	SHAD-41b.ssf
8462	-121.2670957	37.82720745	6340130.561	2124579.113	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	146.292	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:16pm	C Gray	SHAD-41b.ssf
8463	-121.2670821	37.82721056	6340134.493	2124580.214	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	113.196	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:18pm	C Gray	SHAD-41b.ssf
8464	-121.2670689	37.82721499	6340138.332	2124581.797	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	88.330	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:20pm	C Gray	SHAD-41b.ssf
8465	-121.2670582	37.82721928	6340141.42	2124583.333	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71.174	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:22pm	C Gray	SHAD-41b.ssf
8466	-121.2670465	37.82722288	6340144.826	2124584.981	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75.851	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:24pm	C Gray	SHAD-41b.ssf
8467	-121.2670363	37.82722926	6340147.79	2124586.914	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73.392	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:26pm	C Gray	SHAD-41b.ssf
8468	-121.2670237	37.82723676	6340151.451	2124589.616	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67.252	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:28pm	C Gray	SHAD-41b.ssf
8469	-121.2670114	37.82724407	6340155.015	2124592.248	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	52.986	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:30pm	C Gray	SHAD-41b.ssf
8470	-121.2669935	37.82725092	6340158.93	2124594.709	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40.024	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:32pm	C Gray	SHAD-41b.ssf
8471	-121.2670079	37.82724067	6340157.3	2124590.991	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35.211	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:34pm	C Gray	SHAD-41b.ssf
8472	-121.2670074	37.82723998	6340156.157	2124590.749	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35.119	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:36pm	C Gray	SHAD-41b.ssf
8473	-121.2670195	37.82723124	6340152.632	2124587.596	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39.693	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:38pm	C Gray	SHAD-41b.ssf
8474	-121.2670302	37.82722522	6340149.543	2124585.431	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	48.090	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:40pm	C Gray	SHAD-41b.ssf
8475	-121.2670438	37.82721817	6340145.594	2124582.894	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	58.058	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:42pm	C Gray	SHAD-41b.ssf
8476	-121.2670556	37.82721214	6340142.116	2124580.728	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71.940	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:44pm	C Gray	SHAD-41b.ssf
8477	-121.2670688	37.82720618	6340138.329	2124578.587	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70.508	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:46pm	C Gray	SHAD-41b.ssf
8478	-121.2670798	37.82720107	6340135.136	2124576.752	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67.032	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:48pm	C Gray	SHAD-41b.ssf
8479	-121.2670928	37.82719511	6340131.351	2124574.615	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80.708	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:50pm	C Gray	SHAD-41b.ssf
8480	-121.2671036	37.8271906	6340127.603	2124573.001	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	108.308	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:52pm	C Gray	SHAD-41b.ssf
8481	-121.2671126	37.82719148	6340125.641	2124573.338	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	131.244	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:54pm	C Gray	SHAD-41b.ssf
8482	-121.2671118	37.82718591	6340125.84	2124571.308	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	123.837	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:56pm	C Gray	SHAD-41b.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8483	-121.2671107	37.82719016	6340126.189	2124572.853	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	124,723	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:57:58pm	C Gray	SHAD-41b.ssf
8484	-121.2670949	37.82719383	6340130.736	2124574.154	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	126,746	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:00pm	C Gray	SHAD-41b.ssf
8485	-121.2670788	37.82719583	6340135.403	2124574.843	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	133,307	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:02pm	C Gray	SHAD-41b.ssf
8486	-121.2670635	37.82720098	6340139.833	2124576.683	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	91,501	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:04pm	C Gray	SHAD-41b.ssf
8487	-121.267052	37.82720667	6340143.176	2124578.726	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	64,833	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:06pm	C Gray	SHAD-41b.ssf
8488	-121.2670395	37.82721331	6340146.798	2124581.115	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	68,077	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:08pm	C Gray	SHAD-41b.ssf
8489	-121.2670271	37.82721892	6340150.441	2124583.128	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,896	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:10pm	C Gray	SHAD-41b.ssf
8490	-121.2670139	37.82722512	6340154.224	2124585.355	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,753	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:12pm	C Gray	SHAD-41b.ssf
8491	-121.2670039	37.82723158	6340157.136	2124587.684	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,443	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:14pm	C Gray	SHAD-41b.ssf
8492	-121.2670033	37.82722553	6340157.288	2124585.479	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,836	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:16pm	C Gray	SHAD-41b.ssf
8493	-121.2670097	37.82722	6340155.437	2124583.478	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,145	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:18pm	C Gray	SHAD-41b.ssf
8494	-121.2670222	37.82721337	6340151.874	2124581.094	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	55,601	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:20pm	C Gray	SHAD-41b.ssf
8495	-121.2670365	37.82720494	6340147.644	2124578.058	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	60,838	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:22pm	C Gray	SHAD-41b.ssf
8496	-121.2670494	37.82719913	6340143.915	2124575.975	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,827	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:24pm	C Gray	SHAD-41b.ssf
8497	-121.2670634	37.82719394	6340139.855	2124574.117	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	71,618	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:26pm	C Gray	SHAD-41b.ssf
8498	-121.2670766	37.82718972	6340136.022	2124572.613	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	59,349	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:28pm	C Gray	SHAD-41b.ssf
8499	-121.2670904	37.82718462	6340132.026	2124570.789	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	76,731	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:30pm	C Gray	SHAD-41b.ssf
8500	-121.2671011	37.82718072	6340128.908	2124569.394	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	126,098	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:32pm	C Gray	SHAD-41b.ssf
8501	-121.2671148	37.82717734	6340124.956	2124568.194	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	128,911	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:34pm	C Gray	SHAD-41b.ssf
8502	-121.2671105	37.82717852	6340126.202	2124568.616	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	134,977	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:36pm	C Gray	SHAD-41b.ssf
8503	-121.2671117	37.82717901	6340125.85	2124568.798	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	137,504	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:38pm	C Gray	SHAD-41b.ssf
8504	-121.2670987	37.82718102	6340129.609	2124569.498	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	133,066	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:40pm	C Gray	SHAD-41b.ssf
8505	-121.2670815	37.82718581	6340134.609	2124571.2	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	97,974	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:42pm	C Gray	SHAD-41b.ssf
8506	-121.2670652	37.82719151	6340141.332	2124573.239	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	77,865	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:44pm	C Gray	SHAD-41b.ssf
8507	-121.2670589	37.82719287	6340141.139	2124573.72	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	62,117	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:45pm	C Gray	SHAD-41b.ssf
8508	-121.2670367	37.82720134	6340147.581	2124576.409	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	70,756	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:48pm	C Gray	SHAD-41b.ssf
8509	-121.2670225	37.82720815	6340151.691	2124579.195	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	63,754	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:50pm	C Gray	SHAD-41b.ssf
8510	-121.2670052	37.8272166	6340156.738	2124582.232	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	52,066	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:52pm	C Gray	SHAD-41b.ssf
8511	-121.2670137	37.82720513	6340154.248	2124578.076	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	49,506	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:54pm	C Gray	SHAD-41b.ssf
8512	-121.2670101	37.82720734	6340154.994	2124578.873	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,643	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:56pm	C Gray	SHAD-41b.ssf
8513	-121.2670111	37.82721013	6340155.298	2124579.888	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	50,093	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:58:58pm	C Gray	SHAD-41b.ssf
8514	-121.2670111	37.82721014	6340155.001	2124579.894	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	48,846	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:59:02pm	C Gray	SHAD-41b.ssf
8515	-121.2670111	37.82721014	6340155.001	2124579.894	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,348	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:59:02pm	C Gray	SHAD-41b.ssf
8516	-121.2670111	37.82721014	6340155.001	2124579.894	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	45,962	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:59:05pm	C Gray	SHAD-41b.ssf
8517	-121.2670111	37.82721014	6340155.001	2124579.894	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,388	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:59:08pm	C Gray	SHAD-41b.ssf
8518	-121.2670111	37.82721014	6340155.001	2124579.894	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	46,888	Geo 7X	Real-time SBAS Corrected	10/2/2017	02:59:10pm	C Gray	SHAD-41b.ssf
8519	-121.2673286	37.82719862	6340063.261	2124576.45	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,606	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:57:57am	C Gray	SHAD41-c.ssf
8520	-121.2673286	37.82719862	6340063.267	2124576.45	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,756	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:57:58am	C Gray	SHAD41-c.ssf
8522	-121.2673286	37.82719874	6340063.267	2124576.494	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	71,271	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:58:05am	C Gray	SHAD41-c.ssf
8523	-121.2673285	37.82719897	6340063.295	2124576.576	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	72,148	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:58:08am	C Gray	SHAD41-c.ssf
8524	-121.267329	37.82719943	6340063.169	2124576.746	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	70,804	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:58:32am	C Gray	SHAD41-c.ssf
8525	-121.2673291	37.8271994	6340063.138	2124576.736	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	70,145	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:58:36am	C Gray	SHAD41-c.ssf
8526	-121.2673289	37.82719936	6340063.182	2124576.714	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	71,089	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:58:47am	C Gray	SHAD41-c.ssf
8527	-121.2673284	37.82719936	6340063.321	2124576.72	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	72,757	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:58:49am	C Gray	SHAD41-c.ssf
8528	-121.2673279	37.82719632	6340063.472	2124575.611	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	71,152	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:58:51am	C Gray	SHAD41-c.ssf
8529	-121.2673269	37.82719625	6340063.756	2124575.582	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	64,216	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:58:53am	C Gray	SHAD41-c.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8530	-121.2673269	37.82719734	6340063.759	2124575.981	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,331	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:58:55am	C Gray	SHAD41-c.ssf
8531	-121.2673253	37.82719635	6340064.23	2124575.615	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,406	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:58:58am	C Gray	SHAD41-c.ssf
8532	-121.2673241	37.82719584	6340064.552	2124575.428	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,824	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:00am	C Gray	SHAD41-c.ssf
8533	-121.2673249	37.82719568	6340064.339	2124575.372	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,288	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:02am	C Gray	SHAD41-c.ssf
8534	-121.2673255	37.82719605	6340064.167	2124575.508	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,963	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:03am	C Gray	SHAD41-c.ssf
8535	-121.2673258	37.82719551	6340064.058	2124575.31	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,911	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:05am	C Gray	SHAD41-c.ssf
8536	-121.2673256	37.82719651	6340064.002	2124575.676	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,818	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:07am	C Gray	SHAD41-c.ssf
8537	-121.2673235	37.82719754	6340064.753	2124576.045	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	61,054	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:15am	C Gray	SHAD41-c.ssf
8538	-121.2673232	37.82719491	6340064.823	2124575.085	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,161	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:19am	C Gray	SHAD41-c.ssf
8539	-121.2673248	37.82719515	6340064.361	2124575.178	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	63,450	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:22am	C Gray	SHAD41-c.ssf
8540	-121.2673228	37.82718746	6340063.413	2124572.384	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,943	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:23am	C Gray	SHAD41-c.ssf
8541	-121.2673282	37.82718669	6340063.359	2124572.18	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,499	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:25am	C Gray	SHAD41-c.ssf
8542	-121.2673359	37.8271825	6340061.115	2124570.598	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,610	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:28am	C Gray	SHAD41-c.ssf
8543	-121.2673436	37.82717758	6340058.879	2124568.824	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	107,115	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:29am	C Gray	SHAD41-c.ssf
8544	-121.2673533	37.82717075	6340056.063	2124566.359	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	124,510	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:31am	C Gray	SHAD41-c.ssf
8545	-121.2673594	37.8271652	6340054.28	2124564.354	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,380	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:33am	C Gray	SHAD41-c.ssf
8546	-121.2673682	37.82715647	6340051.701	2124561.195	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,428	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:36am	C Gray	SHAD41-c.ssf
8547	-121.2673752	37.82714765	6340049.645	2124558.002	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	103,702	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:37am	C Gray	SHAD41-c.ssf
8548	-121.2673925	37.82713505	6340044.635	2124553.453	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	91,290	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:42am	C Gray	SHAD41-c.ssf
8549	-121.2674068	37.8271223	6340040.455	2124548.738	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,950	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:45am	C Gray	SHAD41-c.ssf
8550	-121.2674131	37.82711523	6340038.625	2124546.285	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	70,143	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:47am	C Gray	SHAD41-c.ssf
8551	-121.2674207	37.82710892	6340036.415	2124544.005	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,032	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:49am	C Gray	SHAD41-c.ssf
8552	-121.2674265	37.82710293	6340034.7	2124541.841	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	45,544	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:51am	C Gray	SHAD41-c.ssf
8553	-121.2674359	37.82709486	6340031.972	2124538.923	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,406	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:54am	C Gray	SHAD41-c.ssf
8554	-121.2674451	37.82709158	6340030.196	2124537.743	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,339	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:55am	C Gray	SHAD41-c.ssf
8555	-121.2674512	37.82708284	6340027.548	2124534.584	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,916	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:57am	C Gray	SHAD41-c.ssf
8556	-121.2674584	37.82707528	6340025.404	2124531.846	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,291	Geo 7X	Real-time SBAS Corrected	10/3/2017	07:59:59am	C Gray	SHAD41-c.ssf
8557	-121.2674642	37.8270686	6340023.719	2124529.43	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,058	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:01am	C Gray	SHAD41-c.ssf
8558	-121.2674728	37.827061	6340021.226	2124526.683	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,391	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:03am	C Gray	SHAD41-c.ssf
8559	-121.2674802	37.82705362	6340019.04	2124524.014	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,182	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:05am	C Gray	SHAD41-c.ssf
8560	-121.2674879	37.82704746	6340016.816	2124521.788	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,699	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:07am	C Gray	SHAD41-c.ssf
8561	-121.2674936	37.82704014	6340014.449	2124519.6	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,296	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:09am	C Gray	SHAD41-c.ssf
8562	-121.2675029	37.82703477	6340012.453	2124517.203	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,032	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:11am	C Gray	SHAD41-c.ssf
8563	-121.2675052	37.82702839	6340011.77	2124514.884	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,571	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:13am	C Gray	SHAD41-c.ssf
8564	-121.2675145	37.82701719	6340009.049	2124511.088	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,020	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:16am	C Gray	SHAD41-c.ssf
8565	-121.2675183	37.82701124	6340007.916	2124509.096	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,798	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:17am	C Gray	SHAD41-c.ssf
8566	-121.2675251	37.82700613	6340005.938	2124506.829	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,125	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:19am	C Gray	SHAD41-c.ssf
8567	-121.2675331	37.82700166	6340003.625	2124505.217	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,013	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:21am	C Gray	SHAD41-c.ssf
8568	-121.267542	37.82699525	6340001.023	2124502.907	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,161	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:23am	C Gray	SHAD41-c.ssf
8569	-121.2675501	37.82698959	6339998.661	2124500.863	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,949	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:25am	C Gray	SHAD41-c.ssf
8570	-121.2675564	37.82698197	6339996.82	2124498.104	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,462	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:27am	C Gray	SHAD41-c.ssf
8571	-121.2675771	37.82696001	6339990.801	2124490.158	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,636	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:33am	C Gray	SHAD41-c.ssf
8572	-121.2675827	37.82695396	6339989.153	2124487.967	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,554	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:35am	C Gray	SHAD41-c.ssf
8573	-121.2676054	37.82693658	6339982.55	2124481.693	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,516	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:41am	C Gray	SHAD41-c.ssf
8574	-121.2676145	37.82692975	6339979.884	2124479.229	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,141	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:43am	C Gray	SHAD41-c.ssf
8575	-121.2676149	37.82692476	6339979.767	2124477.413	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,885	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:00:53am	C Gray	SHAD41-c.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8576	-121.267586	37.82694937	6339988.172	2124486.304	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	49,780	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:01:01am	C Gray	SHAD41-c.ssf
8577	-121.2675539	37.82696611	6339994.039	2124492.353	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,692	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:01:07am	C Gray	SHAD41-c.ssf
8578	-121.2675654	37.82697826	6339997.689	2124496.748	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,243	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:01:11am	C Gray	SHAD41-c.ssf
8579	-121.2675425	37.82698929	6340000.863	2124500.736	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,896	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:01:15am	C Gray	SHAD41-c.ssf
8580	-121.2675314	37.82700107	6340004.097	2124505.002	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,572	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:01:19am	C Gray	SHAD41-c.ssf
8581	-121.267524	37.82700798	6340006.271	2124507.498	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,875	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:01:21am	C Gray	SHAD41-c.ssf
8582	-121.2675193	37.82701697	6340009.091	2124510.749	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,815	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:01:23am	C Gray	SHAD41-c.ssf
8583	-121.2674457	37.82703728	6340014.517	2124518.101	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,564	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:01:29am	C Gray	SHAD41-c.ssf
8584	-121.2674857	37.82704055	6340017.43	2124521.071	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,016	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:01:31am	C Gray	SHAD41-c.ssf
8585	-121.2674799	37.82705185	6340019.135	2124523.369	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,095	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:01:33am	C Gray	SHAD41-c.ssf
8586	-121.2674615	37.82706637	6340024.506	2124528.61	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,336	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:01:37am	C Gray	SHAD41-c.ssf
8587	-121.2674452	37.82708248	6340029.243	2124534.438	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,232	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:01:41am	C Gray	SHAD41-c.ssf
8588	-121.2674117	37.82710919	6340037.486	2124544.097	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,826	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:01:49am	C Gray	SHAD41-c.ssf
8589	-121.2673779	37.82714691	6340048.865	2124557.738	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	82,709	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:07am	C Gray	SHAD41-c.ssf
8590	-121.2673424	37.82717179	6340059.233	2124568.938	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	100,074	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:07am	C Gray	SHAD41-c.ssf
8591	-121.2673348	37.82718626	6340061.446	2124571.964	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	135,889	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:09am	C Gray	SHAD41-c.ssf
8592	-121.2673301	37.82718759	6340062.81	2124572.436	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	114,913	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:15am	C Gray	SHAD41-c.ssf
8593	-121.2673306	37.82718641	6340062.651	2124572.01	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	134,850	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:17am	C Gray	SHAD41-c.ssf
8594	-121.2673394	37.82718103	6340060.087	2124570.071	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	134,945	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:19am	C Gray	SHAD41-c.ssf
8595	-121.2673938	37.82712397	6340044.163	2124549.422	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	152,686	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:21am	C Gray	SHAD41-c.ssf
8596	-121.2673524	37.82716734	6340056.291	2124565.133	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	112,336	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:23am	C Gray	SHAD41-c.ssf
8597	-121.2673585	37.82716084	6340054.528	2124562.766	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	97,077	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:25am	C Gray	SHAD41-c.ssf
8598	-121.2673671	37.82715197	6340052.008	2124559.554	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	108,846	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:27am	C Gray	SHAD41-c.ssf
8599	-121.2673764	37.82714209	6340049.295	2124555.979	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	109,298	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:30am	C Gray	SHAD41-c.ssf
8600	-121.2673844	37.8271341	6340046.97	2124553.09	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	95,976	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:32am	C Gray	SHAD41-c.ssf
8601	-121.2673906	37.82712793	6340045.163	2124550.857	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	89,692	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:33am	C Gray	SHAD41-c.ssf
8602	-121.2673938	37.82712397	6340044.213	2124549.422	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	83,741	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:35am	C Gray	SHAD41-c.ssf
8603	-121.2674035	37.8271142	6340041.399	2124545.887	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68,958	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:37am	C Gray	SHAD41-c.ssf
8605	-121.26742	37.8270981	6340036.57	2124540.065	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,081	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:41am	C Gray	SHAD41-c.ssf
8606	-121.2674272	37.82709264	6340034.478	2124538.094	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,035	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:43am	C Gray	SHAD41-c.ssf
8607	-121.2674367	37.82708477	6340031.723	2124535.251	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,950	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:45am	C Gray	SHAD41-c.ssf
8608	-121.2674446	37.82707721	6340029.391	2124532.518	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,321	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:47am	C Gray	SHAD41-c.ssf
8609	-121.2674511	37.82706987	6340027.512	2124529.86	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,695	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:49am	C Gray	SHAD41-c.ssf
8610	-121.2674625	37.82705601	6340022.735	2124524.852	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,795	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:53am	C Gray	SHAD41-c.ssf
8611	-121.2674823	37.82704228	6340018.413	2124519.888	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,131	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:57am	C Gray	SHAD41-c.ssf
8612	-121.2674903	37.82703527	6340016.085	2124517.357	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,502	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:02:59am	C Gray	SHAD41-c.ssf
8613	-121.2675003	37.82702698	6340013.174	2124514.362	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,541	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:01am	C Gray	SHAD41-c.ssf
8614	-121.267508	37.82701952	6340010.927	2124511.663	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,408	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:03am	C Gray	SHAD41-c.ssf
8615	-121.2675147	37.82701229	6340008.976	2124509.047	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,712	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:05am	C Gray	SHAD41-c.ssf
8616	-121.2675217	37.82700049	6340006.929	2124506.371	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,919	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:07am	C Gray	SHAD41-c.ssf
8617	-121.2675378	37.82699008	6340002.236	2124501.015	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,528	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:11am	C Gray	SHAD41-c.ssf
8618	-121.2675444	37.82698274	6340000.291	2124498.356	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,130	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:14am	C Gray	SHAD41-c.ssf
8619	-121.2675603	37.82696931	6339995.659	2124493.504	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,679	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:17am	C Gray	SHAD41-c.ssf
8620	-121.2675905	37.82696243	6339993.291	2124491.017	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,735	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:19am	C Gray	SHAD41-c.ssf
8621	-121.2675905	37.82694586	6339986.868	2124485.039	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	59,489	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:26am	C Gray	SHAD41-c.ssf
8622	-121.2675937	37.82694102	6339985.945	2124483.282	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	55,818	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:27am	C Gray	SHAD41-c.ssf

ID	Longitude	Latitude	Easting	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8623	-121.2676046	37.826922415	6339982.727	2124477.164	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,300	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:35am	C Gray	SHAD41-c.ssf
8624	-121.2675958	37.82692794	6339985.225	2124478.526	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,375	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:39am	C Gray	SHAD41-c.ssf
8625	-121.2675921	37.82693476	6339986.368	2124480.998	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,641	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:41am	C Gray	SHAD41-c.ssf
8626	-121.2675818	37.82694405	6339989.384	2124484.356	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,206	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:43am	C Gray	SHAD41-c.ssf
8627	-121.2675755	37.82695203	6339991.215	2124487.247	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	42,311	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:45am	C Gray	SHAD41-c.ssf
8628	-121.2675525	37.82697441	6339997.943	2124496.341	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,325	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:51am	C Gray	SHAD41-c.ssf
8629	-121.2675475	37.82697891	6340000.119	2124496.964	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,860	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:53am	C Gray	SHAD41-c.ssf
8630	-121.2675349	37.82698534	6340002.192	2124499.288	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,882	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:03:55am	C Gray	SHAD41-c.ssf
8631	-121.2675172	37.8270062	6340008.236	2124506.835	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,411	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:01am	C Gray	SHAD41-c.ssf
8632	-121.2675101	37.82701157	6340010.286	2124508.771	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,107	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:03am	C Gray	SHAD41-c.ssf
8633	-121.2675014	37.82702052	6340012.845	2124512.011	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,768	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:05am	C Gray	SHAD41-c.ssf
8634	-121.2674877	37.8270326	6340016.836	2124516.159	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,526	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:09am	C Gray	SHAD41-c.ssf
8635	-121.267481	37.8270379	6340018.778	2124518.291	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,363	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:11am	C Gray	SHAD41-c.ssf
8636	-121.2674726	37.82704766	6340021.219	2124521.826	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,118	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:13am	C Gray	SHAD41-c.ssf
8637	-121.2674665	37.82705326	6340023.016	2124523.848	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,757	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:15am	C Gray	SHAD41-c.ssf
8638	-121.2674582	37.8270592	6340025.978	2124525.994	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,920	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:17am	C Gray	SHAD41-c.ssf
8639	-121.2674523	37.82706588	6340027.151	2124528.409	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,341	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:19am	C Gray	SHAD41-c.ssf
8640	-121.2674215	37.82709377	6340036.134	2124538.493	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,780	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:27am	C Gray	SHAD41-c.ssf
8641	-121.2674147	37.82710016	6340038.114	2124540.803	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,720	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:29am	C Gray	SHAD41-c.ssf
8642	-121.2674004	37.8271069	6340039.909	2124543.242	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,395	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:31am	C Gray	SHAD41-c.ssf
8643	-121.2674085	37.82711381	6340042.278	2124545.742	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,208	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:33am	C Gray	SHAD41-c.ssf
8644	-121.2673935	37.82711952	6340044.294	2124547.802	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,522	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:35am	C Gray	SHAD41-c.ssf
8645	-121.2673875	37.8271268	6340046.058	2124550.439	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	65,196	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:37am	C Gray	SHAD41-c.ssf
8646	-121.2673757	37.82713347	6340048.892	2124552.843	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,440	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:40am	C Gray	SHAD41-c.ssf
8647	-121.2673737	37.82713925	6340049.497	2124554.945	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	91,484	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:41am	C Gray	SHAD41-c.ssf
8648	-121.2673654	37.82714932	6340052.488	2124558.588	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	85,805	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:43am	C Gray	SHAD41-c.ssf
8649	-121.2673565	37.8271569	6340055.079	2124561.324	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	114,388	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:45am	C Gray	SHAD41-c.ssf
8650	-121.2673505	37.8271639	6340056.837	2124563.86	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	87,480	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:47am	C Gray	SHAD41-c.ssf
8651	-121.2673416	37.82717308	6340059.44	2124567.183	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	89,160	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:49am	C Gray	SHAD41-c.ssf
8652	-121.2673316	37.82718032	6340062.338	2124569.794	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	128,359	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:51am	C Gray	SHAD41-c.ssf
8653	-121.2673272	37.82717597	6340063.595	2124568.201	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	150,747	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:53am	C Gray	SHAD41-c.ssf
8654	-121.2673312	37.82717218	6340062.433	2124566.828	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	161,628	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:04:59am	C Gray	SHAD41-c.ssf
8655	-121.2673425	37.8271614	6340059.134	2124562.932	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	111,091	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:06am	C Gray	SHAD41-c.ssf
8657	-121.2673738	37.82713372	6340050.023	2124552.927	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	89,211	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:13am	C Gray	SHAD41-c.ssf
8658	-121.2673793	37.827127	6340048.405	2124550.492	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	86,700	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:15am	C Gray	SHAD41-c.ssf
8659	-121.2673865	37.827127	6340046.315	2124547.96	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	80,971	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:17am	C Gray	SHAD41-c.ssf
8660	-121.2674106	37.82709927	6340039.282	2124540.471	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,067	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:23am	C Gray	SHAD41-c.ssf
8661	-121.2674171	37.82709268	6340037.385	2124538.087	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,682	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:25am	C Gray	SHAD41-c.ssf
8662	-121.2674244	37.82708548	6340035.252	2124535.48	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,336	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:27am	C Gray	SHAD41-c.ssf
8663	-121.2674309	37.82707896	6340033.368	2124533.122	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,130	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:29am	C Gray	SHAD41-c.ssf
8664	-121.2674379	37.82707289	6340031.314	2124530.929	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,310	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:31am	C Gray	SHAD41-c.ssf
8665	-121.2674438	37.82706597	6340029.608	2124528.425	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,560	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:33am	C Gray	SHAD41-c.ssf
8666	-121.2674512	37.82705915	6340027.453	2124525.958	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,760	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:35am	C Gray	SHAD41-c.ssf
8667	-121.2674578	37.82705295	6340025.529	2124523.717	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,147	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:38am	C Gray	SHAD41-c.ssf
8668	-121.2674642	37.82704658	6340023.667	2124521.412	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,697	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:39am	C Gray	SHAD41-c.ssf
8669	-121.2674706	37.82703971	6340021.775	2124518.924	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,497	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:41am	C Gray	SHAD41-c.ssf

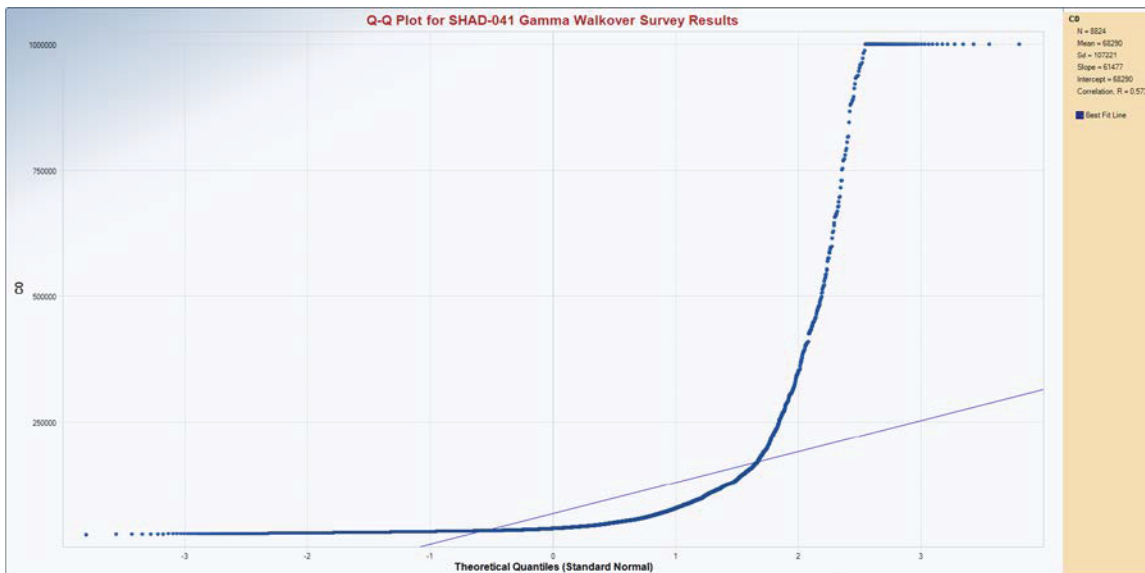
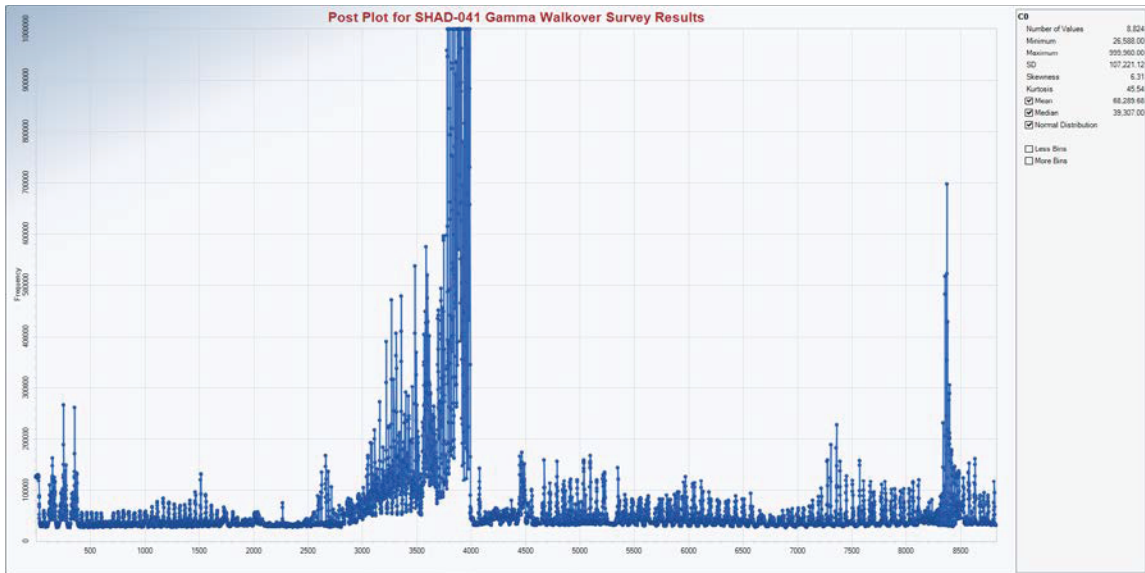
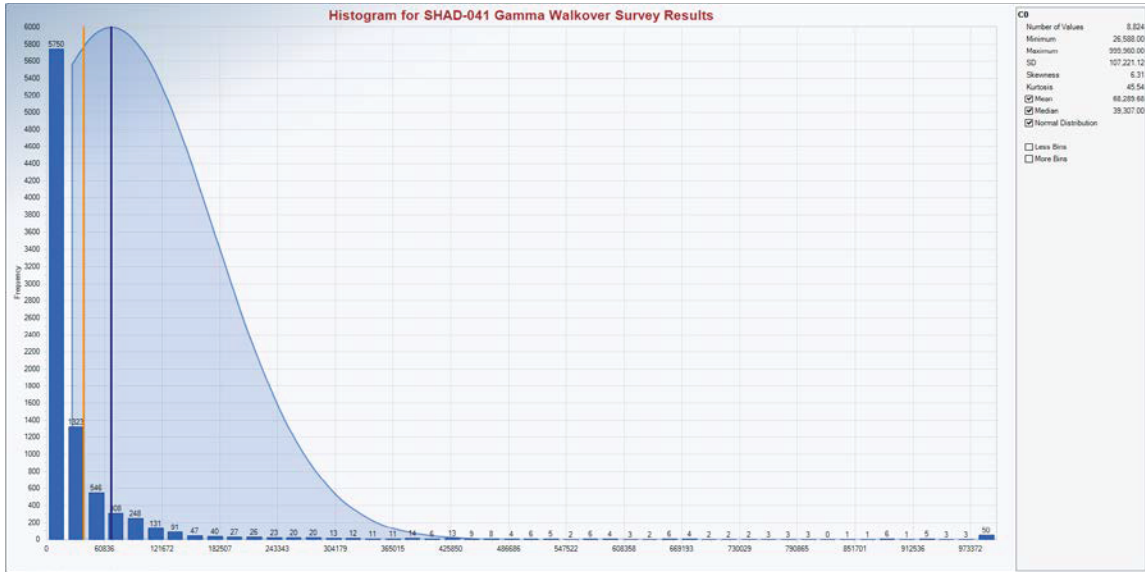
ID	Longitude	Latitude	Easting	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8670	-121.2674778	37.82703325	6340019.672	2124516.591	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,992	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:43am	C Gray	SHAD41-c.ssf
8671	-121.2674824	37.82702711	6340018.328	2124514.622	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,976	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:45am	C Gray	SHAD41-c.ssf
8672	-121.2674915	37.82702783	6340015.706	2124512.209	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,017	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:47am	C Gray	SHAD41-c.ssf
8673	-121.2674978	37.82701529	6340013.843	2124510.098	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,862	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:49am	C Gray	SHAD41-c.ssf
8674	-121.2675059	37.82700862	6340011.491	2124507.687	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,426	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:51am	C Gray	SHAD41-c.ssf
8675	-121.2675115	37.82700312	6340009.864	2124505.701	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,735	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:53am	C Gray	SHAD41-c.ssf
8676	-121.2675176	37.82699829	6340008.996	2124503.956	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,536	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:55am	C Gray	SHAD41-c.ssf
8677	-121.2675248	37.82699149	6340005.074	2124501.497	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,882	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:57am	C Gray	SHAD41-c.ssf
8678	-121.2675315	37.82698861	6340004.033	2124499.549	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,470	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:05:59am	C Gray	SHAD41-c.ssf
8679	-121.2675363	37.82698135	6340002.648	2124497.83	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,358	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:06:01am	C Gray	SHAD41-c.ssf
8680	-121.2675421	37.8269764	6340000.96	2124496.043	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,412	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:06:03am	C Gray	SHAD41-c.ssf
8681	-121.2675485	37.82696922	6339999.067	2124493.442	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,198	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:06:05am	C Gray	SHAD41-c.ssf
8682	-121.2675536	37.82696423	6339997.587	2124491.639	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,256	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:06:07am	C Gray	SHAD41-c.ssf
8683	-121.2675585	37.82695889	6339996.15	2124489.707	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,689	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:06:09am	C Gray	SHAD41-c.ssf
8684	-121.2675644	37.82695419	6339994.445	2124488.007	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,621	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:06:11am	C Gray	SHAD41-c.ssf
8685	-121.2675713	37.82694656	6339992.413	2124485.248	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,219	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:06:13am	C Gray	SHAD41-c.ssf
8686	-121.2675785	37.82693835	6339990.315	2124482.348	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,793	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:06:16am	C Gray	SHAD41-c.ssf
8687	-121.2675891	37.82692839	6339987.223	2124478.674	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,802	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:06:19am	C Gray	SHAD41-c.ssf
8688	-121.2675893	37.8269199	6339987.151	2124475.583	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,765	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:06:23am	C Gray	SHAD41-c.ssf
8689	-121.2675998	37.82691059	6339995.718	2124486.686	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,642	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:06:37am	C Gray	SHAD41-c.ssf
8690	-121.2675964	37.82695478	6339996.628	2124488.208	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,045	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:06:39am	C Gray	SHAD41-c.ssf
8691	-121.2675206	37.82698573	6340007.173	2124499.388	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,220	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:06:49am	C Gray	SHAD41-c.ssf
8692	-121.2675206	37.82698573	6340007.173	2124499.388	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,234	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:06:51am	C Gray	SHAD41-c.ssf
8693	-121.2674585	37.82704055	6340025.308	2124521.003	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,872	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:07:11am	C Gray	SHAD41-c.ssf
8694	-121.2674529	37.82705159	6340026.922	2124523.21	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,842	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:07:13am	C Gray	SHAD41-c.ssf
8695	-121.2674646	37.82705719	6340028.95	2124525.451	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,521	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:07:15am	C Gray	SHAD41-c.ssf
8696	-121.267366	37.8271318	6340052.266	2124552.208	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,195	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:07:39am	C Gray	SHAD41-c.ssf
8697	-121.2673564	37.82714001	6340055.052	2124555.177	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,806	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:07:41am	C Gray	SHAD41-c.ssf
8698	-121.2673499	37.82714821	6340056.964	2124558.146	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	83,515	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:07:43am	C Gray	SHAD41-c.ssf
8699	-121.267345	37.82715518	6340058.408	2124560.673	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	89,737	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:07:45am	C Gray	SHAD41-c.ssf
8700	-121.2673296	37.82716825	6340062.893	2124565.394	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,708	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:07:49am	C Gray	SHAD41-c.ssf
8701	-121.2673611	37.82712988	6340053.689	2124551.499	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,397	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:05am	C Gray	SHAD41-c.ssf
8702	-121.2673681	37.82712253	6340051.646	2124548.838	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	73,647	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:07am	C Gray	SHAD41-c.ssf
8703	-121.267366	37.8271318	6340052.266	2124552.208	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	68,465	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:09am	C Gray	SHAD41-c.ssf
8704	-121.2673831	37.82710759	6340047.254	2124543.433	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	56,719	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:11am	C Gray	SHAD41-c.ssf
8705	-121.267388	37.82710171	6340045.838	2124541.305	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	46,880	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:13am	C Gray	SHAD41-c.ssf
8706	-121.2673943	37.82709451	6340043.993	2124538.696	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,398	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:15am	C Gray	SHAD41-c.ssf
8707	-121.267408	37.82708107	6340039.99	2124533.837	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,295	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:19am	C Gray	SHAD41-c.ssf
8708	-121.2674159	37.82707367	6340037.698	2124531.162	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,474	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:21am	C Gray	SHAD41-c.ssf
8709	-121.2674223	37.82706881	6340035.827	2124529.408	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,374	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:23am	C Gray	SHAD41-c.ssf
8710	-121.2674321	37.82705999	6340032.952	2124526.218	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,702	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:25am	C Gray	SHAD41-c.ssf
8711	-121.2674396	37.82705317	6340030.775	2124523.752	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,204	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:27am	C Gray	SHAD41-c.ssf
8712	-121.2674467	37.82704696	6340028.705	2124521.508	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,327	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:29am	C Gray	SHAD41-c.ssf
8713	-121.2674542	37.82704081	6340026.528	2124519.287	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,673	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:31am	C Gray	SHAD41-c.ssf
8714	-121.2674744	37.82702218	6340020.621	2124512.552	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,652	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:37am	C Gray	SHAD41-c.ssf
8715	-121.2674805	37.82701294	6340018.851	2124509.2	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,130	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:39am	C Gray	SHAD41-c.ssf



ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8716	-121.2674859	37.82700859	6340017.278	2124507.632	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,513	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:41am	C Gray	SHAD41-c.ssf
8717	-121.2675003	37.82699455	6340013.065	2124502.552	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	36,446	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:08:45am	C Gray	SHAD41-c.ssf
8718	-121.2675787	37.82691664	6339990.188	2124474.368	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,457	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:09:11am	C Gray	SHAD41-c.ssf
8719	-121.2675412	37.82695452	6340001.136	2124488.073	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,697	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:09:27am	C Gray	SHAD41-c.ssf
8720	-121.2675348	37.8269606	6340002.996	2124490.271	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,132	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:09:29am	C Gray	SHAD41-c.ssf
8721	-121.2675221	37.82697346	6340006.727	2124494.926	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,351	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:09:41am	C Gray	SHAD41-c.ssf
8722	-121.2675221	37.82697357	6340006.707	2124494.965	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,917	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:09:43am	C Gray	SHAD41-c.ssf
8723	-121.267522	37.82697369	6340006.756	2124495.009	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,434	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:09:45am	C Gray	SHAD41-c.ssf
8724	-121.2675132	37.82698514	6340009.33	2124499.157	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,852	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:12:51am	C Gray	SHAD41-c.ssf
8725	-121.2674835	37.82701322	6340017.993	2124509.309	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,992	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:13:01am	C Gray	SHAD41-c.ssf
8726	-121.2674686	37.82702639	6340022.326	2124514.071	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,748	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:13:04am	C Gray	SHAD41-c.ssf
8727	-121.2673918	37.82710492	6340044.741	2124542.482	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,189	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:13:23am	C Gray	SHAD41-c.ssf
8728	-121.2673855	37.82711175	6340046.579	2124544.953	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	41,594	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:13:25am	C Gray	SHAD41-c.ssf
8729	-121.2673781	37.82712003	6340048.729	2124547.953	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,449	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:13:27am	C Gray	SHAD41-c.ssf
8730	-121.2673715	37.8271267	6340050.679	2124550.365	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	58,736	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:13:29am	C Gray	SHAD41-c.ssf
8731	-121.2673639	37.82713271	6340052.879	2124552.536	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	67,009	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:13:31am	C Gray	SHAD41-c.ssf
8732	-121.2673551	37.82713944	6340055.453	2124554.964	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	67,653	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:13:33am	C Gray	SHAD41-c.ssf
8733	-121.2673385	37.82715574	6340060.268	2124560.859	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	87,210	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:13:37am	C Gray	SHAD41-c.ssf
8734	-121.2673269	37.82715662	6340063.626	2124561.155	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	80,300	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:13:45am	C Gray	SHAD41-c.ssf
8735	-121.2673278	37.82715596	6340063.019	2124560.919	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	72,298	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:13:47am	C Gray	SHAD41-c.ssf
8736	-121.2673305	37.82715488	6340062.596	2124560.529	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	69,071	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:13:48am	C Gray	SHAD41-c.ssf
8737	-121.2673298	37.82714706	6340062.757	2124557.679	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	95,265	Geo 7X	Uncorrected	10/3/2017	08:13:51am	C Gray	SHAD41-c.ssf
8738	-121.2673731	37.82711356	6340050.175	2124545.585	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	47,712	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:14:05am	C Gray	SHAD41-c.ssf
8739	-121.2673729	37.82711127	6340050.209	2124545.269	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	44,912	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:14:07am	C Gray	SHAD41-c.ssf
8740	-121.2673728	37.82711171	6340050.248	2124544.91	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	43,263	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:14:09am	C Gray	SHAD41-c.ssf
8741	-121.2673725	37.82711006	6340050.313	2124544.307	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,753	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:14:13am	C Gray	SHAD41-c.ssf
8742	-121.2673724	37.82710917	6340050.349	2124543.982	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,478	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:14:15am	C Gray	SHAD41-c.ssf
8743	-121.2673723	37.82710843	6340050.378	2124543.714	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,768	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:14:17am	C Gray	SHAD41-c.ssf
8744	-121.2673695	37.82709878	6340051.12	2124536.918	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,667	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:15:03am	C Gray	SHAD41-c.ssf
8745	-121.2673687	37.82709479	6340051.379	2124538.739	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	37,767	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:15:07am	C Gray	SHAD41-c.ssf
8746	-121.2673643	37.8270926	6340052.645	2124537.933	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,227	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:15:11am	C Gray	SHAD41-c.ssf
8747	-121.2673653	37.82709023	6340052.356	2124537.07	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	38,756	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:15:14am	C Gray	SHAD41-c.ssf
8748	-121.2673654	37.82708966	6340052.306	2124536.862	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,287	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:15:15am	C Gray	SHAD41-c.ssf
8749	-121.2673646	37.82709003	6340052.542	2124536.996	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,317	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:15:17am	C Gray	SHAD41-c.ssf
8750	-121.2673633	37.82709048	6340052.911	2124537.158	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	40,845	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:15:19am	C Gray	SHAD41-c.ssf
8751	-121.2673619	37.82709204	6340053.338	2124537.721	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,548	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:15:21am	C Gray	SHAD41-c.ssf
8752	-121.2673606	37.82709286	6340053.707	2124538.019	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,081	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:15:23am	C Gray	SHAD41-c.ssf
8753	-121.267361	37.82709351	6340053.601	2124538.256	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	39,446	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:15:25am	C Gray	SHAD41-c.ssf
8754	-121.2674684	37.82698871	6340022.269	2124499.766	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,646	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:15:57am	C Gray	SHAD41-c.ssf
8755	-121.2674918	37.82697322	6340015.452	2124494.751	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,192	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:16:03am	C Gray	SHAD41-c.ssf
8756	-121.267498	37.82696617	6340013.662	2124492.212	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,377	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:16:05am	C Gray	SHAD41-c.ssf
8757	-121.2675415	37.82692553	6340000.954	2124477.518	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,594	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:16:17am	C Gray	SHAD41-c.ssf
8758	-121.2675107	37.82698806	6340007.308	2124496.593	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,522	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:16:33am	C Gray	SHAD41-c.ssf
8759	-121.2675237	37.82698381	6340009.176	2124498.674	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	34,425	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:16:35am	C Gray	SHAD41-c.ssf
8760	-121.2675063	37.826991	6340011.322	2124501.274	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	33,779	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:16:37am	C Gray	SHAD41-c.ssf
8761	-121.2674828	37.82700151	6340018.155	2124505.046	Ludlum 2221	309548	Ludlum 44-20	309548	PR362630	2/8/2017	35,560	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:16:41am	C Gray	SHAD41-c.ssf

ID	Longitude	Latitude	Eastings	Northings	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8762	-121.2674729	37.82700675	6340021.011	2124506.929	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,431	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:16:43am	C Gray	SHAD41-c.ssf
8763	-121.2674586	37.82702084	6340025.206	2124512.026	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,881	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:16:47am	C Gray	SHAD41-c.ssf
8764	-121.26744	37.82705964	6340030.688	2124526.111	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,783	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:16:57am	C Gray	SHAD41-c.ssf
8765	-121.2674406	37.82705356	6340030.493	2124523.898	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,778	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:16:59am	C Gray	SHAD41-c.ssf
8766	-121.2673905	37.827111	6340045.136	2124544.692	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,501	Geo 7X	Uncorrected	10/3/2017	08:17:15am	C Gray	SHAD41-c.ssf
8767	-121.2673872	37.82711725	6340046.106	2124546.963	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,270	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:17:17am	C Gray	SHAD41-c.ssf
8768	-121.2673824	37.82712073	6340047.512	2124548.219	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	47,854	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:17:19am	C Gray	SHAD41-c.ssf
8769	-121.2673751	37.82712637	6340049.628	2124550.254	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	54,658	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:17:21am	C Gray	SHAD41-c.ssf
8770	-121.2673499	37.82715058	6340056.971	2124559.01	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	78,052	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:17:27am	C Gray	SHAD41-c.ssf
8771	-121.2673435	37.82715685	6340058.83	2124561.276	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	84,808	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:17:29am	C Gray	SHAD41-c.ssf
8772	-121.2673312	37.82715291	6340062.373	2124559.814	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	71,714	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:17:33am	C Gray	SHAD41-c.ssf
8773	-121.2673275	37.82714965	6340063.429	2124558.616	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	75,909	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:17:35am	C Gray	SHAD41-c.ssf
8774	-121.2673291	37.82714731	6340062.97	2124557.77	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	89,807	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:17:39am	C Gray	SHAD41-c.ssf
8775	-121.2673488	37.8271296	6340057.225	2124551.367	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	79,199	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:17:47am	C Gray	SHAD41-c.ssf
8776	-121.2673564	37.82712164	6340055.005	2124548.486	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	72,984	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:17:49am	C Gray	SHAD41-c.ssf
8777	-121.2673598	37.82711654	6340050.008	2124546.638	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	69,055	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:17:50am	C Gray	SHAD41-c.ssf
8778	-121.2673719	37.82710556	6340050.482	2124542.67	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	57,386	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:17:53am	C Gray	SHAD41-c.ssf
8779	-121.2673974	37.82708143	6340043.047	2124533.942	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	40,689	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:17:59am	C Gray	SHAD41-c.ssf
8780	-121.2674058	37.82707413	6340040.59	2124531.306	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,436	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:01am	C Gray	SHAD41-c.ssf
8781	-121.267413	37.82706784	6340038.518	2124529.031	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,124	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:03am	C Gray	SHAD41-c.ssf
8782	-121.2674221	37.82706705	6340035.854	2124526.47	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	37,124	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:05am	C Gray	SHAD41-c.ssf
8783	-121.2674282	37.82705456	6340034.078	2124524.232	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	38,681	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:07am	C Gray	SHAD41-c.ssf
8784	-121.2674363	37.82704671	6340031.718	2124521.394	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,432	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:09am	C Gray	SHAD41-c.ssf
8785	-121.2674497	37.82703425	6340027.799	2124516.887	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,458	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:13am	C Gray	SHAD41-c.ssf
8786	-121.2674658	37.82702689	6340025.736	2124514.224	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,068	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:15am	C Gray	SHAD41-c.ssf
8787	-121.2674645	37.82701994	6340023.485	2124511.713	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,791	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:17am	C Gray	SHAD41-c.ssf
8788	-121.2674361	37.82705054	6340031.783	2124524.194	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,654	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:27am	C Gray	SHAD41-c.ssf
8789	-121.2674737	37.82714462	6340021.198	2124557.131	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,715	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:31am	C Gray	SHAD41-c.ssf
8790	-121.2674718	37.82714796	6340021.772	2124558.344	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,079	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:33am	C Gray	SHAD41-c.ssf
8791	-121.2674694	37.82715316	6340022.464	2124560.231	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,971	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:34am	C Gray	SHAD41-c.ssf
8792	-121.267467	37.82716605	6340023.196	2124564.919	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,659	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:37am	C Gray	SHAD41-c.ssf
8793	-121.2674656	37.8271687	6340023.605	2124565.882	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,131	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:39am	C Gray	SHAD41-c.ssf
8794	-121.2674651	37.82716993	6340023.764	2124566.328	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,905	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:41am	C Gray	SHAD41-c.ssf
8795	-121.2674653	37.82717051	6340023.705	2124566.538	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,875	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:43am	C Gray	SHAD41-c.ssf
8796	-121.267467	37.8271701	6340023.225	2124566.392	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,216	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:45am	C Gray	SHAD41-c.ssf
8797	-121.2674671	37.82716945	6340023.181	2124566.156	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,805	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:18:47am	C Gray	SHAD41-c.ssf
8798	-121.2675259	37.82696522	6340005.598	2124491.932	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,940	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:20:01am	C Gray	SHAD41-c.ssf
8799	-121.2675245	37.82695981	6340005.984	2124489.959	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,115	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:20:07am	C Gray	SHAD41-c.ssf
8800	-121.2675229	37.82695269	6340004.661	2124487.342	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,196	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:20:09am	C Gray	SHAD41-c.ssf
8801	-121.2675442	37.82693876	6340000.221	2124482.38	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,524	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:20:13am	C Gray	SHAD41-c.ssf
8802	-121.26756	37.82691449	6339995.603	2124473.542	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,918	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:20:21am	C Gray	SHAD41-c.ssf
8803	-121.267559	37.82691445	6339995.89	2124473.525	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,265	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:20:23am	C Gray	SHAD41-c.ssf
8804	-121.2675629	37.82691771	6339994.771	2124474.723	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,213	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:20:25am	C Gray	SHAD41-c.ssf
8805	-121.2675303	37.82692108	6339995.514	2124475.58	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,702	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:20:27am	C Gray	SHAD41-c.ssf
8806	-121.2675319	37.82691505	6340003.825	2124486.786	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,197	Geo 7X	Uncorrected	10/3/2017	08:20:35am	C Gray	SHAD41-c.ssf
8807	-121.2674717	37.82698084	6340021.292	2124497.493	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,218	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:20:37am	C Gray	SHAD41-c.ssf

ID	Longitude	Latitude	Easting	Northing	Detector	S/N	Meter	S/N	Cal Date	Result	Rcvr Type	Corr Type	GPS Date	GPS Time	Operator	Datafile
8808	-121.2674282	37.82697988	6340033.84	2124497.04	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,174	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:20:41am	C Gray	SHAD41-c.ssf
8809	-121.2673983	37.82713437	6340042.952	2124553.219	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,819	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:20:43am	C Gray	SHAD41-c.ssf
8810	-121.2674604	37.82732024	6340025.567	2124621.045	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,311	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:20:45am	C Gray	SHAD41-c.ssf
8811	-121.267496	37.82708461	6340014.57	2124535.335	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,690	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:20:51am	C Gray	SHAD41-c.ssf
8812	-121.2675079	37.82705745	6340011.052	2124525.472	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,553	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:20:53am	C Gray	SHAD41-c.ssf
8813	-121.2675021	37.82699522	6340012.56	2124502.801	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,626	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:05am	C Gray	SHAD41-c.ssf
8814	-121.2674981	37.82699285	6340013.669	2124501.93	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,831	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:07am	C Gray	SHAD41-c.ssf
8815	-121.2674955	37.82698984	6340014.441	2124500.827	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,888	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:09am	C Gray	SHAD41-c.ssf
8816	-121.2674917	37.82699304	6340015.549	2124501.984	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,820	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:11am	C Gray	SHAD41-c.ssf
8817	-121.2674701	37.82701175	6340021.854	2124508.742	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,782	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:17am	C Gray	SHAD41-c.ssf
8818	-121.2674626	37.82701801	6340024.041	2124511.004	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,701	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:19am	C Gray	SHAD41-c.ssf
8819	-121.2674537	37.82702576	6340026.635	2124513.804	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,615	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:21am	C Gray	SHAD41-c.ssf
8820	-121.2674457	37.82703419	6340028.956	2124516.858	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,078	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:23am	C Gray	SHAD41-c.ssf
8821	-121.2674381	37.82704195	6340031.171	2124519.662	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,910	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:25am	C Gray	SHAD41-c.ssf
8822	-121.2674317	37.82704867	6340033.035	2124522.095	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	35,873	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:27am	C Gray	SHAD41-c.ssf
8823	-121.2673905	37.82708769	6340045.064	2124536.204	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	39,332	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:37am	C Gray	SHAD41-c.ssf
8824	-121.2673774	37.8271035	6340048.9	2124541.93	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	43,141	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:41am	C Gray	SHAD41-c.ssf
8825	-121.2673683	37.82711324	6340051.546	2124545.455	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	44,810	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:43am	C Gray	SHAD41-c.ssf
8826	-121.2673591	37.82712058	6340054.237	2124548.108	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	51,677	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:45am	C Gray	SHAD41-c.ssf
8827	-121.2673518	37.82712681	6340056.348	2124550.359	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	62,053	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:47am	C Gray	SHAD41-c.ssf
8828	-121.2673433	37.82713533	6340058.838	2124553.442	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	74,643	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:49am	C Gray	SHAD41-c.ssf
8829	-121.2673386	37.82713924	6340060.197	2124554.854	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	76,808	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:51am	C Gray	SHAD41-c.ssf
8830	-121.267331	37.82714067	6340062.394	2124555.357	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	116,677	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:21:59am	C Gray	SHAD41-c.ssf
8831	-121.2673338	37.82713381	6340061.576	2124552.865	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	94,574	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:22:01am	C Gray	SHAD41-c.ssf
8832	-121.2673547	37.82711313	6340055.465	2124545.384	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	67,927	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:22:07am	C Gray	SHAD41-c.ssf
8833	-121.2673621	37.82710469	6340053.326	2124542.329	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	53,128	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:22:11am	C Gray	SHAD41-c.ssf
8834	-121.2674254	37.82703687	6340034.839	2124517.783	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	36,837	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:22:31am	C Gray	SHAD41-c.ssf
8835	-121.267431	37.82702556	6340033.175	2124513.679	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	34,524	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:22:35am	C Gray	SHAD41-c.ssf
8836	-121.2674348	37.82702205	6340032.084	2124512.411	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,190	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:22:40am	C Gray	SHAD41-c.ssf
8837	-121.2674358	37.82702197	6340031.782	2124512.385	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,214	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:22:41am	C Gray	SHAD41-c.ssf
8838	-121.2674376	37.82702212	6340031.275	2124512.444	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,764	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:22:43am	C Gray	SHAD41-c.ssf
8839	-121.2674378	37.82702223	6340031.209	2124512.509	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,148	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:22:49am	C Gray	SHAD41-c.ssf
8840	-121.2674378	37.82702223	6340031.209	2124512.509	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,897	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:22:51am	C Gray	SHAD41-c.ssf
8841	-121.2674378	37.82702223	6340031.209	2124512.509	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,841	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:22:53am	C Gray	SHAD41-c.ssf
8842	-121.2674378	37.82702223	6340031.209	2124512.509	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,555	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:22:55am	C Gray	SHAD41-c.ssf
8843	-121.2674378	37.82702223	6340031.209	2124512.509	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	32,044	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:22:57am	C Gray	SHAD41-c.ssf
8844	-121.2674378	37.82702223	6340031.209	2124512.509	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	31,954	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:22:59am	C Gray	SHAD41-c.ssf
8845	-121.2674378	37.82702223	6340031.209	2124512.509	Ludlum 2221	309548	Ludlum 44-20	309548	2/8/2017	33,512	Geo 7X	Real-time SBAS Corrected	10/3/2017	08:23:01am	C Gray	SHAD41-c.ssf



**E-2 Downhole Gamma and Soil Core Scan Logs**

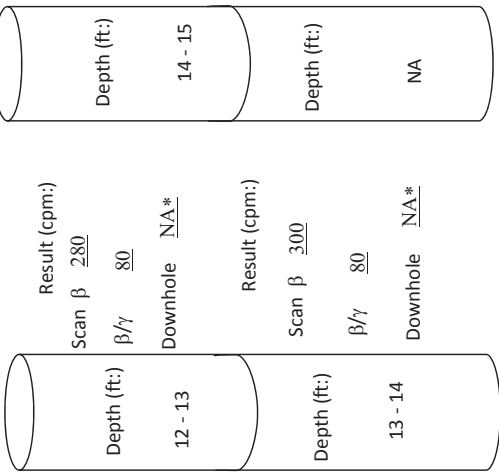




Location	Shupe Depot		Survey Type	Downhole Gamma / Core Scan	Bore Hole:	Survey Log #	S2017-024
Area	SHAD-041		Surveyor	Shane Reese	Ref No.	Date	5-Oct-17

**Alpha/Beta Survey**

Location	α Result	β result	Depth (ft.)	Scan β	β/γ	Downhole	Result (cpm:)
NA	NA	NA	12 - 13	280	80	NA*	300
NA	NA	NA	13 - 14	300	80	NA*	NA
NA	NA	NA	14 - 15	NA*	NA*	NA*	NA



Surveyor:	Shane Reese	Date:	10/5/2017	Reviewer:	James Reese	Date:	10/10/2017
Signature:		Signature:					

General Area: 15 µR/hr

\* Downhole gamma logging was discontinued at 12 ft due to the presence of water













Location	Shupe Depot		Survey Type	Downhole Gamma / Core Scan	Bore Hole:	Survey Log #	S2017-025
Area	SHAD-041		Surveyor	Shane Reese	Ref No.	Date	5-Oct-17
<b>Alpha/Beta Survey</b>							
See Pic on Right							
Location	$\alpha$ Result	$\beta$ result					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
Meter	2360	12	2221	19			NA
Meter S/N	184952	130346	271428	111333			NA
Probe S/N	PR299865	PR248554	PR362630	NA			NA
Cal Due	26-Sep-18	28-Sep-18	28-Sep-18	12-Sep-18			NA
BKG:	0/144	80	1366	11 $\mu$ R/hr			NA
NA	NA	NA	NA	NA			NA
<b>Comments</b>							
Scan $\beta$ : Represents results of the scan of the core with the 2360 listed above.							
$\beta/\gamma$ : Represents results of the scan of the core with the model 12 listed above							
Downhole: Represents results of the downhole gamma logging using the model 2221 listed above							
General Area: 15 $\mu$ R/hr							
* Downhole gamma logging was discontinued at 12 ft due to the presence of water							

Surveyor	Date	Reviewer	Date
Shane Reese	10/5/2017	James Reese	10/10/2017
			

Survey Type	Bore Hole:	Survey Log #	Date
Scan	8		
Surveyor	Ref No.	Date	
Shane Reese	NA	NA	5-Oct-17

Depth (ft.)	Scan $\beta$	$\beta/\gamma$	Downhole	Result (cpm)
12 - 13	320	80	NA*	320
13 - 14	300	80	NA*	NA
14 - 15	NA	NA	NA	NA

Location		Sharpe Depot		Survey Type		Downhole Gamma / Core Scan		Bore Hole:		Survey Log #		
Area		SHAD-041		Surveyor		Shane Reese		Ref No.		Date		
		Alpha/Beta Survey										
		See Pic on Right										
Location	α Result	β result	Depth (ft.)	Result (cpm:)	Scan β	β/γ	Downhole	Depth (ft.)	Result (cpm:)	Scan β	β/γ	Downhole
NA	NA	NA	Surface - 1ft	300	100	3572	2 - 3	300	80	4892	4 - 5	420
NA	NA	NA	1 - 2	300	100	4815	3 - 4	300	80	4356	5 - 6	300
NA	NA	NA	6 - 7	300	80	5711	8 - 9	440	120	6035	10 - 11	300
NA	NA	NA	7 - 8	420	120	5902	9 - 10	300	80	6105	11 - 12	340
NA	NA	NA		4815	4881			4881	4881			4881
Meter	2360	12	2221	19	NA							
Meter S/N	184952	130346	271428	111333	NA							
Probe S/N	PR299865	PR248554	PR362630	NA	NA							
Cal Due	26-Sep-18	28-Sep-18	28-Sep-18	12-Sep-18	NA							
BKG:	0/144	80	1366	11 μR/hr	NA							
NA	NA	NA	NA	NA	NA							
Comments												
Scan β: Represents results of the scan of the core with the 2360 listed above.												
β/γ: Represents results of the scan of the core with the model 12 listed above												
Downhole: Represents results of the downhole gamma logging using the model 2221 listed above												
General Area: 20 μR/hr												
* Downhole gamma logging was discontinued at 12 ft due to the presence of water												

Location	Shape Dept		Survey Type	Downhole Gamma / Core Scan	Bore Hole:	Survey Log #	S2017-026
Area	SHAD-041		Surveyor	Shane Reese	Ref No.	Date	5-Oct-17
<b>Alpha/Beta Survey</b>							
See Pic on Right							
Location	$\alpha$ Result	$\beta$ result	Depth (ft.)	Result (cpm):	Depth (ft.)	Result (cpm):	
NA	NA	NA	12 - 13	Scan $\beta$ <u>300</u> $\beta/\gamma$ <u>100</u> Downhole <u>NA*</u>	14 - 15	Scan $\beta$ <u>400</u> $\beta/\gamma$ <u>80</u> Downhole <u>NA*</u>	
NA	NA	NA	13 - 14	Scan $\beta$ <u>300</u> $\beta/\gamma$ <u>100</u> Downhole <u>NA*</u>	NA	Scan $\beta$ <u>NA</u> $\beta/\gamma$ <u>NA</u> Downhole <u>NA</u>	
Meter	2360	12	2221	19	NA	NA	
Meter S/N	184952	130346	271428	111333	NA	NA	
Probe S/N	PR299865	PR248554	PR362630	NA	NA	NA	
Cal Due	26-Sep-18	28-Sep-18	28-Sep-18	12-Sep-18	12-Sep-18	12-Sep-18	
BKG:	0/144	80	1366	11 $\mu$ R/hr	NA	NA	
NA	NA	NA	NA	NA	NA	NA	
<b>Comments</b>							
Scan $\beta$ : Represents results of the scan of the core with the 2360 listed above.							
$\beta/\gamma$ : Represents results of the scan of the core with the model 12 listed above							
Downhole: Represents results of the downhole gamma logging using the model 2221 listed above							
General Area: 20 $\mu$ R/hr							
* Downhole gamma logging was discontinued at 12 ft due to the presence of water							
Surveyor:	Shane Reese	Date	10/5/2017	Signature:	James Reese	Date	10/10/2017
Signature:		Signature:		Signature:		Signature:	

Location		Sharpe Depot		Survey Type		Downhole Gamma / Core Scan		Bore Hole:		Survey Log #					
Area		SHAD-041		Surveyor		Shane Reese		Ref No.		Date					
		Alpha/Beta Survey													
Location		See Pic on Right													
		$\alpha$ Result	$\beta$ result												
NA	NA	NA	NA					Depth (ft.):	Result (cpm:)	Scan $\beta$	Result (cpm:)				
NA	NA	NA	NA					2 - 3	Scan $\beta$ <u>400</u>	$\beta/\gamma$ <u>100</u>	Scan $\beta$ <u>300</u>				
NA	NA	NA	NA					Downhole <u>4354</u>	$\beta/\gamma$ <u>100</u>	Downhole <u>5334</u>	$\beta/\gamma$ <u>80</u>				
NA	NA	NA	NA					Depth (ft.):	Result (cpm:)	Scan $\beta$ <u>400</u>	Result (cpm:)				
NA	NA	NA	NA					3 - 4	Scan $\beta$ <u>400</u>	$\beta/\gamma$ <u>120</u>	Scan $\beta$ <u>360</u>				
NA	NA	NA	NA					Downhole <u>5118</u>	$\beta/\gamma$ <u>120</u>	Downhole <u>5705</u>	$\beta/\gamma$ <u>100</u>				
NA	NA	NA	NA					Depth (ft.):	Result (cpm:)	Scan $\beta$ <u>400</u>	Result (cpm:)				
NA	NA	NA	NA					6 - 7	Scan $\beta$ <u>340</u>	$\beta/\gamma$ <u>100</u>	Scan $\beta$ <u>400</u>				
NA	NA	NA	NA					Downhole <u>6252</u>	$\beta/\gamma$ <u>100</u>	Downhole <u>5871</u>	$\beta/\gamma$ <u>100</u>				
NA	NA	NA	NA					Depth (ft.):	Result (cpm:)	Scan $\beta$ <u>400</u>	Result (cpm:)				
NA	NA	NA	NA					9 - 10	Scan $\beta$ <u>400</u>	$\beta/\gamma$ <u>100</u>	Scan $\beta$ <u>420</u>				
NA	NA	NA	NA					Downhole <u>6156</u>	$\beta/\gamma$ <u>100</u>	Downhole <u>NA*</u>	$\beta/\gamma$ <u>100</u>				
NA	NA	NA	NA					Depth (ft.):	Result (cpm:)	Scan $\beta$ <u>380</u>	Result (cpm:)				
NA	NA	NA	NA					7 - 8	Scan $\beta$ <u>380</u>	$\beta/\gamma$ <u>80</u>	Scan $\beta$ <u>420</u>				
NA	NA	NA	NA					Downhole <u>5636</u>	$\beta/\gamma$ <u>80</u>	Downhole <u>5636</u>	$\beta/\gamma$ <u>100</u>				
Meter	2360	2221	12	2221	19	NA									
Meter S/N	184952	130346	271428	111333	NA	NA									
Probe S/N	PR299865	PR248554	PR362630	NA	NA	NA									
Cal Due	26-Sep-18	28-Sep-18	28-Sep-18	12-Sep-18	9 $\mu$ R/hr	NA									
BKG:	4/154	80	1337	NA	NA	NA									
NA	NA	NA	NA	NA	NA	NA									
<b>Comments</b>															
Scan $\beta$ : Represents results of the scan of the core with the 2360 listed above.															
$\beta/\gamma$ : Represents results of the scan of the core with the model 12 listed above															
Downhole: Represents results of the downhole gamma logging using the model 2221 listed above															
General Area: 34 $\mu$ R/hr															
*Downhole gamma logging was discontinued at 12 ft due to the presence of water.															
Surveyor:				Shane Reese				Reviewer:				James Reese			
Signature:								Date:				10/4/2017			
Signature:								Date:				10/10/2017			





Location		Sharpe Depot		Survey Type		Downhole Gamma / Core Scan		Bore Hole:		Survey Log #			
Area		SHAD-041		Surveyor		Shane Reese		Ref No.		Date			
		Alpha/Beta Survey											
		See Pic on Right											
Location	α Result	β result	Depth (ft.)	Result (cpm:)	Scan β	β/γ	Downhole	Depth (ft.)	Result (cpm:)	Scan β	β/γ	Downhole	
NA	NA	NA	Surface - 1ft	320	100	4374	2-3	340	100	4873	4-5	320	
NA	NA	NA	1-2	400	100	4542	3-4	300	100	4736	5-6	300	
NA	NA	NA	6-7	340	80	5094	8-9	340	80	6018	10-11	500	
NA	NA	NA	7-8	300	80	5818	9-10	320	100	6208	11-12	300	
Meter	2360	12											
Meter S/N	184952	130346											
Probe S/N	PR299865	PR362630											
Cal Due	26-Sep-18	28-Sep-18											
BKG:	0/144	80											
NA	NA	NA											
Comments													
Scan β: Represents results of the scan of the core with the 2360 listed above.													
β/γ: Represents results of the scan of the core with the model 12 listed above													
Downhole: Represents results of the downhole gamma logging using the model 2221 listed above													
General Area: 15 μR/hr													
* Downhole gamma logging was discontinued at 12 ft due to the presence of water													
				Surveyor:				Shane Reese		Reviewer:		James Reese	
				Signature:				Date		Signature:		Date	
								10/5/2017				10/10/2017	





























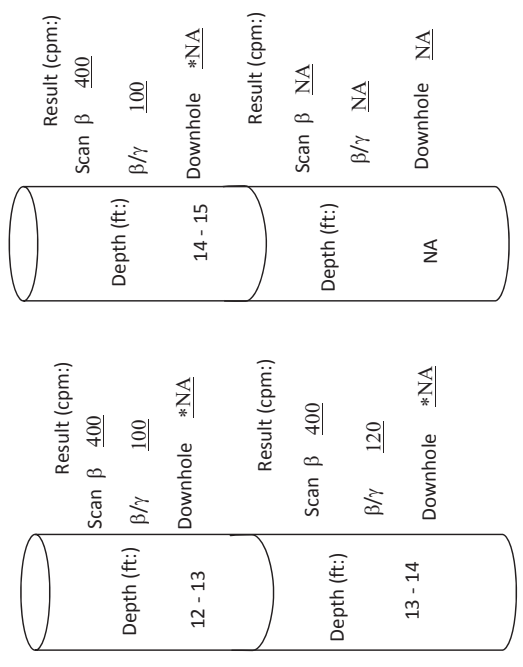








Location	Shape Depot		Survey Type	Downhole Gamma / Core Scan	Bore Hole:	Survey Log #	S2017-031
Area	SHAD-041		Surveyor	Shane Reese	Ref No.	Date	6-Oct-17
<b>Alpha/Beta Survey</b>							
See Pic on Right							
Location	$\alpha$ Result	$\beta$ result					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
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NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
Meter	2360	12	2221	19			NA
Meter S/N	184952	130346	271428	111333			NA
Probe S/N	PR299865	PR248554	PR362630	NA			NA
Cal Due	26-Sep-18	28-Sep-18	25-Sep-18	12-Sep-18			NA
BKG:	4/150	80	1332	12 $\mu$ R/hr			NA
NA	NA	NA	NA	NA			NA
<b>Comments</b>							
Scan $\beta$ : Represents results of the scan of the core with the 2360 listed above.							
$\beta/\gamma$ : Represents results of the scan of the core with the model 12 listed above							
Downhole: Represents results of the downhole gamma logging using the model 2221 listed above							
General Area: 20 $\mu$ R/hr							
* Downhole gamma logging discontinued due to the presence of water							



Surveyor:	Date	Reviewer:	Date
Shane Reese	10/6/2017	James Reese	10/10/2017
Signature:	Signature:	Signature:	Signature:









Location		Sharpe Depot		Survey Type		Downhole Gamma / Core Scan		Bore Hole:		Survey Log #		
Area		SHAD-041		Surveyor		Shane Reese		Ref No.		Date		
		Alpha/Beta Survey										
		See Pic on Right										
Location	α Result	β result	Depth (ft.)	Result (cpm:)	Scan β	β/γ	Downhole	Depth (ft.)	Result (cpm:)	Scan β	β/γ	Downhole
NA	NA	NA	Surface - 1ft	400	120	4623	2 - 3	400	100	5097	4 - 5	300
NA	NA	NA	1 - 2	400	120	4780	3 - 4	300	100	4409	5 - 6	300
NA	NA	NA	6 - 7	300	100	5342	8 - 9	300	100	5865	10 - 11	340
NA	NA	NA	7 - 8	300	100	5713	9 - 10	300	100	6215	11 - 12	320
Meter	2360	12										
Meter S/N	184952	130346										
Probe S/N	PR299865	PR248554										
Cal Due	26-Sep-18	28-Sep-18										
BKG:	4/150	80										
NA	NA	NA										
Comments												
Scan β: Represents results of the scan of the core with the 2360 listed above.												
β/γ: Represents results of the scan of the core with the model 12 listed above												
Downhole: Represents results of the downhole gamma logging using the model 2221 listed above												
General Area: 15 μR/hr												
* Downhole gamma logging discontinued due to the presence of water												
				Surveyor: Shane Reese				Reviewer: James Reese				Date: 10/10/2017
				Signature:				Signature:				Date: 10/10/2017



Location	Shupe Depot		Survey Type	Downhole Gamma / Core Scan	Bore Hole:	Survey Log #	S2017-034
Area	SHAD-041		Surveyor	Shane Reese	Ref No.	Date	6-Oct-17
<b>Alpha/Beta Survey</b>							
See Pic on Right							
Location	$\alpha$ Result	$\beta$ result					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
NA	NA	NA					
Meter	2360	12	2221	19	NA	NA	NA
Meter S/N	184952	130346	271428	111333	NA	NA	NA
Probe S/N	PR299865	PR248554	PR362630	NA	NA	NA	NA
Cal Due	26-Sep-18	28-Sep-18	25-Sep-18	12-Sep-18	NA	NA	NA
BKG:	4/150	80	1332	12 $\mu$ R/hr	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA
<b>Comments</b>							
Scan $\beta$ : Represents results of the scan of the core with the 2360 listed above.							
$\beta/\gamma$ : Represents results of the scan of the core with the model 12 listed above							
Downhole: Represents results of the downhole gamma logging using the model 2221 listed above							
General Area: 15 $\mu$ R/hr							
* Downhole gamma logging discontinued due to the presence of water							

Surveyor	Date	Reviewer	Date
Shane Reese	10/6/2017	James Reese	10/10/2017

Survey Type	Survey Log #	Date
Downhole Gamma / Core Scan	30	6-Oct-17
Surveyor	NA	NA

Depth (ft.)	Scan $\beta$	$\beta/\gamma$	Downhole	Result (cpm:)
12 - 13	380	100	*NA	380
13 - 14	420	120	*NA	420
14 - 15	NA	NA	NA	NA

**E-3 IDW Drum Scan Logs**

drum 1 sharpe

ORTEC g v - i ( 63) wan32 G53W2.10 09-OCT-2017 11:35:50 Page 1  
Tidewater Inc Spectrum name: 2017\_10\_06\_09\_02\_020 geo.An1

Sample description  
Drum 1

Spectrum Filename: D:\Spectrums\2017\_10\_06\_09\_02\_020 geo.An1

Acquisition information

Start time: 06-Oct-2017 07:20:21  
Live time: 1788  
Real time: 1801  
Dead time: 0.71 %  
Detector ID: 1

Detector system  
Trans Spec

Calibration

Filename: 2017\_10\_06\_09\_02\_020 geo.Spc  
Energy and efficiency using mixed gamma (60481) at 100 mm from e  
ndcap

Energy Calibration

Created: 23-Aug-2001 10:28:30  
Zero offset: -0.121 keV  
Gain: 0.198 keV/channel  
Quadratic: 2.072E-09 keV/channel^2

Efficiency Calibration

Created: 23-Aug-2001 10:28:30  
Type: TCC Polynomial  
Coefficients: -0.828917 -4.988540 -0.619424  
6.066823 0.000000 0.000000

Library Files

Main analysis library: NORM 041316a.Lib  
Library Match width: 0.500

Analysis parameters

Analysis engine: wan32 G53W2.10  
Start channel: 10 ( 1.86keV )  
Stop channel: 8000 ( 1583.42keV )  
Peak rejection level: 100.000%  
Peak search sensitivity: 4  
Sample Size: 1.0000E+00  
Activity scaling factor: 1.0000E+00/( 1.0000E+00\* 1.0000E+00) =  
1.0000E+00  
Detection limit method: Traditional ORTEC method  
Random error: 1.0000000E+00  
Systematic error: 1.0000000E+00  
Fraction Limit: 0.000%  
Background width: best method (based on spectrum).  
Half lives decay limit: 12.000  
Activity range factor: 2.000  
Min. step backg. energy: 0.000

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drum 1 sharpe

ORTEC g v - i ( 63) Wan32 G53W2.10 09-OCT-2017 11:35:50 Page 2  
 Tidewater Inc Spectrum name: 2017\_10\_06\_09\_02\_020 geo.An1

Multiplet shift channel 2.000

Corrections	Status	Comments
Decay correct to date:	NO	
Decay during acquisition:	NO	
Decay during collection:	NO	
True coincidence correction:	NO	
Peaked background correction:	NO	
Absorption (Internal):	NO	
Geometry correction:	NO	
Random summing:	NO	

Energy Calibration  
 Normalized diff: 0.1921

***** U N I D E N T I F I E D P E A K S U M M A R Y *****								
Peak Channel	Centroid Energy	Background Counts	Net Area Counts	Intensity Cts/Sec	Uncert 1 Sigma %	FWHM keV	Suspected Nuclide	
45.04	8.79	3111.	2498.	1.397	4.89	1.597	ZN-65	s
182.89	36.08	9332.	782.	0.438	23.37	0.911	XE-133M	s
205.04	40.46	11421.	875.	0.489	24.16	0.516	MO-99	s
636.88	125.94	2510.	1090.	0.609	7.17	0.934	PA-234	D
646.28	127.80	2496.	374.	0.209	19.59	0.936	AC-228	D
788.11	155.87	1602.	1058.	0.591	9.58	1.012	TA-182	M
904.89	178.98	961.	261.	0.146	22.58	0.699	TA-182	SM
940.88	186.11	1434.	1545.	0.864	5.45	0.842	PA-234	M
1366.15	270.28	734.	403.	0.225	13.37	0.913	AC-228	s
1561.12	308.87	367.	661.	0.370	8.09	1.148	-	SM
1630.22	322.55	414.	1405.	0.786	4.61	1.060	-	M
2438.26	482.49	301.	471.	0.264	9.34	1.109	HF-181	M
2997.61	593.20	195.	504.	0.282	7.80	1.005	SB-126	s
3313.19	655.67	154.	211.	0.118	14.45	1.322	SB-126	
3908.89	773.58	53.	2262.	1.265	2.25	1.163	W-187	s
6994.86	1384.45	0.	426.	0.238	4.85	1.097	AG-110M	s

s - Peak fails shape tests.  
 D - Peak area deconvoluted.  
 M - Peak is close to a library peak.

***** I D E N T I F I E D P E A K S U M M A R Y *****								
Nuclide	Peak Channel	Centroid Energy	Background Counts	Net Area Counts	Intensity Cts/Sec	Uncert 1 Sigma %	FWHM keV	
U-238	246.50	48.67	11667.	505.	0.282	43.01	0.193s	
U-238	320.32	63.28	3225.	46.	0.026	175.21	0.396s	
U-238	467.76	92.46	2780.	0.	0.000	1000.00	0.900	
U-238	470.45	92.99	2726.	20.	0.011	423.92	0.236s	

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ORTEC g v - i ( 63) Wan32 G53W2.10 09-OCT-2017 11:35:50 Page 3  
 Tidewater Inc Spectrum name: 2017\_10\_06\_09\_02\_020 geo.An1

Nuclide	Channel	Energy	Background	Net area	Cnts/sec	Uncert	FWHM
U-238	571.99	113.09	1512.	25.	0.014	229.82	0.357s
Th-232	652.67	129.06	1292.	0.	0.000	0.00	0.337D

drum 1 sharpe

U-238	665.65	131.63	1857.	58.	0.032	106.33	0.940D
Th-232	1055.13	208.72	747.	78.	0.044	67.75	0.275s
Th-232	1205.95	238.57	112.	7.	0.004	188.98	0.124s
U-238	1305.08	258.19	280.	118.	0.066	37.19	0.543s
Th-232	1366.25	270.30	734.	0.	0.000	0.00	0.913D
Th-232	1404.00	277.77	427.	15.	0.008	252.84	0.000s
PB-214	1492.85	295.36	125.	9.	0.005	171.47	0.338s
Th-232	1659.56	328.36	190.	49.	0.027	47.13	0.616s
Th-232	1699.84	336.33	436.	124.	0.070	40.36	0.221s
PB-214	1781.28	352.45	354.	107.	0.060	34.29	0.528s
Th-232	2070.56	409.71	194.	95.	0.053	29.75	0.824s
Th-232	2341.96	463.43	96.	22.	0.012	73.57	0.516s
Th-232	2580.74	510.69	214.	0.	0.000	0.00	0.546D
U-238	2754.34	545.05	156.	77.	0.043	38.02	0.200s
U-238	2885.64	571.04	196.	49.	0.027	65.47	0.337s
Th-232	2948.00	583.38	21.	0.	0.000	1000.00	0.000s
BI-214	3079.16	609.35	41.	9.	0.005	100.00	0.286s
Cs-137	3344.32	661.83	68.	12.	0.007	107.70	0.309s
U-238	3495.53	691.76	67.	30.	0.017	54.65	0.150s
Th-232	3673.51	726.99	12.	5.	0.003	100.00	0.191s
U-238	3737.71	739.70	55.	17.	0.009	68.17	1.520D
U-238	3753.42	742.81	70.	30.	0.017	43.08	1.522D
U-238	3815.56	755.11	52.	0.	0.000	1000.00	1.534
Th-232	3810.42	754.09	70.	68.	0.038	32.49	0.271s
U-238	3870.35	765.95	16.	6.	0.003	124.32	0.330s
U-238	3948.23	781.37	22.	10.	0.006	74.48	1.557D
U-238	3973.08	786.29	58.	31.	0.018	38.45	1.562D
Th-232	4016.70	794.92	33.	33.	0.018	40.74	0.458s
U-238	4303.00	851.60	4.	0.	0.000	1000.00	0.000s
Th-232	4348.00	860.50	5.	0.	0.000	1000.00	0.000s
U-238	4449.02	880.50	46.	32.	0.018	34.59	1.646D
U-238	4462.87	883.24	11.	21.	0.012	31.46	1.648D
U-238	4540.79	898.66	7.	3.	0.002	130.38	0.309s
Th-232	4591.93	908.79	11.	33.	0.018	30.98	0.346s
U-238	4658.01	921.87	6.	6.	0.003	81.65	0.276s
U-238	4673.19	924.87	13.	0.	0.000	1000.00	1.685
U-238	4779.92	946.00	7.	16.	0.009	41.17	0.255s
Th-232	4874.75	964.77	5.	0.	0.000	0.00	0.000D
Th-232	4890.43	967.87	6.	7.	0.004	67.01	0.231s
U-238	5033.02	996.10	13.	16.	0.009	39.23	1.747D
U-238	5057.93	1001.03	15.	23.	0.013	31.29	1.752D
BI-214	5659.39	1120.09	7.	8.	0.004	69.97	0.239s
U-238	6032.67	1193.98	9.	4.	0.002	130.09	0.156s
U-238	6249.11	1236.82	0.	28.	0.016	18.90	0.289s
U-238	6835.33	1352.87	1.	0.	0.000	360.56	0.156s
U-238	7040.00	1393.38	0.	0.	0.000	1000.00	0.000s

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ORTEC g v - i ( 63) Wan32 G53W2.10 09-OCT-2017 11:35:50 Page 4  
 Tidewater Inc Spectrum name: 2017\_10\_06\_09\_02\_020 geo.An1

Nuclide	Channel	Energy	Background	Net area	Cnts/sec	Uncert	FWHM
U-238	7245.00	1433.97	0.	0.	0.000	1000.00	0.000s
K-40	7376.67	1460.03	1.	0.	0.000	360.56	0.156s
U-238	7629.33	1510.05	1.	0.	0.000	360.56	0.156s
U-238	7849.00	1553.53	0.	0.	0.000	1000.00	0.000s

s - Peak fails shape tests.  
 D - Peak area deconvoluted.

\*\*\*\*\* SUMMARY OF LIBRARY PEAK USAGE \*\*\*\*\*  
 - Nuclide - Average ----- Peak -----  
 Name Code Activity Energy Activity Code MDA Value  
 Page 3

	microCi	keV	drum 1 sharpe		Comments	
			microCi	microCi		
BI-214	5.5616E-05	609.32	3.245E-05	?(	3.381E-05	G K
		1764.51	0.000E+00	=	0.000E+00	G
		1120.28	1.266E-04	?(	6.765E-05	G
PB-214	3.3259E-04	351.99	3.326E-04	?(	8.428E-05	G K
		295.22	0.000E+00	%	9.098E-05	G
Cs-137	0.0000E+00	661.62	0.000E+00	%	2.671E-05	G
Th-232	2.6779E-04	911.10	2.678E-04	&(	4.233E-05	G K
		238.62	0.000E+00	%	3.349E-05	A
		583.17	0.000E+00	%	3.872E-05	A
		968.90	9.635E-05	&	7.740E-05	A
		338.40	1.243E-03	&	3.395E-04	A
		727.18	0.000E+00	%	1.759E-04	A
		270.30	0.000E+00	!	1.102E-03	A
		1588.23	0.000E+00	=	0.000E+00	A
		860.53	0.000E+00	%	1.736E-04	A
		794.95	1.479E-03	+	5.435E-04	A
		510.69	0.000E+00	?	4.036E-04	A
		964.77	0.000E+00	%	1.609E-04	A
		463.00	6.860E-04	?	4.948E-04	A
		129.06	0.000E+00	&	1.719E-03	A
		1630.40	0.000E+00	=	0.000E+00	A
		755.30	1.268E-02	&	3.193E-03	A
		328.00	1.818E-03	+	8.368E-04	A
		277.40	0.000E+00	%	1.346E-03	A
		209.25	1.727E-03	&	9.064E-04	A
409.46	6.305E-03	+	1.622E-03	GA		
U-238	6.1558E-03	1001.03	6.156E-03	(	1.580E-03	G K
		766.36	0.000E+00	%	4.578E-03	GA
		92.80	0.000E+00	%	2.593E-03	GA
		92.38	0.000E+00	%	2.619E-03	A

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ORTEC g v - i ( 63) Wan32 G53W2.10 09-OCT-2017 11:35:50 Page 5  
 Tidewater Inc Spectrum name: 2017\_10\_06\_09\_02\_020 geo.An1

Nuclide	Ave activity	Energy	Activity	Code	Peak MDA	Comments
		112.81	0.000E+00	%	1.707E-02	A
		258.00	1.557E-01	+	3.778E-02	A
		63.30	0.000E+00	%	2.557E-03	GA
		691.30	6.865E-02	+	3.268E-02	GA
		569.30	4.672E-01	&	2.159E-01	GA
		543.98	3.250E+00	&	9.325E-01	A
		131.63	0.000E+00	%	1.711E-01	A
		755.00	0.000E+00	%	9.984E-01	A
		49.55	1.790E+00	&	5.547E-01	A
		742.81	6.726E-02	+	3.258E-02	A
		739.70	2.772E-01	+	2.094E-01	A
		781.37	2.418E-01	+	2.084E-01	A
		786.29	1.241E-01	+	5.460E-02	A
		883.24	2.382E-01	+	9.717E-02	A
		880.50	3.879E-01	+	1.568E-01	A
		851.57	0.000E+00	%	1.129E-01	A
		921.70	9.970E-02	+	9.013E-02	A
		898.67	0.000E+00	%	1.996E-01	A
		1193.77	0.000E+00	%	1.040E-01	A
		945.90	1.133E-01	+	5.062E-02	A

drum 1 sharpe

925.10	0.000E+00	%	8.739E-02	A
996.10	8.868E-01	+	4.388E-01	A
1237.40	1.203E+00	+	3.436E-01	G
1393.60	0.000E+00	%	7.392E-02	A
1352.90	0.000E+00	%	2.439E-01	A
1911.20	0.000E+00	=	0.000E+00	A
1874.80	0.000E+00	=	0.000E+00	A
1867.50	0.000E+00	=	0.000E+00	A
1831.70	0.000E+00	=	0.000E+00	A
1809.30	0.000E+00	=	0.000E+00	A
1765.80	0.000E+00	=	0.000E+00	A
1737.90	0.000E+00	=	0.000E+00	A
1553.74	0.000E+00	%	3.637E-02	A
1510.30	0.000E+00	%	4.481E-02	A
1434.30	0.000E+00	%	2.879E-02	A

K-40 0.0000E+00 1460.00 0.000E+00 % 5.285E-05 G K  
 ( - This peak used in the nuclide activity average.

- \* - Peak is too wide, but only one peak in library.
- ! - Peak is part of a multiplet and this area went negative during deconvolution.
- ? - Peak is too narrow.
- @ - Peak is too wide at FW25M, but ok at FWHM.
- % - Peak fails sensitivity test.
- \$ - Peak identified, but first peak of this nuclide failed one or more qualification tests.
- + - Peak activity higher than counting uncertainty range.

- - Peak activity lower than counting uncertainty range.
- = - Peak outside analysis energy range.
- & - Calculated peak centroid is not close enough to the library energy centroid for positive identification.
- P - Peakbackground subtraction

Nuclide Codes:

- T - Thermal Neutron Activation
- F - Fast Neutron Activation
- I - Fission Product
- N - Naturally Occurring Isotope
- P - Photon Reaction
- C - Charged Particle Reaction
- M - No MDA Calculation
- R - Coincidence Corrected
- H - Halflife limit exceeded

Peak Codes:

- G - Gamma Ray
- X - X-Ray
- P - Positron Decay
- S - Single-Escape
- D - Double-Escape
- K - Key Line
- A - Not in Average
- C - Coincidence Peak

\*\*\*\*\* S U M M A R Y O F N U C L I D E S I N S A M P L E \*\*\*\*\*

Nuclide	Time of Count	Uncertainty	1 Sigma
	Activity	Counting	Total
	pCi/Kg		
BI-214 #C	5.5616E-05	6.102E+01%	6.466E+01%
PB-214 #	3.3259E-04	3.429E+01%	4.041E+01%
RA-226	No in-range peaks		
Cs-137 <	2.6714E-05		
Th-232	2.6779E-04	3.098E+01%	3.756E+01%





drum 2 sharpe use

ORTEC g v - i ( 63) wan32 G800W064 10/10/2017 8:15:02 PM Page 1  
Tidewater Inc Spectrum name: 2017\_10\_06\_10\_06\_400 geo.An1

Sample description  
Drum 2

Spectrum Filename: C:\User\Sharpe\2017\_10\_06\_10\_06\_400 geo.An1

Acquisition information

Start time: 10/6/2017 7:20:21 AM  
Live time: 1788  
Real time: 1802  
Dead time: 0.76 %  
Detector ID: 1

Detector system  
Trans Spec

Calibration

Filename: cal 3-18-16.clb  
Al Ring 74115-57 +74116-57

Energy Calibration

Created: 3/18/2016 12:30:54 PM  
Zero offset: 0.193 keV  
Gain: 0.374 keV/channel  
Quadratic: 5.432E-10 keV/channel^2

Efficiency Calibration

Created: 3/18/2016 12:53:43 PM  
Type: Polynomial  
Uncertainty: 0.000 %  
Coefficients: 0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000

Library Files

Main analysis library: NORM 041316a.Lib  
Library Match Width: 0.500

Analysis parameters

Analysis engine: wan32 G800W064  
Start channel: 10 ( 3.93keV )  
Stop channel: 8000 ( 2989.03keV )  
Peak rejection level: 100.000%  
Peak search sensitivity: 3  
Sample Size: 2.2800E+05 +/- 0.000E+00%  
Activity scaling factor: 1.0000E+03/( 1.0000E-06\* 2.2800E+05) =  
4.3860E+03  
Detection limit method: Traditional ORTEC method  
Random error: 1.0000000E+00  
Systematic error: 1.0000000E+00  
Fraction Limit: 0.000%  
Background width: best method (based on spectrum).  
Half lives decay limit: 12.000  
Activity range factor: 2.000

♀

drum 2 sharpe use

ORTEC g v - i ( 63) wan32 G800W064 10/10/2017 8:15:02 PM Page 2  
 Tidewater Inc Spectrum name: 2017\_10\_06\_10\_06\_400 geo.An1

Min. step backg. energy 0.000  
 Multiplet shift channel 2.000

Corrections	Status	Comments
Decay correct to date:	NO	
Decay during acquisition:	NO	
Decay during collection:	NO	
True coincidence correction:	NO	
Peaked background correction:	NO	
Absorption (Internal):	NO	
Geometry correction:	NO	
Random summing:	NO	

Energy Calibration  
 Normalized diff: 0.1955

\*\*\*\*\* U N I D E N T I F I E D P E A K S U M M A R Y \*\*\*\*\*

Peak Channel	Centroid Energy	Background Counts	Net Area Counts	Efficiency * Area	Uncert 1 Sigma %	FWHM keV	Suspected Nuclide
43.15	16.12	2446.	1197.	0.000E+00	6.77	1.837	- S
178.41	66.91	7170.	706.	7.058E+02	17.38	1.293	- SD
183.69	68.89	7541.	839.	8.394E+02	15.03	1.295	AM-241 SD
199.21	74.68	7731.	563.	5.626E+02	22.50	1.299	AM-243 SD
206.41	77.37	7976.	775.	7.752E+02	16.68	1.301	- SD
279.76	104.36	7426.	145.	1.449E+02	86.58	0.611	PU-240 S
363.65	135.79	5550.	192.	1.916E+02	55.47	1.345	- SD
628.76	235.37	1503.	122.	1.220E+02	45.85	1.417	- SD
645.62	241.67	2543.	436.	4.364E+02	17.03	1.421	Ra-226 D
675.11	252.45	1384.	157.	1.568E+02	33.67	0.746	- SM
1494.91	559.19	480.	64.	6.400E+01	56.60	0.691	- S
1528.10	571.24	303.	29.	2.949E+01	85.46	1.641	U-238 SD
1616.40	604.21	274.	55.	5.491E+01	44.74	1.661	- SD
1698.24	634.81	209.	27.	2.700E+01	79.94	1.366	- S
2056.52	768.14	250.	247.	2.475E+02	11.04	1.758	Ra-226 SD
2499.93	934.05	156.	117.	1.170E+02	18.64	1.238	Ra-226 S
6994.68	2613.43	4.	530.	5.295E+02	4.45	2.396	- S

s - Peak fails shape tests.  
 D - Peak area deconvoluted.  
 M - Peak is close to a library peak.

♀

ORTEC g v - i ( 63) wan32 G800W064 10/10/2017 8:15:02 PM Page 3  
 Tidewater Inc Spectrum name: 2017\_10\_06\_10\_06\_400 geo.An1

\*\*\*\*\* I D E N T I F I E D P E A K S U M M A R Y \*\*\*\*\*

Nuclide	Peak Channel	Centroid Energy	Background Counts	Net Area Counts	Intensity Cts/Sec	Uncert 1 Sigma %	FWHM keV
U-238	168.92	63.30	5832.	174.	0.097	62.41	1.291D
Th-232	344.93	129.06	5367.	176.	0.098	59.44	1.340D
U-238	351.81	131.63	5817.	140.	0.078	77.53	1.342D
Th-232	559.44	209.20	3171.	152.	0.085	56.65	3.710s
Th-232	638.19	238.62	2410.	1143.	0.639	6.76	1.419D

drum 2 sharpe use

Th-232	720.54	269.39	1648.	119.	0.067	51.25	0.836s
PB-214	788.82	294.90	1622.	930.	0.520	7.59	1.554
Th-232	876.90	327.80	1147.	71.	0.040	72.89	2.343s
Th-232	903.80	337.85	1121.	207.	0.116	25.44	1.329
PB-214	941.21	351.83	1446.	1615.	0.903	4.78	1.621
Th-232	1096.08	409.69	477.	62.	0.035	51.41	0.885s
Th-232	1238.78	463.00	678.	87.	0.049	48.52	2.059s
Th-232	1366.55	510.74	720.	476.	0.266	10.94	2.306
U-238	1523.30	569.30	373.	29.	0.016	97.11	1.640D
Th-232	1560.51	583.20	526.	565.	0.316	7.98	1.742
BI-214	1630.42	609.32	409.	1661.	0.929	3.00	1.664D
Cs-137	1770.39	661.61	292.	32.	0.018	84.25	1.130s
Th-232	1946.67	727.47	302.	179.	0.100	17.93	2.928s
U-238	1987.34	742.66	131.	25.	0.014	67.32	0.609s
Th-232	2022.81	755.92	155.	22.	0.012	80.11	2.031
U-238	2050.76	766.36	406.	69.	0.039	42.97	1.757D
U-238	2090.94	781.37	207.	43.	0.024	49.52	1.765D
U-238	2104.11	786.29	216.	97.	0.054	23.70	1.768D
Th-232	2127.90	795.18	208.	97.	0.054	26.04	2.176s
Th-232	2302.12	860.27	285.	96.	0.054	31.64	1.632
U-238	2356.27	880.50	207.	30.	0.017	69.91	1.820D
U-238	2363.61	883.24	193.	36.	0.020	57.19	1.821D
Th-232	2438.30	911.14	238.	446.	0.249	7.40	1.687
U-238	2466.55	921.70	141.	21.	0.012	81.59	1.842D
U-238	2475.65	925.10	189.	21.	0.012	96.86	1.843D
U-238	2532.95	946.51	126.	21.	0.012	78.68	0.985s
Th-232	2581.83	964.77	213.	100.	0.056	22.96	1.864D
Th-232	2592.89	968.90	201.	242.	0.135	10.48	1.866D
U-238	2667.29	996.69	152.	26.	0.015	75.97	0.926s
BI-214	2998.00	1120.25	205.	449.	0.251	7.20	2.053
U-238	3196.51	1194.42	84.	13.	0.007	98.70	0.873s
U-238	3313.47	1238.11	244.	216.	0.121	15.62	2.220s
U-238	3841.37	1435.34	64.	16.	0.009	83.62	0.654s
K-40	3909.02	1460.61	83.	2384.	1.333	2.16	2.112
U-238	4039.21	1509.25	74.	56.	0.031	29.77	1.918
U-238	4153.52	1551.96	22.	12.	0.007	62.43	0.615s
Th-232	4249.06	1587.65	38.	40.	0.023	27.96	1.744
Th-232	4362.81	1630.15	46.	36.	0.020	37.85	3.131s
BI-214	4720.90	1763.93	40.	484.	0.270	5.21	2.076

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ORTEC g v - i ( 63) wan32 G800W064 10/10/2017 8:15:02 PM Page 4  
 Tidewater Inc Spectrum name: 2017\_10\_06\_10\_06\_400 geo.An1

Nuclide	Channel	Energy	Background	Net area	Cnts/sec	Uncert	FWHM
U-238	4844.82	1810.23	13.	13.	0.007	49.30	2.904s
U-238	4901.91	1831.56	10.	7.	0.004	83.70	1.826
U-238	4998.11	1867.50	13.	8.	0.005	68.26	2.215D
U-238	5017.65	1874.80	11.	24.	0.014	27.74	2.217D

s - Peak fails shape tests.  
 D - Peak area deconvoluted.

***** S U M M A R Y O F L I B R A R Y P E A K U S A G E *****								
- Nuclide -	Average	-----	Peak	-----				
Name	Code	Activity	Energy	Activity	Code	MDA	Value	
		microCi	keV	microCi	microCi		Comments	
BI-214		5.4485E-05	609.32	5.449E-05	(	9.541E-07	1.38E-02	4.61E+01 G K
			1764.51	4.591E-05	-	3.122E-06		1.59E+01 G
			1120.28	4.511E-05	-	3.685E-06		1.50E+01 G

drum 2 sharpe use									
PB-214	6.8342E-05	351.99	6.580E-05	(	2.212E-06	1.86E-02	3.71E+01	G	K
		295.22	7.326E-05	(	4.523E-06		1.92E+01	G	
Cs-137	5.6268E-07	661.62	5.627E-07	?(	4.411E-07	1.10E+04	8.46E+01	G	
Th-232	2.6130E-05	911.10	2.613E-05	(	1.308E-06	5.11E+12	2.58E+01	G	K
		238.62	3.963E-05	+	2.940E-06		4.36E+01	A	
		583.17	2.978E-05		2.487E-06		2.87E+01	A	
		968.90	2.316E-05		2.896E-06		1.58E+01	A	
		338.40	2.782E-05		6.980E-06		1.13E+01	A	
		727.18	4.103E-05	+	7.241E-06		6.58E+00	A	
		270.30	5.216E-05	&	2.619E-05		3.46E+00	A	
		1588.23	1.892E-05	-	6.103E-06		3.22E+00	A	
		860.53	3.367E-05	+	9.858E-06		4.31E+00	A	
		794.95	3.450E-05	+	8.964E-06		4.25E+00	A	
		510.69	9.387E-05	+	9.750E-06		7.66E+00	A	
		964.77	3.026E-05		7.732E-06		4.99E+00	A	
		463.00	2.989E-05		1.361E-05		4.40E+00	A	
		129.06	1.098E-04	+	6.607E-05		2.42E+00	A	
		1630.40	3.584E-05	+	1.333E-05		1.51E+00	A	
		755.30	3.356E-05	+	2.921E-05		1.00E+00	A	
		328.00	3.658E-05	+	2.555E-05		2.95E+00	A	
		277.40	0.000E+00	&	2.465E-05		2.24E+00	A	
209.25	5.918E-05	+	3.187E-05		3.89E+00	A			
409.46	4.881E-05	+	2.625E-05		1.92E+00	GA			
U-238	0.0000E+00	1001.03	0.000E+00	%	3.134E-05	1.65E+12	8.37E-01	G	K
		766.36	3.553E-04	?	1.611E-04		2.94E-01	GA	
		92.80	0.000E+00	%	4.584E-05		2.80E+00	GA	
		92.38	0.000E+00	%	4.645E-05		2.80E+00	A	

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ORTEC g v - i ( 63) wan32 G800w064 10/10/2017 8:15:02 PM Page 5  
 Tidewater Inc Spectrum name: 2017\_10\_06\_10\_06\_400 geo.An1

Nuclide	Ave activity	Energy	Activity	Code	Peak	MDA	Comments
		112.81	0.000E+00	&	4.350E-04		2.80E-01 A
		258.00	0.000E+00	&	1.229E-03		7.28E-02 A
		63.30	5.490E-05	?	3.467E-05		4.80E+00 GA
		691.30	0.000E+00	%	2.973E-04		7.80E-02 GA
		569.30	2.642E-03	&	2.660E-03		1.64E-02 GA
		543.98	0.000E+00	%	7.729E-03		3.60E-03 A
		131.63	7.196E-03	?	5.638E-03		2.94E-02 A
		755.00	0.000E+00	%	1.863E-02		2.00E-03 A
		49.55	0.000E+00	%	2.963E-02		6.40E-02 A
		742.81	4.480E-04	?	3.309E-04		8.30E-02 A
		739.70	0.000E+00	%	2.136E-03		1.10E-02 A
		781.37	8.385E-03	\$	4.443E-03		7.78E-03 A
		786.29	3.024E-03		7.955E-04		4.85E-02 A
		883.24	3.014E-03	&	1.838E-03		1.80E-02 A
		880.50	2.680E-03	&	1.981E-03		1.70E-02 A
		851.57	0.000E+00	%	3.298E-03		6.00E-03 A
		921.70	2.540E-03	?	2.204E-03		1.27E-02 A
		898.67	0.000E+00	%	3.526E-03		5.20E-03 A
		1193.77	1.500E-03	?	1.629E-03		1.34E-02 A
		945.90	1.027E-03	?	8.636E-04		3.09E-02 A
		925.10	2.291E-03	?	2.332E-03		1.36E-02 A
		996.10	9.770E-03	?	7.143E-03		4.10E-03 A
		1237.40	5.544E-02		7.900E-03		5.90E-03 G
		1393.60	0.000E+00	&	4.254E-03		3.70E-03 A
		1352.90	0.000E+00	%	6.737E-03		2.20E-03 A
		1911.20	0.000E+00	%	1.037E-03		6.10E-03 A
		1874.80	4.720E-03	&	1.721E-03		7.80E-03 A

drum 2 sharpe use

1867.50	1.393E-03	?	1.150E-03	9.20E-03	A
1831.70	5.800E-04	?	5.583E-04	1.72E-02	A
1809.30	5.489E-03	\$	3.166E-03	3.69E-03	A
1765.80	0.000E+00	%	6.218E-03	7.60E-03	A
1737.90	0.000E+00	%	4.146E-04	2.12E-02	A
1553.74	2.320E-03	&	1.639E-03	8.08E-03	A
1510.30	6.577E-03	?	1.953E-03	1.29E-02	A
1434.30	2.436E-03	\$	2.055E-03	9.68E-03	A

K-40 3.3776E-04 1460.00 3.378E-04 ( 1.895E-06 4.57E+11 1.07E+01 G K  
 ( - This peak used in the nuclide activity average.

- \* - Peak is too wide, but only one peak in library.
- ! - Peak is part of a multiplet and this area went negative during deconvolution.
- ? - Peak is too narrow.
- @ - Peak is too wide at FW25M, but ok at FWHM.
- % - Peak fails sensitivity test.
- \$ - Peak identified, but first peak of this nuclide failed one or more qualification tests.
- + - Peak activity higher than counting uncertainty range.

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ORTEC g v - i ( 63) wan32 G800W064 10/10/2017 8:15:02 PM Page 6  
 Tidewater Inc Spectrum name: 2017\_10\_06\_10\_06\_400 geo.An1

- - Peak activity lower than counting uncertainty range.
- = - Peak outside analysis energy range.
- & - Calculated peak centroid is not close enough to the library energy centroid for positive identification.
- P - Peakbackground subtraction

Nuclide Codes:	Peak Codes:
T - Thermal Neutron Activation	G - Gamma Ray
F - Fast Neutron Activation	X - X-Ray
I - Fission Product	P - Positron Decay
N - Naturally Occurring Isotope	S - Single-Escape
P - Photon Reaction	D - Double-Escape
C - Charged Particle Reaction	K - Key Line
M - No MDA Calculation	A - Not in Average
R - Coincidence Corrected	C - Coincidence Peak
H - Halflife limit exceeded	

\*\*\*\*\* D I S C A R D E D I S O T O P E P E A K S \*\*\*\*\*

Nuclide	Centroid Energy	Background Counts	Net Area Counts	Intensity Cts/Sec	Uncert 1 Sigma %	Activity
U-238	63.30	5832.	174.	0.097	62.41	2.408E-01
U-238	131.63	5817.	140.	0.078	77.53	3.156E+01
U-238	569.30	373.	29.	0.016	97.11	1.159E+01
U-238	742.66	131.	25.	0.014	67.32	1.965E+00
U-238	766.36	406.	69.	0.039	42.97	1.558E+00
U-238	781.37	207.	43.	0.024	49.52	3.678E+01
U-238	786.29	216.	97.	0.054	23.70	1.326E+01
U-238	880.50	207.	30.	0.017	69.91	1.176E+01
U-238	883.24	193.	36.	0.020	57.19	1.322E+01
U-238	921.70	141.	21.	0.012	81.59	1.114E+01
U-238	925.10	189.	21.	0.012	96.86	1.005E+01
U-238	946.51	126.	21.	0.012	78.68	4.506E+00
U-238	996.69	152.	26.	0.015	75.97	4.285E+01

drum 2 sharpe use

U-238	1194.42	84.	13.	0.007	98.70	6.580E+00
U-238	1238.11	244.	216.	0.121	15.62	2.432E+02
U-238	1435.34	64.	16.	0.009	83.62	1.068E+01
U-238	1509.25	74.	56.	0.031	29.77	2.885E+01
U-238	1551.96	22.	12.	0.007	62.43	1.017E+01
U-238	1810.23	13.	13.	0.007	49.30	2.408E+01
U-238	1831.56	10.	7.	0.004	83.70	2.544E+00
U-238	1867.50	13.	8.	0.005	68.26	6.112E+00
U-238	1874.80	11.	24.	0.014	27.74	2.070E+01

P - Peakbackground subtraction

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ORTEC g v - i ( 63) wan32 G800w064 10/10/2017 8:15:02 PM Page 7  
 Tidewater Inc Spectrum name: 2017\_10\_06\_10\_06\_400 geo.An1

\*\*\*\*\* S U M M A R Y O F N U C L I D E S I N S A M P L E \*\*\*\*\*  
 Nuclide Time of Count Uncertainty 1 Sigma MDA  
 Activity Counting Total pCi/g

BI-214	2.3897E-01	2.9968E+00%	4.4300E+00%	0.418E-02
PB-214	2.9975E-01	4.4830E+00%	1.0663E+01%	0.970E-02
RA-226	No in-range peaks			
Cs-137 #C	2.4679E-03	8.4247E+01%	8.4300E+01%	0.193E-02
Th-232	1.1461E-01	7.3977E+00%	7.7352E+00%	0.574E-02
U-238 B<	1.3746E-01			
K-40	1.4814E+00	2.1622E+00%	3.4877E+00%	0.831E-02

- # - All peaks for activity calculation had bad shape.
- \* - Activity omitted from total
- & - Activity omitted from total and all peaks had bad shape.
- < - MDA value printed.
- A - Activity printed, but activity < MDA.
- B - Activity < MDA and failed test.
- C - Area < Critical level.
- F - Failed fraction or key line test.
- H - Half-life limit exceeded

----- S U M M A R Y -----  
 Total Activity ( 3.9 to 2989.0 keV) 2.135E+00 pCi/g

Analyzed by: \_\_\_\_\_  
 Shane Reese

Reviewed by: \_\_\_\_\_  
 Supervisor

Laboratory: Tidewater Inc

drum 3 sharpe use

ORTEC g v - i ( 63) wan32 G800W064 10/10/2017 8:11:08 PM Page 1  
Tidewater Inc Spectrum name: 2017\_10\_06\_10\_37\_260 geo.An1

Sample description  
Drum 3

Spectrum Filename: C:\User\Sharpe\2017\_10\_06\_10\_37\_260 geo.An1

Acquisition information

Start time: 10/6/2017 7:20:21 AM  
Live time: 1787  
Real time: 1801  
Dead time: 0.78 %  
Detector ID: 1

Detector system  
Trans Spec

Calibration

Filename: cal 3-18-16.clb  
Al Ring 74115-57 +74116-57

Energy Calibration

Created: 3/18/2016 12:30:54 PM  
Zero offset: 0.193 keV  
Gain: 0.374 keV/channel  
Quadratic: 5.432E-10 keV/channel^2

Efficiency Calibration

Created: 3/18/2016 12:53:43 PM  
Type: Polynomial  
Uncertainty: 0.000 %  
Coefficients: 0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000

Library Files

Main analysis library: NORM 041316a.Lib  
Library Match Width: 0.500

Analysis parameters

Analysis engine: wan32 G800W064  
Start channel: 10 ( 3.93keV )  
Stop channel: 8000 ( 2989.03keV )  
Peak rejection level: 100.000%  
Peak search sensitivity: 3  
Sample Size: 2.2800E+05 +/- 0.000E+00%  
Activity scaling factor: 1.0000E+03/( 1.0000E-06\* 2.2800E+05) =  
4.3860E+03  
Detection limit method: Traditional ORTEC method  
Random error: 1.0000000E+00  
Systematic error: 1.0000000E+00  
Fraction Limit: 0.000%  
Background width: best method (based on spectrum).  
Half lives decay limit: 12.000  
Activity range factor: 2.000

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drum 3 sharpe use

ORTEC g v - i ( 63) wan32 G800W064 10/10/2017 8:11:08 PM Page 2  
Tidewater Inc Spectrum name: 2017\_10\_06\_10\_37\_260 geo.An1

Min. step backg. energy 0.000  
Multiplet shift channel 2.000

Corrections	Status	Comments
Decay correct to date:	NO	
Decay during acquisition:	NO	
Decay during collection:	NO	
True coincidence correction:	NO	
Peaked background correction:	NO	
Absorption (Internal):	NO	
Geometry correction:	NO	
Random summing:	NO	

Energy Calibration  
Normalized diff: 0.1382

\*\*\*\*\* U N I D E N T I F I E D P E A K S U M M A R Y \*\*\*\*\*

Peak Channel	Centroid Energy	Background Counts	Net Area Counts	Efficiency * Area	Uncert 1 Sigma %	FWHM keV	Suspected Nuclide	
44.06	16.65	2979.	2111.	0.000E+00	4.63	2.798	-	SM
183.67	69.22	7208.	218.	2.180E+02	55.49	0.713	AM-241	SM
206.93	77.46	8896.	567.	5.674E+02	25.01	1.754	AM-243	SM
470.04	175.92	3031.	77.	7.680E+01	99.47	0.969	-	S
512.58	191.95	2699.	125.	1.249E+02	58.03	1.997	Th-229	S
645.28	241.63	2483.	512.	5.119E+02	14.46	1.421	Ra-226	D
699.19	261.36	1517.	142.	1.416E+02	39.81	1.436	-	SD
1150.03	429.46	596.	41.	4.060E+01	90.59	0.480	-	S
1836.94	686.51	174.	68.	6.820E+01	30.52	1.281	PU-240	SM
2102.09	785.32	255.	92.	9.198E+01	26.69	1.768	U-238	D
2159.05	806.88	234.	147.	1.473E+02	19.50	2.160	Ra-226	SM
2499.76	934.14	173.	158.	1.582E+02	15.58	1.581	Ra-226	M
6995.06	2613.57	0.	505.	5.050E+02	4.45	2.501	-	S

s - Peak fails shape tests.  
D - Peak area deconvoluted.  
M - Peak is close to a library peak.

\*\*\*\*\* I D E N T I F I E D P E A K S U M M A R Y \*\*\*\*\*

Nuclide	Peak Channel	Centroid Energy	Background Counts	Net Area Counts	Intensity Cts/Sec	Uncert 1 Sigma %	FWHM keV
Th-232	348.90	130.54	4934.	193.	0.108	50.63	0.188s
Th-232	638.19	238.62	2392.	1143.	0.639	6.74	1.419D
U-238	690.06	258.00	1284.	96.	0.054	53.50	1.433D
Th-232	721.05	269.58	1268.	56.	0.031	88.82	0.848s
Th-232	742.63	277.64	1583.	95.	0.053	62.83	1.207

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Tidewater Inc Spectrum name: 2017\_10\_06\_10\_37\_260 geo.An1

Nuclide	Channel	Energy	Background	Net area	Cnts/sec	Uncert	FWHM
PB-214	788.96	294.95	1878.	1122.	0.628	6.91	1.688
Th-232	876.59	327.69	1304.	204.	0.114	28.78	2.549s
Th-232	905.59	338.52	1119.	203.	0.113	26.00	1.617



drum 3 sharpe use

PB-214	941.18	351.82	1621.	2000.	1.119	4.19	1.729
Th-232	1095.46	409.46	656.	57.	0.032	68.44	2.217s
Th-232	1238.75	462.99	616.	117.	0.065	34.14	0.943s
Th-232	1366.42	510.69	1153.	548.	0.307	13.67	1.981s
Th-232	1560.27	583.11	536.	628.	0.352	7.44	1.675
BI-214	1630.22	609.24	504.	2139.	1.197	2.84	1.853
Th-232	1945.57	727.06	309.	110.	0.062	27.42	0.801s
Th-232	2021.34	755.37	242.	45.	0.025	55.85	0.414s
U-238	2090.94	781.37	186.	32.	0.018	62.95	1.765D
Th-232	2127.45	795.01	258.	100.	0.056	28.35	1.442
U-238	2280.02	852.01	235.	30.	0.017	84.75	2.105
Th-232	2302.98	860.59	224.	97.	0.054	26.87	1.588s
Th-232	2438.62	911.27	329.	367.	0.205	10.49	1.894
Th-232	2581.83	964.77	199.	119.	0.067	19.13	1.864D
Th-232	2592.89	968.90	188.	239.	0.134	10.38	1.866D
BI-214	2997.75	1120.16	302.	599.	0.335	6.92	2.313s
U-238	3192.62	1192.96	118.	17.	0.010	95.50	1.142s
U-238	3313.65	1238.18	252.	220.	0.123	14.92	2.693s
U-238	3618.95	1352.24	76.	20.	0.011	74.45	3.075s
U-238	3730.60	1393.95	80.	41.	0.023	41.23	1.156s
U-238	3839.45	1434.62	29.	9.	0.005	81.95	0.422s
K-40	3909.02	1460.61	109.	2365.	1.323	2.23	2.307
U-238	4162.76	1555.41	30.	13.	0.007	72.16	0.373s
Th-232	4250.65	1588.25	44.	21.	0.012	52.79	0.695s
Th-232	4363.93	1630.57	30.	51.	0.029	23.95	3.647s
BI-214	4721.04	1763.99	17.	528.	0.296	4.61	1.807
U-238	4843.93	1809.90	7.	6.	0.004	70.33	1.934
U-238	4899.06	1830.49	15.	23.	0.013	35.62	3.602s
U-238	4993.53	1865.79	18.	16.	0.009	48.81	1.125s

s - Peak fails shape tests.

D - Peak area deconvoluted.

\*\*\*\*\* S U M M A R Y O F L I B R A R Y P E A K U S A G E \*\*\*\*\*

- Nuclide - Name	Average Code	Activity microCi	Energy keV	Peak Activity microCi	Code	MDA Value microCi	Comments
BI-214		7.0185E-05	609.32	7.018E-05	(	1.058E-06	1.38E-02 4.61E+01 G K
			1764.51	5.018E-05	-	3.184E-06	1.59E+01 G
			1120.28	6.019E-05	-	4.319E-06	1.50E+01 G

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 Tidewater Inc Spectrum name: 2017\_10\_06\_10\_37\_260 geo.An1

Nuclide	Ave activity	Energy	Activity	Code	Peak MDA	Comments
PB-214	8.3846E-05	351.99	8.152E-05	(	2.342E-06	1.86E-02 3.71E+01 G K
		295.22	8.834E-05	(	4.867E-06	1.92E+01 G
Cs-137	0.0000E+00	661.62	0.000E+00	%	2.811E-07	1.10E+04 8.46E+01 G
Th-232	2.1524E-05	911.10	2.152E-05	(	1.533E-06	5.11E+12 2.58E+01 G K
		238.62	3.963E-05	+	2.934E-06	4.36E+01 A
		583.17	3.310E-05	+	2.569E-06	2.87E+01 A
		968.90	2.286E-05		2.845E-06	1.58E+01 A
		338.40	2.720E-05		6.967E-06	1.13E+01 A
		727.18	2.533E-05		6.769E-06	6.58E+00 A
		270.30	2.443E-05	&	2.271E-05	3.46E+00 A
		1588.23	9.675E-06	-	5.595E-06	3.22E+00 A
		860.53	3.404E-05	+	9.068E-06	4.31E+00 A

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794.95	3.544E-05	+	9.701E-06	4.25E+00	A
510.69	1.083E-04	+	1.161E-05	7.66E+00	A
964.77	3.606E-05	+	7.802E-06	4.99E+00	A
463.00	4.021E-05	+	1.333E-05	4.40E+00	A
129.06	1.207E-04	&	6.359E-05	2.42E+00	A
1630.40	5.118E-05	+	1.326E-05	1.51E+00	A
755.30	6.775E-05	+	3.700E-05	1.00E+00	A
328.00	1.048E-04	+	2.841E-05	2.95E+00	A
277.40	6.427E-05	+	3.945E-05	2.24E+00	A
209.25	0.000E+00	?	2.447E-05	3.89E+00	A
409.46	4.458E-05	+	3.014E-05	1.92E+00	GA

U-238	0.0000E+00	1001.03	0.000E+00	%	2.579E-05	1.65E+12	8.37E-01	G K
		766.36	0.000E+00	%	9.792E-05		2.94E-01	GA
		92.80	0.000E+00	%	4.570E-05		2.80E+00	GA
		92.38	0.000E+00	&	4.598E-05		2.80E+00	A
		112.81	0.000E+00	&	3.866E-04		2.80E-01	A
		258.00	2.004E-03		1.102E-03		7.28E-02	A
		63.30	0.000E+00	?	3.236E-05		4.80E+00	GA
		691.30	0.000E+00	&	4.130E-04		7.80E-02	GA
		569.30	0.000E+00	&	1.697E-03		1.64E-02	GA
		543.98	0.000E+00	&	7.963E-03		3.60E-03	A
		131.63	0.000E+00	?	4.146E-03		2.94E-02	A
		755.00	0.000E+00		1.900E-02		2.00E-03	A
		49.55	0.000E+00	&	2.962E-02		6.40E-02	A
		742.81	0.000E+00	!	3.885E-04		8.30E-02	A
		739.70	0.000E+00	?	1.585E-03		1.10E-02	A
		781.37	6.207E-03	&	4.157E-03		7.78E-03	A
		786.29	0.000E+00	&	7.865E-04		4.85E-02	A
		883.24	0.000E+00	!	1.831E-03		1.80E-02	A
		880.50	0.000E+00	&	1.616E-03		1.70E-02	A
		851.57	7.662E-03		5.930E-03		6.00E-03	A
		921.70	0.000E+00	?	1.109E-03		1.27E-02	A

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Nuclide	Ave activity	Energy	Activity	Code	Peak MDA	Comments
		898.67	0.000E+00	%	3.819E-03	5.20E-03 A
		1193.77	1.964E-03	?	1.912E-03	1.34E-02 A
		945.90	0.000E+00	%	5.758E-04	3.09E-02 A
		925.10	0.000E+00	?	1.447E-03	1.36E-02 A
		996.10	0.000E+00	%	5.159E-03	4.10E-03 A
		1237.40	5.639E-02		8.005E-03	5.90E-03 G
		1393.60	1.684E-02		6.566E-03	3.70E-03 A
		1352.90	1.340E-02	?	9.875E-03	2.20E-03 A
		1911.20	0.000E+00	%	1.328E-03	6.10E-03 A
		1874.80	0.000E+00	%	1.567E-03	7.80E-03 A
		1867.50	2.630E-03	&	1.440E-03	9.20E-03 A
		1831.70	2.049E-03	&	8.117E-04	1.72E-02 A
		1809.30	2.623E-03	?	2.305E-03	3.69E-03 A
		1765.80	0.000E+00	%	6.393E-03	7.60E-03 A
		1737.90	0.000E+00	%	4.449E-04	2.12E-02 A
		1553.74	2.433E-03	&	1.832E-03	8.08E-03 A
		1510.30	0.000E+00	%	1.403E-03	1.29E-02 A
		1434.30	1.453E-03	?	1.442E-03	9.68E-03 A

K-40 3.3517E-04 1460.00 3.352E-04 ( 2.167E-06 4.57E+11 1.07E+01 G K  
 ( - This peak used in the nuclide activity average.

\* - Peak is too wide, but only one peak in library.  
 ! - Peak is part of a multiplet and this area went

drum 3 sharpe use

- ? - Peak is too narrow.
- @ - Peak is too wide at FW25M, but ok at FWHM.
- % - Peak fails sensitivity test.
- \$ - Peak identified, but first peak of this nuclide failed one or more qualification tests.
- + - Peak activity higher than counting uncertainty range.
- - Peak activity lower than counting uncertainty range.
- = - Peak outside analysis energy range.
- & - Calculated peak centroid is not close enough to the library energy centroid for positive identification.
- P - Peakbackground subtraction

Nuclide Codes:	Peak Codes:
T - Thermal Neutron Activation	G - Gamma Ray
F - Fast Neutron Activation	X - X-Ray
I - Fission Product	P - Positron Decay
N - Naturally Occurring Isotope	S - Single-Escape
P - Photon Reaction	D - Double-Escape
C - Charged Particle Reaction	K - Key Line
M - No MDA Calculation	A - Not in Average
R - Coincidence Corrected	C - Coincidence Peak
H - Halflife limit exceeded	

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 Tidewater Inc Spectrum name: 2017\_10\_06\_10\_37\_260 geo.An1

\*\*\*\*\* D I S C A R D E D I S O T O P E P E A K S \*\*\*\*\*  
 Nuclide Centroid Background Net Area Intensity Uncert Activity  
 Energy Counts Counts Cts/Sec 1 Sigma %

U-238	258.00	1284.	96.	0.054	53.50	8.789E+00
U-238	781.37	186.	32.	0.018	62.95	2.722E+01
U-238	852.01	235.	30.	0.017	84.75	3.361E+01
U-238	1192.96	118.	17.	0.010	95.50	8.613E+00
U-238	1238.18	252.	220.	0.123	14.92	2.473E+02
U-238	1352.24	76.	20.	0.011	74.45	5.879E+01
U-238	1393.95	80.	41.	0.023	41.23	7.386E+01
U-238	1434.62	29.	9.	0.005	81.95	6.373E+00
U-238	1555.41	30.	13.	0.007	72.16	1.067E+01
U-238	1809.90	7.	6.	0.004	70.33	1.150E+01
U-238	1830.49	15.	23.	0.013	35.62	8.985E+00
U-238	1865.79	18.	16.	0.009	48.81	1.154E+01

P - Peakbackground subtraction

\*\*\*\*\* S U M M A R Y O F N U C L I D E S I N S A M P L E \*\*\*\*\*  
 Nuclide Time of Count Uncertainty 1 Sigma MDA  
 Activity Counting Total pCi/g

BI-214	3.0783E-01	2.8443E+00%	4.3283E+00%	0.464E-02
PB-214	3.6774E-01	4.0406E+00%	1.0485E+01%	0.103E-01
RA-226	No in-range peaks			
Cs-137	< 1.2329E-03			
Th-232	9.4403E-02	1.0495E+01%	1.0735E+01%	0.672E-02
U-238	B< 1.1311E-01			
K-40	1.4701E+00	2.2295E+00%	3.5299E+00%	0.950E-02

drum 3 sharpe use

- < - MDA value printed.
- A - Activity printed, but activity < MDA.
- B - Activity < MDA and failed test.
- C - Area < Critical level.
- F - Failed fraction or key line test.
- H - Halflife limit exceeded

----- S U M M A R Y -----  
Total Activity ( 3.9 to 2989.0 keV) 2.240E+00 pCi/g

Analyzed by: \_\_\_\_\_  
Shane Reese

Reviewed by: \_\_\_\_\_  
Supervisor

Laboratory: Tidewater Inc

drum 4 sharpe use

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Live time: 1786  
Real time: 1801  
Dead time: 0.87 %  
Detector ID: 1

Detector system  
Trans Spec

Calibration  
Filename: Cal 3-18-16.Clb  
Al Ring 74115-57 +74116-57

Energy Calibration  
Created: 3/18/2016 12:30:54 PM  
Zero offset: 0.193 keV  
Gain: 0.374 keV/channel  
Quadratic: 5.432E-10 keV/channel<sup>2</sup>

Efficiency Calibration  
Created: 3/18/2016 12:53:43 PM  
Type: Polynomial  
Uncertainty: 0.000 %  
Coefficients: 0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000

Library Files  
Main analysis library: NORM 041316a.Lib  
Library Match width: 0.500

Analysis parameters  
Analysis engine: wan32 G800W064  
Start channel: 10 ( 3.93keV )  
Stop channel: 8000 ( 2989.03keV )  
Peak rejection level: 100.000%  
Peak search sensitivity: 3  
Sample Size: 2.2800E+05 +/- 0.000E+00%  
Activity scaling factor: 1.0000E+03/( 1.0000E-06\* 2.2800E+05) =  
4.3860E+03  
Detection limit method: Traditional ORTEC method  
Random error: 1.0000000E+00  
Systematic error: 1.0000000E+00  
Fraction Limit: 0.000%  
Background width: best method (based on spectrum).  
Half lives decay limit: 12.000  
Activity range factor: 2.000

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Tidewater Inc Spectrum name: 2017\_10\_06\_11\_18\_200 geo.An1

Min. step backg. energy 0.000  
Multiplet shift channel 2.000

Corrections  
Decay correct to date: Status NO Comments  
Page 1

drum 4 sharpe use

Decay during acquisition: NO  
 Decay during collection: NO  
 True coincidence correction: NO  
 Peaked background correction: NO  
 Absorption (Internal): NO  
 Geometry correction: NO  
 Random summing: NO

Energy Calibration  
 Normalized diff: 0.1854

\*\*\*\*\* U N I D E N T I F I E D P E A K S U M M A R Y \*\*\*\*\*

Channel	Peak Centroid Energy	Background Counts	Net Area Counts	Efficiency * Area	Uncert 1 Sigma %	FWHM keV	Suspected Nuclide
44.58	16.85	3302.	2678.	0.000E+00	3.90	3.308	- S
181.82	68.12	8506.	737.	7.369E+02	18.08	1.294	AM-241 SD
205.46	76.91	10427.	463.	4.627E+02	33.79	1.129	AM-243
274.87	102.80	6351.	177.	1.769E+02	64.14	1.320	AM-241 SD
280.74	105.00	7022.	174.	1.736E+02	68.66	1.322	U-235 SD
497.34	185.96	4601.	715.	7.153E+02	14.86	1.550	Ra-226
645.41	241.71	3072.	790.	7.898E+02	10.54	1.421	Ra-226 D
1267.52	473.89	514.	47.	4.740E+01	72.39	0.496	- S
1607.06	600.62	248.	33.	3.300E+01	66.35	0.606	- S
1733.22	647.92	176.	19.	1.900E+01	96.45	0.528	- S
2056.13	768.34	356.	282.	2.825E+02	12.11	1.697	Ra-226 M
2244.82	839.03	257.	40.	3.960E+01	63.46	0.871	- S
2702.95	1009.63	112.	30.	3.050E+01	51.24	1.043	- S
3767.34	1407.73	139.	139.	1.394E+02	17.32	1.584	Ra-226
4038.49	1509.07	95.	115.	1.149E+02	15.17	2.102	Ra-226 SD
6995.23	2613.64	0.	541.	5.410E+02	4.30	2.547	-

s - Peak fails shape tests.  
 D - Peak area deconvoluted.  
 M - Peak is close to a library peak.

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ORTEC g v - i ( 63) Wan32 G800W064 10/10/2017 8:06:27 PM Page 3  
 Tidewater Inc Spectrum name: 2017\_10\_06\_11\_18\_200 geo.An1

\*\*\*\*\* I D E N T I F I E D P E A K S U M M A R Y \*\*\*\*\*

Nuclide	Peak Channel	Centroid Energy	Background Counts	Net Area Counts	Intensity Cts/Sec	Uncert 1 Sigma %	FWHM keV
U-238	168.92	63.30	7272.	346.	0.194	35.25	1.291D
U-238	297.86	111.47	6141.	159.	0.089	68.27	0.485s
Th-232	345.87	129.41	6546.	245.	0.137	48.30	3.070s
Th-232	638.19	238.62	2814.	1223.	0.685	6.77	1.419D
PB-214	789.10	295.00	2428.	1786.	1.000	5.19	1.674
Th-232	875.23	327.18	314.	22.	0.012	93.42	0.349s
Th-232	904.95	338.28	1425.	241.	0.135	25.13	1.200
PB-214	941.14	351.80	1890.	3422.	1.916	2.82	1.799s
Th-232	1099.66	411.03	1040.	92.	0.052	56.08	1.479s
Th-232	1238.83	463.02	747.	193.	0.108	23.97	3.103s
Th-232	1366.69	510.79	1306.	630.	0.353	12.40	2.684
Th-232	1560.14	583.06	750.	684.	0.383	8.12	1.706s
BI-214	1630.18	609.23	720.	3505.	1.963	2.20	1.805
Cs-137	1770.29	661.57	395.	36.	0.020	86.64	0.487s
Th-232	1945.95	727.20	350.	156.	0.087	20.99	2.087s

drum 4 sharpe use

U-238	2090.94	781.37	172.	33.	0.019	58.68	1.765D
U-238	2104.11	786.29	298.	99.	0.056	26.50	1.768D
Th-232	2127.68	795.10	321.	116.	0.065	27.10	2.619s
Th-232	2303.44	860.76	315.	126.	0.070	25.68	2.692s
Th-232	2438.19	911.10	326.	507.	0.284	7.76	2.073
U-238	2477.00	925.61	167.	42.	0.024	47.93	2.014
Th-232	2581.83	964.77	223.	121.	0.068	19.65	1.864D
Th-232	2592.89	968.90	239.	286.	0.160	9.67	1.866D
BI-214	2998.08	1120.28	262.	930.	0.521	4.59	2.337s
U-238	3195.09	1193.88	108.	23.	0.013	67.22	1.270s
U-238	3313.07	1237.96	322.	340.	0.190	11.41	1.835s
K-40	3909.04	1460.62	162.	2639.	1.478	2.17	2.279
U-238	4042.02	1510.30	192.	20.	0.011	98.48	2.103D
U-238	4156.24	1552.97	43.	13.	0.007	85.76	0.528s
Th-232	4250.04	1588.02	50.	36.	0.020	34.00	2.284
Th-232	4361.01	1629.48	42.	17.	0.010	63.84	0.408s
BI-214	4721.27	1764.07	57.	759.	0.425	4.10	2.173
U-238	4835.14	1806.61	11.	8.	0.004	77.90	0.505s
U-238	4901.56	1831.43	22.	10.	0.005	85.35	0.582s
U-238	5109.89	1909.26	21.	18.	0.010	45.95	2.420

s - Peak fails shape tests.  
D - Peak area deconvoluted.

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Tidewater Inc Spectrum name: 2017\_10\_06\_11\_18\_200 geo.An1

\*\*\*\*\* S U M M A R Y O F L I B R A R Y P E A K U S A G E \*\*\*\*\*

- Nuclide - Name Code	Average Activity microCi	Energy keV	Peak Activity microCi	Code	MDA microCi	Value	Comments
BI-214	1.1510E-04	609.32	1.151E-04	(	1.263E-06	1.38E-02	4.61E+01 G K
		1764.51	7.219E-05	-	3.889E-06		1.59E+01 G
		1120.28	9.363E-05	-	4.964E-06		1.50E+01 G
PB-214	1.4001E-04	351.99	1.396E-04	(	2.529E-06	1.86E-02	3.71E+01 G K
		295.22	1.408E-04	(	5.533E-06		1.92E+01 G
Cs-137	6.4749E-07	661.62	6.475E-07	(	5.116E-07	1.10E+04	8.46E+01 G
Th-232	2.9767E-05	911.10	2.977E-05	(	1.527E-06	5.11E+12	2.58E+01 G K
		238.62	4.244E-05	+	3.137E-06		4.36E+01 A
		583.17	3.606E-05	+	2.851E-06		2.87E+01 A
		968.90	2.741E-05		3.154E-06		1.58E+01 A
		338.40	3.234E-05		7.820E-06		1.13E+01 A
		727.18	3.579E-05	+	7.433E-06		6.58E+00 A
		270.30	0.000E+00	&	1.827E-05		3.46E+00 A
		1588.23	1.673E-05	-	6.404E-06		3.22E+00 A
		860.53	4.411E-05	+	1.061E-05		4.31E+00 A
		794.95	4.120E-05	+	1.071E-05		4.25E+00 A
		510.69	1.246E-04	+	1.239E-05		7.66E+00 A
		964.77	3.675E-05	+	8.109E-06		4.99E+00 A
		463.00	6.632E-05	+	1.509E-05		4.40E+00 A
		129.06	1.532E-04	+	7.320E-05		2.42E+00 A
		1630.40	1.704E-05	-	1.140E-05		1.51E+00 A
		755.30	0.000E+00	%	2.333E-05		1.00E+00 A
328.00	1.139E-05	&	1.356E-05		2.95E+00 A		
277.40	0.000E+00	%	2.731E-05		2.24E+00 A		
209.25	0.000E+00	%	2.129E-05		3.89E+00 A		

		drum 4 sharpe use						
		409.46	7.292E-05	&	3.791E-05		1.92E+00	GA
U-238	0.0000E+00	1001.03	0.000E+00	%	2.770E-05	1.65E+12	8.37E-01	G K
		766.36	0.000E+00	?	1.657E-04		2.94E-01	GA
		92.80	0.000E+00	&	4.732E-05		2.80E+00	GA
		92.38	0.000E+00	&	4.745E-05		2.80E+00	A
		112.81	8.611E-04	&	6.095E-04		2.80E-01	A
		258.00	0.000E+00	%	8.926E-04		7.28E-02	A
		63.30	1.092E-04	&	3.908E-05		4.80E+00	GA
		691.30	0.000E+00	&	3.326E-04		7.80E-02	GA
		569.30	0.000E+00	&	1.862E-03		1.64E-02	GA
		543.98	0.000E+00	&	9.295E-03		3.60E-03	A
		131.63	0.000E+00	?	4.681E-03		2.94E-02	A
		755.00	0.000E+00	&	1.176E-02		2.00E-03	A

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ORTEC g v - i ( 63) wan32 G800W064 10/10/2017 8:06:27 PM Page 5  
 Tidewater Inc Spectrum name: 2017\_10\_06\_11\_18\_200 geo.An1

Nuclide	Ave activity	Energy	Activity	Code	Peak MDA	Comments	
		49.55	0.000E+00	%	3.062E-02	6.40E-02	A
		742.81	0.000E+00	?	4.619E-04	8.30E-02	A
		739.70	0.000E+00	&	2.755E-03	1.10E-02	A
		781.37	6.443E-03	?	4.041E-03	7.78E-03	A
		786.29	3.103E-03		8.951E-04	4.85E-02	A
		883.24	0.000E+00	?	1.970E-03	1.80E-02	A
		880.50	0.000E+00	?	2.054E-03	1.70E-02	A
		851.57	0.000E+00	%	3.556E-03	6.00E-03	A
		921.70	0.000E+00	?	1.886E-03	1.27E-02	A
		898.67	0.000E+00	%	4.195E-03	5.20E-03	A
		1193.77	2.598E-03	?	1.886E-03	1.34E-02	A
		945.90	0.000E+00	%	6.760E-04	3.09E-02	A
		925.10	4.696E-03		2.332E-03	1.36E-02	A
		996.10	0.000E+00	&	5.655E-03	4.10E-03	A
		1237.40	8.712E-02	*	9.464E-03	5.90E-03	G
		1393.60	0.000E+00	%	4.393E-03	3.70E-03	A
		1352.90	0.000E+00	%	7.323E-03	2.20E-03	A
		1911.20	4.466E-03	&	2.319E-03	6.10E-03	A
		1874.80	0.000E+00	%	1.092E-03	7.80E-03	A
		1867.50	0.000E+00	%	9.515E-04	9.20E-03	A
		1831.70	8.360E-04	?	7.494E-04	1.72E-02	A
		1809.30	3.199E-03	&	2.742E-03	3.69E-03	A
		1765.80	0.000E+00	%	7.844E-03	7.60E-03	A
		1737.90	0.000E+00	%	4.805E-04	2.12E-02	A
		1553.74	2.360E-03	?	2.078E-03	8.08E-03	A
		1510.30	2.402E-03	?	2.484E-03	1.29E-02	A
		1434.30	0.000E+00	&	1.452E-03	9.68E-03	A

K-40 3.7429E-04 1460.00 3.743E-04 ( 2.628E-06 4.57E+11 1.07E+01 G K  
 ( - This peak used in the nuclide activity average.

- \* - Peak is too wide, but only one peak in library.
- ! - Peak is part of a multiplet and this area went negative during deconvolution.
- ? - Peak is too narrow.
- @ - Peak is too wide at FW25M, but ok at FWHM.
- % - Peak fails sensitivity test.
- \$ - Peak identified, but first peak of this nuclide failed one or more qualification tests.
- + - Peak activity higher than counting uncertainty range.
- - Peak activity lower than counting uncertainty range.
- = - Peak outside analysis energy range.
- & - Calculated peak centroid is not close enough to the



drum 4 sharpe use  
 library energy centroid for positive identification.  
 P - Peakbackground subtraction

Nuclide Codes: Peak Codes:  
 T - Thermal Neutron Activation G - Gamma Ray  
 F - Fast Neutron Activation X - X-Ray

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ORTEC g v - i ( 63) wan32 G800W064 10/10/2017 8:06:27 PM Page 6  
 Tidewater Inc Spectrum name: 2017\_10\_06\_11\_18\_200 geo.An1

I - Fission Product P - Positron Decay  
 N - Naturally Occurring Isotope S - Single-Escape  
 P - Photon Reaction D - Double-Escape  
 C - Charged Particle Reaction K - Key Line  
 M - No MDA Calculation A - Not in Average  
 R - Coincidence Corrected C - Coincidence Peak  
 H - Halflife limit exceeded

\*\*\*\*\* D I S C A R D E D I S O T O P E P E A K S \*\*\*\*\*

Nuclide	Centroid Energy	Background Counts	Net Area Counts	Intensity Cts/Sec	Uncert 1 Sigma %	Activity
U-238	63.30	7272.	346.	0.194	35.25	4.788E-01
U-238	111.47	6141.	159.	0.089	68.27	3.777E+00
U-238	781.37	172.	33.	0.019	58.68	2.826E+01
U-238	786.29	298.	99.	0.056	26.50	1.361E+01
U-238	925.61	167.	42.	0.024	47.93	2.060E+01
U-238	1193.88	108.	23.	0.013	67.22	1.139E+01
U-238	1237.96	322.	340.	0.190	11.41	3.821E+02
U-238	1510.30	192.	20.	0.011	98.48	1.053E+01
U-238	1552.97	43.	13.	0.007	85.76	1.035E+01
U-238	1806.61	11.	8.	0.004	77.90	1.403E+01
U-238	1831.43	22.	10.	0.005	85.35	3.667E+00
U-238	1909.26	21.	18.	0.010	45.95	1.959E+01

P - Peakbackground subtraction

\*\*\*\*\* S U M M A R Y O F N U C L I D E S I N S A M P L E \*\*\*\*\*

Nuclide	Time of Count	Uncertainty 1 Sigma	Activity pCi/g	Counting	Total	MDA
BI-214	5.0483E-01	2.2013E+00%	3.9358E+00%	0.554E-02		
PB-214	6.1406E-01	2.8153E+00%	1.0076E+01%	0.111E-01		
RA-226	No in-range peaks					
Cs-137	C 2.8399E-03	8.6642E+01%	8.6694E+01%	0.224E-02		
Th-232	1.3056E-01	7.7575E+00%	8.0799E+00%	0.670E-02		
U-238	B< 1.2149E-01					
K-40	1.6416E+00	2.1679E+00%	3.4913E+00%	0.115E-01		

< - MDA value printed.  
 A - Activity printed, but activity < MDA.  
 B - Activity < MDA and failed test.  
 C - Area < Critical level.  
 F - Failed fraction or key line test.  
 H - Halflife limit exceeded

----- S U M M A R Y -----  
 Total Activity ( 3.9 to 2989.0 keV) 2.891E+00 pCi/g

Analyzed by: \_\_\_\_\_

drum 4 sharpe use

Shane Reese

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ORTEC g v - i ( 63) wan32 G800w064 10/10/2017 8:06:27 PM Page 7  
Tidewater Inc Spectrum name: 2017\_10\_06\_11\_18\_200 geo.An1

Reviewed by: \_\_\_\_\_  
Supervisor

Laboratory: Tidewater Inc

drum 5 sharpe weight

ORTEC g v - i ( 63) wan32 G53W2.10 09-OCT-2017 19:06:48 Page 1  
Tidewater Inc Spectrum name: 2017\_10\_06\_12\_03\_030 geo.An1

Sample description  
Drum 5

Spectrum Filename: C:\User\Sharpe\2017\_10\_06\_12\_03\_030 geo.An1

Acquisition information

Start time: 06-Oct-2017 07:20:20  
Live time: 1788  
Real time: 1800  
Dead time: 0.71 %  
Detector ID: 1

Detector system  
Trans Spec

Calibration

Filename: cal 3-18-16.clb  
Al Ring 74115-57 +74116-57

Energy Calibration

Created: 18-Mar-2016 12:30:54  
Zero offset: 0.193 keV  
Gain: 0.374 keV/channel  
Quadratic: 5.432E-10 keV/channel^2

Efficiency Calibration

Created: 18-Mar-2016 12:53:43  
Type: Polynomial  
Uncertainty: 0.000 %  
Coefficients: 0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000

Library Files

Main analysis library: NORM 041316a.Lib  
Library Match Width: 0.500

Analysis parameters

Analysis engine: wan32 G53W2.10  
Start channel: 10 ( 3.93keV )  
Stop channel: 8000 ( 2989.03keV )  
Peak rejection level: 100.000%  
Peak search sensitivity: 4  
Sample Size: 5.0000E+01  
Activity scaling factor: 1.0000E+03/( 1.0000E-06\* 5.0000E+01) =  
2.0000E+07  
Detection limit method: Traditional ORTEC method  
Random error: 1.0000000E+00  
Systematic error: 1.0000000E+00  
Fraction Limit: 0.000%  
Background width: best method (based on spectrum).  
Half lives decay limit: 12.000  
Activity range factor: 2.000

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drum 5 sharpe weight

ORTEC g v - i ( 63) Wan32 G53W2.10 09-OCT-2017 19:06:48 Page 2  
 Tidewater Inc Spectrum name: 2017\_10\_06\_12\_03\_030 geo.An1

Min. step backg. energy 0.000  
 Multiplet shift channel 2.000

Corrections	Status	Comments
Decay correct to date:	NO	
Decay during acquisition:	NO	
Decay during collection:	NO	
True coincidence correction:	NO	
Peaked background correction:	NO	
Absorption (Internal):	NO	
Geometry correction:	NO	
Random summing:	NO	

Energy Calibration  
 Normalized diff: 0.2103

\*\*\*\*\* U N I D E N T I F I E D P E A K S U M M A R Y \*\*\*\*\*

Peak Channel	Centroid Energy	Background Counts	Net Area Counts	Intensity Cts/Sec	Uncert 1 Sigma %	FWHM keV	Suspected Nuclide
478.64	179.01	2950.	158.	0.088	56.70	0.688	TA-182 s
6088.96	2275.05	4.	16.	0.009	34.60	0.374	- s
6995.35	2613.68	0.	518.	0.290	4.39	2.705	TL-208 s

s - Peak fails shape tests.  
 D - Peak area deconvoluted.

\*\*\*\*\* I D E N T I F I E D P E A K S U M M A R Y \*\*\*\*\*

Nuclide	Peak Channel	Centroid Energy	Background Counts	Net Area Counts	Intensity Cts/Sec	Uncert 1 sigma %	FWHM keV
U-238	129.31	48.50	2128.	26.	0.015	251.68	0.492s
U-238	166.10	62.25	5060.	50.	0.028	223.15	0.317s
U-238	246.75	92.38	6583.	93.	0.052	123.43	1.313D
U-238	247.88	92.80	6564.	112.	0.062	103.10	1.313D
U-238	303.13	113.44	4028.	74.	0.041	127.64	0.615s
Th-232	344.93	129.06	5206.	99.	0.055	103.93	1.340D
U-238	351.81	131.63	6068.	51.	0.028	217.63	1.342D
Th-232	559.83	209.35	1796.	88.	0.049	74.33	1.278
Th-232	637.00	238.18	2539.	839.	0.469	11.24	1.433
U-238	691.85	258.67	1173.	68.	0.038	80.55	0.422s
Th-232	723.74	270.58	1331.	183.	0.102	34.36	0.932s
Th-232	740.68	276.91	1720.	164.	0.092	49.05	1.007s
PB-214	788.74	294.87	1581.	755.	0.422	10.73	1.665s
Th-232	877.54	328.04	1050.	160.	0.089	37.81	1.195
Th-232	903.54	337.76	1118.	300.	0.168	21.60	1.264s
PB-214	941.38	351.90	1384.	1229.	0.687	5.97	1.982s
Th-232	1096.72	409.93	623.	121.	0.068	38.74	1.144

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ORTEC g v - i ( 63) Wan32 G53W2.10 09-OCT-2017 19:06:48 Page 3  
 Tidewater Inc Spectrum name: 2017\_10\_06\_12\_03\_030 geo.An1

Nuclide	Channel	Energy	Background	Net area	Cnts/sec	Uncert	FWHM
Th-232	1238.22	462.79	582.	110.	0.062	41.95	1.458s
Th-232	1367.00	510.90	735.	259.	0.145	21.84	2.151s

drum 5 sharpe weight

U-238	1452.50	542.85	326.	29.	0.016	109.43	0.723s
U-238	1525.25	570.03	288.	29.	0.016	99.65	0.541s
Th-232	1559.81	582.94	572.	740.	0.414	8.42	1.747s
BI-214	1630.25	609.25	462.	1396.	0.781	4.04	1.906s
Cs-137	1766.00	659.97	137.	8.	0.004	236.27	0.000s
U-238	1847.86	690.56	103.	17.	0.010	87.84	0.437s
Th-232	1947.34	727.72	276.	194.	0.109	18.57	1.043s
U-238	1979.40	739.70	245.	12.	0.007	185.43	1.741D
U-238	1987.73	742.81	226.	42.	0.023	53.44	1.743D
U-238	2020.36	755.00	250.	27.	0.015	86.64	1.750D
Th-232	2021.16	755.30	284.	10.	0.006	229.15	1.750D
U-238	2048.08	765.36	104.	13.	0.007	114.35	0.787s
U-238	2090.94	781.37	237.	16.	0.009	135.68	1.765D
U-238	2104.11	786.29	239.	45.	0.025	50.54	1.768D
Th-232	2126.38	794.61	182.	78.	0.044	32.03	0.470s
U-238	2277.88	851.21	76.	12.	0.007	109.19	0.615s
Th-232	2303.66	860.84	200.	140.	0.078	26.15	2.213s
U-238	2356.27	880.50	145.	34.	0.019	53.43	1.820D
U-238	2363.61	883.24	148.	46.	0.026	40.12	1.821D
U-238	2404.64	898.57	93.	28.	0.016	57.64	0.686s
Th-232	2438.61	911.26	234.	462.	0.259	8.42	2.064
U-238	2466.55	921.70	91.	31.	0.017	47.70	1.842D
U-238	2475.65	925.10	150.	12.	0.007	142.86	1.843D
U-238	2524.17	943.23	158.	22.	0.013	106.46	0.677s
Th-232	2581.83	964.77	169.	105.	0.058	20.14	1.864D
Th-232	2592.89	968.90	163.	306.	0.171	8.23	1.866D
U-238	2665.69	996.10	134.	20.	0.011	83.44	1.880D
U-238	2678.89	1001.03	188.	14.	0.008	140.79	1.882D
BI-214	2997.98	1120.24	243.	438.	0.245	9.01	2.240s
U-238	3189.00	1191.61	155.	0.	0.000	1000.00	0.000s
U-238	3313.30	1238.05	157.	234.	0.131	15.39	1.444s
U-238	3621.00	1353.01	9.	2.	0.001	196.85	0.000s
U-238	3731.67	1394.35	14.	1.	0.001	493.29	0.480s
U-238	3832.32	1431.96	48.	33.	0.018	45.45	1.138s
K-40	3909.03	1460.61	103.	2355.	1.317	2.30	2.195
U-238	4042.44	1510.46	38.	4.	0.002	271.57	0.279s
U-238	4157.50	1553.44	2.	0.	0.000	1000.00	0.436s
Th-232	4248.77	1587.54	37.	43.	0.024	30.30	0.907s
Th-232	4363.00	1630.22	29.	3.	0.001	347.31	0.000s
U-238	4645.60	1735.80	16.	7.	0.004	105.95	0.672s
BI-214	4722.44	1764.51	61.	308.	0.172	6.74	2.187D
U-238	4725.90	1765.80	343.	6.	0.003	465.25	2.187D
U-238	4842.42	1809.33	3.	1.	0.001	180.28	0.315s
U-238	4903.00	1831.97	4.	1.	0.000	349.28	0.000s
U-238	4998.11	1867.50	13.	9.	0.005	64.80	2.215D
U-238	5017.65	1874.80	12.	5.	0.003	102.84	2.218D

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ORTEC g v - i ( 63) Wan32 G53W2.10 09-OCT-2017 19:06:48 Page 4  
 Tidewater Inc Spectrum name: 2017\_10\_06\_12\_03\_030 geo.An1

Nuclide	Channel	Energy	Background	Net area	Cnts/sec	Uncert	FWHM
U-238	5117.11	1911.96	10.	18.	0.010	43.51	0.890s

s - Peak fails shape tests.  
 D - Peak area deconvoluted.

\*\*\*\*\* SUMMARY OF LIBRARY PEAK USAGE \*\*\*\*\*

- Nuclide - Name	Code	Average Activity microCi	Energy keV	Peak Activity microCi	Code	MDA Value microCi	Comments
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drum 5 sharpe weight						
BI-214	4.5358E-05	609.32	4.578E-05	*(	1.014E-06	G K
		1764.51	2.923E-05	-	2.628E-06	G
		1120.28	4.406E-05	*(	2.265E-06	G
PB-214	5.0081E-05	351.99	5.008E-05	(	2.164E-06	G K
		295.22	5.942E-05	+	5.422E-06	G
Cs-137	0.0000E+00	661.62	0.000E+00	&	3.133E-07	G
Th-232	2.7101E-05	911.10	2.710E-05	(	1.299E-06	G K
		238.62	2.908E-05		2.867E-06	A
		583.17	3.901E-05	+	2.725E-06	A
		968.90	2.923E-05		2.979E-06	A
		338.40	4.031E-05	+	7.211E-06	A
		727.18	4.457E-05	+	7.160E-06	A
		270.30	7.996E-05	+	2.426E-05	A
		1588.23	2.003E-05	-	6.178E-06	A
		860.53	4.911E-05	+	9.324E-06	A
		794.95	2.775E-05	?	8.291E-06	A
		510.69	5.112E-05	+	8.899E-06	A
		964.77	3.168E-05		7.245E-06	A
		463.00	3.797E-05	+	1.296E-05	A
		129.06	0.000E+00	%	6.466E-05	A
		1630.40	0.000E+00	%	8.526E-06	A
		755.30	0.000E+00	%	3.742E-05	A
		328.00	8.200E-05	+	2.547E-05	A
277.40	1.107E-04	+	4.177E-05	A		
209.25	3.420E-05	+	2.405E-05	A		
409.46	9.527E-05	+	3.077E-05	GA		
U-238	0.0000E+00	1001.03	0.000E+00	%	3.721E-05	G K
		766.36	0.000E+00	&	8.127E-05	GA
		92.80	0.000E+00	%	6.266E-05	GA
		92.38	0.000E+00	%	6.266E-05	A
		112.81	0.000E+00	%	4.918E-04	A
		258.00	1.412E-03	?	1.045E-03	A
		63.30	0.000E+00	&	3.200E-05	GA

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ORTEC g v - i ( 63) Wan32 G53W2.10 09-OCT-2017 19:06:48 Page 5  
 Tidewater Inc Spectrum name: 2017\_10\_06\_12\_03\_030 geo.An1

Nuclide	Ave activity	Energy	Activity	Code	Peak MDA	Comments
		691.30	3.295E-04	?	3.101E-04	GA
		569.30	2.689E-03	?	2.368E-03	GA
		543.98	0.000E+00	&	1.140E-02	A
		131.63	0.000E+00	%	5.714E-03	A
		755.00	2.004E-02		1.817E-02	A
		49.55	0.000E+00	&	3.089E-02	A
		742.81	7.579E-04		4.309E-04	A
		739.70	0.000E+00	%	3.185E-03	A
		781.37	0.000E+00	%	4.469E-03	A
		786.29	1.410E-03		7.586E-04	A
		883.24	3.871E-03		1.697E-03	A
		880.50	2.997E-03		1.728E-03	A
		851.57	0.000E+00	%	3.471E-03	A
		921.70	3.648E-03		1.921E-03	A
		898.67	8.140E-03	?	4.670E-03	A
		1193.77	0.000E+00	&	2.044E-03	A
		945.90	0.000E+00	&	9.531E-04	A
		925.10	0.000E+00	%	2.057E-03	A
		996.10	7.506E-03		6.666E-03	A
		1237.40	5.992E-02	*	7.295E-03	G







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Sample description  
Drum 6

Spectrum Filename: C:\User\Sharpe\2017\_10\_06\_12\_40\_050.An1

Acquisition information

Start time: 10/6/2017 7:20:21 AM  
Live time: 1788  
Real time: 1800  
Dead time: 0.70 %  
Detector ID: 1

Detector system  
Trans Spec

Calibration

Filename: Cal 3-18-16.C1b  
Al Ring 74115-57 +74116-57

Energy Calibration

Created: 3/18/2016 12:30:54 PM  
Zero offset: 0.193 keV  
Gain: 0.374 keV/channel  
Quadratic: 5.432E-10 keV/channel<sup>2</sup>

Efficiency Calibration

Created: 3/18/2016 12:53:43 PM  
Type: Polynomial  
Uncertainty: 0.000 %  
Coefficients: 0.000000 0.000000  
0.000000  
0.000000 0.000000

Library Files

Main analysis library: NORM 041316a.Lib  
Library Match Width: 0.500

Analysis parameters

Analysis engine: Wan32 G800W064  
Start channel: 20 ( 7.67keV )  
Stop channel: 8182 ( 3057.02keV )

Peak rejection level:	30.000%
Peak search sensitivity:	3
Sample Size:	2.2600E+05 +/- 0.000E+00%
Activity scaling factor:	1.0000E+03/( 1.0000E-06*
2.2600E+05) =	4.4248E+03
Detection limit method:	Traditional ORTEC method
Random error:	1.0000000E+00
Systematic error:	1.0000000E+00
Fraction Limit:	0.000%
Background width:	5
Half lives decay limit:	12.000
Activity range factor:	2.000

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Min. step backg. energy 0.000  
 Multiplet shift channel 2.000

Corrections	Status	Comments
Decay correct to date:	NO	
Decay during acquisition:	NO	
Decay during collection:	NO	
True coincidence correction:	NO	
Peaked background correction:	NO	
Absorption (Internal):	NO	
Geometry correction:	NO	
Random summing:	NO	

Energy Calibration  
 Normalized diff: 0.1768

\*\*\*\*\* U N I D E N T I F I E D P E A K S U M M A R Y \*\*\*\*\*

Suspected	Peak Centroid	Background	Net Area	Efficiency	Uncert	FWHM
Channel	Energy	Counts	Counts	* Area	1 Sigma %	keV

---

4627.42	1729.01	18.	85.	8.460E+01	14.25	
2.405	Ra-226	sM				
6995.20	2613.63	9.	504.	5.043E+02	4.60	
2.624	-	s				

s - Peak fails shape tests.  
 D - Peak area deconvoluted.  
 M - Peak is close to a library peak.

\*\*\*\*\* I D E N T I F I E D P E A K S U M M A R Y \*\*\*\*\*

Nuclide	Peak	Centroid	Background	Net Area	Intensity
Uncert	FWHM	Channel	Energy	Counts	Cts/Sec
Sigma %	keV				1

---

Th-232	636.97	238.17	2814.	826.	0.462
10.54	1.432				
PB-214	789.16	295.02	1624.	602.	0.337
11.54	2.042s				
Th-232	905.27	338.40	1118.	280.	0.156
19.83	0.973s				
PB-214	941.13	351.80	1354.	1202.	0.672
6.04	1.773s				
Th-232	1366.02	510.54	879.	460.	0.257
13.71	2.277				
Th-232	1560.36	583.15	598.	613.	0.343
8.30	1.739s				
BI-214	1630.16	609.22	384.	1301.	0.728
3.78	2.107s				
Th-232	1945.34	726.97	317.	131.	0.073
24.80	1.818				
U-238	2054.45	767.74	258.	110.	0.062
25.30	2.221s				
Th-232	2302.78	860.51	241.	110.	0.061
25.94	3.073s				
Th-232	2437.88	910.99	283.	410.	0.229
9.04	2.253s				
Th-232	2581.83	964.77	199.	84.	0.047
26.11	1.864D				
Th-232	2592.89	968.90	224.	238.	0.133
11.02	1.866D				
BI-214	2998.16	1120.31	255.	388.	0.217
9.49	2.172				
U-238	3313.44	1238.10	240.	203.	0.113
16.30	3.049s				
K-40	3909.09	1460.64	105.	2328.	1.302
2.24	2.373s				

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Nuclide	Channel	Energy	Background	Net area	Cnts/sec
Th-232	4249.75	1587.91	38.	49.	0.028
23.66	1.563s				
BI-214	4721.01	1763.97	34.	357.	0.200
6.24	2.101s				

s - Peak fails shape tests.  
 D - Peak area deconvoluted.

\*\*\*\*\* S U M M A R Y O F L I B R A R Y P E A K U S A G E \*\*\*\*\*

Name	Code	Average Activity microCi	Energy keV	Peak Activity microCi	Code	MDA Value microCi	Comments
------	------	-----------------------------	---------------	--------------------------	------	----------------------	----------

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BI-214		4.1784E-05	609.32	4.268E-05	* (	3.217E-06	1.38E-
02	4.61E+01	G K					
			1764.51	3.390E-05	-	9.396E-06	
	1.59E+01	G					
			1120.28	3.902E-05	(	8.144E-06	
	1.50E+01	G					
PB-214		4.8446E-05	351.99	4.899E-05	@ (	7.299E-06	1.86E-
02	3.71E+01	G K					
			295.22	4.741E-05	@ (	1.540E-05	
	1.92E+01	G					
Cs-137		0.0000E+00	661.62	0.000E+00	%	1.044E-06	1.10E+
04	8.46E+01	G					
Th-232		2.4015E-05	911.10	2.402E-05	* (	4.986E-06	5.11E+
12	2.58E+01	G K					
			238.62	2.864E-05		1.006E-05	
	4.36E+01	A					
			583.17	3.229E-05	+	8.940E-06	
	2.87E+01	A					
			968.90	2.274E-05		1.024E-05	
	1.58E+01	A					
			338.40	3.750E-05	+	2.439E-05	
	1.13E+01	A					
			727.18	3.003E-05	+	2.424E-05	

6.58E+00	A		270.30	0.000E+00	%	5.614E-05	
3.46E+00	A		1588.23	2.315E-05		2.342E-05	
3.22E+00	A		860.53	3.848E-05	+	3.299E-05	
4.31E+00	A		794.95	0.000E+00	%	2.226E-05	
4.25E+00	A		510.69	9.079E-05	+	3.516E-05	
7.66E+00	A		964.77	2.547E-05	?	2.577E-05	
4.99E+00	A		463.00	0.000E+00	%	3.016E-05	
4.40E+00	A		129.06	0.000E+00	&	1.894E-04	
2.42E+00	A		1630.40	0.000E+00	%	3.943E-05	
1.51E+00	A		755.30	0.000E+00	&	7.793E-05	
1.00E+00	A		328.00	0.000E+00	%	5.361E-05	
2.95E+00	A		277.40	0.000E+00	%	8.274E-05	
2.24E+00	A		209.25	0.000E+00	&	6.674E-05	
3.89E+00	A		409.46	0.000E+00	%	7.046E-05	
1.92E+00	GA						
U-238		0.0000E+00	1001.03	0.000E+00	&	1.223E-04	1.65E+
12	8.37E-01	G K	766.36	5.677E-04	&	4.945E-04	
2.94E-01	GA		92.80	0.000E+00	%	2.103E-04	
2.80E+00	GA		92.38	0.000E+00	%	2.103E-04	
2.80E+00	A		112.81	0.000E+00	%	1.415E-03	
2.80E-01	A		258.00	0.000E+00	&	2.672E-03	
7.28E-02	A						

Nuclide	Ave activity	Energy	Activity	Code	Peak	MDA
Comments						
		63.30	0.000E+00 %		8.182E-05	
4.80E+00 GA		691.30	0.000E+00 &		9.812E-04	
7.80E-02 GA		569.30	0.000E+00 %		7.012E-03	
1.64E-02 GA		543.98	0.000E+00 &		2.837E-02	
3.60E-03 A		131.63	0.000E+00 %		1.242E-02	
2.94E-02 A		755.00	0.000E+00 &		5.532E-02	
2.00E-03 A		49.55	0.000E+00 &		9.699E-02	
6.40E-02 A		742.81	0.000E+00 %		1.252E-03	
8.30E-02 A		739.70	0.000E+00 &		9.345E-03	
1.10E-02 A		781.37	0.000E+00 &		1.012E-02	
7.78E-03 A		786.29	0.000E+00 %		2.379E-03	
4.85E-02 A		883.24	0.000E+00 %		5.684E-03	
1.80E-02 A		880.50	0.000E+00 %		3.037E-03	
1.70E-02 A		851.57	0.000E+00 %		1.154E-02	
6.00E-03 A		921.70	0.000E+00 %		3.984E-03	
1.27E-02 A		898.67	0.000E+00 %		1.218E-02	
5.20E-03 A		1193.77	0.000E+00 %		5.186E-03	
1.34E-02 A		945.90	0.000E+00 &		2.103E-03	
3.09E-02 A		925.10	0.000E+00 %		6.943E-03	
1.36E-02 A		996.10	0.000E+00 %		2.386E-02	
4.10E-03 A		1237.40	5.194E-02 \$		2.689E-02	
5.90E-03 G		1393.60	0.000E+00 %		1.565E-02	

3.70E-03	A		1352.90	0.000E+00	%	1.594E-02
2.20E-03	A		1911.20	0.000E+00	%	5.744E-03
6.10E-03	A		1874.80	0.000E+00	%	3.847E-03
7.80E-03	A		1867.50	0.000E+00	%	2.871E-03
9.20E-03	A		1831.70	0.000E+00	&	1.874E-03
1.72E-02	A		1809.30	0.000E+00	%	9.175E-03
3.69E-03	A		1765.80	0.000E+00	%	1.061E-02
7.60E-03	A		1737.90	0.000E+00	&	1.480E-03
2.12E-02	A		1553.74	0.000E+00	%	4.420E-03
8.08E-03	A		1510.30	0.000E+00	%	4.416E-03
1.29E-02	A		1434.30	0.000E+00	%	5.223E-03
9.68E-03	A					

K-40                    3.2983E-04    1460.00 3.298E-04 @ ( 7.687E-06 4.57E+  
 11 1.07E+01 G K

( - This peak used in the nuclide activity average.

\* - Peak is too wide, but only one peak in library.

! - Peak is part of a multiplet and this area went  
 negative during deconvolution.

? - Peak is too narrow.

@ - Peak is too wide at FW25M, but ok at FWHM.

% - Peak fails sensitivity test.

\$ - Peak identified, but first peak of this nuclide  
 failed one or more qualification tests.

+ - Peak activity higher than counting uncertainty range.

- - Peak activity lower than counting uncertainty range.

= - Peak outside analysis energy range.



& - Calculated peak centroid is not close enough to the library energy centroid for positive identification.  
 P - Peakbackground subtraction

Nuclide Codes:	Peak Codes:
T - Thermal Neutron Activation	G - Gamma Ray
F - Fast Neutron Activation	X - X-Ray
I - Fission Product	P - Positron Decay
N - Naturally Occurring Isotope	S - Single-Escape
P - Photon Reaction	D - Double-Escape
C - Charged Particle Reaction	K - Key Line
M - No MDA Calculation	A - Not in Average
R - Coincidence Corrected	C - Coincidence Peak
H - Halflife limit exceeded	

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\*\*\*\*\* D I S C A R D E D I S O T O P E P E A K S  
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Nuclide	Centroid Energy	Background Counts	Net Area Counts	Intensity Cts/Sec	Uncert 1 Sigma %
---------	-----------------	-------------------	-----------------	-------------------	------------------

U-238	767.74	258.	110.	0.062	25.30
2.512E+00					
U-238	1238.10	240.	203.	0.113	16.30
2.298E+02					
P - Peakbackground subtraction					

\*\*\*\*\* S U M M A R Y O F N U C L I D E S I N S A M P L E  
 E \*\*\*\*\*

Nuclide	Time of Count Activity pCi/g	Uncertainty Counting	1 Sigma Total	MDA
BI-214	1.8489E-01	3.7761E+00%	4.9904E+00%	0.142E-01
PB-214 #	2.1436E-01	6.0361E+00%	1.1403E+01%	0.323E-01
RA-226	No in-range peaks			
Cs-137 <	4.6214E-03			



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Reviewed by: \_\_\_\_\_  
Supervisor

Laboratory: Tidewater Inc

## **Appendix F**

### Human Health and Ecological Risk Assessment Reports

## F1 Human Health Risk Assessment Report

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## Figures

F1-1	HHRA Conceptual Site Model
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## Attachment

F1-1	ProUCL Worksheets
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## Acronyms and Abbreviations

ft	feet
mg/kg	Milligram per kilogram
µg/kg	Microgram per kilogram
µg/dL	Microgram per deciliter
95 UCL	95 percent Upper Confidence Limit of the arithmetic mean
bgs	Below ground surface
Cal/EPA	California Environmental Protection Agency
COPC	Contaminants of potential concern
CRF	Code of Federal Regulations
CSM	Conceptual Site Model
CVRWQCB	Central Valley Regional Water Quality Control Board
DTSC	California Department of Toxic Substances Control
DTSC-SLs	DTSC-modified Screening Levels
EPC	Exposure point concentration
ESL	Environmental screening level
HERO	Office of Human and Ecological Risk
HHRA	Human health risk assessment
HI	Hazard Index
HQ	Hazard Quotient
ILCR	Incremental Lifetime Cancer Risk
IQ	Intelligence quotient
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
ND	Not detected
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated biphenyl compound
PCDD	Polychlorinated dibenzodioxin
PCDF	Polychlorinated dibenzofuran
RBSL	Risk-based screening level
RME	Reasonable maximum exposure
RSL	Regional screening level
SFBRWQCB	San Francisco Regional Water Quality Control Board
SHAD-041	Sites 33/29
Sharpe	Sharpe Army Depot
USEPA	U.S. Environmental Protection Agency
VOC	Volatile organic compound

## F1-1.0 Human Health Risk Assessment

The objective of the human health risk assessment for the Sharpe Army Depot (Sharpe) Sites 33/29 (SHAD-041) was to evaluate potential human exposures and health risks associated with soil concentrations of nonradiological contaminants of potential concern (COPCs) and site use to support remedial decision-making. The evaluation of human health risk from exposure to Radium-226 in soil at SHAD-041 is addressed separately in Appendix F3.

A four-step process, briefly described below, is generally used to conduct Human Health Risk Assessment (HHRA), consistent with State of California Department of Toxic Substances Control (DTSC) and U.S. Environmental Protection Agency (USEPA) guidance for human health risk assessment (HERO, 2018; USEPA, 1989).

1. **Hazard Assessment.** This step includes identification and tabulation of sampling data for use in the subsequent steps of the HHRA process. The data were examined for data quality to verify that the data were appropriate for use in a quantitative risk assessment. In the Hazard Assessment step, chemicals that may result in adverse effects to human health are regarded as COPCs.
2. **Exposure Assessment.** The exposure assessment describes the current land use and exposure setting, identifies potential exposure scenarios and potentially complete exposure pathways, identifies potential exposure points, estimates exposure point concentrations (EPCs), and estimates chemical intakes.
3. **Toxicity Assessment.** In this step, toxicity criteria (e.g., noncancer chronic reference doses and cancer slope factors) were identified and compiled for the COPCs at the site. For this HHRA, current regulatory risk-based screening values were used that incorporate toxicity values as recommended by the California Environmental Protection Agency (Cal/EPA) and the USEPA. In the absence of screening levels for a particular COPC, the chemical was evaluated using a surrogate chemical with similar chemical and physical properties, where appropriate.
4. **Risk Characterization.** The results of the exposure analysis were combined with toxicity criteria to estimate risk. The significance of potential adverse health outcomes is expressed as a Hazard Index representing a numerical ratio of the intake to a reference criterion for noncarcinogens, and as a probability statement in terms of incremental risk cancer outcomes for carcinogens.

### F1-1.1 Hazard Assessment

The purpose of the hazard assessment is to identify those contaminants that will be quantitatively assessed in the HHRA. The SHAD-041 HHRA evaluated analytical results of soil samples collected in October 2017 for the remedial investigation and feasibility study. Analytes included metals (chromium, hexavalent chromium, and lead), polychlorinated biphenyl compounds (PCBs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated dibenzodioxin and polychlorinated dibenzofurans (PCDD/PCDF), and volatile organic compounds (VOCs). COPCs were selected by comparing maximum analyte concentrations to the lower and more protective of the resident soil values listed in the USEPA Regional Screening Levels (RSLs) (November 2018) and the Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, and DTSC-modified Screening Levels (DTSC-SLs) (June 2018). Analytes



with maximum concentrations exceeding the lower of the residential soil screening values were selected as COPCs and included hexavalent chromium, lead, and dioxins/furans (as 2,3,7,8-TCDD equivalence).

Analytical results for chemicals in soil sampled are summarized in Table F1-1. Detected COPCs in soil samples were evaluated further in the exposure assessment, discussed in the following section.

## **F1-1.2 Exposure Assessment**

In evaluating the potential human health risks posed by COPCs at SHAD-041, it is necessary to identify the populations that may potentially be exposed to the chemicals present, and to determine the pathways by which these exposures may occur. Identification of the potentially exposed populations requires evaluating the human activity and anticipated land use at SHAD-041.

USEPA (1989) identifies three components of an exposure assessment:

1. Characterization of the exposure setting
2. Identification of the complete exposure pathways and potential receptors
3. Quantification of the magnitude of exposures

Characterization of the exposure setting is based on a discussion of current and anticipated future land uses. The conditions for the identification of complete exposure pathways and potential receptors as a requirement for exposure are presented in a discussion of site-specific exposure scenarios. The quantification of exposures is based on the development of EPCs and the estimation of chemical intakes.

### **F1-1.2.1 Exposure Setting**

The exposure setting is based on current land use. Current land use at Sharpe, and specifically SHAD-041, is limited to industrial. SHAD-041 is an undeveloped, unpaved area consisting of sparsely vegetated soil. No structures are currently present at SHAD-041.

### **F1-1.2.2 Exposure Pathways and Receptors**

Exposure to chemicals in the environment is determined to occur when certain conditions are met. These conditions are summarized as a complete exposure pathway, which is composed of four components:

1. A source and mechanism of chemical release
2. A retention or transport medium (in cases where chemical dispersion is observed, multiple media may be affected)
3. An exposure point (that is, a setting where potential human contact with the chemical-affected medium or media occur)
4. A route of exposure at the exposure point (for example, inhalation)

A complete exposure pathway is present when these four components are present, and these components are used to describe potential exposure scenarios.

The various chemical and physical properties of the COPCs account for their transport and fate. The potential environmental media that may contribute to exposures include soil, groundwater, outdoor air, and indoor air. Potential release and transport mechanisms include volatilization, diffusion, advection,

and airborne dispersion of volatile emissions. These phenomena account for the unique potential exposure pathways associated with specific chemicals. For this human health evaluation, potential exposure to soil through the incidental ingestion and dermal contact routes of exposure were qualitatively assessed.

### **F1-1.2.3 Relevant Exposure Pathways**

Relevant exposure pathways for COPCs in soil at SHAD-041 include dermal contact, incidental ingestion, and inhalation of COPCs adsorbed to soil particulates. Inhalation of VOCs that have migrated into the subsurface soil and eventually into ambient outdoor air and indoor air in buildings was not evaluated because soil gas samples were not collected. Data from the remedial investigation indicate that the majority of VOCs in soil were reported as not detected or at concentrations three to four orders of magnitude lower than regulatory risk-based screening levels (RBSLs). However, should the site be redeveloped with office/industrial buildings or for residential land use in the future, exposure will need to re-evaluated to address the potential for exposure to VOCs through the indoor air pathway.

### **F1-1.2.4 Potentially Exposed Populations**

Current and future exposed populations under baseline conditions include hypothetical residents, commercial workers (employees and/or subcontractors), and construction workers. Receptors were assumed to be exposed to COPCs in surface and subsurface soil to a depth of 10 feet (ft) below ground surface (bgs). These receptors could potentially be exposed to COPCs in soil through complete exposure pathways shown on the CSM Figure F1-1.

Values for the exposure parameters for the receptors evaluated are specified in HHRA Note 1 (HERO, 2014).

#### **Hypothetical Resident**

Although the site is currently not developed for residential use, the hypothetical resident was evaluated for this HHRA under the baseline scenario. For the purposes of the HHRA, a resident receptor is assumed to remain on the site for 26 years. Consequently, the resident receptor is exposed to site conditions for 6 years as a child and 20 years as an adult, for 350 days/year. The resident receptor may be exposed to site chemicals in surface and subsurface soil through dermal contact with soil, incidental ingestion, and inhalation of airborne soil particles while the site remains uncovered.

#### **Commercial/Industrial Worker**

The commercial/industrial scenario represents a range of workers who spend most of their time indoors to those who frequently work outdoors, but under site conditions that do not include excavation. A commercial/industrial worker is assumed to be an adult that will have eight hours of exposure during the workday at the site for a period of 25 years. The future commercial/industrial worker is assumed to be exposed to COPCs in uncovered surface and subsurface soil through dermal contact, incidental ingestion, and inhalation of VOCs and non-VOCs adsorbed to airborne particulates.

## **Construction Worker**

The construction worker receptor represents a worker that may be exposed to surface and subsurface soil during invasive activities such as excavation, maintenance, and building construction. Exposure may occur through dermal contact, incidental ingestion, and inhalation of VOCs and non-VOCs adsorbed to fugitive dust. A construction worker is assumed to be exposed to site soil during an eight-hour workday for the duration of one year. Typically, the same worker is not assigned to the same site over a year; therefore, the assumptions used to evaluate the construction worker are conservative. Also, chronic toxicity information is used to develop the RBSLs although the duration of exposure evaluated is relatively short.

### **F1-1.2.5 Conceptual Site Model**

A conceptual site model (CSM) is used to show the relationship between a chemical source, exposure pathway, and potential receptor at a site. The CSM identifies potential or suspected chemical sources, potentially impacted media, and potential receptors. It also identifies the potential human exposure routes for contacting impacted media. These source-pathway-receptor relationships provide the basis for the quantitative exposure assessment. Only those complete source-pathway-receptor relationships are included in the risk evaluations. As shown on the CSM on Figure F1-1, dermal contact, incidental ingestion of soil, and inhalation of VOCs and non-VOCs adsorbed to airborne particulates are shown as exposure pathways. Under current site conditions, exposure pathways are incomplete for the hypothetical resident, commercial/industrial worker, and construction worker. However, should the site be redeveloped in the future, exposure pathways are shown as complete as noted on Figure F1-1 for each receptor through the dermal contact, incidental ingestion of soil, inhalation routes of exposure.

### **F1-1.2.6 Exposure Assumptions**

Assumptions for route-specific exposure parameters used to estimate intakes at the site are specific to the potentially exposed population and the route of exposure. In general, exposure assumptions corresponding to a reasonable maximum exposure (RME) scenario were used. Intake assumptions for the RME scenario represent “the highest exposure that is reasonably expected to occur at the site” (USEPA, 1989). According to the USEPA, the intent of the RME scenario is “to estimate a conservative exposure case (i.e., well above the average case) that is still within the range of possible exposures” (USEPA, 1989). The RME is estimated using “many conservative and upper-bound parameter values and assumptions” (USEPA, 1989).

### **F1-1.2.7 Quantification of Exposure**

An exposure point concentration (EPC) of a COPC is the estimated concentration to which a receptor may be exposed over an assumed duration of time. Due to the uncertainty associated with estimating the true average concentration of a COPC at a site, the 95 percent upper confidence limit (95 UCL) of the arithmetic mean is used for this variable and provides reasonable confidence that the true site average will not be underestimated (USEPA, 1992).

ProUCL software, version 5.1 (USEPA, 2016), was used to calculate the 95 UCLs for each COPC using soil datasets consisting of more than four detected values and more than eight samples. The highest

recommended 95 UCL provided in the ProUCL output for a particular COPC was used as the EPC for that COPC in the risk evaluation. Where there were fewer than four detected data points in a dataset, the maximum concentration of that particular analyte was used as the EPC for estimating soil concentrations. When analytes were reported as not detected (ND), one-half the highest reporting limit was conservatively used as the EPC.

A summary of soil data is provided with descriptive statistics and calculated 95 UCLs in Table 1. The EPCs are shown as the recommended 95 UCL or maximum concentration, as appropriate. The ProUCL worksheets are presented in Attachment F1-1.

### **F1-1.3 Toxicity Assessment**

The toxicity assessment examines the potential for a chemical to cause adverse health effects in exposed individuals. It also presents the relationship between the magnitude of exposure and potential for adverse effects. Toxicity values used to estimate the likelihood of adverse effects occurring in humans at different exposure levels are identified as part of the dose-response task within the risk assessment process.

Cal/EPA and the USEPA specify a hierarchy of toxicity criteria that have been incorporated in the development of the risk-based screening values that were used in this HHRA to calculate cancer risks and noncancer hazards as described in Section F1.4 as follows.

### **F1-1.4 Risk Characterization**

The most conservative cancer and noncancer RBSLs from DTSC Human and Ecological Risk Assessment Office (HERO, 2018), the USEPA (2017), and the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB, 2016) were used to calculate cancer risks and noncancer Hazard Quotients (HQs) for each COPC, as presented in Tables F1-2 through F1-4. Although Sharpe Army Depot is regulated by the Central Valley Regional Water Quality Control Board (CVRWQCB), the SFBRWQCB Environmental Screening Levels (ESLs) for the construction worker were used for this HHRA because they use conservative assumptions and the CVRWQCB does not have ESLs. Because risk is cumulative, cancer risks and noncancer hazard were calculated for analytes (chromium and lead, hexavalent chromium, PCDD/PCDF, PCBs, VOCs, and PAHs) that were investigated during the 2017 remedial investigation and feasibility study, regardless of whether the analyte was identified as a COPC.

Incremental cancer risks associated with exposure to COPCs classified by the USEPA as carcinogens are characterized as an estimate of the probability (risk) that an individual will develop cancer over a lifetime. This estimated theoretical incremental lifetime risk is expressed as a unitless probability. For example, an incremental lifetime cancer risk of  $1 \times 10^{-5}$  indicates an individual has a one in one hundred thousand (1 in 100,000) chance of developing cancer during a 70-year lifetime as a result of the assumed exposure conditions. An incremental lifetime cancer risk of  $1 \times 10^{-6}$  (one in one million [1 in 1,000,000]) is the regulatory point of departure; a total incremental lifetime cancer risk greater than  $1 \times 10^{-6}$  indicates an exceedance of the target risk level. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) provides a definition of an acceptable incremental lifetime cancer risk range of  $1 \times 10^{-6}$  through  $1 \times 10^{-4}$  for the selection of remedial actions that protect human health and the environment (40 Code of Federal Regulations (CFR) §300.430(e)(2)(i)(A)(2)).

#### F1-1.4.1 Calculation of Cancer Risk

Cancer risks for individual COPCs were calculated using the ratio method as follows:

$$\text{Cancer Risk} = (\text{EPC}/\text{RBSLx}) * 1 \times 10^{-6}$$

Where:

EPC = Exposure Point Concentration (mg/Kg) (95 UCL or maximum)

RBSLx = Risk-Based Screening Level (mg/Kg) for an individual chemical

$1 \times 10^{-6}$  = target risk

For each COPC, the cancer risks were summed to estimate total incremental lifetime cancer risk using the following general equation as cited in the *User's Guide to the Regional Screening Levels* (USEPA, 2017):

$$\text{Total Incremental Lifetime Cancer Risk (ILCR)} = [(\text{EPC}/\text{RBSLx}) + (\text{EPC}/\text{RBSLy}) + (\text{EPC}/\text{RBSLz})] \times (1 \times 10^{-6})$$

Where:

EPC = Exposure Point Concentration (mg/kg) (95 UCL or maximum)

RBSLx = Risk-Based Screening Level (mg/kg) for an individual chemical

$1 \times 10^{-6}$  = target risk

#### F1-1.4.2 Calculation of Noncancer Hazard

The estimate of noncancer health effects is represented by a Hazard Index (HI). The HI is determined by summing the HQs for each COPC. The HQ is the ratio of potential COPC exposure to the level at which no adverse health effects are expected. If the HQ is less than 1, then no adverse health effects are expected as a result of exposure to that COPC. If the HQ is greater than 1, then adverse health effects are possible; however, an HQ exceeding 1 does not necessarily mean adverse effects will occur. The total HI (the sum of the HQs) reflects the assumption that the effects of the various COPCs are additive. Consistent with the NCP at 40 CFR §300.430(e)(2)(i)(A)(1), when an HI less than or equal to, adverse noncancer health effects are not anticipated. If the HI is greater than 1, there may be potential adverse noncancer health effects associated with the pathway being evaluated.

Noncancer HQs were calculated using the ratio method as follows:

$$\text{HQ} = (\text{EPC}/\text{RBSLx})/1$$

Where:

EPC = Exposure Point Concentration (mg/kg) (95 UCL or maximum)

RBSLx = Risk-Based Screening Level (mg/kg) for an individual chemical

1 = target noncancer HQ

Noncancer HQs were summed to estimate the HI using the following general equation as cited in the *User's Guide for RSLs* (USEPA, 2018):

$$HI = [(EPC/RBSLx)+(EPC/RBSLy)+(EPC/RBSLz)]$$

Where:

EPC = Exposure Point Concentration (mg/kg) (95 UCL or maximum concentration)

RBSLx = Risk-Based Screening Level (mg/kg) for an individual chemical

#### **F1-1.4.3 Evaluation of Lead in Soil**

Lead was evaluated separately from the other inorganics evaluated in the risk assessment. Children are the most sensitive receptor for exposure to lead, and one microgram per deciliter ( $\mu\text{g}/\text{dL}$ ) is the estimated incremental increase in children's blood lead that would reduce the intelligence quotient (IQ) by up to 1 point.

The residential screening level for lead is 80 mg/kg, which corresponds to the soil concentration at the 90th percentile that would result in a blood lead concentration equal to one  $\mu\text{g}/\text{dL}$  in children (Cal/EPA, 2009). For the adult commercial/industrial worker, the screening level of 320 mg/kg for lead at the 90th percentile corresponds to the soil concentration that would result in a blood lead level of one  $\mu\text{g}/\text{dL}$  in the fetus of a pregnant adult worker (Cal/EPA, 2009). As recommended in *HHRA Note 3* (HERO, 2018), the maximum detected concentration or 95 UCL (if data are insufficient to support a 95 UCL calculation) were compared to the lead RBSLs. The lead dataset was sufficiently robust to calculate 95 UCLs for the depth intervals evaluated and is subsequently discussed as the EPC used for comparison to the screening levels.

#### **F1-1.4.4 Risk Assessment Results**

Exposure pathways evaluated for the on-site resident, commercial worker, and construction worker were: dermal contact, incidental ingestion of soil, and inhalation of chemicals adsorbed to particulates.

Results of the risk calculations are presented in Tables F1-2 through F1-4 for three exposure depths: 0-0.5 ft bgs, 0-3 ft bgs, and 0-10 ft bgs. As discussed in Section F1.4.1, the cancer risks for each COPC were summed and is the total incremental lifetime cancer risk (ILCR) used to evaluate risks posed by multiple chemicals. For noncarcinogens, the cumulative hazard from multiple chemicals is the sum of the HQs, also known as the HI, as explained in Section F1.4.2. A discussion of the lead evaluation is also provided.

##### **Hypothetical Resident**

Results of the risk calculations for the resident receptor shows that the total ILCR s were  $4 \times 10^{-5}$  (0-0.5 ft bgs) and  $1 \times 10^{-5}$  (0-3 ft bgs and 0-10 ft bgs). These cancer risks were an order of magnitude higher than the regulatory risk threshold of  $1 \times 10^{-6}$ , with the highest cancer risks posed by PCDD/PCDF and hexavalent chromium. The residential HIs for the three depth intervals evaluated were less than the target HI of 1, indicating that adverse noncancer health effects are not expected based on the estimated exposure.

Lead EPCs were 1,022 mg/kg (0-0.5 ft bgs), 662 mg/kg (0-3 ft bgs), and 448 mg/kg (0-10 ft bgs) and exceed the soil concentration of 80 mg/kg that corresponds to the blood lead concentration of 1  $\mu\text{g}/\text{dL}$  in children

(Cal/EPA, 2009). The highest concentrations of lead are generally in the eastern portion of SHAD-041, with the maximum concentration of 3,300 mg/kg (0-0.5 ft bgs) at sampling location VSP-11.

### **Commercial/Industrial Worker**

Total ILCR s for the commercial/industrial worker receptor were  $3 \times 10^{-6}$  (0-0.5 ft bgs) and  $1 \times 10^{-6}$  (0-3 ft bgs and 0-10 ft bgs). The highest ILCR for the 0-0.5 ft bgs depth interval is three times higher than the regulatory risk threshold of  $1 \times 10^{-6}$  and is attributed to the sum of cancer risks for COPCs with cancer risks less than  $1 \times 10^{-6}$ . The HIs for the three depth intervals evaluated were less than the regulatory target HI of 1; therefore, adverse noncancer health effects are not anticipated.

Lead EPCs were 1,022 mg/kg (0-0.5 ft bgs), 662 mg/kg (0-3 ft bgs), and 448 mg/kg (0-10 ft bgs) and exceed the soil concentration of 320 mg/kg that corresponds to the blood lead concentration of 1  $\mu\text{g}/\text{dL}$  in the fetus of a pregnant adult worker (Cal/EPA, 2009).

### **Construction Worker**

For the three depth intervals evaluated, total ILCR s were  $4 \times 10^{-6}$  (0-0.5 ft bgs),  $8 \times 10^{-7}$  (0-3 ft bgs), and  $1 \times 10^{-6}$  (0-10 ft bgs). The highest ILCR for the 0–0.5 ft bgs depth interval is four times higher than the regulatory risk threshold of  $1 \times 10^{-6}$  and is attributed to the hexavalent chromium EPC that results in  $4 \times 10^{-6}$  cancer risk. The construction worker HIs for the three depth intervals evaluated were less than the target HI of 1, indicating that adverse noncancer health effects are not expected based on the estimated exposure.

Lead EPCs were 1,022 mg/kg (0-0.5 ft bgs), 662 mg/kg (0-3 ft bgs), and 448 mg/kg (0-10 ft bgs) and exceed the soil concentration of 320 mg/kg that corresponds to the blood lead concentration of 1  $\mu\text{g}/\text{dL}$  in the fetus of a pregnant adult worker (Cal/EPA, 2009).

## **F1-1.5 Uncertainty Discussion**

There are various sources of uncertainty in the estimates of potential cancer risks and noncancer health hazards that affect the overall outcome of the human health screening risk evaluation. Sources of uncertainty associated with the selection of COPCs, calculation procedures, exposure assumptions, and the various factors and parameters used in the development of the RBSLs incorporate conservativeness to prevent or reduce the possibility that the calculated risks do not underestimate actual risks. The approach used in this human health screening risk evaluation has been health protective whenever possible and tended to overestimate exposures. The key uncertainties include:

- Numerous assumptions are used to estimate human exposure to chemicals. These assumptions include parameters such as exposure time, exposure duration, human activity patterns, and others. Most of the exposure assumptions used in the development of RBSLs that were used to estimate risk for this assessment are recommended by Cal/EPA and the USEPA and are often the upper 90<sup>th</sup> or 95<sup>th</sup> percentile values. The use of these values is recommended to estimate RME that may occur at a site. However, the combination of multiple upper-bound estimates used as exposure parameters may overestimate chemical intake.
- Available scientific information is insufficient to provide a thorough understanding of all the toxic properties of each of the chemicals to which humans may be exposed. It is generally

necessary, therefore, to infer these properties by extrapolating them from data obtained under other conditions of exposure, generally in laboratory animals. Although reliance on experimental animal data has been widely used in general risk assessment practices, chemical absorption, metabolism, excretion, and toxic responses may differ between humans and the species for which experimental toxicity data are available. Uncertainties in using animal data to predict potential effects in humans are introduced when routes of exposure in animal studies differ from human exposure routes, when the exposures in animal studies are short-term or subchronic, and when effects seen at relatively high exposure levels in animal studies are used to predict effects at the much lower exposure levels found in the environment.

- The cancer risks and noncancer HIs were back-calculated using screening values that were developed based on conservative exposure and toxicity assumptions (overestimate).
- The soil samples were collected from judgmentally placed soil sampling locations. Relative to the soil exposure area, the analytical results may not be representative of the actual spatial distribution of chemical concentrations in soil (underestimate/overestimate).
- Soil is not a homogeneous matrix and, although the laboratory homogenized the soil samples, the sample results are based on a small analytical sample aliquot. The analytical sample size may not be representative of the soil exposure area comprising the former SHAD-041 area (underestimate/overestimate).
- The construction worker cancer risk and hazard were back-calculated using SFBRWQCB ESLs for the construction worker. While DTSC does not support the use of the SFBRWQCB ESLs, the construction worker ESLs were derived using USEPA exposure factors and toxicity values consistent with DTSC requirements. The cancer risks and hazards calculated using USEPA exposure factors, rather than those specified in HHRA Note 1 (September 2014), results in uncertainty but is anticipated to differ by less than an order of magnitude (underestimate/overestimate).
- There are no EPA- or DTSC-recommended soil to indoor air attenuation factors for soil, and without soil gas sampling, the data cannot be evaluated for vapor intrusion into buildings. Therefore, the indoor air exposure pathway was not evaluated, resulting in uncertainty in the risk evaluation (underestimate).

### **F1-1.6 Summary and Conclusions**

The purpose of this HHRA was to evaluate potential human exposures and health risks associated with COPC concentrations and to identify areas that may require remediation. Potential human health exposures to the hypothetical resident, commercial/industrial worker, and construction worker were evaluated. Cancer and noncancer risks associated with COPC concentrations in soil were estimated by the ratio method using calculated 95 UCLs and regulatory RBSLs. Soil lead concentrations were evaluated separately by comparison to soil concentrations that correspond to the soil concentration at the 90th percentile that are protective of children and fetuses of adult workers.



For the receptors evaluated at SHAD-041, the calculated total cancer risks and noncancer hazards for the following receptors were:

**CALCULATED RECEPTOR RISKS**

Receptor	Exposure Depth (ft bgs)					
	0–0.5		0–3		0–10	
	Total Cancer Risk	Hazard Index	Total Cancer Risk	Hazard Index	Total Cancer Risk	Hazard Index
Hypothetical Resident	4x10 <sup>-5</sup>	0.5	1x10 <sup>-5</sup>	0.3	1x10 <sup>-5</sup>	0.2
Commercial/Industrial Worker	3x10 <sup>-6</sup>	0.04	1x10 <sup>-6</sup>	0.02	1x10 <sup>-6</sup>	0.01
Construction Worker	4x10 <sup>-6</sup>	0.1	8x10 <sup>-7</sup>	0.08	1x10 <sup>-6</sup>	0.05

The total cancer risks for the receptors evaluated at the 0-0.5 ft bgs, 0-3 ft bgs, and 0-10 ft bgs depth intervals were within the risk management range of 1x10<sup>-6</sup> through 1x10<sup>-4</sup> and less than the threshold of 1 for noncancer hazard.

Based on the results of the HHRA for nonradiological COPCs, remediation does not appear to be warranted for the protection of human health, with the exception of lead. The lead concentrations used as EPCs for the evaluation of the resident, commercial/industrial worker, and construction worker exceeded the soil concentrations that are protective of children and the fetuses of adult workers. Lead concentrations at SHAD-041 appear to be elevated primarily in the eastern portion of the site and should be evaluated for remedial action. Cancer risk to the future potential resident was estimated at 4x10<sup>-5</sup> in surface soil, attributed to dioxins/furans and hexavalent chromium. While cancer risk for these analytes exceeds 1x10<sup>-6</sup>, the regulatory point of departure, the need for remedial action will be evaluated in the risk management decision process.

**F1-1.7 References**

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## Tables

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

Analyte	Residential	Commercial/	Source	Lab Sample ID:										Units
				K1702659-001 SHAD041DP002	K1702659-002 SHAD041DP004	K1702659-003 SHAD041DP006	K1702659-004 SHAD041DP008	K1702659-005 SHAD041DP010	K1702659-006 SHAD041DP011	K1702659-007 SHAD041DP012	K1702659-008 SHAD041DP013	K1702659-009 SHAD041DP015		
Field Sample ID: Sample Location: Sample Depth:														
	SSO1NS VSP-2 0.5	SSO1NS VSP-4 0.5	SSO1NS VSP-6 0.5	SSO1NS VSP-8 0.5	SSO1NS VSP-10 0.5	SSO1NS VSP-11 0.5	SSO1NS VSP-12 0.5	SSO1NS VSP-13 0.5	SSO1NS VSP-15 0.5					
<b>PAHs</b>														
Naphthalene	3,800	17,000	USEPA, 2018	67 U	33 U	34 U	68 U	33 U	33 U	34 U	17 U	33 U	33 U	
2-Methylnaphthalene	2,400,000	3,000,000	USEPA, 2018	67 U	33 U	34 U	68 U	33 U	33 U	34 U	17 U	33 U	33 U	
1-Methylnaphthalene	18,000	73,000	USEPA, 2018	67 U	33 U	34 U	68 U	33 U	33 U	34 U	17 U	33 U	33 U	
Acenaphthylene	--	--	--	67 U	33 U	34 U	68 U	33 U	33 U	34 U	17 U	33 U	33 U	
Acenaphthene	3,600,000	45,000,000	USEPA, 2018	67 U	33 U	34 U	68 U	33 U	33 U	34 U	17 U	33 U	33 U	
Fluorene	2,400,000	30,000,000	USEPA, 2018	67 U	33 U	34 U	68 U	33 U	33 U	34 U	17 U	33 U	33 U	
Phenanthrene	--	--	--	67 U	33 U	34 U	68 U	33 U	33 U	34 U	17 U	33 U	33 U	
Anthracene	18,000,000	230,000,000	USEPA, 2018	67 U	33 U	34 U	68 U	33 U	33 U	34 U	17 U	33 U	33 U	
Fluoranthene	2,400,000	30,000,000	USEPA, 2018	67 U	33 U	39 J	68 U	33 U	33 U	34 U	17 U	33 U	20 J	
Pyrene	1,800,000	23,000,000	USEPA, 2018	67 U	33 U	36 J	68 U	33 U	33 U	34 U	17 U	33 U	33 U	
Benz[a]anthracene	1,100	13,000	HERO, 2017; USEPA, 2018	67 U	33 U	34 U	68 U	33 U	33 U	34 U	17 U	33 U	33 U	
Chrysene	110,000	1,300,000	HERO, 2017; USEPA, 2018	67 U	33 U	64 J	68 U	33 U	33 U	34 U	17 U	33 U	17 J	
Benz[b]fluoranthene	1,100	13,000	HERO, 2017; USEPA, 2018	67 U	33 U	41 J	68 U	33 U	33 U	34 U	17 U	33 U	22 J	
Benz[k]fluoranthene	11,000	130,000	HERO, 2017; USEPA, 2018	67 U	33 U	20 J	68 U	33 U	33 U	34 U	17 U	33 U	33 U	
Benz[a]pyrene	110	1,300	HERO, 2017; USEPA, 2018	67 U	33 U	56 J	68 U	33 U	33 U	34 U	17 U	33 U	13 J	
Indeno[1,2,3-cd]pyrene	1,100	13,000	HERO, 2017; USEPA, 2018	67 U	33 U	34 U	68 U	33 U	33 U	34 U	17 U	33 U	33 U	
Dibenz[a,h]anthracene	110	1,300	HERO, 2017; USEPA, 2018	67 U	33 U	34 U	68 U	33 U	33 U	34 U	17 U	33 U	33 U	
Benz[ghi]perylene	--	--	--	67 U	33 U	29 J	68 U	33 U	33 U	34 U	17 U	31 J	14 J	
<b>Metals</b>														
Chromium VI	0.30	6.3	USEPA, 2018	0.87	1.8	1.1	0.31 J	2.10	1.5	1.3	0.82	0.56		
Chromium	36,000	170,000	HERO, 2018	30	19	21	21	35	31	24	13	28		
Lead	80	320	HERO, 2011	240	120	140	18	280	3300	1000	22	330		
<b>PCBs</b>														
Aroclor 1016	4.1	27	USEPA, 2018	0.016 U	0.016 U	0.016 U	0.011 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	
Aroclor 1221	0.20	0.83	USEPA, 2018	0.016 U	0.016 U	0.016 U	0.021 U	0.019 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	
Aroclor 1232	0.17	0.72	USEPA, 2018	0.016 U	0.016 U	0.016 U	0.011 U	0.010 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	
Aroclor 1242	0.23	0.95	USEPA, 2018	0.016 U	0.016 U	0.016 U	0.011 U	0.010 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	
Aroclor 1248	0.23	0.95	USEPA, 2018	0.016 U	0.016 U	0.016 U	0.011 U	0.010 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	
Aroclor 1254	0.24	0.97	USEPA, 2018	0.016 U	0.016 U	0.016 U	0.011 U	0.010 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	
Aroclor 1260	0.24	0.99	USEPA, 2018	0.016 U	0.016 U	0.21	0.011 U	0.010 U	0.016 U	0.016 U	0.016 U	0.016 U	0.010 U	
<b>SVOC/PCDD/PCDF</b>														
2,3,7,8-TCDD	4.8	22	USEPA, 2018	3	0.88 J	1.2	0.22 J	0.23	67	17	0.15 J	1.4		
<b>VOCs</b>														
1,1,1-Trichloroethane	1,700,000	7,300,000	HERO, 2018	1.0 U J	0.99 U J	1.1 U J	0.88 U J	0.82 U J	0.99 U J	0.88 U J	0.86 U J	0.97 U J		
1,1,2,2-Tetrachloroethane	600	2,700	USEPA, 2018	1.0 U J	0.99 U J	1.1 U J	0.88 U J	0.82 U J	0.99 U J	0.88 U J	0.86 U J	0.97 U J		
1,1,2-Trichloroethane	1,100	5,000	USEPA, 2018	1.0 U J	0.99 U J	1.1 U J	0.88 U J	0.82 U J	0.99 U J	0.88 U J	0.86 U J	0.97 U J		
1,1-Dichloroethane	3,600	16,000	USEPA, 2018	1.0 U J	0.99 U J	1.1 U J	0.88 U J	0.82 U J	0.99 U J	0.88 U J	0.86 U J	0.97 U J		
1,1-Dichloroethene	230,000	1,000,000	USEPA, 2018	5.0 U J	5.0 U J	5.3 U J	4.4 U J	4.1 U J	4.9 U J	4.4 U J	4.3 U J	4.8 U J		
1,2,4-Trimethylbenzene	300,000	1,800,000	USEPA, 2018	1.0 U J	0.99 U J	1.1 U J	0.88 U J	0.82 U J	0.99 U J	0.88 U J	0.86 U J	0.97 U J		
1,2-Dibromoethane (EDB)	36	160	USEPA, 2018	1.0 U J	0.99 U J	1.1 U J	0.88 U J	0.82 U J	0.99 U J	0.88 U J	0.86 U J	0.97 U J		
1,2-Dichlorobenzene	1,800,000	9,300,000	USEPA, 2018	1.1 U J	0.99 U J	1.1 U J	0.88 U J	0.82 U J	0.99 U J	0.88 U J	0.86 U J	0.97 U J		
1,2-Dichloroethane	460	2,000	USEPA, 2018	1.1 U J	0.99 U J	1.1 U J	0.88 U J	0.82 U J	0.99 U J	0.88 U J	0.86 U J	0.97 U J		
cis-1,2-Dichloroethene	19,000	86,000	USEPA, 2018	1.0 U J	0.99 U J	1.1 U J	0.88 U J	0.82 U J	0.99 U J	0.88 U J	0.86 U J	0.97 U J		
trans-1,2-Dichloroethene	130,000	600,000	HERO, 2018	1.0 U J	0.99 U J	1.1 U J	0.88 U J	0.82 U J	0.99 U J	0.88 U J	0.86 U J	0.97 U J		
1,2-Dichloropropane	2,500	11,000	USEPA, 2018	1.0 U J	0.99 U J	1.1 U J	0.88 U J	0.82 U J	0.99 U J	0.88 U J	0.86 U J	0.97 U J		



Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

PAHs	Analyte	Residential	Commercial/	Source	Lab Sample ID:										Units
					K1702659-010 SHAD041DP017 SSO1NS VSP-17 0.5	K1702659-011 SHAD041DP018 SSO1NS VSP-18 0.5	K1702659-012 SHAD041DP019 SSO1NS VSP-19 0.5	K1702659-013 SHAD041DP020 SSO1NS VSP-20 0.5	K1702659-014 SHAD041DP022 SSO1NS VSP-22 0.5	K1702659-015 SHAD041DP024 SSO1NS VSP-24 0.5	K1702659-016 SHAD041DP025 SSO1NS VSP-25 0.5	K1702659-017 SHAD041DP026 SSO1NS VSP-26 0.5	K1702659-018 SHAD041DP027 SSO1NS VSP-27 0.5		
	Naphthalene	3,800	17,000	USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	2-Methylnaphthalene	240,000	3,000,000	USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	1-Methylnaphthalene	18,000	73,000	USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Acenaphthylene	--	--	--	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Acenaphthene	3,600,000	45,000,000	USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Fluorene	2,400,000	30,000,000	USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Phenanthrene	--	--	--	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Anthracene	18,000,000	230,000,000	USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Fluoranthene	2,400,000	30,000,000	USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Pyrene	1,800,000	23,000,000	USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Benz[a]anthracene	1,100	13,000	HERO, 2017; USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Chrysene	110,000	1,300,000	HERO, 2017; USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Benz[b]fluoranthene	1,100	13,000	HERO, 2017; USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Benz[k]fluoranthene	11,000	130,000	HERO, 2017; USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Benz[a]pyrene	110	1,300	HERO, 2017; USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Indeno[1,2,3-cd]pyrene	1,100	13,000	HERO, 2017; USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Dibenz[a,h]anthracene	110	1,300	HERO, 2017; USEPA, 2018	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	Benz[ghi]perylene	--	--	--	34 U	34 U	3.5 U	33 U	33 U	3.6 U	34 U	33 U	33 U	33 U	33 U
	<b>Metals</b>														
	Chromium VI	0.30	6.3	USEPA, 2018	0.56	1.1	0.19 J	2.1	0.127	0.34 J	41	0.4	0.4	0.2	
	Chromium	36,000	170,000	HERO, 2018	31	27	8.2	22	52	41	29	28	28	24	
	Lead	80	320	HERO, 2011	820	1400	2.8 J	330	260	5.1	490	220	220	520	
	<b>PCBs</b>														
	Aroclor 1016	4.1	27	USEPA, 2018	0.016 U	0.016 U	0.017 U	0.016 U	0.016 U	0.017 U	0.017 U	0.016 U	0.016 U	0.016 U	
	Aroclor 1221	0.20	0.83	USEPA, 2018	0.016 U	0.016 U	0.017 U	0.016 U	0.016 U	0.017 U	0.017 U	0.016 U	0.016 U	0.016 U	
	Aroclor 1232	0.17	0.72	USEPA, 2018	0.016 U	0.016 U	0.017 U	0.016 U	0.016 U	0.017 U	0.017 U	0.016 U	0.016 U	0.016 U	
	Aroclor 1242	0.23	0.95	USEPA, 2018	0.016 U	0.016 U	0.017 U	0.016 U	0.016 U	0.017 U	0.017 U	0.016 U	0.016 U	0.016 U	
	Aroclor 1248	0.23	0.95	USEPA, 2018	0.016 U	0.016 U	0.017 U	0.016 U	0.016 U	0.017 U	0.017 U	0.016 U	0.016 U	0.016 U	
	Aroclor 1254	0.24	0.97	USEPA, 2018	0.016 U	0.016 U	0.017 U	0.016 U	0.016 U	0.017 U	0.017 U	0.016 U	0.016 U	0.016 U	
	Aroclor 1260	0.24	0.99	USEPA, 2018	0.010 U	0.023 J	0.017 U	0.016 U	0.012 J	0.017 U	0.017 U	0.016 U	0.016 U	0.021 J	
	<b>SVOC-PCDD/PCDF</b>														
	2,3,7,8-TCDD	4.8	22	USEPA, 2018	4.5	38	0.42 U	0.88 J	0.78 J	0.43	1.6	0.56	0.56	0.85 J	
	<b>VOCS</b>														
	1,1,1-Trichloroethane	1,700,000	7,300,000	HERO, 2018	0.82 UJ	0.85 UJ	0.92 U	0.93 UJ	0.91 UJ	0.99 U	0.98 UJ	3.1 U	3.1 U	0.87 UJ	
	1,1,2,2-Tetrachloroethane	600	2,700	USEPA, 2018	0.82 UJ	0.85 UJ	0.92 U	0.93 UJ	0.91 UJ	0.99 U	0.98 UJ	3.1 U	3.1 U	0.87 UJ	
	1,1,2-Trichloroethane	1,100	5,000	USEPA, 2018	0.82 UJ	0.85 UJ	0.92 U	0.93 UJ	0.91 UJ	0.99 U	0.98 UJ	3.1 U	3.1 U	0.87 UJ	
	1,1-Dichloroethane	3,600	16,000	USEPA, 2018	0.82 UJ	0.85 UJ	0.92 U	0.93 UJ	0.91 UJ	0.99 U	0.98 UJ	3.1 U	3.1 U	0.87 UJ	
	1,1-Dichloroethene	230,000	1,000,000	USEPA, 2018	4.1 U	4.3 U	4.6 U	4.6 UJ	4.5 UJ	4.9 U	4.9 U	4.5 UJ	4.5 UJ	4.4	
	1,2,4-Trimethylbenzene	300,000	1,800,000	USEPA, 2018	0.82 UJ	0.85 UJ	0.92 U	0.93 UJ	0.91 UJ	0.99 U	0.98 UJ	0.91 UJ	0.91 UJ	0.87 UJ	
	1,2-Dibromoethane (EDB)	36	160	USEPA, 2018	0.82 UJ	0.85 UJ	0.92 U	0.93 UJ	0.91 UJ	0.99 U	0.98 UJ	0.91 UJ	0.91 UJ	0.87 UJ	
	1,2-Dichlorobenzene	1,800,000	9,300,000	USEPA, 2018	0.82 UJ	0.85 UJ	0.92 U	0.93 UJ	0.91 UJ	0.99 U	0.98 UJ	0.91 UJ	0.91 UJ	0.87 UJ	
	1,2-Dichloroethane	460	2,000	USEPA, 2018	0.82 UJ	0.85 UJ	0.92 U	0.93 UJ	0.91 UJ	0.99 U	0.98 UJ	0.91 UJ	0.91 UJ	0.87 UJ	
	cis-1,2-Dichloroethene	19,000	86,000	HERO, 2018	0.82 UJ	0.85 UJ	0.92 U	0.93 UJ	0.91 UJ	0.99 U	0.98 UJ	0.91 UJ	0.91 UJ	0.87 UJ	
	trans-1,2-Dichloroethene	130,000	600,000	HERO, 2018	0.82 UJ	0.85 UJ	0.92 U	0.93 UJ	0.91 UJ	0.99 U	0.98 UJ	0.91 UJ	0.91 UJ	0.87 UJ	
	1,2-Dichloropropane	2,500	11,000	USEPA, 2018	0.82 UJ	0.85 UJ	0.92 U	0.93 UJ	0.91 UJ	0.99 U	0.98 UJ	0.91 UJ	0.91 UJ	0.87 UJ	

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

VOCs (continued)	Analyte	Residential	Commercial/	Source	Units	Lab Sample ID:									
						K1702659-010 SHAD041DP017	K1702659-011 SHAD041DP018	K1702659-012 SHAD041DP019	K1702659-013 SHAD041DP020	K1702659-014 SHAD041DP022	K1702659-015 SHAD041DP024	K1702659-016 SHAD041DP025	K1702659-017 SHAD041DP026	K1702659-018 SHAD041DP027	
	Field Sample ID: Sample Location: Sample Depth:					SSO1NS VSP-17	SSO1NS VSP-18	SSO1NS VSP-19	SSO1NS VSP-20	SSO1NS VSP-22	SSO1NS VSP-24	SSO1NS VSP-25	SSO1NS VSP-26	SSO1NS VSP-27	
1,3-Dichlorobenzene	HERO, 2018	--	--	--	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
cis-1,3-Dichloropropene	HERO, 2018	580	2,600	HERO, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
trans-1,3-Dichloropropene	HERO, 2018	580	2,600	HERO, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
1,4-Dichlorobenzene	USEPA, 2018	2,600	11,000	USEPA, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
Benzene	HERO, 2018	330	1,400	HERO, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
Bromodichloromethane	USEPA, 2018	290	1,300	USEPA, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
Bromoform	USEPA, 2018	19,000	86,000	USEPA, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
Bromomethane	USEPA, 2018	6,800	30,000	USEPA, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
Carbon Tetrachloride	HERO, 2018	99	430	HERO, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
Chlorobenzene	USEPA, 2018	280,000	1,300,000	USEPA, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
Chloroform	USEPA, 2018	320	1,400	USEPA, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
Chloromethane	USEPA, 2018	110,000	460,000	USEPA, 2018	µg/kg	4.1 U	4.3 U	4.6 U	4.6 U	4.5 UJ	4.9 U	4.9 U	4.5 UJ	4.4	
Dibromochloromethane	HERO, 2018	940	4,100	HERO, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
Ethylbenzene	USEPA, 2018	5,800	25,000	USEPA, 2018	µg/kg	1.0 J	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 UJ	0.91 UJ	6.8 J+	
Methylene Chloride	HERO, 2018	1,900	24,000	HERO, 2018	µg/kg	4.1 U	4.5 J	4.6 U	4.6 U	4.5 UJ	4.9 U	4.9 U	4.5 UJ	4.4	
Styrene	USEPA, 2018	6,000,000	35,000,000	USEPA, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
Tetrachloroethene	HERO, 2018	590	2,700	HERO, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 UJ	0.91 UJ	0.99 U	0.98 UJ	0.91 UJ	0.87 UJ	
Toluene	HERO, 2018	1,100,000	5,400,000	HERO, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 UJ	0.91 UJ	0.99 U	0.98 UJ	0.91 UJ	0.87 UJ	
Trichloroethene	USEPA, 2018	940	6,000	USEPA, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
Vinyl Chloride	HERO, 2018	8.8	150	HERO, 2018	µg/kg	0.82 UJ	0.85 UJ	0.92 U	0.93 U	0.91 UJ	0.99 U	0.98 U	0.91 UJ	0.87 UJ	
m-p-Xylene	USEPA, 2018	550,000	2,400,000	USEPA, 2018	µg/kg	7.6 J	4.3 U	4.6 U	4.6 UJ	4.5 UJ	4.9 UJ	4.9 UJ	4.5 UJ	49 J+	
o-Xylene	USEPA, 2018	650,000	2,800,000	USEPA, 2018	µg/kg	7.6 J	4.3 U	4.6 U	4.6 UJ	4.5 UJ	4.9 UJ	4.9 UJ	4.5 UJ	49 J+	

Notes:

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- µg/g = microgram per gram
- pg/g = picogram per gram
- Bolded and Underlined:** exceedance of residential/industrial risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect
- J = estimated value
- J- = estimated value, biased low
- J+ = estimated value, biased high
- NS = Not sampled

References:  
 Human and Ecological Risk Office (HERO), 2011. *User's Guide to Leads Spread 8 and Recommendations for Human and Ecological Risk Assessment (HHRA) Note Number: 3*. Department of Toxic Substances Control (DTSC), September.  
 HERO, 2018. *Human Health Risk Assessment (HHRA) Note Number: 3*. DTSC-modified Screening Levels (DTSC-SL). Retrieved from: [http://www.dtsc.ca.gov/AssessingRisk/upload/HERO\\_HHRA\\_Note\\_3\\_June\\_2018.pdf](http://www.dtsc.ca.gov/AssessingRisk/upload/HERO_HHRA_Note_3_June_2018.pdf)  
 USEPA, 2018. *Regional Screening Levels (RSLs)*. November.

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

Analyte	Residential	Commercial/	Source	Lab Sample ID:										Units
				K1702659-019 SHAD041DP028	K1702659-020 SHAD041DP029	K1702659-021 SHAD041DP030	K1702659-001 SHAD041DP002	K1702659-002 SHAD041DP004	K1702659-003 SHAD041DP006	K1702659-004 SHAD041DP008	K1702659-005 SHAD041DP010	K1702659-006 SHAD041DP011	K1702659-007 SHAD041DP012	
Field Sample ID: Sample Location: Sample Depth:														
	SSO2NS VSP-28 0.5	SSO2NS VSP-29 0.5	SSO2NS VSP-30 0.5	SSO2NS VSP-2 2.5	SSO2NS VSP-4 2.5	SSO2NS VSP-6 2.5	SSO2NS VSP-8 2.5	SSO2NS VSP-10 2.5	SSO2NS VSP-11 2.5	SSO2NS VSP-12 2.5	SSO2NS VSP-13 2.5	SSO2NS VSP-14 2.5		
<b>PAHs</b>														
Naphthalene	3,800	17,000	USEPA, 2018	17 U	35 U	1.6 J	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
2-Methylnaphthalene	240,000	3,000,000	USEPA, 2018	17 U	35 U	0.64 J	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
1-Methylnaphthalene	18,000	73,000	USEPA, 2018	17 U	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Acenaphthylene	--	--	--	4.3 J	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Acenaphthene	3,600,000	45,000,000	USEPA, 2018	17 U	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Fluorene	2,400,000	30,000,000	USEPA, 2018	17 U	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Phenanthrene	--	--	--	14 J	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Anthracene	18,000,000	230,000,000	USEPA, 2018	11 J	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Fluoranthene	2,400,000	30,000,000	USEPA, 2018	25 J	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Pyrene	1,800,000	23,000,000	USEPA, 2018	23 J	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Benz[a]anthracene	1,100	13,000	HERO, 2017; USEPA, 2018	18 J	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Chrysene	110,000	1,300,000	HERO, 2017; USEPA, 2018	28 J	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Benz[b]fluoranthene	1,100	13,000	HERO, 2017; USEPA, 2018	59	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Benz[k]fluoranthene	11,000	130,000	HERO, 2017; USEPA, 2018	17 U	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Benz[a]pyrene	110	1,300	HERO, 2017; USEPA, 2018	20 J	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Indeno[1,2,3-cd]pyrene	1,100	13,000	HERO, 2017; USEPA, 2018	18 J	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Dibenz[a,h]anthracene	110	1,300	HERO, 2017; USEPA, 2018	17 U	35 U	3.3 U	3.5 U	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
Benz[ghi]perylene	--	--	--	24 J	12 J	3.3 U	2.5 J	3.4 U	3.5 U	3.5 U	3.5 U	3.5 U		
<b>Metals</b>														
Chromium VI	0.30	6.3	USEPA, 2018	1.8	0.41	0.26 J	0.58	0.20 J	0.39 J	0.56	0.22 J	0.29 J		
Chromium	36,000	170,000	HERO, 2018	36	21	12	25	8.8	10	8.3	11	9.2		
Lead	80	320	HERO, 2011	1700	48	18	34	2.7	18	1.8 J	4.5 J	30		
<b>PCBs</b>														
Aroclor 1016	4.1	27	USEPA, 2018	0.016 U	0.017 U	0.016 U	0.017 U	0.016 U	0.017 U	0.017 U	0.017 U	0.017 U		
Aroclor 1221	0.20	0.83	USEPA, 2018	0.016 U	0.017 U	0.016 U	0.017 U	0.016 U	0.017 U	0.017 U	0.017 U	0.016 U		
Aroclor 1232	0.17	0.72	USEPA, 2018	0.016 U	0.017 U	0.016 U	0.017 U	0.016 U	0.017 U	0.017 U	0.017 U	0.016 U		
Aroclor 1242	0.23	0.95	USEPA, 2018	0.016 U	0.017 U	0.016 U	0.017 U	0.016 U	0.017 U	0.017 U	0.017 U	0.016 U		
Aroclor 1248	0.23	0.95	USEPA, 2018	0.016 U	0.017 U	0.016 U	0.017 U	0.016 U	0.017 U	0.017 U	0.017 U	0.016 U		
Aroclor 1254	0.24	0.97	USEPA, 2018	0.016 U	0.017 U	0.016 U	0.017 U	0.016 U	0.017 U	0.017 U	0.017 U	0.016 U		
Aroclor 1260	0.24	0.99	USEPA, 2018	0.016 U	0.017 U	0.016 U	0.017 U	0.016 U	0.017 U	0.017 U	0.017 U	0.016 U		
<b>SVOC/PCDD/PCDF</b>														
2,3,7,8-TCDD	4.8	22	USEPA, 2018	5.4	0.61 J	0.25 J	0.42 U	0.42 U	0.37 J	0.43 U	0.40 U	2		
<b>VOCs</b>														
1,1,1-Trichloroethane	1,700,000	7,300,000	HERO, 2018	0.92 UJ	0.88 UJ	1.1 UJ	0.99 U	0.90 U	1.0 U	0.96 U	0.97 U	1.0 U		
1,1,2,2-Tetrachloroethane	600	2,700	USEPA, 2018	0.92 UJ	0.88 UJ	1.1 UJ	0.99 U	0.90 U	1.0 U	0.96 U	0.97 U	1.0 U		
1,1,2-Trichloroethane	1,100	5,000	USEPA, 2018	0.92 UJ	0.88 UJ	1.1 UJ	0.99 U	0.90 U	1.0 U	0.96 U	0.97 U	1.0 U		
1,1-Dichloroethane	3,600	16,000	USEPA, 2018	0.92 UJ	0.88 UJ	1.1 UJ	0.99 U	0.90 U	1.0 U	0.96 U	0.97 U	1.0 U		
1,1-Dichloroethene	230,000	1,000,000	USEPA, 2018	4.6 U	4.4 U	5.3 U	4.9 U	4.5 U	5.0 U	4.8 U	4.8 U	5.2 U		
1,2,4-Trimethylbenzene	300,000	1,800,000	USEPA, 2018	0.92 UJ	0.88 UJ	1.1 UJ	0.99 U	0.90 U	1.0 U	0.96 U	0.97 U	1.0 U		
1,2-Dibromoethane (EDB)	36	160	USEPA, 2018	0.92 UJ	0.88 UJ	1.1 UJ	0.99 U	0.90 U	1.0 U	0.96 U	0.97 U	1.0 U		
1,2-Dichlorobenzene	1,800,000	9,300,000	USEPA, 2018	0.92 UJ	0.88 UJ	1.1 UJ	0.99 U	0.90 U	1.0 U	0.96 U	0.97 U	1.0 U		
1,2-Dichloroethane	460	2,000	USEPA, 2018	0.92 UJ	0.88 UJ	1.1 UJ	0.99 U	0.90 U	1.0 U	0.96 U	0.97 U	1.0 U		
cis-1,2-Dichloroethene	19,000	86,000	HERO, 2018	0.92 UJ	0.88 UJ	1.1 UJ	0.99 U	0.90 U	1.0 U	0.96 U	0.97 U	1.0 U		
trans-1,2-Dichloroethene	130,000	600,000	HERO, 2018	0.92 UJ	0.88 UJ	1.1 UJ	0.99 U	0.90 U	1.0 U	0.96 U	0.97 U	1.0 U		
1,2-Dichloropropane	2,500	11,000	USEPA, 2018	0.92 UJ	0.88 UJ	1.1 UJ	0.99 U	0.90 U	1.0 U	0.96 U	0.97 U	1.0 U		



Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

VOCs (continued)	Analyte	Residential	Commercial/	Source	Lab Sample ID:		Field Sample ID:		Sample Location:		Sample Depth:		Units											
					SHAD041DP019	K1702659-019	SHAD041DP028	K1702659-020	SHAD041DP029	K1702659-020	SHAD041DP030	K1702659-021	SHAD041DP002	K1702659-001	SHAD041DP004	K1702659-002	SHAD041DP006	K1702659-003	SHAD041DP008	K1702659-004	SHAD041DP010	K1702659-005	SHAD041DP011	
1,3-Dichlorobenzene		--	--	HERO, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
cis-1,3-Dichloropropene		580	2,600	HERO, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
trans-1,3-Dichloropropene		580	2,600	HERO, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
1,4-Dichlorobenzene		2,600	11,000	USEPA, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
Benzene		330	1,400	HERO, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
Bromodichloromethane		290	1,300	USEPA, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
Bromoform		19,000	86,000	USEPA, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
Bromomethane		6,800	30,000	USEPA, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
Carbon Tetrachloride		99	430	HERO, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
Chlorobenzene		280,000	1,300,000	USEPA, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
Chloroform		320	1,400	USEPA, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
Chloromethane		110,000	460,000	USEPA, 2018	4.6 U	4.4 U	4.6 U	4.4 U	4.6 U	4.9 U	4.4 U	4.5 U	4.5 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	5.2 U	
Dibromochloromethane		940	4,100	HERO, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
Ethylbenzene		5,800	25,000	USEPA, 2018	3.1 J	0.7 J	3.1 J	0.7 J	3.1 J	0.99 U	4.5 U	4.5 U	4.5 U	4.7 J	4.7 J	4.7 J	4.7 J	4.7 J	4.7 J	4.7 J	4.7 J	4.7 J	1.0 U	
Methylene Chloride		1,900	24,000	HERO, 2018	4.6 U	4.4 U	4.6 U	4.4 U	4.6 U	4.9 U	4.4 U	4.5 U	4.5 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	5.2 U	
Styrene		6,000,000	35,000,000	USEPA, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
Tetrachloroethene		590	2,700	HERO, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
Toluene		1,100,000	5,400,000	HERO, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
Trichloroethene		940	6,000	USEPA, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
Vinyl Chloride		8.8	150	HERO, 2018	0.92 UJ	0.88 UJ	0.92 UJ	0.88 UJ	0.92 UJ	0.99 UJ	0.90 UJ	0.90 UJ	0.90 UJ	0.97 U	0.96 U	0.97 U	0.97 U	0.96 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	1.0 U
m-p-Xylene		550,000	2,400,000	USEPA, 2018	21.4	5.8 J	21.4	5.8 J	21.4	4.9 U	4.5 U	4.5 U	4.5 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	5.2 U	
o-Xylene		650,000	2,800,000	USEPA, 2018	21.4	5.8 J	21.4	5.8 J	21.4	4.9 U	4.5 U	4.5 U	4.5 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	5.2 U	

Notes:

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- pg/g = picogram per gram
- Bolded and Underlined:** exceedance of residential/industrial risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect
- J = estimated value
- J- = estimated value, biased low
- J+ = estimated value, biased high
- NS = Not sampled

**References:**  
 Human and Ecological Risk Office (HERO), 2011. *User's Guide to Leads Spread 8 and Recommendations for Human and Ecological Risk Assessment (HHRA) Note Number: 3*. Department of Toxic Substances Control (DTSC), September.  
 HERO, 2018. *Human Health Risk Assessment (HHRA) Note Number: 3*. DTSC-modified Screening Levels (DTSC-SL). Retrieved from: [http://www.dtsc.ca.gov/AssessingRisk/upload/HERO\\_HHRA\\_Note\\_3\\_June\\_2018.pdf](http://www.dtsc.ca.gov/AssessingRisk/upload/HERO_HHRA_Note_3_June_2018.pdf)  
 USEPA, 2018. *Regional Screening Levels (RSLs)*. November.



Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

VOCs (continued)	Analyte	Residential	Commercial/	Source	Units	Lab Sample ID:									
						K1702659-007 SHAD041DP012	K1702659-008 SHAD041DP013	K1702659-009 SHAD041DP015	K1702659-010 SHAD041DP017	K1702659-011 SHAD041DP018	K1702659-012 SHAD041DP019	K1702659-013 SHAD041DP020	K1702659-014 SHAD041DP022	K1702659-015 SHAD041DP024	
						SS02NS VSP-12	SS02NS VSP-13	SS02NS VSP-15	SS02NS VSP-17	SS02NS VSP-18	SS02NS VSP-19	SS02NS VSP-20	SS02NS VSP-22	SS02NS VSP-24	
						2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
1,3-Dichlorobenzene	HERO, 2018	--	--	--	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
cis-1,3-Dichloropropene	HERO, 2018	580	2,600	HERO, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
trans-1,3-Dichloropropene	HERO, 2018	580	2,600	HERO, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
1,4-Dichlorobenzene	USEPA, 2018	2,600	11,000	USEPA, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
Benzene	HERO, 2018	330	1,400	HERO, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
Bromodichloromethane	USEPA, 2018	290	1,300	USEPA, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
Bromoform	USEPA, 2018	19,000	86,000	USEPA, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
Bromomethane	USEPA, 2018	6,800	30,000	USEPA, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
Carbon Tetrachloride	HERO, 2018	99	430	HERO, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
Chlorobenzene	USEPA, 2018	280,000	1,300,000	USEPA, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
Chloroform	USEPA, 2018	320	1,400	USEPA, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
Chloromethane	USEPA, 2018	110,000	460,000	USEPA, 2018	µg/kg	4.7 U	4.6 U	4.5 U	5.0 U	4.6 U	4.6 U	5.3 U	4.7 U	6.2 U	
Dibromochloromethane	HERO, 2018	940	4,100	HERO, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
Ethylbenzene	USEPA, 2018	5,800	25,000	USEPA, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
Methylene Chloride	HERO, 2018	1,900	24,000	HERO, 2018	µg/kg	4.7 U	4.6 U	4.5 U	5.0 U	4.6 U	4.6 U	5.3 U	4.7 U	6.2 U	
Styrene	USEPA, 2018	6,000,000	35,000,000	USEPA, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
Tetrachloroethene	HERO, 2018	590	2,700	HERO, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
Toluene	HERO, 2018	1,100,000	5,400,000	HERO, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
Trichloroethene	USEPA, 2018	940	6,000	USEPA, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
Vinyl Chloride	HERO, 2018	8.8	150	HERO, 2018	µg/kg	0.94 U	0.92 U	0.90 U	1.0 U	0.91 U	0.93 U	1.1 U	0.94 U	1.2 U	
m-p-Xylene	USEPA, 2018	550,000	2,400,000	USEPA, 2018	µg/kg	4.7 U	4.6 U	4.5 U	5.0 U	4.6 U	4.6 U	5.3 U	4.7 U	6.2 U	
o-Xylene	USEPA, 2018	650,000	2,800,000	USEPA, 2018	µg/kg	4.7 U	4.6 U	4.5 U	5.0 U	4.6 U	4.6 U	5.3 U	4.7 U	6.2 U	

Notes:

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- pg/g = picogram per gram
- Bolded and Underlined:** exceedance of commercial/industrial risk-based screening level
- Bolded:** exceedance of residential risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect

J = estimated value

J- = estimated value, biased low

J+ = estimated value, biased high

NS = Not sampled

References:

Human and Ecological Risk Office (HERO), 2011. *User's Guide to Leads Spread 8 and Recommendations for Human and Ecological Risk Assessment (HHRA) Note Number: 3*. Department of Toxic Substances Control (DTSC), September.

HERO, 2018. *Human Health Risk Assessment (HHRA) Note Number: 3*. DTSC-modified Screening Levels (DTSC-SL). Retrieved from: [http://www.dtsc.ca.gov/AssessingRisk/upload/HERO\\_HHRA\\_Note\\_3\\_June\\_2018.pdf](http://www.dtsc.ca.gov/AssessingRisk/upload/HERO_HHRA_Note_3_June_2018.pdf)

USEPA, 2018. *Regional Screening Levels (RSLs)*. November.

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

Analyte	Residential	Commercial/	Source	Lab Sample ID:															
				K1702659-016		K1702659-017		K1702659-018		K1702659-019		K1702659-020		K1702659-021		K1702659-002		K1702659-003	
				SHAD041DP025	SS02NS VSP-25	SHAD041DP026	SS02NS VSP-26	SHAD041DP027	SS02NS VSP-27	SHAD041DP028	SS02NS VSP-28	SHAD041DP029	SS02NS VSP-29	SHAD041DP030	SS02NS VSP-30	SHAD041DP004	SS03NS VSP-4	SHAD041DP006	SS03NS VSP-6
Field Sample ID:	Sample Location:		Sample Depth:	Units															
<b>PAHs</b>																			
Naphthalene	3,800	17,000	USEPA, 2018	µg/kg	17U	4.0U	17U	17U	17U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
2-Methylnaphthalene	240,000	3,000,000	USEPA, 2018	µg/kg	17U	4.0U	17U	17U	17U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
1-Methylnaphthalene	18,000	73,000	USEPA, 2018	µg/kg	17U	4.0U	17U	17U	17U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Acenaphthylene	--	--	--	µg/kg	17U	4.0U	17U	17U	17U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Acenaphthene	3,600,000	45,000,000	USEPA, 2018	µg/kg	17U	4.0U	17U	17U	17U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Fluorene	2,400,000	30,000,000	USEPA, 2018	µg/kg	17U	4.0U	17U	17U	17U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Phenanthrene	--	--	--	µg/kg	17U	4.0U	17U	17U	17U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Anthracene	18,000,000	230,000,000	USEPA, 2018	µg/kg	5.1J	4.0U	5.4J	4.2U	4.2U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Fluoranthene	2,400,000	30,000,000	USEPA, 2018	µg/kg	19J	4.0U	19J	4.2U	4.2U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Pyrene	1,800,000	23,000,000	USEPA, 2018	µg/kg	3.9U	4.0U	17U	17U	17U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Benz[a]anthracene	1,100	13,000	HERO, 2017; USEPA, 2018	µg/kg	13J	4.0U	13J	4.2U	4.2U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Chrysene	110,000	1,300,000	HERO, 2017; USEPA, 2018	µg/kg	14J	4.0U	14J	4.2U	4.2U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Benz[b]fluoranthene	1,100	13,000	HERO, 2017; USEPA, 2018	µg/kg	19J	4.0U	19J	4.2U	4.2U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Benz[k]fluoranthene	11,000	130,000	HERO, 2017; USEPA, 2018	µg/kg	3.9U	4.0U	17U	17U	17U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Benzo[a]pyrene	110	1,300	HERO, 2017; USEPA, 2018	µg/kg	11J	4.0U	11J	4.2U	4.2U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Indeno[1,2,3-cd]pyrene	1,100	13,000	HERO, 2017; USEPA, 2018	µg/kg	3.9U	4.0U	17U	17U	17U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Dibenz[a,h]anthracene	110	1,300	HERO, 2017; USEPA, 2018	µg/kg	3.9U	4.0U	17U	17U	17U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
Benzo[g,h,i]perylene	--	--	--	µg/kg	13J	4.0U	13J	4.2U	4.2U	4.2U	3.4U	3.4U	3.7U	3.7U	3.9U	3.7U	3.7U		
<b>Metals</b>																			
Chromium VI	0.30	6.3	USEPA, 2018	mg/kg	0.15J	0.45J	4.7	0.25U	0.32J	0.35J	9.1	9.1	14	14	25	14	11		
Chromium	36,000	170,000	HERO, 2018	mg/kg	10	12	27	14	5.3J	15	3.4J	3.4J	15	15	3.1J	3.1J	3.5J		
Lead	80	320	HERO, 2011	mg/kg	2.4J	2.1J	230	5.3J	3.4J	3.4J	3.4J	3.4J	3.4J	3.4J	3.4J	3.4J	3.4J		
<b>PCBs</b>																			
Aroclor 1016	4.1	27	USEPA, 2018	mg/kg	0.019U	0.016U	0.016U	0.020U	0.016U	0.018U	0.016U	0.016U	0.018U	0.019U	0.019U	0.017U	0.017U		
Aroclor 1221	0.20	0.83	USEPA, 2018	mg/kg	0.019U	0.019U	0.019U	0.020U	0.016U	0.018U	0.016U	0.016U	0.018U	0.019U	0.019U	0.017U	0.017U		
Aroclor 1232	0.17	0.72	USEPA, 2018	mg/kg	0.019U	0.016U	0.016U	0.020U	0.016U	0.018U	0.016U	0.016U	0.018U	0.019U	0.019U	0.017U	0.017U		
Aroclor 1242	0.23	0.95	USEPA, 2018	mg/kg	0.019U	0.016U	0.016U	0.020U	0.016U	0.018U	0.016U	0.016U	0.018U	0.019U	0.019U	0.017U	0.017U		
Aroclor 1248	0.23	0.95	USEPA, 2018	mg/kg	0.019U	0.016U	0.016U	0.020U	0.016U	0.018U	0.016U	0.016U	0.018U	0.019U	0.019U	0.017U	0.017U		
Aroclor 1254	0.24	0.97	USEPA, 2018	mg/kg	0.019U	0.016U	0.016U	0.020U	0.016U	0.018U	0.016U	0.016U	0.018U	0.019U	0.019U	0.017U	0.017U		
Aroclor 1260	0.24	0.99	USEPA, 2018	mg/kg	0.019U	0.016U	0.016U	0.020U	0.016U	0.018U	0.016U	0.016U	0.018U	0.019U	0.019U	0.017U	0.017U		
<b>SVOC-PCDD/PCDF</b>																			
2,3,7,8-TCDD	4.8	22	USEPA, 2018	pg/g	0.47U	0.48U	7.9	0.51U	0.42U	0.45U	0.42U	0.42U	0.47U	0.47U	0.47U	0.44	0.44		
<b>VOCs</b>																			
1,1,1-Trichloroethane	1,700,000	7,300,000	HERO, 2018	µg/kg	0.92U	0.96U	0.89U	1.3U	0.94U	0.82U	0.94U	0.94U	1.0U	1.0U	1.0U	1.0U	1.0U		
1,1,2,2-Tetrachloroethane	600	2,700	USEPA, 2018	µg/kg	0.92U	0.96U	0.89U	1.3U	0.94U	0.82U	0.94U	0.94U	1.0U	1.0U	1.0U	1.0U	1.0U		
1,1,2-Trichloroethane	1,100	5,000	USEPA, 2018	µg/kg	0.92U	0.96U	0.89U	1.3U	0.94U	0.82U	0.94U	0.94U	1.0U	1.0U	1.0U	1.0U	1.0U		
1,1-Dichloroethane	3,600	16,000	USEPA, 2018	µg/kg	0.92U	0.96U	0.89U	1.3U	0.94U	0.82U	0.94U	0.94U	1.0U	1.0U	1.0U	1.0U	1.0U		
1,1-Dichloroethene	230,000	1,000,000	USEPA, 2018	µg/kg	4.6U	4.8	4.4U	6.6	4.7U	4.1U	4.7U	4.7U	5.2U	5.2U	5.1	5.1	5.1		
1,2,4-Trimethylbenzene	300,000	1,800,000	USEPA, 2018	µg/kg	0.92U	0.96U	0.89U	1.3U	0.94U	0.82U	0.94U	0.94U	1.0U	1.0U	1.0U	1.0U	1.0U		
1,2-Dibromoethane (EDB)	36	160	USEPA, 2018	µg/kg	0.92U	0.96U	0.89U	1.3U	0.94U	0.82U	0.94U	0.94U	1.0U	1.0U	1.0U	1.0U	1.0U		
1,2-Dichlorobenzene	1,800,000	9,300,000	USEPA, 2018	µg/kg	0.92U	0.96U	0.89U	1.3U	0.94U	0.82U	0.94U	0.94U	1.0U	1.0U	1.0U	1.0U	1.0U		
1,2-Dichloroethane	460	2,000	USEPA, 2018	µg/kg	0.92U	0.96U	0.89U	1.3U	0.94U	0.82U	0.94U	0.94U	1.0U	1.0U	1.0U	1.0U	1.0U		
cis-1,2-Dichloroethene	19,000	86,000	HERO, 2018	µg/kg	0.92U	0.96U	0.89U	1.3U	0.94U	0.82U	0.94U	0.94U	1.0U	1.0U	1.0U	1.0U	1.0U		
trans-1,2-Dichloroethene	130,000	600,000	HERO, 2018	µg/kg	0.92U	0.96U	0.89U	1.3U	0.94U	0.82U	0.94U	0.94U	1.0U	1.0U	1.0U	1.0U	1.0U		
1,2-Dichloropropane	2,500	11,000	USEPA, 2018	µg/kg	0.92U	0.96U	0.89U	1.3U	0.94U	0.82U	0.94U	0.94U	1.0U	1.0U	1.0U	1.0U	1.0U		

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

VOCs (continued)	Analyte	Residential	Commercial/	Source	Sample Depth:		Sample Location:		Field Sample ID:		Lab Sample ID:				
					Units	Depth	VSP-25	VSP-26	VSP-27	VSP-28	VSP-29	VSP-30	VSP-2	VSP-4	VSP-6
1,3-Dichlorobenzene		--	--			µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
cis-1,3-Dichloropropene		580	2,600	HERO, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
trans-1,3-Dichloropropene		580	2,600	HERO, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
1,4-Dichlorobenzene		2,600	11,000	USEPA, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Benzene		330	1,400	HERO, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Bromodichloromethane		290	1,300	USEPA, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Bromoforn		19,000	86,000	USEPA, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Bromomethane		6,800	30,000	USEPA, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Carbon Tetrachloride		99	430	HERO, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Chlorobenzene		280,000	1,300,000	USEPA, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Chloroform		320	1,400	USEPA, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Chloromethane		110,000	460,000	USEPA, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Dibromochloromethane		940	4,100	HERO, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Ethylbenzene		5,800	25,000	USEPA, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Methylene Chloride		1,900	24,000	HERO, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Styrene		6,000,000	35,000,000	USEPA, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Tetrachloroethene		590	2,700	HERO, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Toluene		1,100,000	5,400,000	HERO, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Trichloroethene		940	6,000	USEPA, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
Vinyl Chloride		8.8	150	HERO, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
m-p-Xylene		550,000	2,400,000	USEPA, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U
o-Xylene		650,000	2,800,000	USEPA, 2018		µg/kg	0.92 U	0.89 U	0.96 U	0.93 U	1.3 U	0.94 U	0.82 U	1.0 U	1.0 U

Notes:

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- pg/g = picogram per gram
- Bolded and Underlined:** exceedance of residential/industrial risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect

J = estimated value

J- = estimated value, biased low

J+ = estimated value, biased high

NS = Not sampled

References:

Human and Ecological Risk Office (HERO), 2011. *User's Guide to Leads Spread 8 and Recommendations for Evaluation of Lead Exposures in Adults*. Department of Toxic Substances Control (DTSC), September.  
 HERO, 2018. *Human Health Risk Assessment (HHRA) Note Number: 3, DTSC-modified Screening Levels (DTSC-SL)*. Retrieved from: [http://www.dtsc.ca.gov/AssessingRisk/upload/HERO\\_HHRA\\_Note\\_3\\_June\\_2018.pdf](http://www.dtsc.ca.gov/AssessingRisk/upload/HERO_HHRA_Note_3_June_2018.pdf)  
 USEPA, 2018. *Regional Screening Levels (RSLs)*. November.

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

Analyte	Residential	Commercial/	Source	Lab Sample ID:										Units
				K1702659-004 SHAD041DP008 SS03NS VSP-8 5	K1702659-005 SHAD041DP010 SS03NS VSP-10 5	K1702659-006 SHAD041DP011 SS03NS VSP-11 5	K1702659-007 SHAD041DP012 SS03NS VSP-12 5	K1702659-008 SHAD041DP013 SS03NS VSP-13 5	K1702659-009 SHAD041DP015 SS03NS VSP-15 5	K1702659-010 SHAD041DP017 SS03NS VSP-17 5	K1702659-011 SHAD041DP018 SS03NS VSP-18 5	K1702659-012 SHAD041DP019 SS03NS VSP-19 5		
Field Sample ID: Sample Location: Sample Depth:														
<b>PAHs</b>														
Naphthalene	3,800	17,000	USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
2-Methylnaphthalene	240,000	3,000,000	USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
1-Methylnaphthalene	18,000	73,000	USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Acenaphthylene	--	--	--	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Acenaphthene	3,600,000	45,000,000	USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Fluorene	2,400,000	30,000,000	USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Phenanthrene	--	--	--	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Anthracene	18,000,000	230,000,000	USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Fluoranthene	2,400,000	30,000,000	USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Pyrene	1,800,000	23,000,000	USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Benz[a]anthracene	1,100	13,000	HERO, 2017; USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Chrysene	110,000	1,300,000	HERO, 2017; USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Benz[b]fluoranthene	1,100	13,000	HERO, 2017; USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Benz[k]fluoranthene	11,000	130,000	HERO, 2017; USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Benz[a]pyrene	110	1,300	HERO, 2017; USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Indeno[1,2,3-cd]pyrene	1,100	13,000	HERO, 2017; USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Dibenz[a,h]anthracene	110	1,300	HERO, 2017; USEPA, 2018	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
Benzol[h,i]perylene	--	--	--	3.6 U	3.8 U	4.0 U	4.2 U	3.8 U	3.7 U	4.1 U	3.9 U	3.9 U	4.2 U	
<b>Metals</b>														
Chromium VI	0.30	6.3	USEPA, 2018	0.31 J	0.34 J	0.44 J	0.39 J	0.28 J	0.26 J	0.33 J	0.14 J	0.14 J	0.22 J	
Chromium	36,000	170,000	HERO, 2018	12	17	15 J	14	15	17	26	12	12	19	
Lead	80	320	HERO, 2011	2.3 J	18	50 J	21 J	3.4 J	15	2.6 J	58	58	4.7 J	
<b>PCBs</b>														
Aroclor 1016	4.1	27	USEPA, 2018	0.017 U	0.018 U	0.019 U	0.020 U	0.018 U	0.018 U	0.020 U	0.019 U	0.019 U	0.020 U	
Aroclor 1221	0.20	0.83	USEPA, 2018	0.017 U	0.018 U	0.019 U	0.020 U	0.018 U	0.018 U	0.020 U	0.019 U	0.019 U	0.020 U	
Aroclor 1232	0.17	0.72	USEPA, 2018	0.017 U	0.018 U	0.019 U	0.020 U	0.018 U	0.018 U	0.020 U	0.019 U	0.019 U	0.020 U	
Aroclor 1242	0.23	0.95	USEPA, 2018	0.017 U	0.018 U	0.019 U	0.020 U	0.018 U	0.018 U	0.020 U	0.019 U	0.019 U	0.020 U	
Aroclor 1248	0.23	0.95	USEPA, 2018	0.017 U	0.018 U	0.019 U	0.020 U	0.018 U	0.018 U	0.020 U	0.019 U	0.019 U	0.020 U	
Aroclor 1254	0.24	0.97	USEPA, 2018	0.017 U	0.018 U	0.019 U	0.020 U	0.018 U	0.018 U	0.020 U	0.019 U	0.019 U	0.020 U	
Aroclor 1260	0.24	0.99	USEPA, 2018	0.017 U	0.018 U	0.019 U	0.020 U	0.018 U	0.018 U	0.020 U	0.019 U	0.019 U	0.020 U	
<b>SVOC-PCDD/PCDF</b>														
2,3,7,8-TCDD	4.8	22	USEPA, 2018	0.22 J	0.23	11	0.31 J	0.46 U	1.4	0.5 U	0.75 J	0.75 J	0.50 U	
<b>VOCs</b>														
1,1,1-Trichloroethane	1,700,000	7,300,000	HERO, 2018	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U	1.2 U	1.1 U	1.1 U	1.0 U	
1,1,2,2-Tetrachloroethane	600	2,700	USEPA, 2018	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U	1.2 U	1.1 U	1.1 U	1.0 U	
1,1,2-Trichloroethane	1,100	5,000	USEPA, 2018	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U	1.2 U	1.1 U	1.1 U	1.0 U	
1,1-Dichloroethane	3,600	16,000	USEPA, 2018	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U	1.2 U	1.1 U	1.1 U	1.0 U	
1,1-Dichloroethene	230,000	1,000,000	USEPA, 2018	5.1 U	5.4 U	5.3 U	5.2 U	5.0 U	5.6 U	6.1 U	5.3 U	5.3 U	5.2 U	
1,2,4-Trimethylbenzene	300,000	1,800,000	USEPA, 2018	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U	1.2 U	1.1 U	1.1 U	1.0 U	
1,2-Dibromoethane (EDB)	36	160	USEPA, 2018	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U	1.2 U	1.1 U	1.1 U	1.0 U	
1,2-Dichlorobenzene	1,800,000	9,300,000	USEPA, 2018	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U	1.2 U	1.1 U	1.1 U	1.0 U	
1,2-Dichloroethane	460	2,000	USEPA, 2018	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U	1.2 U	1.1 U	1.1 U	1.0 U	
cis-1,2-Dichloroethene	19,000	86,000	HERO, 2018	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U	1.2 U	1.1 U	1.1 U	1.0 U	
trans-1,2-Dichloroethene	130,000	600,000	HERO, 2018	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U	1.2 U	1.1 U	1.1 U	1.0 U	
1,2-Dichloropropane	2,500	11,000	USEPA, 2018	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U	1.2 U	1.1 U	1.1 U	1.0 U	

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

VOCs (continued)	Analyte	Residential	Commercial/	Source	Units	Lab Sample ID:					Field Sample ID:						
						SHAD041DP008	K1702659-004	K1702659-005	K1702659-006	K1702659-007	K1702659-008	K1702659-009	K1702659-010	K1702659-011	K1702659-012	SHAD041DP018	SHAD041DP019
1,3-Dichlorobenzene		--	--	HERO, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
cis-1,3-Dichloropropene		580	2,600	HERO, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
trans-1,3-Dichloropropene		580	2,600	HERO, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
1,4-Dichlorobenzene		2,600	11,000	USEPA, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
Benzene		330	1,400	HERO, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
Bromodichloromethane		290	1,300	USEPA, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
Bromoform		19,000	86,000	USEPA, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
Bromomethane		6,800	30,000	USEPA, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
Carbon Tetrachloride		99	430	HERO, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
Chlorobenzene		280,000	1,300,000	USEPA, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
Chloroform		320	1,400	USEPA, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
Chloromethane		110,000	460,000	USEPA, 2018	µg/kg	5.1U	5.4U	5.3U	5.3U	5.2U	5.0U	5.6U	6.1U	6.1U	5.3U	5.2U	5.0U
Dibromochloromethane		940	4,100	HERO, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
Ethylbenzene		5,800	25,000	USEPA, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
Methylene Chloride		1,900	24,000	HERO, 2018	µg/kg	5.1U	5.4U	5.3U	5.3U	5.2U	5.0U	5.6U	6.1U	6.1U	5.2U	5.2U	5.0U
Styrene		6,000,000	35,000,000	USEPA, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
Tetrachloroethene		590	2,700	HERO, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
Toluene		1,100,000	5,400,000	HERO, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
Trichloroethene		940	6,000	USEPA, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
Vinyl Chloride		8.8	150	HERO, 2018	µg/kg	1.0U	1.1U	1.1U	1.1U	1.0U	1.0U	1.1U	1.2U	1.1U	1.1U	1.0U	1.0U
m-p-Xylene		550,000	2,400,000	USEPA, 2018	µg/kg	5.1U	5.4U	5.3U	5.3U	5.2U	5.0U	5.6U	6.1U	6.1U	5.3U	5.2U	5.2U
o-Xylene		650,000	2,800,000	USEPA, 2018	µg/kg	5.1U	5.4U	5.3U	5.3U	5.2U	5.0U	5.6U	6.1U	6.1U	5.3U	5.2U	5.2U

Notes:

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- pg/g = picogram per gram
- Bolded and Underlined:** exceedance of residential risk-based screening level
- Bolded:** exceedance of commercial/industrial risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect

- J = estimated value
- J- = estimated value, biased low
- J+ = estimated value, biased high
- NS = Not sampled

References:

Human and Ecological Risk Office (HERO), 2011. *User's Guide to Leads Spread 8 and Recommendations for Evaluation of Lead Exposures in Adults*. Department of Toxic Substances Control (DTSC), September.

HERO, 2018. *Human Health Risk Assessment (HHRA) Note Number: 3, DTSC-modified Screening Levels (DTSC-SL)*. Retrieved from: [http://www.dtsc.ca.gov/AssessingRisk/upload/HERO\\_HHRA\\_Note\\_3\\_June\\_2018.pdf](http://www.dtsc.ca.gov/AssessingRisk/upload/HERO_HHRA_Note_3_June_2018.pdf)

USEPA, 2018. *Regional Screening Levels (RSLs)*. November.

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

Analyte	Residential	Commercial/	Source	Lab Sample ID:										
				K1702659-013 SHAD041DP020 SS03NS VSP-20 5	K1702659-014 SHAD041DP022 SS03NS VSP-22 5	K1702659-015 SHAD041DP024 SS03NS VSP-24 5	K1702659-016 SHAD041DP025 SS03NS VSP-25 5	K1702659-017 SHAD041DP026 SS03NS VSP-26 5	K1702659-018 SHAD041DP027 SS03NS VSP-27 5	K1702659-019 SHAD041DP028 SS03NS VSP-28 5	K1702659-020 SHAD041DP029 SS03NS VSP-29 5	K1702659-021 SHAD041DP030 SS03NS VSP-30 5		
Field Sample ID:	Sample Location:													
Sample Depth:	Sample Depth:													
Units	Units													
<b>PAHs</b>														
Naphthalene	3,800	17,000	USEPA, 2018	4.1U	3.4U	4.1U	3.9U	3.8U	4.1U	3.7U	4.1U	4.1U	3.7U	3.7U
2-Methylnaphthalene	240,000	3,000,000	USEPA, 2018	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
1-Methylnaphthalene	18,000	73,000	USEPA, 2018	4.1U	3.4U	4.1U	3.9U	3.8U	4.1U	3.7U	4.1U	4.1U	3.7U	3.7U
Acenaphthylene	--	--	--	4.1U	3.4U	4.1U	3.9U	3.8U	4.1U	3.7U	4.1U	4.1U	3.7U	3.7U
Acenaphthene	3,600,000	45,000,000	USEPA, 2018	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Fluorene	2,400,000	30,000,000	USEPA, 2018	4.1U	3.4U	4.1U	3.9U	3.8U	4.1U	3.7U	4.1U	4.1U	3.7U	3.7U
Phenanthrene	--	--	--	4.1U	3.4U	4.1U	3.9U	3.8U	4.1U	3.7U	4.1U	4.1U	3.7U	3.7U
Anthracene	18,000,000	230,000,000	USEPA, 2018	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Fluoranthene	2,400,000	30,000,000	USEPA, 2018	4.1U	3.4U	4.1U	3.9U	3.8U	4.1U	3.7U	4.1U	4.1U	3.7U	3.7U
Pyrene	1,800,000	23,000,000	USEPA, 2018	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Benz[a]anthracene	1,100	13,000	HERO, 2017; USEPA, 2018	4.1U	3.4U	4.1U	3.9U	3.8U	4.1U	3.7U	4.1U	4.1U	3.7U	3.7U
Chrysene	110,000	1,300,000	HERO, 2017; USEPA, 2018	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Benz[b]fluoranthene	1,100	13,000	HERO, 2017; USEPA, 2018	4.1U	1.5J	4.1U	3.9U	3.8U	4.1U	3.7U	4.1U	4.1U	3.7U	3.7U
Benz[k]fluoranthene	11,000	130,000	HERO, 2017; USEPA, 2018	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Benzo[a]pyrene	110	1,300	HERO, 2017; USEPA, 2018	4.1U	3.4U	4.1U	3.9U	3.8U	4.1U	3.7U	4.1U	4.1U	3.7U	3.7U
Indeno[1,2,3-cd]pyrene	1,100	13,000	HERO, 2017; USEPA, 2018	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Dibenz[a,h]anthracene	110	1,300	HERO, 2017; USEPA, 2018	4.1U	3.4U	4.1U	3.9U	3.8U	4.1U	3.7U	4.1U	4.1U	3.7U	3.7U
Benz[ghi]perylene	--	--	--	4.1U	1.9J	4.1U	3.9U	3.8U	4.1U	3.7U	4.1U	4.1U	3.7U	3.7U
<b>Metals</b>														
Chromium VI	0.30	6.3	USEPA, 2018	0.27J	0.45	0.27J	0.71	0.40J	0.34J	0.54	0.20J	0.54	0.20J	0.28J
Chromium	36,000	170,000	HERO, 2018	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lead	80	320	HERO, 2011	4.0J	39	5.0J	11	34	2.7J	6.9	4.2J	6.9	4.2J	2.1J
<b>PCBs</b>														
Aroclor 1016	4.1	27	USEPA, 2018	0.020U	0.016U	0.020U	0.019U	0.018U	0.020U	0.018U	0.020U	0.018U	0.020U	0.018U
Aroclor 1221	0.20	0.83	USEPA, 2018	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aroclor 1232	0.17	0.72	USEPA, 2018	0.020U	0.016U	0.020U	0.019U	0.018U	0.020U	0.018U	0.020U	0.018U	0.020U	0.018U
Aroclor 1242	0.23	0.95	USEPA, 2018	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aroclor 1248	0.23	0.95	USEPA, 2018	0.020U	0.016U	0.020U	0.019U	0.018U	0.020U	0.018U	0.020U	0.018U	0.020U	0.018U
Aroclor 1254	0.24	0.97	USEPA, 2018	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aroclor 1260	0.24	0.99	USEPA, 2018	0.020U	0.016U	0.020U	0.019U	0.018U	0.020U	0.018U	0.020U	0.018U	0.020U	0.018U
<b>SVOC-PCDD/PCDF</b>														
2,3,7,8-TCDD	4.8	22	USEPA, 2018	0.50U	0.41U	0.50U	0.47U	0.69J	0.50U	0.45U	0.50U	0.45U	0.50U	0.44U
<b>VOCs</b>														
1,1,1-Trichloroethane	1,700,000	7,300,000	HERO, 2018	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
1,1,2,2-Tetrachloroethane	600	2,700	USEPA, 2018	1.2U	0.92U	1.2U	1.0U	1.3U	0.93U	1.1U	1.1U	1.1U	1.0U	1.0U
1,1,2-Trichloroethane	1,100	5,000	USEPA, 2018	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
1,1-Dichloroethane	16,000	16,000	USEPA, 2018	1.2U	0.92U	1.2U	1.0U	1.3U	0.93U	1.1U	1.1U	1.1U	1.0U	1.0U
1,1-Dichloroethene	230,000	1,000,000	USEPA, 2018	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
1,2,4-Trimethylbenzene	300,000	1,800,000	USEPA, 2018	6.0U	4.6U	6.0U	5.1U	6.4U	4.7U	5.3U	5.5U	5.5U	5.1U	5.1U
1,2-Dibromoethane (EDB)	36	160	USEPA, 2018	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
1,2-Dichlorobenzene	1,800,000	9,300,000	USEPA, 2018	1.2U	0.92U	1.2U	1.0U	1.3U	0.93U	1.1U	1.1U	1.1U	1.0U	1.0U
1,2-Dichloroethane	460	2,000	USEPA, 2018	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
cis-1,2-Dichloroethene	19,000	86,000	HERO, 2018	1.2U	0.92U	1.2U	1.0U	1.3U	0.93U	1.1U	1.1U	1.1U	1.0U	1.0U
trans-1,2-Dichloroethene	130,000	600,000	HERO, 2018	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
1,2-Dichloropropane	2,500	11,000	USEPA, 2018	1.2U	0.92U	1.2U	1.0U	1.3U	0.93U	1.1U	1.1U	1.1U	1.0U	1.0U



Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

VOCs (continued)	Analyte	Residential	Commercial/	Source	Sample Depth: Units	Lab Sample ID:					Field Sample ID:				
						K1702659-013 SHAD041DP020 SS03NS VSP-20 5	K1702659-014 SHAD041DP022 SS03NS VSP-22 5	K1702659-015 SHAD041DP024 SS03NS VSP-24 5	K1702659-016 SHAD041DP025 SS03NS VSP-25 5	K1702659-017 SHAD041DP026 SS03NS VSP-26 5	K1702659-018 SHAD041DP027 SS03NS VSP-27 5	K1702659-019 SHAD041DP028 SS03NS VSP-28 5	K1702659-020 SHAD041DP029 SS03NS VSP-29 5	K1702659-021 SHAD041DP030 SS03NS VSP-30 5	
1,3-Dichlorobenzene	HERO, 2018	--	--	--	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
cis-1,3-Dichloropropene	HERO, 2018	580	2,600	HERO, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
trans-1,3-Dichloropropene	HERO, 2018	580	2,600	HERO, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
1,4-Dichlorobenzene	USEPA, 2018	2,600	11,000	USEPA, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
Benzene	HERO, 2018	330	1,400	HERO, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
Bromodichloromethane	USEPA, 2018	290	1,300	USEPA, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
Bromoform	USEPA, 2018	19,000	86,000	USEPA, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
Bromomethane	USEPA, 2018	6,800	30,000	USEPA, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
Carbon Tetrachloride	HERO, 2018	99	430	HERO, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
Chlorobenzene	USEPA, 2018	280,000	1,300,000	USEPA, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
Chloroform	USEPA, 2018	320	1,400	USEPA, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
Chloromethane	USEPA, 2018	110,000	460,000	USEPA, 2018	6.0 U	4.6 U	4.6 U	5.1 U	6.4 U	4.7 U	5.3 U	5.5 U	5.1 U		
Dibromochloromethane	HERO, 2018	940	4,100	HERO, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
Ethylbenzene	USEPA, 2018	5,800	25,000	USEPA, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
Methylene Chloride	HERO, 2018	1,900	24,000	HERO, 2018	5.0 U	4.6 U	4.6 U	5.1 U	6.4 U	4.7 U	5.3 U	5.5 U	5.1 U		
Styrene	USEPA, 2018	6,000,000	35,000,000	USEPA, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
Tetrachloroethene	HERO, 2018	590	2,700	HERO, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
Toluene	HERO, 2018	1,100,000	5,400,000	HERO, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
Trichloroethene	USEPA, 2018	940	6,000	USEPA, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
Vinyl Chloride	HERO, 2018	8.8	150	HERO, 2018	1.2 U	0.92 U	0.92 U	1.0 U	1.3 U	0.93 U	1.1 U	1.1 U	1.1 U	1.0 U	
m-p-Xylene	USEPA, 2018	550,000	2,400,000	USEPA, 2018	6.0 U	4.6 U	4.6 U	5.1 U	6.4 U	4.7 U	5.3 U	5.5 U	5.1 U		
o-Xylene	USEPA, 2018	650,000	2,800,000	USEPA, 2018	6.0 U	4.6 U	4.6 U	5.1 U	6.4 U	4.7 U	5.3 U	5.5 U	5.1 U		

Notes:

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- µg/lb = microgram per gram
- pg/lb = picogram per gram
- Bolded and Underlined:** exceedance of residential risk-based screening level
- Bolded:** exceedance of commercial/industrial risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect

J = estimated value

J- = estimated value, biased low

J+ = estimated value, biased high

NS = Not sampled

References:

Human and Ecological Risk Office (HERO), 2011. *User's Guide to Leads Spread 8 and Recommendations for Human and Ecological Risk Assessment (HHRA) Note Number: 3*. Department of Toxic Substances Control (DTSC), September.

HERO, 2018. *Human Health Risk Assessment (HHRA) Note Number: 3*. DTSC-modified Screening Levels (DTSC-SL). Retrieved from: [http://www.dtsc.ca.gov/AssessingRisk/upload/HERO\\_HHRA\\_Note\\_3\\_June\\_2018.pdf](http://www.dtsc.ca.gov/AssessingRisk/upload/HERO_HHRA_Note_3_June_2018.pdf)

USEPA, 2018. *Regional Screening Levels (RSLs)*. November.

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

PAHs	Lab Sample ID:										Source	Units			
	Analyte	Residential	Commercial/	Field Sample ID:											
				SHAD041DP002	SHAD041DP004	SHAD041DP006	SHAD041DP008	SHAD041DP010	SHAD041DP011	SHAD041DP012			SHAD041DP013	SHAD041DP015	
Sample Location:	SS04NS VSP-2	SS04NS VSP-4	SS04NS VSP-6	SS04NS VSP-8	SS04NS VSP-10	SS04NS VSP-11	SS04NS VSP-12	SS04NS VSP-13	SS04NS VSP-15	SS04NS VSP-10	SS04NS VSP-11	SS04NS VSP-12	SS04NS VSP-13	SS04NS VSP-15	
Sample Depth:	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Naphthalene	3,800	17,000		USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
2-Methylnaphthalene	240,000	3,000,000		USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
1-Methylnaphthalene	18,000	73,000		USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Acenaphthylene	--	--		--	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Acenaphthene	3,600,000	45,000,000		USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Fluorene	2,400,000	30,000,000		USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Phenanthrene	--	--		--	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Anthracene	18,000,000	230,000,000		USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Fluoranthene	2,400,000	30,000,000		USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Pyrene	1,800,000	23,000,000		USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Benzofluoranthene	1,100	13,000		HERO, 2017; USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Chrysene	110,000	1,300,000		HERO, 2017; USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Benzofluoranthene	1,100	13,000		HERO, 2017; USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Benzofluoranthene	11,000	130,000		HERO, 2017; USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Benzofluoranthene	110	1,300		HERO, 2017; USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Indeno[1,2,3-cd]pyrene	1,100	13,000		HERO, 2017; USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Dibenz[ah]anthracene	110	1,300		HERO, 2017; USEPA, 2018	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
Benzofluoranthene	--	--		--	3.8 U	3.8 U	4.0 U	4.1 U	4.0 U	4.0 U	3.9 U	4.0 U	3.9 U	3.5 U	
<b>Metals</b>															
Chromium VI	0.30	6.3		USEPA, 2018	6.4	0.26 J	0.12 J	0.49	0.33 J	0.25 J	0.28 J	0.52	0.34 J		
Chromium	36,000	170,000		HERO, 2018	25	11	13	13	18	11	26	9.8	13		
Lead	80	320		HERO, 2011	17	2.9 J	3.6 J	2.9 J	2.0 J	3.2 J	3.2 J	1.6 J	4.2 J		
<b>PCBs</b>															
Aroclor 1016	4.1	27		USEPA, 2018	0.018 U	0.018 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.017 U	
Aroclor 1221	0.20	0.83		USEPA, 2018	0.018 U	0.018 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.017 U	
Aroclor 1232	0.17	0.72		USEPA, 2018	0.018 U	0.018 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.017 U	
Aroclor 1242	0.23	0.95		USEPA, 2018	0.018 U	0.018 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.017 U	
Aroclor 1248	0.23	0.95		USEPA, 2018	0.018 U	0.018 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.017 U	
Aroclor 1254	0.24	0.97		USEPA, 2018	0.018 U	0.018 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.017 U	
Aroclor 1260	0.24	0.99		USEPA, 2018	0.018 U	0.018 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.017 U	
<b>SVOC-PCDD/PCDF</b>															
2,3,7,8-TCDD	4.8	22		USEPA, 2018	0.46 U	0.45 U	0.48 U	0.48 U	0.48 U	0.47 U	0.48 U	0.47 U	0.48 U	0.42 U	
<b>VOCs</b>															
1,1,1-Trichloroethane	1,700,000	7,300,000		HERO, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U		
1,1,2,2-Tetrachloroethane	600	2,700		USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U		
1,1,2-Trichloroethane	1,100	5,000		USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U		
1,1-Dichloroethane	3,600	16,000		USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U		
1,1-Dichloroethene	230,000	1,000,000		USEPA, 2018	4.9 U	5.8 U	5.8 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.6 U		
1,2,4-Trimethylbenzene	300,000	1,800,000		USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U		
1,2-Dibromoethane (EDB)	36	160		USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U		
1,2-Dichlorobenzene	1,800,000	9,300,000		USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U		
1,2-Dichloroethane	460	2,000		USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U		
cis-1,2-Dichloroethene	19,000	86,000		HERO, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U		
trans-1,2-Dichloroethene	130,000	600,000		HERO, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U		
1,1-Dichloropropane	2,500	11,000		USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U		

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

VOCs (continued)	Analyte	Residential	Commercial/	Source	Lab Sample ID:		Field Sample ID:		Sample Location:		Sample Depth:		Units																				
					SHAD041DP002	SHAD041DP004	SHAD041DP006	SHAD041DP008	SHAD041DP010	SHAD041DP011	SHAD041DP012	SHAD041DP013	SHAD041DP015	SS04NS	VSP-2	SS04NS	VSP-4	SS04NS	VSP-6	SS04NS	VSP-8	SS04NS	VSP-10	SS04NS	VSP-12	SS04NS	VSP-13	SS04NS	VSP-15				
1,3-Dichlorobenzene		--	--	HERO, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
cis-1,3-Dichloropropene		580	2,600	HERO, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
trans-1,3-Dichloropropene		580	2,600	HERO, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
1,4-Dichlorobenzene		2,600	11,000	USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
Benzene		330	1,400	HERO, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
Bromodichloromethane		290	1,300	USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
Bromoform		19,000	86,000	USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
Bromomethane		6,800	30,000	USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
Carbon Tetrachloride		99	430	HERO, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
Chlorobenzene		280,000	1,300,000	USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
Chloroform		320	1,400	USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
Chloromethane		110,000	460,000	USEPA, 2018	4.9 U	5.8 U	5.8 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	
Dibromochloromethane		940	4,100	HERO, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
Ethylbenzene		5,800	25,000	USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
Methylene Chloride		1,900	24,000	HERO, 2018	4.9 U	5.8 U	5.8 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	
Styrene		6,000,000	35,000,000	USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
Tetrachloroethene		590	2,700	HERO, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
Toluene		1,100,000	5,400,000	HERO, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
Trichloroethene		940	6,000	USEPA, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
Vinyl Chloride		8.8	150	HERO, 2018	0.97 U	1.2 U	1.2 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U	0.96 U	1.1 U	0.92 U	0.87 U	1.1 U
m-p-Xylene		550,000	2,400,000	USEPA, 2018	4.9 U	5.8 U	5.8 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	
o-Xylene		650,000	2,800,000	USEPA, 2018	4.9 U	5.8 U	5.8 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	5.3 U	4.8 U	5.3 U	4.6 U	4.4 U	

Notes:

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- pg/g = picogram per gram
- Bolded and Underlined:** exceedance of residential/industrial risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect

J = estimated value

J- = estimated value, biased low

J+ = estimated value, biased high

NS = Not sampled

References:

Human and Ecological Risk Office (HERO), 2011. *User's Guide to Leads Spread 8 and Recommendations for Evaluation of Lead Exposures in Adults*. Department of Toxic Substances Control (DTSC), September.  
 HERO, 2018. *Human Health Risk Assessment (HHRA) Note Number: 3, DTSC-modified Screening Levels (DTSC-SL)*. Retrieved from: [http://www.dtsc.ca.gov/AssessingRisk/upload/HERO\\_HHRA\\_Note\\_3\\_June\\_2018.pdf](http://www.dtsc.ca.gov/AssessingRisk/upload/HERO_HHRA_Note_3_June_2018.pdf)  
 USEPA, 2018. *Regional Screening Levels (RSLs)*. November.

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

Analyte	Residential	Commercial/	Source	Lab Sample ID:																				
				SHAD041DP017		SHAD041DP018		SHAD041DP019		SHAD041DP020		SHAD041DP022		SHAD041DP024		SHAD041DP025		SHAD041DP026		SHAD041DP027				
				SS04NS VSP-17 10	SS04NS VSP-18 10	SS04NS VSP-19 10	SS04NS VSP-20 10	SS04NS VSP-22 10	SS04NS VSP-24 10	SS04NS VSP-25 10	SS04NS VSP-26 10	SS04NS VSP-27 10	Field Sample ID: Sample Location: Sample Depth:	Units										
<b>PAHs</b>																								
Naphthalene	3,800	17,000	USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
2-Methylnaphthalene	240,000	3,000,000	USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
1-Methylnaphthalene	18,000	73,000	USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Acenaphthylene	--	--	--	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Acenaphthene	3,600,000	45,000,000	USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Fluorene	2,400,000	30,000,000	USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Phenanthrene	--	--	--	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Anthracene	18,000,000	230,000,000	USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Fluoranthene	2,400,000	30,000,000	USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Pyrene	1,800,000	23,000,000	USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Benz[a]anthracene	1,100	13,000	HERO, 2017; USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Chrysene	110,000	1,300,000	HERO, 2017; USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Benz[b]fluoranthene	1,100	13,000	HERO, 2017; USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Benz[k]fluoranthene	11,000	130,000	HERO, 2017; USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Benz[a]pyrene	110	1,300	HERO, 2017; USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Indeno[1,2,3-cd]pyrene	1,100	13,000	HERO, 2017; USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Dibenz[a,h]anthracene	110	1,300	HERO, 2017; USEPA, 2018	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
Benz[ghi]perylene	--	--	--	4.0U	4.1U	4.0U	3.7U	3.8U	4.0U	4.0U	4.0U	3.8U	4.0U	3.8U	3.7U	3.8U	3.7U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U	3.8U
<b>Metals</b>																								
Chromium VI	0.30	6.3	USEPA, 2018	0.54	0.30J	0.27J	0.18J	0.46	0.28J	0.28J	0.28J	0.31J	0.28J	0.46	0.31J	0.28J	0.34J	0.28J	0.31J	0.28J	0.46	0.31J	0.28J	0.37J
Chromium	36,000	170,000	HERO, 2018	18	18	11	7	11	9.5	9.5	9.5	9.4	9.5	11	9.4	9.7	9.4	9.5	9.4	9.7	9.4	9.7	9.4	13
Lead	80	320	HERO, 2011	3.6J	3.5J	3.8J	2J	1.4J	2.8J	2.8J	2.9J	2.4J	2.8J	1.4J	2.9J	2.4J	2.4J	2.8J	2.9J	2.4J	2.4J	2.4J	2.4J	2.0J
<b>PCBs</b>																								
Aroclor 1016	4.1	27	USEPA, 2018	0.019U	0.020U	0.019U	0.018U	0.018U	0.019U	0.019U	0.019U	0.018U	0.019U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.019U
Aroclor 1221	0.20	0.83	USEPA, 2018	0.019U	0.020U	0.019U	0.018U	0.018U	0.019U	0.019U	0.019U	0.018U	0.019U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.019U
Aroclor 1232	0.17	0.72	USEPA, 2018	0.019U	0.020U	0.019U	0.018U	0.018U	0.019U	0.019U	0.019U	0.018U	0.019U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.019U
Aroclor 1242	0.23	0.95	USEPA, 2018	0.019U	0.020U	0.019U	0.018U	0.018U	0.019U	0.019U	0.019U	0.018U	0.019U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.019U
Aroclor 1248	0.23	0.95	USEPA, 2018	0.019U	0.020U	0.019U	0.018U	0.018U	0.019U	0.019U	0.019U	0.018U	0.019U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.019U
Aroclor 1254	0.24	0.97	USEPA, 2018	0.019U	0.020U	0.019U	0.018U	0.018U	0.019U	0.019U	0.019U	0.018U	0.019U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.019U
Aroclor 1260	0.24	0.99	USEPA, 2018	0.019U	0.020U	0.019U	0.018U	0.018U	0.019U	0.019U	0.019U	0.018U	0.019U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.018U	0.019U
<b>SVOC-PCDD/PCDF</b>																								
2,3,7,8-TCDD	4.8	22	USEPA, 2018	0.49U	0.49U	0.49U	0.45U	0.46U	0.48U	0.48U	0.48U	0.46U	0.48U	0.46U	0.48U	0.46U	0.44U	0.48U	0.46U	0.44U	0.48U	0.46U	0.44U	0.47U
<b>VOCs</b>																								
1,1,1-Trichloroethane	1,700,000	7,300,000	HERO, 2018	0.92U	0.88U	0.93U	1.0U	1.1U	1.0U	1.0U	1.0U	0.97U	1.0U	1.1U	0.97U	0.82U	0.82U	0.97U	0.82U	0.82U	0.82U	0.82U	0.82U	0.84U
1,1,2,2-Tetrachloroethane	600	2,700	USEPA, 2018	0.92U	0.88U	0.93U	1.0U	1.1U	1.0U	1.0U	1.0U	0.97U	1.0U	1.1U	0.97U	0.82U	0.82U	0.97U	0.82U	0.82U	0.82U	0.82U	0.82U	0.84U
1,1,2-Trichloroethane	1,100	5,000	USEPA, 2018	0.92U	0.88U	0.93U	1.0U	1.1U	1.0U	1.0U	1.0U	0.97U	1.0U	1.1U	0.97U	0.82U	0.82U	0.97U	0.82U	0.82U	0.82U	0.82U	0.84U	
1,1-Dichloroethane	3,600	16,000	USEPA, 2018	0.92U	0.88U	0.93U	1.0U	1.1U	1.0U	1.0U	1.0U	0.97U	1.0U	1.1U	0.97U	0.82U	0.82U	0.97U	0.82U	0.82U	0.82U	0.82U	0.84U	
1,1-Dichloroethene	230,000	1,000,000	USEPA, 2018	4.6U	4.4U	4.6U	5.2U	5.5U	5.2U	5.2U	5.2U	4.9U	5.2U	5.5U	4.9U	4.1U	4.1U	4.9U	4.1U	4.1U	4.1U	4.1U	4.2U	
1,2,4-Trimethylbenzene	300,000	1,800,000	USEPA, 2018	0.92U	0.88U	0.93U	1.0U	1.1U	1.0U	1.0U	1.0U	0.97U	1.0U	1.1U	0.97U	0.82U	0.82U	0.97U	0.82U	0.82U	0.82U	0.82U	0.84U	
1,2-Dibromoethane (EDB)	36	160	USEPA, 2018	0.92U	0.88U	0.93U	1.0U	1.1U	1.0U	1.0U	1.0U	0.97U	1.0U	1.1U	0.97U	0.82U	0.82U	0.97U	0.82U	0.82U	0.82U	0.82U	0.84U	
1,2-Dichlorobenzene	1,800,000	9,300,000	USEPA, 2018	0.92U	0.88U	0.93U	1.0U	1.1U	1.0U	1.0U	1.0U	0.97U	1.0U	1.1U	0.97U	0.82U	0.82U	0.97U	0.82U	0.82U	0.82U	0.82U	0.84U	
1,2-Dichloroethane	460	2,000	USEPA, 2018	0.92U	0.88U	0.93U	1.0U	1.1U	1.0U	1.0U	1.0U	0.97U	1.0U	1.1U	0.97U	0.82U	0.82U	0.97U	0.82U	0.82U	0.82U	0.82U	0.84U	
cis-1,2-Dichloroethene	19,000	86,000	HERO, 2018	0.92U	0.88U	0.93U	1.0U	1.1U	1.0U	1.0U	1.0U	0.97U	1.0U	1.1U	0.97U	0.82U	0.82U	0.97U	0.82U	0.82U	0.82U	0.82U	0.84U	
trans-1,2-Dichloroethene	130,000	600,000	HERO, 2018	0.92U	0.88U	0.93U	1.0U	1.1U	1.0U	1.0U	1.0U	0.97U	1.0U	1.1U	0.97U	0.82U	0.82U	0.97U	0.82U	0.82U	0.82U	0.82U	0.84U	
1,2-Dichloropropane	2,500	11,000	USEPA, 2018	0.92U	0.88U	0.93U	1.0U	1.1U	1.0U	1.0U	1.0U	0.97U	1.0U	1.1U	0.97U	0.82U	0.82U	0.97U	0.82U	0.82U	0.82U	0.82U	0.84U	

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

VOCs (continued)	Analyte	Residential	Commercial/	Source	Lab Sample ID:		Field Sample ID:		Sample Location:		Sample Depth:		Units													
					SHAD041DP017	SHAD041DP018	SHAD041DP019	SHAD041DP020	SHAD041DP022	SHAD041DP024	SHAD041DP025	SHAD041DP026	SHAD041DP027	SS04NS	VSP-17	SS04NS	VSP-18	SS04NS	VSP-19	SS04NS	VSP-20	SS04NS	VSP-22	SS04NS	VSP-24	SS04NS
1,3-Dichlorobenzene	HERO, 2018	--	--	--	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
cis-1,3-Dichloropropene	HERO, 2018	580	2,600	HERO, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
trans-1,3-Dichloropropene	HERO, 2018	580	2,600	HERO, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
1,4-Dichlorobenzene	USEPA, 2018	2,600	11,000	USEPA, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Benzene	HERO, 2018	330	1,400	HERO, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Bromodichloromethane	USEPA, 2018	290	1,300	USEPA, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Bromoform	USEPA, 2018	19,000	86,000	USEPA, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Bromomethane	USEPA, 2018	6,800	30,000	USEPA, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Carbon Tetrachloride	HERO, 2018	99	430	HERO, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Chlorobenzene	USEPA, 2018	280,000	1,300,000	USEPA, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Chloroform	USEPA, 2018	320	1,400	USEPA, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Chloromethane	USEPA, 2018	110,000	460,000	USEPA, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Dibromochloromethane	HERO, 2018	940	4,100	HERO, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Ethylbenzene	USEPA, 2018	5,800	25,000	USEPA, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Methylene Chloride	HERO, 2018	1,900	24,000	HERO, 2018	4.6 U	4.4 U	4.6 U	5.2 U	5.5 U	5.2 U	5.2 U	4.9 U	4.1 U	4.2 U												
Styrene	USEPA, 2018	6,000,000	35,000,000	USEPA, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Tetrachloroethene	HERO, 2018	590	2,700	HERO, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Toluene	HERO, 2018	1,100,000	5,400,000	HERO, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Trichloroethene	USEPA, 2018	940	6,000	USEPA, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
Vinyl Chloride	HERO, 2018	8.8	150	HERO, 2018	0.92 U	0.88 U	0.93 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	0.82 U	0.84 U												
m-p-Xylene	USEPA, 2018	550,000	2,400,000	USEPA, 2018	4.6 U	4.4 U	4.6 U	5.2 U	5.5 U	5.2 U	5.2 U	4.9 U	4.1 U	4.2 U												
o-Xylene	USEPA, 2018	650,000	2,800,000	USEPA, 2018	4.6 U	4.4 U	4.6 U	5.2 U	5.5 U	5.2 U	5.2 U	4.9 U	4.1 U	4.2 U												

Notes:

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- pg/g = picogram per gram
- Bolded and Underlined:** exceedance of residential risk-based screening level
- Bolded:** exceedance of commercial/industrial risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect

J = estimated value

J- = estimated value, biased low

J+ = estimated value, biased high

NS = Not sampled

References:

Human and Ecological Risk Office (HERO), 2011. *User's Guide to Leads Spread 8 and Recommendations for Evaluation of Lead Exposures in Adults*. Department of Toxic Substances Control (DTSC), September.  
 HERO, 2018. *Human Health Risk Assessment (HHRA) Note Number: 3, DTSC-modified Screening Levels (DTSC-SL)*. Retrieved from: [http://www.dtsc.ca.gov/AssessingRisk/upload/HERO\\_HHRA\\_Note\\_3\\_June\\_2018.pdf](http://www.dtsc.ca.gov/AssessingRisk/upload/HERO_HHRA_Note_3_June_2018.pdf)  
 USEPA, 2018. *Regional Screening Levels (RSLs)*. November.

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

PAHs	Residential		Commercial/		Source	Lab Sample ID:		Field Sample ID:		Sample Location:		Sample Depth:		Units	
	Analyte					SHAD041DP028	SHAD041DP029	SHAD041DP030	SHAD041DP002	SHAD041DP004	SHAD041DP006	SHAD041DP008	SHAD041DP010		SHAD041DP011
Naphthalene	3,800		17,000		USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
2-Methylnaphthalene	240,000		3,000,000		USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
1-Methylnaphthalene	18,000		73,000		USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Acenaphthylene	--		--		--	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Acenaphthene	3,600,000		45,000,000		USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Fluorene	2,400,000		30,000,000		USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Phenanthrene	--		--		--	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Anthracene	18,000,000		230,000,000		USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Fluoranthene	2,400,000		30,000,000		USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Pyrene	1,800,000		23,000,000		USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Benz[a]anthracene	1,100		13,000		HERO, 2017; USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Chrysene	110,000		1,300,000		HERO, 2017; USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Benz[b]fluoranthene	1,100		13,000		HERO, 2017; USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Benz[k]fluoranthene	11,000		130,000		HERO, 2017; USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Benz[a]pyrene	110		1,300		HERO, 2017; USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Indeno[1,2,3-cd]pyrene	1,100		13,000		HERO, 2017; USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Dibenz[a,h]anthracene	110		1,300		HERO, 2017; USEPA, 2018	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
Benz[ghi]perylene	--		--		--	3.9 U	3.9 U	4.1 U	4.4 U	4.4 U	4.2 U	4.4 U	4.2 U	4.3 U	
<b>Metals</b>															
Chromium VI	0.30		6.3		USEPA, 2018	0.52	0.30 J	0.30 J	0.99	0.99	0.46 J	1.4	0.49	0.51	
Chromium	36,000		170,000		HERO, 2018	15	12	13	14	14	12	16	16	9.3	
Lead	80		320		HERO, 2011	3.7 J	2.4 J	2.8 J	6.5	6.5	3.8 J	8.4	3.4 J	6.0 J	
<b>PCBs</b>															
Aroclor 1016	4.1		27		USEPA, 2018	0.019 U	0.019 U	0.020 U	0.021 U	0.021 U	0.020 U	0.021 U	0.020 U	0.021 U	
Aroclor 1221	0.20		0.83		USEPA, 2018	0.019 U	0.019 U	0.020 U	0.021 U	0.021 U	0.020 U	0.021 U	0.020 U	0.021 U	
Aroclor 1232	0.17		0.72		USEPA, 2018	0.019 U	0.019 U	0.020 U	0.021 U	0.021 U	0.020 U	0.021 U	0.020 U	0.021 U	
Aroclor 1242	0.23		0.95		USEPA, 2018	0.019 U	0.019 U	0.020 U	0.021 U	0.021 U	0.020 U	0.021 U	0.020 U	0.021 U	
Aroclor 1248	0.23		0.95		USEPA, 2018	0.019 U	0.019 U	0.020 U	0.021 U	0.021 U	0.020 U	0.021 U	0.020 U	0.021 U	
Aroclor 1254	0.24		0.97		USEPA, 2018	0.019 U	0.019 U	0.020 U	0.021 U	0.021 U	0.020 U	0.021 U	0.020 U	0.021 U	
Aroclor 1260	0.24		0.99		USEPA, 2018	0.019 U	0.019 U	0.020 U	0.021 U	0.021 U	0.020 U	0.021 U	0.020 U	0.021 U	
<b>SVOC-PCDD/PCDF</b>															
2,3,7,8-TCDD	4.8		22		USEPA, 2018	0.48 U	0.48 U	0.50 U	0.53 U	0.53 U	0.51 U	0.53 U	0.51 U	0.53 U	
<b>VOCs</b>															
1,1,1-Trichloroethane	1,700,000		7,300,000		HERO, 2018	1.0 U	0.98 U	0.96 U	1.1 U	1.1 U	0.97 U	1.2 U	0.93 U	1.1 U	
1,1,2,2-Tetrachloroethane	600		2,700		USEPA, 2018	1.0 U	0.98 U	0.96 U	1.1 U	1.1 U	0.97 U	1.2 U	0.93 U	1.1 U	
1,1,2-Trichloroethane	1,100		5,000		USEPA, 2018	1.0 U	0.98 U	0.96 U	1.1 U	1.1 U	0.97 U	1.2 U	0.93 U	1.1 U	
1,1-Dichloroethane	3,600		16,000		USEPA, 2018	1.0 U	0.98 U	0.96 U	1.1 U	1.1 U	0.97 U	1.2 U	0.93 U	1.1 U	
1,1-Dichloroethene	230,000		1,000,000		USEPA, 2018	5.0 U	4.9 U	4.8 U	5.6 U	5.6 U	4.9 U	5.9 U	4.7 U	5.5 U	
1,2,4-Trimethylbenzene	300,000		1,800,000		USEPA, 2018	1.0 U	0.98 U	0.96 U	1.1 U	1.1 U	0.97 U	1.2 U	0.93 U	1.1 U	
1,2-Dibromoethane (EDB)	36		160		USEPA, 2018	1.0 U	0.98 U	0.96 U	1.1 U	1.1 U	0.97 U	1.2 U	0.93 U	1.1 U	
1,2-Dichlorobenzene	1,800,000		9,300,000		USEPA, 2018	1.0 U	0.98 U	0.96 U	1.1 U	1.1 U	0.97 U	1.2 U	0.93 U	1.1 U	
1,2-Dichloroethane	460		2,000		USEPA, 2018	1.0 U	0.98 U	0.96 U	1.1 U	1.1 U	0.97 U	1.2 U	0.93 U	1.1 U	
cis-1,2-Dichloroethene	19,000		86,000		HERO, 2018	1.0 U	0.98 U	0.96 U	1.1 U	1.1 U	0.97 U	1.2 U	0.93 U	1.1 U	
trans-1,2-Dichloroethene	130,000		600,000		HERO, 2018	1.0 U	0.98 U	0.96 U	1.1 U	1.1 U	0.97 U	1.2 U	0.93 U	1.1 U	
1,2-Dichloropropane	2,500		11,000		USEPA, 2018	1.0 U	0.98 U	0.96 U	1.1 U	1.1 U	0.97 U	1.2 U	0.93 U	1.1 U	

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

Analyte	Residential	Commercial/	Source	Lab Sample ID:	SHAD041DP028	SHAD041DP029	SHAD041DP030	SHAD041DP002	SHAD041DP004	SHAD041DP006	SHAD041DP008	SHAD041DP010	SHAD041DP011
VOCs (continued)				Field Sample ID:	SS04NS	SS04NS	SS04NS	SS05NS	SS05NS	SS05NS	SS05NS	SS05NS	SS05NS
				Sample Location:	VSP-28	VSP-29	VSP-30	VSP-2	VSP-4	VSP-6	VSP-8	VSP-10	VSP-11
				Sample Depth:	10	10	10	12.5	12.5	12.5	12.5	12.5	12.5
				Units									
1,3-Dichlorobenzene	--	--	--	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
cis-1,3-Dichloropropene	580	2,600	HERO, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
trans-1,3-Dichloropropene	580	2,600	HERO, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
1,4-Dichlorobenzene	2,600	11,000	USEPA, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
Benzene	330	1,400	HERO, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
Bromodichloromethane	290	1,300	USEPA, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
Bromoform	19,000	86,000	USEPA, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
Bromomethane	6,800	30,000	USEPA, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
Carbon Tetrachloride	99	430	HERO, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
Chlorobenzene	280,000	1,300,000	USEPA, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
Chloroform	320	1,400	USEPA, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
Chloromethane	110,000	460,000	USEPA, 2018	µg/kg	5.0 U	4.9 U	4.8 U	5.6 U	4.9 U	5.9 U	4.7 U	4.4 U	5.5 U
Dibromochloromethane	940	4,100	HERO, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
Ethylbenzene	5,800	25,000	USEPA, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
Methylene Chloride	1,900	24,000	HERO, 2018	µg/kg	5.0 U	4.9 U	4.8 U	5.6 U	2.3 J	5.9 U	4.7 U	4.4 U	5.5 U
Styrene	6,000,000	35,000,000	USEPA, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
Tetrachloroethene	590	2,700	HERO, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
Toluene	1,100,000	5,400,000	HERO, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
Trichloroethene	940	6,000	USEPA, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.41 J	0.89 U	1.1 U
Vinyl Chloride	8.8	150	HERO, 2018	µg/kg	1.0 U	0.98 U	0.96 U	1.1 U	0.97 U	1.2 U	0.93 U	0.89 U	1.1 U
m-p-Xylene	550,000	2,400,000	USEPA, 2018	µg/kg	5.0 U	4.9 U	4.8 U	5.6 U	4.9 U	5.9 U	4.7 U	4.4 U	5.5 U
o-Xylene	650,000	2,800,000	USEPA, 2018	µg/kg	5.0 U	4.9 U	4.8 U	5.6 U	4.9 U	5.9 U	4.7 U	4.4 U	5.5 U

Notes:

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- pg/g = picogram per gram
- Bolded and Underlined:** exceedance of residential risk-based screening level
- Bolded:** exceedance of commercial/industrial risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect

J = estimated value

J- = estimated value, biased low

J+ = estimated value, biased high

NS = Not sampled

References:

Human and Ecological Risk Office (HERO), 2011. *User's Guide to LeadsSpread 8 and Recommendations for Evaluation of Lead Exposures in Adults*. Department of Toxic Substances Control (DTSC), September.  
 HERO, 2018. *Human Health Risk Assessment (HHRA) Note Number: 3, DTSC-modified Screening Levels (DTSC-SL)*. Retrieved from: [http://www.dtsc.ca.gov/AssessingRisk/upload/HERO\\_HHRA\\_Note\\_3\\_June\\_2018.pdf](http://www.dtsc.ca.gov/AssessingRisk/upload/HERO_HHRA_Note_3_June_2018.pdf)  
 USEPA, 2018. *Regional Screening Levels (RSLs)*. November.





Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

VOCs (continued)	Residential		Commercial/		Source	Lab Sample ID:		SHAD041DP012		SHAD041DP013		SHAD041DP015		SHAD041DP017		SHAD041DP018		SHAD041DP019		SHAD041DP020		SHAD041DP022		SHAD041DP024								
	Field Sample ID:	Sample Location:	Sample Depth:	Units		SS05NS	VSP-12	12.5	SS05NS	VSP-13	12.5	SS05NS	VSP-15	12.5	SS05NS	VSP-17	12.5	SS05NS	VSP-18	12.5	SS05NS	VSP-19	12.5	SS05NS	VSP-20	12.5	SS05NS	VSP-22	12.5	SS05NS	VSP-24	12.5
1,3-Dichlorobenzene	--	--	--	--	HERO, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
cis-1,3-Dichloropropene	580	2,600	2,600	2,600	HERO, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
trans-1,3-Dichloropropene	580	2,600	2,600	2,600	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
1,4-Dichlorobenzene	2,600	11,000	11,000	11,000	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
Benzene	330	1,400	1,400	1,400	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
Bromodichloromethane	290	1,300	1,300	1,300	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
Bromoform	19,000	86,000	86,000	86,000	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
Bromomethane	6,800	30,000	30,000	30,000	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
Carbon Tetrachloride	99	430	430	430	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
Chlorobenzene	280,000	1,300,000	1,300,000	1,300,000	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
Chloroform	320	1,400	1,400	1,400	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
Chloromethane	110,000	460,000	460,000	460,000	USEPA, 2018	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	NS	
Dibromochloromethane	940	4,100	4,100	4,100	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
Ethylbenzene	5,800	25,000	25,000	25,000	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
Methylene Chloride	1,900	24,000	24,000	24,000	USEPA, 2018	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	NS	
Styrene	6,000,000	35,000,000	35,000,000	35,000,000	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
Tetrachloroethene	590	2,700	2,700	2,700	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
Toluene	1,100,000	5,400,000	5,400,000	5,400,000	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
Trichloroethene	940	6,000	6,000	6,000	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
Vinyl Chloride	8.8	150	150	150	USEPA, 2018	0.96 U	1.2 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	0.86 U	1.1 U	1.0 U	NS
m-p-Xylene	550,000	2,400,000	2,400,000	2,400,000	USEPA, 2018	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	NS	
o-Xylene	650,000	2,800,000	2,800,000	2,800,000	USEPA, 2018	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	4.8 U	5.9 U	4.3 U	5.3 U	5.2 U	NS	

Notes:

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- pg/g = picogram per gram
- Bolded and Underlined:** exceedance of residential/industrial risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect
- J = estimated value
- J- = estimated value, biased low
- J+ = estimated value, biased high
- NS = Not sampled

**References:**  
 Human and Ecological Risk Office (HERO), 2011. *User's Guide to LeadsSpread 8 and Recommendations for Human and Ecological Risk Assessment (HHRA) Note Number: 3*. Department of Toxic Substances Control (DTSC), September.  
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 USEPA, 2018. *Regional Screening Levels (RSLs)*. November.

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

PAHs	Residential		Commercial/		Source	Lab Sample ID:		Field Sample ID:		Sample Location:		Sample Depth:	
	Units	Units	Units	Units		Units	Units	Units	Units	Units	Units	Units	Units
Naphthalene	3,800	17,000	USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	3.7 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
2-Methylnaphthalene	240,000	3,000,000	USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	4.4 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
1-Methylnaphthalene	18,000	73,000	USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	3.7 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Acenaphthylene	--	--	--	NS	4.1 U	4.4 U	4.7 U	3.7 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Acenaphthene	3,600,000	45,000,000	USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	4.4 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Fluorene	2,400,000	30,000,000	USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	3.7 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Phenanthrene	--	--	--	NS	4.1 U	4.4 U	4.7 U	3.7 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Anthracene	18,000,000	230,000,000	USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	4.4 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Fluoranthene	2,400,000	30,000,000	USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	3.7 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Pyrene	1,800,000	23,000,000	USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	3.7 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Benz[a]anthracene	1,100	13,000	HERO, 2017; USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	4.4 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Chrysene	110,000	1,300,000	HERO, 2017; USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	3.7 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Benz[b]fluoranthene	1,100	13,000	HERO, 2017; USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	4.4 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Benz[k]fluoranthene	11,000	130,000	HERO, 2017; USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	3.7 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Benz[a]pyrene	110	1,300	HERO, 2017; USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	4.4 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Indeno[1,2,3-cd]pyrene	1,100	13,000	HERO, 2017; USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	3.7 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Dibenz[a,h]anthracene	110	1,300	HERO, 2017; USEPA, 2018	NS	4.1 U	4.4 U	4.7 U	4.4 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
Benz[ghi]perylene	--	--	--	NS	4.1 U	4.4 U	4.7 U	3.7 U	3.8 U	4.0 U	3.9 U	3.9 U	4.1 U
<b>Metals</b>													
Chromium VI	0.30	6.3	USEPA, 2018	NS	1.2	0.97	1.7	0.18 J	1.4	0.23 J	0.25 J	0.24 J	0.24 J
Chromium	36,000	170,000	HERO, 2018	NS	14	3.4	21	18	13	13	20	15	15
Lead	80	320	HERO, 2011	NS	7.2	1.6	8.3	4.9 J	5.8	4.2 J	4.8 J	5.5	5.5
<b>PCBs</b>													
Aroclor 1016	4.1	27	USEPA, 2018	NS	0.020 U	0.021 U	0.022 U	0.019 U	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U
Aroclor 1221	0.20	0.83	USEPA, 2018	NS	0.020 U	0.021 U	0.022 U	0.019 U	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U
Aroclor 1232	0.17	0.72	USEPA, 2018	NS	0.020 U	0.021 U	0.022 U	0.019 U	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U
Aroclor 1242	0.23	0.95	USEPA, 2018	NS	0.020 U	0.021 U	0.022 U	0.019 U	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U
Aroclor 1248	0.23	0.95	USEPA, 2018	NS	0.020 U	0.021 U	0.022 U	0.019 U	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U
Aroclor 1254	0.24	0.97	USEPA, 2018	NS	0.020 U	0.021 U	0.022 U	0.019 U	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U
Aroclor 1260	0.24	0.99	USEPA, 2018	NS	0.020 U	0.021 U	0.022 U	0.019 U	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U
<b>SVOC:PCDD/PCDF</b>													
2,3,7,8-TCDD	4.8	22	USEPA, 2018	NS	0.49 U	0.53 U	0.57 U	0.46 U	0.47 U	0.48 U	0.46 U	0.49 U	0.49 U
<b>VOCs</b>													
1,1,1-Trichloroethane	1,700,000	7,300,000	HERO, 2018	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U	1.1 U
1,1,2,2-Tetrachloroethane	600	2,700	USEPA, 2018	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U	1.1 U
1,1,2-Trichloroethane	1,100	5,000	USEPA, 2018	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U	1.1 U
1,1-Dichloroethane	3,600	16,000	USEPA, 2018	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U	1.1 U
1,1-Dichloroethene	230,000	1,000,000	USEPA, 2018	NS	5.7 U	5.1 U	6.1 U	4.9 U	5.1 U	4.5 U	4.0 U	5.4 U	5.4 U
1,2,4-Trimethylbenzene	300,000	1,800,000	USEPA, 2018	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U	1.1 U
1,2-Dibromoethane (EDB)	36	160	USEPA, 2018	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U	1.1 U
1,2-Dichlorobenzene	1,800,000	9,300,000	USEPA, 2018	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U	1.1 U
1,2-Dichloroethane	460	2,000	USEPA, 2018	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U	1.1 U
cis-1,2-Dichloroethene	19,000	86,000	HERO, 2018	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U	1.1 U
trans-1,2-Dichloroethene	130,000	600,000	HERO, 2018	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U	1.1 U
1,2-Dichloropropane	2,500	11,000	USEPA, 2018	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U	1.1 U

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

Analyte	Residential	Commercial/	Source	Lab Sample ID:	SHAD041DP025	SHAD041DP026	SHAD041DP027	SHAD041DP028	SHAD041DP029	SHAD041DP030	160-24848-24	160-24917-12	160-24848-30
VOCs (continued)				Field Sample ID:	SS05NS	SS05NS	SS05NS	SS05NS	SS05NS	SS05NS	SS06NS	SS06NS	SS06NS
				Sample Location:	VSP-25	VSP-26	VSP-27	VSP-28	VSP-29	VSP-30	VSP-2	VSP-4	VSP-6
				Sample Depth:	12.5	12.5	12.5	12.5	12.5	12.5	15	15	15
				Units									
1,3-Dichlorobenzene	--	--	--	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
cis-1,3-Dichloropropene	580	2,600	HERO, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
trans-1,3-Dichloropropene	580	2,600	HERO, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
1,4-Dichlorobenzene	2,600	11,000	USEPA, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
Benzene	330	1,400	HERO, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
Bromodichloromethane	290	1,300	USEPA, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
Bromoform	19,000	86,000	USEPA, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
Bromomethane	6,800	30,000	USEPA, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
Carbon Tetrachloride	99	430	HERO, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
Chlorobenzene	280,000	1,300,000	USEPA, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
Chloroform	320	1,400	USEPA, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
Chloromethane	110,000	460,000	USEPA, 2018	µg/kg	NS	5.7 U	5.1 U	6.1 U	4.9 U	5.1 U	4.5 U	4.0 U	5.4 U
Dibromochloromethane	940	4,100	HERO, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
Ethylbenzene	5,800	25,000	USEPA, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
Methylene Chloride	1,900	24,000	HERO, 2018	µg/kg	NS	5.7 U	5.1 U	6.1 U	4.9 U	5.1 U	4.5 U	2.2 J	5.4 U
Styrene	6,000,000	35,000,000	USEPA, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
Tetrachloroethene	590	2,700	HERO, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
Toluene	1,100,000	5,400,000	HERO, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
Trichloroethene	940	6,000	USEPA, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
Vinyl Chloride	8.8	150	HERO, 2018	µg/kg	NS	1.1 U	1.0 U	1.2 U	0.97 U	1.0 U	0.90 U	0.79 U	1.1 U
m-p-Xylene	550,000	2,400,000	USEPA, 2018	µg/kg	NS	5.7 U	5.1 U	6.1 U	4.9 U	5.1 U	4.5 U	4.0 U	5.4 U
o-Xylene	650,000	2,800,000	USEPA, 2018	µg/kg	NS	5.7 U	5.1 U	6.1 U	4.9 U	5.1 U	4.5 U	4.0 U	5.4 U

Notes:

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- pg/g = picogram per gram
- Bolded and Underlined:** exceedance of residential risk-based screening level
- Bolded:** exceedance of commercial/industrial risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect

J = estimated value

J- = estimated value, biased low

J+ = estimated value, biased high

NS = Not sampled

References:

- Human and Ecological Risk Office (HERO), 2011. *User's Guide to Leads Spread 8 and Recommendations for Human and Ecological Risk Assessment (HHRA) Note Number: 3*. DTSC-modified Screening Levels (DTSC-SL). Retrieved from: [http://www.dtsc.ca.gov/AssessingRisk/upload/HERO\\_HHRA\\_Note\\_3\\_June\\_2018.pdf](http://www.dtsc.ca.gov/AssessingRisk/upload/HERO_HHRA_Note_3_June_2018.pdf)
- USEPA, 2018. *Regional Screening Levels (RSLs)*. November.







Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

VOCs (continued)	Analyte	Residential	Commercial/	Source	Lab Sample ID:		Field Sample ID:		Sample Location:		Sample Depth:		Units						
					SHAD041DP020	SHAD041DP022	SHAD041DP024	SHAD041DP025	SHAD041DP026	SHAD041DP027	SHAD041DP028	SHAD041DP029	SHAD041DP030	NA	SS06NS	VSP-20	VSP-22	VSP-24	VSP-25
1,3-Dichlorobenzene		--	--	HERO, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
cis-1,3-Dichloropropene		580	2,600	HERO, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
trans-1,3-Dichloropropene		580	2,600	HERO, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
1,4-Dichlorobenzene		2,600	11,000	USEPA, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
Benzene		330	1,400	HERO, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
Bromodichloromethane		290	1,300	USEPA, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
Bromoform		19,000	86,000	USEPA, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
Bromomethane		6,800	30,000	USEPA, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
Carbon Tetrachloride		99	430	HERO, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
Chlorobenzene		280,000	1,300,000	USEPA, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
Chloroform		320	1,400	USEPA, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
Chloromethane		110,000	460,000	USEPA, 2018	NS	5.7 U	NS	NS	5.4 U	NS	4.2 U	4.6 U	4.1 U	4.0 U					
Dibromochloromethane		940	4,100	HERO, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
Ethylbenzene		5,800	25,000	USEPA, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
Methylene Chloride		1,900	24,000	HERO, 2018	NS	5.7 U	NS	NS	5.4 U	NS	4.2 U	4.6 U	4.1 U	4.0 U					
Styrene		6,000,000	35,000,000	USEPA, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
Tetrachloroethene		590	2,700	HERO, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
Toluene		1,100,000	5,400,000	HERO, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
Trichloroethene		940	6,000	USEPA, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
Vinyl Chloride		8.8	150	HERO, 2018	NS	1.1 U	NS	NS	1.1 U	NS	0.85 U	0.93 U	0.82 U	0.79 U					
m-p-Xylene		550,000	2,400,000	USEPA, 2018	NS	5.7 U	NS	NS	5.4 U	NS	4.2 U	4.6 U	4.1 U	4.0 U					
o-Xylene		650,000	2,800,000	USEPA, 2018	NS	5.7 U	NS	NS	5.4 U	NS	4.2 U	4.6 U	4.1 U	4.0 U					

Notes:

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- pg/g = picogram per gram
- Bolded and Underlined:** exceedance of commercial/industrial risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect
- J = estimated value
- J- = estimated value, biased low
- J+ = estimated value, biased high
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References:  
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 USEPA, 2018. *Regional Screening Levels (RSLs)*. November.

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

Analyte	Residential	Commercial/	Source	Units	0-0.5 ft bgs Depth Interval						
					Count	No.	Concentration		EPC	Basis (max or 95 UCL)	
							Maximum	Minimum			95 UCL
<b>PAHs</b>											
Naphthalene	3,800	17,000	USEPA, 2018	µg/kg	21	1	1.6	1.6	NA	1.6	Max
2-Methylnaphthalene	240,000	3,000,000	USEPA, 2018	µg/kg	21	1	0.64	0.64	NA	0.64	Max
1-Methylnaphthalene	18,000	73,000	USEPA, 2018	µg/kg	21	0	< 3.3	< 3.3	NA	< 68	Max ND
Acenaphthylene	--	--	--	µg/kg	21	1	4.3	< 3.3	NA	4.3	Max
Acenaphthene	3,600,000	45,000,000	USEPA, 2018	µg/kg	21	0	< 68	< 3.3	NA	< 68	Max ND
Fluorene	2,400,000	30,000,000	USEPA, 2018	µg/kg	21	0	< 68	< 3.3	NA	< 68	Max ND
Phenanthrene	--	--	--	µg/kg	21	1	14	< 3.3	NA	14	Max
Anthracene	18,000,000	230,000,000	USEPA, 2018	µg/kg	21	1	11	< 3.3	NA	11	Max
Fluoranthene	2,400,000	30,000,000	USEPA, 2018	µg/kg	21	3	39	< 3.3	NA	39	Max
Pyrene	1,800,000	23,000,000	USEPA, 2018	µg/kg	21	3	36	< 3.3	NA	36	Max
Benzol[anthracene]	1,100	13,000	HERO, 2017; USEPA, 2018	µg/kg	21	3	18	< 3.3	NA	18	Max
Chrysene	110,000	1,300,000	HERO, 2017; USEPA, 2018	µg/kg	21	3	64	< 3.3	NA	64	Max
Benzob[fluoranthene]	1,100	13,000	HERO, 2017; USEPA, 2018	µg/kg	21	4	59	< 3.3	21.4	21.4	95% KM (t) UCL
Benzok[fluoranthene]	11,000	130,000	HERO, 2017; USEPA, 2018	µg/kg	21	1	20	< 3.3	NA	20	Max
Benzol[a]pyrene	110	1,300	HERO, 2017; USEPA, 2018	µg/kg	21	3	56	< 3.3	NA	56	Max
Indeno[1,2,3-cd]pyrene	1,100	13,000	HERO, 2017; USEPA, 2018	µg/kg	21	1	18	< 3.3	NA	18	Max
Dibenz[ghi]perylene	1,100	1,300	HERO, 2017; USEPA, 2018	µg/kg	21	0	< 68	< 3.3	NA	< 68	Max ND
Benzol[g,h,i]perylene	--	--	--	µg/kg	21	6	31	< 3.3	21.08	21.08	95% KM (t) UCL
<b>Metals</b>											
Chromium VI	0.30	6.3	USEPA, 2018	mg/kg	21	21	41	0.127	11.15	11.15	95% Chebyshev (Mean, Std) UCL
Chromium	36,000	170,000	HERO, 2018	mg/kg	21	21	52	8.2	30.1	30.1	95% Student's-t UCL
Lead	80	320	HERO, 2011	mg/kg	21	21	3300	2.8	1022	1022	95% Adjusted Gamma UCL
<b>PCBs</b>											
Aroclor 1016	4.1	27	USEPA, 2018	mg/kg	21	0	< 0.017	< 0.011	NA	< 0.017	Max ND
Aroclor 1211	0.20	0.83	USEPA, 2018	mg/kg	21	0	< 0.021	< 0.016	NA	< 0.021	Max ND
Aroclor 1232	0.17	0.72	USEPA, 2018	mg/kg	21	0	< 0.017	< 0.010	NA	< 0.017	Max ND
Aroclor 1242	0.23	0.95	USEPA, 2018	mg/kg	21	0	< 0.017	< 0.010	NA	< 0.017	Max ND
Aroclor 1248	0.23	0.95	USEPA, 2018	mg/kg	21	0	< 0.017	< 0.010	NA	< 0.017	Max ND
Aroclor 1254	0.24	0.97	USEPA, 2018	mg/kg	21	0	< 0.017	< 0.010	NA	< 0.017	Max ND
Aroclor 1260	0.24	0.99	USEPA, 2018	mg/kg	21	4	0.21	< 0.010	0.057	0.057	Gamma Adjusted KM-UCL
<b>SVOC-PCDD/PCDF</b>											
2,3,7,8-TCDD	4.8	22	USEPA, 2018	pg/g	21	20	67	0.15	22.4	22.4	95% KM (Chebyshev) UCL
<b>VOCS</b>											
1,1,1-Trichloroethane	1,700,000	7,300,000	HERO, 2018	µg/kg	21	0	< 3.1	< 0.82	NA	< 3.1	Max ND
1,1,2,2-Tetrachloroethane	600	2,700	USEPA, 2018	µg/kg	21	0	< 3.1	< 0.82	NA	< 3.1	Max ND
1,1,2-Trichloroethane	1,100	5,000	USEPA, 2018	µg/kg	21	0	< 3.1	< 0.82	NA	< 3.1	Max ND
1,1-Dichloroethane	3,600	16,000	USEPA, 2018	µg/kg	21	0	< 1.1	< 0.82	NA	< 1.1	Max ND
1,1-Dichloroethene	230,000	1,000,000	USEPA, 2018	µg/kg	21	1	4.4	< 4.1	NA	4.4	Max
1,2,4-Trimethylbenzene	300,000	1,800,000	USEPA, 2018	µg/kg	21	0	< 1.1	< 0.82	NA	< 1.1	Max ND
1,2-Dibromoethane (EDB)	36	160	USEPA, 2018	µg/kg	21	0	< 1.1	< 0.82	NA	< 1.1	Max ND
1,2-Dichlorobenzene	1,800,000	9,300,000	USEPA, 2018	µg/kg	21	0	< 1.1	< 0.82	NA	< 1.1	Max ND
1,2-Dichloroethane	460	2,000	USEPA, 2018	µg/kg	21	0	< 1.1	< 0.82	NA	< 1.1	Max ND
cis-1,2-Dichloroethene	19,000	86,000	HERO, 2018	µg/kg	21	0	< 1.1	< 0.82	NA	< 1.1	Max ND
trans-1,2-Dichloroethene	130,000	600,000	HERO, 2018	µg/kg	21	0	< 1.1	< 0.82	NA	< 1.1	Max ND
1,2-Dichloropropane	2,500	11,000	USEPA, 2018	µg/kg	21	0	< 1.1	< 0.82	NA	< 1.1	Max ND



Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

Analyte	Residential		Commercial/		Source	Units	Count	No.	0-0.5 ft bgs Depth Interval				
	Residential		Commercial/						Concentration		95 UCL	EPC	Basis (max or 95 UCL)
	Residential	Commercial/	Maximum	Minimum									
<b>VOCs (continued)</b>													
1,3-Dichlorobenzene	--	--	--	--	HERO, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
cis-1,3-Dichloropropene	580	2,600	2,600	2,600	HERO, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
trans-1,3-Dichloropropene	580	2,600	2,600	2,600	HERO, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
1,4-Dichlorobenzene	2,600	11,000	11,000	11,000	USEPA, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
Benzene	330	1,400	1,400	1,400	HERO, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
Bromodichloromethane	290	1,300	1,300	1,300	USEPA, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
Bromoform	19,000	86,000	86,000	86,000	USEPA, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
Bromomethane	6,800	30,000	30,000	30,000	USEPA, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
Carbon Tetrachloride	99	430	430	430	HERO, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
Chlorobenzene	280,000	1,300,000	1,300,000	1,300,000	USEPA, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
Chloroform	320	1,400	1,400	1,400	USEPA, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
Chloromethane	110,000	460,000	460,000	460,000	USEPA, 2018	µg/kg	21	1	4.4	<0.97	NA	4.4	Max
Dibromochloromethane	940	4,100	4,100	4,100	HERO, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
Ethylbenzene	5,800	25,000	25,000	25,000	USEPA, 2018	µg/kg	21	11	12	0.47	4.7	4.7	95% KM (Chebyshev) UCL
Methylene Chloride	1,900	24,000	24,000	24,000	HERO, 2018	µg/kg	21	3	4.5	<0.86	NA	4.5	Max
Styrene	6,000,000	35,000,000	35,000,000	35,000,000	USEPA, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
Tetrachloroethene	590	2,700	2,700	2,700	HERO, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
Toluene	1,100,000	5,400,000	5,400,000	5,400,000	HERO, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
Trichloroethene	940	6,000	6,000	6,000	USEPA, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
Vinyl Chloride	8.8	150	150	150	HERO, 2018	µg/kg	21	0	<1.1	<0.82	NA	<1.1	Max ND
m-p-Xylene	550,000	2,400,000	2,400,000	2,400,000	USEPA, 2018	µg/kg	21	10	76	<1.1	28.43	28.43	95% KM (Chebyshev) UCL
o-Xylene	650,000	2,800,000	2,800,000	2,800,000	USEPA, 2018	µg/kg	21	11	76	4.3	31.18	31.18	95% KM (Chebyshev) UCL

**Notes:**

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- µg/g = microgram per gram
- Bolded and Underlined:** exceedance of residential risk-based screening level
- Bolded:** exceedance of commercial/industrial risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect
- J = estimated value
- J- = estimated value, biased low
- J+ = estimated value, biased high
- NS = Not sampled

**References:**  
 Human and Ecological Risk Office (HERO), 2011. *User's Guide to LeadSpread 8 and Recommendations for Human and Ecological Risk Assessment in Adults*. Department of Toxic Substances Control (DTSC), September.  
 Evaluation of Lead Exposures in Adults . Department of Toxic Substances Control (DTSC), September.  
 HERO, 2018. *Human Health Risk Assessment (HHRA) Note Number: 3, DTSC-modified Screening Levels (DTSC-SLs)*. Retrieved from: [http://www.dtsc.ca.gov/AssessingRisk/upload/HERO\\_HHRA\\_Note\\_3\\_June\\_2018.pdf](http://www.dtsc.ca.gov/AssessingRisk/upload/HERO_HHRA_Note_3_June_2018.pdf)  
 USEPA, 2018. *Regional Screening Levels (RSLs)*. November.

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

Analyte	Residential	Commercial/	Source	Units	0-3 ft bgs Depth Interval						
					Count	No.	Concentration		EPC	Basis (max or 95 UCL)	
							Maximum	Minimum			
Lab Sample ID:	Field Sample ID:	Sample Location:	Sample Depth:								
<b>PAHs</b>											
Naphthalene	3,800	17,000	USEPA, 2018	µg/kg	42	3	3.4	1.6	NA	3.4	Max
2-Methylnaphthalene	240,000	3,000,000	USEPA, 2018	µg/kg	42	3	1.6	0.64	NA	1.6	Max
1-Methylnaphthalene	18,000	73,000	USEPA, 2018	µg/kg	42	0	< 68	< 3.3	NA	< 68	Max ND
Acenaphthylene	--	--	--	µg/kg	42	2	4.3	< 3.3	NA	4.3	Max
Acenaphthene	3,600,000	45,000,000	USEPA, 2018	µg/kg	42	1	4.3	< 3.3	NA	4.3	Max
Fluorene	2,400,000	30,000,000	USEPA, 2018	µg/kg	42	1	1.3	< 3.3	NA	1.3	Max
Phenanthrene	--	--	--	µg/kg	42	3	14	< 3.3	NA	14	Max
Anthracene	18,000,000	230,000,000	USEPA, 2018	µg/kg	42	6	11	1	3.051	3.051	95% KM (t) UCL
Fluoranthene	2,400,000	30,000,000	USEPA, 2018	µg/kg	42	7	39	1.9	8.584	8.584	95% KM (t) UCL
Pyrene	1,800,000	23,000,000	USEPA, 2018	µg/kg	42	5	36	2.5	7.049	7.049	95% KM (t) UCL
Benz[a]anthracene	1,100	13,000	HERO, 2017; USEPA, 2018	µg/kg	42	9	18	1.5	7.178	7.178	95% KM (t) UCL
Chrysene	110,000	1,300,000	HERO, 2017; USEPA, 2018	µg/kg	42	9	64	2.1	10.46	10.46	95% KM (t) UCL
Benz[b]fluoranthene	1,100	13,000	HERO, 2017; USEPA, 2018	µg/kg	42	12	59	1.9	12.31	12.31	95% KM (t) UCL
Benz[k]fluoranthene	11,000	130,000	HERO, 2017; USEPA, 2018	µg/kg	42	3	20	2.1	NA	20	Max
Benz[a]pyrene	110	1,300	HERO, 2017; USEPA, 2018	µg/kg	42	8	56	0.95	8.918	8.918	Gamma Adjusted KM-UCL
Indeno[1,2,3-cd]pyrene	1,100	13,000	HERO, 2017; USEPA, 2018	µg/kg	42	3	18	3.1	NA	18	Max
Dibenz[a,h]anthracene	1,100	1,300	HERO, 2017; USEPA, 2018	µg/kg	42	0	< 68	< 3.3	NA	< 68	Max ND
Benz[ghi]perylene	--	--	--	µg/kg	42	15	31	1.5	10.83	10.83	95% KM (t) UCL
<b>Metals</b>											
Chromium VI	0.30	6.3	USEPA, 2018	mg/kg	42	41	41	0.127	1.768	1.768	KM H-UCL
Chromium	36,000	170,000	HERO, 2018	mg/kg	42	42	52	8.2	23.36	23.36	95% Student's-t UCL
Lead	80	320	HERO, 2011	mg/kg	42	42	3300	0.19	661.9	661.9	95% Adjusted Gamma UCL
<b>PCBs</b>											
Aroclor 1016	4.1	27	USEPA, 2018	mg/kg	42	0	< 0.020	< 0.011	NA	< 0.020	Max ND
Aroclor 1221	0.20	0.83	USEPA, 2018	mg/kg	42	0	< 0.021	< 0.016	NA	< 0.021	Max ND
Aroclor 1232	0.17	0.72	USEPA, 2018	mg/kg	42	0	< 0.020	< 0.010	NA	< 0.020	Max ND
Aroclor 1242	0.23	0.95	USEPA, 2018	mg/kg	42	0	< 0.020	< 0.010	NA	< 0.020	Max ND
Aroclor 1248	0.23	0.95	USEPA, 2018	mg/kg	42	0	< 0.020	< 0.010	NA	< 0.020	Max ND
Aroclor 1254	0.24	0.97	USEPA, 2018	mg/kg	42	0	< 0.020	< 0.010	NA	< 0.020	Max ND
Aroclor 1260	0.24	0.99	USEPA, 2018	mg/kg	42	4	0.21	< 0.010	0.0284	0.0284	Gamma Adjusted KM-UCL
<b>SVOC-PCDD/PCDF</b>											
2,3,7,8-TCDD	4.8	22	USEPA, 2018	pg/g	0	29	67	0.15	15.44	15.44	95% KM (Chebyshev) UCL
<b>VOCS</b>											
1,1,1-Trichloroethane	1,700,000	7,300,000	HERO, 2018	µg/kg	42	0	< 3.1	< 0.82	NA	< 3.1	Max ND
1,1,2,2-Tetrachloroethane	600	2,700	USEPA, 2018	µg/kg	42	0	< 3.1	< 0.82	NA	< 3.1	Max ND
1,1,2-Trichloroethane	1,100	5,000	USEPA, 2018	µg/kg	42	0	< 3.1	< 0.82	NA	< 3.1	Max ND
1,1-Dichloroethane	3,600	16,000	USEPA, 2018	µg/kg	42	0	< 1.3	< 0.82	NA	< 1.3	Max ND
1,1-Dichloroethene	230,000	1,000,000	USEPA, 2018	µg/kg	42	3	6.6	< 4.1	NA	6.6	Max
1,2,4-Trimethylbenzene	300,000	1,800,000	USEPA, 2018	µg/kg	42	0	< 1.3	< 0.82	NA	< 1.3	Max ND
1,2-Dibromoethane (EDB)	36	160	USEPA, 2018	µg/kg	42	0	< 1.3	< 0.82	NA	< 1.3	Max ND
1,2-Dichlorobenzene	1,800,000	9,300,000	USEPA, 2018	µg/kg	42	0	< 1.3	< 0.82	NA	< 1.3	Max ND
1,2-Dichloroethane	460	2,000	USEPA, 2018	µg/kg	42	0	< 1.3	< 0.82	NA	< 1.3	Max ND
cis-1,2-Dichloroethene	19,000	86,000	HERO, 2018	µg/kg	42	0	< 1.3	< 0.82	NA	< 1.3	Max ND
trans-1,2-Dichloroethene	130,000	600,000	HERO, 2018	µg/kg	42	0	< 1.3	< 0.82	NA	< 1.3	Max ND
1,2-Dichloropropane	2,500	11,000	USEPA, 2018	µg/kg	42	0	< 1.3	< 0.82	NA	< 1.3	Max ND

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

Analyte	Residential		Commercial/		Source	Units	Count	No.	0-3 ft bgs Depth Interval			Basis (max or 95 UCL)	
	Field Sample ID:		Concentration						95 UCL	EPC			
	Sample Location:	Sample Depth:	Maximum	Minimum									
<b>VOCs (continued)</b>													
1,3-Dichlorobenzene	--	--	--	--	HERO, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
cis-1,3-Dichloropropene	580	580	2,600	2,600	HERO, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
trans-1,3-Dichloropropene	580	580	2,600	2,600	HERO, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
1,4-Dichlorobenzene	2,600	2,600	11,000	11,000	USEPA, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
Benzene	330	330	1,400	1,400	HERO, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
Bromodichloromethane	290	290	1,300	1,300	USEPA, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
Bromoform	19,000	19,000	86,000	86,000	USEPA, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
Bromomethane	6,800	6,800	30,000	30,000	USEPA, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
Carbon Tetrachloride	99	99	430	430	HERO, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
Chlorobenzene	280,000	280,000	1,300,000	1,300,000	USEPA, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
Chloroform	320	320	1,400	1,400	USEPA, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
Chloromethane	110,000	110,000	460,000	460,000	USEPA, 2018	µg/kg	42	3	6.6	<0.97	NA	6.6	Max
Dibromochloromethane	940	940	4,100	4,100	HERO, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
Ethylbenzene	5,800	5,800	25,000	25,000	USEPA, 2018	µg/kg	42	14	12	0.47	1.515	1.515	KM H-UCL
Methylene Chloride	1,900	1,900	24,000	24,000	HERO, 2018	µg/kg	42	5	6.6	<0.86	2.892	2.892	95% KM (t) UCL
Styrene	6,000,000	6,000,000	35,000,000	35,000,000	USEPA, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
Tetrachloroethene	590	590	2,700	2,700	HERO, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
Toluene	1,100,000	1,100,000	5,400,000	5,400,000	HERO, 2018	µg/kg	42	1	0.75	<0.82	NA	0.75	Max
Trichloroethene	940	940	6,000	6,000	USEPA, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
Vinyl Chloride	8.8	8.8	150	150	HERO, 2018	µg/kg	42	0	<1.3	<0.82	NA	<1.3	Max ND
m-p-Xylene	550,000	550,000	2,400,000	2,400,000	USEPA, 2018	µg/kg	42	13	76	0.91	6.933	6.933	KM H-UCL
o-Xylene	650,000	650,000	2,800,000	2,800,000	USEPA, 2018	µg/kg	42	14	76	0.91	13.09	13.09	Gamma Adjusted KM-UCL

Notes:

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- µg/lb = microgram per pound
- µg/g = microgram per gram
- Bolded and Underlined**: exceedance of residential risk-based screening level
- Bolded**: exceedance of commercial/industrial risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect
- J = estimated value
- J- = estimated value, biased low
- J+ = estimated value, biased high
- NS = Not sampled

**References:**  
 Human and Ecological Risk Office (HERO), 2011. *User's Guide to LeadSpread 8 and Recommendations for Human and Ecological Risk Assessment in Adults*. Department of Toxic Substances Control (DTSC), September.  
 Evaluation of Lead Exposures in Adults. Department of Toxic Substances Control (DTSC), September.  
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 USEPA, 2018. *Regional Screening Levels (RSLs)*. November.

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

Analyte	Residential	Commercial/	Source	Lab Sample ID:		0-10 ft bgs Depth Interval								
				Field Sample ID:		Count	No.	Concentration		95 UCL	EPC	Basis (max or 95 UCL)		
				Sample Location:	Sample Depth:			Maximum	Minimum					
				Units										
<b>PAHs</b>														
Naphthalene	3,800	17,000	USEPA, 2018	µg/kg	84	3	3.4	1.6	NA	3.4	Max			
2-Methylnaphthalene	240,000	3,000,000	USEPA, 2018	µg/kg	84	4	1.6	0.64	0.98	0.98	KM H-UCL			
1-Methylnaphthalene	18,000	73,000	USEPA, 2018	µg/kg	84	0	< 3.3	< 3.3	NA	< 68	Max ND			
Acenaphthylene	--	--	--	µg/kg	84	2	4.3	< 3.3	NA	4.3	Max			
Acenaphthene	3,600,000	45,000,000	USEPA, 2018	µg/kg	84	1	4.3	< 3.3	NA	4.3	Max			
Fluorene	2,400,000	30,000,000	USEPA, 2018	µg/kg	84	1	1.3	1.3	NA	1.3	Max			
Phenanthrene	--	--	--	µg/kg	84	3	14	< 3.3	NA	14	Max			
Anthracene	18,000,000	230,000,000	USEPA, 2018	µg/kg	84	6	11	1	1.744	1.744	95% KM (t) UCL			
Fluoranthene	2,400,000	30,000,000	USEPA, 2018	µg/kg	84	8	39	1.8	4.67	4.67	95% KM (t) UCL			
Pyrene	1,800,000	23,000,000	USEPA, 2018	µg/kg	84	6	36	1.6	4.225	4.225	95% KM (t) UCL			
Benzol[anthracene]	1,100	13,000	HERO, 2017; USEPA, 2018	µg/kg	84	10	18	1	3.881	3.881	95% KM (t) UCL			
Chrysene	110,000	1,300,000	HERO, 2017; USEPA, 2018	µg/kg	84	11	64	2.1	6.111	6.111	95% KM (t) UCL			
Benzofluoranthene	1,100	13,000	HERO, 2017; USEPA, 2018	µg/kg	84	15	59	1.5	6.532	6.532	95% KM (t) UCL			
Benzokifluoranthene	11,000	130,000	HERO, 2017; USEPA, 2018	µg/kg	84	3	20	2.1	NA	20	Max			
Benzo[a]pyrene	110	1,300	HERO, 2017; USEPA, 2018	µg/kg	84	9	56	0.95	4.411	4.411	95% KM Approximate Gamma UCL			
Indeno[1,2,3-cd]pyrene	1,100	13,000	HERO, 2017; USEPA, 2018	µg/kg	84	3	18	3.1	NA	18	Max			
Dibenz[ah]anthracene	1,10	1,300	HERO, 2017; USEPA, 2018	µg/kg	84	0	< 68	< 3.3	NA	< 68	Max ND			
Benzo[ghi]perylene	--	--	--	µg/kg	84	17	31	1.5	5.824	5.824	95% KM (t) UCL			
<b>Metals</b>														
Chromium VI	0.30	6.3	USEPA, 2018	mg/kg	84	83	41	0.12	3.296	3.296	95% KM (Chebyshev) UCL			
Chromium	36,000	170,000	HERO, 2018	mg/kg	84	84	52	7	19.13	19.13	95% Modified-t UCL			
Lead	80	320	HERO, 2011	mg/kg	84	84	3300	0.19	448.4	448.4	95% Chebyshev (Mean, Sd) UCL			
<b>PCBs</b>														
Aroclor 1016	4.1	27	USEPA, 2018	mg/kg	84	0	< 0.020	< 0.011	NA	< 0.020	Max ND			
Aroclor 1221	0.20	0.83	USEPA, 2018	mg/kg	84	0	< 0.021	< 0.016	NA	< 0.021	Max ND			
Aroclor 1232	0.17	0.72	USEPA, 2018	mg/kg	84	0	< 0.020	< 0.010	NA	< 0.020	Max ND			
Aroclor 1242	0.23	0.95	USEPA, 2018	mg/kg	84	0	< 0.020	< 0.010	NA	< 0.020	Max ND			
Aroclor 1248	0.23	0.95	USEPA, 2018	mg/kg	84	0	< 0.020	< 0.010	NA	< 0.020	Max ND			
Aroclor 1254	0.24	0.97	USEPA, 2018	mg/kg	84	0	< 0.020	< 0.010	NA	< 0.020	Max ND			
Aroclor 1260	0.24	0.99	USEPA, 2018	mg/kg	84	4	0.21	< 0.010	0.0178	0.0178	95% KM Approximate Gamma UCL			
<b>SVOC-PCDD/PCDF</b>														
2,3,7,8-TCDD	4.8	22	USEPA, 2018	pg/g	84	37	67	0.15	8.206	8.206	95% KM (Chebyshev) UCL			
<b>VOCS</b>														
1,1,1-Trichloroethane	1,700,000	7,300,000	HERO, 2018	µg/kg	84	0	< 3.1	< 0.82	NA	< 3.1	Max ND			
1,1,2,2-Tetrachloroethane	600	2,700	USEPA, 2018	µg/kg	84	0	< 3.1	< 0.82	NA	< 3.1	Max ND			
1,1,2-Trichloroethane	1,100	5,000	USEPA, 2018	µg/kg	84	0	< 3.1	< 0.82	NA	< 3.1	Max ND			
1,1-Dichloroethane	3,600	16,000	USEPA, 2018	µg/kg	84	0	< 1.3	< 0.82	NA	< 1.3	Max ND			
1,1-Dichloroethene	230,000	1,000,000	USEPA, 2018	µg/kg	84	4	6.6	< 4.1	4.264	4.264	95% KM (t) UCL			
1,2,4-Trimethylbenzene	300,000	1,800,000	USEPA, 2018	µg/kg	84	0	< 1.3	< 0.82	NA	< 1.3	Max ND			
1,2-Dibromoethane (EDB)	36	160	USEPA, 2018	µg/kg	84	0	< 1.3	< 0.82	NA	< 1.3	Max ND			
1,2-Dichlorobenzene	1,800,000	9,300,000	USEPA, 2018	µg/kg	84	0	< 1.3	< 0.82	NA	< 1.3	Max ND			
1,2-Dichloroethane	460	2,000	USEPA, 2018	µg/kg	84	0	< 1.3	< 0.82	NA	< 1.3	Max ND			
cis-1,2-Dichloroethene	19,000	86,000	HERO, 2018	µg/kg	84	0	< 1.3	< 0.82	NA	< 1.3	Max ND			
trans-1,2-Dichloroethene	130,000	600,000	HERO, 2018	µg/kg	84	0	< 1.3	< 0.82	NA	< 1.3	Max ND			
1,2-Dichloropropane	2,500	11,000	USEPA, 2018	µg/kg	84	0	< 1.3	< 0.82	NA	< 1.3	Max ND			

Table F1-1. October 2017 SHAD-041 Soil Sample Results and Summary Statistics

Analyte	Residential		Commercial/		Source	Units	Count	No.	0-10 ft bgs Depth Interval			Basis (max or 95 UCL)	
	Concentration		Concentration						95 UCL	EPC			
	Maximum	Minimum	Maximum	Minimum									
<b>VOCs (continued)</b>													
1,3-Dichlorobenzene	--	--	--	--	--	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
cis-1,3-Dichloropropene	580	580	2,600	2,600	HERO, 2018	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
trans-1,3-Dichloropropene	580	580	2,600	2,600	HERO, 2018	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
1,4-Dichlorobenzene	2,600	2,600	11,000	11,000	USEPA, 2018	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
Benzene	330	330	1,400	1,400	HERO, 2018	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
Bromodichloromethane	290	290	1,300	1,300	USEPA, 2018	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
Bromoform	19,000	19,000	86,000	86,000	USEPA, 2018	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
Bromomethane	6,800	6,800	30,000	30,000	USEPA, 2018	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
Carbon Tetrachloride	99	99	430	430	HERO, 2018	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
Chlorobenzene	280,000	280,000	1,300,000	1,300,000	USEPA, 2018	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
Chloroform	320	320	1,400	1,400	USEPA, 2018	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
Chloromethane	110,000	110,000	460,000	460,000	USEPA, 2018	µg/kg	84	4	6.6	<0.97	1.808	1.808	95% KM (t) UCL
Dibromochloromethane	940	940	4,100	4,100	HERO, 2018	µg/kg	84	0	<5.3	<0.82	NA	<5.3	Max ND
Ethylbenzene	5,800	5,800	25,000	25,000	USEPA, 2018	µg/kg	84	14	12	0.47	0.996	0.996	KM H-UCL
Methylene Chloride	1,900	1,900	24,000	24,000	HERO, 2018	µg/kg	84	8	6.6	<0.86	2.64	2.64	95% KM (t) UCL
Styrene	6,000,000	6,000,000	35,000,000	35,000,000	USEPA, 2018	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
Tetrachloroethene	590	590	2,700	2,700	HERO, 2018	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
Toluene	1,100,000	1,100,000	5,400,000	5,400,000	HERO, 2018	µg/kg	84	1	0.75	<0.82	NA	0.75	Max
Trichloroethene	940	940	6,000	6,000	USEPA, 2018	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
Vinyl Chloride	8.8	8.8	150	150	HERO, 2018	µg/kg	84	0	<1.3	<0.82	NA	<1.3	Max ND
m-p-Xylene	550,000	550,000	2,400,000	2,400,000	USEPA, 2018	µg/kg	84	14	76	0.91	3.136	3.136	KM H-UCL
o-Xylene	650,000	650,000	2,800,000	2,800,000	USEPA, 2018	µg/kg	84	15	76	0.91	3.632	3.632	KM H-UCL

Notes:

- = screening level not established
- µg/kg = microgram per kilogram
- mg/kg = milligram per kilogram
- µg/g = microgram per gram
- Bolded and Underlined**: exceedance of residential risk-based screening level
- Bolded**: exceedance of commercial/industrial risk-based screening level
- J = Estimated because concentration is less than the LOQ or the QC criteria was not met
- U = Non-detect
- J = estimated value
- J- = estimated value, biased low
- J+ = estimated value, biased high
- NS = Not sampled

References:

Human and Ecological Risk Office (HERO), 2011. *User's Guide to LeadSpread 8 and Recommendations for Human and Ecological Risk Assessment in Adults*. Department of Toxic Substances Control (DTSC), September.

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USEPA, 2018. *Regional Screening Levels (RSLs)*. November.



Table F1-2: SHAD-041 Site (0-0.5 ft bgs) Risk Evaluation Results

Parameter Name	Units	Descriptive Statistics				Location & Depth of Max Concentration Detected				Cancer Risk and Noncancer Hazard						SHAD-041 Risk Calculations					
		Count (n)	No. Detects	Minimum	Maximum	95 UCL	Sample	Depth (ft bgs)	Residential		Commercial/Industrial		Construction Worker		RBSSL Source	Residential		Commercial/Industrial		Construction Worker	
									Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer		Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer
Aroclor 1016	mg/kg	21	0	< 0.011	< 0.017	1	NA	VSP 24; VSP 25; VSP 29	0.5	6.7	4.1	27	51	--	1.3E-09	0.002	3.1E-10	0.0002	--	--	--
Aroclor 1221	mg/kg	21	0	< 0.016	< 0.021	1	NA	VSP 19; VSP 24; VSP 25; VSP 29	0.5	0.20	--	0.83	--	--	5.3E-08	--	1.3E-08	--	--	--	--
Aroclor 1232	mg/kg	21	0	< 0.010	< 0.017	1	NA	VSP 19; VSP 24; VSP 25; VSP 29	0.5	0.17	--	0.72	--	--	5.0E-08	--	1.2E-08	--	--	--	--
Aroclor 1242	mg/kg	21	0	< 0.010	< 0.017	1	NA	VSP 19; VSP 24; VSP 25; VSP 29	0.5	0.23	--	0.95	--	--	3.7E-08	--	8.9E-09	--	--	--	--
Aroclor 1248	mg/kg	21	0	< 0.010	< 0.017	1	NA	VSP 19; VSP 24; VSP 25; VSP 29	0.5	0.23	--	0.95	--	--	3.7E-08	--	8.9E-09	--	--	--	--
Aroclor 1254	mg/kg	21	0	< 0.010	< 0.017	1	NA	VSP 19; VSP 24; VSP 25; VSP 29	0.5	0.24	1.2	0.97	15	--	3.5E-08	0.007	8.8E-09	0.0006	--	--	--
Aroclor 1260	mg/kg	21	4	< 0.010	0.21		0.057	VSP 6	0.5	0.24	--	0.99	--	--	2.4E-07	--	5.8E-08	--	--	--	--
<b>VOCs</b>																					
1,1,1-Trichloroethane	mg/kg	21	0	< 0.0082	< 0.0031	1	NA	VSP 26	0.5	--	1,700	--	7,200	--	0.000009	--	0.000002	--	--	0.000002	0.000002
1,1,2,2-Tetrachloroethane	mg/kg	21	0	< 0.0082	< 0.0031	1	NA	VSP 26	0.5	0.60	1,600	2.7	4,300	49	2.6E-09	0.000001	5.7E-10	0.000004	3.2E-11	0.000002	0.000002
1,1,2-Trichloroethane	mg/kg	21	0	< 0.0082	< 0.0031	1	NA	VSP 26	0.5	1.1	1.5	5.0	6.3	110	1.4E-09	0.001	3.1E-10	0.0002	1.4E-11	0.0002	0.0002
1,1-Dichloroethane	mg/kg	21	0	< 0.0082	< 0.0011	1	NA	VSP 6; VSP 30	0.5	3.6	1,600	16	7,100	370	1.5E-10	0.0000003	3.4E-11	0.00000008	1.5E-12	0.000000008	0.000000008
1,1-Dichloroethylene	mg/kg	21	1	< 0.0041	0.0044		NA	VSP 27	0.5	--	230	--	1,000	--	0.00002	--	0.000004	--	0.00001	--	0.00001
1,2,4-Trimethylbenzene	mg/kg	21	0	< 0.0082	< 0.0011	1	NA	VSP 6; VSP 30	0.5	--	300	--	1,800	--	0.000002	--	0.0000003	--	--	--	--
1,2-Dibromoethane	mg/kg	21	0	< 0.0082	< 0.0011	1	NA	VSP 6; VSP 30	0.5	0.036	7.1	0.16	30	3.3	1.5E-08	0.00008	3.4E-09	0.00002	1.7E-10	0.00002	0.00002
1,2-Dichlorobenzene	mg/kg	21	0	< 0.0082	< 0.0011	1	NA	VSP 6; VSP 30	0.5	--	1,800	--	9,300	--	0.0000003	--	0.0000006	--	0.0000007	--	0.0000007
1,2-Dichloroethane	mg/kg	21	0	< 0.0082	< 0.0011	1	NA	VSP 6; VSP 30	0.5	0.46	31	2.0	140	45	1.2E-09	0.00002	2.8E-10	0.000004	1.2E-11	0.000004	0.000004
1,2-Dichloropropane	mg/kg	21	0	< 0.0082	< 0.0011	1	NA	VSP 6; VSP 30	0.5	2.5	16	11	66	99	2.2E-10	0.00003	5.0E-11	0.000008	5.6E-12	0.000008	0.000008
1,4-Dichlorobenzene	mg/kg	21	0	< 0.0082	< 0.0011	1	NA	VSP 6; VSP 30	0.5	2.6	3,400	11	25,000	280	2.1E-10	0.000002	5.0E-11	0.00000002	2.0E-12	0.00000004	0.00000004
Benzene	mg/kg	21	0	< 0.0082	< 0.0011	1	NA	VSP 6; VSP 30	0.5	0.33	11	1.4	46	33	1.7E-09	0.00005	3.9E-10	0.00001	1.7E-11	0.00001	0.00001
Bromodichloromethane	mg/kg	21	0	< 0.0082	< 0.0011	1	NA	VSP 6; VSP 30	0.5	0.29	270	1.3	1,300	28	1.9E-09	0.00002	4.2E-10	0.000004	2.0E-11	0.00000008	0.00000008
Bromoform	mg/kg	21	0	< 0.0082	< 0.0011	1	NA	VSP 6; VSP 30	0.5	19	1,600	86	3,000	1,200	2.9E-11	0.000003	6.4E-12	0.000002	4.6E-13	0.00000008	0.00000008

Table F1-2: SHAD-041 Site (0-0.5 ft bgs) Risk Evaluation Results

Parameter Name	Units	Descriptive Statistics				Location & Depth of Max Concentration Detected				Risk-Based Concentrations Used to Calculate Cancer Risk and Noncancer Hazard				SHAD-041 Risk Calculations						
		Count (n)	No. Detects	Minimum	Maximum	95 UCL	Sample	Depth (ft.bgs)	Residential Cancer	Residential Non-cancer	Commercial/Industrial Cancer	Commercial/Industrial Non-cancer	Construction Worker Cancer	Construction Worker Non-cancer	Residential Cancer	Residential Non-cancer	Commercial/Industrial Cancer	Commercial/Industrial Non-cancer	Construction Worker Cancer	Construction Worker Non-cancer
Bromomethane	mg/kg	21	0	< 0.00082	< 0.0011	1	NA	VSP6; VSP30	0.5;	6.8	--	30	--	29	--	0.00008	--	0.00002	--	0.00002
Carbon Tetrachloride	mg/kg	21	0	< 0.00082	< 0.0011	1	NA	VSP6; VSP30	0.5;	100	0.43	570	10	220	5.6E-09	0.000006	1.3E-09	0.000001	5.5E-11	0.000003
Chlorobenzene	mg/kg	21	0	< 0.00082	< 0.0011	1	NA	VSP6; VSP30	0.5;	280	--	1,300	--	1,200	--	0.000002	--	0.000004	--	0.0000005
Chloroform	mg/kg	21	0	< 0.00082	< 0.0011	1	NA	VSP6; VSP30	0.5;	200	1.4	1,000	34	860	1.7E-09	0.000003	3.9E-10	0.0000006	1.6E-11	0.0000006
Chloromethane	mg/kg	21	1	< 0.00097	0.0044		NA	VSP27	0.5;	110	--	460	--	470	--	0.00004	--	0.00001	--	0.000009
cis-1,2-Dichloroethene	mg/kg	21	0	< 0.00082	< 0.0011	1	NA	VSP6; VSP30	0.5;	18	--	84	--	78	--	0.00003	--	0.000007	--	0.000007
cis-1,3-Dichloropropene	mg/kg	21	0	< 0.00082	< 0.0011	1	NA	VSP6; VSP30	0.5;	72	2.5	310	53	300	9.5E-10	0.000008	2.2E-10	0.000002	1.0E-11	0.000002
Dibromochloromethane	mg/kg	21	0	< 0.00082	< 0.0011	1	NA	VSP6; VSP30	0.5;	470	4.1	2,500	290	7,100	5.9E-10	0.000001	1.3E-10	0.0000002	1.9E-12	0.0000008
Ethylbenzene	mg/kg	21	11	0.00047	0.012		0.0047	VSP30	0.5;	5.8	3,400	25	20,000	15,000	8.1E-10	0.000001	1.9E-10	0.0000002	8.7E-12	0.0000003
m-Xylene & p-Xylene	mg/kg	21	10	< 0.0011	0.076		0.028	VSP30	0.5;	550	--	2,400	--	--	--	0.00005	--	0.00001	--	--
Methylene chloride	mg/kg	21	3	< 0.00086	0.0045		NA	VSP18	0.5;	350	24	3,200	490	1,400	2.5E-09	0.00001	1.9E-10	0.000001	9.2E-12	0.0000003
o-Xylene	mg/kg	21	11	0.0043	0.076		0.031	VSP30	0.5;	650	--	2,800	--	--	--	0.00005	--	0.00001	--	--
Styrene	mg/kg	21	0	< 0.00082	< 0.0011	1	NA	VSP6; VSP30	0.5;	6,000	--	35,000	--	25,000	--	0.0000009	--	0.0000002	--	0.0000002
Tetrachloroethene	mg/kg	21	0	< 0.00082	< 0.0011	1	NA	VSP6; VSP30	0.5;	81	2.7	390	33	350	9.3E-10	0.000007	2.0E-10	0.000001	1.7E-11	0.000002
Toluene	mg/kg	21	0	< 0.00082	< 0.0011	1	NA	VSP6; VSP30	0.5;	1,100	--	5,300	--	4,700	--	0.000005	--	0.000001	--	0.0000001
trans-1,2-Dichloroethene	mg/kg	21	0	< 0.00082	< 0.0011	1	NA	VSP6; VSP30	0.5;	130	--	600	--	570	--	0.000004	--	0.0000009	--	0.0000001
trans-1,3-Dichloropropene	mg/kg	21	0	< 0.00082	< 0.0011	1	NA	VSP6; VSP30	0.5;	72	2.5	310	53	300	9.5E-10	0.000008	2.2E-10	0.000002	1.0E-11	0.000002
Trichloroethene	mg/kg	21	0	< 0.00082	< 0.0011	1	NA	VSP6; VSP30	0.5;	4.1	6.0	19	130	18	5.9E-10	0.0001	9.2E-11	0.00003	4.2E-12	0.00003
Vinyl chloride	mg/kg	21	0	< 0.00082	< 0.0011	1	NA	VSP6; VSP30	0.5;	0.0087	70	0.15	370	300	6.3E-08	0.000008	3.7E-09	0.000001	1.6E-10	0.000002
<b>Total Cancer Risk</b>													<b>4.E-05</b>	<b>0.5</b>	<b>3.E-06</b>	<b>0.04</b>	<b>4.E-06</b>	<b>0.1</b>		

**Notes:**  
 Residential and commercial/industrial risk-based screening levels are based on Human Health Risk Assessment (HHRA) Note Number 3 (HERO, 2018) and Regional Screening Levels (RSLs) (USEPA, 2018).  
 Construction Worker risk-based screening levels are based on Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater (RWQCB, 2019).  
 When there are fewer than eight samples or four detections for any analyte, the maximum concentration is used as the EPC in the risk calculations.

ft = feet  
 bgs = below ground surface  
 TEC = Toxic Equivalent  
 mg/kg = milligrams per kilogram



Table F1-2: SHAD-041 Site (0-0.5 ft bgs) Risk Evaluation Results

Parameter Name	Units	Descriptive Statistics			Location & Depth of Max Concentration Detected		Risk-Based Concentrations Used to Calculate Cancer Risk and Noncancer Hazard						SHAD-041 Risk Calculations						
		Count (n)	No. Detects	Minimum	Maximum	95 UCL	Sample	Depth (ft bgs)	Residential	Commercial/Industrial		Construction Worker	Residential	Commercial/Industrial		Construction Worker			
										Cancer	Non-cancer			Cancer	Non-cancer		Cancer	Non-cancer	

NA = not applicable  
 95 UCL = 95 percent Upper Confidence Limit  
 \* = EPA Regional Screening Levels (RSLs) for individual carcinogenic PAHs are presented as benzo(a)pyrene [B(a)P] toxic equivalents (TEQs), except for naphthalene. There are no TEQs for naphthalene, therefore, it is not evaluated as a B(a)P TEQ.  
 Cancer risks from individual carcinogenic PAHs are summed as B(a)P TEQs and added to Total Cancer Risk, cancer risk attributed to naphthalene is included in the Total Cancer Risk.  
 Carcinogenic PAH risk-based screening levels are adjusted to benzo(a)pyrene Toxic Equivalent (TEQ), and are based on the April 2017 HERO Quarterly Update and HHRA Note 1.  
 < = less than  
 - = indicates that Risk-based Screening Level (RBSL) is not available, therefore, cancer risk or noncancer hazard was not calculated.  
 ^ = Risk-based screening level is not available; surrogate is acenaphthene.  
 # = No RBSL available; surrogate is pyrene.  
 \*\* = Chromium III screening levels used for the evaluation of Total Chromium.  
 # = Surrogate for dioxin and furan compounds is 2,3,7,8-TCDD. Cancer-based and noncancer-based RBSLs for dioxin/furan congeners were calculated by dividing the 2,3,7,8-TCDD RBSL by the congener-specific TEF (Van den Berg et al., 2006) WHO, 2005 as cited in HERD, 2009). The summed total 2,3,7,8-TCDD TEQ cancer risk is included in the Total Cancer Risk and the hazard quotient (HQ) for dioxins and furans is included in the Hazard Index (HI).  
 1. One half the Practical Quantitation Limit (PQL) was used to calculate risk.  
 2. Exceeds Residential Human Health Screening Level (HERO, 2018; USEPA, 2018).  
 3. Exceeds Commercial/Industrial Human Health Screening Level (HERO, 2018; USEPA, 2018).  
 4. Exceeds Construction Worker Shallow and Deep Soil Screening Level (RWQCB, 2019).  
 NC\* Not calculated; lead was evaluated by comparison to RBSLs that are based on a health-protective target blood lead level of concern of 1 microgram per deciliter (HERO, 2011)

**References:**

Human and Ecological Risk Office (HERO), 2011. *User's Guide to LeadSpread 8 and Recommendations for Evaluation of Lead Exposures in Adults*. Department of Toxic Substances Control (DTSC). September.  
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 USEPA, 2018. *Regional Screening Levels (RSLs)*. November.

Table F1-3. SHAD-041 Site (0-3 ft bgs) Risk Evaluation Results

Parameter Name	Units	Descriptive Statistics				Location & Depth of Max Concentration Detected		Risk-Based Concentrations Used to Calculate Cancer Risk and Noncancer Hazard				SHAD-041 Risk Calculations									
		Count (n)	No. Detects	Minimum	Maximum	95 UCL	Sample	Depth (ft bgs)	Residential		Commercial/Industrial		Residential		Commercial/Industrial		Construction Worker				
									Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer			
<b>PAHs</b>																					
1-Methylnaphthalene	mg/kg	42	0	< 0.0033	< 0.068	1	NA	VSP8	0.5	18	4,200	73	53,000	--	--	USEPA, 2018	4.7E-10	0.0000006	--	--	
2-Methylnaphthalene	mg/kg	42	3	0.00064	0.0016		NA	VSP18	2.5	--	240	--	3,000	--	670	USEPA, 2018	--	0.0000005	--	0.000002	
Acenaphthene	mg/kg	42	1	< 0.0033	0.0043		NA	VSP18	2.5	--	3,600	--	45,000	--	10,000	USEPA, 2018	--	0.0000001	--	0.0000004	
Acenaphthylene ^	mg/kg	42	2	< 0.0033	0.0043		NA	VSP28- VSP18	0.5; 2.5	--	3,600	--	45,000	--	10,000	USEPA, 2018	--	0.0000001	--	0.0000004	
Anthracene	mg/kg	42	6	0.0010	0.011		0.0031	VSP28	0.5	--	18,000	--	230,000	--	50,000	USEPA, 2018	--	0.0000002	--	0.0000006	
Benzo(a)anthracene	mg/kg	42	9	0.0015	0.018		0.0072	VSP28	0.5	1.1	170	13	1,400	110	--	HERO, 2017; USEPA, 2018	6.5E-09	0.00004	5.5E-10	0.000005	6.5E-11
Benzo(a)pyrene	mg/kg	42	8	0.00095	0.056		0.0089	VSP6	0.5	0.11	17	1.3	140	10	--	HERO, 2017; USEPA, 2018	8.1E-08	0.0005	6.9E-09	0.00006	8.9E-10
Benzo(b)fluoranthene	mg/kg	42	12	0.0019	0.059		0.012	VSP28	0.5	1.1	170	13	1,400	110	--	HERO, 2017; USEPA, 2018	1.1E-08	0.00007	9.5E-10	0.00009	1.1E-10
Benzo(g,h,i)perylene ^	mg/kg	42	15	0.0015	0.031		0.011	VSP13	0.5	--	1,800	--	23,000	--	--	USEPA, 2018	--	0.000006	--	0.000005	--
Benzo(k)fluoranthene	mg/kg	42	3	0.0021	0.020		NA	VSP6	0.5	11	1,700	130	14,000	910	--	USEPA, 2018	1.8E-09	0.00001	1.5E-10	0.000001	2.2E-11
Chrysene	mg/kg	42	9	0.0021	0.064		0.010	VSP6	0.5	110	17,000	1,300	140,000	9,100	--	USEPA, 2018	9.5E-11	0.0000006	8.0E-12	0.0000007	1.1E-12
Dibenz(a,h)anthracene	mg/kg	42	0	< 0.0033	< 0.068	1	NA	VSP8	0.5	0.11	17	1.3	140	11	--	HERO, 2017; USEPA, 2018	3.1E-07	0.002	2.6E-08	0.0002	3.1E-09
Fluoranthene	mg/kg	42	7	0.0019	0.039		0.0086	VSP6	0.5	--	2,400	--	30,000	--	6,700	USEPA, 2018	--	0.000004	--	0.0000003	--
Fluorene	mg/kg	42	1	0.0013	0.013		NA	VSP18	2.5	--	2,400	--	30,000	--	6,700	USEPA, 2018	--	0.0000005	--	0.0000004	--
Indeno(1,2,3-cd)pyrene	mg/kg	42	3	0.0031	0.018		NA	VSP28	0.5	1.1	170	13	1,400	110	--	HERO, 2017; USEPA, 2018	1.6E-08	0.0001	1.4E-09	0.00001	1.6E-10
Naphthalene	mg/kg	42	3	0.0016	0.0034		NA	VSP18	2.5	3.8	130	17	590	400	500	USEPA, 2018	8.9E-10	0.00003	2.0E-10	0.000006	8.5E-12
Phenanthrene ^	mg/kg	42	3	< 0.0033	0.014		NA	VSP28	0.5	--	1,800	--	23,000	--	--	USEPA, 2018	--	0.00008	--	0.0000006	--
Pyrene	mg/kg	42	5	0.0025	0.056		0.0070	VSP6	0.5	--	1,800	--	23,000	--	5,000	USEPA, 2018	--	0.000004	--	0.0000003	--
Benzo(a)pyrene TEQ ^	mg/kg	NA	NA	NA	NA		NA	NA	NA	0.11	17	1.3	140	10	--	USEPA, 2018	4.3E-07	--	3.6E-08	--	4.3E-09
<b>Metals</b>																					
Chromium Total **	mg/kg	42	42	8.2	52		23	VSP22	0.5	--	36,000	--	170,000	--	530,000	USEPA, 2018	--	0.0006	--	0.0001	--
Hexavalent Chromium	mg/kg	42	41	0.127	41	<sup>2,3,4</sup>	1.8	VSP25	0.5	0.30	230	6.3	3,500	2.8	400	USEPA, 2018	5.9E-06	0.008	2.8E-07	0.0005	6.3E-07
Lead Total	mg/kg	42	42	0.2	3300	<sup>2,4</sup>	662	VSP11	0.5	--	80	--	320	--	160	USEPA, 2018	NC <sup>a</sup>	NC <sup>a</sup>	NC <sup>a</sup>	NC <sup>a</sup>	NC <sup>a</sup>
PCDD/PCDF 2,3,7,8-TCDD	mg/kg	42	29	1.5E-07	6.7E-05	<sup>2,3</sup>	1.5E-05	VSP11	0.5	4.8E-06	5.1E-05	2.2E-05	7.2E-04	1.5E-04	2.0E-04	USEPA, 2018	3.2E-06	0.3	7.0E-07	0.02	1.0E-07
<b>PCBs</b>																					
Aroclor 1016	mg/kg	42	0	< 0.011	< 0.020	1	NA	VSP29	2.5	6.7	4.1	27	51	--	--	USEPA, 2018	1.5E-09	0.002	3.7E-10	0.0002	--
Aroclor 1221	mg/kg	42	0	< 0.016	< 0.021	1	NA	VSP8	0.5	0.20	--	0.83	--	--	--	USEPA, 2018	5.3E-08	--	1.3E-08	--	--
Aroclor 1232	mg/kg	42	0	< 0.010	< 0.020	1	NA	VSP29	2.5	0.17	--	0.72	--	--	--	USEPA, 2018	5.9E-08	--	1.4E-08	--	--



Table F1-3. SHAD-041 Site (0-3 ft bgs) Risk Evaluation Results

Parameter Name	Units	Count (n)	No. Detects	Descriptive Statistics		Location & Depth of Max Concentration Detected		Risk-Based Concentrations Used to Calculate Cancer Risk and Noncancer Hazard						SHAD-041 Risk Calculations								
				Minimum	Maximum	95 UCL	Depth (ft bgs)	Residential		Commercial/Industrial		Construction Worker		Residential		Commercial/Industrial		Construction Worker				
							Sample	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer			
Methylene chloride	mg/kg	42	5	< 0.00086	0.0066	0.0029	VSP29	2.5	1.8	350	24	3,200	490	1,400	1.6E-09	0.000008	1.2E-10	0.0000009	5.9E-12	0.000002		
o-Xylene	mg/kg	42	14	0.00091	0.076	0.013	VSP30	0.5	--	650	--	2,800	--	--	0.00002	--	0.000005	--	--	--		
Styrene	mg/kg	42	0	< 0.00082	< 0.0013	1	VSP29	2.5	--	6,000	--	35,000	--	25,000	--	0.0000001	--	0.0000002	--	0.0000003		
Tetrachloroethene	mg/kg	42	0	< 0.00082	< 0.0013	1	VSP29	2.5	0.59	81	2.7	390	33	350	1.1E-09	0.000008	2.4E-10	0.000002	2.0E-11	0.000002		
Toluene	mg/kg	42	1	0.00075	0.00075	NA	VSP18	2.5	--	1,100	--	5,300	--	4,700	--	0.0000007	--	0.0000001	--	0.0000002		
trans-1,2-Dichloroethene	mg/kg	42	0	< 0.00082	< 0.0013	1	VSP29	2.5	--	130	--	600	--	570	--	0.000005	--	0.0000001	--	0.0000001		
trans-1,3-Dichloropropene	mg/kg	42	0	< 0.00082	< 0.0013	1	VSP29	2.5	0.58	72	2.5	310	53	300	1.1E-09	0.000009	2.6E-10	0.000002	1.2E-11	0.000002		
Trichloroethene	mg/kg	42	0	< 0.00082	< 0.0013	1	VSP29	2.5	0.94	4.1	6.0	19	130	18	6.9E-10	0.0002	1.1E-10	0.00003	5.0E-12	0.00004		
Vinyl chloride	mg/kg	42	0	< 0.00082	< 0.0013	1	VSP29	2.5	0.0087	70	0.15	370	3.4	300	7.5E-08	0.000009	4.3E-09	0.000002	1.9E-10	0.000002		
								<b>Total Cancer Risk</b>						<b>Hazard Index</b>								
								1.1E-05						0.3								
								--						0.02								
								7.1E-07						0.08								

**Notes:**

Residential and commercial/industrial risk-based screening levels are based on *Human Health Risk Assessment (HHRA) Note Number 3* (HERO, 2018) and *Regional Screening Levels (RSLs)* (USEPA, 2018). Construction Worker risk-based screening levels are based on *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* (RWQCB, 2019).

When there are fewer than eight samples or four detections for any analyte, the maximum concentration is used as the EPC in the risk calculations.

ft = feet

bgs = below ground surface

TEQ = Toxic Equivalent

mg/kg = milligrams per kilogram

NA = not applicable

95 UCL = 95 percent Upper Confidence Limit

\* = EPA Regional Screening Levels (RSLs) for individual carcinogenic PAHs are presented as benzo(a)pyrene [BaP] toxic equivalents (TEQs), except for naphthalene. There are no TEQs for naphthalene, therefore, it is not evaluated as a BaP TEQ.

Cancer risks from individual carcinogenic PAHs are summed as BaP TEQs and added to Total Cancer Risk; cancer risk attributed to naphthalene is included in the Total Cancer Risk.

Carcinogenic PAH risk-based screening levels are adjusted to benzo(a)pyrene Toxic Equivalent (TEQ), and are based on the April 2017 HERO Quarterly Update and HHRA Note 1.

< = less than

-- = indicates that Risk-based Screening Level (RBSL) is not available, therefore, cancer risk or noncancer hazard was not calculated.

^ = Risk-based screening level is not available; surrogate is acenaphthene.

# = No RBSL available; surrogate is pyrene.

\*\* = Chromium III screening levels used for the evaluation of Total Chromium.

^ = Surrogate for dioxin and furan compounds is 2,3,7,8-TCDD. Cancer-based and noncancer-based RBSLs for dioxin/furan congeners were calculated by dividing the 2,3,7,8-TCDD RBSL by the congener-specific TEF (Van den Berg et al., 2006); WHO, 2005 as cited in HERO, 2009). The summed total 2,3,7,8-TCDD TEQ cancer risk is included in the Total Cancer Risk and the hazard quotient (HQ) for dioxins and furans is included in the Hazard Index (HI).

1. One half the Practical Quantitation Limit (PQL) was used to calculate risk.

2. Exceeds Residential Human Health Screening Level (HERO, 2018; USEPA, 2018).

3. Exceeds Commercial/Industrial Human Health Screening Level (HERO, 2018; USEPA, 2018).

4. Exceeds Construction Worker Shallow and Deep Soil Screening Level (RWQCB, 2019).

NC<sup>1</sup> Not calculated; lead was evaluated by comparison to RBSLs that are based on a health-protective target blood lead level of concern of 1 microgram per deciliter (HERO, 2011)

**References:**

- Human and Ecological Risk Office (HERO). 2011. *User's Guide to LeadSpread 8 and Recommendations for Evaluation of Lead Exposures in Adults*. Department of Toxic Substances Control (DTSC). September.
- HERO. 2014. *Human Health Risk Assessment (HHRA) Note Number 1*. Retrieved from DTSC recommended methodology for the use of U.S. EPA Regional Screening Levels (RSLs) in the Human Health Risk Assessment process at hazardous waste sites and permitted facilities: [https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA\\_Note1-2.pdf](https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA_Note1-2.pdf)



Table F1-4. SHAD-041 Site (0-10 ft bgs) Risk Evaluation Results

Parameter Name	Units	Count (n)	No. Detects	Descriptive Statistics			95 UCL	Max Concentration Detected	Location & Depth of Max Concentration Detected						Risk-Based Concentrations Used to Calculate Cancer Risk and Noncancer Hazard						SHAD-041 Risk Calculations							
				Minimum	Maximum	95 UCL			Residential		Commercial/Industrial		Residential		Commercial/Industrial		Residential		Commercial/Industrial		RBSI Source	Residential		Commercial/Industrial		Construction Worker		
									Sample	Depth (ft bgs)	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer		Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer
<b>PAHs</b>																												
1-Methylnaphthalene	mg/kg	84	0	< 0.0033	< 0.068	1	NA	VSP8	0.5	18	4,200	73	53,000	--	--	USEPA, 2018; RWQCB, 2019; USEPA, 2018	1.9E-09	0.000008	4.7E-10	0.0000006	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg	84	4	0.00064	0.0016		0.00098	VSP18	2.5	--	240	--	3,000	--	--	USEPA, 2018; RWQCB, 2019; USEPA, 2018	--	0.000004	--	0.0000003	--	--	--	--	--	0.000001	--	0.000001
Acenaphthene	mg/kg	84	1	< 0.0033	0.0043		NA	VSP18	2.5	--	3,600	--	45,000	--	--	USEPA, 2018; RWQCB, 2019; USEPA, 2018	--	0.000001	--	0.0000001	--	--	--	--	--	0.00000004	--	0.00000004
Acenaphthylene ^	mg/kg	84	2	< 0.0033	0.0043		NA	VSP18	2.5	--	3,600	--	45,000	--	--	USEPA, 2018; RWQCB, 2019; USEPA, 2018	--	0.000001	--	0.0000001	--	--	--	--	--	0.00000004	--	0.00000004
Anthracene	mg/kg	84	6	0.0010	0.011		0.0017	VSP28	0.5	--	18,000	--	230,000	--	--	USEPA, 2018; RWQCB, 2019; USEPA, 2018	--	0.000001	--	0.00000008	--	--	--	--	--	0.000000003	--	0.000000003
Benz(a)anthracene	mg/kg	84	10	0.0010	0.018		0.0039	VSP28	0.5	1.1	170	13	1,400	110	--	HERO, 2017; USEPA, 2018; RWQCB, 2019;	3.5E-09	0.00002	3.0E-10	0.000003	3.0E-10	0.000003	3.5E-11	--	--	--	--	--
Benz(a)pyrene	mg/kg	84	9	0.00095	0.056		0.0044	VSP6	0.5	0.11	17	1.3	140	10	--	HERO, 2017; USEPA, 2018; RWQCB, 2019;	4.0E-08	0.0003	3.4E-09	0.00003	3.4E-09	0.00003	4.4E-10	--	--	--	--	--
Benz(b)fluoranthene	mg/kg	84	15	0.0015	0.059		0.0065	VSP28	0.5	1.1	170	13	1,400	110	--	HERO, 2017; USEPA, 2018; RWQCB, 2019;	5.9E-09	0.00004	5.0E-10	0.000005	5.0E-10	0.000005	5.9E-11	--	--	--	--	--
Benz(g,h)perylene #	mg/kg	84	17	0.0015	0.031		0.0058	VSP13	0.5	--	1,800	--	23,000	--	--	USEPA, 2018; RWQCB, 2019;	--	0.000003	--	0.0000003	--	--	--	--	--	--	--	--
Benz(k)fluoranthene	mg/kg	84	3	0.0021	0.020		NA	VSP6	0.5	11	1,700	130	14,000	910	--	HERO, 2017; USEPA, 2018; RWQCB, 2019;	1.8E-09	0.00001	1.5E-10	0.000001	1.5E-10	0.000001	2.2E-11	--	--	--	--	--
Chrysene	mg/kg	84	11	0.0021	0.064		0.0061	VSP6	0.5	110	17,000	1,300	140,000	9,100	--	HERO, 2017; USEPA, 2018; RWQCB, 2019;	5.6E-11	0.0000004	4.7E-12	0.00000004	4.7E-12	0.00000004	6.7E-13	--	--	--	--	--
Dibenz(a,h)anthracene	mg/kg	84	0	< 0.0033	< 0.068	1	NA	VSP8	0.5	0.11	17	1.3	140	11	--	HERO, 2017; USEPA, 2018; RWQCB, 2019;	3.1E-07	0.002	2.6E-08	0.0002	2.6E-08	0.0002	3.1E-09	--	--	--	--	--
Fluoranthene	mg/kg	84	8	0.0018	0.039		0.0047	VSP6	0.5	--	2,400	--	30,000	--	6,700	USEPA, 2018; RWQCB, 2019;	--	0.000002	--	0.0000002	--	--	--	0.00000007	--	--	--	0.00000007
Fluorene	mg/kg	84	1	0.0013	0.0013		NA	VSP18	2.5	--	2,400	--	30,000	--	6,700	USEPA, 2018; RWQCB, 2019;	--	0.000005	--	0.0000005	--	--	--	0.00000002	--	--	--	0.00000002
Indeno(1,2,3-cd)pyrene	mg/kg	84	3	0.0031	0.018		NA	VSP28	0.5	1.1	170	13	1,400	110	--	HERO, 2017; USEPA, 2018; RWQCB, 2019;	1.6E-08	0.0001	1.4E-09	0.00001	1.4E-09	0.00001	1.6E-10	--	--	--	--	--
Naphthalene	mg/kg	84	3	0.0016	0.0034		NA	VSP18	2.5	3.8	130	17	590	400	500	USEPA, 2018; RWQCB, 2019;	8.9E-10	0.00003	2.0E-10	0.000006	2.0E-10	0.000006	8.5E-12	--	--	--	--	0.000007
Phenanthrene #	mg/kg	84	3	< 0.0033	0.014		NA	VSP28	0.5	--	1,800	--	23,000	--	--	USEPA, 2018; RWQCB, 2019;	--	0.000008	--	0.0000008	--	--	--	--	--	--	--	--
Pyrene	mg/kg	84	6	0.0016	0.036		0.0042	VSP6	0.5	--	1,800	--	23,000	--	5,000	USEPA, 2018; RWQCB, 2019;	--	0.000002	--	0.0000002	--	--	--	0.00000008	--	--	--	0.00000008
Benz(a)pyrene TEQ *	mg/kg	NA	NA	NA	NA		NA	NA	NA	0.11	17	1.3	140	10	--	USEPA, 2018; RWQCB, 2019;	3.8E-07	--	3.2E-08	--	--	--	3.8E-09	--	--	--	--	--
<b>Metals</b>																												
Chromium-Total ++	mg/kg	84	84	7.0	52		19	VSP22	0.5	--	36,000	--	170,000	--	530,000	USEPA, 2018; RWQCB, 2019;	--	0.0005	--	0.0001	--	--	--	--	--	--	--	0.00004
Hexavalent Chromium	mg/kg	84	83	0.12	41	2.3	3.3	VSP25	0.5	0.30	230	6.3	3,500	2.8	400	USEPA, 2018; RWQCB, 2019;	1.1E-05	0.01	5.2E-07	0.0009	5.2E-07	0.0009	1.2E-06	0.008	--	--	--	0.008
Lead-Total	mg/kg	84	84	0.19	3300	2.3	448	VSP11	0.5	--	80	--	320	--	160	USEPA, 2018; RWQCB, 2019;	NC <sup>a</sup>	NC <sup>a</sup>	NC <sup>a</sup>	NC <sup>a</sup>	NC <sup>a</sup>	NC <sup>a</sup>	NC <sup>a</sup>	NC <sup>a</sup>	NC <sup>a</sup>	NC <sup>a</sup>	NC <sup>a</sup>	
PCDD/PCDF	mg/kg	84	37	1.5E-07	6.7E-05	2.3	8.2E-06	VSP11	0.5	4.8E-06	5.1E-05	2.2E-05	7.2E-04	1.5E-04	2.0E-04	USEPA, 2018; RWQCB, 2019;	1.7E-06	0.2	3.7E-07	0.01	3.7E-07	0.01	5.5E-08	0.04	--	--	--	0.04

Table F1-4. SHAD-041 Site (0-10 ft bgs) Risk Evaluation Results

Parameter Name	Units	Count			Descriptive Statistics			Location & Depth of Max Concentration Detected			Risk-Based Concentrations Used to Calculate Cancer Risk and Noncancer Hazard						SHAD-041 Risk Calculations					
		No. Detects	Minimum	Maximum	95 UCL	Sample	Depth (ft bgs)	Residential		Commercial/Industrial		Construction Worker		RBSL Source	Residential		Commercial/Industrial		Construction Worker			
								Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer		Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer		
Aroclor 1016	mg/kg	84	0 < 0.011	< 0.020	1	NA	6.7	4.1	27	51	--	--	1.5E-09	0.002	3.7E-10	0.0002	--	--	--	--		
Aroclor 1221	mg/kg	84	0 < 0.016	< 0.021	1	NA	0.20	--	0.83	--	--	--	5.3E-08	--	1.3E-08	--	--	--	--	--		
Aroclor 1232	mg/kg	84	0 < 0.010	< 0.020	1	NA	0.17	--	0.72	--	--	--	5.9E-08	--	1.4E-08	--	--	--	--	--		
Aroclor 1242	mg/kg	84	0 < 0.010	< 0.020	1	NA	0.23	--	0.95	--	--	--	4.3E-08	--	1.1E-08	--	--	--	--	--		
Aroclor 1248	mg/kg	84	0 < 0.010	< 0.020	1	NA	0.23	--	0.95	--	--	--	4.3E-08	--	1.1E-08	--	--	--	--	--		
Aroclor 1254	mg/kg	84	0 < 0.010	< 0.020	1	NA	0.24	1.2	0.97	15	--	--	4.2E-08	0.008	1.0E-08	0.0007	--	--	--	--		
Aroclor 1260	mg/kg	84	4 < 0.010	0.21		0.018	0.24	--	0.99	--	--	--	7.4E-08	--	1.8E-08	--	--	--	--	--		
<b>VOCs</b>																						
1,1,1-Trichloroethane	mg/kg	84	0 < 0.00082	< 0.0031	1	NA	--	1,700	--	7,200	--	--	0.0000009	--	0.0000002	--	--	--	--	0.0000002		

Table F1-4. SHAD-041 Site (0-10 ft bgs) Risk Evaluation Results

Parameter Name	Units	Count			Descriptive Statistics			Location & Depth of Max Concentration Detected			Risk-Based Concentrations Used to Calculate Cancer Risk and Noncancer Hazard						SHAD-041 Risk Calculations					
		No. Detects	Minimum	Maximum	95 UCL	Sample	Depth (ft bgs)	Residential		Commercial/Industrial		Residential		Commercial/Industrial		Cancer	Noncancer	Cancer	Noncancer	Construction Worker	Cancer	Noncancer
								Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer							
1,1,2,2-Tetrachloroethane	mg/kg	84	< 0.00082	< 0.0031	1	NA	VSP26	0.5	0.60	1.600	2.7	4.300	49	7.100	2.6E-09	0.000001	5.7E-10	0.0000004	3.2E-11	0.0000002		
1,1,2-Trichloroethane	mg/kg	84	< 0.00082	< 0.0031	1	NA	VSP26	0.5	1.1	1.5	5.0	6.3	110	6.3	1.4E-09	0.001	3.1E-10	0.0002	1.4E-11	0.0002		
1,1-Dichloroethane	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	3.6	1.600	16	7.100	370	71.000	1.8E-10	0.000004	4.1E-11	0.00000009	1.8E-12	0.000000009		
1,1-Dichloroethylene	mg/kg	84	< 0.0041	0.0066	0.0043	0.0043	VSP29	2.5	--	230	--	1,000	--	350	--	0.0002	--	0.000004	--	0.00001		
1,2,4-Trimethylbenzene	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	--	300	--	1,800	--	--	--	0.000002	--	0.0000004	--	--	--	--
1,2-Dibromoethane	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	0.036	7.1	0.16	30	3.3	30	1.8E-08	0.00009	4.1E-09	0.00002	2.0E-10	0.00002		
1,2-Dichlorobenzene	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	--	1,800	--	9,300	--	7,800	--	0.000004	--	0.00000007	--	0.00000008		
1,2-Dichloroethane	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	0.46	31	2.0	140	45	130	1.4E-09	0.00002	3.3E-10	0.000005	1.4E-11	0.000005		
1,2-Dichloropropane	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	2.5	16	11	66	99	66	2.6E-10	0.00004	5.9E-11	0.00001	6.6E-12	0.00001		
1,4-Dichlorobenzene	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	2.6	3,400	11	25,000	280	15,000	2.5E-10	0.000002	5.9E-11	0.00000003	2.3E-12	0.00000004		
Benzene	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	0.33	11	1.4	46	33	45	2.0E-09	0.00006	4.6E-10	0.00001	2.0E-11	0.00001		
Bromodichloromethane	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	0.29	270	1.3	1,300	28	7,100	2.2E-09	0.000002	5.0E-10	0.00000005	2.3E-11	0.000000009		
Bromoform	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	19	1,600	86	3,000	1,200	7,100	3.4E-11	0.000004	7.6E-12	0.0000002	5.4E-13	0.000000009		
Bromomethane	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	--	6.8	--	30	--	29	--	0.0001	--	0.00002	--	0.00002		
Carbon Tetrachloride	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	0.098	100	0.43	570	10	220	6.6E-09	0.000007	1.5E-09	0.000001	6.5E-11	0.000003		
Chlorobenzene	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	--	280	--	1,300	--	1,200	--	0.000002	--	0.0000005	--	0.0000005		
Chloroform	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	0.32	200	1.4	1,000	34	860	2.0E-09	0.000003	4.6E-10	0.0000007	1.9E-11	0.0000008		
Chloromethane	mg/kg	84	< 0.00097	0.0066	0.0018	0.0018	VSP29	2.5	--	110	--	460	--	470	--	0.0002	--	0.000004	--	0.000004		
cis-1,2-Dichloroethene	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	--	18	--	84	--	78	--	0.00004	--	0.000008	--	0.000008		
cis-1,3-Dichloropropene	mg/kg	84	< 0.00082	< 0.0013	1	NA	VSP29; VSP26	2.5; 5	0.58	72	2.5	310	53	300	1.1E-09	0.000009	2.6E-10	0.000002	1.2E-11	0.000002		
Dibromochloromethane	mg/kg	84	< 0.00082	< 0.0053	1	NA	VSP18	5	0.94	470	4.1	2,500	290	7,100	2.8E-09	0.000006	6.5E-10	0.000001	9.1E-12	0.0000004		
Ethylbenzene	mg/kg	84	0.00047	0.012	0.0010	0.0010	VSP30	0.5	5.8	3,400	25	20,000	540	15,000	1.7E-10	0.000003	4.0E-11	0.0000005	1.8E-12	0.0000007		
m-Xylene & p-Xylene	mg/kg	84	0.00091	0.076	0.0031	0.0031	VSP30	0.5	--	550	--	2,400	--	--	--	0.000006	--	0.000001	--	--		
Methylene chloride	mg/kg	84	< 0.00086	0.0066	0.0026	0.0026	VSP29	2.5	1.8	350	24	3,200	490	1,400	1.5E-09	0.000008	1.1E-10	0.0000008	5.4E-12	0.000002		



Table F1-4. SHAD-041 Site (0-10 ft bgs) Risk Evaluation Results

Parameter Name	Units	Count (n)	Descriptive Statistics			95 UCL	Location & Depth of Max Concentration Detected	Risk-Based Concentrations Used to Calculate Cancer Risk and Noncancer Hazard						RBSL Source	SHAD-041 Risk Calculations													
			No. Detects	Minimum	Maximum			Residential	Commercial/Industrial		Construction Worker		Cancer		Noncancer	Cancer	Noncancer	Cancer	Noncancer									
									Cancer	Non-cancer	Cancer	Non-cancer								Cancer	Non-cancer							
o-Xylene	mg/kg	84	15	0.00091	0.076	0.0036	VSP30 VSP25; VSP26	5	0.5	650	2,800	25,000	25,000	0.000006	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	
Styrene	mg/kg	84	0	< 0.00082	< 0.0013	NA	VSP25; VSP26	5	2.5;	6,000	35,000	25,000	25,000	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Tetrachloroethene	mg/kg	84	0	< 0.00082	< 0.0013	NA	VSP25; VSP26	5	2.5;	81	390	33	350	0.000008	0.000008	2.4E-10	0.000002	2.4E-10	0.000002	2.4E-10	0.000002	2.4E-10	0.000002	2.4E-10	0.000002	2.4E-10	0.000002	0.000002
Toluene	mg/kg	84	1	0.00075	0.00075	NA	VSP18 VSP25; VSP26	2.5;	2.5;	1,100	5,300	4,700	4,700	0.000007	0.000007	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
trans-1,2-Dichloroethene	mg/kg	84	0	< 0.00082	< 0.0013	NA	VSP25; VSP26	5	2.5;	130	600	570	570	0.000005	0.000005	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
trans-1,3-Dichloropropene	mg/kg	84	0	< 0.00082	< 0.0013	NA	VSP25; VSP26	5	2.5;	72	310	53	300	0.000009	0.000009	2.6E-10	0.000002	2.6E-10	0.000002	2.6E-10	0.000002	2.6E-10	0.000002	2.6E-10	0.000002	2.6E-10	0.000002	0.000002
Trichloroethene	mg/kg	84	0	< 0.00082	< 0.0013	NA	VSP25; VSP26	5	2.5;	4.1	6.0	19	18	0.0002	0.0002	1.1E-10	0.00003	1.1E-10	0.00003	1.1E-10	0.00003	1.1E-10	0.00003	1.1E-10	0.00003	1.1E-10	0.00003	0.00004
Vinyl chloride	mg/kg	84	0	< 0.00078	< 0.0013	NA	VSP25; VSP26	5	2.5;	0.0087	70	370	300	0.000009	0.000009	4.3E-09	0.000002	4.3E-09	0.000002	4.3E-09	0.000002	4.3E-09	0.000002	4.3E-09	0.000002	4.3E-09	0.000002	0.000002
													Total Cancer Risk		Total Cancer Risk		Total Cancer Risk		Total Cancer Risk		Total Cancer Risk		Total Cancer Risk		Total Cancer Risk			
													1.E-05		1.E-05		1.E-05		1.E-05		1.E-05		1.E-05		1.E-05			
													0.2		0.2		0.2		0.2		0.2		0.2		0.2			
													0.01		0.01		0.01		0.01		0.01		0.01		0.01			
													0.05		0.05		0.05		0.05		0.05		0.05		0.05			

**Notes:**

Residential and commercial/industrial risk-based screening levels are based on *Human Health Risk Assessment (HHRA) Note Number 3* (HERO, 2018) and *Regional Screening Levels (RSLs) (USEPA, 2018)*. Construction Worker risk-based screening levels are based on *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* (RWQCB, 2019).  
When there are fewer than eight samples or four detections for any analyte, the maximum concentration is used as the EPC in the risk calculations.  
ft = feet  
bgs = below ground surface  
TEQ = Toxic Equivalent  
mg/kg = milligrams per kilogram  
NA = not applicable  
95 UCL = 95 percent Upper Confidence Limit  
\* = EPA Regional Screening Levels (RSLs) for individual carcinogenic PAHs are presented as benzo(a)pyrene [B(a)P] toxic equivalents (TEQs), except for naphthalene. There are no TEQs for naphthalene, therefore, it is not evaluated as a B(a)P TEQ.  
Cancer risks from individual carcinogenic PAHs are summed as B(a)P TEQs and added to Total Cancer Risk; cancer risk attributed to naphthalene is included in the Total Cancer Risk.  
Carcinogenic PAH risk-based screening levels are adjusted to benzo(a)pyrene Toxic Equivalent (TEQ), and are based on the April 2017 HERO Quarterly Update and HHRA Note 1.  
< = less than  
- = indicates that Risk-based Screening Level (RBSL) is not available, therefore, cancer risk or noncancer hazard was not calculated.  
A = Risk-based screening level is not available; surrogate is acenaphthene.  
\*\* = No RBSL available; surrogate is pyrene.  
\*\*\* = Chromium III screening levels used for the evaluation of Total Chromium.  
\* = Surrogate for dioxin and furan compounds is 2,3,7,8-TCDD. Cancer-based and noncancer-based RBSLs for dioxin/furan congeners were calculated by dividing the 2,3,7,8-TCDD RBSL by the congener-specific TEF (Van den Berg et al., 2006) WHO, 2005 as cited in HERO, 2009). The summed total 2,3,7,8-TCDD TEQ cancer risk is included in the Total Cancer Risk and the hazard quotient (HQ) for dioxins and furans is included in the Hazard Index (HI).  
1 One half the Practical Quantitation Limit (PQL) was used to calculate risk.  
2 Exceeds Residential Human Health Screening Level (HERO, 2018; USEPA, 2018).  
3 Exceeds Commercial/Industrial Human Health Screening Level (HERO, 2018; USEPA, 2018).  
4 Exceeds Construction Worker Shallow and Deep Soil Screening Level (RWQCB, 2019).  
NC\* Not calculated; lead was evaluated by comparison to RBSLs that are based on a health-protective target blood lead level of concern of 1 microgram per deciliter (HERO, 2011).

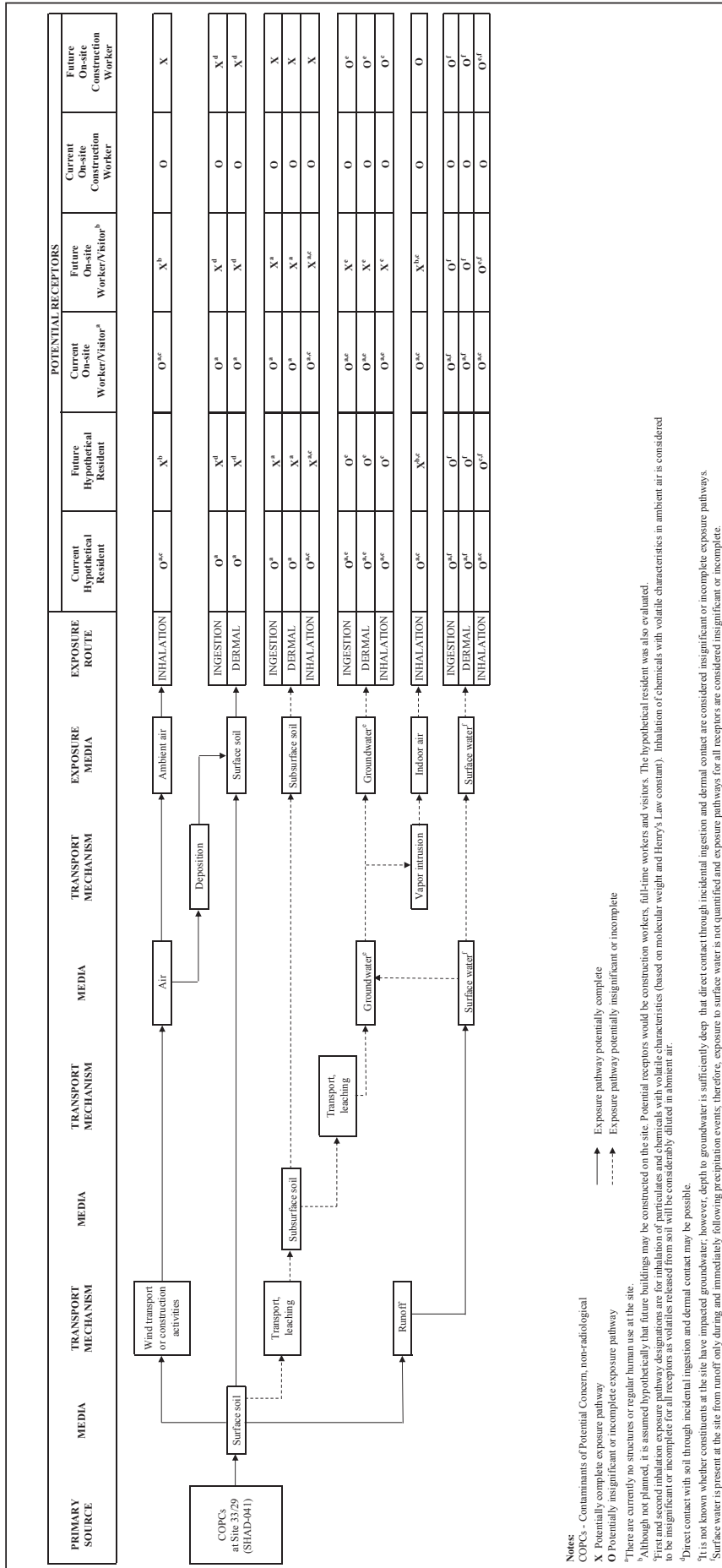
**References:**

Human and Ecological Risk Office (HERO). 2011. *User's Guide to LeadSpread 8 and Recommendations for Evaluation of Lead Exposures in Adults*. Department of Toxic Substances Control (DTSC). September.  
HERO. 2014. *Human Health Risk Assessment (HHRA) Note Number 1*. Retrieved from DTSC recommended methodology for the use of U.S. EPA Regional Screening Levels (RSLs) in the Human Health Risk Assessment process at hazardous waste sites and permitted facilities: [https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA\\_Note1.pdf](https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA_Note1.pdf)

Table F1-4. SHAD-041 Site (0-10 ft bgs) Risk Evaluation Results

Parameter Name	Units	Count & Depth of Max Concentration Detected			Descriptive Statistics			Risk-Based Concentrations Used to Calculate Cancer Risk and Noncancer Hazard						SHAD-041 Risk Calculations					
		Count (n)	No. Detects	Depth (ft bgs)	Minimum	Maximum	95 UCL	Residential		Commercial/Industrial		Construction Worker		Residential		Commercial/Industrial		Construction Worker	
								Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer
<p>HERO, 2018. Human Health Risk Assessment (HHRA) Note Number: 3, DTSC-modified Screening Levels (DTSC-SLs). Retrieved from: <a href="http://www.dtsc.ca.gov/AssessingRisk/upload/HERO_HHRA_Note_3_June_2018.pdf">http://www.dtsc.ca.gov/AssessingRisk/upload/HERO_HHRA_Note_3_June_2018.pdf</a></p> <p>HERD, 2009. Human Health Risk Assessment (HHRA) Note Number 2 (Interim). Retrieved from DTSC remedial goals for dioxins and dioxin-like compounds for consideration at California hazardous waste sites: <a href="http://www.dtsc.ca.gov/AssessingRisk/upload/HHRA_Note2_dioxin-2.pdf">http://www.dtsc.ca.gov/AssessingRisk/upload/HHRA_Note2_dioxin-2.pdf</a></p> <p>RWQCB, 2019. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater. California Regional Water Quality Control Board (RWQCB). San Francisco Bay Region, January.</p> <p>Van den Berg, M, et al., 2006. Review. The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds. Toxicological Sciences 93(2), 223-241.</p> <p>USEPA, 2018. Regional Screening Levels (RSLs). November.</p>																			

## **Figures**



PRIMARY SOURCE	MEDIA	TRANSPORT MECHANISM	MEDIA	TRANSPORT MECHANISM	EXPOSURE MEDIA	EXPOSURE ROUTE	POTENTIAL RECEPTORS					
							Current Hypothetical Resident	Future Hypothetical Resident	Current On-site Worker/Visitor <sup>a</sup>	Future On-site Worker/Visitor <sup>b</sup>	Current On-site Construction Worker	Future On-site Construction Worker
COPCs at Site 33/29 (SHAD-041)	Surface soil	Wind transport or construction activities	Air	Deposition	Ambient air	INHALATION	0 <sup>bc</sup>	X <sup>b</sup>	0 <sup>bc</sup>	X <sup>b</sup>	0	X
						INGESTION	0 <sup>a</sup>	X <sup>d</sup>	0 <sup>a</sup>	X <sup>d</sup>	0	X <sup>d</sup>
	Surface soil	Transport, leaching	Subsurface soil	Deposition	Surface soil	DERMAL	0 <sup>a</sup>	X <sup>d</sup>	0 <sup>a</sup>	X <sup>d</sup>	0	X <sup>d</sup>
						INGESTION	0 <sup>a</sup>	X <sup>a</sup>	0 <sup>a</sup>	X <sup>a</sup>	0	X
	Subsurface soil	Transport, leaching	Subsurface soil	Deposition	Subsurface soil	DERMAL	0 <sup>a</sup>	X <sup>a</sup>	0 <sup>a</sup>	X <sup>a</sup>	0	X
						INGESTION	0 <sup>a</sup>	X <sup>a</sup>	0 <sup>a</sup>	X <sup>a</sup>	0	X
	Groundwater <sup>e</sup>	Transport, leaching	Groundwater <sup>e</sup>	Deposition	Groundwater <sup>e</sup>	DERMAL	0 <sup>bc</sup>	0 <sup>f</sup>	0 <sup>bc</sup>	0 <sup>f</sup>	0	0 <sup>c</sup>
						INGESTION	0 <sup>bc</sup>	0 <sup>f</sup>	0 <sup>bc</sup>	0 <sup>f</sup>	0	0 <sup>c</sup>
	Surface water <sup>f</sup>	Runoff	Surface water <sup>f</sup>	Deposition	Surface water <sup>f</sup>	DERMAL	0 <sup>bc</sup>	0 <sup>f</sup>	0 <sup>bc</sup>	0 <sup>f</sup>	0	0 <sup>c</sup>
						INGESTION	0 <sup>bc</sup>	0 <sup>f</sup>	0 <sup>bc</sup>	0 <sup>f</sup>	0	0 <sup>c</sup>
	Surface water <sup>f</sup>	Runoff	Surface water <sup>f</sup>	Vapor intrusion	Indoor air	INHALATION	0 <sup>bc</sup>	X <sup>bc</sup>	0 <sup>bc</sup>	X <sup>bc</sup>	0	0
						INGESTION	0 <sup>bc</sup>	0 <sup>f</sup>	0 <sup>bc</sup>	0 <sup>f</sup>	0	0 <sup>c</sup>
Surface water <sup>f</sup>	Runoff	Surface water <sup>f</sup>	Deposition	Surface water <sup>f</sup>	DERMAL	0 <sup>bc</sup>	0 <sup>f</sup>	0 <sup>bc</sup>	0 <sup>f</sup>	0	0 <sup>c</sup>	
					INGESTION	0 <sup>bc</sup>	0 <sup>f</sup>	0 <sup>bc</sup>	0 <sup>f</sup>	0	0 <sup>c</sup>	

**Notes:**  
 COPCs - Contaminants of Potential Concern, non-radiological  
 X - Potentially complete exposure pathway  
 O - Potentially insignificant or incomplete exposure pathway  
 \*There are currently no structures or regular human use at the site.  
<sup>a</sup>Although not planned, it is assumed hypothetically that future buildings may be constructed on the site. Potential receptors would be construction workers, full-time workers and visitors. The hypothetical resident was also evaluated.  
<sup>b</sup>First and second inhalation exposure pathway designations are for inhalation of particulates and chemicals with volatile characteristics (based on molecular weight and Henry's Law constant). Inhalation of chemicals with volatile characteristics in ambient air is considered to be insignificant or incomplete for all receptors as volatiles released from soil will be considerably diluted in ambient air.  
<sup>c</sup>Direct contact with soil through incidental ingestion and dermal contact may be possible.  
<sup>d</sup>It is not known whether constituents at the site have impacted groundwater, however, depth to groundwater is sufficiently deep that direct contact through incidental ingestion and dermal contact are considered insignificant or incomplete exposure pathways.  
<sup>e</sup>Surface water is present at the site from runoff only during and immediately following precipitation events, therefore, exposure to surface water is not quantified and exposure pathways for all receptors are considered insignificant or incomplete.

Figure  
**F1-1**  
**Conceptual Site Model**  
**for Human Health Exposure Pathways**  
 Sites 33/29 (SHAD-041)  
 Remedial Investigation/Feasibility Study Report  
 Sharpe Army Depot, Lathrop, California



## **ATTACHMENT**

**ATTACHMENT F1-1**  
**ProUCL OUTPUT**

# SHAD-041 Summary Statistics for 0-0.5 ft bgs Depth Interval

## General Statistics on Uncensored Data

Date/Time of Computation ProUCL 5.11/16/2018 5:51:16 PM

### User Selected Options

From File SHAD-041\_ProUCL\_CALC\_a.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_a.xls

## General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Naphthalene (ug/kg)	21	0	1	20	95.24%	3.5	68	1.6	0	0	N/A
2-Methylnaphthalene (ug/kg)	21	0	1	20	95.24%	3.5	68	0.64	0	0	N/A
1-Methylnaphthalene (ug/kg)	21	0	0	21	100.00%	3.3	68	N/A	N/A	N/A	N/A
Acenaphthylene (ug/kg)	21	0	1	20	95.24%	3.3	68	3.55	0.188	0.433	0.122
Acenaphthene (ug/kg)	21	0	0	21	100.00%	3.3	68	N/A	N/A	N/A	N/A
Fluorene (ug/kg)	21	0	0	21	100.00%	3.3	68	N/A	N/A	N/A	N/A
Phenanthrene (ug/kg)	21	0	1	20	95.24%	3.3	68	5.975	21.47	4.633	0.775
Anthracene (ug/kg)	21	0	1	20	95.24%	3.3	68	5.225	11.12	3.334	0.638
Fluoranthene (ug/kg)	21	0	3	18	85.71%	3.3	68	11.24	122.4	11.06	0.984
Pyrene (ug/kg)	21	0	3	18	85.71%	3.3	68	10.45	100.5	10.03	0.959
Benzo[a]anthracene (ug/kg)	21	0	3	18	85.71%	3.3	68	9.314	48.32	6.952	0.746
Chrysene (ug/kg)	21	0	3	18	85.71%	3.3	68	12.56	234.2	15.3	1.219
Benzo[b]fluoranthene (ug/kg)	21	0	4	17	80.95%	3.3	68	13.19	218	14.77	1.12
Benzo[k]floranthene (ug/kg)	21	0	1	20	95.24%	3.3	68	6.083	38.73	6.224	1.023
Benzo[a]pyrene (ug/kg)	21	0	3	18	85.71%	3.3	68	10.63	155.1	12.45	1.172
Indeno[1,2,3-cd]pyrene (ug/kg)	21	0	1	20	95.24%	3.3	68	6.24	34.57	5.88	0.942
Dibenz[a,h]anthracene (ug/kg)	21	0	0	21	100.00%	3.3	68	N/A	N/A	N/A	N/A
Benzo[g,h,i]perylene (ug/kg)	21	0	6	15	71.43%	3.3	68	14.81	107.3	10.36	0.7

## General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Naphthalene (ug/kg)	1	0	1.6	1.6	1.6	1.6	N/A	N/A	0	N/A	N/A
2-Methylnaphthalene (ug/kg)	1	0	0.64	0.64	0.64	0.64	N/A	N/A	0	N/A	N/A
1-Methylnaphthalene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Acenaphthylene (ug/kg)	1	0	4.3	4.3	4.3	4.3	N/A	N/A	0	N/A	N/A
Acenaphthene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fluorene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenanthrene (ug/kg)	1	0	14	14	14	14	N/A	N/A	0	N/A	N/A
Anthracene (ug/kg)	1	0	11	11	11	11	N/A	N/A	0	N/A	N/A
Fluoranthene (ug/kg)	3	0	20	39	28	25	97	9.849	7.413	1.244	0.352
Pyrene (ug/kg)	3	0	18	36	25.67	23	86.33	9.292	7.413	1.185	0.362
Benzo[a]anthracene (ug/kg)	3	0	17	18	17.33	17	0.333	0.577	0	1.732	0.0333
Chrysene (ug/kg)	3	0	17	64	36.33	28	604.3	24.58	16.31	1.35	0.677
Benzo[b]fluoranthene (ug/kg)	4	0	15	59	34.25	31.5	392.9	19.82	19.27	0.556	0.579
Benzo[k]floranthene (ug/kg)	1	0	20	20	20	20	N/A	N/A	0	N/A	N/A
Benzo[a]pyrene (ug/kg)	3	0	13	56	29.67	20	532.3	23.07	10.38	1.554	0.778
Indeno[1,2,3-cd]pyrene (ug/kg)	1	0	18	18	18	18	N/A	N/A	0	N/A	N/A
Dibenz[a,h]anthracene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo[g,h,i]perylene (ug/kg)	6	0	12	31	21.83	22.5	59.77	7.731	11.12	-0.184	0.354

## Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Naphthalene (ug/kg)	21	0	3.6	17	33	33	34	34	35	67	67.8
2-Methylnaphthalene (ug/kg)	21	0	3.6	17	33	33	34	34	35	67	67.8
1-Methylnaphthalene (ug/kg)	21	0	3.6	17	33	33	34	34	35	67	67.8
Acenaphthylene (ug/kg)	21	0	3.6	17	33	33	34	34	35	67	67.8
Acenaphthene (ug/kg)	21	0	3.6	17	33	33	34	34	35	67	67.8
Fluorene (ug/kg)	21	0	3.6	17	33	33	34	34	35	67	67.8
Phenanthrene (ug/kg)	21	0	3.6	17	33	33	34	34	35	67	67.8
Anthracene (ug/kg)	21	0	3.6	17	33	33	34	34	35	67	67.8
Fluoranthene (ug/kg)	21	0	3.6	20	25	33	34	34	39	67	67.8
Pyrene (ug/kg)	21	0	3.6	18	23	33	34	34	36	67	67.8
Benzo[a]anthracene (ug/kg)	21	0	3.6	17	17	33	34	34	35	67	67.8
Chrysene (ug/kg)	21	0	3.6	17	28	33	34	34	64	67	67.8
Benzo[b]fluoranthene (ug/kg)	21	0	3.6	17	22	33	34	35	59	67	67.8

### SHAD-041 Summary Statistics for 0-0.5 ft bgs Depth Interval

Benzo[k]floranthene (ug/kg)	21	0	3.6	17	20	33	34	34	35	67	67.8
Benzo[a]pyrene (ug/kg)	21	0	3.6	17	20	33	34	34	56	67	67.8
Indeno[1,2,3-cd]pyrene (ug/kg)	21	0	3.6	18	33	33	34	34	35	67	67.8
Dibenz[a,h]anthracene (ug/kg)	21	0	3.6	17	33	33	34	34	35	67	67.8
Benzo[g,h,i]perylene (ug/kg)	21	0	3.6	14	17	33	34	34	34	67	67.8

#### General Statistics on Uncensored Data

Date/Time of Computation ProUCL 5.11/16/2018 5:52:02 PM

#### User Selected Options

From File SHAD-041\_ProUCL\_CALC\_a.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_a.xls

#### General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Chromium VI (mg/kg)	21	0	21	0	0.00%	N/A	N/A	2.802	77.03	8.776	3.132
Chromium (mg/kg)	21	0	21	0	0.00%	N/A	N/A	26.34	99.67	9.983	0.379
Lead (mg/kg)	21	0	21	0	0.00%	N/A	N/A	536.4	619424	787	1.467

#### General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Chromium VI (mg/kg)	21	0	0.127	41	2.802	0.82	77.03	8.776	0.756	4.541	3.132
Chromium (mg/kg)	21	0	8.2	52	26.34	27	99.67	9.983	8.895	0.534	0.379
Lead (mg/kg)	21	0	2.8	3300	536.4	260	619424	787	352.9	2.536	1.467

#### Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Chromium VI (mg/kg)	21	0	0.2	0.31	0.34	0.82	1.5	1.8	2.1	2.1	33.22
Chromium (mg/kg)	21	0	13	21	21	27	31	31	36	41	49.8
Lead (mg/kg)	21	0	18	22	48	260	520	820	1400	1700	2980

#### General Statistics on Uncensored Data

Date/Time of Computation ProUCL 5.11/16/2018 5:52:32 PM

#### User Selected Options

From File SHAD-041\_ProUCL\_CALC\_a.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_a.xls

#### General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Aroclor 1016 (mg/kg)	21	0	0	21	100.00%	0.011	0.017	N/A	N/A	N/A	N/A
Aroclor 1221 (mg/kg)	21	0	0	21	100.00%	0.016	0.021	N/A	N/A	N/A	N/A
Aroclor 1232 (mg/kg)	21	0	0	21	100.00%	0.01	0.017	N/A	N/A	N/A	N/A
Aroclor 1242 (mg/kg)	21	0	0	21	100.00%	0.01	0.017	N/A	N/A	N/A	N/A
Aroclor 1248 (mg/kg)	21	0	0	21	100.00%	0.01	0.017	N/A	N/A	N/A	N/A
Aroclor 1254 (mg/kg)	21	0	0	21	100.00%	0.01	0.017	N/A	N/A	N/A	N/A
Aroclor 1260 (mg/kg)	21	0	4	17	80.95%	0.01	0.072	0.0209	0.0018	0.0424	2.029

#### General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Aroclor 1016 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1221 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1232 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1242 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1248 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1254 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1260 (mg/kg)	4	0	0.012	0.21	0.0665	0.022	0.00918	0.0958	0.00815	1.985	1.44

#### Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Aroclor 1016 (mg/kg)	21	0	0.016	0.016	0.016	0.016	0.016	0.016	0.017	0.017	0.017
Aroclor 1221 (mg/kg)	21	0	0.016	0.016	0.016	0.016	0.017	0.017	0.017	0.019	0.0206



### SHAD-041 Summary Statistics for 0-0.5 ft bgs Depth Interval

Aroclor 1232 (mg/kg)	21	0	0.016	0.016	0.016	0.016	0.016	0.016	0.017	0.017	0.017
Aroclor 1242 (mg/kg)	21	0	0.016	0.016	0.016	0.016	0.016	0.016	0.017	0.017	0.017
Aroclor 1248 (mg/kg)	21	0	0.016	0.016	0.016	0.016	0.016	0.016	0.017	0.017	0.017
Aroclor 1254 (mg/kg)	21	0	0.016	0.016	0.016	0.016	0.016	0.016	0.017	0.017	0.017
Aroclor 1260 (mg/kg)	21	0	0.01	0.01	0.01	0.016	0.017	0.017	0.023	0.072	0.182

#### General Statistics on Uncensored Data

Date/Time of Computation ProUCL 5.11/16/2018 5:53:09 PM

#### User Selected Options

From File SHAD-041\_ProUCL\_CALC\_a.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_a.xls

#### General Statistics for Censored Datasets (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
SVOC-PCDD/PCDF 2,3,7,8-TCDD (pg/g)	21	0	20	1	4.76%	0.42	0.42	6.912	251.8	15.87	2.296

#### General Statistics for Raw Dataset using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
SVOC-PCDD/PCDF 2,3,7,8-TCDD (pg/g)	20	0	0.15	67	7.247	0.88	275.8	16.61	0.949	3.056	2.292

#### Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
SVOC-PCDD/PCDF 2,3,7,8-TCDD (pg/g)	21	0	0.23	0.42	0.43	0.88	3	4.5	17	38	61.2

#### General Statistics on Uncensored Data

Date/Time of Computation ProUCL 5.11/16/2018 5:53:48 PM

#### User Selected Options

From File SHAD-041\_ProUCL\_CALC\_a.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_a.xls

#### General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
1,1,1-Trichloroethane (ug/kg)	21	0	0	21	100.00%	0.82	3.1	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane (ug/kg)	21	0	0	21	100.00%	0.82	3.1	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane (ug/kg)	21	0	0	21	100.00%	0.82	3.1	N/A	N/A	N/A	N/A
1,1-Dichloroethane (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
1,1-Dichloroethene (ug/kg)	21	0	1	20	95.24%	4.1	5.3	4.138	0.00984	0.0992	0.024
1,2,4-Trimethylbenzene (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
1,2-Dibromoethane (EDB) (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
1,2-Dichloroethane (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
cis-1,2-Dichloroethene (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
trans-1,2-Dichloroethene (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
1,2-Dichloropropane (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
1,3-Dichlorobenzene (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
cis-1,3-Dichloropropene (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
trans-1,3-Dichloropropene (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
Benzene (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
Bromodichloromethane (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
Bromoform (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
Bromomethane (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
Carbon Tetrachloride (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
Chlorobenzene (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
Chloroform (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
Chloromethane (ug/kg)	21	0	1	20	95.24%	0.97	5.3	1.313	1.059	1.029	0.784
Dibromochloromethane (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
Ethylbenzene (ug/kg)	21	0	11	10	47.62%	0.85	0.99	1.93	7.675	2.77	1.436
Methylene Chloride (ug/kg)	21	0	3	18	85.71%	0.86	5.3	2.055	2.004	1.416	0.689
Styrene (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
Tetrachloroethene (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
Toluene (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A

### SHAD-041 Summary Statistics for 0-0.5 ft bgs Depth Interval

Trichloroethane (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
Vinyl Chloride (ug/kg)	21	0	0	21	100.00%	0.82	1.1	N/A	N/A	N/A	N/A
m-p-Xylene (ug/kg)	21	0	10	11	52.38%	1.1	4.9	10.22	325.9	18.05	1.767
o-Xylene (ug/kg)	21	0	11	10	47.62%	4.3	4.9	13	332.3	18.23	1.403

#### General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
1,1,1-Trichloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethene (ug/kg)	1	0	4.4	4.4	4.4	4.4	N/A	N/A	0	N/A	N/A
1,2,4-Trimethylbenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dibromoethane (EDB) (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
cis-1,2-Dichloroethene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
trans-1,2-Dichloroethene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloropropane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,3-Dichlorobenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
cis-1,3-Dichloropropene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
trans-1,3-Dichloropropene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromodichloromethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromoform (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromomethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloroform (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloromethane (ug/kg)	1	0	4.4	4.4	4.4	4.4	N/A	N/A	0	N/A	N/A
Dibromochloromethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene (ug/kg)	11	0	0.47	12	3.044	1	13.23	3.637	0.741	1.804	1.195
Methylene Chloride (ug/kg)	3	0	2.6	4.5	3.833	4.4	1.143	1.069	0.148	-1.715	0.279
Styrene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetrachloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Trichloroethene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
m-p-Xylene (ug/kg)	10	0	4.3	76	19.29	7.05	583.4	24.15	3.632	1.905	1.252
o-Xylene (ug/kg)	11	0	4.3	76	20.9	7.6	553.6	23.53	4.893	1.614	1.126

#### Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
1,1,1-Trichloroethane (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1.1	1.1	2.7
1,1,2,2-Tetrachloroethane (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1.1	1.1	2.7
1,1,2-Trichloroethane (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1.1	1.1	2.7
1,1-Dichloroethane (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
1,1-Dichloroethene (ug/kg)	21	0	4.3	4.4	4.4	4.6	4.9	4.9	5	5.3	5.3
1,2,4-Trimethylbenzene (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
1,2-Dibromoethane (EDB) (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
1,2-Dichlorobenzene (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1.1	1.1	1.1
1,2-Dichloroethane (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
cis-1,2-Dichloroethene (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
trans-1,2-Dichloroethene (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
1,2-Dichloropropane (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
1,3-Dichlorobenzene (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
cis-1,3-Dichloropropene (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
trans-1,3-Dichloropropene (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
1,4-Dichlorobenzene (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1.1	1.1	1.1
Benzene (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
Bromodichloromethane (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
Bromoform (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1.1	1.1	1.1
Bromomethane (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
Carbon Tetrachloride (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
Chlorobenzene (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1

**SHAD-041 Summary Statistics for 0-0.5 ft bgs Depth Interval**

Chloroform (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
Chloromethane (ug/kg)	21	0	4.1	4.3	4.3	4.5	4.9	4.9	5	5	5.24
Dibromochloromethane (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
Ethylbenzene (ug/kg)	21	0	0.81	0.86	0.88	0.94	1	1.5	5.3	6.8	10.96
Methylene Chloride (ug/kg)	21	0	2.6	4.1	4.4	4.5	4.9	4.9	5	5.3	5.3
Styrene (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
Tetrachloroethene (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
Toluene (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
Trichloroethene (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
Vinyl Chloride (ug/kg)	21	0	0.85	0.87	0.88	0.92	0.99	0.99	1	1.1	1.1
m-p-Xylene (ug/kg)	21	0	4.3	4.5	4.5	4.9	6.5	7.6	21	49	70.6
o-Xylene (ug/kg)	21	0	4.4	4.5	4.6	4.9	7.6	12	37	49	70.6

# SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

## UCL Statistics for Data Sets with Non-Detects

User Selected Options  
 Date/Time of Computation ProUCL 5.11/16/2018 5:54:51 PM  
 From File SHAD-041\_ProUCL\_CALC\_a.xls  
 Full Precision OFF  
 Confidence Coefficient 95%  
 Number of Bootstrap Operations 2000

### Benzo[b]fluoranthene (ug/kg)

#### General Statistics

Total Number of Observations	21	Number of Distinct Observations	13
Number of Detects	4	Number of Non-Detects	17
Number of Distinct Detects	4	Number of Distinct Non-Detects	9
Minimum Detect	15	Minimum Non-Detect	3.3
Maximum Detect	59	Maximum Non-Detect	68
Variance Detects	392.9	Percent Non-Detects	80.95%
Mean Detects	34.25	SD Detects	19.82
Median Detects	31.5	CV Detects	0.579
Skewness Detects	0.556	Kurtosis Detects	-1.902
Mean of Logged Detects	3.398	SD of Logged Detects	0.614

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.948
5% Shapiro Wilk Critical Value	0.748
Lilliefors Test Statistic	0.232
5% Lilliefors Critical Value	0.375

#### Shapiro Wilk GOF Test

Detected Data appear Normal at 5% Significance Level

#### Lilliefors GOF Test

Detected Data appear Normal at 5% Significance Level

**Detected Data appear Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	13.19	KM Standard Error of Mean	4.764
KM SD	14.77	95% KM (BCA) UCL	N/A
95% KM (t) UCL	21.4	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	21.02	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	27.48	95% KM Chebyshev UCL	33.95
97.5% KM Chebyshev UCL	42.93	99% KM Chebyshev UCL	60.58

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.255
5% A-D Critical Value	0.659
K-S Test Statistic	0.236
5% K-S Critical Value	0.396

#### Anderson-Darling GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

#### Kolmogorov-Smirnov GOF

Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	3.832
Theta hat (MLE)	8.939
nu hat (MLE)	30.65
Mean (detects)	34.25

k star (bias corrected MLE)	1.125
Theta star (bias corrected MLE)	30.46
nu star (bias corrected)	8.996

#### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	9.383
Maximum	59	Median	2.445
SD	15.59	CV	1.662
k hat (MLE)	0.227	k star (bias corrected MLE)	0.226
Theta hat (MLE)	41.42	Theta star (bias corrected MLE)	41.53
nu hat (MLE)	9.516	nu star (bias corrected)	9.49
Adjusted Level of Significance ( $\beta$ )	0.0383		
Approximate Chi Square Value (9.49, $\alpha$ )	3.625	Adjusted Chi Square Value (9.49, $\beta$ )	3.351
95% Gamma Approximate UCL (use when $n \geq 50$ )	24.56	95% Gamma Adjusted UCL (use when $n < 50$ )	N/A

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	13.19	SD (KM)	14.77
Variance (KM)	218	SE of Mean (KM)	4.764
k hat (KM)	0.797	k star (KM)	0.715
nu hat (KM)	33.49	nu star (KM)	30.04
theta hat (KM)	16.54	theta star (KM)	18.44
80% gamma percentile (KM)	21.66	90% gamma percentile (KM)	32.93
95% gamma percentile (KM)	44.53	99% gamma percentile (KM)	72.18

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (30.04, $\alpha$ )	18.52	Adjusted Chi Square Value (30.04, $\beta$ )	17.83
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	21.38	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	22.22

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.966	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.197	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	13.62	Mean in Log Scale	2.311
SD in Original Scale	13.44	SD in Log Scale	0.737
95% t UCL (assumes normality of ROS data)	18.68	95% Percentile Bootstrap UCL	18.9
95% BCA Bootstrap UCL	20.01	95% Bootstrap t UCL	25.12
95% H-UCL (Log ROS)	19.12		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	2.043	KM Geo Mean	7.717
KM SD (logged)	1.007	95% Critical H Value (KM-Log)	2.574
KM Standard Error of Mean (logged)	0.406	95% H-UCL (KM -Log)	22.87
KM SD (logged)	1.007	95% Critical H Value (KM-Log)	2.574
KM Standard Error of Mean (logged)	0.406		

### DL/2 Statistics

<b>DL/2 Normal</b>		<b>DL/2 Log-Transformed</b>	
Mean in Original Scale	19.18	Mean in Log Scale	2.64
SD in Original Scale	13.42	SD in Log Scale	0.967
95% t UCL (Assumes normality)	24.23	95% H-Stat UCL	38.54

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

**Suggested UCL to Use**

## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

95% KM (t) UCL 21.4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### Benzo[g,h,i]perylene (ug/kg)

General Statistics			
Total Number of Observations	21	Number of Distinct Observations	14
Number of Detects	6	Number of Non-Detects	15
Number of Distinct Detects	6	Number of Distinct Non-Detects	8
Minimum Detect	12	Minimum Non-Detect	3.3
Maximum Detect	31	Maximum Non-Detect	68
Variance Detects	59.77	Percent Non-Detects	71.43%
Mean Detects	21.83	SD Detects	7.731
Median Detects	22.5	CV Detects	0.354
Skewness Detects	-0.184	Kurtosis Detects	-1.775
Mean of Logged Detects	3.025	SD of Logged Detects	0.387

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.932	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.178	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level

**Detected Data appear Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	14.81	KM Standard Error of Mean	3.635
KM SD	10.36	95% KM (BCA) UCL	20.39
<b>95% KM (t) UCL</b>	<b>21.08</b>	95% KM (Percentile Bootstrap) UCL	20.32
95% KM (z) UCL	20.79	95% KM Bootstrap t UCL	20.1
90% KM Chebyshev UCL	25.71	95% KM Chebyshev UCL	30.65
97.5% KM Chebyshev UCL	37.51	99% KM Chebyshev UCL	50.97

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.32	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.698	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.198	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.333	Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	8.667	k star (bias corrected MLE)	4.444
Theta hat (MLE)	2.519	Theta star (bias corrected MLE)	4.913
nu hat (MLE)	104	nu star (bias corrected)	53.33
Mean (detects)	21.83		

#### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	4.639	Mean	15.18
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## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

Maximum	31	Median	14.43
SD	8.376	CV	0.552
k hat (MLE)	3.119	k star (bias corrected MLE)	2.706
Theta hat (MLE)	4.867	Theta star (bias corrected MLE)	5.612
nu hat (MLE)	131	nu star (bias corrected)	113.6
Adjusted Level of Significance ( $\beta$ )	0.0383		
Approximate Chi Square Value (113.63, $\alpha$ )	90.02	Adjusted Chi Square Value (113.63, $\beta$ )	88.41
95% Gamma Approximate UCL (use when $n \geq 50$ )	19.16	95% Gamma Adjusted UCL (use when $n < 50$ )	19.51

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	14.81	SD (KM)	10.36
Variance (KM)	107.3	SE of Mean (KM)	3.635
k hat (KM)	2.043	k star (KM)	1.783
nu hat (KM)	85.8	nu star (KM)	74.87
theta hat (KM)	7.249	theta star (KM)	8.307
80% gamma percentile (KM)	22.47	90% gamma percentile (KM)	29.6
95% gamma percentile (KM)	36.44	99% gamma percentile (KM)	51.73

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (74.87, $\alpha$ )	55.94	Adjusted Chi Square Value (74.87, $\beta$ )	54.69
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	19.82	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	20.27

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.912	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.187	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	15.81	Mean in Log Scale	2.657
SD in Original Scale	7.449	SD in Log Scale	0.465
95% t UCL (assumes normality of ROS data)	18.61	95% Percentile Bootstrap UCL	18.44
95% BCA Bootstrap UCL	18.62	95% Bootstrap t UCL	19.11
95% H-UCL (Log ROS)	19.47		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	2.347	KM Geo Mean	10.45
KM SD (logged)	0.912	95% Critical H Value (KM-Log)	2.447
KM Standard Error of Mean (logged)	0.326	95% H-UCL (KM -Log)	26.09
KM SD (logged)	0.912	95% Critical H Value (KM-Log)	2.447
KM Standard Error of Mean (logged)	0.326		

### DL/2 Statistics

<b>DL/2 Normal</b>		<b>DL/2 Log-Transformed</b>	
Mean in Original Scale	17.27	Mean in Log Scale	2.587
SD in Original Scale	9.411	SD in Log Scale	0.916
95% t UCL (Assumes normality)	20.81	95% H-Stat UCL	33.39

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (t) UCL 21.08

## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### UCL Statistics for Data Sets with Non-Detects

User Selected Options  
 Date/Time of Computation ProUCL 5.11/16/2018 5:55:32 PM  
 From File SHAD-041\_ProUCL\_CALC\_a.xls  
 Full Precision OFF  
 Confidence Coefficient 95%  
 Number of Bootstrap Operations 2000

### Chromium VI (mg/kg)

#### General Statistics

Total Number of Observations	21	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	0.127	Mean	2.802
Maximum	41	Median	0.82
SD	8.776	Std. Error of Mean	1.915
Coefficient of Variation	3.132	Skewness	4.541

#### Normal GOF Test

Shapiro Wilk Test Statistic 0.287  
 5% Shapiro Wilk Critical Value 0.908  
 Lilliefors Test Statistic 0.484  
 5% Lilliefors Critical Value 0.188

#### Shapiro Wilk GOF Test

Data Not Normal at 5% Significance Level

#### Lilliefors GOF Test

Data Not Normal at 5% Significance Level

**Data Not Normal at 5% Significance Level**

#### Assuming Normal Distribution

##### 95% Normal UCL

95% Student's-t UCL 6.105

##### 95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995) 7.98

95% Modified-t UCL (Johnson-1978) 6.422

#### Gamma GOF Test

A-D Test Statistic 2.766  
 5% A-D Critical Value 0.805  
 K-S Test Statistic 0.339  
 5% K-S Critical Value 0.2

#### Anderson-Darling Gamma GOF Test

Data Not Gamma Distributed at 5% Significance Level

#### Kolmogorov-Smirnov Gamma GOF Test

Data Not Gamma Distributed at 5% Significance Level

**Data Not Gamma Distributed at 5% Significance Level**

#### Gamma Statistics

k hat (MLE)	0.501	k star (bias corrected MLE)	0.461
Theta hat (MLE)	5.598	Theta star (bias corrected MLE)	6.081
nu hat (MLE)	21.02	nu star (bias corrected)	19.35
MLE Mean (bias corrected)	2.802	MLE Sd (bias corrected)	4.128
		Approximate Chi Square Value (0.05)	10.38
Adjusted Level of Significance	0.0383	Adjusted Chi Square Value	9.872

#### Assuming Gamma Distribution

95% Approximate Gamma UCL (use when  $n \geq 50$ ) 5.227

95% Adjusted Gamma UCL (use when  $n < 50$ ) 5.494

#### Lognormal GOF Test



## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

Shapiro Wilk Test Statistic	0.884
5% Shapiro Wilk Critical Value	0.908
Lilliefors Test Statistic	0.168
5% Lilliefors Critical Value	0.188

<b>Shapiro Wilk Lognormal GOF Test</b>	
Data Not Lognormal at 5% Significance Level	
<b>Lilliefors Lognormal GOF Test</b>	
Data appear Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

<b>Lognormal Statistics</b>			
Minimum of Logged Data	-2.064	Mean of logged Data	-0.238
Maximum of Logged Data	3.714	SD of logged Data	1.244

<b>Assuming Lognormal Distribution</b>			
95% H-UCL	3.844	90% Chebyshev (MVUE) UCL	3.138
95% Chebyshev (MVUE) UCL	3.831	97.5% Chebyshev (MVUE) UCL	4.792
99% Chebyshev (MVUE) UCL	6.68		

**Nonparametric Distribution Free UCL Statistics**  
 Data appear to follow a Discernible Distribution at 5% Significance Level

<b>Nonparametric Distribution Free UCLs</b>			
95% CLT UCL	5.952	95% Jackknife UCL	6.105
95% Standard Bootstrap UCL	5.815	95% Bootstrap-t UCL	33.98
95% Hall's Bootstrap UCL	20.54	95% Percentile Bootstrap UCL	6.545
95% BCA Bootstrap UCL	8.57		
90% Chebyshev(Mean, Sd) UCL	8.548	95% Chebyshev(Mean, Sd) UCL	11.15
97.5% Chebyshev(Mean, Sd) UCL	14.76	99% Chebyshev(Mean, Sd) UCL	21.86

**Suggested UCL to Use**  
 95% Chebyshev (Mean, Sd) UCL 11.15

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### Chromium (mg/kg)

<b>General Statistics</b>			
Total Number of Observations	21	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	8.2	Mean	26.34
Maximum	52	Median	27
SD	9.983	Std. Error of Mean	2.179
Coefficient of Variation	0.379	Skewness	0.534

<b>Normal GOF Test</b>		<b>Shapiro Wilk GOF Test</b>	
Shapiro Wilk Test Statistic	0.966	Data appear Normal at 5% Significance Level	
5% Shapiro Wilk Critical Value	0.908	<b>Lilliefors GOF Test</b>	
Lilliefors Test Statistic	0.13	Data appear Normal at 5% Significance Level	
5% Lilliefors Critical Value	0.188		

Data appear Normal at 5% Significance Level

<b>Assuming Normal Distribution</b>		<b>95% UCLs (Adjusted for Skewness)</b>	
<b>95% Normal UCL</b>		95% Adjusted-CLT UCL (Chen-1995)	30.2
95% Student's-t UCL	30.1	95% Modified-t UCL (Johnson-1978)	30.14

## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

### Gamma GOF Test

A-D Test Statistic	0.354
5% A-D Critical Value	0.744
K-S Test Statistic	0.142
5% K-S Critical Value	0.19

### Anderson-Darling Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

### Kolmogorov-Smirnov Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

### Gamma Statistics

k hat (MLE)	6.661	k star (bias corrected MLE)	5.742
Theta hat (MLE)	3.955	Theta star (bias corrected MLE)	4.588
nu hat (MLE)	279.8	nu star (bias corrected)	241.1
MLE Mean (bias corrected)	26.34	MLE Sd (bias corrected)	10.99
Adjusted Level of Significance	0.0383	Approximate Chi Square Value (0.05)	206.2
		Adjusted Chi Square Value	203.7

### Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	30.81	95% Adjusted Gamma UCL (use when n<50)	31.18
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### Lognormal GOF Test

Shapiro Wilk Test Statistic	0.94
5% Shapiro Wilk Critical Value	0.908
Lilliefors Test Statistic	0.171
5% Lilliefors Critical Value	0.188

### Shapiro Wilk Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

### Lilliefors Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

### Lognormal Statistics

Minimum of Logged Data	2.104	Mean of logged Data	3.194
Maximum of Logged Data	3.951	SD of logged Data	0.424

### Assuming Lognormal Distribution

95% H-UCL	32.02	90% Chebyshev (MVUE) UCL	34.13
95% Chebyshev (MVUE) UCL	37.56	97.5% Chebyshev (MVUE) UCL	42.32
99% Chebyshev (MVUE) UCL	51.66		

### Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

### Nonparametric Distribution Free UCLs

95% CLT UCL	29.93	95% Jackknife UCL	30.1
95% Standard Bootstrap UCL	29.79	95% Bootstrap-t UCL	30.5
95% Hall's Bootstrap UCL	31.2	95% Percentile Bootstrap UCL	30
95% BCA Bootstrap UCL	30.33		
90% Chebyshev(Mean, Sd) UCL	32.88	95% Chebyshev(Mean, Sd) UCL	35.84
97.5% Chebyshev(Mean, Sd) UCL	39.95	99% Chebyshev(Mean, Sd) UCL	48.02

### Suggested UCL to Use

95% Student's-t UCL	30.1
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

### General Statistics

Total Number of Observations	21	Number of Distinct Observations	19
		Number of Missing Observations	0
Minimum	2.8	Mean	536.4
Maximum	3300	Median	260
SD	787	Std. Error of Mean	171.7
Coefficient of Variation	1.467	Skewness	2.536

### Normal GOF Test

Shapiro Wilk Test Statistic	0.68
5% Shapiro Wilk Critical Value	0.908
Lilliefors Test Statistic	0.27
5% Lilliefors Critical Value	0.188

### Shapiro Wilk GOF Test

Data Not Normal at 5% Significance Level

### Lilliefors GOF Test

Data Not Normal at 5% Significance Level

**Data Not Normal at 5% Significance Level**

### Assuming Normal Distribution

#### 95% Normal UCL

95% Student's-t UCL	832.6
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#### 95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995)	920.4
95% Modified-t UCL (Johnson-1978)	848.4

### Gamma GOF Test

A-D Test Statistic	0.229
5% A-D Critical Value	0.802
K-S Test Statistic	0.112
5% K-S Critical Value	0.2

### Anderson-Darling Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

### Kolmogorov-Smirnov Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

### Gamma Statistics

k hat (MLE)	0.542	k star (bias corrected MLE)	0.496
Theta hat (MLE)	990.5	Theta star (bias corrected MLE)	1082
nu hat (MLE)	22.74	nu star (bias corrected)	20.83
MLE Mean (bias corrected)	536.4	MLE Sd (bias corrected)	761.7
		Approximate Chi Square Value (0.05)	11.46
Adjusted Level of Significance	0.0383	Adjusted Chi Square Value	10.93

### Assuming Gamma Distribution

95% Approximate Gamma UCL (use when $n \geq 50$ )	974.5	95% Adjusted Gamma UCL (use when $n < 50$ )	1022
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### Lognormal GOF Test

Shapiro Wilk Test Statistic	0.945
5% Shapiro Wilk Critical Value	0.908
Lilliefors Test Statistic	0.175
5% Lilliefors Critical Value	0.188

### Shapiro Wilk Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

### Lilliefors Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

**Data appear Lognormal at 5% Significance Level**

### Lognormal Statistics

Minimum of Logged Data	1.03	Mean of logged Data	5.126
Maximum of Logged Data	8.102	SD of logged Data	1.913

### Assuming Lognormal Distribution

95% H-UCL	5792	90% Chebyshev (MVUE) UCL	2189
95% Chebyshev (MVUE) UCL	2793	97.5% Chebyshev (MVUE) UCL	3632
99% Chebyshev (MVUE) UCL	5278		

### Nonparametric Distribution Free UCL Statistics

## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

Data appear to follow a Discernible Distribution at 5% Significance Level

### Nonparametric Distribution Free UCLs

95% CLT UCL	818.9	95% Jackknife UCL	832.6
95% Standard Bootstrap UCL	805.2	95% Bootstrap-t UCL	1051
95% Hall's Bootstrap UCL	1862	95% Percentile Bootstrap UCL	835.1
95% BCA Bootstrap UCL	931.4		
90% Chebyshev(Mean, Sd) UCL	1052	95% Chebyshev(Mean, Sd) UCL	1285
97.5% Chebyshev(Mean, Sd) UCL	1609	99% Chebyshev(Mean, Sd) UCL	2245

### Suggested UCL to Use

95% Adjusted Gamma UCL 1022

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### UCL Statistics for Data Sets with Non-Detects

#### User Selected Options

Date/Time of Computation	ProUCL 5.11/16/2018 5:56:23 PM
From File	SHAD-041_ProUCL_CALC_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

#### Aroclor 1260 (mg/kg)

### General Statistics

Total Number of Observations	21	Number of Distinct Observations	9
Number of Detects	4	Number of Non-Detects	17
Number of Distinct Detects	4	Number of Distinct Non-Detects	5
Minimum Detect	0.012	Minimum Non-Detect	0.01
Maximum Detect	0.21	Maximum Non-Detect	0.072
Variance Detects	0.00918	Percent Non-Detects	80.95%
Mean Detects	0.0665	SD Detects	0.0958
Median Detects	0.022	CV Detects	1.44
Skewness Detects	1.985	Kurtosis Detects	3.952
Mean of Logged Detects	-3.405	SD of Logged Detects	1.263

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.676
5% Shapiro Wilk Critical Value	0.748
Lilliefors Test Statistic	0.425
5% Lilliefors Critical Value	0.375

### Shapiro Wilk GOF Test

Detected Data Not Normal at 5% Significance Level

### Lilliefors GOF Test

Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0209	KM Standard Error of Mean	0.0107
KM SD	0.0424	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.0394	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.0385	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.053	95% KM Chebyshev UCL	0.0675
97.5% KM Chebyshev UCL	0.0877	99% KM Chebyshev UCL	0.127

## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.665	<b>Anderson-Darling GOF Test</b>	
5% A-D Critical Value	0.669	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.422	<b>Kolmogorov-Smirnov GOF</b>	
5% K-S Critical Value	0.404	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

### Gamma Statistics on Detected Data Only

k hat (MLE)	0.848	k star (bias corrected MLE)	0.379
Theta hat (MLE)	0.0784	Theta star (bias corrected MLE)	0.176
nu hat (MLE)	6.787	nu star (bias corrected)	3.03
Mean (detects)	0.0665		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0208
Maximum	0.21	Median	0.01
SD	0.0435	CV	2.096
k hat (MLE)	1.134	k star (bias corrected MLE)	1.004
Theta hat (MLE)	0.0183	Theta star (bias corrected MLE)	0.0207
nu hat (MLE)	47.62	nu star (bias corrected)	42.15
Adjusted Level of Significance ( $\beta$ )	0.0383		
Approximate Chi Square Value (42.15, $\alpha$ )	28.27	Adjusted Chi Square Value (42.15, $\beta$ )	27.4
95% Gamma Approximate UCL (use when $n \geq 50$ )	0.031	95% Gamma Adjusted UCL (use when $n < 50$ )	N/A

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0209	SD (KM)	0.0424
Variance (KM)	0.0018	SE of Mean (KM)	0.0107
k hat (KM)	0.243	k star (KM)	0.24
nu hat (KM)	10.21	nu star (KM)	10.08
theta hat (KM)	0.0861	theta star (KM)	0.0871
80% gamma percentile (KM)	0.0299	90% gamma percentile (KM)	0.0629
95% gamma percentile (KM)	0.102	99% gamma percentile (KM)	0.208

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (10.08, $\alpha$ )	3.992	Adjusted Chi Square Value (10.08, $\beta$ )	3.702
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	0.0528	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	0.057

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.822	<b>Shapiro Wilk GOF Test</b>	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.365	<b>Lilliefors GOF Test</b>	
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0135	Mean in Log Scale	-6.818
SD in Original Scale	0.0455	SD in Log Scale	2.14
95% t UCL (assumes normality of ROS data)	0.0306	95% Percentile Bootstrap UCL	0.0325
95% BCA Bootstrap UCL	0.0442	95% Bootstrap t UCL	0.128
95% H-UCL (Log ROS)	0.088		

## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-4.364	KM Geo Mean	0.0127
KM SD (logged)	0.67	95% Critical H Value (KM-Log)	2.158
KM Standard Error of Mean (logged)	0.17	95% H-UCL (KM -Log)	0.022
KM SD (logged)	0.67	95% Critical H Value (KM-Log)	2.158
KM Standard Error of Mean (logged)	0.17		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	0.0195
SD in Original Scale	0.0443
95% t UCL (Assumes normality)	0.0361

#### DL/2 Log-Transformed

Mean in Log Scale	-4.647
SD in Log Scale	0.897
95% H-Stat UCL	0.0233

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Approximate Gamma Distributed at 5% Significance Level**

### Suggested UCL to Use

Gamma Adjusted KM-UCL (use when  $k \leq 1$  and  $15 < n < 50$  but  $k \neq 1$ ) 0.057

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test

When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### UCL Statistics for Data Sets with Non-Detects

#### User Selected Options

Date/Time of Computation	ProUCL 5.11/16/2018 5:57:04 PM
From File	SHAD-041_ProUCL_CALC_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

### SVOC-PCDD/PCDF 2,3,7,8-TCDD (pg/g)

#### General Statistics

Total Number of Observations	21	Number of Distinct Observations	20
Number of Detects	20	Number of Non-Detects	1
Number of Distinct Detects	19	Number of Distinct Non-Detects	1
Minimum Detect	0.15	Minimum Non-Detect	0.42
Maximum Detect	67	Maximum Non-Detect	0.42
Variance Detects	275.8	Percent Non-Detects	4.762%
Mean Detects	7.247	SD Detects	16.61
Median Detects	0.88	CV Detects	2.292
Skewness Detects	3.056	Kurtosis Detects	9.452
Mean of Logged Detects	0.355	SD of Logged Detects	1.693

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.483
5% Shapiro Wilk Critical Value	0.905
Lilliefors Test Statistic	0.394
5% Lilliefors Critical Value	0.192

#### Shapiro Wilk GOF Test

Detected Data Not Normal at 5% Significance Level

#### Lilliefors GOF Test

Detected Data Not Normal at 5% Significance Level

## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

Detected Data Not Normal at 5% Significance Level

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6.912	KM Standard Error of Mean	3.552
KM SD	15.87	95% KM (BCA) UCL	13.51
95% KM (t) UCL	13.04	95% KM (Percentile Bootstrap) UCL	13.06
95% KM (z) UCL	12.76	95% KM Bootstrap t UCL	29.26
90% KM Chebyshev UCL	17.57	95% KM Chebyshev UCL	22.4
97.5% KM Chebyshev UCL	29.1	99% KM Chebyshev UCL	42.26

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.958	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.823	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.286	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.207	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

### Gamma Statistics on Detected Data Only

k hat (MLE)	0.404	k star (bias corrected MLE)	0.377
Theta hat (MLE)	17.93	Theta star (bias corrected MLE)	19.23
nu hat (MLE)	16.17	nu star (bias corrected)	15.07
Mean (detects)	7.247		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	6.902
Maximum	67	Median	0.88
SD	16.26	CV	2.356
k hat (MLE)	0.368	k star (bias corrected MLE)	0.347
Theta hat (MLE)	18.76	Theta star (bias corrected MLE)	19.89
nu hat (MLE)	15.45	nu star (bias corrected)	14.58
Adjusted Level of Significance ( $\beta$ )	0.0383		
Approximate Chi Square Value (14.58, $\alpha$ )	6.969	Adjusted Chi Square Value (14.58, $\beta$ )	6.567
95% Gamma Approximate UCL (use when $n \geq 50$ )	14.44	95% Gamma Adjusted UCL (use when $n < 50$ )	15.32

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	6.912	SD (KM)	15.87
Variance (KM)	251.8	SE of Mean (KM)	3.552
k hat (KM)	0.19	k star (KM)	0.194
nu hat (KM)	7.97	nu star (KM)	8.165
theta hat (KM)	36.42	theta star (KM)	35.56
80% gamma percentile (KM)	8.97	90% gamma percentile (KM)	20.9
95% gamma percentile (KM)	35.88	99% gamma percentile (KM)	77.31

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (8.16, $\alpha$ )	2.831	Adjusted Chi Square Value (8.16, $\beta$ )	2.595
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	19.94	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	21.75

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.915	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.905	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.173	<b>Lilliefors GOF Test</b>

## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

5% Lilliefors Critical Value 0.192

Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.909	Mean in Log Scale	0.249
SD in Original Scale	16.26	SD in Log Scale	1.721
95% t UCL (assumes normality of ROS data)	13.03	95% Percentile Bootstrap UCL	13.36
95% BCA Bootstrap UCL	15.87	95% Bootstrap t UCL	28.94
95% H-UCL (Log ROS)	23.14		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.264	KM Geo Mean	1.302
KM SD (logged)	1.662	95% Critical H Value (KM-Log)	3.574
KM Standard Error of Mean (logged)	0.372	95% H-UCL (KM -Log)	19.57
KM SD (logged)	1.662	95% Critical H Value (KM-Log)	3.574
KM Standard Error of Mean (logged)	0.372		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	6.912
SD in Original Scale	16.26
95% t UCL (Assumes normality)	13.03

#### DL/2 Log-Transformed

Mean in Log Scale	0.264
SD in Log Scale	1.703
95% H-Stat UCL	22.18

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Lognormal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (Chebyshev) UCL 22.4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### UCL Statistics for Data Sets with Non-Detects

#### User Selected Options

Date/Time of Computation	ProUCL 5.11/16/2018 5:58:01 PM
From File	SHAD-041_ProUCL_CALC_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

#### Ethylbenzene (ug/kg)

#### General Statistics

Total Number of Observations	21	Number of Distinct Observations	19
Number of Detects	11	Number of Non-Detects	10
Number of Distinct Detects	11	Number of Distinct Non-Detects	8
Minimum Detect	0.47	Minimum Non-Detect	0.85
Maximum Detect	12	Maximum Non-Detect	0.99
Variance Detects	13.23	Percent Non-Detects	47.62%
Mean Detects	3.044	SD Detects	3.637
Median Detects	1	CV Detects	1.195
Skewness Detects	1.804	Kurtosis Detects	2.983



## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

Mean of Logged Detects 0.552

SD of Logged Detects 1.072

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.734	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.85	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.301	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.251	Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.93	KM Standard Error of Mean	0.636
KM SD	2.77	95% KM (BCA) UCL	3.041
95% KM (t) UCL	3.026	95% KM (Percentile Bootstrap) UCL	3.037
95% KM (z) UCL	2.975	95% KM Bootstrap t UCL	4.228
90% KM Chebyshev UCL	3.836	<b>95% KM Chebyshev UCL</b>	<b>4.7</b>
97.5% KM Chebyshev UCL	5.899	99% KM Chebyshev UCL	8.253

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.794	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.751	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.271	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.262	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected Data Not Gamma Distributed at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	1.026	k star (bias corrected MLE)	0.807
Theta hat (MLE)	2.967	Theta star (bias corrected MLE)	3.774
nu hat (MLE)	22.56	nu star (bias corrected)	17.74
Mean (detects)	3.044		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.626
Maximum	12	Median	0.47
SD	2.991	CV	1.839
k hat (MLE)	0.327	k star (bias corrected MLE)	0.312
Theta hat (MLE)	4.974	Theta star (bias corrected MLE)	5.212
nu hat (MLE)	13.73	nu star (bias corrected)	13.1
Adjusted Level of Significance ( $\beta$ )	0.0383		
Approximate Chi Square Value (13.10, $\alpha$ )	5.962	Adjusted Chi Square Value (13.10, $\beta$ )	5.594
95% Gamma Approximate UCL (use when $n \geq 50$ )	3.574	95% Gamma Adjusted UCL (use when $n < 50$ )	3.808

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.93	SD (KM)	2.77
Variance (KM)	7.675	SE of Mean (KM)	0.636
k hat (KM)	0.485	k star (KM)	0.448
nu hat (KM)	20.38	nu star (KM)	18.8
theta hat (KM)	3.977	theta star (KM)	4.311
80% gamma percentile (KM)	3.149	90% gamma percentile (KM)	5.338
95% gamma percentile (KM)	7.709	99% gamma percentile (KM)	13.6

### Gamma Kaplan-Meier (KM) Statistics

## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

Approximate Chi Square Value (18.80, $\alpha$ )	9.974	Adjusted Chi Square Value (18.80, $\beta$ )	9.481
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	3.638	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	3.827

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.896	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.242	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.901	Mean in Log Scale	0.0661
SD in Original Scale	2.852	SD in Log Scale	0.935
95% t UCL (assumes normality of ROS data)	2.974	95% Percentile Bootstrap UCL	3.004
95% BCA Bootstrap UCL	3.306	95% Bootstrap t UCL	4.344
95% H-UCL (Log ROS)	2.777		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.11	KM Geo Mean	1.116
KM SD (logged)	0.889	95% Critical H Value (KM-Log)	2.417
KM Standard Error of Mean (logged)	0.215	95% H-UCL (KM -Log)	2.678
KM SD (logged)	0.889	95% Critical H Value (KM-Log)	2.417
KM Standard Error of Mean (logged)	0.215		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	1.816
SD in Original Scale	2.89
95% t UCL (Assumes normality)	2.904

#### DL/2 Log-Transformed

Mean in Log Scale	-0.0746
SD in Log Scale	1.014
95% H-Stat UCL	2.79

DL/2 is not a recommended method, provided for comparisons and historical reasons

### Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

### Suggested UCL to Use

95% KM (Chebyshev) UCL	4.7
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## m-p-Xylene (ug/kg)

### General Statistics

Total Number of Observations	21	Number of Distinct Observations	14
Number of Detects	10	Number of Non-Detects	11
Number of Distinct Detects	9	Number of Distinct Non-Detects	7
Minimum Detect	4.3	Minimum Non-Detect	1.1
Maximum Detect	76	Maximum Non-Detect	4.9
Variance Detects	583.4	Percent Non-Detects	52.38%
Mean Detects	19.29	SD Detects	24.15
Median Detects	7.05	CV Detects	1.252
Skewness Detects	1.905	Kurtosis Detects	2.926
Mean of Logged Detects	2.422	SD of Logged Detects	1.009

## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.679	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.842	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.319	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.262	Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	10.22	KM Standard Error of Mean	4.177
KM SD	18.05	95% KM (BCA) UCL	19.26
95% KM (t) UCL	17.42	95% KM (Percentile Bootstrap) UCL	17.33
95% KM (z) UCL	17.09	95% KM Bootstrap t UCL	32.65
90% KM Chebyshev UCL	22.75	<a href="#">95% KM Chebyshev UCL</a>	<a href="#">28.43</a>
97.5% KM Chebyshev UCL	36.31	99% KM Chebyshev UCL	51.78

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.001	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.747	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.287	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.273	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected Data Not Gamma Distributed at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	1.065	k star (bias corrected MLE)	0.812
Theta hat (MLE)	18.11	Theta star (bias corrected MLE)	23.75
nu hat (MLE)	21.3	nu star (bias corrected)	16.24
Mean (detects)	19.29		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	9.191
Maximum	76	Median	0.01
SD	18.97	CV	2.064
k hat (MLE)	0.21	k star (bias corrected MLE)	0.212
Theta hat (MLE)	43.76	Theta star (bias corrected MLE)	43.4
nu hat (MLE)	8.821	nu star (bias corrected)	8.894
Adjusted Level of Significance ( $\beta$ )	0.0383		
Approximate Chi Square Value (8.89, $\alpha$ )	3.263	Adjusted Chi Square Value (8.89, $\beta$ )	3.006
95% Gamma Approximate UCL (use when $n \geq 50$ )	25.05	95% Gamma Adjusted UCL (use when $n < 50$ )	27.2

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	10.22	SD (KM)	18.05
Variance (KM)	325.9	SE of Mean (KM)	4.177
k hat (KM)	0.32	k star (KM)	0.306
nu hat (KM)	13.46	nu star (KM)	12.87
theta hat (KM)	31.89	theta star (KM)	33.35
80% gamma percentile (KM)	15.75	90% gamma percentile (KM)	30.06
95% gamma percentile (KM)	46.43	99% gamma percentile (KM)	88.86

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (12.87, $\alpha$ )	5.805	Adjusted Chi Square Value (12.87, $\beta$ )	5.443
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	22.66	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	24.16

## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.842	<b>Shapiro Wilk GOF Test</b>	
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.252	<b>Lilliefors GOF Test</b>	
5% Lilliefors Critical Value	0.262	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	9.706	Mean in Log Scale	1.083
SD in Original Scale	18.72	SD in Log Scale	1.519
95% t UCL (assumes normality of ROS data)	16.75	95% Percentile Bootstrap UCL	17.2
95% BCA Bootstrap UCL	20.11	95% Bootstrap t UCL	34
95% H-UCL (Log ROS)	29.13		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.398	KM Geo Mean	4.046
KM SD (logged)	1.258	95% Critical H Value (KM-Log)	2.935
KM Standard Error of Mean (logged)	0.348	95% H-UCL (KM -Log)	20.37
KM SD (logged)	1.258	95% Critical H Value (KM-Log)	2.935
KM Standard Error of Mean (logged)	0.348		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	10.32
SD in Original Scale	18.43
95% t UCL (Assumes normality)	17.25

#### DL/2 Log-Transformed

Mean in Log Scale	1.525
SD in Log Scale	1.149
95% H-Stat UCL	18.13

DL/2 is not a recommended method, provided for comparisons and historical reasons

### Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

### Suggested UCL to Use

95% KM (Chebyshev) UCL	28.43
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## o-Xylene (ug/kg)

### General Statistics

Total Number of Observations	21	Number of Distinct Observations	14
Number of Detects	11	Number of Non-Detects	10
Number of Distinct Detects	10	Number of Distinct Non-Detects	6
Minimum Detect	4.3	Minimum Non-Detect	4.3
Maximum Detect	76	Maximum Non-Detect	4.9
Variance Detects	553.6	Percent Non-Detects	47.62%
Mean Detects	20.9	SD Detects	23.53
Median Detects	7.6	CV Detects	1.126
Skewness Detects	1.614	Kurtosis Detects	1.956
Mean of Logged Detects	2.53	SD of Logged Detects	1.022

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.749	<b>Shapiro Wilk GOF Test</b>	
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## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

5% Shapiro Wilk Critical Value	0.85	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.284	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.251	Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	13	KM Standard Error of Mean	4.172
KM SD	18.23	95% KM (BCA) UCL	20.82
95% KM (t) UCL	20.19	95% KM (Percentile Bootstrap) UCL	20.02
95% KM (z) UCL	19.86	95% KM Bootstrap t UCL	27.13
90% KM Chebyshev UCL	25.51	95% KM Chebyshev UCL	31.18
97.5% KM Chebyshev UCL	39.05	99% KM Chebyshev UCL	54.51

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.824	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.749	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.264	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.262	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected Data Not Gamma Distributed at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	1.117	k star (bias corrected MLE)	0.873
Theta hat (MLE)	18.7	Theta star (bias corrected MLE)	23.93
nu hat (MLE)	24.58	nu star (bias corrected)	19.21
Mean (detects)	20.9		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	10.95
Maximum	76	Median	4.3
SD	19.78	CV	1.806
k hat (MLE)	0.222	k star (bias corrected MLE)	0.222
Theta hat (MLE)	49.34	Theta star (bias corrected MLE)	49.33
nu hat (MLE)	9.323	nu star (bias corrected)	9.324
Adjusted Level of Significance ( $\beta$ )	0.0383		
Approximate Chi Square Value (9.32, $\alpha$ )	3.524	Adjusted Chi Square Value (9.32, $\beta$ )	3.254
95% Gamma Approximate UCL (use when $n \geq 50$ )	28.98	95% Gamma Adjusted UCL (use when $n < 50$ )	31.38

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	13	SD (KM)	18.23
Variance (KM)	332.3	SE of Mean (KM)	4.172
k hat (KM)	0.508	k star (KM)	0.467
nu hat (KM)	21.34	nu star (KM)	19.63
theta hat (KM)	25.57	theta star (KM)	27.81
80% gamma percentile (KM)	21.27	90% gamma percentile (KM)	35.65
95% gamma percentile (KM)	51.13	99% gamma percentile (KM)	89.47

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (19.63, $\alpha$ )	10.58	Adjusted Chi Square Value (19.63, $\beta$ )	10.07
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	24.12	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	25.34

### Lognormal GOF Test on Detected Observations Only

## SHAD-041 95 UCL Statistics for 0-0.5 ft bgs Depth Interval

Shapiro Wilk Test Statistic	0.872	<b>Shapiro Wilk GOF Test</b>	
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.234	<b>Lilliefors GOF Test</b>	
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level	

**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	11.56	Mean in Log Scale	1.385
SD in Original Scale	19.44	SD in Log Scale	1.47
95% t UCL (assumes normality of ROS data)	18.87	95% Percentile Bootstrap UCL	18.68
95% BCA Bootstrap UCL	21.46	95% Bootstrap t UCL	28.91
95% H-UCL (Log ROS)	34.41		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	2.02	KM Geo Mean	7.536
KM SD (logged)	0.885	95% Critical H Value (KM-Log)	2.413
KM Standard Error of Mean (logged)	0.203	95% H-UCL (KM -Log)	17.97
KM SD (logged)	0.885	95% Critical H Value (KM-Log)	2.413
KM Standard Error of Mean (logged)	0.203		

### DL/2 Statistics

<b>DL/2 Normal</b>		<b>DL/2 Log-Transformed</b>	
Mean in Original Scale	12.05	Mean in Log Scale	1.725
SD in Original Scale	19.16	SD in Log Scale	1.127
95% t UCL (Assumes normality)	19.26	95% H-Stat UCL	21.15

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Lognormal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (Chebyshev) UCL	31.18
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006). However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

# SHAD-041 Summary Statistics for 0-3 ft bgs Depth Interval

## General Statistics on Uncensored Data

Date/Time of Computation ProUCL 5.11/16/2018 5:59:00 PM

### User Selected Options

From File SHAD-041\_ProUCL\_CALC\_b.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_b.xls

### General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Naphthalene (ug/kg)	42	0	3	39	92.86%	3.4	68	2.317	0.443	0.666	0.287
2-Methylnaphthalene (ug/kg)	42	0	3	39	92.86%	3.4	68	0.99	0.187	0.433	0.437
1-Methylnaphthalene (ug/kg)	42	0	0	42	100.00%	3.3	68	N/A	N/A	N/A	N/A
Acenaphthylene (ug/kg)	42	0	2	40	95.24%	3.3	68	3.395	0.0862	0.294	0.0865
Acenaphthene (ug/kg)	42	0	1	41	97.62%	3.3	68	3.35	0.0475	0.218	0.0651
Fluorene (ug/kg)	42	0	1	41	97.62%	3.3	68	1.3	0	0	N/A
Phenanthrene (ug/kg)	42	0	3	39	92.86%	3.3	68	4.029	5.433	2.331	0.579
Anthracene (ug/kg)	42	0	6	36	85.71%	3.3	68	2.122	5.838	2.416	1.139
Fluoranthene (ug/kg)	42	0	7	35	83.33%	3.3	68	5.755	74.01	8.603	1.495
Pyrene (ug/kg)	42	0	5	37	88.10%	3.3	68	4.758	47.8	6.914	1.453
Benzo[a]anthracene (ug/kg)	42	0	9	33	78.57%	3.3	68	5.161	33.32	5.773	1.119
Chrysene (ug/kg)	42	0	9	33	78.57%	3.3	68	6.982	128.2	11.32	1.622
Benzo[b]fluoranthene (ug/kg)	42	0	12	30	71.43%	3.3	68	8.591	151.9	12.33	1.435
Benzo[k]floranthene (ug/kg)	42	0	3	39	92.86%	3.3	68	2.788	11.85	3.442	1.234
Benzo[a]pyrene (ug/kg)	42	0	8	34	80.95%	3.3	68	4.858	91.24	9.552	1.966
Indeno[1,2,3-cd]pyrene (ug/kg)	42	0	3	39	92.86%	3.3	68	3.696	8.525	2.92	0.79
Dibenz[a,h]anthracene (ug/kg)	42	0	0	42	100.00%	3.3	68	N/A	N/A	N/A	N/A
Benzo[g,h,i]perylene (ug/kg)	42	0	15	27	64.29%	3.3	68	8.087	74.8	8.648	1.069

### General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Naphthalene (ug/kg)	3	0	1.6	3.4	2.533	2.6	0.813	0.902	1.186	-0.331	0.356
2-Methylnaphthalene (ug/kg)	3	0	0.64	1.6	0.99	0.73	0.281	0.53	0.133	1.676	0.536
1-Methylnaphthalene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Acenaphthylene (ug/kg)	2	0	4.3	4.3	4.3	4.3	0	0	0	N/A	N/A
Acenaphthene (ug/kg)	1	0	4.3	4.3	4.3	4.3	N/A	N/A	0	N/A	N/A
Fluorene (ug/kg)	1	0	1.3	1.3	1.3	1.3	N/A	N/A	0	N/A	N/A
Phenanthrene (ug/kg)	3	0	5.3	14	8.4	5.9	23.61	4.859	0.89	1.702	0.578
Anthracene (ug/kg)	6	0	1	11	5.3	5.1	10.46	3.234	0.89	0.926	0.61
Fluoranthene (ug/kg)	7	0	1.9	39	18.3	19	157.5	12.55	8.895	0.232	0.686
Pyrene (ug/kg)	5	0	2.5	36	16.62	18	196.8	14.03	21.35	0.38	0.844
Benzo[a]anthracene (ug/kg)	9	0	1.5	18	11.64	13	41.53	6.444	5.93	-0.786	0.553
Chrysene (ug/kg)	9	0	2.1	64	18.54	14	358.8	18.94	13.64	1.997	1.021
Benzo[b]fluoranthene (ug/kg)	12	0	1.9	59	19.3	17	295.1	17.18	18.24	1.232	0.89
Benzo[k]floranthene (ug/kg)	3	0	2.1	20	8.067	2.1	106.8	10.33	0	1.732	1.281
Benzo[a]pyrene (ug/kg)	8	0	0.95	56	15.54	11	298.8	17.29	7.116	2.262	1.112
Indeno[1,2,3-cd]pyrene (ug/kg)	3	0	3.1	18	8.067	3.1	74	8.603	0	1.732	1.066
Dibenz[a,h]anthracene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo[g,h,i]perylene (ug/kg)	15	0	1.5	31	14.35	14	81.11	9.006	10.38	0.374	0.627

### Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Naphthalene (ug/kg)	42	0	3.4	3.5	3.5	17	33	33.8	34	34.95	67.59
2-Methylnaphthalene (ug/kg)	42	0	3.4	3.5	3.5	17	33	33.8	34	34.95	67.59
1-Methylnaphthalene (ug/kg)	42	0	3.5	3.5	3.5	17	33	33.8	34	34.95	67.59
Acenaphthylene (ug/kg)	42	0	3.5	3.5	3.525	10.65	33	33.8	34	34.95	67.59
Acenaphthene (ug/kg)	42	0	3.5	3.5	3.525	17	33	33.8	34	34.95	67.59
Fluorene (ug/kg)	42	0	3.41	3.5	3.5	17	33	33.8	34	34.95	67.59
Phenanthrene (ug/kg)	42	0	3.5	3.5	3.6	15.5	33	33.8	34	34.95	67.59
Anthracene (ug/kg)	42	0	3.41	3.5	3.525	5.25	33	33.8	34	34.95	67.59
Fluoranthene (ug/kg)	42	0	3.41	3.5	3.525	17	33	33.8	34	38.8	67.59
Pyrene (ug/kg)	42	0	3.41	3.5	3.525	17	33	33.8	34	35.95	67.59
Benzo[a]anthracene (ug/kg)	42	0	3.4	3.5	3.5	13	33	33	34	34.95	67.59
Chrysene (ug/kg)	42	0	3.41	3.5	3.6	15.5	33	33.8	34	62.55	67.59
Benzo[b]fluoranthene (ug/kg)	42	0	3.4	3.5	3.6	16	33	34	34.9	58.1	67.59
Benzo[k]floranthene (ug/kg)	42	0	3.4	3.5	3.5	17	33	33	34	34.95	67.59

**SHAD-041 Summary Statistics for 0-3 ft bgs Depth Interval**

Benzo[a]pyrene (ug/kg)	42	0	3.41	3.5	3.6	12	33	33.8	34	54.95	67.59
Indeno[1,2,3-cd]pyrene (ug/kg)	42	0	3.4	3.5	3.5	17	33	33.8	34	34.95	67.59
Dibenz[a,h]anthracene (ug/kg)	42	0	3.5	3.5	3.5	17	33	33.8	34	34.95	67.59
Benzo[g,h,i]perylene (ug/kg)	42	0	3.4	3.5	3.6	13	32.5	33	34	34	67.59

**General Statistics on Uncensored Data**

Date/Time of Computation ProUCL 5.11/16/2018 5:59:29 PM

**User Selected Options**

From File SHAD-041\_ProUCL\_CALC\_b.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_b.xls

**General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method**

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Chromium VI (mg/kg)	42	0	41	1	2.38%	0.25	0.25	1.824	38.37	6.195	3.396
Chromium (mg/kg)	42	0	42	0	0.00%	N/A	N/A	20.69	105.9	10.29	0.497
Lead (mg/kg)	42	0	42	0	0.00%	N/A	N/A	396.4	463225	680.6	1.717

**General Statistics for Raw Data Sets using Detected Data Only**

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Chromium VI (mg/kg)	41	0	0.127	41	1.864	0.45	40.22	6.342	0.371	6.169	3.402
Chromium (mg/kg)	42	0	8.2	52	20.69	19.5	105.9	10.29	12.6	0.836	0.497
Lead (mg/kg)	42	0	0.19	3300	396.4	84	463225	680.6	121.9	2.623	1.717

**Percentiles using all Detects (Ds) and Non-Detects (NDs)**

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Chromium VI (mg/kg)	42	0	0.2	0.252	0.295	0.43	1.175	1.46	2.07	4	26.12
Chromium (mg/kg)	42	0	9.22	10.2	11.25	19.5	27.75	28.8	34.6	35.95	47.49
Lead (mg/kg)	42	0	2.43	4.62	6.125	84	367.5	514	1360	1690	2767

**General Statistics on Uncensored Data**

Date/Time of Computation ProUCL 5.11/17/2018 9:22:45 AM

**User Selected Options**

From File SHAD-041\_ProUCL\_CALC\_b.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_b.xls

**General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method**

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Aroclor 1016 (mg/kg)	42	0	0	42	100.00%	0.011	0.02	N/A	N/A	N/A	N/A
Aroclor 1221 (mg/kg)	42	0	0	42	100.00%	0.016	0.021	N/A	N/A	N/A	N/A
Aroclor 1232 (mg/kg)	42	0	0	42	100.00%	0.01	0.02	N/A	N/A	N/A	N/A
Aroclor 1242 (mg/kg)	42	0	0	42	100.00%	0.01	0.02	N/A	N/A	N/A	N/A
Aroclor 1248 (mg/kg)	42	0	0	42	100.00%	0.01	0.02	N/A	N/A	N/A	N/A
Aroclor 1254 (mg/kg)	42	0	0	42	100.00%	0.01	0.02	N/A	N/A	N/A	N/A
Aroclor 1260 (mg/kg)	42	0	4	38	90.48%	0.01	0.072	0.0154	9.3032E-4	0.0305	1.979

**General Statistics for Raw Data Sets using Detected Data Only**

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Aroclor 1016 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1221 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1232 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1242 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1248 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1254 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1260 (mg/kg)	4	0	0.012	0.21	0.0665	0.022	0.00918	0.0958	0.00815	1.985	1.44

**Percentiles using all Detects (Ds) and Non-Detects (NDs)**

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Aroclor 1016 (mg/kg)	42	0	0.016	0.016	0.016	0.016	0.017	0.017	0.018	0.019	0.0196
Aroclor 1221 (mg/kg)	42	0	0.016	0.016	0.016	0.016	0.017	0.017	0.019	0.019	0.0206
Aroclor 1232 (mg/kg)	42	0	0.016	0.016	0.016	0.016	0.017	0.017	0.018	0.019	0.0196
Aroclor 1242 (mg/kg)	42	0	0.016	0.016	0.016	0.016	0.017	0.017	0.018	0.019	0.0196



**SHAD-041 Summary Statistics for 0-3 ft bgs Depth Interval**

Aroclor 1248 (mg/kg)	42	0	0.016	0.016	0.016	0.016	0.017	0.017	0.018	0.019	0.0196
Aroclor 1254 (mg/kg)	42	0	0.016	0.016	0.016	0.016	0.017	0.017	0.018	0.019	0.0196
Aroclor 1260 (mg/kg)	42	0	0.01	0.01	0.01	0.011	0.016	0.016	0.017	0.0229	0.153

**General Statistics on Uncensored Data**

Date/Time of Computation ProUCL 5.11/17/2018 9:23:24 AM

**User Selected Options**

From File SHAD-041\_ProUCL\_CALC\_b.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_b.xls

**General Statistics for Censored Datasets (with NDs) using Kaplan Meier Method**

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
SVOC-PCDD/PCDF 2,3,7,8-TCDD (pg/g)	42	0	29	13	30.95%	0.4	0.51	6.068	187.4	13.69	2.256

**General Statistics for Raw Dataset using Detected Data Only**

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
SVOC-PCDD/PCDF 2,3,7,8-TCDD (pg/g)	29	0	0.15	67	8.676	1.2	258.4	16.07	1.231	2.374	1.853

**Percentiles using all Detects (Ds) and Non-Detects (NDs)**

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
SVOC-PCDD/PCDF 2,3,7,8-TCDD (pg/g)	42	0	0.373	0.42	0.42	0.585	1.9	4.2	23.3	37.65	55.52

**General Statistics on Uncensored Data**

Date/Time of Computation ProUCL 5.11/17/2018 9:24:08 AM

**User Selected Options**

From File SHAD-041\_ProUCL\_CALC\_b.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_b.xls

**General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method**

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
1,1,1-Trichloroethane (ug/kg)	42	0	0	42	100.00%	0.82	3.1	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane (ug/kg)	42	0	0	42	100.00%	0.82	3.1	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane (ug/kg)	42	0	0	42	100.00%	0.82	3.1	N/A	N/A	N/A	N/A
1,1-Dichloroethane (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
1,1-Dichloroethene (ug/kg)	42	0	3	39	92.86%	4.1	6.2	4.215	0.162	0.403	0.0955
1,2,4-Trimethylbenzene (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
1,2-Dibromoethane (EDB) (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
1,2-Dichloroethane (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
cis-1,2-Dichloroethene (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
trans-1,2-Dichloroethene (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
1,2-Dichloropropane (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
1,3-Dichlorobenzene (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
cis-1,3-Dichloropropene (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
trans-1,3-Dichloropropene (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Benzene (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Bromodichloromethane (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Bromoform (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Bromomethane (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Carbon Tetrachloride (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Chlorobenzene (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Chloroform (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Chloromethane (ug/kg)	42	0	3	39	92.86%	0.97	6.2	1.527	1.946	1.395	0.914
Dibromochloromethane (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Ethylbenzene (ug/kg)	42	0	14	28	66.67%	0.85	4.5	1.389	4.541	2.131	1.534
Methylene Chloride (ug/kg)	42	0	5	37	88.10%	0.86	6.2	2.027	2.531	1.591	0.785
Styrene (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Tetrachloroethene (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Toluene (ug/kg)	42	0	1	41	97.62%	0.82	1.3	0.75	0	0	N/A
Trichloroethene (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Vinyl Chloride (ug/kg)	42	0	0	42	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
m-p-Xylene (ug/kg)	42	0	13	29	69.05%	1.1	6.2	5.898	182.9	13.52	2.293

**SHAD-041 Summary Statistics for 0-3 ft bgs Depth Interval**

o-Xylene (ug/kg) 42 0 14 28 66.67% 4.3 6.2 6.864 203.7 14.27 2.079

**General Statistics for Raw Data Sets using Detected Data Only**

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
1,1,1-Trichloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethene (ug/kg)	3	0	4.4	6.6	5.267	4.8	1.373	1.172	0.593	1.508	0.223
1,2,4-Trimethylbenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dibromoethane (EDB) (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
cis-1,2-Dichloroethene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
trans-1,2-Dichloroethene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloropropane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,3-Dichlorobenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
cis-1,3-Dichloropropene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
trans-1,3-Dichloropropene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromodichloromethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromoform (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromomethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloroform (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloromethane (ug/kg)	3	0	4.4	6.6	5.267	4.8	1.373	1.172	0.593	1.508	0.223
Dibromochloromethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene (ug/kg)	14	0	0.47	12	2.839	1	11.2	3.346	0.764	1.866	1.179
Methylene Chloride (ug/kg)	5	0	2.6	6.6	4.58	4.5	2.022	1.422	0.445	0.0702	0.31
Styrene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetrachloroethene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene (ug/kg)	1	0	0.75	0.75	0.75	0.75	N/A	N/A	0	N/A	N/A
Trichloroethene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
m-p-Xylene (ug/kg)	13	0	0.91	76	15.49	6.5	491.4	22.17	3.262	2.231	1.431
o-Xylene (ug/kg)	14	0	0.91	76	17.03	6.55	486.7	22.06	5.708	1.902	1.295

**Percentiles using all Detects (Ds) and Non-Detects (NDs)**

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
1,1,1-Trichloroethane (ug/kg)	42	0	0.871	0.892	0.903	0.94	0.99	1	1.1	1.195	2.362
1,1,2,2-Tetrachloroethane (ug/kg)	42	0	0.871	0.892	0.903	0.94	0.99	1	1.1	1.195	2.362
1,1,2-Trichloroethane (ug/kg)	42	0	0.871	0.892	0.903	0.94	0.99	1	1.1	1.195	2.362
1,1-Dichloroethane (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
1,1-Dichloroethene (ug/kg)	42	0	4.4	4.42	4.5	4.7	4.9	5	5.29	5.3	6.436
1,2,4-Trimethylbenzene (ug/kg)	42	0	0.871	0.892	0.91	0.94	0.99	0.998	1.09	1.1	1.259
1,2-Dibromoethane (EDB) (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
1,2-Dichlorobenzene (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.1	1.1	1.259
1,2-Dichloroethane (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
cis-1,2-Dichloroethene (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
trans-1,2-Dichloroethene (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
1,2-Dichloropropane (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
1,3-Dichlorobenzene (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
cis-1,3-Dichloropropene (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
trans-1,3-Dichloropropene (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
1,4-Dichlorobenzene (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.1	1.1	1.259
Benzene (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
Bromodichloromethane (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
Bromoform (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.1	1.1	1.259
Bromomethane (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
Carbon Tetrachloride (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
Chlorobenzene (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
Chloroform (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
Chloromethane (ug/kg)	42	0	4.3	4.4	4.425	4.6	4.9	4.98	5.18	5.3	6.436
Dibromochloromethane (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
Ethylbenzene (ug/kg)	42	0	0.851	0.902	0.91	0.94	1	1.18	4.36	5.275	9.868

**SHAD-041 Summary Statistics for 0-3 ft bgs Depth Interval**

Methylene Chloride (ug/kg)	42	0	4.1	4.4	4.5	4.65	4.9	4.98	5.29	5.3	6.436
Styrene (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
Tetrachloroethene (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
Toluene (ug/kg)	42	0	0.861	0.882	0.9	0.935	0.99	0.998	1.09	1.1	1.259
Trichloroethene (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
Vinyl Chloride (ug/kg)	42	0	0.871	0.892	0.903	0.935	0.99	0.998	1.09	1.1	1.259
m-p-Xylene (ug/kg)	42	0	4.31	4.5	4.525	4.8	5.275	5.8	7.5	20.55	64.93
o-Xylene (ug/kg)	42	0	4.4	4.5	4.6	4.8	5.675	6.12	11.56	36.2	64.93

# SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

## UCL Statistics for Data Sets with Non-Detects

User Selected Options  
 Date/Time of Computation ProUCL 5.11/17/2018 9:26:29 AM  
 From File SHAD-041\_ProUCL\_CALC\_b.xls  
 Full Precision OFF  
 Confidence Coefficient 95%  
 Number of Bootstrap Operations 2000

### Anthracene (ug/kg)

#### General Statistics

Total Number of Observations	42	Number of Distinct Observations	18
Number of Detects	6	Number of Non-Detects	36
Number of Distinct Detects	5	Number of Distinct Non-Detects	14
Minimum Detect	1	Minimum Non-Detect	3.3
Maximum Detect	11	Maximum Non-Detect	68
Variance Detects	10.46	Percent Non-Detects	85.71%
Mean Detects	5.3	SD Detects	3.234
Median Detects	5.1	CV Detects	0.61
Skewness Detects	0.926	Kurtosis Detects	2.707
Mean of Logged Detects	1.463	SD of Logged Detects	0.79

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.876
5% Shapiro Wilk Critical Value	0.788
Lilliefors Test Statistic	0.321
5% Lilliefors Critical Value	0.325

#### Shapiro Wilk GOF Test

Detected Data appear Normal at 5% Significance Level

#### Lilliefors GOF Test

Detected Data appear Normal at 5% Significance Level

**Detected Data appear Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.122	KM Standard Error of Mean	0.552
KM SD	2.416	95% KM (BCA) UCL	4.52
95% KM (t) UCL	3.051	95% KM (Percentile Bootstrap) UCL	4.34
95% KM (z) UCL	3.03	95% KM Bootstrap t UCL	3.137
90% KM Chebyshev UCL	3.777	95% KM Chebyshev UCL	4.527
97.5% KM Chebyshev UCL	5.568	99% KM Chebyshev UCL	7.613

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.535
5% A-D Critical Value	0.702
K-S Test Statistic	0.274
5% K-S Critical Value	0.335

#### Anderson-Darling GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

#### Kolmogorov-Smirnov GOF

Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	2.597	k star (bias corrected MLE)	1.41
Theta hat (MLE)	2.041	Theta star (bias corrected MLE)	3.76
nu hat (MLE)	31.16	nu star (bias corrected)	16.91
Mean (detects)	5.3		

# SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

## Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.707
Maximum	11	Median	1.008
SD	2.31	CV	1.353
k hat (MLE)	0.407	k star (bias corrected MLE)	0.394
Theta hat (MLE)	4.191	Theta star (bias corrected MLE)	4.332
nu hat (MLE)	34.22	nu star (bias corrected)	33.11
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (33.11, $\alpha$ )	20.95	Adjusted Chi Square Value (33.11, $\beta$ )	20.61
95% Gamma Approximate UCL (use when $n \geq 50$ )	2.698	95% Gamma Adjusted UCL (use when $n < 50$ )	2.743

## Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.122	SD (KM)	2.416
Variance (KM)	5.838	SE of Mean (KM)	0.552
k hat (KM)	0.771	k star (KM)	0.732
nu hat (KM)	64.77	nu star (KM)	61.48
theta hat (KM)	2.752	theta star (KM)	2.899
80% gamma percentile (KM)	3.482	90% gamma percentile (KM)	5.27
95% gamma percentile (KM)	7.107	99% gamma percentile (KM)	11.47

## Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (61.48, $\alpha$ )	44.44	Adjusted Chi Square Value (61.48, $\beta$ )	43.93
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	2.935	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	2.969

## Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.833	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.319	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

## Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.016	Mean in Log Scale	0.365
SD in Original Scale	2.024	SD in Log Scale	0.788
95% t UCL (assumes normality of ROS data)	2.541	95% Percentile Bootstrap UCL	2.574
95% BCA Bootstrap UCL	2.668	95% Bootstrap t UCL	2.762
95% H-UCL (Log ROS)	2.557		

## Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.382	KM Geo Mean	1.465
KM SD (logged)	0.741	95% Critical H Value (KM-Log)	2.096
KM Standard Error of Mean (logged)	0.169	95% H-UCL (KM -Log)	2.455
KM SD (logged)	0.741	95% Critical H Value (KM-Log)	2.096
KM Standard Error of Mean (logged)	0.169		

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	9.488
SD in Original Scale	8.746
95% t UCL (Assumes normality)	11.76

#### DL/2 Log-Transformed

Mean in Log Scale	1.724
SD in Log Scale	1.107
95% H-Stat UCL	15.89

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

#### Suggested UCL to Use

95% KM (t) UCL	3.051
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006). However, simulation results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

Fluoranthene (ug/kg)

### General Statistics

Total Number of Observations	42	Number of Distinct Observations	19
Number of Detects	7	Number of Non-Detects	35
Number of Distinct Detects	6	Number of Distinct Non-Detects	14
Minimum Detect	1.9	Minimum Non-Detect	3.3
Maximum Detect	39	Maximum Non-Detect	68
Variance Detects	157.5	Percent Non-Detects	83.33%
Mean Detects	18.3	SD Detects	12.55
Median Detects	19	CV Detects	0.686
Skewness Detects	0.232	Kurtosis Detects	0.196
Mean of Logged Detects	2.549	SD of Logged Detects	1.086

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.925	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.237	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.304	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.755	KM Standard Error of Mean	1.681
KM SD	8.603	95% KM (BCA) UCL	9.482
95% KM (t) UCL	8.584	95% KM (Percentile Bootstrap) UCL	9.12
95% KM (z) UCL	8.52	95% KM Bootstrap t UCL	8.689
90% KM Chebyshev UCL	10.8	95% KM Chebyshev UCL	13.08
97.5% KM Chebyshev UCL	16.25	99% KM Chebyshev UCL	22.48

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.564	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.721	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.339	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.317	Detected Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

### Gamma Statistics on Detected Data Only

k hat (MLE)	1.543	k star (bias corrected MLE)	0.977
Theta hat (MLE)	11.86	Theta star (bias corrected MLE)	18.73
nu hat (MLE)	21.6	nu star (bias corrected)	13.68
Mean (detects)	18.3		

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	4.988
Maximum	39	Median	1.7
SD	8.396	CV	1.683
k hat (MLE)	0.27	k star (bias corrected MLE)	0.267
Theta hat (MLE)	18.46	Theta star (bias corrected MLE)	18.7
nu hat (MLE)	22.69	nu star (bias corrected)	22.4
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (22.40, $\alpha$ )	12.64	Adjusted Chi Square Value (22.40, $\beta$ )	12.38
95% Gamma Approximate UCL (use when $n \geq 50$ )	8.84	95% Gamma Adjusted UCL (use when $n < 50$ )	9.027

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.755	SD (KM)	8.603
Variance (KM)	74.01	SE of Mean (KM)	1.681
k hat (KM)	0.448	k star (KM)	0.431
nu hat (KM)	37.59	nu star (KM)	36.24
theta hat (KM)	12.86	theta star (KM)	13.34
80% gamma percentile (KM)	9.36	90% gamma percentile (KM)	16.03
95% gamma percentile (KM)	23.29	99% gamma percentile (KM)	41.4

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (36.24, $\alpha$ )	23.46	Adjusted Chi Square Value (36.24, $\beta$ )	23.09
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	8.889	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	9.03

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.835	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.356	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.304	Detected Data Not Lognormal at 5% Significance Level

**Detected Data appear Approximate Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.447	Mean in Log Scale	1.105
SD in Original Scale	7.823	SD in Log Scale	1.001
95% t UCL (assumes normality of ROS data)	7.479	95% Percentile Bootstrap UCL	7.493
95% BCA Bootstrap UCL	7.956	95% Bootstrap t UCL	8.56
95% H-UCL (Log ROS)	7.202		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.109	KM Geo Mean	3.033
KM SD (logged)	0.944	95% Critical H Value (KM-Log)	2.297
KM Standard Error of Mean (logged)	0.192	95% H-UCL (KM -Log)	6.645
KM SD (logged)	0.944	95% Critical H Value (KM-Log)	2.297
KM Standard Error of Mean (logged)	0.192		



## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	11.19
SD in Original Scale	10.17
95% t UCL (Assumes normality)	13.83

#### DL/2 Log-Transformed

Mean in Log Scale	1.856
SD in Log Scale	1.165
95% H-Stat UCL	20.05

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

#### Suggested UCL to Use

95% KM (t) UCL	8.584
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulation results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## Pyrene (ug/kg)

### General Statistics

Total Number of Observations	42	Number of Distinct Observations	18
Number of Detects	5	Number of Non-Detects	37
Number of Distinct Detects	5	Number of Distinct Non-Detects	14
Minimum Detect	2.5	Minimum Non-Detect	3.3
Maximum Detect	36	Maximum Non-Detect	68
Variance Detects	196.8	Percent Non-Detects	88.1%
Mean Detects	16.62	SD Detects	14.03
Median Detects	18	CV Detects	0.844
Skewness Detects	0.38	Kurtosis Detects	-1.181
Mean of Logged Detects	2.361	SD of Logged Detects	1.186

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.922
5% Shapiro Wilk Critical Value	0.762
Lilliefors Test Statistic	0.223
5% Lilliefors Critical Value	0.343

### Shapiro Wilk GOF Test

Detected Data appear Normal at 5% Significance Level

### Lilliefors GOF Test

Detected Data appear Normal at 5% Significance Level

**Detected Data appear Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.758	KM Standard Error of Mean	1.361
KM SD	6.914	95% KM (BCA) UCL	8.207
95% KM (t) UCL	7.049	95% KM (Percentile Bootstrap) UCL	7.33
95% KM (z) UCL	6.997	95% KM Bootstrap t UCL	6.681
90% KM Chebyshev UCL	8.841	95% KM Chebyshev UCL	10.69
97.5% KM Chebyshev UCL	13.26	99% KM Chebyshev UCL	18.3

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.388
5% A-D Critical Value	0.689
K-S Test Statistic	0.252
5% K-S Critical Value	0.363

### Anderson-Darling GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

### Kolmogorov-Smirnov GOF

Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

### Gamma Statistics on Detected Data Only

k hat (MLE)	1.253	k star (bias corrected MLE)	0.635
Theta hat (MLE)	13.26	Theta star (bias corrected MLE)	26.19
nu hat (MLE)	12.53	nu star (bias corrected)	6.347
Mean (detects)	16.62		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	3.193
Maximum	36	Median	0.01
SD	7.103	CV	2.224
k hat (MLE)	0.226	k star (bias corrected MLE)	0.225
Theta hat (MLE)	14.15	Theta star (bias corrected MLE)	14.17
nu hat (MLE)	18.96	nu star (bias corrected)	18.94
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (18.94, $\alpha$ )	10.07	Adjusted Chi Square Value (18.94, $\beta$ )	9.839
95% Gamma Approximate UCL (use when $n \geq 50$ )	6.005	95% Gamma Adjusted UCL (use when $n < 50$ )	6.146

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.758	SD (KM)	6.914
Variance (KM)	47.8	SE of Mean (KM)	1.361
k hat (KM)	0.474	k star (KM)	0.456
nu hat (KM)	39.78	nu star (KM)	38.28
theta hat (KM)	10.05	theta star (KM)	10.44
80% gamma percentile (KM)	7.773	90% gamma percentile (KM)	13.12
95% gamma percentile (KM)	18.89	99% gamma percentile (KM)	33.22

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (38.28, $\alpha$ )	25.11	Adjusted Chi Square Value (38.28, $\beta$ )	24.73
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	7.254	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	7.365

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.876	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.272	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.343	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.258	Mean in Log Scale	0.949
SD in Original Scale	6.553	SD in Log Scale	0.876
95% t UCL (assumes normality of ROS data)	5.96	95% Percentile Bootstrap UCL	6.126
95% BCA Bootstrap UCL	6.608	95% Bootstrap t UCL	8.234
95% H-UCL (Log ROS)	5.14		

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.164	KM Geo Mean	3.202
KM SD (logged)	0.675	95% Critical H Value (KM-Log)	2.037
KM Standard Error of Mean (logged)	0.139	95% H-UCL (KM -Log)	4.986
KM SD (logged)	0.675	95% Critical H Value (KM-Log)	2.037
KM Standard Error of Mean (logged)	0.139		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	10.36
SD in Original Scale	9.805
95% t UCL (Assumes normality)	12.91

#### DL/2 Log-Transformed

Mean in Log Scale	1.779
SD in Log Scale	1.141
95% H-Stat UCL	17.79

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (t) UCL	7.049
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## Benzo[a]anthracene (ug/kg)

### General Statistics

Total Number of Observations	42	Number of Distinct Observations	20
Number of Detects	9	Number of Non-Detects	33
Number of Distinct Detects	7	Number of Distinct Non-Detects	14
Minimum Detect	1.5	Minimum Non-Detect	3.3
Maximum Detect	18	Maximum Non-Detect	68
Variance Detects	41.53	Percent Non-Detects	78.57%
Mean Detects	11.64	SD Detects	6.444
Median Detects	13	CV Detects	0.553
Skewness Detects	-0.786	Kurtosis Detects	-1.104
Mean of Logged Detects	2.183	SD of Logged Detects	0.937

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.844
5% Shapiro Wilk Critical Value	0.829
Lilliefors Test Statistic	0.25
5% Lilliefors Critical Value	0.274

### Shapiro Wilk GOF Test

Detected Data appear Normal at 5% Significance Level

### Lilliefors GOF Test

Detected Data appear Normal at 5% Significance Level

**Detected Data appear Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.161	KM Standard Error of Mean	1.199
KM SD	5.773	95% KM (BCA) UCL	7.551
95% KM (t) UCL	7.178	95% KM (Percentile Bootstrap) UCL	7.278
95% KM (z) UCL	7.132	95% KM Bootstrap t UCL	7.387
90% KM Chebyshev UCL	8.757	95% KM Chebyshev UCL	10.39
97.5% KM Chebyshev UCL	12.65	99% KM Chebyshev UCL	17.09

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.939
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### Anderson-Darling GOF Test

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

5% A-D Critical Value	0.73	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.32	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.283	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected Data Not Gamma Distributed at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	1.987	k star (bias corrected MLE)	1.399
Theta hat (MLE)	5.859	Theta star (bias corrected MLE)	8.324
nu hat (MLE)	35.77	nu star (bias corrected)	25.18
Mean (detects)	11.64		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.172	Mean	5.878
Maximum	18	Median	4.822
SD	4.851	CV	0.825
k hat (MLE)	1.529	k star (bias corrected MLE)	1.436
Theta hat (MLE)	3.843	Theta star (bias corrected MLE)	4.093
nu hat (MLE)	128.5	nu star (bias corrected)	120.6
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (120.63, $\alpha$ )	96.27	Adjusted Chi Square Value (120.63, $\beta$ )	95.49
95% Gamma Approximate UCL (use when $n \geq 50$ )	7.366	95% Gamma Adjusted UCL (use when $n < 50$ )	7.425

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.161	SD (KM)	5.773
Variance (KM)	33.32	SE of Mean (KM)	1.199
k hat (KM)	0.799	k star (KM)	0.758
nu hat (KM)	67.14	nu star (KM)	63.67
theta hat (KM)	6.457	theta star (KM)	6.808
80% gamma percentile (KM)	8.456	90% gamma percentile (KM)	12.71
95% gamma percentile (KM)	17.07	99% gamma percentile (KM)	27.4

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (63.67, $\alpha$ )	46.32	Adjusted Chi Square Value (63.67, $\beta$ )	45.79
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	7.095	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	7.176

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.758	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.829	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.325	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.274	Detected Data Not Lognormal at 5% Significance Level

**Detected Data Not Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.081	Mean in Log Scale	1.266
SD in Original Scale	4.907	SD in Log Scale	0.821
95% t UCL (assumes normality of ROS data)	6.355	95% Percentile Bootstrap UCL	6.395
95% BCA Bootstrap UCL	6.567	95% Bootstrap t UCL	6.614
95% H-UCL (Log ROS)	6.562		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.145	KM Geo Mean	3.141
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## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

KM SD (logged)	0.913	95% Critical H Value (KM-Log)	2.264
KM Standard Error of Mean (logged)	0.218	95% H-UCL (KM -Log)	6.585
KM SD (logged)	0.913	95% Critical H Value (KM-Log)	2.264
KM Standard Error of Mean (logged)	0.218		

### DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	10.04	Mean in Log Scale	1.781
SD in Original Scale	8.815	SD in Log Scale	1.126
95% t UCL (Assumes normality)	12.32	95% H-Stat UCL	17.37

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (t) UCL 7.178

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## Chrysene (ug/kg)

### General Statistics

Total Number of Observations	42	Number of Distinct Observations	20
Number of Detects	9	Number of Non-Detects	33
Number of Distinct Detects	8	Number of Distinct Non-Detects	14
Minimum Detect	2.1	Minimum Non-Detect	3.3
Maximum Detect	64	Maximum Non-Detect	68
Variance Detects	358.8	Percent Non-Detects	78.57%
Mean Detects	18.54	SD Detects	18.94
Median Detects	14	CV Detects	1.021
Skewness Detects	1.997	Kurtosis Detects	4.649
Mean of Logged Detects	2.472	SD of Logged Detects	1.06

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.78
5% Shapiro Wilk Critical Value	0.829
Lilliefors Test Statistic	0.268
5% Lilliefors Critical Value	0.274

### Shapiro Wilk GOF Test

Detected Data Not Normal at 5% Significance Level

### Lilliefors GOF Test

Detected Data appear Normal at 5% Significance Level

**Detected Data appear Approximate Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6.982	KM Standard Error of Mean	2.069
KM SD	11.32	95% KM (BCA) UCL	11.88
95% KM (t) UCL	10.46	95% KM (Percentile Bootstrap) UCL	11.01
95% KM (z) UCL	10.39	95% KM Bootstrap t UCL	12.77
90% KM Chebyshev UCL	13.19	95% KM Chebyshev UCL	16
97.5% KM Chebyshev UCL	19.9	99% KM Chebyshev UCL	27.57

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.294
5% A-D Critical Value	0.739
K-S Test Statistic	0.169

### Anderson-Darling GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

### Kolmogorov-Smirnov GOF

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

5% K-S Critical Value 0.285 Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	1.255	k star (bias corrected MLE)	0.911
Theta hat (MLE)	14.78	Theta star (bias corrected MLE)	20.36
nu hat (MLE)	22.59	nu star (bias corrected)	16.39
Mean (detects)	18.54		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	4.91
Maximum	64	Median	0.01
SD	11.51	CV	2.345
k hat (MLE)	0.188	k star (bias corrected MLE)	0.191
Theta hat (MLE)	26.09	Theta star (bias corrected MLE)	25.76
nu hat (MLE)	15.81	nu star (bias corrected)	16.01
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (16.01, $\alpha$ )	7.972	Adjusted Chi Square Value (16.01, $\beta$ )	7.77
95% Gamma Approximate UCL (use when $n \geq 50$ )	9.864	95% Gamma Adjusted UCL (use when $n < 50$ )	10.12

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	6.982	SD (KM)	11.32
Variance (KM)	128.2	SE of Mean (KM)	2.069
k hat (KM)	0.38	k star (KM)	0.369
nu hat (KM)	31.94	nu star (KM)	30.99
theta hat (KM)	18.37	theta star (KM)	18.93
80% gamma percentile (KM)	11.15	90% gamma percentile (KM)	20
95% gamma percentile (KM)	29.83	99% gamma percentile (KM)	54.77

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (30.99, $\alpha$ )	19.27	Adjusted Chi Square Value (30.99, $\beta$ )	18.94
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	11.23	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	11.42

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.958	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.229	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.174	Mean in Log Scale	1.118
SD in Original Scale	10.85	SD in Log Scale	1.074
95% t UCL (assumes normality of ROS data)	8.992	95% Percentile Bootstrap UCL	9.231
95% BCA Bootstrap UCL	10.48	95% Bootstrap t UCL	12.1
95% H-UCL (Log ROS)	8.193		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.303	KM Geo Mean	3.682
KM SD (logged)	0.957	95% Critical H Value (KM-Log)	2.311
KM Standard Error of Mean (logged)	0.192	95% H-UCL (KM -Log)	8.221

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

KM SD (logged)	0.957	95% Critical H Value (KM-Log)	2.311
KM Standard Error of Mean (logged)	0.192		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	11.87
SD in Original Scale	12.28
95% t UCL (Assumes normality)	15.05

#### DL/2 Log-Transformed

Mean in Log Scale	1.897
SD in Log Scale	1.166
95% H-Stat UCL	20.92

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Approximate Normal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (t) UCL	10.46
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When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test

When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## Benzo[b]fluoranthene (ug/kg)

### General Statistics

Total Number of Observations	42	Number of Distinct Observations	25
Number of Detects	12	Number of Non-Detects	30
Number of Distinct Detects	11	Number of Distinct Non-Detects	14
Minimum Detect	1.9	Minimum Non-Detect	3.3
Maximum Detect	59	Maximum Non-Detect	68
Variance Detects	295.1	Percent Non-Detects	71.43%
Mean Detects	19.3	SD Detects	17.18
Median Detects	17	CV Detects	0.89
Skewness Detects	1.232	Kurtosis Detects	1.374
Mean of Logged Detects	2.5	SD of Logged Detects	1.115

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.883
5% Shapiro Wilk Critical Value	0.859
Lilliefors Test Statistic	0.188
5% Lilliefors Critical Value	0.243

### Shapiro Wilk GOF Test

Detected Data appear Normal at 5% Significance Level

### Lilliefors GOF Test

Detected Data appear Normal at 5% Significance Level

**Detected Data appear Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	8.591	KM Standard Error of Mean	2.213
KM SD	12.33	95% KM (BCA) UCL	12.53
95% KM (t) UCL	12.31	95% KM (Percentile Bootstrap) UCL	12.35
95% KM (z) UCL	12.23	95% KM Bootstrap t UCL	13.43
90% KM Chebyshev UCL	15.23	95% KM Chebyshev UCL	18.24
97.5% KM Chebyshev UCL	22.41	99% KM Chebyshev UCL	30.61

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.253
5% A-D Critical Value	0.752

### Anderson-Darling GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

K-S Test Statistic	0.137	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.251	Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	1.226	k star (bias corrected MLE)	0.975
Theta hat (MLE)	15.74	Theta star (bias corrected MLE)	19.79
nu hat (MLE)	29.43	nu star (bias corrected)	23.41
Mean (detects)	19.3		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	6.997
Maximum	59	Median	1.322
SD	12.45	CV	1.779
k hat (MLE)	0.24	k star (bias corrected MLE)	0.238
Theta hat (MLE)	29.2	Theta star (bias corrected MLE)	29.35
nu hat (MLE)	20.13	nu star (bias corrected)	20.02
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (20.02, $\alpha$ )	10.87	Adjusted Chi Square Value (20.02, $\beta$ )	10.63
95% Gamma Approximate UCL (use when $n \geq 50$ )	12.89	95% Gamma Adjusted UCL (use when $n < 50$ )	13.18

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	8.591	SD (KM)	12.33
Variance (KM)	151.9	SE of Mean (KM)	2.213
k hat (KM)	0.486	k star (KM)	0.467
nu hat (KM)	40.81	nu star (KM)	39.23
theta hat (KM)	17.68	theta star (KM)	18.4
80% gamma percentile (KM)	14.06	90% gamma percentile (KM)	23.57
95% gamma percentile (KM)	33.81	99% gamma percentile (KM)	59.17

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (39.23, $\alpha$ )	25.88	Adjusted Chi Square Value (39.23, $\beta$ )	25.49
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	13.02	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	13.22

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.934	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.859	Detected Data appear Lognormal at 5% Significance Level

Lilliefors Test Statistic	0.19	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.243	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.992	Mean in Log Scale	1.434
SD in Original Scale	11.72	SD in Log Scale	1.058
95% t UCL (assumes normality of ROS data)	11.03	95% Percentile Bootstrap UCL	11.24
95% BCA Bootstrap UCL	12.5	95% Bootstrap t UCL	12.77
95% H-UCL (Log ROS)	10.96		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.448	KM Geo Mean	4.255
KM SD (logged)	1.071	95% Critical H Value (KM-Log)	2.436



## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

KM Standard Error of Mean (logged)	0.21	95% H-UCL (KM -Log)	11.35
KM SD (logged)	1.071	95% Critical H Value (KM-Log)	2.436
KM Standard Error of Mean (logged)	0.21		

### DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	12.77	Mean in Log Scale	1.95
SD in Original Scale	12.74	SD in Log Scale	1.2
95% t UCL (Assumes normality)	16.08	95% H-Stat UCL	23.47

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (t) UCL 12.31

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## Benzo[a]pyrene (ug/kg)

### General Statistics

Total Number of Observations	42	Number of Distinct Observations	20
Number of Detects	8	Number of Non-Detects	34
Number of Distinct Detects	6	Number of Distinct Non-Detects	14
Minimum Detect	0.95	Minimum Non-Detect	3.3
Maximum Detect	56	Maximum Non-Detect	68
Variance Detects	298.8	Percent Non-Detects	80.95%
Mean Detects	15.54	SD Detects	17.29
Median Detects	11	CV Detects	1.112
Skewness Detects	2.262	Kurtosis Detects	5.622
Mean of Logged Detects	2.247	SD of Logged Detects	1.166

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.722	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.818	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.308	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.283	Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.858	KM Standard Error of Mean	1.741
KM SD	9.552	95% KM (BCA) UCL	9.593
95% KM (t) UCL	7.788	95% KM (Percentile Bootstrap) UCL	8.623
95% KM (z) UCL	7.722	95% KM Bootstrap t UCL	9.284
90% KM Chebyshev UCL	10.08	95% KM Chebyshev UCL	12.45
97.5% KM Chebyshev UCL	15.73	99% KM Chebyshev UCL	22.18

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.37	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.733	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.197	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.301	Detected data appear Gamma Distributed at 5% Significance Level

# SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

Detected data appear Gamma Distributed at 5% Significance Level

## Gamma Statistics on Detected Data Only

k hat (MLE)	1.146	k star (bias corrected MLE)	0.799
Theta hat (MLE)	13.57	Theta star (bias corrected MLE)	19.45
nu hat (MLE)	18.33	nu star (bias corrected)	12.79
Mean (detects)	15.54		

## Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	3.701
Maximum	56	Median	0.01
SD	9.542	CV	2.578
k hat (MLE)	0.191	k star (bias corrected MLE)	0.193
Theta hat (MLE)	19.4	Theta star (bias corrected MLE)	19.17
nu hat (MLE)	16.03	nu star (bias corrected)	16.22
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (16.22, $\alpha$ )	8.115	Adjusted Chi Square Value (16.22, $\beta$ )	7.91
95% Gamma Approximate UCL (use when $n \geq 50$ )	7.397	95% Gamma Adjusted UCL (use when $n < 50$ )	7.588

## Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.858	SD (KM)	9.552
Variance (KM)	91.24	SE of Mean (KM)	1.741
k hat (KM)	0.259	k star (KM)	0.256
nu hat (KM)	21.73	nu star (KM)	21.51
theta hat (KM)	18.78	theta star (KM)	18.97
80% gamma percentile (KM)	7.114	90% gamma percentile (KM)	14.56
95% gamma percentile (KM)	23.35	99% gamma percentile (KM)	46.67

## Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (21.51, $\alpha$ )	11.97	Adjusted Chi Square Value (21.51, $\beta$ )	11.72
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	8.729	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	8.918

## Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.926	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.233	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.283	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

## Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.551	Mean in Log Scale	0.699
SD in Original Scale	9.12	SD in Log Scale	1.16
95% t UCL (assumes normality of ROS data)	6.92	95% Percentile Bootstrap UCL	7.21
95% BCA Bootstrap UCL	8.402	95% Bootstrap t UCL	10.19
95% H-UCL (Log ROS)	6.247		

## Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.645	KM Geo Mean	1.906
KM SD (logged)	1.175	95% Critical H Value (KM-Log)	2.557
KM Standard Error of Mean (logged)	0.245	95% H-UCL (KM -Log)	6.082
KM SD (logged)	1.175	95% Critical H Value (KM-Log)	2.557

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

KM Standard Error of Mean (logged) 0.245

DL/2 Normal		DL/2 Statistics		DL/2 Log-Transformed	
Mean in Original Scale	11.05			Mean in Log Scale	1.846
SD in Original Scale	11.15			SD in Log Scale	1.15
95% t UCL (Assumes normality)	13.95			95% H-Stat UCL	19.34

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Gamma Distributed at 5% Significance Level**

### Suggested UCL to Use

Gamma Adjusted KM-UCL (use when  $k \leq 1$  and  $15 < n < 50$  but  $k \leq 1$ ) 8.918

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## Benzo[g,h,i]perylene (ug/kg)

General Statistics			
Total Number of Observations	42	Number of Distinct Observations	26
Number of Detects	15	Number of Non-Detects	27
Number of Distinct Detects	13	Number of Distinct Non-Detects	13
Minimum Detect	1.5	Minimum Non-Detect	3.3
Maximum Detect	31	Maximum Non-Detect	68
Variance Detects	81.11	Percent Non-Detects	64.29%
Mean Detects	14.35	SD Detects	9.006
Median Detects	14	CV Detects	0.627
Skewness Detects	0.374	Kurtosis Detects	-0.458
Mean of Logged Detects	2.386	SD of Logged Detects	0.891

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.937	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.881	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.161	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.22	Detected Data appear Normal at 5% Significance Level

**Detected Data appear Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	8.087	KM Standard Error of Mean	1.629
KM SD	8.648	95% KM (BCA) UCL	11.23
95% KM (t) UCL	10.83	95% KM (Percentile Bootstrap) UCL	11
95% KM (z) UCL	10.77	95% KM Bootstrap t UCL	11.29
90% KM Chebyshev UCL	12.98	95% KM Chebyshev UCL	15.19
97.5% KM Chebyshev UCL	18.26	99% KM Chebyshev UCL	24.3

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.572	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.234	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.224	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected data follow Appr. Gamma Distribution at 5% Significance Level**

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

### Gamma Statistics on Detected Data Only

k hat (MLE)	1.95	k star (bias corrected MLE)	1.605
Theta hat (MLE)	7.36	Theta star (bias corrected MLE)	8.946
nu hat (MLE)	58.5	nu star (bias corrected)	48.14
Mean (detects)	14.35		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	7.568
Maximum	31	Median	4.478
SD	8.111	CV	1.072
k hat (MLE)	0.519	k star (bias corrected MLE)	0.497
Theta hat (MLE)	14.59	Theta star (bias corrected MLE)	15.21
nu hat (MLE)	43.56	nu star (bias corrected)	41.78
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (41.78, $\alpha$ )	27.97	Adjusted Chi Square Value (41.78, $\beta$ )	27.56
95% Gamma Approximate UCL (use when $n \geq 50$ )	11.31	95% Gamma Adjusted UCL (use when $n < 50$ )	11.47

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	8.087	SD (KM)	8.648
Variance (KM)	74.8	SE of Mean (KM)	1.629
k hat (KM)	0.874	k star (KM)	0.828
nu hat (KM)	73.45	nu star (KM)	69.53
theta hat (KM)	9.249	theta star (KM)	9.769
80% gamma percentile (KM)	13.19	90% gamma percentile (KM)	19.5
95% gamma percentile (KM)	25.91	99% gamma percentile (KM)	41.01

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (69.53, $\alpha$ )	51.34	Adjusted Chi Square Value (69.53, $\beta$ )	50.78
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	10.95	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	11.07

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.876	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.881	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.277	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.22	Detected Data Not Lognormal at 5% Significance Level

**Detected Data Not Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.72	Mean in Log Scale	1.612
SD in Original Scale	7.708	SD in Log Scale	0.926
95% t UCL (assumes normality of ROS data)	9.721	95% Percentile Bootstrap UCL	9.729
95% BCA Bootstrap UCL	9.992	95% Bootstrap t UCL	10.17
95% H-UCL (Log ROS)	10.7		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.515	KM Geo Mean	4.549
KM SD (logged)	1.067	95% Critical H Value (KM-Log)	2.431
KM Standard Error of Mean (logged)	0.224	95% H-UCL (KM -Log)	12.04
KM SD (logged)	1.067	95% Critical H Value (KM-Log)	2.431
KM Standard Error of Mean (logged)	0.224		

# SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

## DL/2 Statistics

### DL/2 Normal

Mean in Original Scale	11.17
SD in Original Scale	9.76
95% t UCL (Assumes normality)	13.7

### DL/2 Log-Transformed

Mean in Log Scale	1.886
SD in Log Scale	1.139
95% H-Stat UCL	19.73

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

## Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (t) UCL	10.83
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## UCL Statistics for Data Sets with Non-Detects

### User Selected Options

Date/Time of Computation	ProUCL 5.11/17/2018 9:27:17 AM
From File	SHAD-041_ProUCL_CALC_b.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

## Chromium VI (mg/kg)

### General Statistics

Total Number of Observations	42	Number of Distinct Observations	30
Number of Detects	41	Number of Non-Detects	1
Number of Distinct Detects	29	Number of Distinct Non-Detects	1
Minimum Detect	0.127	Minimum Non-Detect	0.25
Maximum Detect	41	Maximum Non-Detect	0.25
Variance Detects	40.22	Percent Non-Detects	2.381%
Mean Detects	1.864	SD Detects	6.342
Median Detects	0.45	CV Detects	3.402
Skewness Detects	6.169	Kurtosis Detects	38.89
Mean of Logged Detects	-0.469	SD of Logged Detects	1.134

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.257
5% Shapiro Wilk Critical Value	0.941
Lilliefors Test Statistic	0.412
5% Lilliefors Critical Value	0.137

### Shapiro Wilk GOF Test

Detected Data Not Normal at 5% Significance Level

### Lilliefors GOF Test

Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

## Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.824	KM Standard Error of Mean	0.968
KM SD	6.195	95% KM (BCA) UCL	3.779
95% KM (t) UCL	3.453	95% KM (Percentile Bootstrap) UCL	3.705
95% KM (z) UCL	3.416	95% KM Bootstrap t UCL	11.68
90% KM Chebyshev UCL	4.727	95% KM Chebyshev UCL	6.042
97.5% KM Chebyshev UCL	7.867	99% KM Chebyshev UCL	11.45

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	4.276	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.806	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.223	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.145	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected Data Not Gamma Distributed at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	0.57	k star (bias corrected MLE)	0.545
Theta hat (MLE)	3.27	Theta star (bias corrected MLE)	3.423
nu hat (MLE)	46.75	nu star (bias corrected)	44.66
Mean (detects)	1.864		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.82
Maximum	41	Median	0.43
SD	6.271	CV	3.446
k hat (MLE)	0.538	k star (bias corrected MLE)	0.516
Theta hat (MLE)	3.381	Theta star (bias corrected MLE)	3.529
nu hat (MLE)	45.22	nu star (bias corrected)	43.32
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (43.32, $\alpha$ )	29.23	Adjusted Chi Square Value (43.32, $\beta$ )	28.82
95% Gamma Approximate UCL (use when $n \geq 50$ )	2.697	95% Gamma Adjusted UCL (use when $n < 50$ )	2.736

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.824	SD (KM)	6.195
Variance (KM)	38.37	SE of Mean (KM)	0.968
k hat (KM)	0.0867	k star (KM)	0.0964
nu hat (KM)	7.284	nu star (KM)	8.097
theta hat (KM)	21.04	theta star (KM)	18.92
80% gamma percentile (KM)	1.198	90% gamma percentile (KM)	4.779
95% gamma percentile (KM)	10.61	99% gamma percentile (KM)	29.51

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (8.10, $\alpha$ )	2.791	Adjusted Chi Square Value (8.10, $\beta$ )	2.681
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	5.291	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	5.509
95% Gamma Adjusted KM-UCL (use when $k \leq 1$ and $15 < n < 50$ )			

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.902	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.941	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.136	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.137	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Approximate Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.823	Mean in Log Scale	-0.504
SD in Original Scale	6.27	SD in Log Scale	1.142
95% t UCL (assumes normality of ROS data)	3.451	95% Percentile Bootstrap UCL	3.716
95% BCA Bootstrap UCL	4.835	95% Bootstrap t UCL	11.53
95% H-UCL (Log ROS)	1.819		

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.499	KM Geo Mean	0.607
KM SD (logged)	1.123	95% Critical H Value (KM-Log)	2.496
KM Standard Error of Mean (logged)	0.176	95% H-UCL (KM -Log)	1.768
KM SD (logged)	1.123	95% Critical H Value (KM-Log)	2.496
KM Standard Error of Mean (logged)	0.176		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	1.823
SD in Original Scale	6.27
95% t UCL (Assumes normality)	3.451

#### DL/2 Log-Transformed

Mean in Log Scale	-0.508
SD in Log Scale	1.148
95% H-Stat UCL	1.828

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

### Suggested UCL to Use

KM H-UCL	1.768
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## Chromium (mg/kg)

### General Statistics

Total Number of Observations	42	Number of Distinct Observations	29
		Number of Missing Observations	0
Minimum	8.2	Mean	20.69
Maximum	52	Median	19.5
SD	10.29	Std. Error of Mean	1.588
Coefficient of Variation	0.497	Skewness	0.836

### Normal GOF Test

Shapiro Wilk Test Statistic	0.874
5% Shapiro Wilk Critical Value	0.942
Lilliefors Test Statistic	0.112
5% Lilliefors Critical Value	0.135

### Shapiro Wilk GOF Test

Data Not Normal at 5% Significance Level

### Lilliefors GOF Test

Data appear Normal at 5% Significance Level

**Data appear Approximate Normal at 5% Significance Level**

### Assuming Normal Distribution

#### 95% Normal UCL

95% Student's-t UCL	23.36
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#### 95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995)	23.52
95% Modified-t UCL (Johnson-1978)	23.4

### Gamma GOF Test

A-D Test Statistic	0.611
5% A-D Critical Value	0.753
K-S Test Statistic	0.116
5% K-S Critical Value	0.137

### Anderson-Darling Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

### Kolmogorov-Smirnov Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

### Gamma Statistics

k hat (MLE)	4.268	k star (bias corrected MLE)	3.979
Theta hat (MLE)	4.848	Theta star (bias corrected MLE)	5.2
nu hat (MLE)	358.5	nu star (bias corrected)	334.2
MLE Mean (bias corrected)	20.69	MLE Sd (bias corrected)	10.37
		Approximate Chi Square Value (0.05)	292.9
Adjusted Level of Significance	0.0443	Adjusted Chi Square Value	291.5

### Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	23.61	95% Adjusted Gamma UCL (use when n<50)	23.72
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### Lognormal GOF Test

Shapiro Wilk Test Statistic	0.89
5% Shapiro Wilk Critical Value	0.942
Lilliefors Test Statistic	0.108
5% Lilliefors Critical Value	0.135

### Shapiro Wilk Lognormal GOF Test

Data Not Lognormal at 5% Significance Level

### Lilliefors Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

**Data appear Approximate Lognormal at 5% Significance Level**

### Lognormal Statistics

Minimum of Logged Data	2.104	Mean of logged Data	2.908
Maximum of Logged Data	3.951	SD of logged Data	0.506

### Assuming Lognormal Distribution

95% H-UCL	24.2	90% Chebyshev (MVUE) UCL	25.85
95% Chebyshev (MVUE) UCL	28.16	97.5% Chebyshev (MVUE) UCL	31.37
99% Chebyshev (MVUE) UCL	37.67		

### Nonparametric Distribution Free UCL Statistics

**Data appear to follow a Discernible Distribution at 5% Significance Level**

### Nonparametric Distribution Free UCLs

95% CLT UCL	23.3	95% Jackknife UCL	23.36
95% Standard Bootstrap UCL	23.24	95% Bootstrap-t UCL	23.6
95% Hall's Bootstrap UCL	23.41	95% Percentile Bootstrap UCL	23.35
95% BCA Bootstrap UCL	23.6		
90% Chebyshev(Mean, Sd) UCL	25.45	95% Chebyshev(Mean, Sd) UCL	27.61
97.5% Chebyshev(Mean, Sd) UCL	30.61	99% Chebyshev(Mean, Sd) UCL	36.49

### Suggested UCL to Use

95% Student's-t UCL	23.36
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When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test

When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## Lead (mg/kg)

### General Statistics

Total Number of Observations	42	Number of Distinct Observations	39
		Number of Missing Observations	0
Minimum	0.19	Mean	396.4



## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

Maximum	3300	Median	84
SD	680.6	Std. Error of Mean	105
Coefficient of Variation	1.717	Skewness	2.623

### Normal GOF Test

Shapiro Wilk Test Statistic	0.624
5% Shapiro Wilk Critical Value	0.942
Lilliefors Test Statistic	0.28
5% Lilliefors Critical Value	0.135

### Shapiro Wilk GOF Test

Data Not Normal at 5% Significance Level

### Lilliefors GOF Test

Data Not Normal at 5% Significance Level

**Data Not Normal at 5% Significance Level**

### Assuming Normal Distribution

#### 95% Normal UCL

95% Student's-t UCL 573.2

#### 95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995) 614.6

95% Modified-t UCL (Johnson-1978) 580.3

### Gamma GOF Test

A-D Test Statistic	0.803
5% A-D Critical Value	0.847
K-S Test Statistic	0.135
5% K-S Critical Value	0.147

### Anderson-Darling Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

### Kolmogorov-Smirnov Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

### Gamma Statistics

k hat (MLE)	0.353
Theta hat (MLE)	1123
nu hat (MLE)	29.65
MLE Mean (bias corrected)	396.4
Adjusted Level of Significance	0.0443

k star (bias corrected MLE)	0.344
Theta star (bias corrected MLE)	1154
nu star (bias corrected)	28.86
MLE Sd (bias corrected)	676.3
Approximate Chi Square Value (0.05)	17.6
Adjusted Chi Square Value	17.29

### Assuming Gamma Distribution

95% Approximate Gamma UCL (use when  $n \geq 50$ ) 650.1

95% Adjusted Gamma UCL (use when  $n < 50$ ) 661.9

### Lognormal GOF Test

Shapiro Wilk Test Statistic	0.889
5% Shapiro Wilk Critical Value	0.942
Lilliefors Test Statistic	0.155
5% Lilliefors Critical Value	0.135

### Shapiro Wilk Lognormal GOF Test

Data Not Lognormal at 5% Significance Level

### Lilliefors Lognormal GOF Test

Data Not Lognormal at 5% Significance Level

**Data Not Lognormal at 5% Significance Level**

### Lognormal Statistics

Minimum of Logged Data	-1.661
Maximum of Logged Data	8.102

Mean of logged Data	4.08
SD of logged Data	2.474

### Assuming Lognormal Distribution

95% H-UCL	6762
95% Chebyshev (MVUE) UCL	3420
99% Chebyshev (MVUE) UCL	6546

90% Chebyshev (MVUE) UCL	2660
97.5% Chebyshev (MVUE) UCL	4475

### Nonparametric Distribution Free UCL Statistics

**Data do not follow a Discernible Distribution (0.05)**

### Nonparametric Distribution Free UCLs

95% CLT UCL	569.2
95% Standard Bootstrap UCL	566.8

95% Jackknife UCL	573.2
95% Bootstrap-t UCL	650.8

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

95% Hall's Bootstrap UCL	665.8	95% Percentile Bootstrap UCL	581.3
95% BCA Bootstrap UCL	625.9		
90% Chebyshev(Mean, Sd) UCL	711.5	95% Chebyshev(Mean, Sd) UCL	854.2
97.5% Chebyshev(Mean, Sd) UCL	1052	99% Chebyshev(Mean, Sd) UCL	1441

### Suggested UCL to Use

95% Adjusted Gamma UCL 661.9

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### UCL Statistics for Data Sets with Non-Detects

#### User Selected Options

Date/Time of Computation	ProUCL 5.11/17/2018 9:28:18 AM
From File	SHAD-041_ProUCL_CALC_b.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

#### Aroclor 1260 (mg/kg)

#### General Statistics

Total Number of Observations	42	Number of Distinct Observations	9
Number of Detects	4	Number of Non-Detects	38
Number of Distinct Detects	4	Number of Distinct Non-Detects	6
Minimum Detect	0.012	Minimum Non-Detect	0.01
Maximum Detect	0.21	Maximum Non-Detect	0.072
Variance Detects	0.00918	Percent Non-Detects	90.48%
Mean Detects	0.0665	SD Detects	0.0958
Median Detects	0.022	CV Detects	1.44
Skewness Detects	1.985	Kurtosis Detects	3.952
Mean of Logged Detects	-3.405	SD of Logged Detects	1.263

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.676
5% Shapiro Wilk Critical Value	0.748
Lilliefors Test Statistic	0.425
5% Lilliefors Critical Value	0.375

#### Shapiro Wilk GOF Test

Detected Data Not Normal at 5% Significance Level

#### Lilliefors GOF Test

Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0154	KM Standard Error of Mean	0.00544
KM SD	0.0305	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.0246	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.0243	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.0317	95% KM Chebyshev UCL	0.0391
97.5% KM Chebyshev UCL	0.0494	99% KM Chebyshev UCL	0.0695

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.665
5% A-D Critical Value	0.669
K-S Test Statistic	0.422
5% K-S Critical Value	0.404

#### Anderson-Darling GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

#### Kolmogorov-Smirnov GOF

Detected Data Not Gamma Distributed at 5% Significance Level

# SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

Detected data follow Appr. Gamma Distribution at 5% Significance Level

## Gamma Statistics on Detected Data Only

k hat (MLE)	0.848	k star (bias corrected MLE)	0.379
Theta hat (MLE)	0.0784	Theta star (bias corrected MLE)	0.176
nu hat (MLE)	6.787	nu star (bias corrected)	3.03
Mean (detects)	0.0665		

## Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0154
Maximum	0.21	Median	0.01
SD	0.0309	CV	2.007
k hat (MLE)	1.729	k star (bias corrected MLE)	1.621
Theta hat (MLE)	0.0089	Theta star (bias corrected MLE)	0.00949
nu hat (MLE)	145.2	nu star (bias corrected)	136.2
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (136.20, $\alpha$ )	110.2	Adjusted Chi Square Value (136.20, $\beta$ )	109.4
95% Gamma Approximate UCL (use when $n \geq 50$ )	0.019	95% Gamma Adjusted UCL (use when $n < 50$ )	N/A

## Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0154	SD (KM)	0.0305
Variance (KM)	9.3032E-4	SE of Mean (KM)	0.00544
k hat (KM)	0.255	k star (KM)	0.253
nu hat (KM)	21.44	nu star (KM)	21.24
theta hat (KM)	0.0604	theta star (KM)	0.0609
80% gamma percentile (KM)	0.0225	90% gamma percentile (KM)	0.0462
95% gamma percentile (KM)	0.0743	99% gamma percentile (KM)	0.149

## Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (21.24, $\alpha$ )	11.77	Adjusted Chi Square Value (21.24, $\beta$ )	11.52
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	0.0278	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	0.0284

## Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.822	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.365	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

## Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00669	Mean in Log Scale	-8.875
SD in Original Scale	0.0325	SD in Log Scale	2.736
95% t UCL (assumes normality of ROS data)	0.0151	95% Percentile Bootstrap UCL	0.0164
95% BCA Bootstrap UCL	0.0219	95% Bootstrap t UCL	0.0644
95% H-UCL (Log ROS)	0.0447		

## Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-4.489	KM Geo Mean	0.0112
KM SD (logged)	0.488	95% Critical H Value (KM-Log)	1.89
KM Standard Error of Mean (logged)	0.0872	95% H-UCL (KM -Log)	0.0146
KM SD (logged)	0.488	95% Critical H Value (KM-Log)	1.89

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

KM Standard Error of Mean (logged) 0.0872

DL/2 Normal		DL/2 Statistics		DL/2 Log-Transformed	
Mean in Original Scale	0.0124			Mean in Log Scale	-4.939
SD in Original Scale	0.0318			SD in Log Scale	0.694
95% t UCL (Assumes normality)	0.0207			95% H-Stat UCL	0.0114

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Approximate Gamma Distributed at 5% Significance Level**

### Suggested UCL to Use

Gamma Adjusted KM-UCL (use when  $k \leq 1$  and  $15 < n < 50$  but  $k \leq 1$ ) 0.0284

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test

When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### UCL Statistics for Data Sets with Non-Detects

#### User Selected Options

Date/Time of Computation ProUCL 5.11/17/2018 9:28:56 AM  
 From File SHAD-041\_ProUCL\_CALC\_b.xls  
 Full Precision OFF  
 Confidence Coefficient 95%  
 Number of Bootstrap Operations 2000

### SVOC-PCDD/PCDF 2,3,7,8-TCDD (pg/g)

General Statistics			
Total Number of Observations	42	Number of Distinct Observations	32
Number of Detects	29	Number of Non-Detects	13
Number of Distinct Detects	27	Number of Distinct Non-Detects	7
Minimum Detect	0.15	Minimum Non-Detect	0.4
Maximum Detect	67	Maximum Non-Detect	0.51
Variance Detects	258.4	Percent Non-Detects	30.95%
Mean Detects	8.676	SD Detects	16.07
Median Detects	1.2	CV Detects	1.853
Skewness Detects	2.374	Kurtosis Detects	5.629
Mean of Logged Detects	0.629	SD of Logged Detects	1.766

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic 0.596  
 5% Shapiro Wilk Critical Value 0.926  
 Lilliefors Test Statistic 0.339  
 5% Lilliefors Critical Value 0.161

### Shapiro Wilk GOF Test

Detected Data Not Normal at 5% Significance Level

### Lilliefors GOF Test

Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6.068	KM Standard Error of Mean	2.15
KM SD	13.69	95% KM (BCA) UCL	9.893

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

95% KM (t) UCL	9.686	95% KM (Percentile Bootstrap) UCL	9.748
95% KM (z) UCL	9.604	95% KM Bootstrap t UCL	12.34
90% KM Chebyshev UCL	12.52	95% KM Chebyshev UCL	15.44
97.5% KM Chebyshev UCL	19.49	99% KM Chebyshev UCL	27.46

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.197	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.828	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.247	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.174	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected Data Not Gamma Distributed at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	0.425	k star (bias corrected MLE)	0.404
Theta hat (MLE)	20.4	Theta star (bias corrected MLE)	21.46
nu hat (MLE)	24.67	nu star (bias corrected)	23.45
Mean (detects)	8.676		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	5.993
Maximum	67	Median	0.585
SD	13.89	CV	2.317
k hat (MLE)	0.255	k star (bias corrected MLE)	0.252
Theta hat (MLE)	23.54	Theta star (bias corrected MLE)	23.76
nu hat (MLE)	21.38	nu star (bias corrected)	21.19
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (21.19, $\alpha$ )	11.73	Adjusted Chi Square Value (21.19, $\beta$ )	11.48
95% Gamma Approximate UCL (use when $n \geq 50$ )	10.82	95% Gamma Adjusted UCL (use when $n < 50$ )	11.06

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	6.068	SD (KM)	13.69
Variance (KM)	187.4	SE of Mean (KM)	2.15
k hat (KM)	0.196	k star (KM)	0.198
nu hat (KM)	16.5	nu star (KM)	16.66
theta hat (KM)	30.89	theta star (KM)	30.6
80% gamma percentile (KM)	7.96	90% gamma percentile (KM)	18.35
95% gamma percentile (KM)	31.34	99% gamma percentile (KM)	67.13

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (16.66, $\alpha$ )	8.428	Adjusted Chi Square Value (16.66, $\beta$ )	8.219
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	11.99	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	12.3

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.914	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.926	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.156	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.161	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Approximate Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.045	Mean in Log Scale	-0.148
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## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

SD in Original Scale	13.87	SD in Log Scale	1.901
95% t UCL (assumes normality of ROS data)	9.646	95% Percentile Bootstrap UCL	9.768
95% BCA Bootstrap UCL	10.68	95% Bootstrap t UCL	11.68
95% H-UCL (Log ROS)	14.9		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.00863	KM Geo Mean	0.991
KM SD (logged)	1.736	95% Critical H Value (KM-Log)	3.283
KM Standard Error of Mean (logged)	0.277	95% H-UCL (KM -Log)	10.9
KM SD (logged)	1.736	95% Critical H Value (KM-Log)	3.283
KM Standard Error of Mean (logged)	0.277		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	6.058
SD in Original Scale	13.86
95% t UCL (Assumes normality)	9.657

#### DL/2 Log-Transformed

Mean in Log Scale	-0.0355
SD in Log Scale	1.772
95% H-Stat UCL	11.66

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Approximate Lognormal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (Chebyshev) UCL 15.44

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### UCL Statistics for Data Sets with Non-Detects

#### User Selected Options

Date/Time of Computation	ProUCL 5.11/17/2018 9:30:04 AM
From File	SHAD-041_ProUCL_CALC_b.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

### Ethylbenzene (ug/kg)

#### General Statistics

Total Number of Observations	42	Number of Distinct Observations	26
Number of Detects	14	Number of Non-Detects	28
Number of Distinct Detects	12	Number of Distinct Non-Detects	16
Minimum Detect	0.47	Minimum Non-Detect	0.85
Maximum Detect	12	Maximum Non-Detect	4.5
Variance Detects	11.2	Percent Non-Detects	66.67%
Mean Detects	2.839	SD Detects	3.346
Median Detects	1	CV Detects	1.179
Skewness Detects	1.866	Kurtosis Detects	3.473
Mean of Logged Detects	0.492	SD of Logged Detects	1.056

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.732
5% Shapiro Wilk Critical Value	0.874

### Shapiro Wilk GOF Test

Detected Data Not Normal at 5% Significance Level

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

Lilliefors Test Statistic	0.298	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.389	KM Standard Error of Mean	0.345
KM SD	2.131	95% KM (BCA) UCL	1.978
95% KM (t) UCL	1.97	95% KM (Percentile Bootstrap) UCL	2.001
95% KM (z) UCL	1.957	95% KM Bootstrap t UCL	2.469
90% KM Chebyshev UCL	2.426	95% KM Chebyshev UCL	2.895
97.5% KM Chebyshev UCL	3.547	99% KM Chebyshev UCL	4.827

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.937	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.759	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.283	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.235	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected Data Not Gamma Distributed at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	1.041	k star (bias corrected MLE)	0.866
Theta hat (MLE)	2.727	Theta star (bias corrected MLE)	3.28
nu hat (MLE)	29.15	nu star (bias corrected)	24.24
Mean (detects)	2.839		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.026
Maximum	12	Median	0.0772
SD	2.295	CV	2.237
k hat (MLE)	0.298	k star (bias corrected MLE)	0.292
Theta hat (MLE)	3.448	Theta star (bias corrected MLE)	3.511
nu hat (MLE)	25	nu star (bias corrected)	24.54
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (24.54, $\alpha$ )	14.26	Adjusted Chi Square Value (24.54, $\beta$ )	13.98
95% Gamma Approximate UCL (use when $n \geq 50$ )	1.765	95% Gamma Adjusted UCL (use when $n < 50$ )	1.801

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.389	SD (KM)	2.131
Variance (KM)	4.541	SE of Mean (KM)	0.345
k hat (KM)	0.425	k star (KM)	0.41
nu hat (KM)	35.69	nu star (KM)	34.48
theta hat (KM)	3.269	theta star (KM)	3.384
80% gamma percentile (KM)	2.248	90% gamma percentile (KM)	3.906
95% gamma percentile (KM)	5.72	99% gamma percentile (KM)	10.27

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (34.48, $\alpha$ )	22.05	Adjusted Chi Square Value (34.48, $\beta$ )	21.69
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	2.172	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	2.208

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.894	<b>Shapiro Wilk GOF Test</b>
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## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.251	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.226	Detected Data Not Lognormal at 5% Significance Level
<b>Detected Data appear Approximate Lognormal at 5% Significance Level</b>		

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.364	Mean in Log Scale	-0.188
SD in Original Scale	2.167	SD in Log Scale	0.821
95% t UCL (assumes normality of ROS data)	1.926	95% Percentile Bootstrap UCL	1.966
95% BCA Bootstrap UCL	2.203	95% Bootstrap t UCL	2.469
95% H-UCL (Log ROS)	1.533		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.134	KM Geo Mean	0.875
KM SD (logged)	0.768	95% Critical H Value (KM-Log)	2.12
KM Standard Error of Mean (logged)	0.149	<b>95% H-UCL (KM -Log)</b>	<b>1.515</b>
KM SD (logged)	0.768	95% Critical H Value (KM-Log)	2.12
KM Standard Error of Mean (logged)	0.149		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	1.311
SD in Original Scale	2.196
95% t UCL (Assumes normality)	1.881

#### DL/2 Log-Transformed

Mean in Log Scale	-0.287
SD in Log Scale	0.852
95% H-Stat UCL	1.445

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Approximate Lognormal Distributed at 5% Significance Level**

### Suggested UCL to Use

KM H-UCL 1.515

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## Methylene Chloride (ug/kg)

### General Statistics

Total Number of Observations	42	Number of Distinct Observations	16
Number of Detects	5	Number of Non-Detects	37
Number of Distinct Detects	5	Number of Distinct Non-Detects	14
Minimum Detect	2.6	Minimum Non-Detect	0.86
Maximum Detect	6.6	Maximum Non-Detect	6.2
Variance Detects	2.022	Percent Non-Detects	88.1%
Mean Detects	4.58	SD Detects	1.422
Median Detects	4.5	CV Detects	0.31
Skewness Detects	0.0702	Kurtosis Detects	1.79
Mean of Logged Detects	1.479	SD of Logged Detects	0.335

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.938
5% Shapiro Wilk Critical Value	0.762
Lilliefors Test Statistic	0.25
5% Lilliefors Critical Value	0.343

### Shapiro Wilk GOF Test

Detected Data appear Normal at 5% Significance Level

### Lilliefors GOF Test

Detected Data appear Normal at 5% Significance Level



# SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

Detected Data appear Normal at 5% Significance Level

## Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.027	KM Standard Error of Mean	0.514
KM SD	1.591	95% KM (BCA) UCL	3.09
95% KM (t) UCL	2.892	95% KM (Percentile Bootstrap) UCL	3.031
95% KM (z) UCL	2.873	95% KM Bootstrap t UCL	2.515
90% KM Chebyshev UCL	3.57	95% KM Chebyshev UCL	4.269
97.5% KM Chebyshev UCL	5.239	99% KM Chebyshev UCL	7.145

## Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.371	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.679	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.284	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.358	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

## Gamma Statistics on Detected Data Only

k hat (MLE)	11.98	k star (bias corrected MLE)	4.925
Theta hat (MLE)	0.382	Theta star (bias corrected MLE)	0.93
nu hat (MLE)	119.8	nu star (bias corrected)	49.25
Mean (detects)	4.58		

## Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.529	Mean	2.285
Maximum	6.6	Median	2.101
SD	1.237	CV	0.542
k hat (MLE)	3.869	k star (bias corrected MLE)	3.609
Theta hat (MLE)	0.59	Theta star (bias corrected MLE)	0.633
nu hat (MLE)	325	nu star (bias corrected)	303.2
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (303.15, $\alpha$ )	263.8	Adjusted Chi Square Value (303.15, $\beta$ )	262.5
95% Gamma Approximate UCL (use when $n \geq 50$ )	2.625	95% Gamma Adjusted UCL (use when $n < 50$ )	2.638

## Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.027	SD (KM)	1.591
Variance (KM)	2.531	SE of Mean (KM)	0.514
k hat (KM)	1.623	k star (KM)	1.523
nu hat (KM)	136.4	nu star (KM)	128
theta hat (KM)	1.249	theta star (KM)	1.331
80% gamma percentile (KM)	3.131	90% gamma percentile (KM)	4.208
95% gamma percentile (KM)	5.253	99% gamma percentile (KM)	7.61

## Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (127.96, $\alpha$ )	102.8	Adjusted Chi Square Value (127.96, $\beta$ )	102
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	2.522	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	2.542

## Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.912	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.303	<b>Lilliefors GOF Test</b>

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

5% Lilliefors Critical Value 0.343 Detected Data appear Lognormal at 5% Significance Level  
**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.555	Mean in Log Scale	0.876
SD in Original Scale	1.03	SD in Log Scale	0.342
95% t UCL (assumes normality of ROS data)	2.823	95% Percentile Bootstrap UCL	2.837
95% BCA Bootstrap UCL	2.865	95% Bootstrap t UCL	2.894
95% H-UCL (Log ROS)	2.801		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.428	KM Geo Mean	1.534
KM SD (logged)	0.723	95% Critical H Value (KM-Log)	2.08
KM Standard Error of Mean (logged)	0.268	95% H-UCL (KM -Log)	2.518
KM SD (logged)	0.723	95% Critical H Value (KM-Log)	2.08
KM Standard Error of Mean (logged)	0.268		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	2.509
SD in Original Scale	1.035
95% t UCL (Assumes normality)	2.778

#### DL/2 Log-Transformed

Mean in Log Scale	0.822
SD in Log Scale	0.509
95% H-Stat UCL	3.011

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (t) UCL	2.892
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## m-p-Xylene (ug/kg)

### General Statistics

Total Number of Observations	42	Number of Distinct Observations	22
Number of Detects	13	Number of Non-Detects	29
Number of Distinct Detects	12	Number of Distinct Non-Detects	12
Minimum Detect	0.91	Minimum Non-Detect	1.1
Maximum Detect	76	Maximum Non-Detect	6.2
Variance Detects	491.4	Percent Non-Detects	69.05%
Mean Detects	15.49	SD Detects	22.17
Median Detects	6.5	CV Detects	1.431
Skewness Detects	2.231	Kurtosis Detects	4.533
Mean of Logged Detects	2	SD of Logged Detects	1.271

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.645
5% Shapiro Wilk Critical Value	0.866
Lilliefors Test Statistic	0.332
5% Lilliefors Critical Value	0.234

### Shapiro Wilk GOF Test

Detected Data Not Normal at 5% Significance Level

### Lilliefors GOF Test

Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	5.898	KM Standard Error of Mean	2.215
KM SD	13.52	95% KM (BCA) UCL	10.75
95% KM (t) UCL	9.626	95% KM (Percentile Bootstrap) UCL	9.861
95% KM (z) UCL	9.542	95% KM Bootstrap t UCL	16.09
90% KM Chebyshev UCL	12.54	95% KM Chebyshev UCL	15.55
97.5% KM Chebyshev UCL	19.73	99% KM Chebyshev UCL	27.94

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.819	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.768	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.263	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.245	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected Data Not Gamma Distributed at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	0.801	k star (bias corrected MLE)	0.668
Theta hat (MLE)	19.33	Theta star (bias corrected MLE)	23.2
nu hat (MLE)	20.83	nu star (bias corrected)	17.36
Mean (detects)	15.49		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	4.802
Maximum	76	Median	0.01
SD	14.01	CV	2.918
k hat (MLE)	0.181	k star (bias corrected MLE)	0.184
Theta hat (MLE)	26.54	Theta star (bias corrected MLE)	26.11
nu hat (MLE)	15.2	nu star (bias corrected)	15.45
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (15.45, $\alpha$ )	7.575	Adjusted Chi Square Value (15.45, $\beta$ )	7.378
95% Gamma Approximate UCL (use when $n \geq 50$ )	9.794	95% Gamma Adjusted UCL (use when $n < 50$ )	10.06

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.898	SD (KM)	13.52
Variance (KM)	182.9	SE of Mean (KM)	2.215
k hat (KM)	0.19	k star (KM)	0.193
nu hat (KM)	15.98	nu star (KM)	16.17
theta hat (KM)	31.01	theta star (KM)	30.64
80% gamma percentile (KM)	7.614	90% gamma percentile (KM)	17.83
95% gamma percentile (KM)	30.69	99% gamma percentile (KM)	66.32

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (16.17, $\alpha$ )	8.083	Adjusted Chi Square Value (16.17, $\beta$ )	7.879
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	11.8	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	12.11

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.928	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.866	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.183	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.234	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.677	Mean in Log Scale	0.647
SD in Original Scale	13.73	SD in Log Scale	1.275
95% t UCL (assumes normality of ROS data)	9.243	95% Percentile Bootstrap UCL	9.622
95% BCA Bootstrap UCL	10.55	95% Bootstrap t UCL	17.47
95% H-UCL (Log ROS)	7.336		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.784	KM Geo Mean	2.189
KM SD (logged)	1.171	95% Critical H Value (KM-Log)	2.552
KM Standard Error of Mean (logged)	0.272	95% H-UCL (KM -Log)	6.933
KM SD (logged)	1.171	95% Critical H Value (KM-Log)	2.552
KM Standard Error of Mean (logged)	0.272		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	6.398
SD in Original Scale	13.49
95% t UCL (Assumes normality)	9.9

#### DL/2 Log-Transformed

Mean in Log Scale	1.182
SD in Log Scale	0.913
95% H-Stat UCL	6.832

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Lognormal Distributed at 5% Significance Level**

### Suggested UCL to Use

KM H-UCL 6.933

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

**o-Xylene (ug/kg)**

### General Statistics

Total Number of Observations	42	Number of Distinct Observations	22
Number of Detects	14	Number of Non-Detects	28
Number of Distinct Detects	13	Number of Distinct Non-Detects	11
Minimum Detect	0.91	Minimum Non-Detect	4.3
Maximum Detect	76	Maximum Non-Detect	6.2
Variance Detects	486.7	Percent Non-Detects	66.67%
Mean Detects	17.03	SD Detects	22.06
Median Detects	6.55	CV Detects	1.295
Skewness Detects	1.902	Kurtosis Detects	3.158
Mean of Logged Detects	2.115	SD of Logged Detects	1.294

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.714
5% Shapiro Wilk Critical Value	0.874
Lilliefors Test Statistic	0.308
5% Lilliefors Critical Value	0.226

### Shapiro Wilk GOF Test

Detected Data Not Normal at 5% Significance Level

### Lilliefors GOF Test

Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6.864	KM Standard Error of Mean	2.343
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## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

KM SD	14.27	95% KM (BCA) UCL	11.57
95% KM (t) UCL	10.81	95% KM (Percentile Bootstrap) UCL	11.18
95% KM (z) UCL	10.72	95% KM Bootstrap t UCL	14.78
90% KM Chebyshev UCL	13.89	95% KM Chebyshev UCL	17.08
97.5% KM Chebyshev UCL	21.5	99% KM Chebyshev UCL	30.18

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.672
5% A-D Critical Value	0.768
K-S Test Statistic	0.244
5% K-S Critical Value	0.237

### Anderson-Darling GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

### Kolmogorov-Smirnov GOF

Detected Data Not Gamma Distributed at 5% Significance Level

**Detected data follow Appr. Gamma Distribution at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	0.821	k star (bias corrected MLE)	0.693
Theta hat (MLE)	20.73	Theta star (bias corrected MLE)	24.57
nu hat (MLE)	23	nu star (bias corrected)	19.41
Mean (detects)	17.03		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	5.683
Maximum	76	Median	0.01
SD	14.84	CV	2.611
k hat (MLE)	0.182	k star (bias corrected MLE)	0.185
Theta hat (MLE)	31.22	Theta star (bias corrected MLE)	30.74
nu hat (MLE)	15.29	nu star (bias corrected)	15.53
Adjusted Level of Significance ( $\beta$ )	0.0443		
Approximate Chi Square Value (15.53, $\alpha$ )	7.632	Adjusted Chi Square Value (15.53, $\beta$ )	7.434
95% Gamma Approximate UCL (use when $n \geq 50$ )	11.56	95% Gamma Adjusted UCL (use when $n < 50$ )	11.87

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	6.864	SD (KM)	14.27
Variance (KM)	203.7	SE of Mean (KM)	2.343
k hat (KM)	0.231	k star (KM)	0.231
nu hat (KM)	19.43	nu star (KM)	19.37
theta hat (KM)	29.68	theta star (KM)	29.76
80% gamma percentile (KM)	9.667	90% gamma percentile (KM)	20.7
95% gamma percentile (KM)	34.02	99% gamma percentile (KM)	69.87

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (19.37, $\alpha$ )	10.39	Adjusted Chi Square Value (19.37, $\beta$ )	10.16
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	12.8	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	13.09

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.938
5% Shapiro Wilk Critical Value	0.874
Lilliefors Test Statistic	0.17
5% Lilliefors Critical Value	0.226

### Shapiro Wilk GOF Test

Detected Data appear Lognormal at 5% Significance Level

### Lilliefors GOF Test

Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

## SHAD-041 95 UCL Statistics for 0-3 ft bgs Depth Interval

Mean in Original Scale	6.599	Mean in Log Scale	0.781
SD in Original Scale	14.51	SD in Log Scale	1.326
95% t UCL (assumes normality of ROS data)	10.37	95% Percentile Bootstrap UCL	10.27
95% BCA Bootstrap UCL	12.02	95% Bootstrap t UCL	15.9
95% H-UCL (Log ROS)	9.274		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.919	KM Geo Mean	2.508
KM SD (logged)	1.233	95% Critical H Value (KM-Log)	2.626
KM Standard Error of Mean (logged)	0.306	95% H-UCL (KM -Log)	8.885
KM SD (logged)	1.233	95% Critical H Value (KM-Log)	2.626
KM Standard Error of Mean (logged)	0.306		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	7.264
SD in Original Scale	14.25
95% t UCL (Assumes normality)	10.97

#### DL/2 Log-Transformed

Mean in Log Scale	1.282
SD in Log Scale	0.943
95% H-Stat UCL	7.887

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Approximate Gamma Distributed at 5% Significance Level**

### Suggested UCL to Use

Gamma Adjusted KM-UCL (use when  $k \leq 1$  and  $15 < n < 50$  but  $k \leq 1$ ) 13.09

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test

When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006). However, simulation results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

# SHAD-041 Summary Statistics for 0-10 ft bgs Depth Interval

## General Statistics on Uncensored Data

Date/Time of Computation ProUCL 5.11/17/2018 9:30:53 AM

### User Selected Options

From File SHAD-041\_ProUCL\_CALC\_c.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_c.xls

### General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Naphthalene (ug/kg)	84	0	3	81	96.43%	3.4	68	2.286	0.421	0.649	0.284
2-Methylnaphthalene (ug/kg)	84	0	4	80	95.24%	3.4	68	0.92	0.155	0.394	0.428
1-Methylnaphthalene (ug/kg)	84	0	0	84	100.00%	3.3	68	N/A	N/A	N/A	N/A
Acenaphthylene (ug/kg)	84	0	2	82	97.62%	3.3	68	3.332	0.0307	0.175	0.0526
Acenaphthene (ug/kg)	84	0	1	83	98.81%	3.3	68	3.316	0.0159	0.126	0.038
Fluorene (ug/kg)	84	0	1	83	98.81%	3.3	68	1.3	0	0	N/A
Phenanthrene (ug/kg)	84	0	3	81	96.43%	3.3	68	3.543	1.929	1.389	0.392
Anthracene (ug/kg)	84	0	6	78	92.86%	3.3	68	1.397	2.354	1.534	1.098
Fluoranthene (ug/kg)	84	0	8	76	90.48%	3.3	68	3.437	35.51	5.959	1.734
Pyrene (ug/kg)	84	0	6	78	92.86%	3.3	68	3.083	23.37	4.835	1.568
Benzo[a]anthracene (ug/kg)	84	0	10	74	88.10%	3.3	68	2.902	16.49	4.061	1.4
Chrysene (ug/kg)	84	0	11	73	86.90%	3.3	68	4.507	62.76	7.922	1.758
Benzo[b]fluoranthene (ug/kg)	84	0	15	69	82.14%	3.3	68	4.762	80.46	8.97	1.884
Benzo[k]fluoranthene (ug/kg)	84	0	3	81	96.43%	3.3	68	2.363	4.643	2.155	0.912
Benzo[a]pyrene (ug/kg)	84	0	9	75	89.29%	3.3	68	2.569	45.73	6.762	2.632
Indeno[1,2,3-cd]pyrene (ug/kg)	84	0	3	81	96.43%	3.3	68	3.322	3.264	1.807	0.544
Dibenz[a,h]anthracene (ug/kg)	84	0	0	84	100.00%	3.3	68	N/A	N/A	N/A	N/A
Benzo[g,h,i]perylene (ug/kg)	84	0	17	67	79.76%	3.3	68	4.515	40.89	6.394	1.416

### General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Naphthalene (ug/kg)	3	0	1.6	3.4	2.533	2.6	0.813	0.902	1.186	-0.331	0.356
2-Methylnaphthalene (ug/kg)	4	0	0.64	1.6	0.92	0.72	0.207	0.455	0.0667	1.956	0.495
1-Methylnaphthalene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Acenaphthylene (ug/kg)	2	0	4.3	4.3	4.3	4.3	0	0	0	N/A	N/A
Acenaphthene (ug/kg)	1	0	4.3	4.3	4.3	4.3	N/A	N/A	0	N/A	N/A
Fluorene (ug/kg)	1	0	1.3	1.3	1.3	1.3	N/A	N/A	0	N/A	N/A
Phenanthrene (ug/kg)	3	0	5.3	14	8.4	5.9	23.61	4.859	0.89	1.702	0.578
Anthracene (ug/kg)	6	0	1	11	5.3	5.1	10.46	3.234	0.89	0.926	0.61
Fluoranthene (ug/kg)	8	0	1.8	39	16.24	19	169	13	15.42	0.421	0.801
Pyrene (ug/kg)	6	0	1.6	36	14.12	10.8	195	13.96	12.97	0.721	0.989
Benzo[a]anthracene (ug/kg)	10	0	1	18	10.58	13	48.24	6.946	6.672	-0.463	0.656
Chrysene (ug/kg)	11	0	2.1	64	15.67	14	327.9	18.11	14.83	2.163	1.155
Benzo[b]fluoranthene (ug/kg)	15	0	1.5	59	15.91	13	281.2	16.77	13.79	1.453	1.054
Benzo[k]fluoranthene (ug/kg)	3	0	2.1	20	8.067	2.1	106.8	10.33	0	1.732	1.281
Benzo[a]pyrene (ug/kg)	9	0	0.95	56	13.93	11	285	16.88	7.116	2.317	1.212
Indeno[1,2,3-cd]pyrene (ug/kg)	3	0	3.1	18	8.067	3.1	74	8.603	0	1.732	1.066
Dibenz[a,h]anthracene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo[g,h,i]perylene (ug/kg)	17	0	1.5	31	12.89	13	88.07	9.385	12.31	0.489	0.728

### Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Naphthalene (ug/kg)	84	0	3.5	3.66	3.7	3.9	17	23.4	33.7	34	67.17
2-Methylnaphthalene (ug/kg)	84	0	3.5	3.6	3.7	3.9	17	23.4	33.7	34	67.17
1-Methylnaphthalene (ug/kg)	84	0	3.5	3.66	3.7	3.9	17	23.4	33.7	34	67.17
Acenaphthylene (ug/kg)	84	0	3.5	3.7	3.7	3.95	7.475	23.4	33.7	34	67.17
Acenaphthene (ug/kg)	84	0	3.5	3.7	3.7	3.95	17	23.4	33.7	34	67.17
Fluorene (ug/kg)	84	0	3.5	3.66	3.7	3.9	17	23.4	33.7	34	67.17
Phenanthrene (ug/kg)	84	0	3.5	3.7	3.7	4	14.75	23.4	33.7	34	67.17
Anthracene (ug/kg)	84	0	3.5	3.7	3.7	4	5.175	23.4	33.7	34	67.17
Fluoranthene (ug/kg)	84	0	3.5	3.66	3.7	4	17	22	33.7	34	67.17
Pyrene (ug/kg)	84	0	3.5	3.6	3.7	3.9	17	20	33.7	34	67.17
Benzo[a]anthracene (ug/kg)	84	0	3.5	3.6	3.7	3.95	13	17	33	34	67.17
Chrysene (ug/kg)	84	0	3.5	3.66	3.7	4	14.75	22.6	33.7	34	67.17
Benzo[b]fluoranthene (ug/kg)	84	0	3.5	3.7	3.7	4	15.5	25.2	34	34.85	67.17
Benzo[k]fluoranthene (ug/kg)	84	0	3.5	3.66	3.7	3.9	17	18.2	33	34	67.17

**SHAD-041 Summary Statistics for 0-10 ft bgs Depth Interval**

Benzo[a]pyrene (ug/kg)	84	0	3.5	3.7	3.7	4	11.5	18.2	33.7	34	67.17
Indeno[1,2,3-cd]pyrene (ug/kg)	84	0	3.5	3.66	3.7	3.9	17	24	33.7	34	67.17
Dibenz[a,h]anthracene (ug/kg)	84	0	3.5	3.66	3.7	3.9	17	23.4	33.7	34	67.17
Benzo[g,h,i]perylene (ug/kg)	84	0	3.5	3.7	3.7	4	13	15.4	33	34	67.17

**General Statistics on Uncensored Data**

Date/Time of Computation ProUCL 5.11/17/2018 9:31:29 AM

**User Selected Options**

From File SHAD-041\_ProUCL\_CALC\_c.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_c.xls

**General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method**

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Chromium VI (mg/kg)	84	0	83	1	1.19%	0.25	0.25	1.152	20.07	4.48	3.889
Chromium (mg/kg)	84	0	84	0	0.00%	N/A	N/A	17.56	72.12	8.492	0.483
Lead (mg/kg)	84	0	84	0	0.00%	N/A	N/A	202.7	266881	516.6	2.548

**General Statistics for Raw Data Sets using Detected Data Only**

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Chromium VI (mg/kg)	83	0	0.12	41	1.164	0.34	20.55	4.533	0.163	8.504	3.895
Chromium (mg/kg)	84	0	7	52	17.56	14.5	72.12	8.492	6.672	1.474	0.483
Lead (mg/kg)	84	0	0.19	3300	202.7	6.1	266881	516.6	6.82	3.878	2.548

**Percentiles using all Detects (Ds) and Non-Detects (NDs)**

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Chromium VI (mg/kg)	84	0	0.2	0.26	0.27	0.34	0.56	0.754	1.57	2.1	12.28
Chromium (mg/kg)	84	0	9.56	11	11.75	14.5	21.25	25	28.7	34.4	42.87
Lead (mg/kg)	84	0	2.1	2.76	2.9	6.1	73.5	234	511	1340	2221

**General Statistics on Uncensored Data**

Date/Time of Computation ProUCL 5.11/17/2018 9:32:06 AM

**User Selected Options**

From File SHAD-041\_ProUCL\_CALC\_c.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_c.xls

**General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method**

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Aroclor 1016 (mg/kg)	84	0	0	84	100.00%	0.011	0.02	N/A	N/A	N/A	N/A
Aroclor 1221 (mg/kg)	84	0	0	84	100.00%	0.016	0.021	N/A	N/A	N/A	N/A
Aroclor 1232 (mg/kg)	84	0	0	84	100.00%	0.01	0.02	N/A	N/A	N/A	N/A
Aroclor 1242 (mg/kg)	84	0	0	84	100.00%	0.01	0.02	N/A	N/A	N/A	N/A
Aroclor 1248 (mg/kg)	84	0	0	84	100.00%	0.01	0.02	N/A	N/A	N/A	N/A
Aroclor 1254 (mg/kg)	84	0	0	84	100.00%	0.01	0.02	N/A	N/A	N/A	N/A
Aroclor 1260 (mg/kg)	84	0	4	80	95.24%	0.01	0.072	0.0127	4.7246E-4	0.0217	1.712

**General Statistics for Raw Data Sets using Detected Data Only**

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Aroclor 1016 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1221 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1232 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1242 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1248 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1254 (mg/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1260 (mg/kg)	4	0	0.012	0.21	0.0665	0.022	0.00918	0.0958	0.00815	1.985	1.44

**Percentiles using all Detects (Ds) and Non-Detects (NDs)**

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Aroclor 1016 (mg/kg)	84	0	0.016	0.016	0.016	0.018	0.019	0.019	0.02	0.02	0.02
Aroclor 1221 (mg/kg)	84	0	0.016	0.016	0.016	0.018	0.019	0.019	0.02	0.02	0.0202
Aroclor 1232 (mg/kg)	84	0	0.016	0.016	0.016	0.018	0.019	0.019	0.02	0.02	0.02
Aroclor 1242 (mg/kg)	84	0	0.016	0.016	0.016	0.018	0.019	0.019	0.02	0.02	0.02



### SHAD-041 Summary Statistics for 0-10 ft bgs Depth Interval

Aroclor 1248 (mg/kg)	84	0	0.016	0.016	0.016	0.018	0.019	0.019	0.02	0.02	0.02
Aroclor 1254 (mg/kg)	84	0	0.016	0.016	0.016	0.018	0.019	0.019	0.02	0.02	0.02
Aroclor 1260 (mg/kg)	84	0	0.01	0.01	0.011	0.012	0.012	0.012	0.016	0.017	0.0955

#### General Statistics on Uncensored Data

Date/Time of Computation ProUCL 5.11/17/2018 9:32:34 AM

#### User Selected Options

From File SHAD-041\_ProUCL\_CALC\_c.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_c.xls

#### General Statistics for Censored Datasets (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
SVOC-PCDD/PCDF 2,3,7,8-TCDD (pg/g)	84	0	37	47	55.95%	0.4	0.51	3.322	102.6	10.13	3.05

#### General Statistics for Raw Dataset using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
SVOC-PCDD/PCDF 2,3,7,8-TCDD (pg/g)	37	0	0.15	67	7.206	0.88	211.7	14.55	0.934	2.737	2.019

#### Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
SVOC-PCDD/PCDF 2,3,7,8-TCDD (pg/g)	84	0	0.4	0.426	0.44	0.48	0.758	1.008	5.13	22.95	43.76

#### General Statistics on Uncensored Data

Date/Time of Computation ProUCL 5.11/17/2018 9:33:07 AM

#### User Selected Options

From File SHAD-041\_ProUCL\_CALC\_c.xls  
Full Precision OFF

From File: SHAD-041\_ProUCL\_CALC\_c.xls

#### General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
1,1,1-Trichloroethane (ug/kg)	84	0	0	84	100.00%	0.82	3.1	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane (ug/kg)	84	0	0	84	100.00%	0.82	3.1	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane (ug/kg)	84	0	0	84	100.00%	0.82	3.1	N/A	N/A	N/A	N/A
1,1-Dichloroethane (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
1,1-Dichloroethene (ug/kg)	84	0	4	80	95.24%	4.1	6.4	4.184	0.102	0.32	0.0764
1,2,4-Trimethylbenzene (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
1,2-Dibromoethane (EDB) (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
1,2-Dichloroethane (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
cis-1,2-Dichloroethene (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
trans-1,2-Dichloroethene (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
1,2-Dichloropropane (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
1,3-Dichlorobenzene (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
cis-1,3-Dichloropropene (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
trans-1,3-Dichloropropene (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Benzene (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Bromodichloromethane (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Bromoform (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Bromomethane (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Carbon Tetrachloride (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Chlorobenzene (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Chloroform (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Chloromethane (ug/kg)	84	0	4	80	95.24%	0.97	6.4	1.383	1.476	1.215	0.878
Dibromochloromethane (ug/kg)	84	0	0	84	100.00%	0.82	5.3	N/A	N/A	N/A	N/A
Ethylbenzene (ug/kg)	84	0	14	70	83.33%	0.82	4.5	1.013	2.424	1.557	1.537
Methylene Chloride (ug/kg)	84	0	8	76	90.48%	0.86	6.4	2.001	2.057	1.434	0.717
Styrene (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Tetrachloroethene (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Toluene (ug/kg)	84	0	1	83	98.81%	0.82	1.3	0.75	0	0	N/A
Trichloroethene (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
Vinyl Chloride (ug/kg)	84	0	0	84	100.00%	0.82	1.3	N/A	N/A	N/A	N/A
m-p-Xylene (ug/kg)	84	0	14	70	83.33%	1.1	6.4	3.626	97.28	9.863	2.72

**SHAD-041 Summary Statistics for 0-10 ft bgs Depth Interval**

o-Xylene (ug/kg) 84 0 15 69 82.14% 4.1 6.4 4.102 110.1 10.49 2.559

**General Statistics for Raw Data Sets using Detected Data Only**

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
1,1,1-Trichloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethene (ug/kg)	4	0	4.4	6.6	5.225	4.95	0.923	0.96	0.519	1.474	0.184
1,2,4-Trimethylbenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dibromoethane (EDB) (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
cis-1,2-Dichloroethene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
trans-1,2-Dichloroethene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloropropane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,3-Dichlorobenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
cis-1,3-Dichloropropene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
trans-1,3-Dichloropropene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromodichloromethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromoform (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromomethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobenzene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloroform (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloromethane (ug/kg)	4	0	4.4	6.6	5.225	4.95	0.923	0.96	0.519	1.474	0.184
Dibromochloromethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene (ug/kg)	14	0	0.47	12	2.839	1	11.2	3.346	0.764	1.866	1.179
Methylene Chloride (ug/kg)	8	0	2	6.6	4.375	4.65	2.122	1.457	0.593	-0.448	0.333
Styrene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetrachloroethane (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene (ug/kg)	1	0	0.75	0.75	0.75	0.75	N/A	N/A	0	N/A	N/A
Trichloroethene (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride (ug/kg)	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
m-p-Xylene (ug/kg)	14	0	0.91	76	14.75	6.15	461.3	21.48	2.446	2.346	1.456
o-Xylene (ug/kg)	15	0	0.91	76	16.23	6.5	461.4	21.48	3.262	2.006	1.323

**Percentiles using all Detects (Ds) and Non-Detects (NDs)**

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
1,1,1-Trichloroethane (ug/kg)	84	0	0.873	0.91	0.92	0.975	1.025	1.1	1.1	1.2	1.606
1,1,2,2-Tetrachloroethane (ug/kg)	84	0	0.873	0.91	0.92	0.975	1.025	1.1	1.1	1.2	1.606
1,1,2-Trichloroethane (ug/kg)	84	0	0.873	0.91	0.92	0.975	1.025	1.1	1.1	1.2	1.606
1,1-Dichloroethane (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
1,1-Dichloroethene (ug/kg)	84	0	4.4	4.5	4.6	4.9	5.2	5.3	5.57	5.97	6.434
1,2,4-Trimethylbenzene (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
1,2-Dibromoethane (EDB) (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
1,2-Dichlorobenzene (ug/kg)	84	0	0.873	0.91	0.92	0.97	1.025	1.1	1.1	1.2	1.3
1,2-Dichloroethane (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
cis-1,2-Dichloroethene (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
trans-1,2-Dichloroethene (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
1,2-Dichloropropane (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
1,3-Dichlorobenzene (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
cis-1,3-Dichloropropene (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
trans-1,3-Dichloropropene (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
1,4-Dichlorobenzene (ug/kg)	84	0	0.873	0.91	0.92	0.97	1.025	1.1	1.1	1.2	1.3
Benzene (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
Bromodichloromethane (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
Bromoform (ug/kg)	84	0	0.873	0.91	0.92	0.97	1.025	1.1	1.1	1.2	1.3
Bromomethane (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
Carbon Tetrachloride (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
Chlorobenzene (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
Chloroform (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
Chloromethane (ug/kg)	84	0	4.3	4.46	4.575	4.8	5.2	5.3	5.57	5.97	6.434
Dibromochloromethane (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.98
Ethylbenzene (ug/kg)	84	0	0.863	0.916	0.92	0.99	1.1	1.1	1.27	4.29	7.684

**SHAD-041 Summary Statistics for 0-10 ft bgs Depth Interval**

Methylene Chloride (ug/kg)	84	0	4.13	4.5	4.6	4.8	5.2	5.3	5.5	5.8	6.434
Styrene (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
Tetrachloroethene (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
Toluene (ug/kg)	84	0	0.87	0.906	0.92	0.97	1	1.1	1.1	1.2	1.3
Trichloroethene (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
Vinyl Chloride (ug/kg)	84	0	0.873	0.91	0.92	0.97	1	1.1	1.1	1.2	1.3
m-p-Xylene (ug/kg)	84	0	4.4	4.6	4.6	4.9	5.3	5.54	6.17	7.45	53.59
o-Xylene (ug/kg)	84	0	4.4	4.6	4.6	4.9	5.325	5.6	6.34	11.34	53.59

# SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

## UCL Statistics for Data Sets with Non-Detects

User Selected Options  
 Date/Time of Computation ProUCL 5.11/17/2018 9:34:42 AM  
 From File SHAD-041\_ProUCL\_CALC\_c.xls  
 Full Precision OFF  
 Confidence Coefficient 95%  
 Number of Bootstrap Operations 2000

### 2-Methylnaphthalene (ug/kg)

#### General Statistics

Total Number of Observations	84	Number of Distinct Observations	19
Number of Detects	4	Number of Non-Detects	80
Number of Distinct Detects	4	Number of Distinct Non-Detects	15
Minimum Detect	0.64	Minimum Non-Detect	3.4
Maximum Detect	1.6	Maximum Non-Detect	68
Variance Detects	0.207	Percent Non-Detects	95.24%
Mean Detects	0.92	SD Detects	0.455
Median Detects	0.72	CV Detects	0.495
Skewness Detects	1.956	Kurtosis Detects	3.864
Mean of Logged Detects	-0.158	SD of Logged Detects	0.423

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.708
5% Shapiro Wilk Critical Value	0.748
Lilliefors Test Statistic	0.412
5% Lilliefors Critical Value	0.375

#### Shapiro Wilk GOF Test

Detected Data Not Normal at 5% Significance Level

#### Lilliefors GOF Test

Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.92	KM Standard Error of Mean	0.227
KM SD	0.394	95% KM (BCA) UCL	N/A
95% KM (t) UCL	1.298	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	1.294	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	1.602	95% KM Chebyshev UCL	1.912
97.5% KM Chebyshev UCL	2.341	99% KM Chebyshev UCL	3.183

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.724
5% A-D Critical Value	0.658
K-S Test Statistic	0.424
5% K-S Critical Value	0.396

#### Anderson-Darling GOF Test

Detected Data Not Gamma Distributed at 5% Significance Level

#### Kolmogorov-Smirnov GOF

Detected Data Not Gamma Distributed at 5% Significance Level

**Detected Data Not Gamma Distributed at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	6.83	k star (bias corrected MLE)	1.874
Theta hat (MLE)	0.135	Theta star (bias corrected MLE)	0.491
nu hat (MLE)	54.64	nu star (bias corrected)	14.99
Mean (detects)	0.92		

#### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.307	Mean	0.928
Maximum	1.711	Median	0.893
SD	0.393	CV	0.424
k hat (MLE)	5.235	k star (bias corrected MLE)	5.056
Theta hat (MLE)	0.177	Theta star (bias corrected MLE)	0.184
nu hat (MLE)	879.4	nu star (bias corrected)	849.3
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (849.33, $\alpha$ )	782.7	Adjusted Chi Square Value (849.33, $\beta$ )	781.6
95% Gamma Approximate UCL (use when $n \geq 50$ )	1.007	95% Gamma Adjusted UCL (use when $n < 50$ )	N/A

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.92	SD (KM)	0.394
Variance (KM)	0.155	SE of Mean (KM)	0.227
k hat (KM)	5.452	k star (KM)	5.265
nu hat (KM)	915.9	nu star (KM)	884.5
theta hat (KM)	0.169	theta star (KM)	0.175
80% gamma percentile (KM)	1.23	90% gamma percentile (KM)	1.457
95% gamma percentile (KM)	1.663	99% gamma percentile (KM)	2.098

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (884.53, $\alpha$ )	816.5	Adjusted Chi Square Value (884.53, $\beta$ )	815.4
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	0.997	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	0.998

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.751	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.394	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.375	Detected Data Not Lognormal at 5% Significance Level

**Detected Data appear Approximate Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.91	Mean in Log Scale	-0.158
SD in Original Scale	0.331	SD in Log Scale	0.361
95% t UCL (assumes normality of ROS data)	0.97	95% Percentile Bootstrap UCL	0.966
95% BCA Bootstrap UCL	0.975	95% Bootstrap t UCL	0.977
95% H-UCL (Log ROS)	0.977		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.158	KM Geo Mean	0.854
KM SD (logged)	0.366	95% Critical H Value (KM-Log)	1.771
KM Standard Error of Mean (logged)	0.211	<b>95% H-UCL (KM -Log)</b>	<b>0.98</b>
KM SD (logged)	0.366	95% Critical H Value (KM-Log)	1.771
KM Standard Error of Mean (logged)	0.211		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	5.666
SD in Original Scale	7.262
95% t UCL (Assumes normality)	6.984

#### DL/2 Log-Transformed

Mean in Log Scale	1.152
SD in Log Scale	0.984
95% H-Stat UCL	6.527

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Approximate Lognormal Distributed at 5% Significance Level**

**Suggested UCL to Use**

# SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

KM Student's t 0.953

KM H-UCL 0.98

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## Anthracene (ug/kg)

### General Statistics

Total Number of Observations	84	Number of Distinct Observations	20
Number of Detects	6	Number of Non-Detects	78
Number of Distinct Detects	5	Number of Distinct Non-Detects	16
Minimum Detect	1	Minimum Non-Detect	3.3
Maximum Detect	11	Maximum Non-Detect	68
Variance Detects	10.46	Percent Non-Detects	92.86%
Mean Detects	5.3	SD Detects	3.234
Median Detects	5.1	CV Detects	0.61
Skewness Detects	0.926	Kurtosis Detects	2.707
Mean of Logged Detects	1.463	SD of Logged Detects	0.79

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.876	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.321	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level

**Detected Data appear Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.397	KM Standard Error of Mean	0.208
KM SD	1.534	95% KM (BCA) UCL	3.758
95% KM (t) UCL	1.744	95% KM (Percentile Bootstrap) UCL	3.71
95% KM (z) UCL	1.74	95% KM Bootstrap t UCL	1.769
90% KM Chebyshev UCL	2.022	95% KM Chebyshev UCL	2.306
97.5% KM Chebyshev UCL	2.699	99% KM Chebyshev UCL	3.471

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.535	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.702	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.274	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.335	Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	2.597	k star (bias corrected MLE)	1.41
Theta hat (MLE)	2.041	Theta star (bias corrected MLE)	3.76
nu hat (MLE)	31.16	nu star (bias corrected)	16.91
Mean (detects)	5.3		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.06
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## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

Maximum	11	Median	0.251
SD	1.727	CV	1.628
k hat (MLE)	0.335	k star (bias corrected MLE)	0.331
Theta hat (MLE)	3.165	Theta star (bias corrected MLE)	3.203
nu hat (MLE)	56.29	nu star (bias corrected)	55.62
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (55.62, $\alpha$ )	39.48	Adjusted Chi Square Value (55.62, $\beta$ )	39.24
95% Gamma Approximate UCL (use when $n \geq 50$ )	1.494	95% Gamma Adjusted UCL (use when $n < 50$ )	1.503

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.397	SD (KM)	1.534
Variance (KM)	2.354	SE of Mean (KM)	0.208
k hat (KM)	0.829	k star (KM)	0.807
nu hat (KM)	139.3	nu star (KM)	135.7
theta hat (KM)	1.685	theta star (KM)	1.73
80% gamma percentile (KM)	2.282	90% gamma percentile (KM)	3.389
95% gamma percentile (KM)	4.516	99% gamma percentile (KM)	7.177

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (135.65, $\alpha$ )	109.7	Adjusted Chi Square Value (135.65, $\beta$ )	109.3
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	1.727	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	1.733

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.833	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.319	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.448	Mean in Log Scale	0.0664
SD in Original Scale	1.495	SD in Log Scale	0.74
95% t UCL (assumes normality of ROS data)	1.719	95% Percentile Bootstrap UCL	1.736
95% BCA Bootstrap UCL	1.829	95% Bootstrap t UCL	1.839
95% H-UCL (Log ROS)	1.657		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.135	KM Geo Mean	1.145
KM SD (logged)	0.477	95% Critical H Value (KM-Log)	1.83
KM Standard Error of Mean (logged)	0.0648	95% H-UCL (KM -Log)	1.411
KM SD (logged)	0.477	95% Critical H Value (KM-Log)	1.83
KM Standard Error of Mean (logged)	0.0648		

### DL/2 Statistics

<b>DL/2 Normal</b>		<b>DL/2 Log-Transformed</b>	
Mean in Original Scale	5.716	Mean in Log Scale	1.194
SD in Original Scale	7.224	SD in Log Scale	0.944
95% t UCL (Assumes normality)	7.027	95% H-Stat UCL	6.461

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (t) UCL 1.744

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### Fluoranthene (ug/kg)

#### General Statistics

Total Number of Observations	84	Number of Distinct Observations	22
Number of Detects	8	Number of Non-Detects	76
Number of Distinct Detects	7	Number of Distinct Non-Detects	16
Minimum Detect	1.8	Minimum Non-Detect	3.3
Maximum Detect	39	Maximum Non-Detect	68
Variance Detects	169	Percent Non-Detects	90.48%
Mean Detects	16.24	SD Detects	13
Median Detects	19	CV Detects	0.801
Skewness Detects	0.421	Kurtosis Detects	-0.324
Mean of Logged Detects	2.304	SD of Logged Detects	1.222

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.897	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.209	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.283	Detected Data appear Normal at 5% Significance Level

**Detected Data appear Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.437	KM Standard Error of Mean	0.741
KM SD	5.959	95% KM (BCA) UCL	5.756
95% KM (t) UCL	4.67	95% KM (Percentile Bootstrap) UCL	5.114
95% KM (z) UCL	4.656	95% KM Bootstrap t UCL	4.995
90% KM Chebyshev UCL	5.66	95% KM Chebyshev UCL	6.667
97.5% KM Chebyshev UCL	8.065	99% KM Chebyshev UCL	10.81

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.619	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.733	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.31	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.301	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected data follow Appr. Gamma Distribution at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	1.173	k star (bias corrected MLE)	0.816
Theta hat (MLE)	13.84	Theta star (bias corrected MLE)	19.89
nu hat (MLE)	18.77	nu star (bias corrected)	13.06
Mean (detects)	16.24		

#### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	3.087
Maximum	39	Median	0.01
SD	6.281	CV	2.034



## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

k hat (MLE)	0.234	k star (bias corrected MLE)	0.234
Theta hat (MLE)	13.17	Theta star (bias corrected MLE)	13.19
nu hat (MLE)	39.38	nu star (bias corrected)	39.31
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (39.31, $\alpha$ )	25.95	Adjusted Chi Square Value (39.31, $\beta$ )	25.76
95% Gamma Approximate UCL (use when $n \geq 50$ )	4.677	95% Gamma Adjusted UCL (use when $n < 50$ )	4.712

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.437	SD (KM)	5.959
Variance (KM)	35.51	SE of Mean (KM)	0.741
k hat (KM)	0.333	k star (KM)	0.329
nu hat (KM)	55.88	nu star (KM)	55.22
theta hat (KM)	10.33	theta star (KM)	10.46
80% gamma percentile (KM)	5.379	90% gamma percentile (KM)	10.02
95% gamma percentile (KM)	15.26	99% gamma percentile (KM)	28.74

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (55.22, $\alpha$ )	39.14	Adjusted Chi Square Value (55.22, $\beta$ )	38.91
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	4.849	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	4.878

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.832	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.325	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.283	Detected Data Not Lognormal at 5% Significance Level

**Detected Data appear Approximate Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.74	Mean in Log Scale	0.793
SD in Original Scale	5.791	SD in Log Scale	0.928
95% t UCL (assumes normality of ROS data)	4.791	95% Percentile Bootstrap UCL	4.867
95% BCA Bootstrap UCL	5.126	95% Bootstrap t UCL	5.371
95% H-UCL (Log ROS)	4.242		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.805	KM Geo Mean	2.236
KM SD (logged)	0.653	95% Critical H Value (KM-Log)	1.955
KM Standard Error of Mean (logged)	0.0846	95% H-UCL (KM -Log)	3.184
KM SD (logged)	0.653	95% Critical H Value (KM-Log)	1.955
KM Standard Error of Mean (logged)	0.0846		

### DL/2 Statistics

<b>DL/2 Normal</b>		<b>DL/2 Log-Transformed</b>	
Mean in Original Scale	6.564	Mean in Log Scale	1.26
SD in Original Scale	8.528	SD in Log Scale	1.016
95% t UCL (Assumes normality)	8.112	95% H-Stat UCL	7.589

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (t) UCL 4.67

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).  
 However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### Pyrene (ug/kg)

#### General Statistics

Total Number of Observations	84	Number of Distinct Observations	21
Number of Detects	6	Number of Non-Detects	78
Number of Distinct Detects	6	Number of Distinct Non-Detects	16
Minimum Detect	1.6	Minimum Non-Detect	3.3
Maximum Detect	36	Maximum Non-Detect	68
Variance Detects	195	Percent Non-Detects	92.86%
Mean Detects	14.12	SD Detects	13.96
Median Detects	10.8	CV Detects	0.989
Skewness Detects	0.721	Kurtosis Detects	-0.898
Mean of Logged Detects	2.046	SD of Logged Detects	1.312

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.871	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.274	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level

**Detected Data appear Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.083	KM Standard Error of Mean	0.687
KM SD	4.835	95% KM (BCA) UCL	4.868
95% KM (t) UCL	4.225	95% KM (Percentile Bootstrap) UCL	4.646
95% KM (z) UCL	4.213	95% KM Bootstrap t UCL	4.574
90% KM Chebyshev UCL	5.144	95% KM Chebyshev UCL	6.077
97.5% KM Chebyshev UCL	7.373	99% KM Chebyshev UCL	9.919

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.433	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.716	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.267	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.341	Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	0.964	k star (bias corrected MLE)	0.593
Theta hat (MLE)	14.64	Theta star (bias corrected MLE)	23.8
nu hat (MLE)	11.57	nu star (bias corrected)	7.118
Mean (detects)	14.12		

#### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs  
 GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	2.512
Maximum	36	Median	0.01
SD	5.352	CV	2.131
k hat (MLE)	0.246	k star (bias corrected MLE)	0.245
Theta hat (MLE)	10.22	Theta star (bias corrected MLE)	10.26

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

nu hat (MLE)	41.28	nu star (bias corrected)	41.13
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (41.13, $\alpha$ )	27.44	Adjusted Chi Square Value (41.13, $\beta$ )	27.24
95% Gamma Approximate UCL (use when $n \geq 50$ )	3.766	95% Gamma Adjusted UCL (use when $n < 50$ )	3.793

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.083	SD (KM)	4.835
Variance (KM)	23.37	SE of Mean (KM)	0.687
k hat (KM)	0.407	k star (KM)	0.4
nu hat (KM)	68.3	nu star (KM)	67.2
theta hat (KM)	7.582	theta star (KM)	7.707
80% gamma percentile (KM)	4.975	90% gamma percentile (KM)	8.707
95% gamma percentile (KM)	12.81	99% gamma percentile (KM)	23.12

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (67.20, $\alpha$ )	49.33	Adjusted Chi Square Value (67.20, $\beta$ )	49.06
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	4.199	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	4.222

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.889	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.24	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.229	Mean in Log Scale	0.744
SD in Original Scale	4.84	SD in Log Scale	0.828
95% t UCL (assumes normality of ROS data)	4.107	95% Percentile Bootstrap UCL	4.137
95% BCA Bootstrap UCL	4.466	95% Bootstrap t UCL	5.069
95% H-UCL (Log ROS)	3.582		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.827	KM Geo Mean	2.287
KM SD (logged)	0.552	95% Critical H Value (KM-Log)	1.876
KM Standard Error of Mean (logged)	0.172	95% H-UCL (KM -Log)	2.983
KM SD (logged)	0.552	95% Critical H Value (KM-Log)	1.876
KM Standard Error of Mean (logged)	0.172		

### DL/2 Statistics

<b>DL/2 Normal</b>		<b>DL/2 Log-Transformed</b>	
Mean in Original Scale	6.151	Mean in Log Scale	1.22
SD in Original Scale	8.09	SD in Log Scale	0.98
95% t UCL (Assumes normality)	7.619	95% H-Stat UCL	6.953

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (t) UCL	4.225
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

Benzo[a]anthracene (ug/kg)

### General Statistics

Total Number of Observations	84	Number of Distinct Observations	23
Number of Detects	10	Number of Non-Detects	74
Number of Distinct Detects	8	Number of Distinct Non-Detects	16
Minimum Detect	1	Minimum Non-Detect	3.3
Maximum Detect	18	Maximum Non-Detect	68
Variance Detects	48.24	Percent Non-Detects	88.1%
Mean Detects	10.58	SD Detects	6.946
Median Detects	13	CV Detects	0.656
Skewness Detects	-0.463	Kurtosis Detects	-1.765
Mean of Logged Detects	1.964	SD of Logged Detects	1.121

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.841	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.842	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.236	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.262	Detected Data appear Normal at 5% Significance Level

**Detected Data appear Approximate Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.902	KM Standard Error of Mean	0.589
KM SD	4.061	95% KM (BCA) UCL	4.34
95% KM (t) UCL	3.881	95% KM (Percentile Bootstrap) UCL	4.201
95% KM (z) UCL	3.87	95% KM Bootstrap t UCL	4.069
90% KM Chebyshev UCL	4.668	95% KM Chebyshev UCL	5.468
97.5% KM Chebyshev UCL	6.579	99% KM Chebyshev UCL	8.76

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.931	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.741	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.303	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.272	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected Data Not Gamma Distributed at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	1.411	k star (bias corrected MLE)	1.054
Theta hat (MLE)	7.501	Theta star (bias corrected MLE)	10.04
nu hat (MLE)	28.21	nu star (bias corrected)	21.08
Mean (detects)	10.58		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	3.45
Maximum	18	Median	2.345
SD	4.116	CV	1.193
k hat (MLE)	0.479	k star (bias corrected MLE)	0.47
Theta hat (MLE)	7.206	Theta star (bias corrected MLE)	7.346
nu hat (MLE)	80.43	nu star (bias corrected)	78.89
Adjusted Level of Significance ( $\beta$ )	0.0471		

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

Approximate Chi Square Value (78.89, $\alpha$ )	59.42	Adjusted Chi Square Value (78.89, $\beta$ )	59.13
95% Gamma Approximate UCL (use when $n \geq 50$ )	4.579	95% Gamma Adjusted UCL (use when $n < 50$ )	4.602

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.902	SD (KM)	4.061
Variance (KM)	16.49	SE of Mean (KM)	0.589
k hat (KM)	0.511	k star (KM)	0.5
nu hat (KM)	85.76	nu star (KM)	84.04
theta hat (KM)	5.684	theta star (KM)	5.801
80% gamma percentile (KM)	4.766	90% gamma percentile (KM)	7.85
95% gamma percentile (KM)	11.14	99% gamma percentile (KM)	19.25

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (84.04, $\alpha$ )	63.91	Adjusted Chi Square Value (84.04, $\beta$ )	63.6
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	3.815	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	3.834

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.789	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.842	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.304	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.262	Detected Data Not Lognormal at 5% Significance Level

**Detected Data Not Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.157	Mean in Log Scale	0.711
SD in Original Scale	3.818	SD in Log Scale	0.883
95% t UCL (assumes normality of ROS data)	3.85	95% Percentile Bootstrap UCL	3.908
95% BCA Bootstrap UCL	3.935	95% Bootstrap t UCL	4.024
95% H-UCL (Log ROS)	3.695		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.638	KM Geo Mean	1.893
KM SD (logged)	0.749	95% Critical H Value (KM-Log)	2.035
KM Standard Error of Mean (logged)	0.205	95% H-UCL (KM -Log)	2.962
KM SD (logged)	0.749	95% Critical H Value (KM-Log)	2.035
KM Standard Error of Mean (logged)	0.205		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	5.979
SD in Original Scale	7.42
95% t UCL (Assumes normality)	7.326

#### DL/2 Log-Transformed

Mean in Log Scale	1.215
SD in Log Scale	0.978
95% H-Stat UCL	6.901

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Approximate Normal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (t) UCL	3.881
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When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test

When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### Chrysene (ug/kg)

#### General Statistics

Total Number of Observations	84	Number of Distinct Observations	24
Number of Detects	11	Number of Non-Detects	73
Number of Distinct Detects	10	Number of Distinct Non-Detects	16
Minimum Detect	2.1	Minimum Non-Detect	3.3
Maximum Detect	64	Maximum Non-Detect	68
Variance Detects	327.9	Percent Non-Detects	86.9%
Mean Detects	15.67	SD Detects	18.11
Median Detects	14	CV Detects	1.155
Skewness Detects	2.163	Kurtosis Detects	5.384
Mean of Logged Detects	2.205	SD of Logged Detects	1.118

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.739	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.85	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.245	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.251	Detected Data appear Normal at 5% Significance Level

**Detected Data appear Approximate Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.507	KM Standard Error of Mean	0.964
KM SD	7.922	95% KM (BCA) UCL	6.436
95% KM (t) UCL	6.111	95% KM (Percentile Bootstrap) UCL	6.217
95% KM (z) UCL	6.093	95% KM Bootstrap t UCL	7.568
90% KM Chebyshev UCL	7.399	95% KM Chebyshev UCL	8.709
97.5% KM Chebyshev UCL	10.53	99% KM Chebyshev UCL	14.1

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.437	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.751	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.201	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.262	Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	1.05	k star (bias corrected MLE)	0.824
Theta hat (MLE)	14.93	Theta star (bias corrected MLE)	19.01
nu hat (MLE)	23.1	nu star (bias corrected)	18.13
Mean (detects)	15.67		

#### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	2.835
Maximum	64	Median	0.01
SD	8.275	CV	2.919
k hat (MLE)	0.203	k star (bias corrected MLE)	0.204
Theta hat (MLE)	13.96	Theta star (bias corrected MLE)	13.91
nu hat (MLE)	34.12	nu star (bias corrected)	34.24

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (34.24, $\alpha$ )	21.86	Adjusted Chi Square Value (34.24, $\beta$ )	21.68
95% Gamma Approximate UCL (use when $n \geq 50$ )	4.441	95% Gamma Adjusted UCL (use when $n < 50$ )	4.477

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.507	SD (KM)	7.922
Variance (KM)	62.76	SE of Mean (KM)	0.964
k hat (KM)	0.324	k star (KM)	0.32
nu hat (KM)	54.37	nu star (KM)	53.76
theta hat (KM)	13.93	theta star (KM)	14.08
80% gamma percentile (KM)	7.015	90% gamma percentile (KM)	13.18
95% gamma percentile (KM)	20.19	99% gamma percentile (KM)	38.25

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (53.76, $\alpha$ )	37.92	Adjusted Chi Square Value (53.76, $\beta$ )	37.69
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	6.39	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	6.43

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.931	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.196	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.471	Mean in Log Scale	1.009
SD in Original Scale	7.825	SD in Log Scale	0.855
95% t UCL (assumes normality of ROS data)	5.891	95% Percentile Bootstrap UCL	5.973
95% BCA Bootstrap UCL	6.849	95% Bootstrap t UCL	7.388
95% H-UCL (Log ROS)	4.816		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.121	KM Geo Mean	3.067
KM SD (logged)	0.634	95% Critical H Value (KM-Log)	1.937
KM Standard Error of Mean (logged)	0.109	95% H-UCL (KM -Log)	4.292
KM SD (logged)	0.634	95% Critical H Value (KM-Log)	1.937
KM Standard Error of Mean (logged)	0.109		

### DL/2 Statistics

<b>DL/2 Normal</b>		<b>DL/2 Log-Transformed</b>	
Mean in Original Scale	6.926	Mean in Log Scale	1.289
SD in Original Scale	9.961	SD in Log Scale	1.024
95% t UCL (Assumes normality)	8.734	95% H-Stat UCL	7.909

DL/2 is not a recommended method, provided for comparisons and historical reasons

### Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

### Suggested UCL to Use

95% KM (t) UCL 6.111

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test

When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).  
 However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### Benzo[b]fluoranthene (ug/kg)

#### General Statistics

Total Number of Observations	84	Number of Distinct Observations	27
Number of Detects	15	Number of Non-Detects	69
Number of Distinct Detects	13	Number of Distinct Non-Detects	16
Minimum Detect	1.5	Minimum Non-Detect	3.3
Maximum Detect	59	Maximum Non-Detect	68
Variance Detects	281.2	Percent Non-Detects	82.14%
Mean Detects	15.91	SD Detects	16.77
Median Detects	13	CV Detects	1.054
Skewness Detects	1.453	Kurtosis Detects	1.918
Mean of Logged Detects	2.157	SD of Logged Detects	1.23

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.827	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.881	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.203	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.22	Detected Data appear Normal at 5% Significance Level

**Detected Data appear Approximate Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.762	KM Standard Error of Mean	1.064
KM SD	8.97	95% KM (BCA) UCL	6.765
95% KM (t) UCL	6.532	95% KM (Percentile Bootstrap) UCL	6.553
95% KM (z) UCL	6.512	95% KM Bootstrap t UCL	7.577
90% KM Chebyshev UCL	7.954	95% KM Chebyshev UCL	9.399
97.5% KM Chebyshev UCL	11.41	99% KM Chebyshev UCL	15.35

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.456	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.765	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.173	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.228	Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	0.952	k star (bias corrected MLE)	0.806
Theta hat (MLE)	16.72	Theta star (bias corrected MLE)	19.75
nu hat (MLE)	28.55	nu star (bias corrected)	24.17
Mean (detects)	15.91		

#### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs  
 GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	3.71
Maximum	59	Median	0.01
SD	9.196	CV	2.478
k hat (MLE)	0.21	k star (bias corrected MLE)	0.21
Theta hat (MLE)	17.7	Theta star (bias corrected MLE)	17.66



## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

nu hat (MLE)	35.22	nu star (bias corrected)	35.29
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (35.29, $\alpha$ )	22.7	Adjusted Chi Square Value (35.29, $\beta$ )	22.53
95% Gamma Approximate UCL (use when $n \geq 50$ )	5.768	95% Gamma Adjusted UCL (use when $n < 50$ )	5.814

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.762	SD (KM)	8.97
Variance (KM)	80.46	SE of Mean (KM)	1.064
k hat (KM)	0.282	k star (KM)	0.28
nu hat (KM)	47.34	nu star (KM)	46.98
theta hat (KM)	16.9	theta star (KM)	17.03
80% gamma percentile (KM)	7.168	90% gamma percentile (KM)	14.15
95% gamma percentile (KM)	22.27	99% gamma percentile (KM)	43.56

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (46.98, $\alpha$ )	32.25	Adjusted Chi Square Value (46.98, $\beta$ )	32.04
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	6.936	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	6.982

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.923	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.881	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.163	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.22	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.847	Mean in Log Scale	0.922
SD in Original Scale	8.758	SD in Log Scale	1.008
95% t UCL (assumes normality of ROS data)	6.436	95% Percentile Bootstrap UCL	6.578
95% BCA Bootstrap UCL	7.002	95% Bootstrap t UCL	7.312
95% H-UCL (Log ROS)	5.357		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.964	KM Geo Mean	2.621
KM SD (logged)	0.824	95% Critical H Value (KM-Log)	2.077
KM Standard Error of Mean (logged)	0.12	95% H-UCL (KM -Log)	4.444
KM SD (logged)	0.824	95% Critical H Value (KM-Log)	2.077
KM Standard Error of Mean (logged)	0.12		

### DL/2 Statistics

<b>DL/2 Normal</b>		<b>DL/2 Log-Transformed</b>	
Mean in Original Scale	7.377	Mean in Log Scale	1.314
SD in Original Scale	10.47	SD in Log Scale	1.062
95% t UCL (Assumes normality)	9.277	95% H-Stat UCL	8.548

DL/2 is not a recommended method, provided for comparisons and historical reasons

### Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

### Suggested UCL to Use

95% KM (t) UCL 6.532

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test

When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### Benzo[a]pyrene (ug/kg)

#### General Statistics

Total Number of Observations	84	Number of Distinct Observations	23
Number of Detects	9	Number of Non-Detects	75
Number of Distinct Detects	7	Number of Distinct Non-Detects	16
Minimum Detect	0.95	Minimum Non-Detect	3.3
Maximum Detect	56	Maximum Non-Detect	68
Variance Detects	285	Percent Non-Detects	89.29%
Mean Detects	13.93	SD Detects	16.88
Median Detects	11	CV Detects	1.212
Skewness Detects	2.317	Kurtosis Detects	5.976
Mean of Logged Detects	1.998	SD of Logged Detects	1.323

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.715	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.829	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.3	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.274	Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.569	KM Standard Error of Mean	0.812
KM SD	6.762	95% KM (BCA) UCL	5.657
95% KM (t) UCL	3.92	95% KM (Percentile Bootstrap) UCL	4.996
95% KM (z) UCL	3.905	95% KM Bootstrap t UCL	5.238
90% KM Chebyshev UCL	5.005	95% KM Chebyshev UCL	6.109
97.5% KM Chebyshev UCL	7.64	99% KM Chebyshev UCL	10.65

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.357	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.164	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.288	Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	0.917	k star (bias corrected MLE)	0.685
Theta hat (MLE)	15.19	Theta star (bias corrected MLE)	20.32
nu hat (MLE)	16.5	nu star (bias corrected)	12.34
Mean (detects)	13.93		

#### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.826
Maximum	56	Median	0.01
SD	6.816	CV	3.733
k hat (MLE)	0.192	k star (bias corrected MLE)	0.193

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

Theta hat (MLE)	9.53	Theta star (bias corrected MLE)	9.476
nu hat (MLE)	32.18	nu star (bias corrected)	32.37
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (32.37, $\alpha$ )	20.36	Adjusted Chi Square Value (32.37, $\beta$ )	20.2
95% Gamma Approximate UCL (use when $n \geq 50$ )	2.902	95% Gamma Adjusted UCL (use when $n < 50$ )	2.926

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.569	SD (KM)	6.762
Variance (KM)	45.73	SE of Mean (KM)	0.812
k hat (KM)	0.144	k star (KM)	0.147
nu hat (KM)	24.25	nu star (KM)	24.72
theta hat (KM)	17.8	theta star (KM)	17.46
80% gamma percentile (KM)	2.752	90% gamma percentile (KM)	7.597
95% gamma percentile (KM)	14.19	99% gamma percentile (KM)	33.41

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (24.72, $\alpha$ )	14.39	Adjusted Chi Square Value (24.72, $\beta$ )	14.26
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	4.411	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	4.454

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.912	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.226	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.731	Mean in Log Scale	0.197
SD in Original Scale	6.623	SD in Log Scale	1.116
95% t UCL (assumes normality of ROS data)	3.933	95% Percentile Bootstrap UCL	4.035
95% BCA Bootstrap UCL	4.922	95% Bootstrap t UCL	5.868
95% H-UCL (Log ROS)	3.027		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.237	KM Geo Mean	1.267
KM SD (logged)	0.806	95% Critical H Value (KM-Log)	2.063
KM Standard Error of Mean (logged)	0.103	95% H-UCL (KM -Log)	2.104
KM SD (logged)	0.806	95% Critical H Value (KM-Log)	2.063
KM Standard Error of Mean (logged)	0.103		

### DL/2 Statistics

<b>DL/2 Normal</b>		<b>DL/2 Log-Transformed</b>	
Mean in Original Scale	6.489	Mean in Log Scale	1.248
SD in Original Scale	9.084	SD in Log Scale	1.011
95% t UCL (Assumes normality)	8.138	95% H-Stat UCL	7.451

DL/2 is not a recommended method, provided for comparisons and historical reasons

### Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

### Suggested UCL to Use

95% KM Approximate Gamma UCL	4.411
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### Benzo[g,h,i]perylene (ug/kg)

#### General Statistics

Total Number of Observations	84	Number of Distinct Observations	29
Number of Detects	17	Number of Non-Detects	67
Number of Distinct Detects	14	Number of Distinct Non-Detects	15
Minimum Detect	1.5	Minimum Non-Detect	3.3
Maximum Detect	31	Maximum Non-Detect	68
Variance Detects	88.07	Percent Non-Detects	79.76%
Mean Detects	12.89	SD Detects	9.385
Median Detects	13	CV Detects	0.728
Skewness Detects	0.489	Kurtosis Detects	-0.587
Mean of Logged Detects	2.181	SD of Logged Detects	1.015

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.913	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.161	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.207	Detected Data appear Normal at 5% Significance Level

**Detected Data appear Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.515	KM Standard Error of Mean	0.787
KM SD	6.394	95% KM (BCA) UCL	5.89
95% KM (t) UCL	5.824	95% KM (Percentile Bootstrap) UCL	5.908
95% KM (z) UCL	5.809	95% KM Bootstrap t UCL	6.113
90% KM Chebyshev UCL	6.876	95% KM Chebyshev UCL	7.945
97.5% KM Chebyshev UCL	9.429	99% KM Chebyshev UCL	12.34

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.692	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.756	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.224	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.213	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected data follow Appr. Gamma Distribution at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	1.477	k star (bias corrected MLE)	1.255
Theta hat (MLE)	8.728	Theta star (bias corrected MLE)	10.27
nu hat (MLE)	50.21	nu star (bias corrected)	42.68
Mean (detects)	12.89		

#### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	4.102
Maximum	31	Median	1.619
SD	6.473	CV	1.578
k hat (MLE)	0.308	k star (bias corrected MLE)	0.305
Theta hat (MLE)	13.3	Theta star (bias corrected MLE)	13.43
nu hat (MLE)	51.82	nu star (bias corrected)	51.3

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (51.30, $\alpha$ )	35.85	Adjusted Chi Square Value (51.30, $\beta$ )	35.63
95% Gamma Approximate UCL (use when $n \geq 50$ )	5.87	95% Gamma Adjusted UCL (use when $n < 50$ )	5.907

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.515	SD (KM)	6.394
Variance (KM)	40.89	SE of Mean (KM)	0.787
k hat (KM)	0.499	k star (KM)	0.489
nu hat (KM)	83.76	nu star (KM)	82.1
theta hat (KM)	9.056	theta star (KM)	9.239
80% gamma percentile (KM)	7.408	90% gamma percentile (KM)	12.27
95% gamma percentile (KM)	17.49	99% gamma percentile (KM)	30.33

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (82.10, $\alpha$ )	62.22	Adjusted Chi Square Value (82.10, $\beta$ )	61.92
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	5.958	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	5.987

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.875	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.265	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.207	Detected Data Not Lognormal at 5% Significance Level

**Detected Data Not Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.72	Mean in Log Scale	1.06
SD in Original Scale	6.024	SD in Log Scale	0.929
95% t UCL (assumes normality of ROS data)	5.813	95% Percentile Bootstrap UCL	5.858
95% BCA Bootstrap UCL	6.013	95% Bootstrap t UCL	6.111
95% H-UCL (Log ROS)	5.541		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.011	KM Geo Mean	2.748
KM SD (logged)	0.82	95% Critical H Value (KM-Log)	2.074
KM Standard Error of Mean (logged)	0.124	95% H-UCL (KM -Log)	4.634
KM SD (logged)	0.82	95% Critical H Value (KM-Log)	2.074
KM Standard Error of Mean (logged)	0.124		

### DL/2 Statistics

<b>DL/2 Normal</b>		<b>DL/2 Log-Transformed</b>	
Mean in Original Scale	6.558	Mean in Log Scale	1.276
SD in Original Scale	8.28	SD in Log Scale	1.009
95% t UCL (Assumes normality)	8.061	95% H-Stat UCL	7.645

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM (t) UCL	5.824
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulation results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

# SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

## UCL Statistics for Data Sets with Non-Detects

User Selected Options  
 Date/Time of Computation ProUCL 5.11/17/2018 9:36:04 AM  
 From File SHAD-041\_ProUCL\_CALC\_c.xls  
 Full Precision OFF  
 Confidence Coefficient 95%  
 Number of Bootstrap Operations 2000

### Chromium VI (mg/kg)

#### General Statistics

Total Number of Observations	84	Number of Distinct Observations	47
Number of Detects	83	Number of Non-Detects	1
Number of Distinct Detects	47	Number of Distinct Non-Detects	1
Minimum Detect	0.12	Minimum Non-Detect	0.25
Maximum Detect	41	Maximum Non-Detect	0.25
Variance Detects	20.55	Percent Non-Detects	1.19%
Mean Detects	1.164	SD Detects	4.533
Median Detects	0.34	CV Detects	3.895
Skewness Detects	8.504	Kurtosis Detects	75.17
Mean of Logged Detects	-0.778	SD of Logged Detects	0.945

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.211
5% Shapiro Wilk P Value	0
Lilliefors Test Statistic	0.409
5% Lilliefors Critical Value	0.0974

#### Normal GOF Test on Detected Observations Only

Detected Data Not Normal at 5% Significance Level

#### Lilliefors GOF Test

Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.152	KM Standard Error of Mean	0.492
KM SD	4.48	95% KM (BCA) UCL	2.185
95% KM (t) UCL	1.97	95% KM (Percentile Bootstrap) UCL	2.083
95% KM (z) UCL	1.961	95% KM Bootstrap t UCL	4.968
90% KM Chebyshev UCL	2.628	95% KM Chebyshev UCL	3.296
97.5% KM Chebyshev UCL	4.223	99% KM Chebyshev UCL	6.045

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	11.59
5% A-D Critical Value	0.803
K-S Test Statistic	0.313
5% K-S Critical Value	0.103

#### Anderson-Darling GOF Test

Detected Data Not Gamma Distributed at 5% Significance Level

#### Kolmogorov-Smirnov GOF

Detected Data Not Gamma Distributed at 5% Significance Level

**Detected Data Not Gamma Distributed at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	0.656
Theta hat (MLE)	1.775
nu hat (MLE)	108.9
Mean (detects)	1.164

k star (bias corrected MLE)	0.64
Theta star (bias corrected MLE)	1.818
nu star (bias corrected)	106.3

#### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.15
Maximum	41	Median	0.34
SD	4.508	CV	3.919
k hat (MLE)	0.636	k star (bias corrected MLE)	0.621
Theta hat (MLE)	1.809	Theta star (bias corrected MLE)	1.852
nu hat (MLE)	106.8	nu star (bias corrected)	104.3
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (104.31, $\alpha$ )	81.75	Adjusted Chi Square Value (104.31, $\beta$ )	81.4
95% Gamma Approximate UCL (use when $n \geq 50$ )	1.468	95% Gamma Adjusted UCL (use when $n < 50$ )	1.474

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.152	SD (KM)	4.48
Variance (KM)	20.07	SE of Mean (KM)	0.492
k hat (KM)	0.0661	k star (KM)	0.0717
nu hat (KM)	11.11	nu star (KM)	12.05
theta hat (KM)	17.42	theta star (KM)	16.07
80% gamma percentile (KM)	0.436	90% gamma percentile (KM)	2.533
95% gamma percentile (KM)	6.645	99% gamma percentile (KM)	21.47

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (12.05, $\alpha$ )	5.258	Adjusted Chi Square Value (12.05, $\beta$ )	5.18
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	2.64	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	2.68

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.835	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk P Value	5.100E-13	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.188	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.0974	Detected Data Not Lognormal at 5% Significance Level

**Detected Data Not Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.152	Mean in Log Scale	-0.793
SD in Original Scale	4.507	SD in Log Scale	0.948
95% t UCL (assumes normality of ROS data)	1.97	95% Percentile Bootstrap UCL	2.061
95% BCA Bootstrap UCL	2.673	95% Bootstrap t UCL	4.896
95% H-UCL (Log ROS)	0.891		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.79	KM Geo Mean	0.454
KM SD (logged)	0.939	95% Critical H Value (KM-Log)	2.18
KM Standard Error of Mean (logged)	0.103	95% H-UCL (KM -Log)	0.883
KM SD (logged)	0.939	95% Critical H Value (KM-Log)	2.18
KM Standard Error of Mean (logged)	0.103		

### DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	1.151	Mean in Log Scale	-0.794
SD in Original Scale	4.507	SD in Log Scale	0.95
95% t UCL (Assumes normality)	1.969	95% H-Stat UCL	0.891

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

**Suggested UCL to Use**

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

95% KM (Chebyshev) UCL 3.296

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### Chromium (mg/kg)

#### General Statistics

Total Number of Observations	84	Number of Distinct Observations	35
		Number of Missing Observations	0
Minimum	7	Mean	17.56
Maximum	52	Median	14.5
SD	8.492	Std. Error of Mean	0.927
Coefficient of Variation	0.483	Skewness	1.474

#### Normal GOF Test

Shapiro Wilk Test Statistic	0.865
5% Shapiro Wilk P Value	1.678E-10
Lilliefors Test Statistic	0.166
5% Lilliefors Critical Value	0.0968

#### Shapiro Wilk GOF Test

Data Not Normal at 5% Significance Level

#### Lilliefors GOF Test

Data Not Normal at 5% Significance Level

**Data Not Normal at 5% Significance Level**

#### Assuming Normal Distribution

##### 95% Normal UCL

95% Student's-t UCL 19.11

##### 95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995) 19.25

95% Modified-t UCL (Johnson-1978) 19.13

#### Gamma GOF Test

A-D Test Statistic	1.664
5% A-D Critical Value	0.754
K-S Test Statistic	0.138
5% K-S Critical Value	0.0977

#### Anderson-Darling Gamma GOF Test

Data Not Gamma Distributed at 5% Significance Level

#### Kolmogorov-Smirnov Gamma GOF Test

Data Not Gamma Distributed at 5% Significance Level

**Data Not Gamma Distributed at 5% Significance Level**

#### Gamma Statistics

k hat (MLE)	5.276	k star (bias corrected MLE)	5.096
Theta hat (MLE)	3.329	Theta star (bias corrected MLE)	3.447
nu hat (MLE)	886.4	nu star (bias corrected)	856.1
MLE Mean (bias corrected)	17.56	MLE Sd (bias corrected)	7.781
		Approximate Chi Square Value (0.05)	789.2
Adjusted Level of Significance	0.0471	Adjusted Chi Square Value	788.1

#### Assuming Gamma Distribution

95% Approximate Gamma UCL (use when  $n \geq 50$ ) 19.05

95% Adjusted Gamma UCL (use when  $n < 50$ ) 19.08

#### Lognormal GOF Test

Shapiro Wilk Test Statistic	0.956
5% Shapiro Wilk P Value	0.0218
Lilliefors Test Statistic	0.121
5% Lilliefors Critical Value	0.0968

#### Shapiro Wilk Lognormal GOF Test

Data Not Lognormal at 5% Significance Level

#### Lilliefors Lognormal GOF Test

Data Not Lognormal at 5% Significance Level

**Data Not Lognormal at 5% Significance Level**

#### Lognormal Statistics



## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

Minimum of Logged Data	1.946	Mean of logged Data	2.768
Maximum of Logged Data	3.951	SD of logged Data	0.432

### Assuming Lognormal Distribution

95% H-UCL	19.05	90% Chebyshev (MVUE) UCL	20.04
95% Chebyshev (MVUE) UCL	21.2	97.5% Chebyshev (MVUE) UCL	22.82
99% Chebyshev (MVUE) UCL	25.99		

### Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

### Nonparametric Distribution Free UCLs

95% CLT UCL	19.09	95% Jackknife UCL	19.11
95% Standard Bootstrap UCL	19.08	95% Bootstrap-t UCL	19.32
95% Hall's Bootstrap UCL	19.31	95% Percentile Bootstrap UCL	19.15
95% BCA Bootstrap UCL	19.19		
90% Chebyshev(Mean, Sd) UCL	20.34	95% Chebyshev(Mean, Sd) UCL	21.6
97.5% Chebyshev(Mean, Sd) UCL	23.35	99% Chebyshev(Mean, Sd) UCL	26.78

### Suggested UCL to Use

95% Student's-t UCL	19.11	or 95% Modified-t UCL	19.13
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## Lead (mg/kg)

### General Statistics

Total Number of Observations	84	Number of Distinct Observations	62
		Number of Missing Observations	0
Minimum	0.19	Mean	202.7
Maximum	3300	Median	6.1
SD	516.6	Std. Error of Mean	56.37
Coefficient of Variation	2.548	Skewness	3.878

### Normal GOF Test

Shapiro Wilk Test Statistic	0.465
5% Shapiro Wilk P Value	0
Lilliefors Test Statistic	0.36
5% Lilliefors Critical Value	0.0968

### Shapiro Wilk GOF Test

Data Not Normal at 5% Significance Level

### Lilliefors GOF Test

Data Not Normal at 5% Significance Level

**Data Not Normal at 5% Significance Level**

### Assuming Normal Distribution

#### 95% Normal UCL

95% Student's-t UCL	296.5
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#### 95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995)	320.9
95% Modified-t UCL (Johnson-1978)	300.5

### Gamma GOF Test

A-D Test Statistic	7.771
5% A-D Critical Value	0.875
K-S Test Statistic	0.242
5% K-S Critical Value	0.106

### Anderson-Darling Gamma GOF Test

Data Not Gamma Distributed at 5% Significance Level

### Kolmogorov-Smirnov Gamma GOF Test

Data Not Gamma Distributed at 5% Significance Level

**Data Not Gamma Distributed at 5% Significance Level**

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

### Gamma Statistics

k hat (MLE)	0.281	k star (bias corrected MLE)	0.279
Theta hat (MLE)	720.3	Theta star (bias corrected MLE)	725.8
nu hat (MLE)	47.29	nu star (bias corrected)	46.93
MLE Mean (bias corrected)	202.7	MLE Sd (bias corrected)	383.6
		Approximate Chi Square Value (0.05)	32.21
Adjusted Level of Significance	0.0471	Adjusted Chi Square Value	32

### Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	295.4	95% Adjusted Gamma UCL (use when n<50)	297.4
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### Lognormal GOF Test

Shapiro Wilk Test Statistic	0.88
5% Shapiro Wilk P Value	3.9858E-9
Lilliefors Test Statistic	0.198
5% Lilliefors Critical Value	0.0968

### Shapiro Wilk Lognormal GOF Test

Data Not Lognormal at 5% Significance Level

### Lilliefors Lognormal GOF Test

Data Not Lognormal at 5% Significance Level

**Data Not Lognormal at 5% Significance Level**

### Lognormal Statistics

Minimum of Logged Data	-1.661	Mean of logged Data	2.836
Maximum of Logged Data	8.102	SD of logged Data	2.25

### Assuming Lognormal Distribution

95% H-UCL	532.8	90% Chebyshev (MVUE) UCL	427.4
95% Chebyshev (MVUE) UCL	533	97.5% Chebyshev (MVUE) UCL	679.5
99% Chebyshev (MVUE) UCL	967.4		

### Nonparametric Distribution Free UCL Statistics

**Data do not follow a Discernible Distribution (0.05)**

### Nonparametric Distribution Free UCLs

95% CLT UCL	295.5	95% Jackknife UCL	296.5
95% Standard Bootstrap UCL	294.9	95% Bootstrap-t UCL	334.8
95% Hall's Bootstrap UCL	340.7	95% Percentile Bootstrap UCL	304.8
95% BCA Bootstrap UCL	326		
90% Chebyshev(Mean, Sd) UCL	371.8	95% Chebyshev(Mean, Sd) UCL	448.4
97.5% Chebyshev(Mean, Sd) UCL	554.7	99% Chebyshev(Mean, Sd) UCL	763.6

### Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	448.4
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### UCL Statistics for Data Sets with Non-Detects

#### User Selected Options

Date/Time of Computation	ProUCL 5.11/17/2018 9:36:52 AM
From File	SHAD-041_ProUCL_CALC_c.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

Aroclor 1260 (mg/kg)

### General Statistics

Total Number of Observations	84	Number of Distinct Observations	10
Number of Detects	4	Number of Non-Detects	80
Number of Distinct Detects	4	Number of Distinct Non-Detects	7
Minimum Detect	0.012	Minimum Non-Detect	0.01
Maximum Detect	0.21	Maximum Non-Detect	0.072
Variance Detects	0.00918	Percent Non-Detects	95.24%
Mean Detects	0.0665	SD Detects	0.0958
Median Detects	0.022	CV Detects	1.44
Skewness Detects	1.985	Kurtosis Detects	3.952
Mean of Logged Detects	-3.405	SD of Logged Detects	1.263

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.676	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.748	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.425	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.375	Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0127	KM Standard Error of Mean	0.00274
KM SD	0.0217	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.0173	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.0172	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.0209	95% KM Chebyshev UCL	0.0246
97.5% KM Chebyshev UCL	0.0298	99% KM Chebyshev UCL	0.0399

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.665	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.669	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.422	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.404	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected data follow Appr. Gamma Distribution at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	0.848	k star (bias corrected MLE)	0.379
Theta hat (MLE)	0.0784	Theta star (bias corrected MLE)	0.176
nu hat (MLE)	6.787	nu star (bias corrected)	3.03
Mean (detects)	0.0665		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0127
Maximum	0.21	Median	0.01
SD	0.0219	CV	1.723
k hat (MLE)	2.917	k star (bias corrected MLE)	2.821
Theta hat (MLE)	0.00435	Theta star (bias corrected MLE)	0.0045
nu hat (MLE)	490	nu star (bias corrected)	473.9
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (473.86, $\alpha$ )	424.4	Adjusted Chi Square Value (473.86, $\beta$ )	423.6

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

95% Gamma Approximate UCL (use when  $n \geq 50$ ) 0.0142

95% Gamma Adjusted UCL (use when  $n < 50$ ) N/A

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0127	SD (KM)	0.0217
Variance (KM)	4.7246E-4	SE of Mean (KM)	0.00274
k hat (KM)	0.341	k star (KM)	0.337
nu hat (KM)	57.33	nu star (KM)	56.61
theta hat (KM)	0.0372	theta star (KM)	0.0377
80% gamma percentile (KM)	0.02	90% gamma percentile (KM)	0.0369
95% gamma percentile (KM)	0.0559	99% gamma percentile (KM)	0.105

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (56.61, $\alpha$ )	40.32	Adjusted Chi Square Value (56.61, $\beta$ )	40.08
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	0.0178	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	0.0179

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.822	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.365	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00337	Mean in Log Scale	-10.82
SD in Original Scale	0.0231	SD in Log Scale	3.272
95% t UCL (assumes normality of ROS data)	0.00757	95% Percentile Bootstrap UCL	0.00819
95% BCA Bootstrap UCL	0.0111	95% Bootstrap t UCL	0.0304
95% H-UCL (Log ROS)	0.026		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-4.547	KM Geo Mean	0.0106
KM SD (logged)	0.35	95% Critical H Value (KM-Log)	1.763
KM Standard Error of Mean (logged)	0.0441	95% H-UCL (KM -Log)	0.0121
KM SD (logged)	0.35	95% Critical H Value (KM-Log)	1.763
KM Standard Error of Mean (logged)	0.0441		

### DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.00911	Mean in Log Scale	-5.043
SD in Original Scale	0.0226	SD in Log Scale	0.501
95% t UCL (Assumes normality)	0.0132	95% H-Stat UCL	0.00809

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Approximate Gamma Distributed at 5% Significance Level**

### Suggested UCL to Use

95% KM Approximate Gamma UCL 0.0178

**When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test**

**When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL**

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

# SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

## UCL Statistics for Data Sets with Non-Detects

User Selected Options  
 Date/Time of Computation ProUCL 5.11/17/2018 9:37:37 AM  
 From File SHAD-041\_ProUCL\_CALC\_c.xls  
 Full Precision OFF  
 Confidence Coefficient 95%  
 Number of Bootstrap Operations 2000

### SVOC-PCDD/PCDF 2,3,7,8-TCDD (pg/g)

#### General Statistics

Total Number of Observations	84	Number of Distinct Observations	41
Number of Detects	37	Number of Non-Detects	47
Number of Distinct Detects	32	Number of Distinct Non-Detects	12
Minimum Detect	0.15	Minimum Non-Detect	0.4
Maximum Detect	67	Maximum Non-Detect	0.51
Variance Detects	211.7	Percent Non-Detects	55.95%
Mean Detects	7.206	SD Detects	14.55
Median Detects	0.88	CV Detects	2.019
Skewness Detects	2.737	Kurtosis Detects	7.839
Mean of Logged Detects	0.414	SD of Logged Detects	1.708

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.552	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.936	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.343	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.144	Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.322	KM Standard Error of Mean	1.121
KM SD	10.13	95% KM (BCA) UCL	5.596
95% KM (t) UCL	5.185	95% KM (Percentile Bootstrap) UCL	5.254
95% KM (z) UCL	5.165	95% KM Bootstrap t UCL	6.321
90% KM Chebyshev UCL	6.683	<b>95% KM Chebyshev UCL</b>	<b>8.206</b>
97.5% KM Chebyshev UCL	10.32	99% KM Chebyshev UCL	14.47

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	3.201	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.831	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.269	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.155	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected Data Not Gamma Distributed at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	0.419	k star (bias corrected MLE)	0.403
Theta hat (MLE)	17.22	Theta star (bias corrected MLE)	17.9
nu hat (MLE)	30.97	nu star (bias corrected)	29.8
Mean (detects)	7.206		

#### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs  
 GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)  
 For such situations, GROS method may yield incorrect values of UCLs and BTVs

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	3.18
Maximum	67	Median	0.01
SD	10.23	CV	3.218
k hat (MLE)	0.206	k star (bias corrected MLE)	0.207
Theta hat (MLE)	15.42	Theta star (bias corrected MLE)	15.37
nu hat (MLE)	34.65	nu star (bias corrected)	34.75
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (34.75, $\alpha$ )	22.26	Adjusted Chi Square Value (34.75, $\beta$ )	22.09
95% Gamma Approximate UCL (use when $n \geq 50$ )	4.963	95% Gamma Adjusted UCL (use when $n < 50$ )	5.002

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.322	SD (KM)	10.13
Variance (KM)	102.6	SE of Mean (KM)	1.121
k hat (KM)	0.108	k star (KM)	0.112
nu hat (KM)	18.07	nu star (KM)	18.75
theta hat (KM)	30.89	theta star (KM)	29.76
80% gamma percentile (KM)	2.673	90% gamma percentile (KM)	9.208
95% gamma percentile (KM)	19.11	99% gamma percentile (KM)	49.9

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (18.75, $\alpha$ )	9.938	Adjusted Chi Square Value (18.75, $\beta$ )	9.825
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	6.268	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	6.34

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.896	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.936	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.167	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.144	Detected Data Not Lognormal at 5% Significance Level

**Detected Data Not Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.312	Mean in Log Scale	-0.782
SD in Original Scale	10.19	SD in Log Scale	1.68
95% t UCL (assumes normality of ROS data)	5.162	95% Percentile Bootstrap UCL	5.364
95% BCA Bootstrap UCL	5.827	95% Bootstrap t UCL	6.589
95% H-UCL (Log ROS)	3.244		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.588	KM Geo Mean	0.555
KM SD (logged)	1.445	95% Critical H Value (KM-Log)	2.702
KM Standard Error of Mean (logged)	0.169	95% H-UCL (KM -Log)	2.422
KM SD (logged)	1.445	95% Critical H Value (KM-Log)	2.702
KM Standard Error of Mean (logged)	0.169		

### DL/2 Statistics

<b>DL/2 Normal</b>		<b>DL/2 Log-Transformed</b>	
Mean in Original Scale	3.304	Mean in Log Scale	-0.638
SD in Original Scale	10.2	SD in Log Scale	1.466
95% t UCL (Assumes normality)	5.154	95% H-Stat UCL	2.4

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

# SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

## Suggested UCL to Use

95% KM (Chebyshev) UCL 8.206

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## UCL Statistics for Data Sets with Non-Detects

### User Selected Options

Date/Time of Computation ProUCL 5.11/17/2018 9:38:53 AM  
 From File SHAD-041\_ProUCL\_CALC\_c.xls  
 Full Precision OFF  
 Confidence Coefficient 95%  
 Number of Bootstrap Operations 2000

### 1,1-Dichloroethene (ug/kg)

#### General Statistics

Total Number of Observations	84	Number of Distinct Observations	22
Number of Detects	4	Number of Non-Detects	80
Number of Distinct Detects	4	Number of Distinct Non-Detects	21
Minimum Detect	4.4	Minimum Non-Detect	4.1
Maximum Detect	6.6	Maximum Non-Detect	6.4
Variance Detects	0.923	Percent Non-Detects	95.24%
Mean Detects	5.225	SD Detects	0.96
Median Detects	4.95	CV Detects	0.184
Skewness Detects	1.474	Kurtosis Detects	2.444
Mean of Logged Detects	1.642	SD of Logged Detects	0.174

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.882	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.302	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

**Detected Data appear Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.184	KM Standard Error of Mean	0.0481
KM SD	0.32	95% KM (BCA) UCL	N/A
95% KM (t) UCL	4.264	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	4.263	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	4.328	95% KM Chebyshev UCL	4.393
97.5% KM Chebyshev UCL	4.484	99% KM Chebyshev UCL	4.662

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.371	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.656	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.292	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.394	Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	42.46	k star (bias corrected MLE)	10.78
Theta hat (MLE)	0.123	Theta star (bias corrected MLE)	0.485

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

nu hat (MLE)	339.7	nu star (bias corrected)	86.25
Mean (detects)	5.225		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.994
Maximum	6.6	Median	1.887
SD	1.21	CV	0.607
k hat (MLE)	1.969	k star (bias corrected MLE)	1.907
Theta hat (MLE)	1.013	Theta star (bias corrected MLE)	1.046
nu hat (MLE)	330.9	nu star (bias corrected)	320.4
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (320.39, $\alpha$ )	279.9	Adjusted Chi Square Value (320.39, $\beta$ )	279.3
95% Gamma Approximate UCL (use when $n \geq 50$ )	2.283	95% Gamma Adjusted UCL (use when $n < 50$ )	N/A

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.184	SD (KM)	0.32
Variance (KM)	0.102	SE of Mean (KM)	0.0481
k hat (KM)	171.4	k star (KM)	165.3
nu hat (KM)	28791	nu star (KM)	27764
theta hat (KM)	0.0244	theta star (KM)	0.0253
80% gamma percentile (KM)	4.455	90% gamma percentile (KM)	4.606
95% gamma percentile (KM)	4.733	99% gamma percentile (KM)	4.978

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, $\alpha$ )	27377	Adjusted Chi Square Value (N/A, $\beta$ )	27371
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	4.243	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	4.244

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.913	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.278	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.777	Mean in Log Scale	0.986
SD in Original Scale	0.809	SD in Log Scale	0.262
95% t UCL (assumes normality of ROS data)	2.924	95% Percentile Bootstrap UCL	2.923
95% BCA Bootstrap UCL	2.946	95% Bootstrap t UCL	2.956
95% H-UCL (Log ROS)	2.914		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.429	KM Geo Mean	4.174
KM SD (logged)	0.0642	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	0.0101	95% H-UCL (KM -Log)	N/A
KM SD (logged)	0.0642	95% Critical H Value (KM-Log)	N/A
KM Standard Error of Mean (logged)	0.0101		

### DL/2 Statistics

<b>DL/2 Normal</b>		<b>DL/2 Log-Transformed</b>	
Mean in Original Scale	2.59	Mean in Log Scale	0.93



## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

SD in Original Scale	0.666	SD in Log Scale	0.189
95% t UCL (Assumes normality)	2.711	95% H-Stat UCL	2.674

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

#### Suggested UCL to Use

95% KM (t) UCL 4.264

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## Chloromethane (ug/kg)

### General Statistics

Total Number of Observations	84	Number of Distinct Observations	24
Number of Detects	4	Number of Non-Detects	80
Number of Distinct Detects	4	Number of Distinct Non-Detects	23
Minimum Detect	4.4	Minimum Non-Detect	0.97
Maximum Detect	6.6	Maximum Non-Detect	6.4
Variance Detects	0.923	Percent Non-Detects	95.24%
Mean Detects	5.225	SD Detects	0.96
Median Detects	4.95	CV Detects	0.184
Skewness Detects	1.474	Kurtosis Detects	2.444
Mean of Logged Detects	1.642	SD of Logged Detects	0.174

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.882
5% Shapiro Wilk Critical Value	0.748
Lilliefors Test Statistic	0.302
5% Lilliefors Critical Value	0.375

### Shapiro Wilk GOF Test

Detected Data appear Normal at 5% Significance Level

### Lilliefors GOF Test

Detected Data appear Normal at 5% Significance Level

**Detected Data appear Normal at 5% Significance Level**

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.383	KM Standard Error of Mean	0.255
KM SD	1.215	95% KM (BCA) UCL	N/A
95% KM (t) UCL	1.808	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	1.803	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	2.149	95% KM Chebyshev UCL	2.496
97.5% KM Chebyshev UCL	2.978	99% KM Chebyshev UCL	3.924

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.371
5% A-D Critical Value	0.656
K-S Test Statistic	0.292
5% K-S Critical Value	0.394

### Anderson-Darling GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

### Kolmogorov-Smirnov GOF

Detected data appear Gamma Distributed at 5% Significance Level

**Detected data appear Gamma Distributed at 5% Significance Level**

### Gamma Statistics on Detected Data Only

k hat (MLE)	42.46	k star (bias corrected MLE)	10.78
Theta hat (MLE)	0.123	Theta star (bias corrected MLE)	0.485
nu hat (MLE)	339.7	nu star (bias corrected)	86.25
Mean (detects)	5.225		

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.822
Maximum	6.6	Median	1.705
SD	1.239	CV	0.68
k hat (MLE)	1.288	k star (bias corrected MLE)	1.25
Theta hat (MLE)	1.415	Theta star (bias corrected MLE)	1.458
nu hat (MLE)	216.4	nu star (bias corrected)	210
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (210.02, $\alpha$ )	177.5	Adjusted Chi Square Value (210.02, $\beta$ )	177
95% Gamma Approximate UCL (use when $n \geq 50$ )	2.156	95% Gamma Adjusted UCL (use when $n < 50$ )	N/A

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.383	SD (KM)	1.215
Variance (KM)	1.476	SE of Mean (KM)	0.255
k hat (KM)	1.296	k star (KM)	1.258
nu hat (KM)	217.7	nu star (KM)	211.3
theta hat (KM)	1.067	theta star (KM)	1.1
80% gamma percentile (KM)	2.18	90% gamma percentile (KM)	3.009
95% gamma percentile (KM)	3.825	99% gamma percentile (KM)	5.687

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (211.30, $\alpha$ )	178.7	Adjusted Chi Square Value (211.30, $\beta$ )	178.1
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	1.636	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	1.641

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.913	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.278	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.684	Mean in Log Scale	0.949
SD in Original Scale	0.816	SD in Log Scale	0.269
95% t UCL (assumes normality of ROS data)	2.832	95% Percentile Bootstrap UCL	2.835
95% BCA Bootstrap UCL	2.861	95% Bootstrap t UCL	2.853
95% H-UCL (Log ROS)	2.82		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.14	KM Geo Mean	1.151
KM SD (logged)	0.495	95% Critical H Value (KM-Log)	1.841
KM Standard Error of Mean (logged)	0.109	95% H-UCL (KM -Log)	1.438
KM SD (logged)	0.495	95% Critical H Value (KM-Log)	1.841
KM Standard Error of Mean (logged)	0.109		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	2.518
SD in Original Scale	0.769
95% t UCL (Assumes normality)	2.657

#### DL/2 Log-Transformed

Mean in Log Scale	0.874
SD in Log Scale	0.349
95% H-Stat UCL	2.725

# SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

DL/2 is not a recommended method, provided for comparisons and historical reasons

## Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

### Suggested UCL to Use

95% KM (t) UCL 1.808

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## Ethylbenzene (ug/kg)

### General Statistics

Total Number of Observations	84	Number of Distinct Observations	30
Number of Detects	14	Number of Non-Detects	70
Number of Distinct Detects	12	Number of Distinct Non-Detects	20
Minimum Detect	0.47	Minimum Non-Detect	0.82
Maximum Detect	12	Maximum Non-Detect	4.5
Variance Detects	11.2	Percent Non-Detects	83.33%
Mean Detects	2.839	SD Detects	3.346
Median Detects	1	CV Detects	1.179
Skewness Detects	1.866	Kurtosis Detects	3.473
Mean of Logged Detects	0.492	SD of Logged Detects	1.056

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.732
5% Shapiro Wilk Critical Value	0.874
Lilliefors Test Statistic	0.298
5% Lilliefors Critical Value	0.226

### Shapiro Wilk GOF Test

Detected Data Not Normal at 5% Significance Level

### Lilliefors GOF Test

Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.013	KM Standard Error of Mean	0.187
KM SD	1.557	95% KM (BCA) UCL	1.338
95% KM (t) UCL	1.324	95% KM (Percentile Bootstrap) UCL	1.362
95% KM (z) UCL	1.32	95% KM Bootstrap t UCL	1.494
90% KM Chebyshev UCL	1.574	95% KM Chebyshev UCL	1.828
97.5% KM Chebyshev UCL	2.18	99% KM Chebyshev UCL	2.872

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.937
5% A-D Critical Value	0.759
K-S Test Statistic	0.283
5% K-S Critical Value	0.235

### Anderson-Darling GOF Test

Detected Data Not Gamma Distributed at 5% Significance Level

### Kolmogorov-Smirnov GOF

Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

### Gamma Statistics on Detected Data Only

k hat (MLE)	1.041	k star (bias corrected MLE)	0.866
Theta hat (MLE)	2.727	Theta star (bias corrected MLE)	3.28
nu hat (MLE)	29.15	nu star (bias corrected)	24.24
Mean (detects)	2.839		

### Gamma ROS Statistics using Imputed Non-Detects

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.655
Maximum	12	Median	0.01
SD	1.699	CV	2.596
k hat (MLE)	0.29	k star (bias corrected MLE)	0.288
Theta hat (MLE)	2.255	Theta star (bias corrected MLE)	2.274
nu hat (MLE)	48.76	nu star (bias corrected)	48.35
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (48.35, $\alpha$ )	33.39	Adjusted Chi Square Value (48.35, $\beta$ )	33.17
95% Gamma Approximate UCL (use when $n \geq 50$ )	0.948	95% Gamma Adjusted UCL (use when $n < 50$ )	0.954

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.013	SD (KM)	1.557
Variance (KM)	2.424	SE of Mean (KM)	0.187
k hat (KM)	0.423	k star (KM)	0.416
nu hat (KM)	71.13	nu star (KM)	69.93
theta hat (KM)	2.393	theta star (KM)	2.434
80% gamma percentile (KM)	1.642	90% gamma percentile (KM)	2.841
95% gamma percentile (KM)	4.152	99% gamma percentile (KM)	7.433

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (69.93, $\alpha$ )	51.68	Adjusted Chi Square Value (69.93, $\beta$ )	51.4
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	1.371	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	1.378

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.894	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.251	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.226	Detected Data Not Lognormal at 5% Significance Level

**Detected Data appear Approximate Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.997	Mean in Log Scale	-0.414
SD in Original Scale	1.59	SD in Log Scale	0.754
95% t UCL (assumes normality of ROS data)	1.285	95% Percentile Bootstrap UCL	1.281
95% BCA Bootstrap UCL	1.426	95% Bootstrap t UCL	1.592
95% H-UCL (Log ROS)	1.04		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.308	KM Geo Mean	0.735
KM SD (logged)	0.598	95% Critical H Value (KM-Log)	1.907
KM Standard Error of Mean (logged)	0.121	<b>95% H-UCL (KM -Log)</b>	<b>0.996</b>
KM SD (logged)	0.598	95% Critical H Value (KM-Log)	1.907
KM Standard Error of Mean (logged)	0.121		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	0.91
SD in Original Scale	1.596
95% t UCL (Assumes normality)	1.199

#### DL/2 Log-Transformed

Mean in Log Scale	-0.484
SD in Log Scale	0.635
95% H-Stat UCL	0.863

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

# SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

## Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

### Suggested UCL to Use

KM H-UCL 0.996

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## Methylene Chloride (ug/kg)

### General Statistics

Total Number of Observations	84	Number of Distinct Observations	25
Number of Detects	8	Number of Non-Detects	76
Number of Distinct Detects	8	Number of Distinct Non-Detects	22
Minimum Detect	2	Minimum Non-Detect	0.86
Maximum Detect	6.6	Maximum Non-Detect	6.4
Variance Detects	2.122	Percent Non-Detects	90.48%
Mean Detects	4.375	SD Detects	1.457
Median Detects	4.65	CV Detects	0.333
Skewness Detects	-0.448	Kurtosis Detects	0.179
Mean of Logged Detects	1.416	SD of Logged Detects	0.392

### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.92	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.257	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.283	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.001	KM Standard Error of Mean	0.384
KM SD	1.434	95% KM (BCA) UCL	2.722
95% KM (t) UCL	2.64	95% KM (Percentile Bootstrap) UCL	2.689
95% KM (z) UCL	2.633	95% KM Bootstrap t UCL	2.758
90% KM Chebyshev UCL	3.153	95% KM Chebyshev UCL	3.675
97.5% KM Chebyshev UCL	4.399	99% KM Chebyshev UCL	5.822

### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.592	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.716	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.302	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.295	Detected Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

### Gamma Statistics on Detected Data Only

k hat (MLE)	8.522	k star (bias corrected MLE)	5.41
Theta hat (MLE)	0.513	Theta star (bias corrected MLE)	0.809
nu hat (MLE)	136.4	nu star (bias corrected)	86.55
Mean (detects)	4.375		

### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.28	Mean	2.132
Maximum	6.6	Median	1.975
SD	1.169	CV	0.548
k hat (MLE)	3.462	k star (bias corrected MLE)	3.347
Theta hat (MLE)	0.616	Theta star (bias corrected MLE)	0.637
nu hat (MLE)	581.7	nu star (bias corrected)	562.2
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (562.24, $\alpha$ )	508.2	Adjusted Chi Square Value (562.24, $\beta$ )	507.4
95% Gamma Approximate UCL (use when $n \geq 50$ )	2.359	95% Gamma Adjusted UCL (use when $n < 50$ )	2.363

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.001	SD (KM)	1.434
Variance (KM)	2.057	SE of Mean (KM)	0.384
k hat (KM)	1.946	k star (KM)	1.885
nu hat (KM)	327	nu star (KM)	316.6
theta hat (KM)	1.028	theta star (KM)	1.062
80% gamma percentile (KM)	3.017	90% gamma percentile (KM)	3.947
95% gamma percentile (KM)	4.837	99% gamma percentile (KM)	6.819

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (316.65, $\alpha$ )	276.4	Adjusted Chi Square Value (316.65, $\beta$ )	275.8
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	2.292	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	2.298

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.86	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.316	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.283	Detected Data Not Lognormal at 5% Significance Level

**Detected Data appear Approximate Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.261	Mean in Log Scale	0.737
SD in Original Scale	1.005	SD in Log Scale	0.384
95% t UCL (assumes normality of ROS data)	2.443	95% Percentile Bootstrap UCL	2.44
95% BCA Bootstrap UCL	2.472	95% Bootstrap t UCL	2.477
95% H-UCL (Log ROS)	2.425		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.463	KM Geo Mean	1.588
KM SD (logged)	0.664	95% Critical H Value (KM-Log)	1.965
KM Standard Error of Mean (logged)	0.218	95% H-UCL (KM -Log)	2.285
KM SD (logged)	0.664	95% Critical H Value (KM-Log)	1.965
KM Standard Error of Mean (logged)	0.218		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	2.574
SD in Original Scale	0.846
95% t UCL (Assumes normality)	2.727

#### DL/2 Log-Transformed

Mean in Log Scale	0.886
SD in Log Scale	0.386
95% H-Stat UCL	2.818

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Normal Distributed at 5% Significance Level**

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

### Suggested UCL to Use

95% KM (t) UCL 2.64

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### m-p-Xylene (ug/kg)

#### General Statistics

Total Number of Observations	84	Number of Distinct Observations	31
Number of Detects	14	Number of Non-Detects	70
Number of Distinct Detects	13	Number of Distinct Non-Detects	22
Minimum Detect	0.91	Minimum Non-Detect	1.1
Maximum Detect	76	Maximum Non-Detect	6.4
Variance Detects	461.3	Percent Non-Detects	83.33%
Mean Detects	14.75	SD Detects	21.48
Median Detects	6.15	CV Detects	1.456
Skewness Detects	2.346	Kurtosis Detects	5.117
Mean of Logged Detects	1.973	SD of Logged Detects	1.225

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.623
5% Shapiro Wilk Critical Value	0.874
Lilliefors Test Statistic	0.345
5% Lilliefors Critical Value	0.226

#### Shapiro Wilk GOF Test

Detected Data Not Normal at 5% Significance Level

#### Lilliefors GOF Test

Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.626	KM Standard Error of Mean	1.166
KM SD	9.863	95% KM (BCA) UCL	6.498
95% KM (t) UCL	5.565	95% KM (Percentile Bootstrap) UCL	6.04
95% KM (z) UCL	5.543	95% KM Bootstrap t UCL	8.062
90% KM Chebyshev UCL	7.123	95% KM Chebyshev UCL	8.706
97.5% KM Chebyshev UCL	10.9	99% KM Chebyshev UCL	15.22

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.001
5% A-D Critical Value	0.767
K-S Test Statistic	0.276
5% K-S Critical Value	0.237

#### Anderson-Darling GOF Test

Detected Data Not Gamma Distributed at 5% Significance Level

#### Kolmogorov-Smirnov GOF

Detected Data Not Gamma Distributed at 5% Significance Level

**Detected Data Not Gamma Distributed at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	0.824	k star (bias corrected MLE)	0.695
Theta hat (MLE)	17.91	Theta star (bias corrected MLE)	21.23
nu hat (MLE)	23.06	nu star (bias corrected)	19.45
Mean (detects)	14.75		

#### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	2.468
Maximum	76	Median	0.01
SD	10.14	CV	4.109
k hat (MLE)	0.172	k star (bias corrected MLE)	0.174
Theta hat (MLE)	14.37	Theta star (bias corrected MLE)	14.22
nu hat (MLE)	28.85	nu star (bias corrected)	29.15
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (29.15, $\alpha$ )	17.83	Adjusted Chi Square Value (29.15, $\beta$ )	17.67
95% Gamma Approximate UCL (use when $n \geq 50$ )	4.035	95% Gamma Adjusted UCL (use when $n < 50$ )	4.07

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.626	SD (KM)	9.863
Variance (KM)	97.28	SE of Mean (KM)	1.166
k hat (KM)	0.135	k star (KM)	0.138
nu hat (KM)	22.71	nu star (KM)	23.23
theta hat (KM)	26.83	theta star (KM)	26.23
80% gamma percentile (KM)	3.677	90% gamma percentile (KM)	10.61
95% gamma percentile (KM)	20.26	99% gamma percentile (KM)	48.74

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (23.23, $\alpha$ )	13.26	Adjusted Chi Square Value (23.23, $\beta$ )	13.13
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	6.35	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	6.414

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.918	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.196	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.427	Mean in Log Scale	0.225
SD in Original Scale	9.94	SD in Log Scale	1.165
95% t UCL (assumes normality of ROS data)	5.231	95% Percentile Bootstrap UCL	5.413
95% BCA Bootstrap UCL	6.44	95% Bootstrap t UCL	9.103
95% H-UCL (Log ROS)	3.355		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.452	KM Geo Mean	1.572
KM SD (logged)	0.959	95% Critical H Value (KM-Log)	2.197
KM Standard Error of Mean (logged)	0.186	95% H-UCL (KM -Log)	3.136
KM SD (logged)	0.959	95% Critical H Value (KM-Log)	2.197
KM Standard Error of Mean (logged)	0.186		

### DL/2 Statistics

#### DL/2 Normal

Mean in Original Scale	4.502
SD in Original Scale	9.675
95% t UCL (Assumes normality)	6.258

#### DL/2 Log-Transformed

Mean in Log Scale	1.064
SD in Log Scale	0.661
95% H-Stat UCL	4.156

DL/2 is not a recommended method, provided for comparisons and historical reasons

### Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use



## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

KM H-UCL 3.136

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

### o-Xylene (ug/kg)

#### General Statistics

Total Number of Observations	84	Number of Distinct Observations	31
Number of Detects	15	Number of Non-Detects	69
Number of Distinct Detects	14	Number of Distinct Non-Detects	21
Minimum Detect	0.91	Minimum Non-Detect	4.1
Maximum Detect	76	Maximum Non-Detect	6.4
Variance Detects	461.4	Percent Non-Detects	82.14%
Mean Detects	16.23	SD Detects	21.48
Median Detects	6.5	CV Detects	1.323
Skewness Detects	2.006	Kurtosis Detects	3.616
Mean of Logged Detects	2.083	SD of Logged Detects	1.254

#### Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.692	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.881	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.323	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.22	Detected Data Not Normal at 5% Significance Level

**Detected Data Not Normal at 5% Significance Level**

#### Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.102	KM Standard Error of Mean	1.242
KM SD	10.49	95% KM (BCA) UCL	7.551
95% KM (t) UCL	6.168	95% KM (Percentile Bootstrap) UCL	7.044
95% KM (z) UCL	6.145	95% KM Bootstrap t UCL	7.499
90% KM Chebyshev UCL	7.829	95% KM Chebyshev UCL	9.517
97.5% KM Chebyshev UCL	11.86	99% KM Chebyshev UCL	16.46

#### Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.842	<b>Anderson-Darling GOF Test</b>
5% A-D Critical Value	0.771	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.259	<b>Kolmogorov-Smirnov GOF</b>
5% K-S Critical Value	0.229	Detected Data Not Gamma Distributed at 5% Significance Level

**Detected Data Not Gamma Distributed at 5% Significance Level**

#### Gamma Statistics on Detected Data Only

k hat (MLE)	0.837	k star (bias corrected MLE)	0.714
Theta hat (MLE)	19.39	Theta star (bias corrected MLE)	22.72
nu hat (MLE)	25.12	nu star (bias corrected)	21.43
Mean (detects)	16.23		

#### Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	2.91
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## SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval

Maximum	76	Median	0.01
SD	10.81	CV	3.716
k hat (MLE)	0.17	k star (bias corrected MLE)	0.172
Theta hat (MLE)	17.13	Theta star (bias corrected MLE)	16.94
nu hat (MLE)	28.54	nu star (bias corrected)	28.86
Adjusted Level of Significance ( $\beta$ )	0.0471		
Approximate Chi Square Value (28.86, $\alpha$ )	17.6	Adjusted Chi Square Value (28.86, $\beta$ )	17.44
95% Gamma Approximate UCL (use when $n \geq 50$ )	4.772	95% Gamma Adjusted UCL (use when $n < 50$ )	4.814

### Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.102	SD (KM)	10.49
Variance (KM)	110.1	SE of Mean (KM)	1.242
k hat (KM)	0.153	k star (KM)	0.155
nu hat (KM)	25.66	nu star (KM)	26.08
theta hat (KM)	26.85	theta star (KM)	26.42
80% gamma percentile (KM)	4.589	90% gamma percentile (KM)	12.22
95% gamma percentile (KM)	22.42	99% gamma percentile (KM)	51.83

### Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (26.08, $\alpha$ )	15.44	Adjusted Chi Square Value (26.08, $\beta$ )	15.3
95% Gamma Approximate KM-UCL (use when $n \geq 50$ )	6.928	95% Gamma Adjusted KM-UCL (use when $n < 50$ )	6.993

### Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.93	<b>Shapiro Wilk GOF Test</b>
5% Shapiro Wilk Critical Value	0.881	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.184	<b>Lilliefors GOF Test</b>
5% Lilliefors Critical Value	0.22	Detected Data appear Lognormal at 5% Significance Level

**Detected Data appear Lognormal at 5% Significance Level**

### Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.878	Mean in Log Scale	0.27
SD in Original Scale	10.59	SD in Log Scale	1.239
95% t UCL (assumes normality of ROS data)	5.799	95% Percentile Bootstrap UCL	5.932
95% BCA Bootstrap UCL	6.706	95% Bootstrap t UCL	8.445
95% H-UCL (Log ROS)	3.951		

### Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.517	KM Geo Mean	1.677
KM SD (logged)	1.02	95% Critical H Value (KM-Log)	2.255
KM Standard Error of Mean (logged)	0.204	<b>95% H-UCL (KM -Log)</b>	<b>3.632</b>
KM SD (logged)	1.02	95% Critical H Value (KM-Log)	2.255
KM Standard Error of Mean (logged)	0.204		

### DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	4.935	Mean in Log Scale	1.114
SD in Original Scale	10.29	SD in Log Scale	0.692
95% t UCL (Assumes normality)	6.803	95% H-Stat UCL	4.504

**DL/2 is not a recommended method, provided for comparisons and historical reasons**

### Nonparametric Distribution Free UCL Statistics

**Detected Data appear Lognormal Distributed at 5% Significance Level**

### Suggested UCL to Use

**KM H-UCL 3.632**

## **SHAD-041 95 UCL Statistics for 0-10 ft bgs Depth Interval**

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006). However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

## F2 Ecological Risk Assessment Report

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## Acronyms

95 UCL	95% Upper Confidence Limit of the mean
bgs	Below ground surface
BTAG	Biological Technical Assistance Group
CDFG	California Department of Fish and Game
COPC	Contaminants of potential concern
COPEC	Contaminant of potential ecological concern
CSM	Conceptual Site Model
DTSC	California Department of Toxic Substance Control
Eco-SSL	USEPA Ecological soil screening level
EPC	Exposure point concentration
ESSL	Scenario specific ecological soil screening level from URS 2011
ESV	Ecological screening value
ft	feet
HERO	DTSC Human and Ecological Risk Office
HQ	Hazard quotient
LANL	Los Alamos National Laboratory
LC50	Lethal concentration for 50% of the population
LD50	Lethal dose for 50% of the population
LOAEL	Low observed adverse effects level
LOEC	Low observed effects concentration
mg/kg	Milligram per kilogram
NOAEL	No observed adverse effects level
NOEC	No observed effects concentration
OU	Operating Unit
PAHs	Polynuclear aromatic hydrocarbons
PCBs	Polychlorinated biphenyls
PCDD/PCDF	Polychlorinated dibenzodioxin/furans
pg/g	Picogram per gram
PRG	Preliminary remediation goal
RI	Remedial Investigation
ROD	Record of Decision
SHAD-041	Sites 33/29
Sharpe	Sharpe Army Depot
SLERA	Screening Level Ecological Risk Assessment
SVOCs	Semivolatile organic compounds
TCE	Trichloroethylene
TEQ	Toxicity equivalents
TRV	Toxicity reference value
UF	Uncertainty factor
USEPA	U.S. Environmental Protection Agency
VOCs	Volatile organic compounds

## **F2.0 Screening Level Ecological Risk Assessment**

A screening level ecological risk assessment (SLERA) was performed to support the 2018 RI/FS for Sites 33/29 (SHAD-041) at the Sharpe Army Depot. SLERA is a process for evaluating the likelihood that releases of contaminants of potential concern (COPCs) from contaminated media may adversely affect ecological receptors.

The SLERA was prepared primarily in accordance with the USEPA *Ecological Risk Assessment Guidance for Superfund* (USEPA, 1997), Guidelines for Ecological Risk Assessment and The Role of Screening-Level Risk Assessments (USEPA, 1998 and 2001), and California Department of Toxic Substance Control (DTSC) Guidance (DTSC, 1996, 1998, 2000, 2009, 2017). A significant portion of the assumptions and data used in this SLERA are from the 2011 *Ecological Risk Evaluation of Burrowing Owls at the Metals Sites* prepared by URS for the Sharpe Army Depot (URS, 2011).

### **F2.1 Problem Formulation**

Problem formulation begins with characterization of potential contaminants at the site and the ecological setting by evaluating site conditions and identifying potential habitat for terrestrial and/or aquatic receptors, as well as reviewing guidance and published literature regarding the potential presence of certain sensitive species for the regional area. The objective of the problem formulation phase is to identify the stressor (chemical, physical, or biological entity with potential to induce adverse effects on individuals, populations, communities, or ecosystems) (USEPA, 1992), to determine what ecological entity is important to protect, and to define an assessment endpoint. Problem formulation produces a conceptual site model (CSM), summarizing the contaminant sources, complete exposure pathways, and receptors of concern. The CSM for this SLERA is discussed in Section F2-2.3.

#### **F2.1.1 Site Characterization**

SHAD-041 is one of six consolidated areas at the Sharpe Army Depot identified in the OU 2 ROD (ESE, 1996) with total lead and/or chromium concentrations that required further investigation and/or remediation to ensure protection of human health and the environment. The selected remedy for the OU 2 ROD was excavation with off-site disposal. Soil at SHAD-041 was investigated and did not require remediation because total lead and chromium concentrations reported at those sites did not exceed the OU 2 ROD cleanup standards (Radian International, 2000) of 1,000 milligrams per kilogram (mg/kg) lead based on protection of human health, and 300 mg/kg chromium based on protection of groundwater. These criteria were selected based on commercial and industrial land-use scenarios, and are not based on potential ecological adverse effects.

Results of samples collected in 1993, 1996, and 1998 indicated that there was no threat to onsite adult workers or groundwater quality at SHAD-041 because all chromium and lead concentrations were less than the cleanup standards. Sample density was considered sufficient to decide that soil removal and disposal would not be necessary at the site (Radian International, 2000). Concentrations of total chromium and lead in soil at SHAD-041 are less than the OU 2 ROD industrial-based cleanup standards. However, those cleanup standards do not allow for unlimited use and unrestricted exposure (e.g., residential use). The majority of post-ROD investigation samples were collected from 0 to 2 ft below ground surface (bgs) based on the OU 2 ROD remedial excavation requirements for metals sites.

Historical soil investigations did not include analysis of hexavalent chromium, polychlorinated dibenzodioxin/furans (PCDD/PCDF), polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), or volatile organic compounds (VOCs). Based on historical use, potential contaminants are hexavalent and total chromium, total lead, PCBs, dioxin toxic equivalents (TEQs), VOCs, PAHs, and Radium 226 (226Ra).

The SLERA uses data from the remedial investigation (RI) that characterizes the lateral and vertical extent of these site-specific chemicals at SHAD-041. Lead, total and hexavalent chromium, dioxin TEQs, PCBs, PAHs, semi volatile organic compounds (SVOCs), and VOCs were detected in surface and subsurface soil (0-15 ft bgs). Contaminants of potential concern (COPCs) are identified in Section F2-3.2. Note potential adverse ecological impacts resulting from exposure to 226Ra are evaluated separately in the Tidewater 2017 *Radiological Human Health and Ecological Risk Assessment Technical Memorandum* (Appendix F3) and are not discussed in this SLERA.

### **F2.1.2 Habitat Characterization**

SHAD-041 is a 0.84 acre (URS, 2011) area adjacent and approximately in the middle of the southern border of the Sharpe Army Depot. It is surrounded on all four sides by roads. The area is dry and sparsely vegetated and represents poor habitat for ecological receptors. No surface water is present at this site. The conditions at SHAD-041 and the Sharpe Army Depot in general, do not constitute unique or ecologically valued habitats and such conditions are generally common among developed/disturbed/managed lands throughout the region (DTSC, 2010).

California Environmental Protection Agency's Department of Toxic Substances Control (DTSC) and the California Department of Fish and Game (CDFG) concluded that burrowing owls (*Athene cunicularia*), a California species of special concern, are present at Sharpe (DTSC and CDFG, 2010). Burrowing owls occupy burrows excavated by California ground squirrels or other animals and, as a result, are subjected to subsurface environmental conditions for portions of their life cycle. Conceivably, burrowing owls that occupy burrows at the metals sites could be exposed to residual contamination in soil. Several areas of the Army Depot are occupied by colonies of burrowing owl: the southwestern corner of Sharpe, west, north, and northwest of Site S-36 (SHAD-044), the western central property boundary, and between Sites S-26 (SHAD-034) and S-3 (SHAD-011). No evidence of the presence of burrowing owls has been observed at SHAD-041.

### **F2.1.3 Conceptual Site Model**

The information obtained from the site and biological characterizations are summarized in the conceptual site model (CSM), provided as Figure F2-1. The CSM is the result of the problem formation step in the ecological risk assessment.

Current and future potential receptors are plants, soil invertebrates, herbivores, invertivores, and carnivores. The potential exposure media for ecological exposure are ambient air, surface soil, prey animals, vegetation, subsurface soil, groundwater, and surface water. Surface water is not present at the site. Depth to groundwater is 12-19.5 ft bgs. The exposure zone for burrowing mammals and birds is 1-6 ft bgs (DTSC, 1998). The site-specific CSM illustrates that exposure to subsurface soil (>6 ft bgs), groundwater, and surface water are not complete exposure pathways.

Potentially complete exposure pathways (routes) are inhalation of dust or VOCs in ambient air, ingestion of and dermal contact with surface soil, ingestion of vegetation and/or prey animals that have taken up



or absorbed bioaccumulatable COPCs. Complete, incomplete, and not applicable exposure routes to potential receptors are identified in the CSM.

The burrowing owl (*Athene cunicularia*) is a California species of special concern and is known to inhabit the Sharpe Army Depot. Presence of the burrowing owl at SHAD-041 was not observed in the 2009, 2010, and 2016 surveys (Albion, 2009, 2010, and 2016) and was confirmed during SHAD-041-specific burrowing owl monitoring conducted prior to RI field work. However, SHAD-041 is considered a nesting area for the burrowing owl and the USEPA expressed concern that burrowing owls could occupy metals site(s) and be exposed to residual concentrations of lead and chromium (URS, 2011). Thus, the borrowing owl is retained as a receptor of concern despite the poor habitat quality of SHAD-041.

#### **F2.1.4 Assessment Endpoint**

The conclusion of problem formulation for this SLERA is that chemical stressors are potentially present in soil at SHAD-041; however, the site is small and barren and represents poor habitat for ecological receptors. The presence of the burrowing owl (a California species of special concern) in other areas of the Depot is justification for a SLERA at SHAD-041. The assessment endpoint of this SLERA is to determine whether there are COPCs present in concentrations that would potentially cause adverse effects to populations of the burrowing owl.

### **F2.2 Exposure and Effects Assessment**

#### **F2.2.1 Ecological Screening Values**

Ecological screening values (ESVs) are the most appropriate site-, scenario-, or receptor-specific screening values identified. ESVs for all C were identified by searching the Risk Assessment Information System (RAIS) database and the Los Alamos National Laboratory (LANL) EcoRISK Database (v 4.1). In addition, a derived preliminary remediation goal (PRG) was used for 2,3,7,8-TCDD based on the No Observed Adverse Effects Level (NOAEL) from Sample (1996) extrapolated using the Efrogmson method (Efrogmson, 1997) as requested by DTSC.

The RAIS database provides a comprehensive set of ecotoxicological screening benchmarks for surface water, sediment, and surface soil applicable to a range of aquatic organisms, soil invertebrates, and terrestrial plants. Screening benchmarks are used to identify chemical concentrations in environmental media that are at or below thresholds for effects to ecological receptors. The appropriate screening benchmarks selected this site from the RAIS are the USEPA-derived set of risk-based ecological soil screening levels (Eco-SSLs) (USEPA, 2005a). EcoSSLs are provided for many of the soil contaminants that are frequently of ecological concern for plants and animals at hazardous waste sites and provides guidance for their use. Eco-SSLs are concentrations of contaminants in soil that are protective of ecological receptors that commonly come into contact with and/or consume biota that live in or on soil. Eco-SSLs are derived separately for four groups of ecological receptors: plants, soil invertebrates, birds, and mammals. As such, these values are presumed to provide adequate protection of terrestrial ecosystems (including food-chain exposure). Eco-SSLs are derived to be protective of the conservative end of the exposure and effects species distribution, and are intended to be applied at the screening stage of an

The LANL ECORISK database is a screening tool that can be used to evaluate impacts from chemicals and radionuclides in soil, water, sediment, and air on ecological receptors (or biota). The database provides media- and receptor-specific ecological screening values.

Site-specific ecological soil screening levels (ESSLs) were developed by URS (2011) using the same evaluation methods as the USEPA (2005a) in their derivation of Eco-SSLs. Scenario-specific ESSL concentrations were derived using the USEPA Eco-SSL methodology for several permutations of exposure scenarios as described in Section F2-3.

The ESVs used for this SLERA are:

- USEPA Eco-SSLs for chromium and lead (USEPA, 2005a, 2005b) obtained from the Risk Assessment Information System - Ecological Benchmarks for Soil and Biota (compiled from numerous sources) (accessed February 2018);
- Los Alamos National Laboratory ECORISK Database 4.1 (September 2017) (benchmarks for mammals, birds, earthworms, and plants); and
- Derived PRG for 2,3,7,8-TCDD based on the NOAEL from Sample (1996) extrapolated using the Efrogmson method (Efrogmson, 1997) as requested by DTSC.

ESVs are used to identify the COPCs that require further evaluation in a site-specific baseline ecological risk assessment (USEPA, 1997, 1998). The ESVs are not designed to be used as cleanup levels and the USEPA emphasizes that it would be inappropriate to use ESVs as cleanup standards.

### **F2.2.2 Contaminants of Potential Concern**

Twenty-one borings were advanced at SHAD-041 as described in Section 3.0 of the RI. Analytical samples were collected every 2.5 to 5 feet. The maximum values from the analytical data collected from 0-10 ft bgs (samples collected at 0.5, 2.5, 5.0, 10.0 bgs; 84 samples) were used to screen for COPCs.

The frequency of detection, range of detected concentrations, and depth and location of maximum detected concentration are reported in Table F2-1. The maximum detected concentrations for every analyte were detected in the 0-2.5 ft depth interval.

The maximum detected concentration of detected contaminants were compared to the most stringent ESV available from the sources described in Section F2-2.1. The results of this comparison are provided in Table F2-1. COPCs are defined as chemicals with maximum detected concentrations exceeding screening levels as outlined in Table F2-1. COPCs do not necessarily signify a risk; rather, they are merely constituents that have been identified for further examination.

The COPCs identified at SHAD-041 are dioxin TEQs, total chromium, hexavalent chromium, and lead. Lead was present in concentrations greater than the most stringent ESV of 11 mg/kg in the 0-2.5 bgs soil interval in 20 of the 21 soil borings. Total chromium was present in concentrations greater than the most stringent ESV of 23 mg/kg in 14 of the 21 soil borings. Hexavalent chromium was present in concentrations greater than the most stringent ESV of 0.34 mg/kg in the 0-2.5 bgs soil interval in 17 of the 21 soil borings. Dioxin TEQs were detected in concentrations greater than the most stringent ESV of 1.6 pg/g in the 0-2.5 bgs soil interval in 8 of the 21 soil borings. The lateral and vertical distributions of lead, dioxin TEQs, and hexavalent chromium detected in concentrations above ESVs are illustrated in Figures F2-2, F2-3, and F2-4, respectively.

### **F2.2.3 Exposure Assessment**

The *Ecological Risk Evaluation of Burrowing Owls at the Metals Sites* (URS, 2011) describes the potential exposure scenarios for the burrowing owl. Burrowing owls could be exposed to chemicals in soil via incidental ingestion of soil (e.g., adhering to prey or during dust baths) and via consumption of prey

captured from within the metals sites. Dermal and particulate inhalation routes of exposure were not evaluated based on USEPA reasoning in its Eco-SSL documentation (USEPA, 2005a) and in its Ecological Risk Assessment Guidance for Superfund (USEPA, 1997). With the exception of some specific contaminants (e.g., pesticides, VOCs), dermal and inhalation routes are thought to be relatively minor contributors to total exposure. Analyses of these routes require too many assumptions and quantitative assessment would have too much uncertainty to be useful in characterizing ecological hazards. DTSC and CDFG (2010) conducted an inhalation risk evaluation for burrowing owls and determined that potential exposure to trichloroethylene (TCE) did not pose a health threat to owls.

The URS technical memorandum evaluated the four exposure scenarios discussed below for exposure of burrowing owls to lead and chromium at the metals sites:

- Screening level: Assumption of 100 percent site fidelity (e.g., all food items are obtained from a metals-affected area and all incidental ingestion is from that area).
- Prey ingestion-only: Assumes that an owl's entire diet was prey captured from a metal-contaminated area, but there is no incidental soil ingestion. Incidental soil ingestion is assumed to occur primarily at burrow sites (which is not part of this exposure scenario) during preening, dust baths, and burrow residence. Incidental soil ingestion is assumed to be comparatively less from capture of above-ground prey, although a prey item might carry soil or dust adhering to its body or within its digestive tract. This scenario also incorporates an assumption that a metals site is suitable habitat for the prey consumed by the burrowing owl and that the area could provide sufficient biomass to be a long-term food source for the burrowing owl.
- 20 percent site use: As discussed in detail in URS 2011, the home range of a burrowing owl is significantly larger than the metals sites, including SHAD-041.
- Incidental ingestion-only: Although burrowing owls have not been observed at the metals sites (Albion, 2009; 2010; 2016), this scenario assumes that burrowing owls occupy burrows at a metals site but do not consume prey obtained from that site. This exposure scenario is the most plausible for burrowing owls at Sharpe metals sites. Small site sizes like SHAD-041 are not likely to provide any substantial prey base. However, burrows at the site (though there are none currently) could be occupied and provide an opportunity for incidental soil ingestion (e.g., dust baths and during burrow occupancy).

This SLERA uses the results of the screening level scenario as the screening value for lead in Section F2-3.1. The results of the incidental ingestion scenario, the most plausible scenario for burrowing owls at the Sharpe Army Depot, are used as the ESV for the risk characterization discussed in Section F2-4.

#### **F2.2.4 Toxicity Reference Values**

A TRV is the chemical dose to an organism, in units of milligrams of chemical per kilogram body weight per day ( $\text{mg}/\text{kg}_{\text{bw}}\text{-day}$ ). Lead TRVs were developed by the U.S. Navy and the USEPA Region 9 Biological Technical Assistance Group (BTAG), which are endorsed for use in California (DTSC, 2000; 2009). A BTAG- $\text{TRV}_{\text{Low}}$  is the lowest NOAEL identified in the scientific literature reviewed by the U.S. Navy and the BTAG. The BTAG- $\text{TRV}_{\text{High}}$  is the exposure dose associated with the midpoint in the range of adverse effects identified in the scientific literature reviewed by the U.S. Navy and the BTAG. The BTAG TRVs are based on literature review but ultimately are based on selection of a single literature-based study as representative of the overall literature. Scenario-specific ESVs for soil ( $\text{mg}/\text{kg}$ ) were developed for each of

the exposure scenarios using the Eco-SSL TRV and BTAG-TRVs for lead. The derived scenario-specific ESVs are provided in Table F2-2.

The ESV based on 100 percent soil ingestion use of the site (990 mg/kg) is used as the ESV for calculating HQ for lead (Table F2-2). The derived NOAEL-based PRG for burrowing owls is used as the ESV to calculate HQ for dioxin TEQs (1.6 pg/g). The LANL NOAEL-based ESL for avian species (140 mg/kg) is used as the ESV to calculate HQ for hexavalent chromium.

### F2.3 Risk Characterization

The risk to ecological receptors is estimated by comparing an exposure point concentration (EPC) (either the maximum or an estimate of the mean) with the most applicable, scenario-specific ESV or benchmark. The result of this comparison is the hazard quotient (HQ).

$$HQ = EPC / ESV$$

If the EPC is greater than the ESV, HQ is greater than 1, and the potential for adverse ecological effects exists. If HQ equals 1, the contaminant is not likely to cause ecological risk. If HQ is less than 1, negligible potential for risk exists. How large the HQ is (i.e., by how much it exceeds 1) is not relevant to a SLERA (USEPA, 1997). HQ only considers exceedance of an endpoint (e.g., ESV). It does not account for the dose-response relationship. When constituent-specific dose-response information is not provided (as is typical of a SLERA), the magnitude of exceedance cannot be properly interpreted. If an HQ is calculated to be greater than 1 for a particular contaminant, that contaminant is then referred to as a Contaminant of Potential Ecological Concern (COPEC) and additional quantitative (such as additional sampling, or a baseline ecological risk assessment), or qualitative evaluation is performed.

Risk characterization combines information concerning exposure to chemicals with information concerning effects of chemicals to estimate risks. Risk characterization for ecological risk assessments is performed by weight of evidence. That is, rather than simply modeling risks, ecological risk assessors examine all available data from chemical analyses, toxicity tests, biological surveys, and biomarkers to estimate the likelihood that significant effects are occurring or will occur and describe the nature, magnitude, and extent of effects on the designated assessment endpoints (USEPA, 1996). The first line of evidence used is the analysis of individual chemicals in individual media to estimate exposure and calculate the HQ. This SLERA is based on this first line of evidence.

The COPCs identified in Table F2-1 are dioxin TEQs, total chromium, hexavalent chromium and lead. DTSC (1998) recommends evaluating adverse effects to burrowing mammals in the 1-6 ft bgs depth interval. The relevant depth intervals collected for samples at SHAD-041 are 0-0.5 ft bgs, 0-2.5 ft bgs, 0-5.0 ft bgs, and 0-10 ft bgs. In order to estimate an average exposure to contaminants in soil at SHAD-041, the 95 UCL is used as an estimate of the mean EPC.

The 95 UCLs for dioxin TEQs, total chromium, hexavalent chromium, and lead were calculated using the USEPA's most recent ProUCL software, currently version 5.1 (USEPA, 2016). ProUCL calculates 95 UCLs using multiple alternative methods, including both parametric methods and nonparametric methods. Parametric methods are based on the assumption that the data are consistent with a standard statistical distribution, such as normal, log-normal, or gamma. Nonparametric methods do not require any assumptions about the distribution. The ProUCL recommended value for 95 UCL was used. The 95 UCLs

for 0-5 ft bgs and 0-10 ft bgs as well as the maximum detected values for dioxin TEQs, total chromium, hexavalent chromium, and lead compared to screening levels are provided in Table F2-3.

Calculated HQs using the maximum value and 95 UCLs for 0-5 ft bgs and 0-10 ft bgs are provided in Table F2-4. The findings of this SLERA are based on the 95 UCL of soil from 0-5 ft bgs. The HQs for the EPCs using the maximum value and 95 UCL of soil from 0-10 ft bgs are provided for comparison.

#### *Lead*

The scenario-specific lead ESSL of 990 mg/kg (incidental ingestion only scenario with the DTSC BTAG TRV<sub>High</sub> for adult birds) was selected as the ESV because it is the most probable scenario for burrowing owls at SHAD-041, while likely overestimating potential adverse effects. The HQ for the 0-5 ft bgs 95 UCL is 1, indicating that adverse ecological effects to burrowing owls as a result of exposure to lead at the Sharpe Army Depot are not expected to occur.

#### *Total Chromium*

The most stringent LANL NOAEL-based ESL for avian species, the American robin an avian insectivore (*Turdus migratorius*), was selected as the ESV for total chromium because it is the most receptor specific ESV for total chromium. The HQ for the 0-5 ft bgs 95 UCL is equal to 1, indicating that adverse ecological effects to burrowing owls as a result of exposure to hexavalent chromium at the Sharpe Army Depot are not expected to occur.

#### *Hexavalent Chromium*

The LANL NOAEL-based ESL for avian species was selected as the ESV for hexavalent chromium because it is the most receptor specific ESV for hexavalent chromium. The HQ for the 0-5 ft bgs 95 UCL is less than 1, indicating that adverse ecological effects to burrowing owls as a result of exposure to hexavalent chromium at the Sharpe Army Depot are not expected to occur.

#### *Dioxin TEQs*

Because of the uncertainty associated with estimating toxicity of dioxins to specific receptors (DTSC, 2017), the derived NOAEL-based PRG for dioxin TEQs was used as the ESV. Calculated HQ are provided in Table F2-4. The HQ calculated with the 0-5 ft bgs 95 UCL is 14, indicating that dioxin TEQs are a COPEC at SHAD-041.

## **F2.4 Findings**

Dioxin TEQs are identified as the only COPEC at SHAD-041. The lateral and vertical distribution of dioxin TEQs is illustrated in Figure F2-3. Dioxin TEQs were detected above the ESV of 1.6 pg/g in the 0-2.5 depth interval of seven soil borings (VSP-28, VSP-25, VSP-26, VSP-17, VSP-18, VSP-12, VSP-11, and VSP-2).

DTSC's *Soil Remedial Goals for Dioxins and Dioxin-like Compounds for Consideration at California Hazardous Waste Sites* (2017) provides human health remedial action goals for dioxin TEQs; however, these goals are not necessarily protective of ecological receptors. Protectiveness is variable depending on the ecological receptors of concern at the site. Invertebrates and plants are generally not sensitive to dioxins, while some wildlife receptors can be markedly susceptible and could drive a risk-based cleanup. The guidance recommends consulting with a DTSC Human and Ecological Risk Office (HERO) ecological risk assessor if site contains habitat or could release dioxins to off-site habitat(s). SHAD-041 is not an

ecological habitat; however, migration of dioxin TEQs via wind transport of dust or stormwater runoff are complete transport pathways. Therefore, a conservative NOAEL-based ESL was used as the ESV to calculate the potential for adverse effects.

The cleanup level for lead established in the OU 2 ROD (ESE, 1996) is 1,000 mg/kg. While lead was not identified as a COPEC, lead was detected in concentrations greater than the facility-wide cleanup level of 1,000 mg/kg in the 0-2.5 depth interval of five soil borings (VSP-28, VSP-17, VSP-18, VSP-12, and VSP-11). These same boring locations have elevated dioxin TEQs. Dioxin TEQs are elevated above the ESV in VSP-2 and VSP-26 as well.

## F2.5 Uncertainty

The uncertainty analysis addresses potential sources of uncertainty in the SLERA and discusses how assumptions used in the analyses may affect the conclusions. In general, the uncertainty in a SLERA is a result of overestimation of assumptions (e.g., overstated likelihood of site use, overstated likelihood of prey being obtained from metal-contaminated areas, use of no-effect toxicological thresholds).

The general categories of uncertainty are listed below:

- Selection and quantification of COPCs
- Chemical fate and transport,
- Receptor exposure assumptions, and
- Toxicity of a contaminant

*Selection and quantification of COPCs* – Estimated EPCs are uncertain. Using the maximum detected concentration will overestimate adverse effects. Use of calculated 95 UCL values only estimates the actual mean of the concentration and may over- or under- estimate effects to receptors. Examples of factors affecting the uncertainty of these estimates include the number of samples, proportion of non-detects, conformance with an assumed mathematical distribution, imprecision of laboratory data, elevated detection limits (from dilutions, matrix interference, etc.), and statistical methodology.

*Chemical Fate and Transport* – There is no data available to confirm whether contaminants, in particular dioxin TEQs in soil at SHAD-041, are migrating from the site to sensitive habitats via wind transport of dust or stormwater transport of soil particles. The recommendation in Section F2-7 assumes that transport pathways are complete. This assumption may result in an overestimation of the potential adverse effects of dioxin TEQs in the environment.

*Receptor exposure assumptions* – As of the 2016 monitoring event (Albion, 2016), and confirmed during SHAD-041-specific burrowing owl monitoring conducted prior to RI field work, burrowing owls are not resident at SHAD-041 (or any of the metals sites at the Sharpe Army Depot) and it is unknown whether burrowing owls utilize any specific areas of SHAD-041. While incidental ingestion of soil is the most plausible scenario for burrowing owls at this site (URS, 2011), with no known presence at the SHAD-041, it is unlikely that there would be incidental soil ingestion for owls that do reside elsewhere on Sharpe. Consequently, the exposure scenario evaluated by URS in 2011 to develop the lead ESV used for this SLERA (incidental soil ingestion-only) likely overestimates incidental ingestion exposures. SHAD-041 is not large enough and the habitat is of poor enough quality that prey production on this site is unlikely to be adequate to supply the dietary needs of the burrowing owls.

The ESVs for dioxin TEQ and hexavalent chromium are conservative screening levels. Use of a screening level as the ESV will overestimate adverse effects to environmental receptors. The toxicity reference TRV developed for calculation of the lead ESV is subject to uncertainty factors (UFs) used to extrapolate toxicity values from studies with less than chronic exposure durations, as well as from toxicity values representing effect levels other than a NOAEL/NOEC, such as a lowest observed adverse effect level/lowest observed effect concentration (LOAEL/LOEC), median lethal dose (lethal dose for 50 percent of the population [LD50]), or median lethal concentration (lethal concentration for 50 percent of the population [LC50]). UF application allows the use of more data to increase an otherwise limited data set available for developing a TRV. UFs are generally based on the relationship identified between no effect and low or lethal effect levels as well as best risk management practices.

## F2.6 Recommendations

Based on ecological risk, the Army recommends removal of surface soil (0-2.5 ft bgs) with dioxin TEQ concentrations greater than the ESV of 1.6 pg/g (VSP-28, VSP-26, VSP-17, VSP-18, VSP-12, VSP-11, and VSP-2). Removal of soil with elevated dioxin TEQ concentrations will also remediate surface soil with lead concentrations greater than the cleanup level of 1,000 mg/kg (ESE, 1996) (VSP-028, VSP-26, VSP-17, VSP-18, VSP-12, VSP-11, and VSP-2) because in most of these borings, elevated lead and dioxin TEQs are collocated.

## F2.7 References

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## Tables

**Table F2-1. Summary of COPCs in Soil (0- 10 ft bgs) and Ecological Screening Values**

Chemical	Units	Minimum Detected Concentration	Maximum Detected Concentration	Location of Maximum Detected Concentration	Depth of Maximum Concentration (ft)	Detection Frequency	Range of Detection Limits
<b>Dioxins</b>							
SVOC-PCDD/PCDF 2,3,7,8-TCDD (pg/g)	pg/g	0.15	67	VSP11	0.5	37/84	0.4 - 0.51
<b>Metals</b>							
Total Chromium (mg/kg)	mg/kg	7	52	VSP11	0.5	84/84	NA
Chromium VI (mg/kg)	mg/kg	0.12	41	VSP25	0.5	83/84	0.25 - 0.25
Lead (mg/kg)	mg/kg	0.19	3300	VSP11	0.5	84/84	NA
<b>Polychlorinated Biphenyls</b>							
Aroclor 1260 (mg/kg)	mg/kg	0.012	0.21	VSP11	0.5	4/84	0.01 - 0.072
<b>Polycyclic Aromatic Hydrocarbons</b>							
Anthracene (ug/kg)	ug/kg	1	18	VSP28	0.5	6/84	3.3 - 68
Benzo[a]anthracene (ug/kg)	ug/kg	1	18	VSP11	0.5	10/84	3.3 - 68
Benzo[a]pyrene (ug/kg)	ug/kg	0.95	56	VSP11	0.5	9/84	3.3 - 68
Benzo[b]fluoranthene (ug/kg)	ug/kg	1.5	59	VSP11	0.5	15/84	3.3 - 68
Benzo[k]fluoranthene (ug/kg)	ug/kg	2.1	20	VSP11	0.5	3/84	3.3 - 68
Chrysene (ug/kg)	ug/kg	2.1	64	VSP11	0.5	11/84	3.3 - 68
Indeno[1,2,3-cd]pyrene (ug/kg)	ug/kg	3.1	18	VSP11	0.5	3/84	3.3 - 68
<b>Semi Volatile Organic Compounds</b>							
2-Methylnaphthalene (ug/kg)	ug/kg	0.64	1.6	VSP18	2.5	4/84	3.4 - 68
Acenaphthene (ug/kg)	ug/kg	4.3	4.3	VSP18	2.5	1/84	3.3 - 68
Fluoranthene (ug/kg)	ug/kg	1.8	39	VSP11	0.5	8/84	3.3 - 68
Fluorene (ug/kg)	ug/kg	1.3	1.3	VSP18	2.5	1/84	3.3 - 68
Naphthalene (ug/kg)	ug/kg	1.6	3.4	VSP4	2.5	3/84	3.4 - 68
Pyrene (ug/kg)	ug/kg	1.6	36	VSP11	0.5	6/84	3.3 - 68
Σ of LMW PAH and SVOC concentrations <sup>b</sup>	ug/kg	8.84	28.6	NA	NA	NA	3.3 - 68
Σ of HMW PAH and SVOC concentrations <sup>h</sup>	ug/kg	14.15	310	NA	NA	NA	3.3 - 68
<b>Volatile Organic Compounds</b>							
1,1-Dichloroethene (ug/kg)	ug/kg	4.4	6.6	VSP11	0.5	4/84	4.1 - 6.4
Chloromethane (ug/kg)	ug/kg	4.4	6.6	VSP11	0.5	4/84	0.97 - 6.4
Ethylbenzene (ug/kg)	ug/kg	0.47	12	VSP11	0.5	14/84	0.82 - 4.5
Methylene Chloride (ug/kg)	ug/kg	2	6.6	VSP11	0.5	8/84	0.86 - 6.4
Toluene (ug/kg)	ug/kg	0.75	0.75	VSP18	2.5	1/84	0.82 - 1.3
m-p-Xylene (ug/kg)	ug/kg	0.91	76	VSP11	0.5	14/84	1.1 - 6.4
o-Xylene (ug/kg)	ug/kg	0.91	76	VSP11	0.5	15/84	4.1 - 6.4

**Table F2-1. Summary of COPCs in Soil (0- 10 ft bgs) and Ecological Screening Values**

Chemical	Concentration Used for Screening <sup>a</sup>	Eco-SSL <sup>b</sup>	LANL NOAEL-based ESL <sup>c</sup> (Birds and Mammals)	LANL NOAEL-based ESL <sup>c</sup> (Earthworms and Plants)	Eco Screening COPC Flag	Rationale for Contaminant Deletion or Selection
<b>Dioxins</b>						
SVOC-PCDD/PCDF 2,3,7,8-TCDD (pg/g)	67		1.6 av <sup>d</sup>	5.00E+06 ea	YES	Max is > av ESL
<b>Metals</b>						
Total Chromium (mg/kg)	52	26 av	23 av		YES	Max is > av ESL
Chromium VI (mg/kg)	41	130 ma	140 av	0.34 ea	YES	Max is > ea ESL
Lead (mg/kg)	3300	11 av	11 av	120 pl	YES	Max is > av ESL
<b>Polychlorinated Biphenyls</b>						
Aroclor 1260 (mg/kg)	0.21		0.88 av		NO	Max < all ESLs
<b>Polycyclic Aromatic Hydrocarbons</b>						
Anthracene (ug/kg)	68		210,000 ma	6,800 pl	NO	Max < all ESLs
Benzo[a]anthracene (ug/kg)	68		730 av		NO	Max < all ESLs
Benzo[a]pyrene (ug/kg)	68		62,000 ma		NO	Max < all ESLs
Benzo[b]fluoranthene (ug/kg)	68		44,000 ma	18,000 pl	NO	Max < all ESLs
Benzo[k]fluoranthene (ug/kg)	68		71,000 ma		NO	Max < all ESLs
Chrysene (ug/kg)	68		3,100 ma		NO	Max < all ESLs
Indeno[1,2,3-cd]pyrene (ug/kg)	68		71,000 ma		NO	Max < all ESLs
<b>Semi Volatile Organic Compounds</b>						
2-Methylnaphthalene (ug/kg)	68		16,000 ma		NO	Max < all ESLs
Acenaphthene (ug/kg)	68		130,000 ma	250 pl	NO	Max < all ESLs
Fluoranthene (ug/kg)	68		22,000 ma	10,000 ea	NO	Max < all ESLs
Fluorene (ug/kg)	68		250,000 ma	3,700 ea	NO	Max < all ESLs
Naphthalene (ug/kg)	68		3,400 av	1,000 pl	NO	Max < all ESLs
Pyrene (ug/kg)	68		23,000 av	10,000 ea	NO	Max < all ESLs
Σ of LMW PAH and SVOC concentrations <sup>e</sup>	340	29,000 in			NO	Max < all ESLs
Σ of HMW PAH and SVOC concentrations <sup>h</sup>	544	1,100 ma			NO	Max < all ESLs
<b>Volatile Organic Compounds</b>						
1,1-Dichloroethene (ug/kg)	6.6		11,000 ma		NO	Max < all ESLs
Chloromethane (ug/kg)	6.6		24 <sup>f</sup> ma		NO	Max < all ESLs
Ethylbenzene (ug/kg)	12		24 <sup>f</sup> ma		NO	Max < all ESLs
Methylene Chloride (ug/kg)	6.6		2,600 ma	1.60E+06 pl	NO	Max < all ESLs
Toluene (ug/kg)	1.3		23,000 ma	2.00E+05 pl	NO	Max < all ESLs
m-p-Xylene (ug/kg)	76		1,400 <sup>e</sup> ma	100,000 <sup>e</sup> pl	NO	Max < all ESLs
o-Xylene (ug/kg)	76		1,400 <sup>e</sup> fma	100,000 <sup>e</sup> pl	NO	Max < all ESLs

**Table F2-1. Summary of COPCs in Soil (0- 10 ft bgs) and Ecological Screening Values****Notes:**

<sup>a</sup>Maximum detection limit is used if the maximum detected value is less than maximum detection limit

<sup>b</sup>EPA Risk Assessment Information System Ecological Benchmarks for Soil and Biota ([https://rais.ornl.gov/tools/eco\\_search.php](https://rais.ornl.gov/tools/eco_search.php))

<sup>c</sup>Los Alamos National Laboratory ECORISK Database 4.1 (September 2017) (lowest of all available benchmarks for mammals, birds, earthworms, and plants)

<sup>d</sup>NOAEL-based Preliminary Remediation Goal using Efroymson et al., 1997

<sup>e</sup>Minimum screening value for total xylenes

<sup>f</sup>Minimum screening value for benzene

<sup>g</sup>Sum of maximum concentration of low molecular weight PAHs and SVOCs (anthracene, 2-methylnaphthalene, acenaphthene, fluorene, and naphthalene)

<sup>h</sup>Sum of maximum concentrations of high molecular weight PAHs and SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, fluoranthene, and pyrene)

**Bolded chemical exceed lowest screening value.**

mg/kg - milligram per kilogram

µg/kg - microgram per kilogram

pg/g - picogram per gram

NA - UCL not calculated

jbo - juvenile burrowing owl

ma - mammal

av - avian

ea - earthworm

pl - plant

**Table F2-2. Derived Scenario-Specific Ecological Screening Value**

Analyte	Exposure Scenario	Juvenile		Adult	
		Eco-SSL TRV mg/kg	BTAG- TRV <sub>high</sub> mg/kg	Eco-SSL TRV mg/kg	BTAG- TRV <sub>high</sub> mg/kg
Lead	Screening Level (100% Site Use)	36	340	41	370
	Prey Ingestion Only (100% Site Use)	53	650	61	740
	Site Specific (20% Site Use)	110	710	130	480
	Soil Ingestion Only (100% Site Use)	170	910	180	990

**Notes:**

Derivation of scenario-specific ESSL concentrations is described in Section 4.3 URS 2011

BTAG Biological Technical Assistance Group

Eco-SSL USEPA (2005a) ecological soil screening level

mg/kg milligrams per kilogram

TRV toxicity reference value

**Table F2-3. Comparison of 95 UCL Values to Ecological Screening Values**

Chemical/Concentration	Units	Max /95 UCL (0-5 ft bgs) <sup>a</sup>	Max/95 UCL (0-10 ft bgs) <sup>a</sup>	Eco-SSL <sup>b</sup>	LANL NOAEL-based ESL <sup>c</sup> (Birds and	LANL NOAEL-based ESL <sup>c</sup> (Earthworms	Scenario-Specific ESSLS for Cr and Pb <sup>e</sup>
SVOC-PCDD/PCDF 2,3,7,8-TCDD	pg/g	67/22.4	67/8.2	--	1.6 av <sup>d</sup>	5.00E+06 ea	--
Total Chromium	mg/kg	52/23.4	52/19.1		23 av	43 sed	84 jbo
Chromium IV	mg/kg	41/1.768	41/19.13	130 ma	140 av	0.34 ea	--
Lead	mg/kg	3300/1022	3300/448.4	11 av	11 ma	120 pl	36 jbo

**Notes:**

<sup>a</sup>Maximum detection limit is used if the maximum detected value is less than maximum detection limit

<sup>b</sup>EPA Risk Assessment Information System Ecological Benchmarks for Soil and Biota ([https://rais.ornl.gov/tools/eco\\_search.php](https://rais.ornl.gov/tools/eco_search.php))

<sup>c</sup>Los Alamos National Laboratory ECORISK Database 4.1 (September 2017) (lowest of all available benchmarks for mammals, birds, earthworms, and plants)

<sup>d</sup>NOAEL-based Preliminary Remediation Goal using Efroymson et al., 1997

<sup>e</sup>Derived Scenario-Specific Screening Level Ecological Screening Levels, URS 2011

95 UCL - 95% upper confidence limit

mg/kg - milligram per kilogram

pg/g - picogram per gram

jbo - juvenile burrowing owl

ma - mammal

av - avian

ea - earthworm

sed - criterion for invertebrate aquatic organisms in sediment

-- Not available

Table F2-4. Risk Characterization

Chemical/ Concentration	Lead mg/kg	Lead 'ESV' <sup>a</sup> mg/kg	HQ	Total Chromium mg/kg	Chromium III mg/kg	HQ	Chromium IV mg/kg	Chromium IV mg/kg	Chromium IV mg/kg	SVOC-PCDD/PCDF 2,3,7,8-TCDD pg/g	Dioxin TEQ 'ESV' <sup>b</sup> pg/g	HQ
Max	3300	990	3	52	23	2	41	140	0.3	67	1.6	42
95 UCL (0-5 ft bgs)	1,022	990	1	23.4	23	1	1.8	140	0.01	22	1.6	14
95 UCL (0-10 ft bgs)	448.4	990	0.5	19.10	23	0.8	19.13	140	0.1	8.2	1.6	5

**Notes:**

HQ are rounded to the nearest significant digit

<sup>a</sup>Derived Scenario-Specific Screening Level Ecological Screening Levels, URS 2011

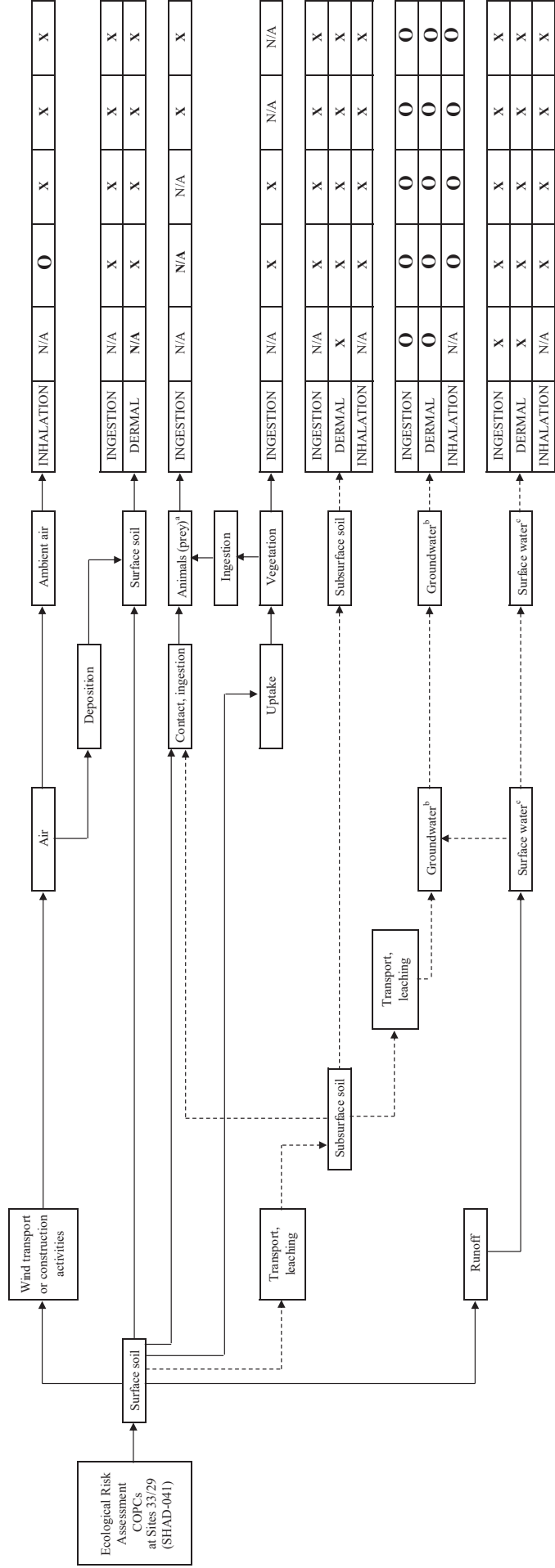
<sup>b</sup>NOAEL-based Preliminary Remediation Goal using Efrogymson et al., 1997

<sup>c</sup>LANL NOAEL-based ESL minimum for avian species



## Figures

PRIMARY SOURCE	MEDIA	TRANSPORT MECHANISM	MEDIA	TRANSPORT MECHANISM	MEDIA	TRANSPORT MECHANISM	EXPOSURE MEDIA	EXPOSURE ROUTE	POTENTIAL RECEPTORS (Current and Future)				
									Plant	Soil Invertebrates	Herbivores	Invertebrates	Carnivores

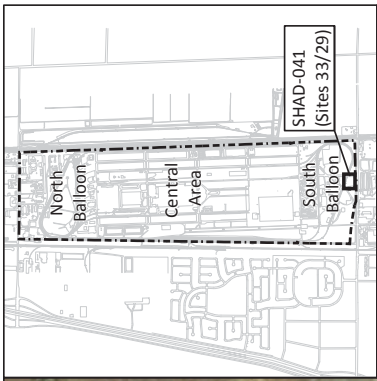
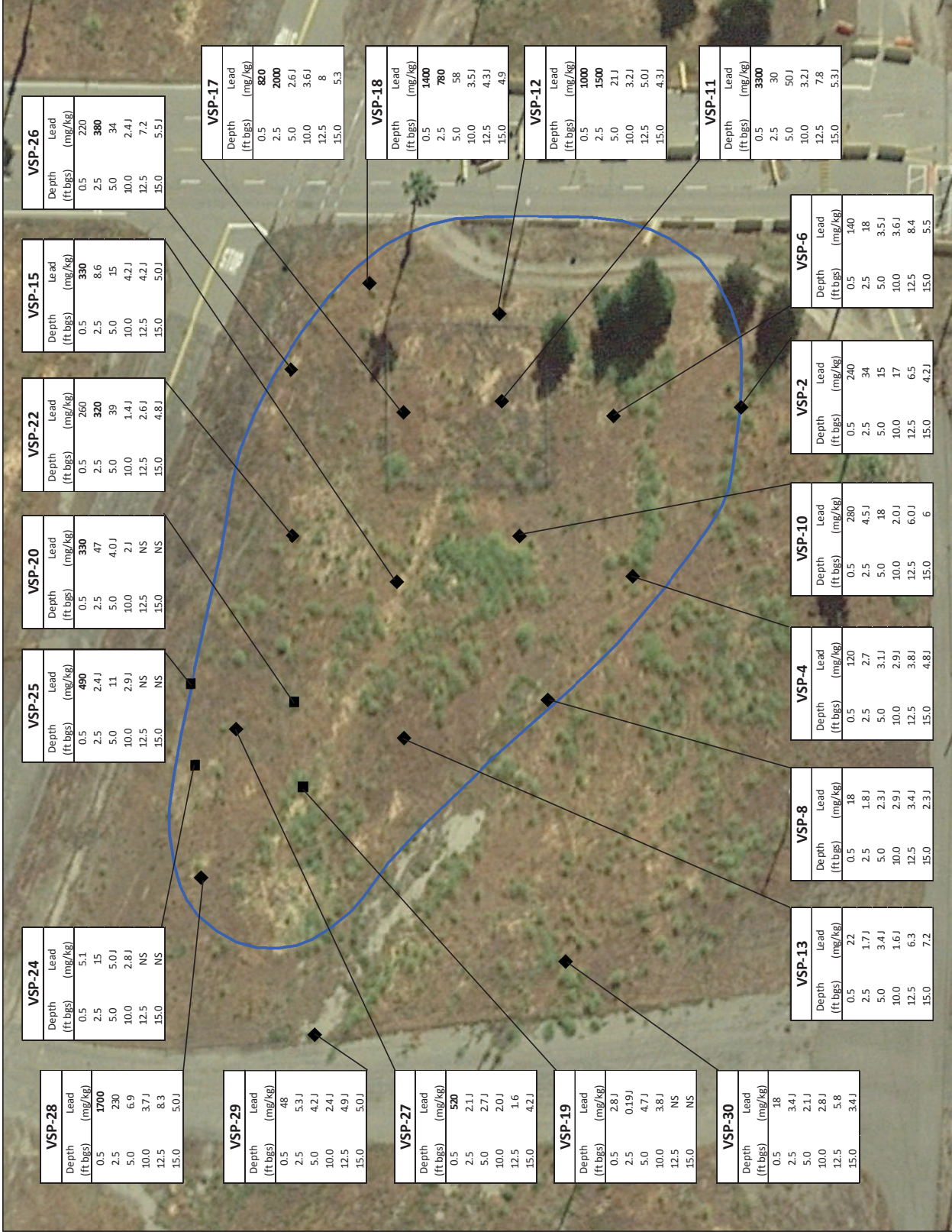


**Notes:**  
 COPCs - Contaminants of Potential Concern  
 X Potentially complete exposure pathway  
 O Potentially insignificant or incomplete exposure pathway N/A Not Applicable  
 \*Animal prey can include soil invertebrates or wildlife (small birds and mammals).  
<sup>b</sup>It is not known whether constituents at the site have impacted groundwater; however, depth to groundwater is sufficiently deep that direct contact through incidental ingestion and dermal contact or inhalation contact are considered insignificant or incomplete exposure pathways. Surface water is present at the site from runoff only during and immediately following precipitation events; therefore, exposure to surface water is not quantified.



**Conceptual Site Model for  
 Ecological Exposure Pathways**  
 Sites 33/29 (SHAD-041)  
 Remedial Investigation/Feasibility Study Report  
 Sharpe Army Depot, Lathrop, California

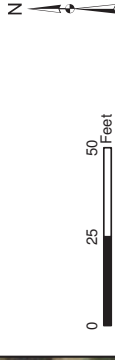
Figure  
**F2-1**



**Legend**

- ◆ Completed Boring (Total Depth = 15 feet bgs)
- Completed Boring (Total Depth = 10 feet bgs)
- SHAD-041 (Sites 33/29) Boundary

**Notes:**  
 Concentrations exceeding the Action Level are shown in **bold**.  
 bgs = below ground surface  
 ft = foot or feet  
 J = estimated concentration  
 mg/kg = milligrams per kilogram  
 NS = not sampled



**Lead Concentrations in Soil**  
 RI/FS Report  
 Sites 33/29 (SHAD-041)  
 Sharpe Army Depot  
 Lathrop, California

**VSP-26**

Depth (ft bgs)	Lead (mg/kg)
0.5	220
2.5	<b>380</b>
5.0	34
10.0	4.2J
12.5	7.2
15.0	5.5J

**VSP-15**

Depth (ft bgs)	Lead (mg/kg)
0.5	<b>330</b>
2.5	8.6
5.0	15
10.0	4.2J
12.5	4.2J
15.0	5.0J

**VSP-22**

Depth (ft bgs)	Lead (mg/kg)
0.5	260
2.5	<b>320</b>
5.0	39
10.0	1.4J
12.5	2.6J
15.0	4.8J

**VSP-20**

Depth (ft bgs)	Lead (mg/kg)
0.5	<b>330</b>
2.5	47
5.0	4.0J
10.0	2J
12.5	NS
15.0	NS

**VSP-25**

Depth (ft bgs)	Lead (mg/kg)
0.5	<b>490</b>
2.5	2.4J
5.0	11
10.0	2.9J
12.5	NS
15.0	NS

**VSP-24**

Depth (ft bgs)	Lead (mg/kg)
0.5	5.1
2.5	15
5.0	5.0J
10.0	2.8J
12.5	NS
15.0	NS

**VSP-28**

Depth (ft bgs)	Lead (mg/kg)
0.5	<b>1700</b>
2.5	230
5.0	6.9
10.0	3.7J
12.5	8.3
15.0	5.0J

**VSP-17**

Depth (ft bgs)	Lead (mg/kg)
0.5	<b>820</b>
2.5	<b>2000</b>
5.0	2.6J
10.0	3.6J
12.5	8
15.0	5.3

**VSP-18**

Depth (ft bgs)	Lead (mg/kg)
0.5	<b>1400</b>
2.5	<b>780</b>
5.0	58
10.0	3.5J
12.5	4.3J
15.0	4.9

**VSP-12**

Depth (ft bgs)	Lead (mg/kg)
0.5	<b>1000</b>
2.5	<b>1500</b>
5.0	21J
10.0	3.2J
12.5	5.0J
15.0	4.3J

**VSP-11**

Depth (ft bgs)	Lead (mg/kg)
0.5	<b>3300</b>
2.5	30
5.0	50J
10.0	3.2J
12.5	7.8
15.0	5.3J

**VSP-6**

Depth (ft bgs)	Lead (mg/kg)
0.5	140
2.5	18
5.0	3.5J
10.0	3.6J
12.5	8.4
15.0	5.5

**VSP-2**

Depth (ft bgs)	Lead (mg/kg)
0.5	240
2.5	34
5.0	15
10.0	17
12.5	6.5
15.0	4.2J

**VSP-10**

Depth (ft bgs)	Lead (mg/kg)
0.5	280
2.5	4.5J
5.0	18
10.0	2.0J
12.5	6.0J
15.0	6

**VSP-4**

Depth (ft bgs)	Lead (mg/kg)
0.5	120
2.5	2.7
5.0	3.1J
10.0	2.9J
12.5	3.8J
15.0	4.8J

**VSP-8**

Depth (ft bgs)	Lead (mg/kg)
0.5	18
2.5	1.8J
5.0	2.3J
10.0	2.9J
12.5	3.4J
15.0	2.3J

**VSP-13**

Depth (ft bgs)	Lead (mg/kg)
0.5	22
2.5	1.7J
5.0	3.4J
10.0	1.6J
12.5	6.3
15.0	7.2

**VSP-29**

Depth (ft bgs)	Lead (mg/kg)
0.5	48
2.5	5.3J
5.0	4.2J
10.0	2.4J
12.5	4.9J
15.0	5.0J

**VSP-27**

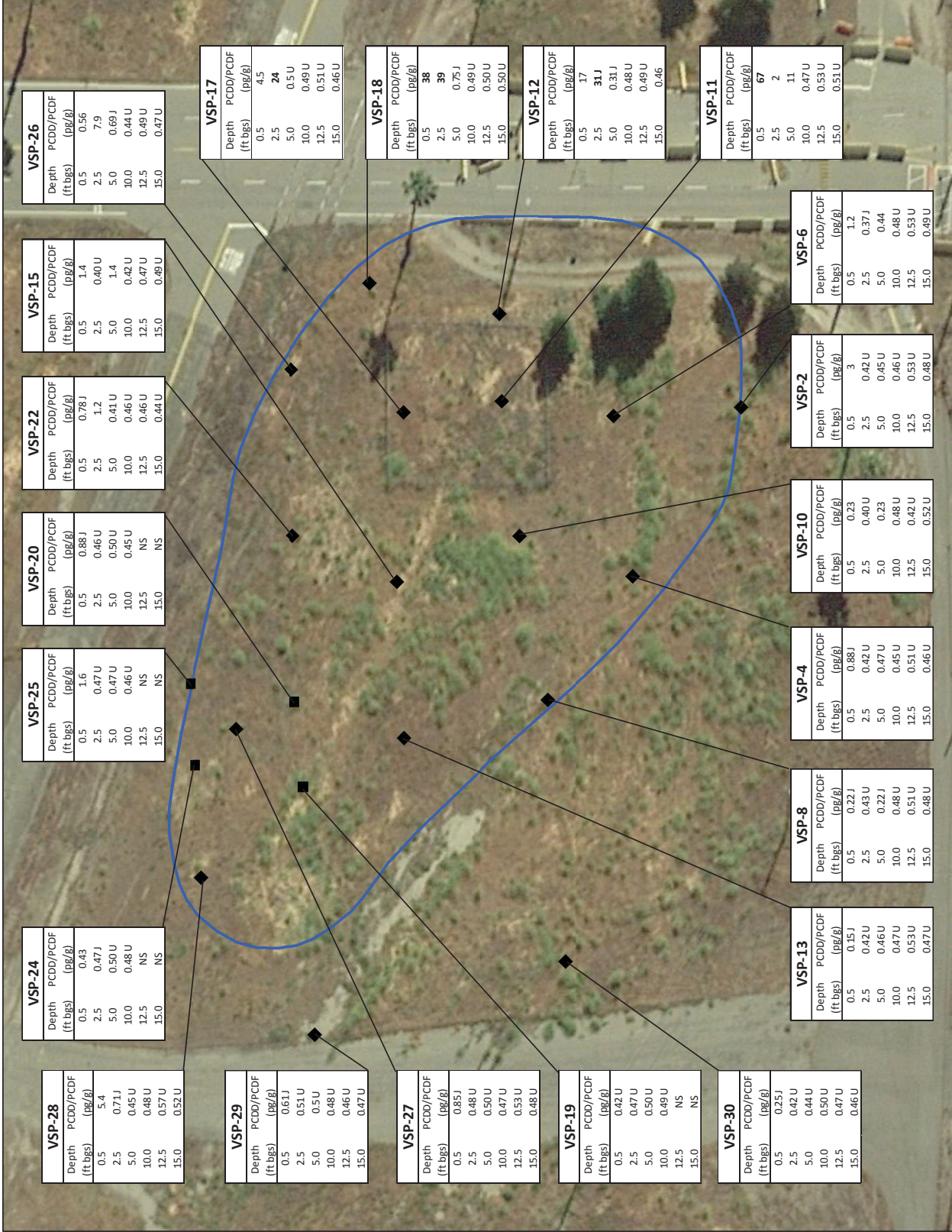
Depth (ft bgs)	Lead (mg/kg)
0.5	<b>520</b>
2.5	2.1J
5.0	2.7J
10.0	2.0J
12.5	1.6
15.0	4.2J

**VSP-19**

Depth (ft bgs)	Lead (mg/kg)
0.5	28J
2.5	0.19J
5.0	4.7J
10.0	3.8J
12.5	NS
15.0	NS

**VSP-30**

Depth (ft bgs)	Lead (mg/kg)
0.5	18
2.5	3.4J
5.0	2.1J
10.0	2.8J
12.5	5.8
15.0	3.4J



**Legend**

- ◆ Completed Boring (Total Depth = 15 feet bgs)
- Completed Boring (Total Depth = 10 feet bgs)
- SHAD-041 (Sites 33/29) Boundary

**Notes:**

- Concentrations exceeding the Action Level are shown in **bold**.
- bgs = below ground surface
- ft = foot or feet
- J = estimated concentration
- NS = not sampled
- pg/g = picogram per gram
- U = not detected, limit of quantitation shown

0 25 50 Feet

N

**PCDD/PCDF Concentrations in Soil**  
 RI/FS Report  
 Sites 33/29 (SHAD-041)  
 Sharpe Army Depot  
 Lathrop, California

Figure **F2-3**

*Ahtna*  
 Environmental, Inc.

**VSP-26**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	0.56
2.5	7.9
5.0	0.69 J
10.0	0.42 U
12.5	0.49 U
15.0	0.47 U

**VSP-15**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	1.4
2.5	0.40 U
5.0	1.4
10.0	0.42 U
12.5	0.47 U
15.0	0.49 U

**VSP-22**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	0.78 J
2.5	1.2
5.0	0.41 U
10.0	0.46 U
12.5	0.46 U
15.0	0.44 U

**VSP-20**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	0.88 J
2.5	0.46 U
5.0	0.30 U
10.0	0.45 U
12.5	NS
15.0	NS

**VSP-25**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	1.6
2.5	0.47 U
5.0	0.47 U
10.0	0.46 U
12.5	NS
15.0	NS

**VSP-24**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	0.43
2.5	0.47 J
5.0	0.30 U
10.0	0.48 U
12.5	NS
15.0	NS

**VSP-28**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	5.4
2.5	0.71 J
5.0	0.45 U
10.0	0.48 U
12.5	0.57 U
15.0	0.52 U

**VSP-17**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	4.5
2.5	<b>24</b>
5.0	0.5 U
10.0	0.49 U
12.5	0.51 U
15.0	0.46 U

**VSP-18**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	<b>38</b>
2.5	<b>39</b>
5.0	0.75 J
10.0	0.49 U
12.5	0.50 U
15.0	0.50 U

**VSP-12**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	17
2.5	<b>31 J</b>
5.0	0.31 J
10.0	0.48 U
12.5	0.49 U
15.0	0.46

**VSP-11**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	<b>67</b>
2.5	2
5.0	11
10.0	0.47 U
12.5	0.53 U
15.0	0.51 U

**VSP-6**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	1.2
2.5	0.37 J
5.0	0.44
10.0	0.48 U
12.5	0.53 U
15.0	0.49 U

**VSP-2**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	3
2.5	0.42 U
5.0	0.45 U
10.0	0.46 U
12.5	0.53 U
15.0	0.48 U

**VSP-10**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	0.23
2.5	0.40 U
5.0	0.23
10.0	0.48 U
12.5	0.42 U
15.0	0.52 U

**VSP-4**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	0.88 J
2.5	0.42 U
5.0	0.47 U
10.0	0.45 U
12.5	0.51 U
15.0	0.46 U

**VSP-8**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	0.22 J
2.5	0.43 U
5.0	0.22 J
10.0	0.48 U
12.5	0.51 U
15.0	0.48 U

**VSP-13**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	0.15 J
2.5	0.42 U
5.0	0.46 U
10.0	0.47 U
12.5	0.53 U
15.0	0.47 U

**VSP-27**

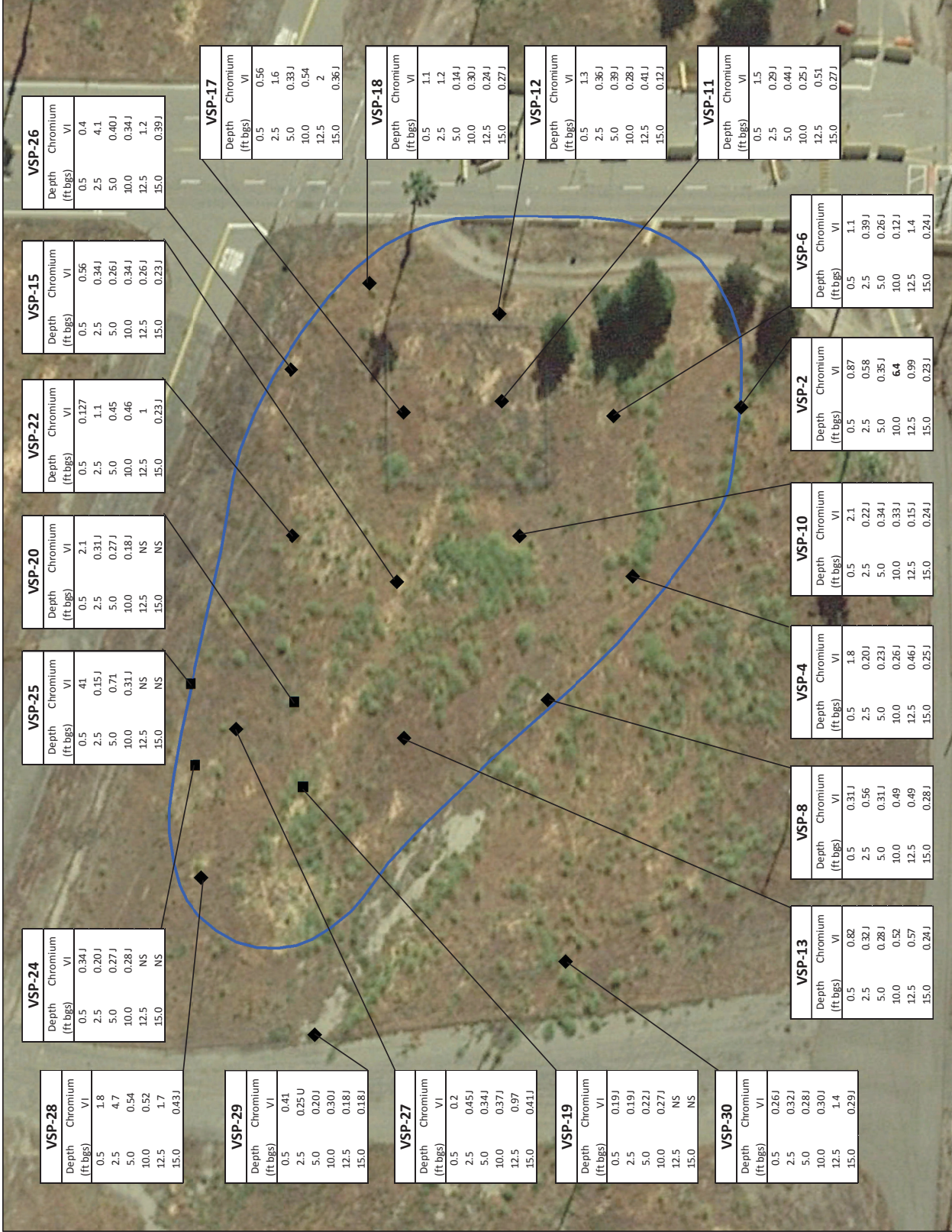
Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	0.85 J
2.5	0.48 U
5.0	0.50 U
10.0	0.47 U
12.5	0.53 U
15.0	0.48 U

**VSP-19**

Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	0.42 U
2.5	0.47 U
5.0	0.50 U
10.0	0.49 U
12.5	NS
15.0	NS

**VSP-30**

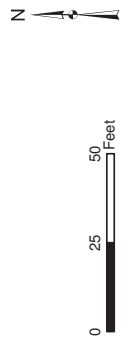
Depth (ft.bgs)	PCDD/PCDF (pg/g)
0.5	0.25 J
2.5	0.42 U
5.0	0.44 U
10.0	0.50 U
12.5	0.47 U
15.0	0.46 U



**Legend**

- ◆ Completed Boring (Total Depth = 15 feet bgs)
- Completed Boring (Total Depth = 10 feet bgs)
- SHAD-041 (Sites 33/29) Boundary

**Notes:**  
 There are no concentrations exceeding the action level.  
 bgs = below ground surface  
 ft = foot or feet  
 J = estimated concentration  
 mg/kg = milligrams per kilogram  
 NS = not sampled  
 U = not detected, limit of quantitation shown



**Hexavalent Chromium Concentrations in Soil**  
 R/FS Report  
 Sites 33/29 (SHAD-041)  
 Sharpe Army Depot  
 Lathrop, California

Figure  
**F2-4**  
 Ahtna Environmental, Inc.

**VSP-26**

Depth (ft bgs)	Chromium VI
0.5	0.4
2.5	4.1
5.0	0.40J
10.0	0.34J
12.5	1.2
15.0	0.39J

**VSP-15**

Depth (ft bgs)	Chromium VI
0.5	0.56
2.5	0.34J
5.0	0.26J
10.0	0.34J
12.5	0.26J
15.0	0.23J

**VSP-22**

Depth (ft bgs)	Chromium VI
0.5	0.127
2.5	1.1
5.0	0.45
10.0	0.46
12.5	1
15.0	0.23J

**VSP-20**

Depth (ft bgs)	Chromium VI
0.5	2.1
2.5	0.31J
5.0	0.27J
10.0	0.18J
12.5	NS
15.0	NS

**VSP-25**

Depth (ft bgs)	Chromium VI
0.5	41
2.5	0.15J
5.0	0.71
10.0	0.31J
12.5	NS
15.0	NS

**VSP-24**

Depth (ft bgs)	Chromium VI
0.5	0.34J
2.5	0.20J
5.0	0.27J
10.0	0.28J
12.5	NS
15.0	NS

**VSP-28**

Depth (ft bgs)	Chromium VI
0.5	1.8
2.5	4.7
5.0	0.54
10.0	0.52
12.5	1.7
15.0	0.43J

**VSP-17**

Depth (ft bgs)	Chromium VI
0.5	0.56
2.5	1.6
5.0	0.33J
10.0	0.54
12.5	2
15.0	0.36J

**VSP-18**

Depth (ft bgs)	Chromium VI
0.5	1.1
2.5	1.2
5.0	0.14J
10.0	0.30J
12.5	0.24J
15.0	0.27J

**VSP-12**

Depth (ft bgs)	Chromium VI
0.5	1.3
2.5	0.36J
5.0	0.39J
10.0	0.28J
12.5	0.41J
15.0	0.12J

**VSP-11**

Depth (ft bgs)	Chromium VI
0.5	1.5
2.5	0.29J
5.0	0.44J
10.0	0.25J
12.5	0.51
15.0	0.27J

**VSP-6**

Depth (ft bgs)	Chromium VI
0.5	1.1
2.5	0.39J
5.0	0.26J
10.0	0.12J
12.5	1.4
15.0	0.24J

**VSP-2**

Depth (ft bgs)	Chromium VI
0.5	0.87
2.5	0.58
5.0	0.35J
10.0	6.4
12.5	0.99
15.0	0.23J

**VSP-10**

Depth (ft bgs)	Chromium VI
0.5	2.1
2.5	0.22J
5.0	0.34J
10.0	0.33J
12.5	0.15J
15.0	0.24J

**VSP-4**

Depth (ft bgs)	Chromium VI
0.5	1.8
2.5	0.20J
5.0	0.23J
10.0	0.26J
12.5	0.46J
15.0	0.25J

**VSP-8**

Depth (ft bgs)	Chromium VI
0.5	0.31J
2.5	0.56
5.0	0.31J
10.0	0.49
12.5	0.49
15.0	0.28J

**VSP-13**

Depth (ft bgs)	Chromium VI
0.5	0.82
2.5	0.32J
5.0	0.28J
10.0	0.52
12.5	0.57
15.0	0.24J

**VSP-27**

Depth (ft bgs)	Chromium VI
0.5	0.2
2.5	0.45J
5.0	0.34J
10.0	0.37J
12.5	0.97
15.0	0.41J

**VSP-19**

Depth (ft bgs)	Chromium VI
0.5	0.19J
2.5	0.19J
5.0	0.22J
10.0	0.27J
12.5	NS
15.0	NS

**VSP-30**

Depth (ft bgs)	Chromium VI
0.5	0.26J
2.5	0.32J
5.0	0.28J
10.0	0.30J
12.5	1.4
15.0	0.29J

## F3 Radiological Human Health and Ecological Risk Assessment Report

# Technical Memorandum

## Radiological Human Health and Ecological Risk Assessment

### Sharpe Depot – Site SHAD-041



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## 1.0 Introduction

Tidewater, Inc, under contract to Ahtna Environmental, Inc. (Ahtna) to provide radiological support for the Radiological Remedial Investigation/Feasibility Study (RI/FS) has prepared this risk and dose assessment for the Sharpe Army Depot (Sharpe) SHAD-041 (referred to as the “Site”). This report describes both the human health risk assessment (HHRA) and ecological risk assessment (ERA) that have been performed at the Site. Past operations at the Site have resulted in releases of radium 226 (Ra-226) to environmental media that may pose risks to human and ecological receptors (Tidewater 2012). The need for radiological assessment at SHAD-041 was identified in the *Final 3rd Five-Year Review Report* (URS 2014).

The methodology used for this evaluation is based upon the guidance from the U.S. Environmental Protection Agency (USEPA) Risk Assessment Guidance for Superfund (RAGS) and Ecological Risk Assessment Guidance for Superfund (ERAGS), The Department of Energy (DOE), and the U.S. Nuclear Regulatory Commission (USNRC) for performing HHRA and ERA. This evaluation is conservatively representative of current site conditions. A total of 140 samples were collected from the Site in an effort to characterize the vertical and horizontal extent of the radiological contamination. Samples were analyzed by gamma spectroscopy to identify the radionuclides of concern (ROC). Only one ROC was identified; Ra-226. The radium was assumed to have been chemically separated over 40 years ago which permits the maximum possible ingrowth of progeny radionuclides yielding a conservative dose rate and risk estimation.

The HHRA was performed for three critical groups; a resident, industrial worker, and a construction worker. The ERA was calculated for the burrowing owl as the lone receptor. The ERA utilizes the graded (Tier) approach for evaluating radiation doses to aquatic and terrestrial biota consistent with the standard ecological risk assessment paradigm (DOE 2004). The first and simplest Tier is a scoping assessment, which establishes the need for more in-depth risk assessment. The second Tier consists of a screening ecological risk assessment, which is relatively simple and conservative in its application and assumptions. The third Tier is a definitive ecological risk assessment, which provides a relatively detailed and realistic assessment of the nature and magnitude of risks.

Doses and risk were calculated for three exposure pathways; external, inhalation, and ingestion for the three human critical groups and for the ecological receptor. **Tables 1 and 2** provide a summary of the results for each of the critical groups. The report describes the parameters and assumptions such that a dose recalculation may be made to accommodate any other scenario.

- No water pathways are evaluated as this RI effort was only for Operable Unit 2 (OU 2) which addresses the soil and soil gas.
- Radiological doses for the resident assumes the resident is onsite 24 hours a day and is exposed to both surface and subsurface contamination.

- The resident does not grow vegetables for consumption in a home garden and derives all water from a city water supply.
- The assumptions for the industrial worker are conservative as it is assumed that a worker disobeys all fencing/signage and spends seven hours a day at the Site for 25 years.
- An assumption was made that the construction worker may be digging or performing excavations at the Site and thus is exposed to subsurface contamination as well as surface.
- The soil concentration averages used in this report represent either an average for the Site or a maximum concentration identified during the sampling effort.

**Table 1, HHRA Dose and Risk Summary**

Critical Group	Maximum dose (mrem/yr) <sup>1</sup>	Maximum Risk <sup>2</sup>
Resident	66.4	1.0 x 10 <sup>-3</sup>
Industrial Worker	62.1	1.1 x 10 <sup>-3</sup>
Construction Worker	77.2	5.6 x 10 <sup>-5</sup>
<sup>1</sup> USEPA has stated the maximum dose should not exceed 12 mrem/yr OSWER 9285.6-20 <sup>2</sup> USEPA risk range is between 10 <sup>-4</sup> and 10 <sup>-6</sup>		

- The burrowing owl is conservatively estimated to spend 100% of the time on the Site.
- The burrowing owl takes all of its food from the Site.

**Table 2, ERA Hazard Ratio Results**

Critical Receptor	Tier	Hazard Ratio <sup>1</sup>
Burrowing Owl	1	1.57
	2	0.13
<sup>1</sup> A hazard ratio in excess of 1 implies an unacceptable risk.		

The HHRA and ERA show that the limiting dose rate and risk is associated with the HHRA verses the ERA. The ERA evaluation was found within the acceptable limits on the Tier 2 evaluation. Therefore, no further action is necessary based upon the ERA. The results of the HHRA indicate that further action should be implemented to reduce the risk and dose to the critical groups from the radiological contamination in the surface and subsurface soils.

### 1.1. Objectives

The assessment is being conducted as part of the Radiological Remedial Investigation/Feasibility Study (RI/FS), and is intended to provide an assessment of risks to human health and environment

that will support the selection of a remedy to eliminate, reduce, or control those risks. The specific objectives of the assessment are to:

- Estimate potential human health and ecological risks associated with the Site if no remedial action occurs;
- Identify areas that pose no unacceptable risks to human health or the environment, and thus require no further action; and
- Develop a list of radiological contaminants of concern (RCOCs) that contribute to unacceptable risks to human health or the environment.

## 1.2. Report Format

The general format of this document is as follows:

- Section 1: **Introduction**. This section presents the general purpose and scope of the assessment, the overall approach to the assessment, and the assessment Report organization.
- Section 2: **Site Information**. This section provides the site description, site history, history of activities at the site, and physical characteristics of the site.
- Section 3: **Data Collection and Contaminants**. This section summarizes the site related contaminants and sampling information.
- Section 4: **HHRA**. This section describes how contaminants were identified for quantitative risk assessment; presents the land use and potentially exposed receptors (people), conceptual site model, methodology for estimating exposure point concentrations, and exposure factor parameter values; and describes the methodology used for cancer risk.
- Section 5: **Screening Level Ecological Risk Assessment (SLERA)**. This section describes when, how, and why particular ecological entities may be exposed to radiological stressors present at the site; describes the receptor, constituent sources, and exposure media, and exposure factor parameter values; describes the approaches for evaluating radiological toxicity.
- Section 6: **Uncertainty**. The section discusses sources and implications of uncertainty in the HHRA and SLERA risk characterization and exposure assessment.
- Section 7: **Conclusion**. This section provides a summary of the HHRA and SLERA results and how they relate to further action recommendations at the Site.
- Section 8: **References**. This section lists the references cited in the HHRA and SLERA.

## 2.0 Site Information

Sharpe was placed on the National Priorities List in 1987 and entered into a four-party Federal Facilities Agreement (FFA) in 1989. As described in the FFA, authority for environmental restoration decision-making rests with a team of remedial project managers from the California

Environmental Protection Agency (CALEPA), including Department of Toxic Substances Control (DTSC) and Central Valley Regional Water Quality Control Board, from the U.S. EPA (USEPA) Region 9, and from Sharpe. The DLA transitioned Sharpe back to the Army effective October 1, 2014. The Army is the lead agency responsible for funding and implementing remedial actions at Sharpe (Ahtna 2017).

The FFA established two operable units (OUs) to facilitate environmental restoration at Sharpe. OU 1 addresses groundwater in four saturated monitoring zones (designated as A, B, C, and D) contaminated primarily with volatile organic compounds (VOCs). OU 2 addresses soil and soil gas above the water table (Ahtna 2017). This document only addresses surface and subsurface soil as part of OU 2.

Wastes generated at Sharpe were primarily a result of former maintenance operations such as paint stripping, metal finishing, and painting. Other waste-generating activities included engine overhauls; hydraulic and electrical repairs; airframe and bodywork; and component repair and reconditioning. Five burning pits (37 through 41) were located between South Avenue and Salvage Drive, around the Polly Street and D Street Extension intersections in the vicinity of the South Balloon Area. SHAD-041 is located in the southern portion of Sharpe within the southern South Balloon and is bound on the North side by two sets of railroad tracks and Parameter Road along the East side by D Street which has a guard house and exits to the South to Lathrop Road. SHAD-041 is approximately 150 feet along the East edge, 320 feet along the South edge, 160 feet along the West edge and 340 feet along the North edge next to Parameter Road (Tidewater 2012). The surface of SHAD-041 is sparsely vegetated soil. No structures are present at SHAD-041 (Ahtna 2017).

The 1980 installation assessment indicated that several buildings were used as a radioactive material storage and repair facilities. The radioactive materials included sketching sets with luminous dial compasses and temperature indicators. Luminous markers containing radium-226 were stored in Building 386 and an instrument repair shop was located in Building 404. (Tidewater, 2012).

In 2012, low-level radiological activity was detected at SHAD-041 at the southern end of Sharpe. SHAD-041 is an OU 2 metal site that did not require a remedial action because concentrations of lead and/or chromium did not exceed cleanup standards. A radiological survey conducted in January 2012 by Tidewater, Inc., determined that radiation in the area around SHAD-041 was not at background levels. The source of the radiation is thought to be radium paint in the ground, perhaps associated with a prior burn pit, although characterization of the site has not been completed. As a temporary safety measure, a fence was installed around the area of potential radiological concern and warning signs were installed reading "Caution: Radioactive Material" (Tidewater 2012).

### 3.0 Data Collection and Evaluation

Samples were collected at SHAD-041 following the approved RI Work Plan and the Sampling and Analysis Plan. A total of 21 borings were drilled across the Site to horizontally and vertically characterize the Ra-226 contamination. The sampling approach used was systematic non-random grid for 16 locations with five biased locations based on professional judgment. Soil samples were collected at four intervals per location for a total of 140 soil samples. Three locations along with the first six inches were sampled and packaged for off-site laboratory analysis. Samples were analyzed following EPA method 901.1 by gamma spectroscopy following a 21-day holding time to ensure equilibrium with progeny radionuclides.

Soil samples were collected according to the Quality Assurance Project Plan (QAPP). Quality Assurance/Quality Control (QA/QC) samples were also be collected at the frequency required by the QAPP.

### 4.0 Human Health Risk Assessment

The objective of the HHRA is to provide an analysis of baseline human health risks that will be used to determine the need for remedial action at the Site. The technical approach for the risk assessment is consistent with guidelines established by the USEPA, the USNRC, and the DTSC for assessing risk to human health. The primary risk assessment guidance documents used in this HHRA report are listed below. Other guidance documents and scientific literature are cited as appropriate in the text.

- Risk Assessment Guidance for Superfund, Volumes I and II, Human Health Evaluation Manual: Part A (USEPA 1989a and 1989b)
- Risk Assessment Guidance for Superfund (RAGS), Volume I, Human Health Evaluation Manual: Part B, Development of Risk-Based Preliminary Remediation Goals (PRGs) (USEPA 1991a)
- Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual, Supplemental Guidance, Standard Default Exposure Factors, (USEPA 1991b).
- Ecological Assessment of Superfund Sites: An Overview, (USEPA 1991c).
- Guidance for Data Usability in Risk Assessment (Part A) (USEPA 1992a)
- Guidance for Data Usability in Risk Assessment (Part B) (USEPA 1992b)
- Soil Screening Guidance: Users Guide (USEPA 1996a)
- Health Effects Assessment Summary Tables and User's Guide (USEPA 1990)
- Exposure Factors Handbook (USEPA 1997a)
- Supplemental Guidance for Developing Soil Screening Levels for Superfund Site (USEPA 2002a)
- Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual: Part E, Supplemental Guidance for Dermal Risk Assessment (USEPA 2004)

- California Department of Toxic Substance Control (DTSC) Office of Human and Ecological Risk (HERO) Note 1 (HERO Note 1, 2014)
- NUREG 5512, Vol 4, Residual Radioactive Contamination from Decommissioning, (USNRC 1992)

The HHRA methodology for radiological constituents is presented in the following subsections of this report:

- Section 4.1 provides criteria that were used to evaluate and screen Site data and to determine the RCOPCs that were evaluated in the HHRA;
- Section 4.2 defines land use assumptions and receptors that were evaluated in the HHRA and presents the Conceptual Site Model (CSM);
- Section 4.3 presents the methodology and guidance that were used to perform the toxicity assessment for radiological constituents;
- Section 4.4 presents the methodology that was used to conduct the risk characterization for radiological constituents; and
- Section 4.5 presents the results of the risk assessments.

#### 4.1. Identification of Radionuclides of Potential Concern

The RI report provides data on the nature and extent of site constituents at SHAD-041. These site constituents were designated based on the operational history of each area, including the radionuclides known or suspected to be at this Site. In this section of the report, the methodology to select RCOPCs is presented. RCOPCs differ from site constituents in that the RCOPCs are the constituents that have been detected at the site that have gone through an extensive screening process and then retained for quantitative analysis in the HHRA. No distinction of original source is made in selecting the RCOPCs. The only radionuclide identified during the sampling effort was Ra-226. **Table 3** provides the sample results.

As was found during previous investigations (Tidewater, 2012), Ra-226 was the only radiological contaminant identified by the sampling effort. Ra-226 is found naturally in soil at various concentrations depending upon the soil type and local environmental conditions. It is part of the uranium 238 (U-238) decay chain and emits alpha, beta, and gamma radiations. **Table 4** below shows the Ra-226 decay chain. Reference area samples were not collected as part of this sampling effort. Therefore, sample results used in the HHRA include the contribution from background.

Table 3, Summary of Soil Sample Results

No:	Sample Location:	No. Exceedances (Results above 1.60 pCi/g) <sup>a</sup>	Depth of Max (ft)	Max Result (pCi/g)	Depth of Min (ft)	Min Result (pCi/g)	Average Result (pCi/g)
1	VSP 2	1	12-13	1.94	Surface	0.72	1.03
2	VSP 4	0	12-13	1.24	Surface	0.90	1.07
3	VSP 6	2	12-13	1.90	4-5	1.17	1.49
4	VSP 8	1	11-12	2.14	2-3	1.12	1.37
5	VSP 10	1	10-11	1.75	2-3	0.81	1.19
6	VSP 11	5	5-6	3.09	14-15	1.35	2.34
7	VSP 12	3	Surface <sup>d</sup>	10.40	14-15	1.20	2.61
8	VSP 13	3	12-13	2.35	2-3	0.91	1.55
9	VSP 15	1	Surface	2.48	1-2	1.08	1.43
10	VSP 17	2	Surface	3.31	14-15	1.09	1.61
11	VSP 18	5	14-15	75.40	4-5	1.41	16.09
12	VSP 19 <sup>b</sup>	2	9-10	1.76	2-3	0.92	1.36
13	VSP 20 <sup>b</sup>	1	Surface	3.26	4-5	0.86	1.60
14	VSP 22 <sup>c</sup>	0	10-11	1.44	1-2	1.06	1.18
15	VSP 24 <sup>b</sup>	0	6-7	1.50	3-4	0.87	1.19
16	VSP 25 <sup>b</sup>	1	9-10	1.60	2-3	0.91	1.27
17	VSP 26	6	Surface	79.60	14-15	1.13	14.36
18	VSP 27	0	4-5	1.56	Surface	0.91	1.35
19	VSP 28	3	Surface	7.08	14-15	1.13	2.32
20	VSP 29	1	8-9	1.68	Surface	0.93	1.25
21	VSP 30	2	13-14	1.82	Surface	0.90	1.30

<sup>a</sup> Exceedance value is based on off-site laboratory uncertainty subtracted from the screening level of 2.0 pCi/g (ex. 2.00 pCi/g – ~0.4 pCi/g uncertainty = ~1.60 pCi/g)

<sup>b</sup> Only four samples collected at this location

<sup>c</sup> Sample location 22 had six (6) samples logged as collected, however only five (5) were processed by the off-site laboratory. Sample ID: 22-01-XX was misplaced. However, sample location 22 showed no elevated results from gamma spectroscopy, core scanning, or downhole gamma logging.

<sup>d</sup> Surface was defined as 0 – 12 inches bgs.

\*Ra-226 results are based on the Bismuth-214 (Bi-214) peak.

For the HHRA, a six-month (180 day) cutoff half-life was selected in the parent radiological dose and risk model. The fate and transport of nuclides with half-lives larger than the specified half-life are modeled explicitly by the code. Progeny nuclides with a half-life shorter than the specified value are assumed to be in secular equilibrium with their immediate parent. Therefore, their contributions are already incorporated in the dose conversion factor (DCF) and risk coefficients of the parent.



Due to this,

- Lead-210 [Pb-210] (half-life = 22 years), progeny of Ra-226 was included during this HHRA.
- Lead-214 [Pb-214] (half-life = 27 minutes) and bismuth-214 [Bi-214] (half-life = 20 minutes), progenies of Ra-226 were included with the Ra-226 DCF.

Table 4, Radium 226 Decay Properties			
Radioisotope (progeny) <sup>a</sup>	Half-Life	Decay Properties Type, Energy (MeV) (% abundance)	Comments
<b>Radium 226</b>	1,600 y	<i>alpha</i> : 4.60 (5.55), 4.78 (94.4) <i>gamma</i> : 0.186 (3.28)	Progeny emissions include alpha, beta, and gamma radiation.
<b>Radon 222</b>	3.8 d	<i>alpha</i> : 5.49 (99.9) <i>gamma</i> : 0.510 (0.078)	None
<b>Polonium 218</b>	3.1 m	<i>alpha</i> : 6.0 (100) <i>beta</i> : 0.33 (0.02) <i>gamma</i> : 0.837 (0.0011)	None
<b>Lead 214</b>	26.8 m	<i>beta</i> : 0.67 (48), 0.73 (42.5), 1.03 (6.3) <i>gamma</i> : 0.2417 (7.5), 0.295 (19.2), 0.352 (37.1), 0.786 (1.1)	99.98% branching ratio for Po-218 decay to Pb-214.
<b>Astatine 218</b>	2 s	<i>alpha</i> : 6.66 (6.4), 6.7 (89.9), 6.757 (3.6) <i>gamma</i> : 0.053 (6.6)	0.02% branching ratio for Po-218 decay to At-218.
<b>Bismuth 214</b>	20 m	<i>alpha</i> : 5.45 (0.012), 5.51 (0.008) <i>beta</i> : 1.42 (8.3), 1.505 (17.6), 1.54 (17.9), 3.27 (17.7) <i>gamma</i> : 0.609 (46.1), 1.12 (15), 1.765 (15.9), 2.204 (5.0)	None
<b>Polonium 214</b>	164 $\mu$ s	<i>alpha</i> : 7.687 (100) <i>gamma</i> : 0.7997 (0.010)	99.979% branching ratio for Bi-214 decay to Po-214.
<b>Thallium 210</b>	1.3 m	<i>beta</i> : 1.32 (25), 1.87 (56), 2.34 (19) <i>gamma</i> : 0.2918 (79.1), 0.7997 (99), 0.860 (6.9), 1.110 (6.9), 1.21 (17), 1.310 (21), 1.410 (4.9), 2.010 (6.9), 2.090 (4.9)	0.021% branching ratio for Bi-214 decay to Tl-210.
<b>Lead 210</b>	22.3 y	<i>alpha</i> : 3.72 (0.000002) <i>beta</i> : 0.016 (80), 0.063 (20) <i>gamma</i> : 0.0465 (4)	Decays to stable Pb-206

## 4.2. Exposure Assessment

This section describes the receptors and exposure pathways that were evaluated in the HHRA. The objectives of the exposure assessment are to estimate the magnitude, frequency, duration and routes of potential human exposures to RCOPCs at the Site. Potential receptor groups are identified in the exposure assessment and estimates of exposure are calculated based on assumptions

regarding exposure pathways and exposure parameters. No samples were collected to for the ground water or surface water during this RI.

#### 4.2.1. Development of the Conceptual Site Model

The first step of the exposure assessment was to identify potentially complete pathways between sources and receptors by:

- Identifying a source of the contaminant;
- Identifying media through which contaminant may come in contact with the receptors, including soils and air;
- Identifying the routes of exposure or pathways through which the receptors may be exposed (i.e. external gamma radiation, ingestion, dermal contact, and inhalation); and
- Identifying current and future potential receptors.

The relationship among the above factors is presented in the Conceptual Site Model (CSM). The CSM provides an illustration of the Site's, exposure pathways, potential receptors and routes of exposure that could lead to a human health dose and risk to potential receptors. For the Site assessments were not performed for groundwater, surface water, or sediment pathways. The following sections of the report provide a detail discussion of the radiological CSM.

The exposure assessment evaluates the risk to all receptor populations that are reasonably anticipated to be exposed to RCOPCs at Site. Only the reasonably maximally exposed (RME) scenarios were evaluated in the HHRA. The exposure assessment evaluated the RME risk to all receptor populations to RCOPCs on the Site. Under the current land use scenario, the RME receptors include a resident living on site but with no garden and water supplied by municipal water, an adult industrial worker walking near or over the Site and an adult construction worker working on the Site. These receptors may come in contact with contaminated media from the Site via soil or resuspension of the contaminant.

An exposure pathway is the physical course a contaminant takes from the source to the exposed receptor. The sources evaluated in this assessment include soil external exposure and resuspension with inhalation and ingestion. Soil data is segregated into 1) surface soil and 2) surface plus subsurface soil for the purposes of risk characterization to the types of human receptors to be evaluated. It is assumed that the industrial worker is exposed only to surface soil, whereas the construction worker and resident may be exposed to both surface soil and subsurface soil. Industrial workers are typically only exposed to surface soil (0 to 12 inches.). For radiological constituents, external gamma radiation is an important pathway of exposure and therefore, it was quantified in this evaluation.

The process for identifying exposure pathways is similar for radionuclides and non-radionuclides except for the following three significant differences:

- Radon pathway is suppressed during radiological HHRA: Radon is a radioactive noble gas that tends to accumulate in enclosed structures. In a Federal Register Notice (USNRC 1994), issued as a result of comments received from a radon workshop, the NRC noted that “radon would not be evaluated when developing release criteria due to: the ubiquitous nature of radon in the general environment, the large uncertainties in the models used to predict radon concentrations; and the inability to distinguish between naturally occurring radon and that which occurs due to licensed activities.” It is notable that radon limits are based on concentration and not risk or dose. This difference is due partly to the fact that background radon concentrations are highly variable and can produce risk estimates well above exposure-based limits.
- Dermal pathway is not evaluated for radiological RCOPCs: Radiological contaminants are typically particulates and do not easily pass through the skin.
- External exposure to radionuclides that emit gamma radiation or x-rays is evaluated: This external exposure pathway accounts for radionuclides that may produce a risk without any physical contact. Ra-226 is such a radionuclide.

The receptor scenarios along with their corresponding exposure pathways are summarized in the following.

#### 4.2.1.1. Resident

Under this scenario, the resident lives on the site and may be exposed by external exposure to residual radioactive contamination in the surface soil and exposure to subsurface contamination. The resident lives on the Site, no remediation has occurred and the average site Ra-226 concentration is 8.07 pCi/g on the surface and 1.96 pCi/g for the subsurface, is at the site 24 hours per day and spends 7 hours per day outdoors. The exposure duration is 20 years (HERO Note 1, 2014). The inhalation rate for the receptor is 20 cubic meter (m<sup>3</sup>) per day (HERO Note 1, 2014). Since resident is assumed to be an adult, a body weight of 80 kilograms (kg) was used to assess exposure to contaminants. Exposure pathways evaluated for the industrial worker scenario include:

- external gamma radiation from radionuclides in the surface soil;
- incidental ingestion of surface soil; and
- inhalation of airborne contaminated dust from surface soil.

#### 4.2.1.2. Industrial Worker

Under this scenario, the industrial worker may be exposed to the residual radioactive contamination that may be present in surface soil but is not expected to have regular contact with subsurface soil. The surface soil concentration is 8.07 pCi/g. The industrial worker is modeled as a typical site worker who spends most of the time indoors. The industrial worker is at the site for 250 days per year for 25 years (HERO Note 1, 2014). During a typical working day, the worker is assumed to spend 7 hours indoors and 1 hour outdoors and will ingest 100 milligram (mg) of soil

(HERO Note 1, 2014). The inhalation rate for the receptor is 14 cubic meter (m<sup>3</sup>) per day (HERO Note 1, 2014). Since workers are assumed to be adults, a body weight of 80 kilograms (kg) was used to assess exposure to contaminants. Exposure pathways evaluated for the industrial worker scenario include:

- external gamma radiation from radionuclides in the surface soil;
- incidental ingestion of surface soil; and
- inhalation of airborne contaminated dust from surface soil.

#### 4.2.1.3. Construction Worker

Since it is reasonable to assume that construction activities could occur at the Site, adult construction workers were identified as potential receptors. During construction activities these receptors could be exposed to residual contamination present in soil surface and subsurface. The Ra-226 concentration is 8.07 pCi/g on the surface and 1.96 pCi/g for the subsurface soil. Construction workers were assumed to be on the job 8 hours per day, 250 days per year over a 1-year period. During a typical working day, the construction worker is assumed to spend 8 hours at the site and will ingest 330 mg of soil per day (HERO Note 1, 2014). The inhalation rate for the receptor is 20 m<sup>3</sup> per day (HERO Note 1, 2014). Since construction workers are assumed to be adults, a body weight of 80 kg was used to assess exposure to chemical constituents. Exposure pathways evaluated for the construction worker scenario include:

- external gamma radiation from radionuclides in the soil;
- incidental ingestion of soil; and
- inhalation of airborne contaminated dust from soil.

**Figure 1** provides the CSM for SHAD-041.



### 4.2.2. Pathway Specific Intakes for Radiological RCOPCs

The human health radiological dose and risk assessment for radiological constituents was conducted by utilizing the residual radioactivity computer code (RESRAD) Version 7.2 (ANL. 2016). While RESRAD uses methods consistent with those presented in the RAGS, the code has several advantages over standard RAGS methods including the following:

- RESRAD models the future conditions taking into account source removal by radiological decay, leaching, erosion, etc., and radiological in growth of progeny;
- RESRAD considers site-specific variables such as rainfall, soil density, etc. that may impact results;
- RESRAD considers source geometry taking into account the thickness and surface area of soil contamination;
- RESRAD is an integrated code that accounts for all potential exposure pathways with a single calculation or “run”; and
- RESRAD provides both carcinogenic risk and radiological dose estimates for comparison to appropriate regulatory limits.

RESRAD-ONSITE 7.2 utilizes Federal Guidance Report (FGR) Nos. 11, 12, or 13 DCFs for determining radiological dose assessment to various receptors present at the Site and the EPA HEAST Morbidity 2001 factors for calculating risk. Except for the differences identified above, the RESRAD calculations parallel the HHRA for non-radiological constituents. The same exposure parameters were utilized, the same exposure pathways were considered, and the same exposure scenarios were evaluated.

The RESRAD codes also require inputs that describe the physical characteristics of the contaminated media. Certain site-specific data such as evapotranspiration coefficients and air exchange rates may be limited, although as many as possible site-specific parameter values were used. The preference was to use site-specific data first, use values recommended or otherwise employed by DTSC second, and use RESRAD defaults last. **Appendix A** presents the assigned value for each RESRAD input parameter.

### 4.3. Toxicity Assessment for Radiological RCOPCs

The toxicity criteria for radionuclides are limited to carcinogenic risk. RESRAD-ONSITE 7.2 utilizes FGR Nos. 11, 12, and 13 DCFs for determining internal and external radiological dose assessment to various receptors present at the Site. Those DCFs are based on International Commission on Radiological Protection (ICRP) 30, 62, and 70 publications.

To estimate radiological risk, the RESRAD-ONSITE code utilizes 2001 HEAST Morbidity risk coefficient values. The risk coefficients derived in HEAST are based on methods and models that take into account the age- and gender-dependence of radionuclide intake, metabolism, dosimetry, radiogenic risk, and competing causes of death in estimating the cancer risk from low-level

exposures to radionuclides in the environment. These risk co-efficient slope factors are presented in units of risk per pCi (internal pathways) or risk per year per pCi/g (external pathways).

A Cancer Slope Factor (CSF) for a radionuclide is defined differently from a CSF for a chemical constituent. USEPA outlines these differences in Radiation Exposure and Risk Assessment Manual (USEPA 1996b). Major differences include the following:

- radiological risk estimates are based primarily on human data – chemical risk estimates are based primarily on animal studies; and
- radiological risk estimates are based on the central estimate of the mean – chemical risk estimates are based on 95% upper confidence limit of the mean.

#### 4.4. Risk Characterization

The RESRAD-ONSITE code provides estimates of integrated lifetime cancer risk (ILCR) and radiological doses by radionuclide and pathway. Radiological dose estimates in millirem per year (mrem/yr) also were provided for comparison against dose-based goals. Based on OSWER 9285.6-20, *Radiation Risk Assessment at CERCLA Sites; Q&A* (USEPA 2014) identified a dose limit criterion of 12 mrem/yr as being protective and equates that dose to a risk of  $3.0 \times 10^{-4}$ . The radiological dose results for each scenario were compared with respect to 12 mrem/yr dose criteria and to the acceptable risk range established by the USEPA. A dose greater than 12 mrem/yr is considered unacceptable whereas one less than 12 mrem/yr is considered acceptable.

#### 4.5. Results

Typically, the USEPA considers remedial action at a site when cumulative excess cancer risk to any current or future population exceeds a risk range of  $1.0 \times 10^{-6}$  to  $1.0 \times 10^{-4}$  (i.e., one case of cancer in one-million to one case of cancer in ten-thousand) (USEPA 1991a).

**Appendix A** presents the output radiological dose and risk assessment summary reports for each exposure scenario. The results showed that the maximum doses for radiological RCOPCs occurred at various years depending upon the ingrowth of progeny radionuclides. Whenever the cumulative dose and/or cancer risk exceeds either or both dose criteria or the CERCLA acceptable risk range, they are designated in **BOLD**. Radium 226 was the only radionuclide identified at the Site and it contributes to all radiological dose and risk associated with the Site.

##### 4.5.1. Resident

The maximum dose to a resident occurs at year 6.94 and results in a dose of 66.4 millirem per year (mrem/yr). The pathway responsible for the majority of the dose is the external exposure pathway giving an exposure of 65.87 mrem/yr. The maximum risk was estimated to be  $1.0 \times 10^{-3}$  associated with the external exposure pathway. The maximum exposure for the subsurface exposure component occurs at year 298.8 at 16.13 mrem/yr with an associated risk of  $2.1 \times 10^{-4}$ . Both the

estimated dose and the risk exceed the EPA limits of 12 mrem/yr and the CERCLA risk range. **Table 5** provides a summary of the dose and risk estimates for the resident receptor.

**Table 5, Resident Exposure Summary**

Site	Medium	Exposure Pathway	Total Dose (mrem/yr)		Total Risk		Major Contributor
			T=6.94	T=1,000	T=6.94	T=1,000	
SHAD-041	Surface Soil	External	<b>65.87</b>	<b>29.25</b>	<b>1.0 x 10<sup>-3</sup></b>	<b>4.4 x 10<sup>-4</sup></b>	Ra-226
		Inhalation	0.05	0.07	1.2 x 10 <sup>-7</sup>	1.2 x 10 <sup>-7</sup>	
		Soil Ingestion	0.48	1.14	<b>4.3 x 10<sup>-6</sup></b>	<b>8.9 x 10<sup>-6</sup></b>	
		Cumulative	<b>66.4</b>	<b>30.4</b>	<b>1.0 x 10<sup>-3</sup></b>	<b>4.5 x 10<sup>-4</sup></b>	
	Subsurface Soil	External	<b>15.92</b>	7.1	<b>2.4 x 10<sup>-4</sup></b>	<b>1.0 x 10<sup>-4</sup></b>	Ra-226
		Inhalation	0.001	0.001	3.0 x 10 <sup>-8</sup>	2.9 x 10 <sup>-8</sup>	
		Soil Ingestion	0.2	0.27	1.0 x 10 <sup>-6</sup>	<b>2.2 x 10<sup>-6</sup></b>	
		Cumulative	<b>16.13</b>	7.38	<b>2.4 x 10<sup>-4</sup></b>	<b>1.1 x 10<sup>-4</sup></b>	

#### 4.5.2. Industrial Worker

The maximum dose to an industrial worker occurs at year 11.89 and results in a dose of 62.11 mrem/yr from the external exposure pathway. The maximum risk was estimated to be 1.1 x 10<sup>-3</sup> associated with the external exposure pathway. Both the estimated dose and the risk exceed the EPA limits of 12 mrem/yr and the CERCLA risk range. For the industrial worker, exposure to subsurface contamination is not considered a relevant pathway. **Table 6** provides a summary of the dose and risk estimates for the industrial worker.

**Table 6, Industrial Worker Exposure Summary**

Site	Medium	Exposure Pathway	Total Dose (mrem/yr)		Total Risk		Major Contributor
			T=11.89	T=1,000	T=11.89	T=1,000	
SHAD-041	Surface Soil	External	<b>61.38</b>	<b>36.9</b>	<b>1.1x 10<sup>-3</sup></b>	<b>7.0 x 10<sup>-4</sup></b>	Ra-226
		Inhalation	0.003	0.004	1.5 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>	
		Soil Ingestion	0.7	1.05	<b>2.6 x 10<sup>-6</sup></b>	<b>1.2 x 10<sup>-5</sup></b>	
		Cumulative	<b>62.11</b>	<b>38.04</b>	<b>1.1 x 10<sup>-3</sup></b>	<b>7.1 x 10<sup>-4</sup></b>	
	Subsurface Soil	External	N/A	N/A	N/A	N/A	Ra-226
		Inhalation	N/A	N/A	N/A	N/A	
		Soil Ingestion	N/A	N/A	N/A	N/A	
		Cumulative	N/A	N/A	N/A	N/A	



### 4.5.3. Construction Worker

The exposure to the construction worker is divided into a surface exposure and a subsurface exposure. The surface exposure maximum dose to a construction worker occurs at year 298 and results in a dose of 77.19 mrem/yr from the external exposure pathway. The maximum risk was estimated to be  $5.6 \times 10^{-5}$  associated with the external exposure pathway. The maximum exposure for the subsurface exposure component occurs at year 298.8 at 18.75 mrem/yr with an associated risk of  $1.3 \times 10^{-5}$ . Both the estimated dose and the risk exceed the EPA limits of 12 mrem/yr and the CERCLA risk range point of departure of  $1.0 \times 10^{-6}$ . **Table 7** provides a summary of the dose and risk estimates for the construction worker.

**Table 7, Construction Worker Exposure Summary**

Site	Medium	Exposure Pathway	Total Dose (mrem/yr)		Total Risk		Major Contributor
			Max	T=1,000	Max	T=1,000	
SHAD-041	Surface Soil <sup>1</sup>	External	72.22	50.15	$5.4 \times 10^{-5}$	$3.8 \times 10^{-5}$	Ra-226
		Inhalation	0.017	0.01	$1.4 \times 10^{-8}$	$9.7 \times 10^{-9}$	
		Soil Ingestion	4.94	3.5	$1.9 \times 10^{-6}$	$1.3 \times 10^{-6}$	
		Cumulative	77.19	53.63	$5.6 \times 10^{-5}$	$3.9 \times 10^{-5}$	
	Subsurface Soil <sup>2</sup>	External	17.54	12.18	$1.3 \times 10^{-5}$	$9.2 \times 10^{-6}$	Ra-226
		Inhalation	0.004	0.003	$3.4 \times 10^{-9}$	$2.4 \times 10^{-9}$	
		Soil Ingestion	1.20	0.84	$4.7 \times 10^{-7}$	$3.3 \times 10^{-7}$	
		Cumulative	18.75	13.03	$1.3 \times 10^{-5}$	$9.2 \times 10^{-6}$	

<sup>1</sup>Exposure and Risk Max in surface soil represents T=298 for maximum exposure and risk  
<sup>2</sup>Exposure and Risk for Max in subsurface represents T=298 for maximum exposure and risk

Copies of the RESRAD calculations are contained in **Appendix A**.

## 4.6. Human Health Risk Summary

This HHRA report presents the potential health impacts to human receptors from exposure to both radiological contamination present at the Site. Past operations at the Site have resulted in releases of radionuclides to environmental media that may pose risks to human receptors. The risk assessment addresses potential exposures to industrial worker, construction worker, and potential future hypothetical onsite residential receptors.

The radiological risk and dose assessments for all scenarios indicate values in excess of the CERCLA risk range and the EPA dose value as specified in OSWER 9285.6-20. Therefore, it is probable that a remedial activity is necessary to reduce these values to within the CERCLA acceptable range. Among them, the resident scenario was considered as the potential future RME

scenario for the site. The intent of the RME scenario was to focus the assessment on a conservative exposure that represents the maximum exposure that is reasonably expected to occur (USEPA 1989a). Potential exposures to radiological contaminants detected in surface and subsurface soils have been evaluated for various exposure pathways as presented in the CSM.

For radiological RCOPCs, RESRAD-ONSITE (version 7.2) was used to perform radiological dose and risk assessment to all receptors for contamination that are present in the soil. Based upon these assessments the EPA's CERCLA risk range and dose have been exceeded at the site indicating that removal of the radiological contaminant is warranted.

Radiological dose and risk assessment for contamination present in surface water, sediment and groundwater was not performed during this phase of the RI.

## 5.0 Screening Level Ecological Risk Assessment (SLERA)

A Screening-Level Ecological Risk Assessment (SLERA) is a process for evaluating the likelihood that releases of radionuclides from contaminated media may adversely affect ecological receptors. The scope of this SLERA is to determine the potential for adverse ecological impacts resulting from exposure to radionuclides released to the environment through past site operations. The SLERA provides information that is intended for use to determine: a) whether ecological risks at the site are negligible, b) if further information and evaluation are necessary to better define potential ecological risks at the site, or c) determine if mitigation should be done without further evaluation.

The SLERA was prepared primarily in accordance with USEPA's Ecological Risk Assessment Guidance for Superfund (ERAGS) (USEPA, 1997b), USEPA's Wildlife Exposure Factors Handbook (USEPA, 1993c), California Department of Toxic Substance Control (DTSC) Guidance for Ecological Risk Assessment at Hazardous Waste Sites and Permitted Facilities (DTSC 1996), and OSWER 9285.6-20, Radiation Risk Assessment Q&A (EPA 2014). Additional guidance documents and information obtained from the scientific literature are cited as appropriate.

Generally, the SLERA consists of performing the following seven tasks:

- **Characterization of the Ecological Setting:** This step involves conducting a site visit to evaluate site conditions and the identification of potential habitat for terrestrial and aquatic receptors, as well as review of pertinent guidance and published literature regarding the potential presence of certain sensitive species for the regional area.
- **Selection of Stressor:** This section of the SLERA identifies radiological constituents potentially originating from the site that may pose adverse impacts to the terrestrial and aquatic environments. Contaminants detected in environmental media are compared to published screening concentrations (also known as benchmarks) to derive a list of contaminants of potential ecological concern (COPECs) to be evaluated further in the SLERA process.
- **Screening-Level Problem Formulation:** This process includes a preliminary review of available information in order to identify the focus of the SLERA and develop a plan for ecological risk characterization. A CSM is the final product of the problem formulation step which identifies habitats and categories of potential receptors, as well as the potential exposure pathways to be further evaluated.
- **Screening-Level Ecological Exposure Assessment:** This process includes further identification of potential exposure pathways (i.e., the course a stressor takes from the source to the receptor) to be evaluated, selection of pertinent ecological receptors, and quantification of exposure.
- **Screening-Level Ecological Effects Assessment:** This process provides information on the toxicity of the contaminant stressors to the selected ecological receptors based upon a review of pertinent guidance and the scientific literature.

- Screening-Level Risk Characterization: This process integrates the Exposure Assessment and Effects Assessment to develop an overall characterization of ecological risk.
- Uncertainty Analysis: This process addresses potential sources of uncertainty in the SLERA and discusses how assumptions used in the analyses may affect the conclusions.

Several of these steps have already been completed for the SHAD-041 site. The receptor has been identified as the burrowing owl (*Athene cunicularia*). The burrowing owl is a California specie of special concern and is known to inhabit the Sharpe site. Site evaluations have not identified the presence of the burrowing owl at SHAD-041 however, since the burrowing owl has been identified at Sharpe it is prudent to perform an assessment of the radiological risk from the Site. The following section will document the problem formation, exposure assessment, effects assessment, and the ecological risk characterization.

## 5.1. Problem Formation

The CSM, shown in Figure 1, is the result of the problem formation step in the ecological risk assessment. As shown in the CSM, the pathways analyzed for assessment to the burrowing owl, are soil ingestion, ingestion of contaminated prey, and direct exposure. The owl is modeled to reside on the Site 100% of the time and derive all of its food from prey eaten on the Site.

### 5.1.1. Dose Rate Limits

Unlike exposures to chemicals, which are expressed as the concentration in water (e.g., ug/L) or soil (e.g., ug/kg), exposures to radionuclides are expressed as the dose rate received by the organism (rad/d). Dose rates that account for adverse biological effects to the organism are assumed to be additive. That is, the total dose rate is the sum of normalized dose rates for individual radionuclides. A dose limit is the amount at which it is unlikely that measurable detrimental effects in populations would occur. Dose limit information is available from multiple sources as detailed below.

National Council on Radiation Protection (NCRP) (1991): There were multiple objectives of this report. One of which was to provide guidance for the establishment of a dose rate below which deleterious effects to aquatic populations are acceptably low. This report focuses on aquatic populations because there is no convincing evidence from the scientific literature that chronic radiation dose rates below those protective of human health will harm terrestrial plant or animal populations. A chronic dose rate remaining below 1 rad/d to a maximally exposed individual in a population of aquatic organisms likely ensures protection for the population. The majority of the whole body doses received by aquatic organisms at all of the sites examined in this report was more than two orders of magnitude below a proposed standard of 1 rad/d (NPS 2016).

International Atomic Energy Agency (IAEA) (1992): The purpose of this report was to determine if statements about the protection of non-human organisms presented in (ICRP 1977, 1991) are consistent with current knowledge, and if not, to determine whether radiation protection standards

for aquatic and terrestrial biota are warranted. Based on this review, it appears that the limiting chronic dose rates of 1 rad/d or less to the maximally exposed individuals in an aquatic population would provide adequate protection for the population. Provided other environmental factors are favorable, it can be expected that aquatic populations exposed to chronic dose rates less than 1 rad/d would maintain the normal characteristic potential for reproduction, growth, and general vigor. Additionally, there was no convincing evidence from scientific literature that chronic radiation dose rates below 1 rad/d for plant populations or 0.1 rad/d for terrestrial animals would harm populations (NPS 2016).

For this evaluation, a dose rate of 0.1 rad/d to the burrowing owl was used as the limiting dose rate.

### 5.1.2. Exposure Pathways

Three exposure scenarios were evaluated for the burrowing owl. It is assumed that burrowing owls could be exposed to radioactive contaminants via incidental ingestion of soil (e.g., adhering to prey or during dust baths), direct exposure from being directly on contaminated locations, and via consumption of prey captured from within the Site. For radiological contaminants, dermal contact exposure is not considered a pathway of importance (USEPA 2014).

The diet of Burrowing Owls in California includes a broad array of arthropods (centipedes, spiders, beetles, crickets, and grasshoppers), small rodents, birds, amphibians, reptiles, and carrion, similar to their diet range wide (Thompson and Anderson 1988, Green et al. 1993, Plumpton and Lutz 1993, Gervais et al. 2000, York et al. 2002). Although insects dominate the diet numerically, vertebrates account for the majority of biomass in some regions (Green et al. 1993) (CDFG 2008). For this assessment it is conservatively assumed that the burrowing owl's food source consists 100% of prey from the Site. A mouse was modeled as the sole food source.

The owl was modeled as living on the Site and not venturing off the site for its lifespan. This is a highly conservative assumption as studies have shown that the home range of the owl varies from 80 to 3.4 hectares. SHAD-041 is approximately 0.5 hectares.

## 5.2. Exposure Evaluations

Exposure evaluation includes evaluating: (1) the exposure point concentrations in surface soil; and (2) the absorbed dose resulted from ionizing radiation exposures of receptors to radionuclides in those exposure media. RESRAD-BIOTA, version 1.8 was used to perform general screening and to determine receptor –specific absorbed dose associated with the ionizing radiation present at the Site. The software was developed for implementing the DOE “Graded Approach for Evaluating Radiation Doses to Aquatic and Terrestrial Biota” (DOE 2002).

The graded approach for evaluating radiation doses to aquatic and terrestrial biota is consistent with the standard ecological risk assessment paradigm (USEPA 1998). The first and simplest Tier is a scoping assessment, which establishes the need for an SLERA. The second Tier consists of a

screening ecological risk assessment, which is relatively simple and conservative in its application and assumptions. The third Tier is a definitive ecological risk assessment, which provides a relatively detailed and realistic assessment of the nature and magnitude of risks.

The Ecological Screening Values (ESV) [BCGs as presented in RESRAD-BIOTA] for radionuclides are activity levels based on a threshold "no effect" dose. ESVs for radionuclides are established using techniques from the DOE and DOE associated efforts (DOE 2002, DOE 2004). The Interagency Steering Committee on Radiation Standards (ISCORS), comprised of the U.S. Environmental Protection Agency, U.S. Nuclear Regulatory Commission, U.S. Department of Energy, U.S. Department of Defense, U.S. Department of Homeland Security, U.S. Department of Transportation, The Occupational Safety and Health Administration of the U.S. Department of Labor, and the U.S. Department of Health and Human Services, has developed a user's guide for the RESRAD-BIOTA code (DOE 2004). This code is a tool for implementing a graded approach (Tier 1 through Tier 3) to biota dose evaluation. The associated RESRAD-BIOTA software used in this evaluation is version 1.8, created on February 9, 2016 (RESRAD-BIOTA 2016). The ESV doses were set at 1 rad/d for terrestrial plants (DOE 2004) and 0.1 rad/d for terrestrial animals (IAEA 1992). The ESV radionuclide BCG values from RESRAD-BIOTA were generated using default assumptions in Tier 1 of the software. These values are derived for parent isotopes and all short-lived daughter products using the radionuclide exposure model of Blaylock et al. (Blaylock, Frank, and O'Neal 1993).

Potential radiological risks to ecological receptors are evaluated using the ratio of the ESV to the site concentration (similar to a hazard quotient for chemicals). This process involves comparing radiological concentrations measured in study area media to their respective ESVs. By nature, these values are conservative, and in this way, avoid the potential for underestimating risk.

### 5.2.1. Tier 1 Evaluation

For the Tier 1 evaluation, the maximum surface concentration from the site was used (79.6 pCi/g) to estimate the impact on the owl. The ESV for Ra-226 was calculated to be 50.6 pCi/g resulting in a ratio (hazard quotient) of 1.57. A ratio above 1.0 implies risk and the next Tier evaluation is necessary.

For the Tier 1 evaluation, no site-specific parameters were included in the calculations save the surface contamination concentration. **Table 8** provides a summary of the input parameters for the Tier 1 evaluation.

Different types of radiation deposit energy in biological tissues in different ways, which affects the amount of cellular damage. **Relative Biological Effectiveness (RBE)** is a relative measure of the damage done by a given type of radiation per unit of energy deposited in biological tissues. As the radiations deposit energy as they travel through an organism, the level of damage to that organism depends upon how much energy is deposited. Alpha radiation deposits more energy causing greater damage to organism. RBEs are used to modify the radiation absorbed dose (RAD)

to provide an effective dose to the organism. The values used in the calculation are those recommended by the ICRP and considered to be conservative.

The **Cut Off Half Life**, indicates that the parent radionuclide is in secular equilibrium with its progeny radionuclides. This ensures that each of the progeny is included in the evaluation. **Table 4** provides a listing of the progeny radionuclides for Ra-226.

**Table 8, Tier 1 RESRAD-BIOTA Parameters**

General Case Information				
<b>Title:</b>	Burrowing Owl			
<b>Ecosystem:</b>	Terrestrial			
<b>Tier Level:</b>	1			
<b>Units:</b>	Traditional (pCi/g)			
Radionuclide Specific Data				
<b>Radionuclide</b>	Concentrations			
	<b>Soil (pCi/g)</b>	<b>Water (pCi/L)</b>	<b>Sediment (pCi/g)</b>	
<b>Ra-226</b>	79.6	0	0	
RBE Values			Cut-off Half-life	
<b>Alpha</b>	<b>Beta</b>	<b>Gamma</b>	180 days	
<b>20</b>	1	1		
Organism Specific Data				
Organism Data				
<b>Name</b>	<b>Dose Limit (rad/d)</b>	<b>Area Factor</b>	<b>Internal Size</b>	<b>External Size</b>
<b>Terrestrial Animal</b>	0.1	1	Default	Default
<b>Terrestrial Plant</b>	1	1	Default	Default
BIV Values				
<b>Organism</b>	<b>Radionuclide</b>	<b>Soil</b>	<b>Water</b>	<b>Sediment</b>
<b>Terrestrial Animal</b>	Ra-226	6.00E-02	4.00E-01	0.00E+00
<b>Terrestrial Plant</b>	Ra-226	1.09E-01	0.00E+00	0.00E+00
No tissue concentration values were entered for this organism.				

The **Area Factor** is a correction factor for exposure and receptor residence time for the selected organism for a finite area of contamination. For this evaluation an AF of 1 was used indicating that the owl spent 100% of its time in the contaminated area.

The **Internal and External Size** is a way to provide an estimate of the organism's size. For Tier 1 and Tier 2 evaluations these values are set to a default size of a deer mouse.

**BIV** is the bioaccumulation factor and is not used in this evaluation as doses were calculated using the Allometric (the relative growth of a part in relation to the entire organism) parameters. **Table 9** provides the results of the Tier 1 evaluation.

**Table 9, Tier 1 Evaluation Results**

Burrowing Owl					
(Summed) Total Ratio for Limiting Organism: 1.57					
(Summed) Soil Ratio for limiting Organism: 1.57					
Terrestrial Animal					
	Soil				Total
Nuclide	Concentration (pCi/g)	BCG (pCi/g)	Ratio	Limiting Organism	Ratio
Ra-226	79.6	50.6	1.57	Yes	1.57
Summed	-	-	1.57	-	1.57

### 5.2.2. Tier 2 Evaluation

Because the Tier 1 ratio value exceed unity a Tier 2 assessment was performed. For the Tier 2 evaluation, the concentration of Ra-226 at the Site was adjusted to 6.64 pCi/g which is the average Site concentration of Ra-226 in the surface soil. The ESV ratio for the Tier 2 assessment is 0.131. The dose rate for the Tier 2 assessment was 0.013 R/d far below the 0.1 R/d recommended by the IAEA. A ratio of less than one suggests there is a high degree of confidence that minimal risk exists, and, therefore, is considered insignificant and no further refinement to account for site specific data is necessary. **Table 10** provides the results of the Tier 2 evaluation.

**Table 10, Tier 2 Evaluation Results**

Burrowing Owl					
Total Ratio for Limiting Organism: 0.132					
Soil Ratio for limiting Organism: 0.132					
Terrestrial Animal					
	Soil				Total
Nuclide	Concentration (pCi/g)	BCG (pCi/g)	Ratio	Limiting Organism	Ratio
Ra-226	6.69	50.6	0.13	Yes	0.13
Summed	-	-	0.13	-	0.13



## 6.0 Uncertainties in Exposure Assessment

All exposure assessments have a degree of uncertainty due to necessary simplifications and assumptions which must be made as part of the evaluation. Exposure assumptions are based on speculation regarding potential land use, assumptions concerning contaminant fate and transport, and receptor behavior. The uncertainty associated with the exposure assumptions used in the risk assessment is low to moderate, and most likely overestimates the actual risks. Major sources of uncertainty in the exposure assessment are discussed below.

Concentrations used to represent exposure point concentrations and characterizations of the distribution of contaminants can be a source of uncertainty. These issues relate to the adequate characterization of the nature and extent of contamination. It is assumed that sufficient samples have been collected from site media and appropriately analyzed to adequately describe the nature and extent of radiological contamination resulting from the release of site-related contaminants. For the HHRA dose and risk estimates, the average Site concentration was used in the calculations. By definition, half of the sample results are less than the average. Also, the distribution of the contaminate across the site is not uniform. Therefore, use of the average concentration may introduce a conservative assessment.

The risk from gamma radiation is dependent on the source surface area and thickness. Slope factors for external gamma radiation assume that the source is a semi-infinite slab. This geometry may not represent actual conditions resulting in an overestimate of risk. The radionuclide concentrations are not homogeneous in nature. However, during this HHRA, radionuclides are assumed to be uniformly contaminated across the thickness of the contaminated zone. This assumption resulted in an overestimation of dose and risk.

Exposure parameters were selected to provide a conservative, yet reasonable, estimate of potential risks to each receptor. The Site is not normally occupied and there are no structures on the site. However, it was assumed that the resident and the owl spent 100% of their work hours on the Site. This assumption likely produces a conservative exposure estimate. Site-specific measurements and data were used, as appropriate, to describe site conditions as accurately as possible. Where site-specific data were not available, parameter values were chosen to provide reasonably conservative estimates of risk, or standard default values recommended by the California Department of Toxic Substance Control (DTSC), Office of Human and Ecological Risk (HERO) Human Health Risk Note 1 (DTSC 2014) were used. Intake parameters for the various exposure pathways (soil ingestion, inhalation, external gamma) were conservatively assumed to be upper bound estimates to take account the uncertainty associated with those parameters.

Radiological risk cancer slope factors (CSF) have been developed primarily using data from groups such as the Japanese atomic bomb survivors. These individuals received large doses of radiation over a short period of time. By contrast, potential receptors in this assessment receive relatively small radiological doses over a long period of time. Although cancerous effects have

only been detected at doses several orders of magnitude larger than those estimated at the Site, it is assumed that the slope factors apply to both large and small radiological doses.

A series of reports published by the National Research Council's Committee on the Biological Effects of Ionizing Radiation (BEIR) lists additional uncertainties resulting from the use of CSFs for radionuclides. BEIR reports point out that cancer risks from exposure to radionuclides at environmental levels (typical background radiation produces approximately 300 mrem/yr) are very difficult to distinguish from background cancer rates. In addition, the calculation of CSFs is based on radium dial painter studies, atomic bomb survivor studies, each considering doses many orders of magnitude higher than those received at environmental levels. The applicability of the linear no-threshold model has been debated by many professional societies. However, the linear no-threshold model (i.e., assuming risk is linear with exposure and is possible for even the smallest doses) has been adopted by all relevant United States regulating agencies. Using this model, risks at environmental levels are calculated even at dose levels a small fraction of background.

The methodology used in this risk assessment is consistent with USEPA and NRC risk assessment guidance documents. However, due to many assumptions that must be made about exposure, there is uncertainty associated with every risk assessment. Assumptions built into the risk assessment in general, overestimate rather than underestimate potential risks, but occasionally can result in underestimating risk. In the following section, an evaluation is presented of the sources of uncertainty in the HHRA assessment and the relative influence of these sources on the results of the evaluation. Uncertainty is inherent in the selection of input parameters and in every step of the risk assessment process. Risk assessment of contaminated sites must not be viewed as yielding single value, invariant results. Rather, the results of risk assessment are estimates that span a range of possible values, and must be understood only in light of the assumptions and methods used in the evaluation.

The results of the HHRA are presented in terms of the potential for adverse effects based upon a number of conservative assumptions. The tendency to be conservative is an effort toward protecting health. Uncertainty can be found at all phases in the risk assessment: in the analytical data, the exposure assessment, the toxicity assessment, and the risk characterization. Where uncertainty does exist, the HHRA uses conservative assumptions to ensure that the outcome will be protective.

## 7.0 Site Radiological Risk Characterization

The risk assessment indicates that the HHRA exceeds the EPA risk range of  $10^{-6}$  to  $10^{-4}$ . Risks derived for the Resident, Industrial Worker, and the Construction Worker all exceeded the EPA risk range.

The ecological risk assessment passed the Tier 2 evaluation indicating that no further evaluation is necessary. Based on a comparison of average-detected concentrations of Ra-226 in Site soil, to conservatively derived ESV, ecological risks from exposure to the Ra-226 are unlikely.

It is recommended that the Site be remediated to remove the radiological contaminant.

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# APPENDIX A

## Human Health and Ecological Risk

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# Resident- Surface Dose



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Dose Conversion Factor (and Related) Parameter Summary  
 Dose Library: FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
A-1	DCF's for external ground radiation, (mrem/yr)/(pCi/g)			
A-1	At-218 (Source: FGR 12)	5.847E-03	5.847E-03	DCF1 ( 1)
A-1	Ba-210 (Source: FGR 12)	3.606E-03	3.606E-03	DCF1 ( 2)
A-1	Ba-214 (Source: FGR 12)	9.808E+00	9.808E+00	DCF1 ( 3)
A-1	Pb-210 (Source: FGR 12)	2.447E-03	2.447E-03	DCF1 ( 4)
A-1	Pb-214 (Source: FGR 12)	1.341E+00	1.341E+00	DCF1 ( 5)
A-1	Po-210 (Source: FGR 12)	5.231E-05	5.231E-05	DCF1 ( 6)
A-1	Po-214 (Source: FGR 12)	5.138E-04	5.138E-04	DCF1 ( 7)
A-1	Po-218 (Source: FGR 12)	5.642E-05	5.642E-05	DCF1 ( 8)
A-1	Ra-226 (Source: FGR 12)	3.176E-02	3.176E-02	DCF1 ( 9)
A-1	Rn-222 (Source: FGR 12)	2.354E-03	2.354E-03	DCF1 ( 10)
A-1	Tl-210 (Source: no data)	0.000E+00	-2.000E+00	DCF1 ( 11)
B-1	Dose conversion factors for inhalation, mrem/pCi:			
B-1	Pb-210+D	2.320E-02	1.360E-02	DCF2 ( 1)
B-1	Ra-226+D	8.594E-03	8.580E-03	DCF2 ( 2)
D-1	Dose conversion factors for ingestion, mrem/pCi:			
D-1	Pb-210+D	7.276E-03	5.370E-03	DCF3 ( 1)
D-1	Ra-226+D	1.321E-03	1.320E-03	DCF3 ( 2)
D-34	Food transfer factors:			
D-34	Pb-210+D , plant/soil concentration ratio, dimensionless	1.000E-02	1.000E-02	RTF ( 1,1)
D-34	Pb-210+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-04	8.000E-04	RTF ( 1,2)
D-34	Pb-210+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.000E-04	3.000E-04	RTF ( 1,3)
D-34	Ra-226+D , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF ( 2,1)
D-34	Ra-226+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF ( 2,2)
D-34	Ra-226+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-03	1.000E-03	RTF ( 2,3)
D-5	Bioaccumulation factors, fresh water, L/kg:			
D-5	Pb-210+D , fish	3.000E+02	3.000E+02	BIOFAC ( 1,1)
D-5	Pb-210+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC ( 1,2)
D-5	Ra-226+D , fish	5.000E+01	5.000E+01	BIOFAC ( 2,1)
D-5	Ra-226+D , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC ( 2,2)

#For DCF1(xxx) only, factors are for infinite depth & area. See ETFG table in Ground Pathway of Detailed Report.  
 \*Base Case means Default.lib w/o Associate Nuclide contributions.

Site-Specific Parameter Summary

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R011	Area of contaminated zone (m**2)	5.023E+03	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	5.000E+00	2.000E+00	---	THICKO
R011	Fraction of contamination that is submerged	0.000E+00	0.000E+00	---	SUBMFRACT
R011	Length parallel to aquifer flow (m)	not used	1.000E+02	---	LCZPAQ
R011	Basic radiation dose limit (mrem/yr)	2.500E+01	3.000E+01	---	BRDL
R011	Time since placement of material (yr)	0.000E+00	0.000E+00	---	TI
R011	Times for calculations (yr)	1.000E+00	1.000E+00	---	T ( 2)
R011	Times for calculations (yr)	3.000E+00	3.000E+00	---	T ( 3)
R011	Times for calculations (yr)	1.000E+01	1.000E+01	---	T ( 4)
R011	Times for calculations (yr)	2.500E+01	3.000E+01	---	T ( 5)
R011	Times for calculations (yr)	1.000E+02	1.000E+02	---	T ( 6)
R011	Times for calculations (yr)	3.000E+02	3.000E+02	---	T ( 7)
R011	Times for calculations (yr)	1.000E+03	1.000E+03	---	T ( 8)
R011	Times for calculations (yr)	not used	0.000E+00	---	T ( 9)
R011	Times for calculations (yr)	not used	0.000E+00	---	T (10)
R012	Initial principal radionuclide (pCi/g): Ra-226	8.070E+00	0.000E+00	---	S1( 2)
R012	Concentration in groundwater (pCi/L): Ra-226	not used	0.000E+00	---	W1( 2)
R013	Cover depth (m)	0.000E+00	0.000E+00	---	COVERO
R013	Density of cover material (g/cm**3)	not used	1.500E+00	---	DENSCV
R013	Cover depth erosion rate (m/yr)	not used	1.000E-03	---	DENSCZ
R013	Density of contaminated zone (g/cm**3)	1.500E+00	1.500E+00	---	VCV
R013	Contaminated zone erosion rate (m/yr)	1.000E-03	1.000E-03	---	VCZ
R013	Contaminated zone total porosity	4.000E-01	4.000E-01	---	TPCZ
R013	Contaminated zone field capacity	2.000E-01	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	1.000E+01	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	5.300E+00	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	2.000E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	not used	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	5.000E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	5.000E-01	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	0.000E+00	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	2.000E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	not used	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	not used	1.000E-03	---	EPS
R014	Density of saturated zone (g/cm**3)	not used	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	not used	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	not used	2.000E-01	---	EPSZ
R014	Saturated zone field capacity	not used	2.000E-01	---	FCSZ
R014	Saturated zone hydraulic conductivity (m/yr)	not used	1.000E+02	---	HCSZ
R014	Saturated zone hydraulic gradient	not used	2.000E-02	---	HGWT
R014	Saturated zone b parameter	not used	5.300E+00	---	BSZ
R014	Water table drop rate (m/yr)	not used	1.000E-03	---	VWT
R014	Well pump intake depth (m below water table)	not used	1.000E+01	---	DWIBWT
R014	Model: Nondispersion (ND) or Mass-Balance (MB)	not used	ND	---	MODEL
R014	Well pumping rate (m**3/yr)	not used	2.500E+02	---	UW

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R015	Number of unsaturated zone strata	not used	1	---	NS
R016	Distribution coefficients for Ra-226				
R016	Contaminated zone (cm**3/g)	7.000E+01	7.000E+01	---	DCNUCC ( 2)
R016	Saturated zone (cm**3/g)	not used	7.000E+01	---	DCNUCC ( 2)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	3.799E-04	ALEACH ( 2)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK ( 2)
R016	Distribution coefficients for daughter Pb-210				
R016	Contaminated zone (cm**3/g)	1.000E+02	1.000E+02	---	DCNUCC ( 1)
R016	Saturated zone (cm**3/g)	not used	1.000E+02	---	DCNUCC ( 1)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.661E-04	ALEACH ( 1)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK ( 1)
R017	Inhalation rate (m**3/yr)	7.300E+03	8.400E+03	---	INHALR
R017	Mass loading for inhalation (g/m**3)	1.000E-04	1.000E-04	---	MLINH
R017	Exposure duration	2.000E+01	3.000E+01	---	ED
R017	Shielding factor, inhalation	4.000E-01	4.000E-01	---	SHF3
R017	Shielding factor, external gamma	7.000E-01	7.000E-01	---	SHF1
R017	Fraction of time spent indoors	7.080E-01	5.000E-01	---	FIND
R017	Fraction of time spent outdoors (on site)	2.920E-01	2.500E-01	---	FOTD
R017	Shape factor flag, external gamma	1.000E+00	1.000E+00	>0 shows circular AREA.	FS
R017	Radii of shape factor array (used if FS = -1):				
R017	Outer annular radius (m), ring 1:	not used	5.000E+01	---	RAD_SHAPE ( 1)
R017	Outer annular radius (m), ring 2:	not used	7.071E+01	---	RAD_SHAPE ( 2)
R017	Outer annular radius (m), ring 3:	not used	0.000E+00	---	RAD_SHAPE ( 3)
R017	Outer annular radius (m), ring 4:	not used	0.000E+00	---	RAD_SHAPE ( 4)
R017	Outer annular radius (m), ring 5:	not used	0.000E+00	---	RAD_SHAPE ( 5)
R017	Outer annular radius (m), ring 6:	not used	0.000E+00	---	RAD_SHAPE ( 6)
R017	Outer annular radius (m), ring 7:	not used	0.000E+00	---	RAD_SHAPE ( 7)
R017	Outer annular radius (m), ring 8:	not used	0.000E+00	---	RAD_SHAPE ( 8)
R017	Outer annular radius (m), ring 9:	not used	0.000E+00	---	RAD_SHAPE ( 9)
R017	Outer annular radius (m), ring 10:	not used	0.000E+00	---	RAD_SHAPE (10)
R017	Outer annular radius (m), ring 11:	not used	0.000E+00	---	RAD_SHAPE (11)
R017	Outer annular radius (m), ring 12:	not used	0.000E+00	---	RAD_SHAPE (12)
R017	Fractions of annular areas within AREA:				
R017	Ring 1	not used	1.000E+00	---	FRACA ( 1)
R017	Ring 2	not used	2.732E-01	---	FRACA ( 2)
R017	Ring 3	not used	0.000E+00	---	FRACA ( 3)
R017	Ring 4	not used	0.000E+00	---	FRACA ( 4)
R017	Ring 5	not used	0.000E+00	---	FRACA ( 5)
R017	Ring 6	not used	0.000E+00	---	FRACA ( 6)
R017	Ring 7	not used	0.000E+00	---	FRACA ( 7)
R017	Ring 8	not used	0.000E+00	---	FRACA ( 8)
R017	Ring 9	not used	0.000E+00	---	FRACA ( 9)
R017	Ring 10	not used	0.000E+00	---	FRACA (10)
R017	Ring 11	not used	0.000E+00	---	FRACA (11)
R017	Ring 12	not used	0.000E+00	---	FRACA (12)

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R018	Fruits, vegetable and grain consumption (kg/yr)	not used	1.600E+02	---	DIET(1)
R018	Leafy vegetable consumption (kg/yr)	not used	1.400E+01	---	DIET(2)
R018	Milk consumption (L/yr)	not used	9.200E+01	---	DIET(3)
R018	Meat and poultry consumption (kg/yr)	not used	6.300E+01	---	DIET(4)
R018	Fish consumption (kg/yr)	not used	5.400E+00	---	DIET(5)
R018	Other seafood consumption (kg/yr)	not used	9.000E-01	---	DIET(6)
R018	Soil ingestion rate (g/yr)	3.650E+01	3.650E+01	---	SOIL
R018	Drinking water intake (L/yr)	not used	5.100E+02	---	DWI
R018	Contamination fraction of drinking water	not used	1.000E+00	---	FDW
R018	Contamination fraction of household water	not used	1.000E+00	---	FHHW
R018	Contamination fraction of livestock water	not used	1.000E+00	---	FLW
R018	Contamination fraction of irrigation water	not used	1.000E+00	---	FIRW
R018	Contamination fraction of aquatic food	not used	5.000E-01	---	FR9
R018	Contamination fraction of plant food	not used	-1	---	FPLANT
R018	Contamination fraction of meat	not used	-1	---	FMEAT
R018	Contamination fraction of milk	not used	-1	---	FMILK
R019	Livestock fodder intake for meat (kg/day)	not used	6.800E+01	---	LF15
R019	Livestock fodder intake for milk (kg/day)	not used	5.500E+01	---	LF16
R019	Livestock water intake for meat (L/day)	not used	5.000E+01	---	LM15
R019	Livestock water intake for milk (L/day)	not used	1.600E+02	---	LM16
R019	Livestock soil intake (kg/day)	not used	5.000E-01	---	LS1
R019	Mass loading for foliar deposition (g/m**3)	not used	1.000E-04	---	MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01	---	DM
R019	Depth of roots (m)	not used	9.000E-01	---	DROOT
R019	Drinking water fraction from ground water	not used	1.000E+00	---	FGWDW
R019	Household water fraction from ground water	not used	1.000E+00	---	FGWHH
R019	Livestock water fraction from ground water	not used	1.000E+00	---	FGMLW
R019	Irrigation fraction from ground water	not used	1.000E+00	---	FGWIR
R19B	Wet weight crop yield for Non-Leafy (kg/m**2)	not used	7.000E-01	---	YV(1)
R19B	Wet weight crop yield for Leafy (kg/m**2)	not used	1.500E+00	---	YV(2)
R19B	Wet weight crop yield for Fodder (kg/m**2)	not used	1.100E+00	---	YV(3)
R19B	Growing Season for Non-Leafy (years)	not used	1.700E-01	---	TE(1)
R19B	Growing Season for Leafy (years)	not used	2.500E-01	---	TE(2)
R19B	Growing Season for Fodder (years)	not used	8.000E-02	---	TE(3)
R19B	Translocation Factor for Non-Leafy	not used	1.000E-01	---	TIV(1)
R19B	Translocation Factor for Leafy	not used	1.000E+00	---	TIV(2)
R19B	Translocation Factor for Fodder	not used	1.000E+00	---	TIV(3)
R19B	Dry Foliar Interception Fraction for Non-Leafy	not used	2.500E-01	---	RDRY(1)
R19B	Dry Foliar Interception Fraction for Leafy	not used	2.500E-01	---	RDRY(2)
R19B	Dry Foliar Interception Fraction for Fodder	not used	2.500E-01	---	RDRY(3)
R19B	Wet Foliar Interception Fraction for Non-Leafy	not used	2.500E-01	---	RWET(1)
R19B	Wet Foliar Interception Fraction for Leafy	not used	2.500E-01	---	RWET(2)
R19B	Wet Foliar Interception Fraction for Fodder	not used	2.500E-01	---	RWET(3)
R19B	Weathering Removal Constant for Vegetation	not used	2.000E+01	---	WLAM
C14	C-12 concentration in water (g/cm**3)	not used	2.000E-05	---	C12WTR
C14	C-12 concentration in contaminated soil (g/g)	not used	3.000E-02	---	C12CZ
C14	Fraction of vegetation carbon from soil	not used	2.000E-02	---	CSOIL

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
C14	Fraction of vegetation carbon from air	not used	9.800E-01	---	CAIR
C14	C-14 evasion layer thickness in soil (m)	not used	3.000E-01	---	DMC
C14	C-14 evasion flux rate from soil (1/sec)	not used	7.000E-07	---	EVSN
C14	C-12 evasion flux rate from soil (1/sec)	not used	1.000E-10	---	REVSN
C14	Fraction of grain in beef cattle feed	not used	8.000E-01	---	AVFG4
C14	Fraction of grain in milk cow feed	not used	2.000E-01	---	AVFG5
STOR	Storage times of contaminated foodstuffs (days) :	1.400E+01	1.400E+01	---	STOR_T(1)
STOR	Fruits, non-leafy vegetables, and grain	1.000E+00	1.000E+00	---	STOR_T(2)
STOR	Leafy vegetables	1.000E+00	1.000E+00	---	STOR_T(3)
STOR	Milk	1.000E+01	2.000E+01	---	STOR_T(4)
STOR	Meat and poultry	7.000E+00	7.000E+00	---	STOR_T(5)
STOR	Fish	7.000E+00	7.000E+00	---	STOR_T(6)
STOR	Crustacea and mollusks	1.000E+00	1.000E+00	---	STOR_T(7)
STOR	Well water	1.000E+00	1.000E+00	---	STOR_T(8)
STOR	Surface water	1.000E+00	1.000E+00	---	STOR_T(9)
STOR	Livestock fodder	4.500E+01	4.500E+01	---	
R021	Thickness of building foundation (m)	not used	1.500E-01	---	FLOOR1
R021	Bulk density of building foundation (g/cm**3)	not used	2.400E+00	---	DENSEFL
R021	Total porosity of the cover material	not used	4.000E-01	---	TECV
R021	Total porosity of the building foundation	not used	1.000E-01	---	TPFL
R021	Volumetric water content of the cover material	not used	5.000E-02	---	PH2OCV
R021	Volumetric water content of the foundation	not used	3.000E-02	---	PH2OFL
R021	Diffusion coefficient for radon gas (m/sec): in cover material	not used	2.000E-06	---	DIFCV
R021	in foundation material	not used	3.000E-07	---	DIFFL
R021	in contaminated zone soil	not used	2.000E-06	---	DIFCZ
R021	Radon vertical dimension of mixing (m)	not used	2.000E+00	---	HMX
R021	Average building air exchange rate (1/hr)	not used	5.000E-01	---	REXG
R021	Height of the building (room) (m)	not used	2.500E+00	---	HRM
R021	Building interior area factor	not used	0.000E+00	---	FBI
R021	Building depth below ground surface (m)	not used	-1.000E+00	---	DMFL
R021	Emanating power of Rn-222 gas	not used	2.500E-01	---	EMANA(1)
R021	Emanating power of Rn-220 gas	not used	1.500E-01	---	EMANA(2)
TITL	Number of graphical time points	32	---	---	NPTS
TITL	Maximum number of integration points for dose	17	---	---	LYMAX
TITL	Maximum number of integration points for risk	1	---	---	KYMAX

Summary : Sharpe Depot Shad-041 - Resident surface

File : C:\RESRAD\_FAMILY\ONSITE\7.2\USERFILES\SHAD-041 RESIDENT SURFACE.RAD

## Summary of Pathway Selections

Pathway	User Selection
1 -- external gamma	active
2 -- inhalation (w/o radon)	active
3 -- plant ingestion	suppressed
4 -- meat ingestion	suppressed
5 -- milk ingestion	suppressed
6 -- aquatic foods	suppressed
7 -- drinking water	suppressed
8 -- soil ingestion	active
9 -- radon	suppressed
Find peak pathway doses	active

Contaminated Zone Dimensions Initial Soil Concentrations, pCi/g

Area: 5023.00 square meters Ra-226 8.070E+00

Thickness: 5.00 meters  
 Cover Depth: 0.00 meters

Total Dose TDOSE(t), mrem/yr  
 Radiation Dose Limit = 2.500E+01 mrem/yr  
 Basic  
 Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years): 0.000E+00 1.000E+00 3.000E+00 1.000E+01 2.500E+01 1.000E+02 3.000E+02 1.000E+03  
 TDOSE(t): 6.635E+01 6.636E+01 6.638E+01 6.639E+01 6.617E+01 6.310E+01 5.371E+01 3.040E+01  
 M(t): 2.654E+00 2.655E+00 2.655E+00 2.655E+00 2.647E+00 2.524E+00 2.148E+00 1.216E+00

Maximum TDOSE(t): 6.640E+01 mrem/yr at t = 6.94 ± 0.01 years

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 6.943E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.556E+01	0.9874	7.115E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.275E-01	0.0125
Total	6.556E+01	0.9874	7.115E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.275E-01	0.0125

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 6.943E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.640E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.640E+01	1.0000

\*Sum of all water independent and dependent pathways.



Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.592E+01	0.9936	4.782E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.219E-01	0.0064
Total	6.592E+01	0.9936	4.782E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.219E-01	0.0064

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.635E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.635E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.587E+01	0.9926	5.152E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.861E-01	0.0073
Total	6.587E+01	0.9926	5.152E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.861E-01	0.0073

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.636E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.636E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.577E+01	0.9907	5.855E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.084E-01	0.0092
Total	6.577E+01	0.9907	5.855E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.084E-01	0.0092

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.638E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.638E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.540E+01	0.9851	7.986E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.791E-01	0.0147
Total	6.540E+01	0.9851	7.986E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.791E-01	0.0147

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.639E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.639E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.462E+01	0.9766	1.119E-02	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.537E+00	0.0232
Total	6.462E+01	0.9766	1.119E-02	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.537E+00	0.0232

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.617E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.617E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.081E+01	0.9637	1.532E-02	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.276E+00	0.0361
Total	6.081E+01	0.9637	1.532E-02	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.276E+00	0.0361

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.310E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.310E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)													
	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	5.168E+01	0.9623	1.348E-02	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.013E+00	0.0375
Total	5.168E+01	0.9623	1.348E-02	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.013E+00	0.0375

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.371E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.371E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)													
	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	2.925E+01	0.9623	7.631E-03	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.140E+00	0.0375
Total	2.925E+01	0.9623	7.631E-03	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.140E+00	0.0375

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.040E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.040E+01	1.0000

\*Sum of all water independent and dependent pathways.



Dose/Source Ratios Summed Over All Pathways  
 Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years	(mrem/yr)/(pCi/g)
		0.000E+00	1.000E+00	3.000E+00
		1.000E+00	1.000E+01	2.500E+02
		1.000E+00	1.000E+02	3.000E+03
Ra-226-D	Ra-226-D	1.000E+00	8.218E+00	8.198E+00
Ra-226-D	Pb-210-D	1.000E+00	4.177E-03	1.235E-02
Ra-226-D	DSR(j)	8.222E+00	8.223E+00	8.226E+00

The DSR includes contributions from associated (half-life ≤ 180 days) daughters.

Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 Basic Radiation Dose Limit = 2.500E+01 mrem/yr

Nuclide (i)	t = 0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
Ra-226	3.041E+00	3.040E+00	3.039E+00	3.039E+00	3.049E+00	3.197E+00	3.756E+00	6.636E+00

Summed Dose/Source Ratios DSR(i,t) in (mrem/yr)/(pCi/g)  
 and Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 at tmin = time of minimum single radionuclide soil guideline  
 and at tmax = time of maximum total dose = 6.94 ± 0.01 years

Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i,tmin) (pCi/g)	DSR(i,tmax) (pCi/g)	G(i,tmin) (pCi/g)	G(i,tmax) (pCi/g)
Ra-226	8.070E+00	6.92 ± 0.01	8.227E+00	3.039E+00	8.227E+00	3.039E+00

Individual Nuclide Dose Summed Over All Pathways  
 Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	t=	DOSE(j,t), mrem/yr
Ra-226	Ra-226	1.000E+00	6.632E+01	6.616E+01
Pb-210	Ra-226	1.000E+00	3.371E-02	9.970E-02
				2.255E-01
				6.069E-01
				1.182E+00
				1.961E+00
				1.748E+00
				9.893E-01

THF(i) is the thread fraction of the parent nuclide.

Individual Nuclide Soil Concentration  
 Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	t=	S(j,t), pCi/g
Ra-226	Ra-226	1.000E+00	8.070E+00	8.063E+00
Pb-210	Ra-226	1.000E+00	0.000E+00	2.468E-01
				7.173E-01
				2.144E+00
				4.298E+00
				7.216E+00
				6.436E+00
				3.643E+00

THF(i) is the thread fraction of the parent nuclide.

RESCALC.EXE execution time = 14.83 seconds

# Resident- Surface Risk

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Cancer Risk Slope Factors Summary Table  
 Risk Library: HEAST 2001 Morbidity

Menu	Parameter	Current Value	Base Case*	Parameter Name
Sf-1	Ground external radiation slope factors, 1/yr per (pCi/g):			
Sf-1	Pb-210+D	4.21E-09	1.41E-09	SLPF ( 1,1)
Sf-1	Ra-226+D	8.49E-06	2.29E-08	SLPF ( 2,1)
Sf-2	Inhalation, slope factors, 1/(pCi):			
Sf-2	Pb-210+D	1.39E-08	2.77E-09	SLPF ( 1,2)
Sf-2	Ra-226+D	1.16E-08	1.15E-08	SLPF ( 2,2)
Sf-3	Food ingestion, slope factors, 1/(pCi):			
Sf-3	Pb-210+D	3.44E-09	1.18E-09	SLPF ( 1,3)
Sf-3	Ra-226+D	5.15E-10	5.14E-10	SLPF ( 2,3)
Sf-3	Water ingestion, slope factors, 1/(pCi):			
Sf-3	Pb-210+D	1.27E-09	8.81E-10	SLPF ( 1,4)
Sf-3	Ra-226+D	3.86E-10	3.85E-10	SLPF ( 2,4)
Sf-3	Soil ingestion, slope factors, 1/(pCi):			
Sf-3	Pb-210+D	2.66E-09	1.84E-09	SLPF ( 1,5)
Sf-3	Ra-226+D	7.30E-10	7.29E-10	SLPF ( 2,5)
Sf-Rn	Radon Inhalation slope factors, 1/(pCi):			
Sf-Rn	Rn-222	1.80E-12	1.80E-12	SLPFRN(1,1)
Sf-Rn	Po-218	3.70E-12	3.70E-12	SLPFRN(1,2)
Sf-Rn	Pb-214	6.20E-12	6.20E-12	SLPFRN(1,3)
Sf-Rn	Bi-214	1.50E-11	1.50E-11	SLPFRN(1,4)
Sf-Rn	Radon K factors, (mrem/WLM):			
Sf-Rn	Rn-222 Indoor	7.60E+02	7.60E+02	KFACTR(1,1)
Sf-Rn	Rn-222 Outdoor	5.70E+02	5.70E+02	KFACTR(1,2)

\*Base Case means Default.Lib w/o Associate Nuclide contributions.

Risk Slope and Environmental Transport Factors for the Ground Pathway

Nuclide (i)	Slope(i) *	ETFG(i,t) At Time in Years (dimensionless)						
		t= 0.000E+00	1.000E+00	7.525E-01	3.000E+00	1.000E+01	2.500E+02	1.000E+03
At-218	3.570E-09	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01
Bi-210	2.760E-09	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01
Bi-214	7.480E-06	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01
Pb-210	1.410E-09	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01
Pb-214	9.820E-07	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01
Po-210	3.950E-11	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01
Po-214	3.860E-10	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01
Po-218	4.260E-11	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01
Ra-226	2.290E-08	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01
Rn-222	1.740E-09	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01
Tl-210	0.000E+00	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01

\* - Units are l/yr per (pCi/g) at infinite depth and area. Multiplication by ETFG(i,t) converts to site conditions.

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 0.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	5.345E-01	0.000E+00	0.000E+00	0.000E+00	2.946E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.946E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 0.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil					
	risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.				
Pb-210	0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000	
Ra-226	1.001E-03	0.9956		1.236E-07	0.0001		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		4.302E-06	0.0043		0.000E+00	0.0000	
Total	1.001E-03	0.9956		1.236E-07	0.0001		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		4.302E-06	0.0043		0.000E+00	0.0000	

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.005E-03	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.005E-03	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 0.000E+00 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.001E-03	0.9956	1.236E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.302E-06	0.0043
Total	1.001E-03	0.9956	1.236E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.302E-06	0.0043



Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Radio- Nuclide	Water Dependent Pathways														
	Water		Fish		Radon		Plant		Meat		Milk		All pathways		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.000E-03	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.000E-03	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	1.635E-02	0.000E+00	0.000E+00	0.000E+00	9.010E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.010E+00
Ra-226	5.340E-01	0.000E+00	0.000E+00	0.000E+00	2.943E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.943E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil  
 and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 1.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	1.544E-08	0.0000	4.541E-09	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	4.796E-07	0.0005
Ra-226	1.000E-03	0.9951	1.235E-07	0.0001	0.000E+00	0.000E+00	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.299E-06	0.0043
Total	1.000E-03	0.9951	1.281E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.778E-06	0.0048

Water Independent Pathways (Inhalation excludes radon)

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.996E-07	0.0005
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.005E-03	0.9995
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.005E-03	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+00 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.000E-03	0.9951	1.281E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.778E-06	0.0048
Total	1.000E-03	0.9951	1.281E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.778E-06	0.0048

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.005E-03	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.005E-03	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	4.751E-02	0.000E+00	0.000E+00	0.000E+00	2.618E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.618E+01
Ra-226	5.332E-01	0.000E+00	0.000E+00	0.000E+00	2.938E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.938E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 3.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	4.488E-08	0.0000	1.319E-08	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.394E-06	0.0014	4.292E-06	0.0043
Ra-226	9.985E-04	0.9942	1.233E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.685E-06	0.0057	1.365E-07	0.0001
Total	9.986E-04	0.9942	1.365E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.685E-06	0.0057	1.365E-07	0.0001

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.452E-06	0.0014
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.003E-03	0.9986
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.004E-03	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 3.000E+00 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	9.986E-04	0.9942	1.365E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.685E-06	0.0057
Total	9.986E-04	0.9942	1.365E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.685E-06	0.0057

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	1.420E+00	0.000E+00	0.000E+00	0.000E+00	7.826E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.826E+01
Ra-226	5.301E-01	0.000E+00	0.000E+00	0.000E+00	2.922E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.922E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 1.000E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	1.342E-07	0.0001	3.944E-08	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	4.166E-06	0.0042
Ra-226	9.928E-04	0.9913	1.226E-07	0.0001	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	4.267E-06	0.0043
Total	9.930E-04	0.9914	1.621E-07	0.0002	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	8.433E-06	0.0084



Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.339E-06	0.0043
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.972E-04	0.9957
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.002E-03	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+01 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	9.930E-04	0.9914	1.621E-07	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.433E-06	0.0084
Total	9.930E-04	0.9914	1.621E-07	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.433E-06	0.0084

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.002E-03	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.002E-03	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 2.500E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	2.846E-01	0.000E+00	0.000E+00	0.000E+00	1.569E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.569E+02
Ra-226	5.237E-01	0.000E+00	0.000E+00	0.000E+00	2.886E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.886E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 2.500E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil					
	risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.				
Pb-210	2.689E-07	0.0003		7.905E-08	0.0001		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		8.350E-06	0.0084	
Ra-226	9.808E-04	0.9869		1.211E-07	0.0001		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		4.216E-06	0.0042	
Total	9.811E-04	0.9872		2.002E-07	0.0002		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		1.257E-05	0.0126	

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.698E-06	0.0088
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.851E-04	0.9912
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.938E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 2.500E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	9.811E-04	0.9872	2.002E-07	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.257E-05	0.0126
Total	9.811E-04	0.9872	2.002E-07	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.257E-05	0.0126

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.938E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.938E-04	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	4.779E-01	0.000E+00	0.000E+00	0.000E+00	2.634E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.634E+02
Ra-226	4.927E-01	0.000E+00	0.000E+00	0.000E+00	2.716E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.716E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 1.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	4.515E-07	0.0005	1.327E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.402E-05	0.0149
Ra-226	9.228E-04	0.9802	1.140E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.966E-06	0.0042
Total	9.232E-04	0.9806	2.467E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.799E-05	0.0191

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.460E-05	0.0155
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.269E-04	0.9845
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.415E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+02 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	9.232E-04	0.9806	2.467E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.799E-05	0.0191
Total	9.232E-04	0.9806	2.467E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.799E-05	0.0191

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.415E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.415E-04	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides



Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+02 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	4.262E-01	0.000E+00	0.000E+00	0.000E+00	2.349E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.349E+02
Ra-226	4.188E-01	0.000E+00	0.000E+00	0.000E+00	2.308E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.308E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 3.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 3.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio-Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	4.027E-07	0.0005	1.184E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.250E-05	0.0156
Ra-226	7.843E-04	0.9794	9.687E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.371E-06	0.0042
Total	7.847E-04	0.9799	2.152E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.588E-05	0.0198

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.303E-05	0.0163
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.878E-04	0.9837
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.008E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 3.000E+02 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	7.847E-04	0.9799	2.152E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.588E-05	0.0198
Total	7.847E-04	0.9799	2.152E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.588E-05	0.0198

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.008E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.008E-04	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+03 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	2.413E-01	0.000E+00	0.000E+00	0.000E+00	1.330E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.330E+02
Ra-226	2.370E-01	0.000E+00	0.000E+00	0.000E+00	1.306E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.306E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 1.000E+03 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	2.279E-07	0.0005	6.701E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.078E-06	0.0156
Ra-226	4.439E-04	0.9794	5.483E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.908E-06	0.0042
Total	4.441E-04	0.9799	1.218E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.986E-06	0.0198

Water Independent Pathways (Inhalation excludes radon)

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.373E-06	0.0163
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.459E-04	0.9837
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.532E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+03 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	4.441E-04	0.9799	1.218E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.986E-06	0.0198
Total	4.441E-04	0.9799	1.218E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.986E-06	0.0198

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.532E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.532E-04	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

# Resident- Subsurface Dose

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Summary : Sharpe Depot Shad-041 - Resident subsurface  
 File : C:\RESRAD\_FAMILY\ONSITE\7.2\USERFILES\SHAD-041 RESIDENTSUBSURFACE.RAD

Dose Conversion Factor (and Related) Parameter Summary  
 Dose Library: FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
A-1	DCF's for external ground radiation, (mrem/yr) / (pCi/g)			
A-1	At-218 (Source: FGR 12)	5.847E-03	5.847E-03	DCF1 ( 1)
A-1	Bi-210 (Source: FGR 12)	3.606E-03	3.606E-03	DCF1 ( 2)
A-1	Bi-214 (Source: FGR 12)	9.808E+00	9.808E+00	DCF1 ( 3)
A-1	Pb-210 (Source: FGR 12)	2.447E-03	2.447E-03	DCF1 ( 4)
A-1	Pb-214 (Source: FGR 12)	1.341E+00	1.341E+00	DCF1 ( 5)
A-1	Po-210 (Source: FGR 12)	5.231E-05	5.231E-05	DCF1 ( 6)
A-1	Po-214 (Source: FGR 12)	5.138E-04	5.138E-04	DCF1 ( 7)
A-1	Po-218 (Source: FGR 12)	5.642E-05	5.642E-05	DCF1 ( 8)
A-1	Ra-226 (Source: FGR 12)	3.176E-02	3.176E-02	DCF1 ( 9)
A-1	Rn-222 (Source: FGR 12)	2.354E-03	2.354E-03	DCF1 ( 10)
A-1	Tl-210 (Source: no data)	0.000E+00	-2.000E+00	DCF1 ( 11)
B-1	Dose conversion factors for inhalation, mrem/pCi:			
B-1	Pb-210+D	2.320E-02	1.360E-02	DCF2 ( 1)
B-1	Ra-226+D	8.594E-03	8.580E-03	DCF2 ( 2)
D-1	Dose conversion factors for ingestion, mrem/pCi:			
D-1	Pb-210+D	7.276E-03	5.370E-03	DCF3 ( 1)
D-1	Ra-226+D	1.321E-03	1.320E-03	DCF3 ( 2)
D-34	Food transfer factors:			
D-34	Pb-210+D , plant/soil concentration ratio, dimensionless	1.000E-02	1.000E-02	RTF ( 1,1)
D-34	Pb-210+D , beef/livestock-intake ratio, (pCi/kg) / (pCi/d)	8.000E-04	8.000E-04	RTF ( 1,2)
D-34	Pb-210+D , milk/livestock-intake ratio, (pCi/L) / (pCi/d)	3.000E-04	3.000E-04	RTF ( 1,3)
D-34	Ra-226+D , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF ( 2,1)
D-34	Ra-226+D , beef/livestock-intake ratio, (pCi/kg) / (pCi/d)	1.000E-03	1.000E-03	RTF ( 2,2)
D-34	Ra-226+D , milk/livestock-intake ratio, (pCi/L) / (pCi/d)	1.000E-03	1.000E-03	RTF ( 2,3)
D-5	Bioaccumulation factors, fresh water, L/kg:			
D-5	Pb-210+D , fish	3.000E+02	3.000E+02	BIOFAC ( 1,1)
D-5	Pb-210+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC ( 1,2)
D-5	Ra-226+D , fish	5.000E+01	5.000E+01	BIOFAC ( 2,1)
D-5	Ra-226+D , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC ( 2,2)

#For DCF1(xxxx) only, factors are for infinite depth & area. See ETFG table in Ground Pathway of Detailed Report.  
 \*Base Case means Default.Lib w/o Associate Nuclide contributions.

Site-Specific Parameter Summary

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R011	Area of contaminated zone (m**2)	5.023E+03	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	5.000E+00	2.000E+00	---	THICKO
R011	Fraction of contamination that is submerged	0.000E+00	0.000E+00	---	SUBMFRACT
R011	Length parallel to aquifer flow (m)	not used	1.000E+02	---	LCZPAQ
R011	Basic radiation dose limit (mrem/yr)	2.500E+01	3.000E+01	---	BRDL
R011	Time since placement of material (yr)	0.000E+00	0.000E+00	---	TI
R011	Times for calculations (yr)	1.000E+00	1.000E+00	---	T ( 2)
R011	Times for calculations (yr)	3.000E+00	3.000E+00	---	T ( 3)
R011	Times for calculations (yr)	1.000E+01	1.000E+01	---	T ( 4)
R011	Times for calculations (yr)	2.500E+01	3.000E+01	---	T ( 5)
R011	Times for calculations (yr)	1.000E+02	1.000E+02	---	T ( 6)
R011	Times for calculations (yr)	3.000E+02	3.000E+02	---	T ( 7)
R011	Times for calculations (yr)	1.000E+03	1.000E+03	---	T ( 8)
R011	Times for calculations (yr)	not used	0.000E+00	---	T ( 9)
R011	Times for calculations (yr)	not used	0.000E+00	---	T (10)
R012	Initial principal radionuclide (pCi/g): Ra-226	1.960E+00	0.000E+00	---	SI ( 2)
R012	Concentration in groundwater (pCi/L): Ra-226	not used	0.000E+00	---	WI ( 2)
R013	Cover depth (m)	0.000E+00	0.000E+00	---	COVERO
R013	Density of cover material (g/cm**3)	not used	1.500E+00	---	DENSCV
R013	Cover depth erosion rate (m/yr)	not used	1.000E-03	---	VCV
R013	Density of contaminated zone (g/cm**3)	1.500E+00	1.500E+00	---	DENSCZ
R013	Contaminated zone erosion rate (m/yr)	1.000E-03	1.000E-03	---	V CZ
R013	Contaminated zone total porosity	4.000E-01	4.000E-01	---	TPCZ
R013	Contaminated zone field capacity	2.000E-01	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	1.000E+01	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	5.300E+00	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	2.000E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	not used	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	5.000E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	5.000E-01	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	0.000E+00	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	2.000E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	not used	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	not used	1.000E-03	---	EPS
R014	Density of saturated zone (g/cm**3)	not used	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	not used	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	not used	2.000E-01	---	EPSZ
R014	Saturated zone field capacity	not used	2.000E-01	---	FCSZ
R014	Saturated zone hydraulic conductivity (m/yr)	not used	1.000E+02	---	HCSZ
R014	Saturated zone hydraulic gradient	not used	2.000E-02	---	HGWT
R014	Saturated zone b parameter	not used	5.300E+00	---	BSZ
R014	Water table drop rate (m/yr)	not used	1.000E+00	---	VWT
R014	Well pump intake depth (m below water table)	not used	1.000E+01	---	DWIBWT
R014	Model: Nondispersion (ND) or Mass-Balance (MB)	not used	ND	---	MODEL
R014	Well pumping rate (m**3/yr)	not used	2.500E+02	---	UW

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R015	Number of unsaturated zone strata	not used	1	---	NS
R016	Distribution coefficients for Ra-226	7.000E+01	7.000E+01	---	DCNUCC ( 2)
R016	Contaminated zone (cm**3/g)	not used	7.000E+01	---	DCNUCS ( 2)
R016	Saturated zone (cm**3/g)	0.000E+00	0.000E+00	3.799E-04	ALEACH ( 2)
R016	Leach rate (/Yr)	0.000E+00	0.000E+00	not used	SOLUBK ( 2)
R016	Solubility constant	0.000E+00	0.000E+00		
R016	Distribution coefficients for daughter Pb-210	1.000E+02	1.000E+02	---	DCNUCC ( 1)
R016	Contaminated zone (cm**3/g)	not used	1.000E+02	---	DCNUCS ( 1)
R016	Saturated zone (cm**3/g)	0.000E+00	0.000E+00	2.661E-04	ALEACH ( 1)
R016	Leach rate (/Yr)	0.000E+00	0.000E+00	not used	SOLUBK ( 1)
R016	Solubility constant	0.000E+00	0.000E+00		
R017	Inhalation rate (m**3/yr)	7.300E+03	8.400E+03	---	INHALR
R017	Mass loading for inhalation (g/m**3)	1.000E-04	1.000E-04	---	MLINH
R017	Exposure duration	2.000E+01	3.000E+01	---	ED
R017	Shielding factor, inhalation	4.000E-01	4.000E-01	---	SHF3
R017	Shielding factor, external gamma	7.000E-01	7.000E-01	---	SHF1
R017	Fraction of time spent indoors	7.080E-01	5.000E-01	---	FIND
R017	Fraction of time spent outdoors (on site)	2.920E-01	2.500E-01	---	FOTD
R017	Shape factor flag, external gamma	1.000E+00	1.000E+00	>0 shows circular AREA.	FS
R017	Radii of shape factor array (used if FS = -1):				
R017	Outer annular radius (m), ring 1:	not used	5.000E+01	---	RAD_SHAPE ( 1)
R017	Outer annular radius (m), ring 2:	not used	7.071E+01	---	RAD_SHAPE ( 2)
R017	Outer annular radius (m), ring 3:	not used	0.000E+00	---	RAD_SHAPE ( 3)
R017	Outer annular radius (m), ring 4:	not used	0.000E+00	---	RAD_SHAPE ( 4)
R017	Outer annular radius (m), ring 5:	not used	0.000E+00	---	RAD_SHAPE ( 5)
R017	Outer annular radius (m), ring 6:	not used	0.000E+00	---	RAD_SHAPE ( 6)
R017	Outer annular radius (m), ring 7:	not used	0.000E+00	---	RAD_SHAPE ( 7)
R017	Outer annular radius (m), ring 8:	not used	0.000E+00	---	RAD_SHAPE ( 8)
R017	Outer annular radius (m), ring 9:	not used	0.000E+00	---	RAD_SHAPE ( 9)
R017	Outer annular radius (m), ring 10:	not used	0.000E+00	---	RAD_SHAPE (10)
R017	Outer annular radius (m), ring 11:	not used	0.000E+00	---	RAD_SHAPE (11)
R017	Outer annular radius (m), ring 12:	not used	0.000E+00	---	RAD_SHAPE (12)
R017	Fractions of annular areas within AREA:				
R017	Ring 1	not used	1.000E+00	---	FRACA ( 1)
R017	Ring 2	not used	2.732E-01	---	FRACA ( 2)
R017	Ring 3	not used	0.000E+00	---	FRACA ( 3)
R017	Ring 4	not used	0.000E+00	---	FRACA ( 4)
R017	Ring 5	not used	0.000E+00	---	FRACA ( 5)
R017	Ring 6	not used	0.000E+00	---	FRACA ( 6)
R017	Ring 7	not used	0.000E+00	---	FRACA ( 7)
R017	Ring 8	not used	0.000E+00	---	FRACA ( 8)
R017	Ring 9	not used	0.000E+00	---	FRACA ( 9)
R017	Ring 10	not used	0.000E+00	---	FRACA (10)
R017	Ring 11	not used	0.000E+00	---	FRACA (11)
R017	Ring 12	not used	0.000E+00	---	FRACA (12)

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R018	Fruits, vegetables and grain consumption (kg/yr)	not used	1.600E+02	---	DIET (1)
R018	Leafy vegetable consumption (kg/yr)	not used	1.400E+01	---	DIET (2)
R018	Milk consumption (l/yr)	not used	9.200E+01	---	DIET (3)
R018	Meat and poultry consumption (kg/yr)	not used	6.300E+01	---	DIET (4)
R018	Fish consumption (kg/yr)	not used	5.400E+00	---	DIET (5)
R018	Other seafood consumption (kg/yr)	not used	9.000E-01	---	DIET (6)
R018	Soil ingestion rate (g/yr)	3.650E+01	3.650E+01	---	SOIL
R018	Drinking water intake (L/yr)	not used	5.100E+02	---	DWI
R018	Contamination fraction of drinking water	not used	1.000E+00	---	FDW
R018	Contamination fraction of household water	not used	1.000E+00	---	FHHW
R018	Contamination fraction of livestock water	not used	1.000E+00	---	FLW
R018	Contamination fraction of irrigation water	not used	1.000E+00	---	FIRW
R018	Contamination fraction of aquatic food	not used	5.000E-01	---	FR9
R018	Contamination fraction of plant food	not used	-1	---	FPLANT
R018	Contamination fraction of meat	not used	-1	---	FMEAT
R018	Contamination fraction of milk	not used	-1	---	FMILK
R019	Livestock fodder intake for meat (kg/day)	not used	6.800E+01	---	LFI5
R019	Livestock fodder intake for milk (kg/day)	not used	5.500E+01	---	LFI6
R019	Livestock water intake for meat (l/day)	not used	5.000E+01	---	LWI5
R019	Livestock water intake for milk (l/day)	not used	1.600E+02	---	LWI6
R019	Livestock soil intake (kg/day)	not used	5.000E-01	---	LSI
R019	Mass loading for foliar deposition (g/m**3)	not used	1.000E-04	---	MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01	---	DM
R019	Depth of roots (m)	not used	9.000E-01	---	DROOT
R019	Drinking water fraction from ground water	not used	1.000E+00	---	FGWDM
R019	Household water fraction from ground water	not used	1.000E+00	---	FGWHH
R019	Livestock water fraction from ground water	not used	1.000E+00	---	FGWLW
R019	Irrigation fraction from ground water	not used	1.000E+00	---	FGWIR
R19B	Wet weight crop yield for Non-Leafy (kg/m**2)	not used	7.000E-01	---	YV (1)
R19B	Wet weight crop yield for Leafy (kg/m**2)	not used	1.500E+00	---	YV (2)
R19B	Wet weight crop yield for Fodder (kg/m**2)	not used	1.100E+00	---	YV (3)
R19B	Growing Season for Non-Leafy (years)	not used	1.700E-01	---	TE (1)
R19B	Growing Season for Leafy (years)	not used	2.500E-01	---	TE (2)
R19B	Growing Season for Fodder (years)	not used	8.000E-02	---	TE (3)
R19B	Translocation Factor for Non-Leafy	not used	1.000E-01	---	TIV (1)
R19B	Translocation Factor for Leafy	not used	1.000E+00	---	TIV (2)
R19B	Translocation Factor for Fodder	not used	1.000E+00	---	TIV (3)
R19B	Dry Foliar Interception Fraction for Non-Leafy	not used	2.500E-01	---	RDRY (1)
R19B	Dry Foliar Interception Fraction for Leafy	not used	2.500E-01	---	RDRY (2)
R19B	Dry Foliar Interception Fraction for Fodder	not used	2.500E-01	---	RDRY (3)
R19B	Wet Foliar Interception Fraction for Non-Leafy	not used	2.500E-01	---	RWET (1)
R19B	Wet Foliar Interception Fraction for Leafy	not used	2.500E-01	---	RWET (2)
R19B	Wet Foliar Interception Fraction for Fodder	not used	2.500E-01	---	RWET (3)
R19B	Weathering Removal Constant for Vegetation	not used	2.000E+01	---	WLAM
C14	C-12 concentration in water (g/cm**3)	not used	2.000E-05	---	Cl2WTR
C14	C-12 concentration in contaminated soil (g/g)	not used	3.000E-02	---	Cl2CZ
C14	Fraction of vegetation carbon from soil	not used	2.000E-02	---	CSOIL

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
C14	Fraction of vegetation carbon from air	not used	9.800E-01	---	CAIR
C14	C-14 evasion layer thickness in soil (m)	not used	3.000E-01	---	DMC
C14	C-14 evasion flux rate from soil (1/sec)	not used	7.000E-07	---	EVSN
C14	C-12 evasion flux rate from soil (1/sec)	not used	1.000E-10	---	REVSN
C14	Fraction of grain in beef cattle feed	not used	8.000E-01	---	AVFG4
C14	Fraction of grain in milk cow feed	not used	2.000E-01	---	AVFG5
STOR	Storage times of contaminated foodstuffs (days):				
STOR	Fruits, non-leafy vegetables, and grain	1.400E+01	1.400E+01	---	STOR_T(1)
STOR	Leafy vegetables	1.000E+00	1.000E+00	---	STOR_T(2)
STOR	Milk	1.000E+00	1.000E+00	---	STOR_T(3)
STOR	Meat and poultry	2.000E+01	2.000E+01	---	STOR_T(4)
STOR	Fish	7.000E+00	7.000E+00	---	STOR_T(5)
STOR	Crustacea and mollusks	7.000E+00	7.000E+00	---	STOR_T(6)
STOR	Well water	1.000E+00	1.000E+00	---	STOR_T(7)
STOR	Surface water	1.000E+00	1.000E+00	---	STOR_T(8)
STOR	Livestock fodder	4.500E+01	4.500E+01	---	STOR_T(9)
R021	Thickness of building foundation (m)	not used	1.500E-01	---	FLOOR1
R021	Bulk density of building foundation (g/cm**3)	not used	2.400E+00	---	DENSFL
R021	Total porosity of the cover material	not used	4.000E-01	---	TPCV
R021	Total porosity of the building foundation	not used	1.000E-01	---	TPFL
R021	Volumetric water content of the cover material	not used	5.000E-02	---	PH2OCV
R021	Volumetric water content of the foundation	not used	3.000E-02	---	PH2OFL
R021	Diffusion coefficient for radon gas (m/sec):				
R021	in cover material	not used	2.000E-06	---	DIFCV
R021	in foundation material	not used	3.000E-07	---	DIFFL
R021	in contaminated zone soil	not used	2.000E-06	---	DIFCZ
R021	Radon vertical dimension of mixing (m)	not used	2.000E+00	---	HMIX
R021	Average building air exchange rate (1/hr)	not used	5.000E-01	---	REXG
R021	Height of the building (room) (m)	not used	2.500E+00	---	HRM
R021	Building interior area factor	not used	0.000E+00	---	FAI
R021	Building depth below ground surface (m)	not used	-1.000E+00	---	DMFL
R021	Emanating power of Rn-222 gas	not used	2.500E-01	---	EMANA(1)
R021	Emanating power of Rn-220 gas	not used	1.500E-01	---	EMANA(2)
TITL	Number of graphical time points	32	---	---	NPTS
TITL	Maximum number of integration points for dose	17	---	---	LYMAX
TITL	Maximum number of integration points for risk	1	---	---	KYMAX

Summary : Sharpe Depot Shad-041 - Resident subsurface

File : C:\RESRAD\_FAMILY\ONSITE\7.2\USERFILES\SHAD-041 RESIDENTSUBSURFACE.RAD

## Summary of Pathway Selections

Pathway	User Selection
1 -- external gamma	active
2 -- inhalation (w/o radon)	active
3 -- plant ingestion	suppressed
4 -- meat ingestion	suppressed
5 -- milk ingestion	suppressed
6 -- aquatic foods	suppressed
7 -- drinking water	suppressed
8 -- soil ingestion	active
9 -- radon	suppressed
Find peak pathway doses	active

Contaminated Zone Dimensions Initial Soil Concentrations, pCi/g  
 Area: 5023.00 square meters Ra-226 1.960E+00  
 Thickness: 5.00 meters  
 Cover Depth: 0.00 meters

Total Dose TDOSE(t), mrem/yr  
 Basic Radiation Dose Limit = 2.500E+01 mrem/yr  
 Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
TDOSE(t):	1.612E+01	1.612E+01	1.612E+01	1.612E+01	1.607E+01	1.533E+01	1.304E+01	7.383E+00
M(t):	6.446E-01	6.447E-01	6.449E-01	6.450E-01	6.428E-01	6.130E-01	5.218E-01	2.953E-01

Maximum TDOSE(t): 1.613E+01 mrem/yr at t = 6.98 ± 0.01 years

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 6.977E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.592E+01	0.9874	1.731E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.014E-01	0.0125
Total	1.592E+01	0.9874	1.731E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.014E-01	0.0125

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 6.977E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.613E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.613E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.601E+01	0.9936	1.161E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.025E-01	0.0064
Total	1.601E+01	0.9936	1.161E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.025E-01	0.0064

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.612E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.612E+01	1.0000

\*Sum of all water independent and dependent pathways.



Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.600E+01	0.9926	1.251E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.181E-01	0.0073
Total	1.600E+01	0.9926	1.251E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.181E-01	0.0073

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.612E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.612E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)									
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	1.597E+01	0.9907	1.422E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	1.478E-01	0.0092
Total	1.597E+01	0.9907	1.422E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	1.478E-01	0.0092

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Radio- Nuclide	Water Dependent Pathways									
	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.612E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.612E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.588E+01	0.9851	1.940E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.378E-01	0.0147
Total	1.588E+01	0.9851	1.940E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.378E-01	0.0147

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.612E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.612E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.569E+01	0.9766	2.717E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.733E-01	0.0232
Total	1.569E+01	0.9766	2.717E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.733E-01	0.0232

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.607E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.607E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.477E+01	0.9637	3.721E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.527E-01	0.0361
Total	1.477E+01	0.9637	3.721E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.527E-01	0.0361

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.533E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.533E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)									
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	1.255E+01	0.9623	3.274E-03	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	4.890E-01	0.0375
Total	1.255E+01	0.9623	3.274E-03	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	4.890E-01	0.0375

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Radio- Nuclide	Water Dependent Pathways						All Pathways*			
	Water	Fish	Radon	Plant	Meat	Milk				
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.304E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.304E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	7.105E+00	0.9623	1.853E-03	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.768E-01	0.0375
Total	7.105E+00	0.9623	1.853E-03	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.768E-01	0.0375

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.383E+00	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.383E+00	1.0000

\*Sum of all water independent and dependent pathways.

Dose/Source Ratios Summed Over All Pathways  
 Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr) / (pCi/g)
		0.000E+00	1.000E+00 3.000E+00 1.000E+01 2.500E+02 3.000E+02 1.000E+03
Ra-226+D	Ra-226+D	1.000E+00	8.211E+00 8.198E+00 8.151E+00 8.052E+00 7.576E+00 6.439E+00 3.644E+00
Ra-226+D	Pb-210+D	1.000E+00	4.177E-03 1.235E-02 2.794E-02 7.520E-02 1.465E-01 2.430E-01 2.166E-01 1.226E-01
Ra-226+D	ESDR(j)	8.222E+00	8.223E+00 8.226E+00 8.226E+00 8.199E+00 7.819E+00 6.656E+00 3.767E+00

The DSR includes contributions from associated (half-life ≤ 180 days) daughters.

Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 Basic Radiation Dose Limit = 2.500E+01 mrem/yr

Nuclide (i)	t =	0.000E+00	1.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
Ra-226		3.041E+00	3.040E+00	3.039E+00	3.049E+00	3.197E+00	3.756E+00	6.636E+00

Summed Dose/Source Ratios DSR(i,t) in (mrem/yr)/(pCi/g)  
 and Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 at tmin = time of minimum single radionuclide soil guideline  
 and at tmax = time of maximum total dose = 6.98 ± 0.01 years

Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i, tmin) (pCi/g)	G(i, tmin)	DSR(i, tmax)	G(i, tmax) (pCi/g)
Ra-226	1.960E+00	6.92 ± 0.01	8.227E+00	3.039E+00	8.227E+00	3.039E+00



Individual Nuclide Dose Summed Over All Pathways  
 Parent Nuclide and Branch Fraction Indicated

Nuclide Parent (j)	THF(i)	t	DOSE(j,t), mrem/yr
Ra-226	1.000E+00	1.611E+01	1.000E+01
Ra-226	1.000E+00	1.609E+01	1.000E+02
Pb-210	1.000E+00	8.187E-03	1.000E+01
Pb-210	1.000E+00	2.422E-02	1.000E+02
Pb-210	1.000E+00	5.476E-02	1.000E+02
Pb-210	1.000E+00	1.607E+01	1.000E+02
Pb-210	1.000E+00	1.598E+01	1.000E+02
Pb-210	1.000E+00	1.578E+01	1.000E+02
Pb-210	1.000E+00	1.474E-01	1.000E+02
Pb-210	1.000E+00	2.872E-01	1.000E+02
Pb-210	1.000E+00	4.763E-01	1.000E+02
Pb-210	1.000E+00	4.245E-01	1.000E+02
Pb-210	1.000E+00	1.262E+01	1.000E+02
Pb-210	1.000E+00	1.485E+01	1.000E+02
Pb-210	1.000E+00	7.143E+00	1.000E+02
Pb-210	1.000E+00	1.262E+01	1.000E+02
Pb-210	1.000E+00	1.485E+01	1.000E+02
Pb-210	1.000E+00	7.143E+00	1.000E+02

THF(i) is the thread fraction of the parent nuclide.

Individual Nuclide Soil Concentration  
 Parent Nuclide and Branch Fraction Indicated

Nuclide Parent (j)	THF(i)	t	S(j,t), pCi/g
Ra-226	1.000E+00	1.000E+00	1.000E+01
Ra-226	1.000E+00	1.958E+00	1.000E+01
Pb-210	1.000E+00	0.000E+00	1.000E+01
Pb-210	1.000E+00	5.995E-02	1.000E+01
Pb-210	1.000E+00	1.742E-01	1.000E+01
Pb-210	1.000E+00	1.955E+00	1.000E+01
Pb-210	1.000E+00	1.944E+00	1.000E+01
Pb-210	1.000E+00	1.921E+00	1.000E+01
Pb-210	1.000E+00	1.807E+00	1.000E+01
Pb-210	1.000E+00	1.536E+00	1.000E+01
Pb-210	1.000E+00	8.692E-01	1.000E+01
Pb-210	1.000E+00	1.536E+00	1.000E+01
Pb-210	1.000E+00	8.692E-01	1.000E+01
Pb-210	1.000E+00	1.536E+00	1.000E+01
Pb-210	1.000E+00	8.692E-01	1.000E+01

THF(i) is the thread fraction of the parent nuclide.

# Resident- Subsurface Risk

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Cancer Risk Slope Factors Summary Table  
 Risk Library: HEAST 2001 Morbidity

Menu	Parameter	Current Value	Base Case*	Parameter Name
Sf-1	Ground external radiation slope factors, 1/yr per (pCi/g):			
Sf-1	Pb-210+D	4.21E-09	1.41E-09	SLPF ( 1,1)
Sf-1	Ra-226+D	8.49E-06	2.29E-08	SLPF ( 2,1)
Sf-2	Inhalation, slope factors, 1/(pCi):			
Sf-2	Pb-210+D	1.39E-08	2.77E-09	SLPF ( 1,2)
Sf-2	Ra-226+D	1.16E-08	1.15E-08	SLPF ( 2,2)
Sf-3	Food ingestion, slope factors, 1/(pCi):			
Sf-3	Pb-210+D	3.44E-09	1.18E-09	SLPF ( 1,3)
Sf-3	Ra-226+D	5.15E-10	5.14E-10	SLPF ( 2,3)
Sf-3	Water ingestion, slope factors, 1/(pCi):			
Sf-3	Pb-210+D	1.27E-09	8.81E-10	SLPF ( 1,4)
Sf-3	Ra-226+D	3.86E-10	3.85E-10	SLPF ( 2,4)
Sf-3	Soil ingestion, slope factors, 1/(pCi):			
Sf-3	Pb-210+D	2.66E-09	1.84E-09	SLPF ( 1,5)
Sf-3	Ra-226+D	7.30E-10	7.29E-10	SLPF ( 2,5)
Sf-Rn	Radon Inhalation slope factors, 1/(pCi):			
Sf-Rn	Rn-222	1.80E-12	1.80E-12	SLPFRN(1,1)
Sf-Rn	Po-218	3.70E-12	3.70E-12	SLPFRN(1,2)
Sf-Rn	Pb-214	6.20E-12	6.20E-12	SLPFRN(1,3)
Sf-Rn	Bi-214	1.50E-11	1.50E-11	SLPFRN(1,4)
Sf-Rn	Radon K factors, (mrem/WLM):			
Sf-Rn	Rn-222 Indoor	7.60E+02	7.60E+02	KFACTR(1,1)
Sf-Rn	Rn-222 Outdoor	5.70E+02	5.70E+02	KFACTR(1,2)

\*Base Case means Default.Lib w/o Associate Nuclide contributions.

Risk Slope and Environmental Transport Factors for the Ground Pathway

Nuclide (i)	Slope(i) *	t= 0.000E+00			t= 1.000E+00			t= 2.500E+01			t= 1.000E+02			t= 3.000E+02			t= 1.000E+03		
		ETFG(i,t)	At Time in Years	(dimensionless)	ETFG(i,t)	At Time in Years	(dimensionless)	ETFG(i,t)	At Time in Years	(dimensionless)	ETFG(i,t)	At Time in Years	(dimensionless)	ETFG(i,t)	At Time in Years	(dimensionless)	ETFG(i,t)	At Time in Years	(dimensionless)
At-218	3.570E-09	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	7.525E-01	
Bi-210	2.760E-09	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	7.341E-01	
Bi-214	7.480E-06	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	7.302E-01	
Pb-210	1.410E-09	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	7.614E-01	
Pb-214	9.820E-07	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	7.344E-01	
Po-210	3.950E-11	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	
Po-214	3.860E-10	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	7.255E-01	
Po-218	4.260E-11	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	7.294E-01	
Ra-226	2.290E-08	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	7.406E-01	
Rn-222	1.740E-09	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	7.263E-01	
Tl-210	0.000E+00	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	7.876E-01	

\* - Units are l/yr per (pCi/g) at infinite depth and area. Multiplication by ETEG(i,t) converts to site conditions.

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 0.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	1.298E-01	0.000E+00	0.000E+00	0.000E+00	7.154E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.154E+01

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 0.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	
Pb-210	0.000E+00	0.0000	0.000E+00	0.000E+00	0.0000	0.000E+00	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	
Ra-226	2.431E-04	0.9956	3.003E-08	0.0001	0.0000	0.000E+00	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.045E-06	0.0043	
Total	2.431E-04	0.9956	3.003E-08	0.0001	0.0000	0.000E+00	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.045E-06	0.0043	

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.442E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.442E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 0.000E+00 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	2.431E-04	0.9956	3.003E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.045E-06	0.0043
Total	2.431E-04	0.9956	3.003E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.045E-06	0.0043

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.442E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.442E-04	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides



Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	3.971E-03	0.000E+00	0.000E+00	0.000E+00	2.188E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.188E+00
Ra-226	1.297E-01	0.000E+00	0.000E+00	0.000E+00	7.148E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.148E+01

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 1.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Ground			Inhalation			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	risk	fract.	risk	fract.
Pb-210	3.751E-09	0.0000	1.103E-09	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.165E-07
Ra-226	2.429E-04	0.9951	3.000E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.044E-06
Total	2.429E-04	0.9951	3.110E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.161E-06

Water Independent Pathways (Inhalation excludes radon)

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Water Dependent Pathways											
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.213E-07	0.0005
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.440E-04	0.9995
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.441E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)											
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	2.429E-04	0.9951	3.110E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.161E-06	0.0048
Total	2.429E-04	0.9951	3.110E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.161E-06	0.0048

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.441E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.441E-04	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	1.154E-02	0.000E+00	0.000E+00	0.000E+00	6.359E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.359E+00
Ra-226	1.295E-01	0.000E+00	0.000E+00	0.000E+00	7.137E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.137E+01

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 3.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 3.000E+00 years

Radio- Nuclide	Ground			Inhalation			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	risk	fract.	risk	fract.
Pb-210	1.090E-08	0.0000	3.205E-09	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.385E-07
Ra-226	2.425E-04	0.9942	2.995E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.042E-06
Total	2.425E-04	0.9942	3.316E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.381E-06

Water Independent Pathways (Inhalation excludes radon)

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Radio- Nuclide	Water Dependent Pathways											
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0014
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.9986
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 3.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)											
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	2.425E-04	0.9942	3.316E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0057
Total	2.425E-04	0.9942	3.316E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0057

Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.439E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.439E-04	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	3.449E-02	0.000E+00	0.000E+00	0.000E+00	1.901E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.901E+01
Ra-226	1.288E-01	0.000E+00	0.000E+00	0.000E+00	7.096E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.096E+01

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	
Pb-210	3.258E-08	0.0001	9.579E-09	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	1.012E-06	0.0042	
Ra-226	2.411E-04	0.9913	2.978E-08	0.0001	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	1.036E-06	0.0043	
Total	2.412E-04	0.9914	3.936E-08	0.0002	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	2.048E-06	0.0084	

Water Independent Pathways (Inhalation excludes radon)

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Plant		Meat		Milk		All Pathways**			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.054E-06	0.0043
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.422E-04	0.9957
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.433E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+01 years

Radon Pathway	Radionuclides									
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)													
	Ground		Inhalation		Radon		Plant		Meat		Soil			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	2.412E-04	0.9914	3.936E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.048E-06	0.0084
Total	2.412E-04	0.9914	3.936E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.048E-06	0.0084



Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.433E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.433E-04	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 2.500E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	6.913E-02	0.000E+00	0.000E+00	0.000E+00	3.810E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.810E+01
Ra-226	1.272E-01	0.000E+00	0.000E+00	0.000E+00	7.010E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.010E+01

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 2.500E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Meat			Milk			Soil		
	risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.	
Pb-210	6.531E-08	0.0003	1.920E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.028E-06	0.0084	
Ra-226	2.382E-04	0.9869	2.942E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.024E-06	0.0042	
Total	2.383E-04	0.9872	4.862E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.052E-06	0.0126	

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.112E-06	0.0088
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.393E-04	0.9912
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.414E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 2.500E+01 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	2.383E-04	0.9872	4.862E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.052E-06	0.0126
Total	2.383E-04	0.9872	4.862E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.052E-06	0.0126

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.414E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.414E-04	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	1.161E-01	0.000E+00	0.000E+00	0.000E+00	6.397E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.397E+01
Ra-226	1.197E-01	0.000E+00	0.000E+00	0.000E+00	6.595E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.595E+01

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 1.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	1.097E-07	0.0005	3.224E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.405E-06	0.0149
Ra-226	2.241E-04	0.9802	2.768E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.633E-07	0.0042
Total	2.242E-04	0.9806	5.992E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.368E-06	0.0191

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Plant		Meat		Milk		All Pathways**			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.547E-06	0.0155
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.251E-04	0.9845
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.287E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)													
	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	2.242E-04	0.9806	5.992E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.368E-06	0.0191
Total	2.242E-04	0.9806	5.992E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.368E-06	0.0191

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.287E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.287E-04	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	1.035E-01	0.000E+00	0.000E+00	0.000E+00	5.705E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.705E+01
Ra-226	1.017E-01	0.000E+00	0.000E+00	0.000E+00	5.605E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.605E+01

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 3.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	
Pb-210	9.780E-08	0.0005	2.875E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.037E-06	0.0156		
Ra-226	1.905E-04	0.9794	2.353E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.187E-07	0.0042		
Total	1.906E-04	0.9799	5.228E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.856E-06	0.0198		



Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Water Dependent Pathways											
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0163
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.913E-04
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.945E-04

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 3.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)											
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.906E-04	0.9799	5.228E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0198
Total	1.906E-04	0.9799	5.228E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0198

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.945E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.945E-04	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+03 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	5.860E-02	0.000E+00	0.000E+00	0.000E+00	3.230E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.230E+01
Ra-226	5.757E-02	0.000E+00	0.000E+00	0.000E+00	3.173E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.173E+01

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 1.000E+03 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	5.536E-08	0.0005	1.628E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.719E-06	0.0156
Ra-226	1.078E-04	0.9794	1.332E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.634E-07	0.0042
Total	1.079E-04	0.9799	2.959E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.182E-06	0.0198

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.791E-06	0.0163
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.083E-04	0.9837
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.101E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+03 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.079E-04	0.9799	2.959E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.182E-06	0.0198
Total	1.079E-04	0.9799	2.959E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.182E-06	0.0198

Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.101E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.101E-04	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

# Industrial Worker- Surface Dose

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Time = 3.000E+00 .....	11
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Summary : Sharpe Depot Shad-041 - Industrial Worker  
 File : C:\RESRAD\_FAMILY\ONSITE\7.2\USERFILES\SHAD-041 INDUSTRIAL WORKER.RAD

Dose Conversion Factor (and Related) Parameter Summary  
 Dose Library: FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
A-1	DCF's for external ground radiation, (mrem/yr) / (pCi/g)			
A-1	At-218 (Source: FGR 12)	5.847E-03	5.847E-03	DCF1 ( 1)
A-1	Bi-210 (Source: FGR 12)	3.606E-03	3.606E-03	DCF1 ( 2)
A-1	Bi-214 (Source: FGR 12)	9.808E+00	9.808E+00	DCF1 ( 3)
A-1	Pb-210 (Source: FGR 12)	2.447E-03	2.447E-03	DCF1 ( 4)
A-1	Pb-214 (Source: FGR 12)	1.341E+00	1.341E+00	DCF1 ( 5)
A-1	Po-210 (Source: FGR 12)	5.231E-05	5.231E-05	DCF1 ( 6)
A-1	Po-214 (Source: FGR 12)	5.138E-04	5.138E-04	DCF1 ( 7)
A-1	Po-218 (Source: FGR 12)	5.642E-05	5.642E-05	DCF1 ( 8)
A-1	Ra-226 (Source: FGR 12)	3.176E-02	3.176E-02	DCF1 ( 9)
A-1	Rn-222 (Source: FGR 12)	2.354E-03	2.354E-03	DCF1 ( 10)
A-1	Tl-210 (Source: no data)	0.000E+00	-2.000E+00	DCF1 ( 11)
B-1	Dose conversion factors for inhalation, mrem/pCi:			
B-1	Pb-210+D	2.320E-02	1.360E-02	DCF2 ( 1)
B-1	Ra-226+D	8.594E-03	8.580E-03	DCF2 ( 2)
D-1	Dose conversion factors for ingestion, mrem/pCi:			
D-1	Pb-210+D	7.276E-03	5.370E-03	DCF3 ( 1)
D-1	Ra-226+D	1.321E-03	1.320E-03	DCF3 ( 2)
D-34	Food transfer factors:			
D-34	Pb-210+D , plant/soil concentration ratio, dimensionless	1.000E-02	1.000E-02	RTF ( 1,1)
D-34	Pb-210+D , beef/livestock-intake ratio, (pCi/kg) / (pCi/d)	8.000E-04	8.000E-04	RTF ( 1,2)
D-34	Pb-210+D , milk/livestock-intake ratio, (pCi/L) / (pCi/d)	3.000E-04	3.000E-04	RTF ( 1,3)
D-34	Ra-226+D , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF ( 2,1)
D-34	Ra-226+D , beef/livestock-intake ratio, (pCi/kg) / (pCi/d)	1.000E-03	1.000E-03	RTF ( 2,2)
D-34	Ra-226+D , milk/livestock-intake ratio, (pCi/L) / (pCi/d)	1.000E-03	1.000E-03	RTF ( 2,3)
D-5	Bioaccumulation factors, fresh water, L/kg:			
D-5	Pb-210+D , fish	3.000E+02	3.000E+02	BIOFAC ( 1,1)
D-5	Pb-210+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC ( 1,2)
D-5	Ra-226+D , fish	5.000E+01	5.000E+01	BIOFAC ( 2,1)
D-5	Ra-226+D , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC ( 2,2)

#For DCF1(xxxx) only, factors are for infinite depth & area. See ETFG table in Ground Pathway of Detailed Report.  
 \*Base Case means Default.Lib w/o Associate Nuclide contributions.



Site-Specific Parameter Summary

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R011	Area of contaminated zone (m**2)	5.023E+03	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	5.000E+00	2.000E+00	---	THICKO
R011	Fraction of contamination that is submerged	2.000E-01	0.000E-01	---	SUBMFRACT
R011	Length parallel to aquifer flow (m)	not used	1.000E+02	---	LCZPAQ
R011	Basic radiation dose limit (mrem/yr)	2.500E+01	3.000E+01	---	BRDL
R011	Time since placement of material (yr)	0.000E+00	0.000E+00	---	TI
R011	Times for calculations (yr)	1.000E+00	1.000E+00	---	T ( 2)
R011	Times for calculations (yr)	3.000E+00	3.000E+00	---	T ( 3)
R011	Times for calculations (yr)	1.000E+01	1.000E+01	---	T ( 4)
R011	Times for calculations (yr)	2.500E+01	3.000E+01	---	T ( 5)
R011	Times for calculations (yr)	1.000E+02	1.000E+02	---	T ( 6)
R011	Times for calculations (yr)	3.000E+02	3.000E+02	---	T ( 7)
R011	Times for calculations (yr)	1.000E+03	1.000E+03	---	T ( 8)
R011	Times for calculations (yr)	not used	0.000E+00	---	T ( 9)
R011	Times for calculations (yr)	not used	0.000E+00	---	T (10)
R012	Initial principal radionuclide (pCi/g): Ra-226	8.070E+00	0.000E+00	---	S1 ( 2)
R012	Concentration in groundwater (pCi/L): Ra-226	not used	0.000E+00	---	W1 ( 2)
R013	Cover depth (m)	0.000E+00	0.000E+00	---	COVERO
R013	Density of cover material (g/cm**3)	not used	1.500E+00	---	DENSCV
R013	Cover depth erosion rate (m/yr)	not used	1.000E-03	---	VCV
R013	Density of contaminated zone (g/cm**3)	1.500E+00	1.500E+00	---	DENSCZ
R013	Contaminated zone erosion rate (m/yr)	1.000E-03	1.000E-03	---	V CZ
R013	Contaminated zone total porosity	4.000E-01	4.000E-01	---	TPCZ
R013	Contaminated zone field capacity	2.000E-01	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	1.000E+01	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	5.300E+00	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	2.000E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	not used	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	5.000E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	1.000E-01	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	0.000E+00	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	2.000E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	not used	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	not used	1.000E-03	---	EPS
R014	Density of saturated zone (g/cm**3)	not used	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	not used	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	not used	2.000E-01	---	EPSZ
R014	Saturated zone field capacity	not used	2.000E-01	---	FCSZ
R014	Saturated zone hydraulic conductivity (m/yr)	not used	1.000E+02	---	HCSZ
R014	Saturated zone hydraulic gradient	not used	2.000E-02	---	HGWT
R014	Saturated zone b parameter	not used	5.300E+00	---	BSZ
R014	Water table drop rate (m/yr)	not used	1.000E+00	---	VWT
R014	Well pump intake depth (m below water table)	not used	1.000E+01	---	DWIBWT
R014	Model: Nondispersion (ND) or Mass-Balance (MB)	not used	ND	---	MODEL
R014	Well pumping rate (m**3/yr)	not used	2.500E+02	---	UW

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R015	Number of unsaturated zone strata	not used	1	---	NS
R016	Distribution coefficients for Ra-226	7.000E+01	7.000E+01	---	DCNUCC ( 2)
R016	Contaminated zone (cm**3/g)	not used	7.000E+01	---	DCNUCS ( 2)
R016	Saturated zone (cm**3/g)	0.000E+00	0.000E+00	7.970E-05	ALEACH ( 2)
R016	Leach rate (/Yr)	0.000E+00	0.000E+00	not used	SOLUBK ( 2)
R016	Solubility constant	0.000E+00	0.000E+00		
R016	Distribution coefficients for daughter Pb-210	1.000E+02	1.000E+02	---	DCNUCC ( 1)
R016	Contaminated zone (cm**3/g)	not used	1.000E+02	---	DCNUCS ( 1)
R016	Saturated zone (cm**3/g)	0.000E+00	0.000E+00	5.585E-05	ALEACH ( 1)
R016	Leach rate (/Yr)	0.000E+00	0.000E+00	not used	SOLUBK ( 1)
R016	Solubility constant	0.000E+00	0.000E+00		
R017	Inhalation rate (m**3/yr)	3.500E+03	8.400E+03	---	INHALR
R017	Mass loading for inhalation (g/m**3)	1.000E-04	1.000E-04	---	MLINH
R017	Exposure duration	2.500E+01	3.000E+01	---	ED
R017	Shielding factor, inhalation	4.000E-01	4.000E-01	---	SHF3
R017	Shielding factor, external gamma	7.000E-01	7.000E-01	---	SHF1
R017	Fraction of time spent indoors	8.750E-01	5.000E-01	---	FIND
R017	Fraction of time spent outdoors (on site)	1.250E-01	2.500E-01	---	FOTD
R017	Shape factor flag, external gamma	1.000E+00	1.000E+00	>0 shows circular AREA.	FS
R017	Radii of shape factor array (used if FS = -1):				
R017	Outer annular radius (m), ring 1:	not used	5.000E+01	---	RAD_SHAPE ( 1)
R017	Outer annular radius (m), ring 2:	not used	7.071E+01	---	RAD_SHAPE ( 2)
R017	Outer annular radius (m), ring 3:	not used	0.000E+00	---	RAD_SHAPE ( 3)
R017	Outer annular radius (m), ring 4:	not used	0.000E+00	---	RAD_SHAPE ( 4)
R017	Outer annular radius (m), ring 5:	not used	0.000E+00	---	RAD_SHAPE ( 5)
R017	Outer annular radius (m), ring 6:	not used	0.000E+00	---	RAD_SHAPE ( 6)
R017	Outer annular radius (m), ring 7:	not used	0.000E+00	---	RAD_SHAPE ( 7)
R017	Outer annular radius (m), ring 8:	not used	0.000E+00	---	RAD_SHAPE ( 8)
R017	Outer annular radius (m), ring 9:	not used	0.000E+00	---	RAD_SHAPE ( 9)
R017	Outer annular radius (m), ring 10:	not used	0.000E+00	---	RAD_SHAPE (10)
R017	Outer annular radius (m), ring 11:	not used	0.000E+00	---	RAD_SHAPE (11)
R017	Outer annular radius (m), ring 12:	not used	0.000E+00	---	RAD_SHAPE (12)
R017	Fractions of annular areas within AREA:				
R017	Ring 1	not used	1.000E+00	---	FRACA ( 1)
R017	Ring 2	not used	2.732E-01	---	FRACA ( 2)
R017	Ring 3	not used	0.000E+00	---	FRACA ( 3)
R017	Ring 4	not used	0.000E+00	---	FRACA ( 4)
R017	Ring 5	not used	0.000E+00	---	FRACA ( 5)
R017	Ring 6	not used	0.000E+00	---	FRACA ( 6)
R017	Ring 7	not used	0.000E+00	---	FRACA ( 7)
R017	Ring 8	not used	0.000E+00	---	FRACA ( 8)
R017	Ring 9	not used	0.000E+00	---	FRACA ( 9)
R017	Ring 10	not used	0.000E+00	---	FRACA (10)
R017	Ring 11	not used	0.000E+00	---	FRACA (11)
R017	Ring 12	not used	0.000E+00	---	FRACA (12)

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R018	Fruits, vegetables and grain consumption (kg/yr)	not used	1.600E+02	---	DIET (1)
R018	Leafy vegetable consumption (kg/yr)	not used	1.400E+01	---	DIET (2)
R018	Milk consumption (l/yr)	not used	9.200E+01	---	DIET (3)
R018	Meat and poultry consumption (kg/yr)	not used	6.300E+01	---	DIET (4)
R018	Fish consumption (kg/yr)	not used	5.400E+00	---	DIET (5)
R018	Other seafood consumption (kg/yr)	not used	9.000E-01	---	DIET (6)
R018	Soil ingestion rate (g/yr)	2.500E+01	3.650E+01	---	SOIL
R018	Drinking water intake (L/yr)	not used	5.100E+02	---	DWI
R018	Contamination fraction of drinking water	not used	1.000E+00	---	FDW
R018	Contamination fraction of household water	not used	1.000E+00	---	FHHW
R018	Contamination fraction of livestock water	not used	1.000E+00	---	FLW
R018	Contamination fraction of irrigation water	not used	1.000E+00	---	FIW
R018	Contamination fraction of aquatic food	not used	5.000E-01	---	FR9
R018	Contamination fraction of plant food	not used	-1	---	FPLANT
R018	Contamination fraction of meat	not used	-1	---	FMEAT
R018	Contamination fraction of milk	not used	-1	---	FMILK
R019	Livestock fodder intake for meat (kg/day)	not used	6.800E+01	---	LF15
R019	Livestock fodder intake for milk (kg/day)	not used	5.500E+01	---	LF16
R019	Livestock water intake for meat (l/day)	not used	5.000E+01	---	LW15
R019	Livestock water intake for milk (l/day)	not used	1.600E+02	---	LW16
R019	Livestock soil intake (kg/day)	not used	5.000E-01	---	LSI
R019	Mass loading for foliar deposition (g/m**3)	not used	1.000E-04	---	MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01	---	DM
R019	Drinking water fraction from ground water	not used	9.000E-01	---	DROOT
R019	Household water fraction from ground water	not used	1.000E+00	---	EGWDW
R019	Livestock water fraction from ground water	not used	1.000E+00	---	FGWHH
R019	Irrigation water fraction from ground water	not used	1.000E+00	---	FGWLW
R019	Wet weight crop yield for Non-Leafy (kg/m**2)	not used	7.000E-01	---	YV (1)
R19B	Wet weight crop yield for Leafy (kg/m**2)	not used	1.500E+00	---	YV (2)
R19B	Wet weight crop yield for Fodder (kg/m**2)	not used	1.100E+00	---	YV (3)
R19B	Growing Season for Non-Leafy (years)	not used	1.700E-01	---	TE (1)
R19B	Growing Season for Leafy (years)	not used	2.500E-01	---	TE (2)
R19B	Growing Season for Fodder (years)	not used	8.000E-02	---	TE (3)
R19B	Translocation Factor for Non-Leafy	not used	1.000E-01	---	TIV (1)
R19B	Translocation Factor for Leafy	not used	1.000E+00	---	TIV (2)
R19B	Translocation Factor for Fodder	not used	1.000E+00	---	TIV (3)
R19B	Dry Foliar Interception Fraction for Non-Leafy	not used	2.500E-01	---	RDRY (1)
R19B	Dry Foliar Interception Fraction for Leafy	not used	2.500E-01	---	RDRY (2)
R19B	Dry Foliar Interception Fraction for Fodder	not used	2.500E-01	---	RDRY (3)
R19B	Wet Foliar Interception Fraction for Non-Leafy	not used	2.500E-01	---	RWET (1)
R19B	Wet Foliar Interception Fraction for Leafy	not used	2.500E-01	---	RWET (2)
R19B	Wet Foliar Interception Fraction for Fodder	not used	2.500E-01	---	RWET (3)
R19B	Weathering Removal Constant for Vegetation	not used	2.000E+01	---	WLAM
C14	C-12 concentration in water (g/cm**3)	not used	2.000E-05	---	C12WTR
C14	C-12 concentration in contaminated soil (g/g)	not used	3.000E-02	---	C12CZ
C14	Fraction of vegetation carbon from soil	not used	2.000E-02	---	CSOIL

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
C14	Fraction of vegetation carbon from air	not used	9.800E-01	---	CAIR
C14	C-14 evasion layer thickness in soil (m)	not used	3.000E-01	---	DMC
C14	C-14 evasion flux rate from soil (1/sec)	not used	7.000E-07	---	EVSN
C14	C-12 evasion flux rate from soil (1/sec)	not used	1.000E-10	---	REVSN
C14	Fraction of grain in beef cattle feed	not used	8.000E-01	---	AVFG4
C14	Fraction of grain in milk cow feed	not used	2.000E-01	---	AVFG5
STOR	Storage times of contaminated foodstuffs (days):				
STOR	Fruits, non-leafy vegetables, and grain	1.400E+01	1.400E+01	---	STOR_T(1)
STOR	Leafy vegetables	1.000E+00	1.000E+00	---	STOR_T(2)
STOR	Milk	1.000E+00	1.000E+00	---	STOR_T(3)
STOR	Meat and poultry	2.000E+01	2.000E+01	---	STOR_T(4)
STOR	Fish	7.000E+00	7.000E+00	---	STOR_T(5)
STOR	Crustacea and mollusks	7.000E+00	7.000E+00	---	STOR_T(6)
STOR	Well water	1.000E+00	1.000E+00	---	STOR_T(7)
STOR	Surface water	1.000E+00	1.000E+00	---	STOR_T(8)
STOR	Livestock fodder	4.500E+01	4.500E+01	---	STOR_T(9)
R021	Thickness of building foundation (m)	not used	1.500E-01	---	FLOOR1
R021	Bulk density of building foundation (g/cm**3)	not used	2.400E+00	---	DENSFL
R021	Total porosity of the cover material	not used	4.000E-01	---	TPCV
R021	Total porosity of the building foundation	not used	1.000E-01	---	TPFL
R021	Volumetric water content of the cover material	not used	5.000E-02	---	PH2OCV
R021	Volumetric water content of the foundation	not used	3.000E-02	---	PH2OFL
R021	Diffusion coefficient for radon gas (m/sec):				
R021	in cover material	not used	2.000E-06	---	DIFCV
R021	in foundation material	not used	3.000E-07	---	DIFFL
R021	in contaminated zone soil	not used	2.000E-06	---	DIFCZ
R021	Radon vertical dimension of mixing (m)	not used	2.000E+00	---	HMIX
R021	Average building air exchange rate (1/hr)	not used	5.000E-01	---	REXG
R021	Height of the building (room) (m)	not used	2.500E+00	---	HRM
R021	Building interior area factor	not used	0.000E+00	---	FAI
R021	Building depth below ground surface (m)	not used	-1.000E+00	---	DMFL
R021	Emanating power of Rn-222 gas	not used	2.500E-01	---	EMANA(1)
R021	Emanating power of Rn-220 gas	not used	1.500E-01	---	EMANA(2)
TITL	Number of graphical time points	32	---	---	NPTS
TITL	Maximum number of integration points for dose	17	---	---	LYMAX
TITL	Maximum number of integration points for risk	1	---	---	KYMAX

Summary : Sharpe Depot Shad-041 - Industrial Worker

File : C:\RESRAD\_FAMILY\ONSITE\7.2\USERFILES\SHAD-041 INDUSTRIAL WORKER.RAD

## Summary of Pathway Selections

Pathway	User Selection
1 -- external gamma	active
2 -- inhalation (w/o radon)	active
3 -- plant ingestion	suppressed
4 -- meat ingestion	suppressed
5 -- milk ingestion	suppressed
6 -- aquatic foods	suppressed
7 -- drinking water	suppressed
8 -- soil ingestion	active
9 -- radon	suppressed
Find peak pathway doses	active

Contaminated Zone Dimensions Initial Soil Concentrations, pCi/g  
 Area: 5023.00 square meters Ra-226 8.070E+00  
 Thickness: 5.00 meters  
 Cover Depth: 0.00 meters

Total Dose TDOSE(t), mrem/yr  
 Basic Radiation Dose Limit = 2.500E+01 mrem/yr  
 Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
TDOSE(t):	6.203E+01	6.204E+01	6.207E+01	6.211E+01	6.204E+01	6.029E+01	5.448E+01	3.804E+01
M(t):	2.481E+00	2.482E+00	2.483E+00	2.484E+00	2.481E+00	2.412E+00	2.179E+00	1.522E+00

Maximum TDOSE(t): 6.211E+01 mrem/yr at t = 11.89 ± 0.02 years

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.189E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.138E+01	0.9882	3.370E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.323E-01	0.0118
Total	6.138E+01	0.9882	3.370E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.323E-01	0.0118

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.189E+01 Years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.211E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.211E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)									
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	6.174E+01	0.9953	1.894E-03	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.890E-01	0.0047
Total	6.174E+01	0.9953	1.894E-03	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.890E-01	0.0047

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Radio- Nuclide	Water Dependent Pathways									
	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.203E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.203E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)									
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	6.171E+01	0.9946	2.041E-03	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.331E-01	0.0054
Total	6.171E+01	0.9946	2.041E-03	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.331E-01	0.0054

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Radio- Nuclide	Water Dependent Pathways									
	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.204E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.204E+01	1.0000

\*Sum of all water independent and dependent pathways.



Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.165E+01	0.9932	2.321E-03	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.171E-01	0.0067
Total	6.165E+01	0.9932	2.321E-03	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.171E-01	0.0067

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.207E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.207E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.143E+01	0.9891	3.171E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.725E-01	0.0108
Total	6.143E+01	0.9891	3.171E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.725E-01	0.0108

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.211E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.211E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.097E+01	0.9828	4.460E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.060E+00	0.0171
Total	6.097E+01	0.9828	4.460E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.060E+00	0.0171

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.204E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.204E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)													
	Ground	Inhalation		Radon		Plant		Meat		Milk		Soil		
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	5.868E+01	0.9733	6.241E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.603E+00	0.0266
Total	5.868E+01	0.9733	6.241E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.603E+00	0.0266

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Radio- Nuclide	Water Dependent Pathways													
	Water	Fish	Radon		Plant		Meat		Milk		All Pathways*			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.029E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.029E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)									
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	5.296E+01	0.9723	5.829E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	1.505E+00	0.0276
Total	5.296E+01	0.9723	5.829E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	1.505E+00	0.0276

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Radio- Nuclide	Water Dependent Pathways						All Pathways*			
	Water	Fish	Radon	Plant	Meat	Milk				
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.448E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.448E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	3.699E+01	0.9723	4.071E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.051E+00	0.0276
Total	3.699E+01	0.9723	4.071E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.051E+00	0.0276

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.804E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.804E+01	1.0000

\*Sum of all water independent and dependent pathways.

Dose/Source Ratios Summed Over All Pathways  
 Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr) / (pCi/g)	DSR(j,t) At Time in Years (mrem/yr) / (pCi/g)
		0.000E+00	1.000E+00	3.000E+00
Ra-226+D	Ra-226+D	1.000E+00	7.684E+00	7.672E+00
Ra-226+D	Pb-210+D	1.000E+00	2.872E-03	8.498E-03
Ra-226+D	ESDR(j)	7.687E+00	7.688E+00	7.691E+00

The DSR includes contributions from associated (half-life ≤ 180 days) daughters.

Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 Basic Radiation Dose Limit = 2.500E+01 mrem/yr

Nuclide (i)	t =	0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
Ra-226		3.252E+00	3.252E+00	3.248E+00	3.252E+00	3.346E+00	3.703E+00	5.303E+00	

Summed Dose/Source Ratios DSR(i,t) in (mrem/yr)/(pCi/g)  
 and Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 at tmin = time of minimum single radionuclide soil guideline  
 and at tmax = time of maximum total dose = 11.89 ± 0.02 years

Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i,tmin) (pCi/g)	G(i,tmin)	DSR(i,tmax)	G(i,tmax) (pCi/g)
Ra-226	8.070E+00	11.88 ± 0.02	7.697E+00	3.248E+00	7.697E+00	3.248E+00

Individual Nuclide Dose Summed Over All Pathways  
 Parent Nuclide and Branch Fraction Indicated

Nuclide Parent (j)	THF(i)	t=	0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
Ra-226	1.000E+00	6.201E+01	6.191E+01	6.169E+01	6.122E+01	5.891E+01	5.316E+01	5.316E+01	3.713E+01	
Pb-210	1.000E+00	2.318E-02	6.857E-02	1.552E-01	4.184E-01	8.184E-01	1.386E+00	1.311E+00	9.157E-01	

THF(i) is the thread fraction of the parent nuclide.

Individual Nuclide Soil Concentration  
 Parent Nuclide and Branch Fraction Indicated

Nuclide Parent (j)	THF(i)	t=	0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
Ra-226	1.000E+00	8.070E+00	8.066E+00	8.058E+00	8.029E+00	7.967E+00	7.667E+00	6.919E+00	4.832E+00	
Pb-210	1.000E+00	0.000E+00	2.469E-01	7.179E-01	2.150E+00	4.326E+00	7.417E+00	7.022E+00	4.904E+00	

THF(i) is the thread fraction of the parent nuclide.



# Industrial Worker- Surface Risk

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Cancer Risk Slope Factors Summary Table  
 Risk Library: FGR 13 Morbidity

Menu	Parameter	Current Value	Base Case*	Parameter Name
Sf-1	Ground external radiation slope factors, 1/yr per (pCi/g):			
Sf-1	Pb-210+D	4.21E-09	1.41E-09	SLPF ( 1,1)
Sf-1	Ra-226+D	8.49E-06	2.29E-08	SLPF ( 2,1)
Sf-2	Inhalation, slope factors, 1/(pCi):			
Sf-2	Pb-210+D	3.08E-08	1.58E-08	SLPF ( 1,2)
Sf-2	Ra-226+D	2.83E-08	2.82E-08	SLPF ( 2,2)
Sf-3	Food ingestion, slope factors, 1/(pCi):			
Sf-3	Pb-210+D	3.44E-09	1.18E-09	SLPF ( 1,3)
Sf-3	Ra-226+D	5.15E-10	5.14E-10	SLPF ( 2,3)
Sf-3	Water ingestion, slope factors, 1/(pCi):			
Sf-3	Pb-210+D	2.66E-09	8.81E-10	SLPF ( 1,4)
Sf-3	Ra-226+D	3.86E-10	3.85E-10	SLPF ( 2,4)
Sf-3	Soil ingestion, slope factors, 1/(pCi):			
Sf-3	Pb-210+D	3.44E-09	1.18E-09	SLPF ( 1,5)
Sf-3	Ra-226+D	5.15E-10	5.14E-10	SLPF ( 2,5)
Sf-Rn	Radon Inhalation slope factors, 1/(pCi):			
Sf-Rn	Rn-222	1.80E-12	1.80E-12	SLPFRN(1,1)
Sf-Rn	Po-218	3.70E-12	3.70E-12	SLPFRN(1,2)
Sf-Rn	Pb-214	6.20E-12	6.20E-12	SLPFRN(1,3)
Sf-Rn	Bi-214	1.50E-11	1.50E-11	SLPFRN(1,4)
Sf-Rn	Radon K factors, (mrem/WLM):			
Sf-Rn	Rn-222 Indoor	7.60E+02	7.60E+02	KFACTR(1,1)
Sf-Rn	Rn-222 Outdoor	5.70E+02	5.70E+02	KFACTR(1,2)

\*Base Case means Default.Lib w/o Associate Nuclide contributions.

Risk Slope and Environmental Transport Factors for the Ground Pathway

Nuclide (i)	Slope(i) *	ETFG(i,t) At Time in Years (dimensionless)								
		t= 0.000E+00	1.000E+00	7.046E-01	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
At-218	3.570E-09	7.046E-01	7.046E-01	7.046E-01	7.046E-01	7.046E-01	7.046E-01	7.046E-01	7.046E-01	7.046E-01
Bi-210	2.760E-09	6.874E-01	6.874E-01	6.874E-01	6.874E-01	6.874E-01	6.874E-01	6.874E-01	6.874E-01	6.874E-01
Bi-214	7.480E-06	6.838E-01	6.838E-01	6.838E-01	6.838E-01	6.838E-01	6.838E-01	6.838E-01	6.838E-01	6.838E-01
Pb-210	1.410E-09	7.129E-01	7.129E-01	7.129E-01	7.129E-01	7.129E-01	7.129E-01	7.129E-01	7.129E-01	7.129E-01
Pb-214	9.820E-07	6.877E-01	6.877E-01	6.877E-01	6.877E-01	6.877E-01	6.877E-01	6.877E-01	6.877E-01	6.877E-01
Po-210	3.950E-11	6.830E-01	6.830E-01	6.830E-01	6.830E-01	6.830E-01	6.830E-01	6.830E-01	6.830E-01	6.830E-01
Po-214	3.860E-10	6.793E-01	6.793E-01	6.793E-01	6.793E-01	6.793E-01	6.793E-01	6.793E-01	6.793E-01	6.793E-01
Po-218	4.260E-11	6.830E-01	6.830E-01	6.830E-01	6.830E-01	6.830E-01	6.830E-01	6.830E-01	6.830E-01	6.830E-01
Ra-226	2.290E-08	6.935E-01	6.935E-01	6.935E-01	6.935E-01	6.935E-01	6.935E-01	6.935E-01	6.935E-01	6.935E-01
Rn-222	1.740E-09	6.801E-01	6.801E-01	6.801E-01	6.801E-01	6.801E-01	6.801E-01	6.801E-01	6.801E-01	6.801E-01
Tl-210	0.000E+00	7.375E-01	7.375E-01	7.375E-01	7.375E-01	7.375E-01	7.375E-01	7.375E-01	7.375E-01	7.375E-01

\* - Units are l/yr per (pCi/g) at infinite depth and area. Multiplication by ETFG(i,t) converts to site conditions.

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 0.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	2.116E-01	0.000E+00	0.000E+00	0.000E+00	2.018E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.018E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 0.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	1.172E-03	0.9977	1.496E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	2.596E-06	0.0022	0.000E+00	0.0000
Total	1.172E-03	0.9977	1.496E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	2.596E-06	0.0022	0.000E+00	0.0000

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Radio- Nuclide	Water Dependent Pathways											
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.174E-03	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.174E-03	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 0.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)											
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.172E-03	0.9977	1.496E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.596E-06	0.0022
Total	1.172E-03	0.9977	1.496E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.596E-06	0.0022

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.174E-03	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.174E-03	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	6.474E-03	0.000E+00	0.000E+00	0.000E+00	6.173E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.173E+00
Ra-226	2.115E-01	0.000E+00	0.000E+00	0.000E+00	2.016E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.016E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 1.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil					
	risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.				
Pb-210	1.808E-08	0.0000		4.978E-09	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		5.313E-07	0.0005	
Ra-226	1.171E-03	0.9972		1.495E-07	0.0001		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		2.595E-06	0.0022	
Total	1.171E-03	0.9972		1.545E-07	0.0001		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		3.126E-06	0.0027	



Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Plant		Meat		Milk		All Pathways**			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.544E-07	0.0005
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.174E-03	0.9995
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.174E-03	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)													
	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.171E-03	0.9972	1.545E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.126E-06	0.0027
Total	1.171E-03	0.9972	1.545E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.126E-06	0.0027

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.174E-03	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.174E-03	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	1.882E-02	0.000E+00	0.000E+00	0.000E+00	1.795E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.795E+01
Ra-226	2.113E-01	0.000E+00	0.000E+00	0.000E+00	2.014E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.014E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 3.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.	
Pb-210	5.257E-08	0.0000		1.447E-08	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		1.545E-06	0.0013	
Ra-226	1.170E-03	0.9963		1.493E-07	0.0001		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		2.592E-06	0.0022	
Total	1.170E-03	0.9963		1.638E-07	0.0001		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		4.137E-06	0.0035	

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Radio- Nuclide	Water Dependent Pathways											
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0014
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.9986
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 3.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)											
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.170E-03	0.9963	1.638E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0035
Total	1.170E-03	0.9963	1.638E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0035

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.174E-03	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.174E-03	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	5.637E-02	0.000E+00	0.000E+00	0.000E+00	5.374E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.374E+01
Ra-226	2.105E-01	0.000E+00	0.000E+00	0.000E+00	2.007E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.007E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 1.000E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	
Pb-210	1.574E-07	0.0001	4.334E-08	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.626E-06	0.0039	
Ra-226	1.166E-03	0.9936	1.488E-07	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.583E-06	0.0022	
Total	1.166E-03	0.9937	1.921E-07	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	7.209E-06	0.0061	

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Plant		Meat		Milk		All Pathways**			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.826E-06	0.0041
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.168E-03	0.9959
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.173E-03	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+01 years

Radon Pathway	Radionuclides									
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)													
	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.166E-03	0.9937	1.921E-07	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.209E-06	0.0061
Total	1.166E-03	0.9937	1.921E-07	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.209E-06	0.0061

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.173E-03	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.173E-03	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides



Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 2.500E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	1.134E-01	0.000E+00	0.000E+00	0.000E+00	1.081E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.081E+02
Ra-226	2.089E-01	0.000E+00	0.000E+00	0.000E+00	1.992E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.992E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 2.500E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.	
Pb-210	3.168E-07	0.0003	8.721E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	9.309E-06	0.0080	
Ra-226	1.157E-03	0.9894	1.477E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	2.563E-06	0.0022	
Total	1.157E-03	0.9896	2.349E-07	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	1.187E-05	0.0102	

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.713E-06	0.0083
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.159E-03	0.9917
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.169E-03	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 2.500E+01 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.157E-03	0.9896	2.349E-07	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.187E-05	0.0102
Total	1.157E-03	0.9896	2.349E-07	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.187E-05	0.0102

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.169E-03	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.169E-03	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	1.945E-01	0.000E+00	0.000E+00	0.000E+00	1.854E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.854E+02
Ra-226	2.010E-01	0.000E+00	0.000E+00	0.000E+00	1.917E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.917E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 1.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	5.432E-07	0.0005	1.495E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.596E-05	0.0141
Ra-226	1.113E-03	0.9830	1.421E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.466E-06	0.0022
Total	1.114E-03	0.9835	2.916E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.843E-05	0.0163

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Plant		Meat		Milk		All Pathways**			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.665E-05	0.0147
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.116E-03	0.9853
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.132E-03	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+02 years

Radon Pathway	Radionuclides									
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)													
	Ground		Inhalation		Radon		Plant		Meat		Soil			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	1.114E-03	0.9835	2.916E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.843E-05	0.0163
Total	1.114E-03	0.9835	2.916E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.843E-05	0.0163

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.132E-03	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.132E-03	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	1.841E-01	0.000E+00	0.000E+00	0.000E+00	1.755E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.755E+02
Ra-226	1.814E-01	0.000E+00	0.000E+00	0.000E+00	1.730E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.730E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 3.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	5.142E-07	0.0005	1.416E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	1.511E-05	0.0148
Ra-226	1.005E-03	0.9823	1.282E-07	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	2.226E-06	0.0022
Total	1.005E-03	0.9828	2.698E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	1.734E-05	0.0170

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Plant		Meat		Milk		All Pathways**			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.577E-05	0.0154
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.007E-03	0.9846
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.023E-03	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 3.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)													
	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.005E-03	0.9828	2.698E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.734E-05	0.0170
Total	1.005E-03	0.9828	2.698E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.734E-05	0.0170



Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.023E-03	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.023E-03	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+03 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	1.286E-01	0.000E+00	0.000E+00	0.000E+00	1.226E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.226E+02
Ra-226	1.267E-01	0.000E+00	0.000E+00	0.000E+00	1.208E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.208E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 1.000E+03 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	3.592E-07	0.0005	9.887E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.055E-05	0.0148
Ra-226	7.015E-04	0.9823	8.955E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.555E-06	0.0022
Total	7.019E-04	0.9828	1.884E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.211E-05	0.0170

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Plant		Meat		Milk		All Pathways**			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.101E-05	0.0154
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.031E-04	0.9846
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.141E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+03 years

Radon Pathway	Radionuclides									
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)													
	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	7.019E-04	0.9828	1.884E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.211E-05	0.0170
Total	7.019E-04	0.9828	1.884E-07	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.211E-05	0.0170

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.141E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.141E-04	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

# Construction Worker- Surface Dose

Summary : Sharpe Depot Shad-041 - Construction Worker Surface Soil

File : C:\RESRAD\_FAMILY\ONSITE\7.2\USERFILES\SHAD-041 CONSTRUCTION WORKER SURFACE.RAD

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Dose Conversion Factor (and Related) Parameter Summary  
 Dose Library: FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
A-1	DCF's for external ground radiation, (mrem/yr) / (pCi/g)			
A-1	At-218 (Source: FGR 12)	5.847E-03	5.847E-03	DCF1 ( 1)
A-1	Bi-210 (Source: FGR 12)	3.606E-03	3.606E-03	DCF1 ( 2)
A-1	Bi-214 (Source: FGR 12)	9.808E+00	9.808E+00	DCF1 ( 3)
A-1	Pb-210 (Source: FGR 12)	2.447E-03	2.447E-03	DCF1 ( 4)
A-1	Pb-214 (Source: FGR 12)	1.341E+00	1.341E+00	DCF1 ( 5)
A-1	Po-210 (Source: FGR 12)	5.231E-05	5.231E-05	DCF1 ( 6)
A-1	Po-214 (Source: FGR 12)	5.138E-04	5.138E-04	DCF1 ( 7)
A-1	Po-218 (Source: FGR 12)	5.642E-05	5.642E-05	DCF1 ( 8)
A-1	Ra-226 (Source: FGR 12)	3.176E-02	3.176E-02	DCF1 ( 9)
A-1	Rn-222 (Source: FGR 12)	2.354E-03	2.354E-03	DCF1 ( 10)
A-1	Tl-210 (Source: no data)	0.000E+00	-2.000E+00	DCF1 ( 11)
B-1	Dose conversion factors for inhalation, mrem/pCi:			
B-1	Pb-210+D	2.320E-02	1.360E-02	DCF2 ( 1)
B-1	Ra-226+D	8.594E-03	8.580E-03	DCF2 ( 2)
D-1	Dose conversion factors for ingestion, mrem/pCi:			
D-1	Pb-210+D	7.276E-03	5.370E-03	DCF3 ( 1)
D-1	Ra-226+D	1.321E-03	1.320E-03	DCF3 ( 2)
D-34	Food transfer factors:			
D-34	Pb-210+D , plant/soil concentration ratio, dimensionless	1.000E-02	1.000E-02	RTF ( 1,1)
D-34	Pb-210+D , beef/livestock-intake ratio, (pCi/kg) / (pCi/d)	8.000E-04	8.000E-04	RTF ( 1,2)
D-34	Pb-210+D , milk/livestock-intake ratio, (pCi/L) / (pCi/d)	3.000E-04	3.000E-04	RTF ( 1,3)
D-34	Ra-226+D , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF ( 2,1)
D-34	Ra-226+D , beef/livestock-intake ratio, (pCi/kg) / (pCi/d)	1.000E-03	1.000E-03	RTF ( 2,2)
D-34	Ra-226+D , milk/livestock-intake ratio, (pCi/L) / (pCi/d)	1.000E-03	1.000E-03	RTF ( 2,3)
D-5	Bioaccumulation factors, fresh water, L/kg:			
D-5	Pb-210+D , fish	3.000E+02	3.000E+02	BIOFAC ( 1,1)
D-5	Pb-210+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC ( 1,2)
D-5	Ra-226+D , fish	5.000E+01	5.000E+01	BIOFAC ( 2,1)
D-5	Ra-226+D , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC ( 2,2)

#For DCF1(xxxx) only, factors are for infinite depth & area. See ETFG table in Ground Pathway of Detailed Report.  
 \*Base Case means Default.Lib w/o Associate Nuclide contributions.

Site-Specific Parameter Summary

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R011	Area of contaminated zone (m**2)	5.023E+03	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	5.000E+00	2.000E+00	---	THICKO
R011	Fraction of contamination that is submerged	2.000E-01	0.000E-01	---	SUBMFRACT
R011	Length parallel to aquifer flow (m)	not used	1.000E+02	---	LCZPAQ
R011	Basic radiation dose limit (mrem/yr)	2.500E+01	3.000E+01	---	BRDL
R011	Time since placement of material (yr)	0.000E+00	0.000E+00	---	TI
R011	Times for calculations (yr)	1.000E+00	1.000E+00	---	T ( 2)
R011	Times for calculations (yr)	3.000E+00	3.000E+00	---	T ( 3)
R011	Times for calculations (yr)	1.000E+01	1.000E+01	---	T ( 4)
R011	Times for calculations (yr)	2.500E+01	3.000E+01	---	T ( 5)
R011	Times for calculations (yr)	1.000E+02	1.000E+02	---	T ( 6)
R011	Times for calculations (yr)	3.000E+02	3.000E+02	---	T ( 7)
R011	Times for calculations (yr)	1.000E+03	1.000E+03	---	T ( 8)
R011	Times for calculations (yr)	not used	0.000E+00	---	T ( 9)
R011	Times for calculations (yr)	not used	0.000E+00	---	T (10)
R012	Initial principal radionuclide (pCi/g): Ra-226	8.070E+00	0.000E+00	---	S1 ( 2)
R012	Concentration in groundwater (pCi/L): Ra-226	not used	0.000E+00	---	W1 ( 2)
R013	Cover depth (m)	3.000E-01	0.000E+00	---	COVERO
R013	Density of cover material (g/cm**3)	1.500E+00	1.500E+00	---	DENSCV
R013	Cover depth erosion rate (m/yr)	1.000E-03	1.000E-03	---	VCV
R013	Density of contaminated zone (g/cm**3)	1.500E+00	1.500E+00	---	DENSCZ
R013	Contaminated zone erosion rate (m/yr)	1.000E-03	1.000E-03	---	V CZ
R013	Contaminated zone total porosity	4.000E-01	4.000E-01	---	TPCZ
R013	Contaminated zone field capacity	2.000E-01	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	1.000E+01	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	5.300E+00	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	2.000E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	not used	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	5.000E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	1.000E-01	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	0.000E+00	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	2.000E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	not used	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	not used	1.000E-03	---	EPS
R014	Density of saturated zone (g/cm**3)	not used	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	not used	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	not used	2.000E-01	---	EPSZ
R014	Saturated zone field capacity	not used	2.000E-01	---	FCSZ
R014	Saturated zone hydraulic conductivity (m/yr)	not used	1.000E+02	---	HCSZ
R014	Saturated zone hydraulic gradient	not used	2.000E-02	---	HGWT
R014	Saturated zone b parameter	not used	5.300E+00	---	BSZ
R014	Water table drop rate (m/yr)	not used	1.000E+00	---	VWT
R014	Well pump intake depth (m below water table)	not used	1.000E+01	---	DWIBWT
R014	Model: Nondispersion (ND) or Mass-Balance (MB)	not used	ND	---	MODEL
R014	Well pumping rate (m**3/yr)	not used	2.500E+02	---	UW



Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R015	Number of unsaturated zone strata	not used	1	---	NS
R016	Distribution coefficients for Ra-226	7.000E+01	7.000E+01	---	DCNUCC ( 2)
R016	Contaminated zone (cm**3/g)	not used	7.000E+01	---	DCNUCS ( 2)
R016	Saturated zone (cm**3/g)	0.000E+00	0.000E+00	7.970E-05	ALEACH ( 2)
R016	Leach rate (/Yr)	0.000E+00	0.000E+00	not used	SOLUBK ( 2)
R016	Solubility constant	0.000E+00	0.000E+00		
R016	Distribution coefficients for daughter Pb-210	1.000E+02	1.000E+02	---	DCNUCC ( 1)
R016	Contaminated zone (cm**3/g)	not used	1.000E+02	---	DCNUCS ( 1)
R016	Saturated zone (cm**3/g)	0.000E+00	0.000E+00	5.585E-05	ALEACH ( 1)
R016	Leach rate (/Yr)	0.000E+00	0.000E+00	not used	SOLUBK ( 1)
R016	Solubility constant	0.000E+00	0.000E+00		
R017	Inhalation rate (m**3/yr)	5.000E+03	8.400E+03	---	INHALR
R017	Mass loading for inhalation (g/m**3)	1.000E-04	1.000E-04	---	MLINH
R017	Exposure duration	1.000E+00	3.000E+01	---	ED
R017	Shielding factor, inhalation	4.000E-01	4.000E-01	---	SHF3
R017	Shielding factor, external gamma	7.000E-01	7.000E-01	---	SHF1
R017	Fraction of time spent indoors	0.000E+00	5.000E+00	---	FIND
R017	Fraction of time spent outdoors (on site)	1.000E+00	2.500E-01	---	FOTD
R017	Shape factor flag, external gamma	1.000E+00	1.000E+00	>0 shows circular AREA.	FS
R017	Radii of shape factor array (used if FS = -1):				
R017	Outer annular radius (m), ring 1:	not used	5.000E+01	---	RAD_SHAPE ( 1)
R017	Outer annular radius (m), ring 2:	not used	7.071E+01	---	RAD_SHAPE ( 2)
R017	Outer annular radius (m), ring 3:	not used	0.000E+00	---	RAD_SHAPE ( 3)
R017	Outer annular radius (m), ring 4:	not used	0.000E+00	---	RAD_SHAPE ( 4)
R017	Outer annular radius (m), ring 5:	not used	0.000E+00	---	RAD_SHAPE ( 5)
R017	Outer annular radius (m), ring 6:	not used	0.000E+00	---	RAD_SHAPE ( 6)
R017	Outer annular radius (m), ring 7:	not used	0.000E+00	---	RAD_SHAPE ( 7)
R017	Outer annular radius (m), ring 8:	not used	0.000E+00	---	RAD_SHAPE ( 8)
R017	Outer annular radius (m), ring 9:	not used	0.000E+00	---	RAD_SHAPE ( 9)
R017	Outer annular radius (m), ring 10:	not used	0.000E+00	---	RAD_SHAPE (10)
R017	Outer annular radius (m), ring 11:	not used	0.000E+00	---	RAD_SHAPE (11)
R017	Outer annular radius (m), ring 12:	not used	0.000E+00	---	RAD_SHAPE (12)
R017	Fractions of annular areas within AREA:				
R017	Ring 1	not used	1.000E+00	---	FRACA ( 1)
R017	Ring 2	not used	2.732E-01	---	FRACA ( 2)
R017	Ring 3	not used	0.000E+00	---	FRACA ( 3)
R017	Ring 4	not used	0.000E+00	---	FRACA ( 4)
R017	Ring 5	not used	0.000E+00	---	FRACA ( 5)
R017	Ring 6	not used	0.000E+00	---	FRACA ( 6)
R017	Ring 7	not used	0.000E+00	---	FRACA ( 7)
R017	Ring 8	not used	0.000E+00	---	FRACA ( 8)
R017	Ring 9	not used	0.000E+00	---	FRACA ( 9)
R017	Ring 10	not used	0.000E+00	---	FRACA (10)
R017	Ring 11	not used	0.000E+00	---	FRACA (11)
R017	Ring 12	not used	0.000E+00	---	FRACA (12)

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R018	Fruits, vegetables and grain consumption (kg/yr)	not used	1.600E+02	---	DIET(1)
R018	Leafy vegetable consumption (kg/yr)	not used	1.400E+01	---	DIET(2)
R018	Milk consumption (l/yr)	not used	9.200E+01	---	DIET(3)
R018	Meat and poultry consumption (kg/yr)	not used	6.300E+01	---	DIET(4)
R018	Fish consumption (kg/yr)	not used	5.400E+00	---	DIET(5)
R018	Other seafood consumption (kg/yr)	not used	9.000E-01	---	DIET(6)
R018	Soil ingestion rate (g/yr)	8.250E+01	3.650E+01	---	SOIL
R018	Drinking water intake (L/yr)	not used	5.100E+02	---	DWI
R018	Contamination fraction of drinking water	not used	1.000E+00	---	FDW
R018	Contamination fraction of household water	not used	1.000E+00	---	FHHW
R018	Contamination fraction of livestock water	not used	1.000E+00	---	FLW
R018	Contamination fraction of irrigation water	not used	1.000E+00	---	FIW
R018	Contamination fraction of aquatic food	not used	5.000E-01	---	FR9
R018	Contamination fraction of plant food	not used	-1	---	FPLANT
R018	Contamination fraction of meat	not used	-1	---	FMEAT
R018	Contamination fraction of milk	not used	-1	---	FMILK
R019	Livestock fodder intake for meat (kg/day)	not used	6.800E+01	---	LF15
R019	Livestock fodder intake for milk (kg/day)	not used	5.500E+01	---	LF16
R019	Livestock water intake for meat (l/day)	not used	5.000E+01	---	LW15
R019	Livestock water intake for milk (l/day)	not used	1.600E+02	---	LW16
R019	Livestock soil intake (kg/day)	not used	5.000E-01	---	LSI
R019	Mass loading for foliar deposition (g/m**3)	not used	1.000E-04	---	MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01	---	DM
R019	Drinking water fraction from ground water	not used	9.000E-01	---	DROOT
R019	Household water fraction from ground water	not used	1.000E+00	---	EGWDW
R019	Livestock water fraction from ground water	not used	1.000E+00	---	FGWHH
R019	Irrigation water fraction from ground water	not used	1.000E+00	---	FGWLW
R019	Wet weight crop yield for Non-Leafy (kg/m**2)	not used	1.000E+00	---	FGWIR
R19B	Wet weight crop yield for Leafy (kg/m**2)	not used	7.000E-01	---	YV(1)
R19B	Wet weight crop yield for Fodder (kg/m**2)	not used	1.500E+00	---	YV(2)
R19B	Growing Season for Non-Leafy (years)	not used	1.100E+00	---	YV(3)
R19B	Growing Season for Leafy (years)	not used	1.700E-01	---	TE(1)
R19B	Growing Season for Fodder (years)	not used	2.500E-01	---	TE(2)
R19B	Translocation Factor for Non-Leafy	not used	8.000E-02	---	TE(3)
R19B	Translocation Factor for Leafy	not used	1.000E-01	---	TIV(1)
R19B	Translocation Factor for Fodder	not used	1.000E+00	---	TIV(2)
R19B	Dry Foliar Interception Fraction for Non-Leafy	not used	1.000E+00	---	TIV(3)
R19B	Dry Foliar Interception Fraction for Leafy	not used	2.500E-01	---	RDRY(1)
R19B	Dry Foliar Interception Fraction for Fodder	not used	2.500E-01	---	RDRY(2)
R19B	Wet Foliar Interception Fraction for Non-Leafy	not used	2.500E-01	---	RDRY(3)
R19B	Wet Foliar Interception Fraction for Leafy	not used	2.500E-01	---	RWET(1)
R19B	Wet Foliar Interception Fraction for Fodder	not used	2.500E-01	---	RWET(2)
R19B	Weathering Removal Constant for Vegetation	not used	2.500E-01	---	RWET(3)
C14	C-12 concentration in water (g/cm**3)	not used	2.000E+01	---	WLAM
C14	C-12 concentration in contaminated soil (g/g)	not used	2.000E-05	---	CL2WTR
C14	Fraction of vegetation carbon from soil	not used	3.000E-02	---	CL2CZ
C14		not used	2.000E-02	---	CSOIL

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
C14	Fraction of vegetation carbon from air	not used	9.800E-01	---	CAIR
C14	C-14 evasion layer thickness in soil (m)	not used	3.000E-01	---	DMC
C14	C-14 evasion flux rate from soil (1/sec)	not used	7.000E-07	---	EVSN
C14	C-12 evasion flux rate from soil (1/sec)	not used	1.000E-10	---	REVSN
C14	Fraction of grain in beef cattle feed	not used	8.000E-01	---	AVFG4
C14	Fraction of grain in milk cow feed	not used	2.000E-01	---	AVFG5
STOR	Storage times of contaminated foodstuffs (days):				
STOR	Fruits, non-leafy vegetables, and grain	1.400E+01	1.400E+01	---	STOR_T(1)
STOR	Leafy vegetables	1.000E+00	1.000E+00	---	STOR_T(2)
STOR	Milk	1.000E+00	1.000E+00	---	STOR_T(3)
STOR	Meat and poultry	2.000E+01	2.000E+01	---	STOR_T(4)
STOR	Fish	7.000E+00	7.000E+00	---	STOR_T(5)
STOR	Crustacea and mollusks	7.000E+00	7.000E+00	---	STOR_T(6)
STOR	Well water	1.000E+00	1.000E+00	---	STOR_T(7)
STOR	Surface water	1.000E+00	1.000E+00	---	STOR_T(8)
STOR	Livestock fodder	4.500E+01	4.500E+01	---	STOR_T(9)
R021	Thickness of building foundation (m)	not used	1.500E-01	---	FLOOR1
R021	Bulk density of building foundation (g/cm**3)	not used	2.400E+00	---	DENSFL
R021	Total porosity of the cover material	not used	4.000E-01	---	TPCV
R021	Total porosity of the building foundation	not used	1.000E-01	---	TPFL
R021	Volumetric water content of the cover material	not used	5.000E-02	---	PH2OCV
R021	Volumetric water content of the foundation	not used	3.000E-02	---	PH2OFL
R021	Diffusion coefficient for radon gas (m/sec):				
R021	in cover material	not used	2.000E-06	---	DIFCV
R021	in foundation material	not used	3.000E-07	---	DIFFL
R021	in contaminated zone soil	not used	2.000E-06	---	DIFCZ
R021	Radon vertical dimension of mixing (m)	not used	2.000E+00	---	HMIX
R021	Average building air exchange rate (1/hr)	not used	5.000E-01	---	REXG
R021	Height of the building (room) (m)	not used	2.500E+00	---	HRM
R021	Building interior area factor	not used	0.000E+00	---	FAI
R021	Building depth below ground surface (m)	not used	-1.000E+00	---	DMFL
R021	Emanating power of Rn-222 gas	not used	2.500E-01	---	EMANA(1)
R021	Emanating power of Rn-220 gas	not used	1.500E-01	---	EMANA(2)
TITL	Number of graphical time points	32	---	---	NPTS
TITL	Maximum number of integration points for dose	17	---	---	LYMAX
TITL	Maximum number of integration points for risk	1	---	---	KYMAX

Summary : Sharpe Depot Shad-041 - Construction Worker Surface Soil

File : C:\RESRAD\_FAMILY\ONSITE\7.2\USERFILES\SHAD-041 CONSTRUCTION WORKER SURFACE.RAD

## Summary of Pathway Selections

Pathway	User Selection
1 -- external gamma	active
2 -- inhalation (w/o radon)	active
3 -- plant ingestion	suppressed
4 -- meat ingestion	suppressed
5 -- milk ingestion	suppressed
6 -- aquatic foods	suppressed
7 -- drinking water	suppressed
8 -- soil ingestion	active
9 -- radon	suppressed
Find peak pathway doses	active

Contaminated Zone Dimensions Initial Soil Concentrations, pCi/g  
 Area: 5023.00 square meters Ra-226 8.070E+00  
 Thickness: 5.00 meters  
 Cover Depth: 0.30 meters

Total Dose TDOSE(t), mrem/yr  
 Basic Radiation Dose Limit = 2.500E+01 mrem/yr  
 Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years): 0.000E+00 1.000E+00 3.000E+00 1.000E+01 2.500E+01 1.000E+02 3.000E+02 1.000E+03  
 TDOSE(t): 2.555E+00 2.583E+00 2.640E+00 2.849E+00 3.355E+00 7.622E+00 7.680E+01 5.363E+01  
 M(t): 1.022E-01 1.033E-01 1.056E-01 1.140E-01 1.342E-01 3.049E-01 3.072E+00 2.145E+00

Maximum TDOSE(t): 7.719E+01 mrem/yr at t = 298.8 ± 0.6 years

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.988E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	7.222E+01	0.9357	1.746E-02	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.947E+00	0.0641
Total	7.222E+01	0.9357	1.746E-02	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.947E+00	0.0641

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.988E+02 Years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.719E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.719E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)							
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	2.555E+00	1.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.0000
Total	2.555E+00	1.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Radio- Nuclide	Water Dependent Pathways						All Pathways*	
	Water	Fish	Radon	Plant	Meat	Milk		
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)							
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	2.583E+00	1.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.0000
Total	2.583E+00	1.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Radio- Nuclide	Water Dependent Pathways						All Pathways*	
	Water	Fish	Radon	Plant	Meat	Milk		
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)							
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	2.640E+00	1.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.0000
Total	2.640E+00	1.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Radio- Nuclide	Water Dependent Pathways							
	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.0000

\*Sum of all water independent and dependent pathways.



Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	2.849E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	2.849E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.849E+00	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.849E+00	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)							
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	3.355E+00	1.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.0000
Total	3.355E+00	1.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Radio- Nuclide	Water Dependent Pathways						All Pathways*	
	Water	Fish	Radon	Plant	Meat	Milk		
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	7.622E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	7.622E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.622E+00	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.622E+00	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)									
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	7.182E+01	0.9351	1.753E-02	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	4.968E+00	0.0647
Total	7.182E+01	0.9351	1.753E-02	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	4.968E+00	0.0647

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Radio- Nuclide	Water Dependent Pathways									
	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.680E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.680E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	5.015E+01	0.9351	1.224E-02	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.470E+00	0.0647
Total	5.015E+01	0.9351	1.224E-02	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.470E+00	0.0647

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.363E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.363E+01	1.0000

\*Sum of all water independent and dependent pathways.

Dose/Source Ratios Summed Over All Pathways  
 Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr) / (pCi/g)
		0.000E+00	1.000E+00 3.000E+00 1.000E+01 2.500E+02 3.000E+02 1.000E+03
Ra-226+D	Ra-226+D	1.000E+00	3.166E-01 3.201E-01 3.271E-01 3.530E-01 4.157E-01 9.444E-01 8.988E+00 6.277E+00
Ra-226+D	Pb-210+D	1.000E+00	1.358E-07 4.089E-07 9.610E-07 2.966E-06 7.760E-06 5.680E-05 5.288E-01 3.693E-01
Ra-226+D	ESDR(j)	3.166E-01	3.201E-01 3.271E-01 3.530E-01 4.157E-01 9.444E-01 9.517E+00 6.646E+00

The DSR includes contributions from associated (half-life ≤ 180 days) daughters.

Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 Basic Radiation Dose Limit = 2.500E+01 mrem/yr

Nuclide (i)	t =	0.000E+00	1.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
Ra-226		7.896E+01	7.811E+01	7.643E+01	7.082E+01	6.014E+01	2.647E+01	2.627E+00 3.762E+00

Summed Dose/Source Ratios DSR(i,t) in (mrem/yr)/(pCi/g)  
 and Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 at tmin = time of minimum single radionuclide soil guideline  
 and at tmax = time of maximum total dose = 298.8 ± 0.6 years

Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i, tmin) (pCi/g)	G(i, tmin)	DSR(i, tmax)	G(i, tmax) (pCi/g)
Ra-226	8.070E+00	298.8 ± 0.6	9.565E+00	2.614E+00	9.565E+00	2.614E+00

Individual Nuclide Dose Summed Over All Pathways  
 Parent Nuclide and Branch Fraction Indicated

Nuclide Parent (j)	THF(i)	t=	0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
Ra-226	1.000E+00	2.555E+00	2.583E+00	2.640E+00	2.849E+00	3.355E+00	7.622E+00	7.253E+01	5.065E+01	
Pb-210	1.000E+00	1.096E-06	3.299E-06	7.755E-06	2.394E-05	6.262E-05	4.584E-04	4.267E+00	2.980E+00	

THF(i) is the thread fraction of the parent nuclide.

Individual Nuclide Soil Concentration  
 Parent Nuclide and Branch Fraction Indicated

Nuclide Parent (j)	THF(i)	t=	0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
Ra-226	1.000E+00	8.070E+00	8.066E+00	8.058E+00	8.029E+00	7.967E+00	7.667E+00	6.919E+00	4.832E+00	
Pb-210	1.000E+00	0.000E+00	2.469E-01	7.179E-01	2.150E+00	4.326E+00	7.417E+00	7.022E+00	4.904E+00	

THF(i) is the thread fraction of the parent nuclide.

RESCALC.EXE execution time = 31.76 seconds

# Construction Worker- Surface Risk



Intrisk : Sharpe Depot Shad-041 - Construction Worker Surface Soil

File : C:\RESRAD\_FAMILY\ONSITE\7.2\USERFILES\SHAD-041 CONSTRUCTION WORKER SURFACE.RAD

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Cancer Risk Slope Factors Summary Table  
 Risk Library: HEAST 2001 Morbidity

Menu	Parameter	Current Value	Base Case*	Parameter Name
Sf-1	Ground external radiation slope factors, 1/yr per (pCi/g):			
Sf-1	Pb-210+D	4.21E-09	1.41E-09	SLPF ( 1,1)
Sf-1	Ra-226+D	8.49E-06	2.29E-08	SLPF ( 2,1)
Sf-2	Inhalation, slope factors, 1/(pCi):			
Sf-2	Pb-210+D	1.39E-08	2.77E-09	SLPF ( 1,2)
Sf-2	Ra-226+D	1.16E-08	1.15E-08	SLPF ( 2,2)
Sf-3	Food ingestion, slope factors, 1/(pCi):			
Sf-3	Pb-210+D	3.44E-09	1.18E-09	SLPF ( 1,3)
Sf-3	Ra-226+D	5.15E-10	5.14E-10	SLPF ( 2,3)
Sf-3	Water ingestion, slope factors, 1/(pCi):			
Sf-3	Pb-210+D	1.27E-09	8.81E-10	SLPF ( 1,4)
Sf-3	Ra-226+D	3.86E-10	3.85E-10	SLPF ( 2,4)
Sf-3	Soil ingestion, slope factors, 1/(pCi):			
Sf-3	Pb-210+D	2.66E-09	1.84E-09	SLPF ( 1,5)
Sf-3	Ra-226+D	7.30E-10	7.29E-10	SLPF ( 2,5)
Sf-Rn	Radon Inhalation slope factors, 1/(pCi):			
Sf-Rn	Rn-222	1.80E-12	1.80E-12	SLPFRN(1,1)
Sf-Rn	Po-218	3.70E-12	3.70E-12	SLPFRN(1,2)
Sf-Rn	Pb-214	6.20E-12	6.20E-12	SLPFRN(1,3)
Sf-Rn	Bi-214	1.50E-11	1.50E-11	SLPFRN(1,4)
Sf-Rn	Radon K factors, (mrem/WLM):			
Sf-Rn	Rn-222 Indoor	7.60E+02	7.60E+02	KFACTR(1,1)
Sf-Rn	Rn-222 Outdoor	5.70E+02	5.70E+02	KFACTR(1,2)

\*Base Case means Default.Lib w/o Associate Nuclide contributions.

Risk Slope and Environmental Transport Factors for the Ground Pathway

Nuclide (i)	Slope(i) *	ETFG(i,t) At Time in Years (dimensionless)									
		t= 0.000E+00	1.000E+00	4.833E-08	5.402E-08	7.976E-08	1.838E-07	1.194E-05	3.000E+01	1.000E+02	3.000E+02
At-218	3.570E-09	4.572E-08	4.833E-08	5.402E-08	7.976E-08	1.838E-07	1.194E-05	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Bi-210	2.760E-09	2.184E-03	2.228E-03	2.319E-03	2.666E-03	3.596E-03	1.606E-02	9.321E-01	9.321E-01	9.321E-01	9.321E-01
Bi-214	7.480E-06	3.124E-02	3.159E-02	3.231E-02	3.496E-02	4.139E-02	9.623E-02	9.272E-01	9.272E-01	9.272E-01	9.272E-01
Pb-210	1.410E-09	1.864E-10	2.007E-10	2.327E-10	3.905E-10	1.184E-09	3.034E-07	9.667E-01	9.667E-01	9.667E-01	9.667E-01
Pb-214	9.820E-07	6.237E-03	6.341E-03	6.556E-03	7.367E-03	9.457E-03	3.297E-02	9.325E-01	9.325E-01	9.325E-01	9.325E-01
Po-210	3.950E-11	1.615E-02	1.637E-02	1.682E-02	1.848E-02	2.263E-02	6.230E-02	9.261E-01	9.261E-01	9.261E-01	9.261E-01
Po-214	3.860E-10	1.746E-02	1.769E-02	1.817E-02	1.993E-02	2.429E-02	6.537E-02	9.211E-01	9.211E-01	9.211E-01	9.211E-01
Po-218	4.260E-11	1.750E-02	1.773E-02	1.821E-02	1.997E-02	2.434E-02	6.551E-02	9.261E-01	9.261E-01	9.261E-01	9.261E-01
Ra-226	2.290E-08	2.143E-03	2.187E-03	2.278E-03	2.624E-03	3.556E-03	1.624E-02	9.404E-01	9.404E-01	9.404E-01	9.404E-01
Rn-222	1.740E-09	1.121E-02	1.137E-02	1.171E-02	1.298E-02	1.618E-02	4.874E-02	9.221E-01	9.221E-01	9.221E-01	9.221E-01
Tl-210	0.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00

\* - Units are l/yr per (pCi/g) at infinite depth and area. Multiplication by ETFG(i,t) converts to site conditions.



Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Radio- Nuclide	Water Dependent Pathways						All Pathways**					
	Water		Fish		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.936E-06	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.936E-06	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 0.000E+00 years

Radon Pathway	Radionuclides											
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212				
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00				
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00				
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00				

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Inhalation						Soil					
	Ground		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.936E-06	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	1.936E-06	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.936E-06	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil  
 and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 1.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	1.678E-12	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	1.957E-06	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	1.957E-06	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000





Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.957E-06	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.957E-06	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil  
 and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 3.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	5.071E-12	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	2.000E-06	1.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	2.000E-06	1.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000



Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.000E-06	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.000E-06	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)					
	Ground risk	Inhalation risk	Plant fract.	Meat risk	Milk risk	Soil fract.
Pb-210	1.739E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	2.158E-06	1.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	2.158E-06	1.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00



Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.158E-06	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.158E-06	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 2.500E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil  
 and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 2.500E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	4.681E-11	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	2.541E-06	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	2.541E-06	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000





Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	2.541E-06	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	2.541E-06	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides





Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.771E-06	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.771E-06	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	5.537E-01	0.000E+00	0.000E+00	0.000E+00	5.793E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.793E+02
Ra-226	5.457E-01	0.000E+00	0.000E+00	0.000E+00	5.708E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.708E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil  
 and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 3.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	2.789E-08	0.0005	7.690E-09	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.542E-06	0.0273
Ra-226	5.448E-05	0.9646	6.311E-09	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.169E-07	0.0074
Total	5.451E-05	0.9651	1.400E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.959E-06	0.0347

Water Independent Pathways (Inhalation excludes radon)

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.577E-06	0.0279
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.490E-05	0.9721
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.648E-05	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 3.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	5.451E-05	0.9651	1.400E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.959E-06	0.0347
Total	5.451E-05	0.9651	1.400E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.959E-06	0.0347

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.648E-05	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides



Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+03 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	3.867E-01	0.000E+00	0.000E+00	0.000E+00	4.046E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.046E+02
Ra-226	3.811E-01	0.000E+00	0.000E+00	0.000E+00	3.986E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.986E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+03 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+03 years

Radio-Nuclide	Ground			Inhalation			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	
Pb-210	1.948E-08	0.0005	5.371E-09	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.077E-06	0.0273	
Ra-226	3.805E-05	0.9646	4.407E-09	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.911E-07	0.0074	
Total	3.807E-05	0.9651	9.778E-09	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.368E-06	0.0347	

Water Independent Pathways (Inhalation excludes radon)

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Plant		Meat		Milk		All Pathways**			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.102E-06	0.0279
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.834E-05	0.9721
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.944E-05	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+03 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)													
	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	3.807E-05	0.9651	9.778E-09	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	3.807E-05	0.9651	9.778E-09	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.368E-06	0.0347

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.944E-05	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.944E-05	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

# Construction Worker- Subsurface Dose

Summary : Sharpe Depot Shad-041 - Construction Worker SubSurface Soil

File : C:\RESRAD\_FAMILY\ONSITE\7.2\USERFILES\SHAD-041 CONSTRUCTION WORKER  
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Dose Conversion Factor (and Related) Parameter Summary  
 Dose Library: FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
A-1	DCF's for external ground radiation, (mrem/yr) / (pCi/g)			
A-1	At-218 (Source: FGR 12)	5.847E-03	5.847E-03	DCF1 ( 1)
A-1	Bi-210 (Source: FGR 12)	3.606E-03	3.606E-03	DCF1 ( 2)
A-1	Bi-214 (Source: FGR 12)	9.808E+00	9.808E+00	DCF1 ( 3)
A-1	Pb-210 (Source: FGR 12)	2.447E-03	2.447E-03	DCF1 ( 4)
A-1	Pb-214 (Source: FGR 12)	1.341E+00	1.341E+00	DCF1 ( 5)
A-1	Po-210 (Source: FGR 12)	5.231E-05	5.231E-05	DCF1 ( 6)
A-1	Po-214 (Source: FGR 12)	5.138E-04	5.138E-04	DCF1 ( 7)
A-1	Po-218 (Source: FGR 12)	5.642E-05	5.642E-05	DCF1 ( 8)
A-1	Ra-226 (Source: FGR 12)	3.176E-02	3.176E-02	DCF1 ( 9)
A-1	Rn-222 (Source: FGR 12)	2.354E-03	2.354E-03	DCF1 ( 10)
A-1	Tl-210 (Source: no data)	0.000E+00	-2.000E+00	DCF1 ( 11)
B-1	Dose conversion factors for inhalation, mrem/pCi:			
B-1	Pb-210+D	2.320E-02	1.360E-02	DCF2 ( 1)
B-1	Ra-226+D	8.594E-03	8.580E-03	DCF2 ( 2)
D-1	Dose conversion factors for ingestion, mrem/pCi:			
D-1	Pb-210+D	7.276E-03	5.370E-03	DCF3 ( 1)
D-1	Ra-226+D	1.321E-03	1.320E-03	DCF3 ( 2)
D-34	Food transfer factors:			
D-34	Pb-210+D , plant/soil concentration ratio, dimensionless	1.000E-02	1.000E-02	RTF ( 1,1)
D-34	Pb-210+D , beef/livestock-intake ratio, (pCi/kg) / (pCi/d)	8.000E-04	8.000E-04	RTF ( 1,2)
D-34	Pb-210+D , milk/livestock-intake ratio, (pCi/L) / (pCi/d)	3.000E-04	3.000E-04	RTF ( 1,3)
D-34	Ra-226+D , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF ( 2,1)
D-34	Ra-226+D , beef/livestock-intake ratio, (pCi/kg) / (pCi/d)	1.000E-03	1.000E-03	RTF ( 2,2)
D-34	Ra-226+D , milk/livestock-intake ratio, (pCi/L) / (pCi/d)	1.000E-03	1.000E-03	RTF ( 2,3)
D-5	Bioaccumulation factors, fresh water, L/kg:			
D-5	Pb-210+D , fish	3.000E+02	3.000E+02	BIOFAC ( 1,1)
D-5	Pb-210+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC ( 1,2)
D-5	Ra-226+D , fish	5.000E+01	5.000E+01	BIOFAC ( 2,1)
D-5	Ra-226+D , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC ( 2,2)

#For DCF1(XXX) only, factors are for infinite depth & area. See ETFG table in Ground Pathway of Detailed Report.  
 \*Base Case means Default.Lib w/o Associate Nuclide contributions.

Site-Specific Parameter Summary

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R011	Area of contaminated zone (m**2)	5.023E+03	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	5.000E+00	2.000E+00	---	THICKO
R011	Fraction of contamination that is submerged	2.000E-01	0.000E-01	---	SUBMFRACT
R011	Length parallel to aquifer flow (m)	not used	1.000E+02	---	LCZPAQ
R011	Basic radiation dose limit (mrem/yr)	2.500E+01	3.000E+01	---	BRDL
R011	Time since placement of material (yr)	0.000E+00	0.000E+00	---	TI
R011	Times for calculations (yr)	1.000E+00	1.000E+00	---	T ( 2)
R011	Times for calculations (yr)	3.000E+00	3.000E+00	---	T ( 3)
R011	Times for calculations (yr)	1.000E+01	1.000E+01	---	T ( 4)
R011	Times for calculations (yr)	2.500E+01	3.000E+01	---	T ( 5)
R011	Times for calculations (yr)	1.000E+02	1.000E+02	---	T ( 6)
R011	Times for calculations (yr)	3.000E+02	3.000E+02	---	T ( 7)
R011	Times for calculations (yr)	1.000E+03	1.000E+03	---	T ( 8)
R011	Times for calculations (yr)	not used	0.000E+00	---	T ( 9)
R011	Times for calculations (yr)	not used	0.000E+00	---	T (10)
R012	Initial principal radionuclide (pCi/g): Ra-226	1.960E+00	0.000E+00	---	S1 ( 2)
R012	Concentration in groundwater (pCi/L): Ra-226	not used	0.000E+00	---	W1 ( 2)
R013	Cover depth (m)	3.000E-01	0.000E+00	---	COVERO
R013	Density of cover material (g/cm**3)	1.500E+00	1.500E+00	---	DENSCV
R013	Cover depth erosion rate (m/yr)	1.000E-03	1.000E-03	---	VCV
R013	Density of contaminated zone (g/cm**3)	1.500E+00	1.500E+00	---	DENSCZ
R013	Contaminated zone erosion rate (m/yr)	1.000E-03	1.000E-03	---	V CZ
R013	Contaminated zone total porosity	4.000E-01	4.000E-01	---	TPCZ
R013	Contaminated zone field capacity	2.000E-01	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	1.000E+01	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	5.300E+00	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	2.000E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	not used	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	5.000E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	1.000E-01	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	0.000E+00	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	2.000E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	not used	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	not used	1.000E-03	---	EPS
R014	Density of saturated zone (g/cm**3)	not used	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	not used	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	not used	2.000E-01	---	EPSZ
R014	Saturated zone field capacity	not used	2.000E-01	---	FCSZ
R014	Saturated zone hydraulic conductivity (m/yr)	not used	1.000E+02	---	HCSZ
R014	Saturated zone hydraulic gradient	not used	2.000E-02	---	HGWT
R014	Saturated zone b parameter	not used	5.300E+00	---	BSZ
R014	Water table drop rate (m/yr)	not used	1.000E-03	---	VWT
R014	Well pump intake depth (m below water table)	not used	1.000E+01	---	DWIBWT
R014	Model: Nondispersion (ND) or Mass-Balance (MB)	not used	ND	---	MODEL
R014	Well pumping rate (m**3/yr)	not used	2.500E+02	---	UW

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R015	Number of unsaturated zone strata	not used	1	---	NS
R016	Distribution coefficients for Ra-226	7.000E+01	7.000E+01	---	DCNUCC ( 2)
R016	Contaminated zone (cm**3/g)	not used	7.000E+01	---	DCNUCS ( 2)
R016	Saturated zone (cm**3/g)	0.000E+00	0.000E+00	7.970E-05	ALEACH ( 2)
R016	Leach rate (/Yr)	0.000E+00	0.000E+00	not used	SOLUBK ( 2)
R016	Solubility constant	0.000E+00	0.000E+00	---	
R016	Distribution coefficients for daughter Pb-210	1.000E+02	1.000E+02	---	DCNUCC ( 1)
R016	Contaminated zone (cm**3/g)	not used	1.000E+02	---	DCNUCS ( 1)
R016	Saturated zone (cm**3/g)	0.000E+00	0.000E+00	5.585E-05	ALEACH ( 1)
R016	Leach rate (/Yr)	0.000E+00	0.000E+00	not used	SOLUBK ( 1)
R016	Solubility constant	0.000E+00	0.000E+00	---	
R017	Inhalation rate (m**3/yr)	5.000E+03	8.400E+03	---	INHALR
R017	Mass loading for inhalation (g/m**3)	1.000E-04	1.000E-04	---	MLINH
R017	Exposure duration	1.000E+00	3.000E+01	---	ED
R017	Shielding factor, inhalation	4.000E-01	4.000E-01	---	SHF3
R017	Shielding factor, external gamma	7.000E-01	7.000E-01	---	SHF1
R017	Fraction of time spent indoors	0.000E+00	5.000E+00	---	FIND
R017	Fraction of time spent outdoors (on site)	1.000E+00	2.500E-01	---	FOTD
R017	Shape factor flag, external gamma	1.000E+00	1.000E+00	>0 shows circular AREA.	FS
R017	Radii of shape factor array (used if FS = -1):				
R017	Outer annular radius (m), ring 1:	not used	5.000E+01	---	RAD_SHAPE ( 1)
R017	Outer annular radius (m), ring 2:	not used	7.071E+01	---	RAD_SHAPE ( 2)
R017	Outer annular radius (m), ring 3:	not used	0.000E+00	---	RAD_SHAPE ( 3)
R017	Outer annular radius (m), ring 4:	not used	0.000E+00	---	RAD_SHAPE ( 4)
R017	Outer annular radius (m), ring 5:	not used	0.000E+00	---	RAD_SHAPE ( 5)
R017	Outer annular radius (m), ring 6:	not used	0.000E+00	---	RAD_SHAPE ( 6)
R017	Outer annular radius (m), ring 7:	not used	0.000E+00	---	RAD_SHAPE ( 7)
R017	Outer annular radius (m), ring 8:	not used	0.000E+00	---	RAD_SHAPE ( 8)
R017	Outer annular radius (m), ring 9:	not used	0.000E+00	---	RAD_SHAPE ( 9)
R017	Outer annular radius (m), ring 10:	not used	0.000E+00	---	RAD_SHAPE (10)
R017	Outer annular radius (m), ring 11:	not used	0.000E+00	---	RAD_SHAPE (11)
R017	Outer annular radius (m), ring 12:	not used	0.000E+00	---	RAD_SHAPE (12)
R017	Fractions of annular areas within AREA:				
R017	Ring 1	not used	1.000E+00	---	FRACA ( 1)
R017	Ring 2	not used	2.732E-01	---	FRACA ( 2)
R017	Ring 3	not used	0.000E+00	---	FRACA ( 3)
R017	Ring 4	not used	0.000E+00	---	FRACA ( 4)
R017	Ring 5	not used	0.000E+00	---	FRACA ( 5)
R017	Ring 6	not used	0.000E+00	---	FRACA ( 6)
R017	Ring 7	not used	0.000E+00	---	FRACA ( 7)
R017	Ring 8	not used	0.000E+00	---	FRACA ( 8)
R017	Ring 9	not used	0.000E+00	---	FRACA ( 9)
R017	Ring 10	not used	0.000E+00	---	FRACA (10)
R017	Ring 11	not used	0.000E+00	---	FRACA (11)
R017	Ring 12	not used	0.000E+00	---	FRACA (12)



Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R018	Fruits, vegetables and grain consumption (kg/yr)	not used	1.600E+02	---	DIET(1)
R018	Leafy vegetable consumption (kg/yr)	not used	1.400E+01	---	DIET(2)
R018	Milk consumption (l/yr)	not used	9.200E+01	---	DIET(3)
R018	Meat and poultry consumption (kg/yr)	not used	6.300E+01	---	DIET(4)
R018	Fish consumption (kg/yr)	not used	5.400E+00	---	DIET(5)
R018	Other seafood consumption (kg/yr)	not used	9.000E-01	---	DIET(6)
R018	Soil ingestion rate (g/yr)	8.250E+01	3.650E+01	---	SOIL
R018	Drinking water intake (L/yr)	not used	5.100E+02	---	DWI
R018	Contamination fraction of drinking water	not used	1.000E+00	---	FDW
R018	Contamination fraction of household water	not used	1.000E+00	---	FHHW
R018	Contamination fraction of livestock water	not used	1.000E+00	---	FLW
R018	Contamination fraction of irrigation water	not used	1.000E+00	---	FIRW
R018	Contamination fraction of aquatic food	not used	1.000E+00	---	FR9
R018	Contamination fraction of plant food	not used	5.000E-01	---	FPLANT
R018	Contamination fraction of meat	not used	-1	---	FMEAT
R018	Contamination fraction of milk	not used	-1	---	FMILK
R019	Livestock fodder intake for meat (kg/day)	not used	6.800E+01	---	LF15
R019	Livestock fodder intake for milk (kg/day)	not used	5.500E+01	---	LF16
R019	Livestock water intake for meat (l/day)	not used	5.000E+01	---	LW15
R019	Livestock water intake for milk (l/day)	not used	1.600E+02	---	LW16
R019	Livestock soil intake (kg/day)	not used	5.000E-01	---	LSI
R019	Mass loading for foliar deposition (g/m**3)	not used	1.000E-04	---	MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01	---	DM
R019	Depth of roots (m)	not used	9.000E-01	---	DROOT
R019	Drinking water fraction from ground water	not used	1.000E+00	---	EGWDW
R019	Household water fraction from ground water	not used	1.000E+00	---	FGWHH
R019	Livestock water fraction from ground water	not used	1.000E+00	---	FGWLW
R019	Irrigation fraction from ground water	not used	1.000E+00	---	FGWIR
R19B	Wet weight crop yield for Non-Leafy (kg/m**2)	not used	7.000E-01	---	YV(1)
R19B	Wet weight crop yield for Leafy (kg/m**2)	not used	1.500E+00	---	YV(2)
R19B	Wet weight crop yield for Fodder (kg/m**2)	not used	1.100E+00	---	YV(3)
R19B	Growing Season for Non-Leafy (years)	not used	1.700E-01	---	TE(1)
R19B	Growing Season for Leafy (years)	not used	2.500E-01	---	TE(2)
R19B	Growing Season for Fodder (years)	not used	8.000E-02	---	TE(3)
R19B	Translocation Factor for Non-Leafy	not used	1.000E-01	---	TIV(1)
R19B	Translocation Factor for Leafy	not used	1.000E+00	---	TIV(2)
R19B	Translocation Factor for Fodder	not used	1.000E+00	---	TIV(3)
R19B	Dry Foliar Interception Fraction for Non-Leafy	not used	2.500E-01	---	RDRY(1)
R19B	Dry Foliar Interception Fraction for Leafy	not used	2.500E-01	---	RDRY(2)
R19B	Dry Foliar Interception Fraction for Fodder	not used	2.500E-01	---	RDRY(3)
R19B	Wet Foliar Interception Fraction for Non-Leafy	not used	2.500E-01	---	RWET(1)
R19B	Wet Foliar Interception Fraction for Leafy	not used	2.500E-01	---	RWET(2)
R19B	Wet Foliar Interception Fraction for Fodder	not used	2.500E-01	---	RWET(3)
R19B	Weathering Removal Constant for Vegetation	not used	2.000E+01	---	WLAM
C14	C-12 concentration in water (g/cm**3)	not used	2.000E-05	---	CL2WTR
C14	C-12 concentration in contaminated soil (g/g)	not used	3.000E-02	---	CL2CZ
C14	Fraction of vegetation carbon from soil	not used	2.000E-02	---	CSOIL

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
C14	Fraction of vegetation carbon from air	not used	9.800E-01	---	CAIR
C14	C-14 evasion layer thickness in soil (m)	not used	3.000E-01	---	DMC
C14	C-14 evasion flux rate from soil (1/sec)	not used	7.000E-07	---	EVSN
C14	C-12 evasion flux rate from soil (1/sec)	not used	1.000E-10	---	REVSN
C14	Fraction of grain in beef cattle feed	not used	8.000E-01	---	AVFG4
C14	Fraction of grain in milk cow feed	not used	2.000E-01	---	AVFG5
STOR	Storage times of contaminated foodstuffs (days):				
STOR	Fruits, non-leafy vegetables, and grain	1.400E+01	1.400E+01	---	STOR_T(1)
STOR	Leafy vegetables	1.000E+00	1.000E+00	---	STOR_T(2)
STOR	Milk	1.000E+00	1.000E+00	---	STOR_T(3)
STOR	Meat and poultry	2.000E+01	2.000E+01	---	STOR_T(4)
STOR	Fish	7.000E+00	7.000E+00	---	STOR_T(5)
STOR	Crustacea and mollusks	7.000E+00	7.000E+00	---	STOR_T(6)
STOR	Well water	1.000E+00	1.000E+00	---	STOR_T(7)
STOR	Surface water	1.000E+00	1.000E+00	---	STOR_T(8)
STOR	Livestock fodder	4.500E+01	4.500E+01	---	STOR_T(9)
R021	Thickness of building foundation (m)	not used	1.500E-01	---	FLOOR1
R021	Bulk density of building foundation (g/cm**3)	not used	2.400E+00	---	DENSFL
R021	Total porosity of the cover material	not used	4.000E-01	---	TPCV
R021	Total porosity of the building foundation	not used	1.000E-01	---	TPFL
R021	Volumetric water content of the cover material	not used	5.000E-02	---	PH2OCV
R021	Volumetric water content of the foundation	not used	3.000E-02	---	PH2OFL
R021	Diffusion coefficient for radon gas (m/sec):				
R021	in cover material	not used	2.000E-06	---	DIFCV
R021	in foundation material	not used	3.000E-07	---	DIFFL
R021	in contaminated zone soil	not used	2.000E-06	---	DIFCZ
R021	Radon vertical dimension of mixing (m)	not used	2.000E+00	---	HMIX
R021	Average building air exchange rate (1/hr)	not used	5.000E-01	---	REXG
R021	Height of the building (room) (m)	not used	2.500E+00	---	HRM
R021	Building interior area factor	not used	0.000E+00	---	FAI
R021	Building depth below ground surface (m)	not used	-1.000E+00	---	DMFL
R021	Emanating power of Rn-222 gas	not used	2.500E-01	---	EMANA(1)
R021	Emanating power of Rn-220 gas	not used	1.500E-01	---	EMANA(2)
TITL	Number of graphical time points	32	---	---	NPTS
TITL	Maximum number of integration points for dose	17	---	---	LYMAX
TITL	Maximum number of integration points for risk	1	---	---	KYMAX

Summary : Sharpe Depot Shad-041 - Construction Worker SubSurface Soil

File : C:\RESRAD\_FAMILY\ONSITE\7.2\USERFILES\SHAD-041 CONSTRUCTION WORKER  
SUBSURFACE.RAD

## Summary of Pathway Selections

Pathway	User Selection
1 -- external gamma	active
2 -- inhalation (w/o radon)	active
3 -- plant ingestion	suppressed
4 -- meat ingestion	suppressed
5 -- milk ingestion	suppressed
6 -- aquatic foods	suppressed
7 -- drinking water	suppressed
8 -- soil ingestion	active
9 -- radon	suppressed
Find peak pathway doses	active

Contaminated Zone Dimensions Initial Soil Concentrations, pCi/g  
 Area: 5023.00 square meters Ra-226 1.960E+00  
 Thickness: 5.00 meters  
 Cover Depth: 0.30 meters

Total Dose TDOSE(t), mrem/yr  
 Basic Radiation Dose Limit = 2.500E+01 mrem/yr  
 Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
TDOSE(t):	6.205E-01	6.273E-01	6.411E-01	6.919E-01	8.148E-01	1.851E+00	1.865E+01	1.303E+01
M(t):	2.482E-02	2.509E-02	2.565E-02	2.768E-02	3.259E-02	7.405E-02	7.461E-01	5.211E-01

Maximum TDOSE(t): 1.875E+01 mrem/yr at t = 298.8 ± 0.6 years

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.988E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio-Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.754E+01	0.9357	4.240E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.202E+00	0.0641
Total	1.754E+01	0.9357	4.240E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.202E+00	0.0641

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.988E+02 years

Water Dependent Pathways

Radio-Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.875E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.875E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)							
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.205E-01	1.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.0000
Total	6.205E-01	1.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Radio- Nuclide	Water Dependent Pathways							
	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.205E-01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.205E-01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)							
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.273E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	6.273E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Radio- Nuclide	Water Dependent Pathways							
	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)							
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.411E-01	1.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.0000
Total	6.411E-01	1.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Radio- Nuclide	Water Dependent Pathways							
	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.411E-01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.411E-01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)							
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	6.919E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	6.919E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Radio- Nuclide	Water Dependent Pathways							
	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.0000

\*Sum of all water independent and dependent pathways.



Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)							
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	8.148E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.0000
Total	8.148E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Radio- Nuclide	Water Dependent Pathways							
	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.148E-01	1.0000
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.148E-01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)							
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.851E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	1.851E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Radio- Nuclide	Water Dependent Pathways							
	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.851E+00	1.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.851E+00	1.000E+00

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)									
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	1.744E+01	0.9351	4.258E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	1.207E+00	0.0647
Total	1.744E+01	0.9351	4.258E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	1.207E+00	0.0647

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Radio- Nuclide	Water Dependent Pathways									
	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.865E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.865E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)									
	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	1.218E+01	0.9351	2.973E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	8.427E-01	0.0647
Total	1.218E+01	0.9351	2.973E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	8.427E-01	0.0647

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Radio- Nuclide	Water Dependent Pathways									
	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*			
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.303E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.303E+01	1.0000

\*Sum of all water independent and dependent pathways.

Dose/Source Ratios Summed Over All Pathways  
 Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr) / (pCi/g)
		0.000E+00	1.000E+00 3.000E+00 1.000E+01 2.500E+02 3.000E+02 1.000E+03
Ra-226+D	Ra-226+D	1.000E+00	3.166E-01 3.201E-01 3.271E-01 3.530E-01 4.157E-01 9.444E-01 8.988E+00 6.277E+00
Ra-226+D	Pb-210+D	1.000E+00	1.358E-07 4.089E-07 9.610E-07 2.966E-06 7.760E-06 5.680E-05 5.288E-01 3.693E-01
Ra-226+D	ESDR(j)		3.166E-01 3.201E-01 3.271E-01 3.530E-01 4.157E-01 9.444E-01 9.517E+00 6.646E+00

The DSR includes contributions from associated (half-life ≤ 180 days) daughters.

Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 Basic Radiation Dose Limit = 2.500E+01 mrem/yr

Nuclide (i)	t = 0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
Ra-226	7.896E+01	7.811E+01	7.643E+01	7.082E+01	6.014E+01	2.647E+01	2.627E+00	3.762E+00

Summed Dose/Source Ratios DSR(i,t) in (mrem/yr)/(pCi/g)  
 and Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 at tmin = time of minimum single radionuclide soil guideline  
 and at tmax = time of maximum total dose = 298.8 ± 0.6 years

Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i, tmin) (pCi/g)	G(i, tmin)	tmax	DSR(i, tmax) (pCi/g)	G(i, tmax)
Ra-226	1.960E+00	298.8 ± 0.6	9.565E+00	2.614E+00	9.565E+00	2.614E+00	2.614E+00

Individual Nuclide Dose Summed Over All Pathways  
 Parent Nuclide and Branch Fraction Indicated

Nuclide Parent (j)	THF(i)	t=	0.000E+00	1.000E+00	3.000E+00	1.000E+01	1.000E+02	3.000E+02	1.000E+03
Ra-226	1.000E+00	6.205E-01	6.273E-01	6.411E-01	6.919E-01	8.148E-01	1.851E+00	1.762E+01	1.230E+01
Pb-210	1.000E+00	2.663E-07	8.014E-07	1.884E-06	5.814E-06	1.521E-05	1.113E-04	1.036E+00	7.239E-01

THF(i) is the thread fraction of the parent nuclide.

Individual Nuclide Soil Concentration  
 Parent Nuclide and Branch Fraction Indicated

Nuclide Parent (j)	THF(i)	t=	0.000E+00	1.000E+00	3.000E+00	1.000E+01	1.000E+02	3.000E+02	1.000E+03
Ra-226	1.000E+00	1.960E+00	1.959E+00	1.957E+00	1.950E+00	1.935E+00	1.862E+00	1.680E+00	1.174E+00
Pb-210	1.000E+00	0.000E+00	5.997E-02	1.744E-01	5.221E-01	1.051E+00	1.801E+00	1.705E+00	1.191E+00

THF(i) is the thread fraction of the parent nuclide.

RESCALC.EXE execution time = 32.02 seconds

# Construction Worker- Subsurface Risk

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Cancer Risk Slope Factors Summary Table  
 Risk Library: HEAST 2001 Morbidity

Menu	Parameter	Current Value	Base Case*	Parameter Name
Sf-1	Ground external radiation slope factors, 1/yr per (pCi/g) :			
Sf-1	Pb-210+D	4.21E-09	1.41E-09	SLPF ( 1,1)
Sf-1	Ra-226+D	8.49E-06	2.29E-08	SLPF ( 2,1)
Sf-2	Inhalation, slope factors, 1/(pCi) :			
Sf-2	Pb-210+D	1.39E-08	2.77E-09	SLPF ( 1,2)
Sf-2	Ra-226+D	1.16E-08	1.15E-08	SLPF ( 2,2)
Sf-3	Food ingestion, slope factors, 1/(pCi) :			
Sf-3	Pb-210+D	3.44E-09	1.18E-09	SLPF ( 1,3)
Sf-3	Ra-226+D	5.15E-10	5.14E-10	SLPF ( 2,3)
Sf-3	Water ingestion, slope factors, 1/(pCi) :			
Sf-3	Pb-210+D	1.27E-09	8.81E-10	SLPF ( 1,4)
Sf-3	Ra-226+D	3.86E-10	3.85E-10	SLPF ( 2,4)
Sf-3	Soil ingestion, slope factors, 1/(pCi) :			
Sf-3	Pb-210+D	2.66E-09	1.84E-09	SLPF ( 1,5)
Sf-3	Ra-226+D	7.30E-10	7.29E-10	SLPF ( 2,5)
Sf-Rn	Radon Inhalation slope factors, 1/(pCi) :			
Sf-Rn	Rn-222	1.80E-12	1.80E-12	SLPFRN(1,1)
Sf-Rn	Po-218	3.70E-12	3.70E-12	SLPFRN(1,2)
Sf-Rn	Pb-214	6.20E-12	6.20E-12	SLPFRN(1,3)
Sf-Rn	Bi-214	1.50E-11	1.50E-11	SLPFRN(1,4)
Sf-Rn	Radon K factors, (mrem/WLM) :			
Sf-Rn	Rn-222 Indoor	7.60E+02	7.60E+02	KFACTR(1,1)
Sf-Rn	Rn-222 Outdoor	5.70E+02	5.70E+02	KFACTR(1,2)

\*Base Case means Default.Lib w/o Associate Nuclide contributions.

Risk Slope and Environmental Transport Factors for the Ground Pathway

Nuclide (i)	Slope(i) *	ETFG(i,t) At Time in Years (dimensionless)									
		t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03		
At-218	3.570E-09	4.572E-08	4.833E-08	5.402E-08	7.976E-08	1.838E-07	1.194E-05	9.554E-01	9.554E-01	9.554E-01	
Bi-210	2.760E-09	2.184E-03	2.228E-03	2.319E-03	2.666E-03	3.596E-03	1.606E-02	9.321E-01	9.321E-01	9.321E-01	
Bi-214	7.480E-06	3.124E-02	3.159E-02	3.231E-02	3.496E-02	4.139E-02	9.623E-02	9.272E-01	9.272E-01	9.272E-01	
Pb-210	1.410E-09	1.864E-10	2.007E-10	2.327E-10	3.905E-10	1.184E-09	3.034E-07	9.667E-01	9.667E-01	9.667E-01	
Pb-214	9.820E-07	6.237E-03	6.341E-03	6.556E-03	7.367E-03	9.457E-03	3.297E-02	9.325E-01	9.325E-01	9.325E-01	
Po-210	3.950E-11	1.615E-02	1.637E-02	1.682E-02	1.848E-02	2.263E-02	6.230E-02	9.261E-01	9.261E-01	9.261E-01	
Po-214	3.860E-10	1.746E-02	1.769E-02	1.817E-02	1.993E-02	2.429E-02	6.537E-02	9.211E-01	9.211E-01	9.211E-01	
Po-218	4.260E-11	1.750E-02	1.773E-02	1.821E-02	1.997E-02	2.434E-02	6.551E-02	9.261E-01	9.261E-01	9.261E-01	
Ra-226	2.290E-08	2.143E-03	2.187E-03	2.278E-03	2.624E-03	3.556E-03	1.624E-02	9.404E-01	9.404E-01	9.404E-01	
Rn-222	1.740E-09	1.121E-02	1.137E-02	1.171E-02	1.298E-02	1.618E-02	4.874E-02	9.221E-01	9.221E-01	9.221E-01	
Tl-210	0.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	

\* - Units are l/yr per (pCi/g) at infinite depth and area. Multiplication by ETFG(i,t) converts to site conditions.

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 0.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil  
 and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 0.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	4.702E-07	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	4.702E-07	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000



Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.702E-07	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil  
 and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 1.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	4.076E-13	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	4.753E-07	1.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	4.753E-07	1.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000



Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.753E-07	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.753E-07	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides



Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+00 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 3.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio-Nuclide	Ground		Inhalation		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	1.232E-12	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	4.859E-07	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	4.859E-07	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000



Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.858E-07	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.858E-07	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+01 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+01 years

Radio-Nuclide	Ground			Inhalation			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	risk	fract.	risk	fract.
Pb-210	4.223E-12	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000
Ra-226	5.242E-07	1.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000
Total	5.242E-07	1.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000

Water Independent Pathways (Inhalation excludes radon)



Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.242E-07	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 2.500E+01 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 2.500E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 2.500E+01 years

Radio-Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	1.137E-11	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	6.172E-07	1.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	6.173E-07	1.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

Water Independent Pathways (Inhalation excludes radon)





Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.173E-07	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.173E-07	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+02 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio-Nuclide	Ground		Inhalation		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	8.427E-11	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	1.401E-06	0.9999	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	1.402E-06	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000



Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.402E-06	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.402E-06	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	1.345E-01	0.000E+00	0.000E+00	0.000E+00	1.407E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.407E+02
Ra-226	1.325E-01	0.000E+00	0.000E+00	0.000E+00	1.386E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.386E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil  
 and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 3.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Ground			Inhalation			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	
Pb-210	6.774E-09	0.0005	1.868E-09	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.745E-07	0.0273	
Ra-226	1.323E-05	0.9646	1.533E-09	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.012E-07	0.0074	
Total	1.324E-05	0.9651	3.400E-09	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.757E-07	0.0347	

Water Independent Pathways (Inhalation excludes radon)

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Plant		Meat		Milk		All Pathways**			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.831E-07	0.0279
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.333E-05	0.9721
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.372E-05	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 3.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)													
	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.324E-05	0.9651	3.400E-09	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	1.324E-05	0.9651	3.400E-09	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.757E-07	0.0347

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.372E-05	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.372E-05	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+03 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	9.393E-02	0.000E+00	0.000E+00	0.000E+00	9.826E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.826E+01
Ra-226	9.255E-02	0.000E+00	0.000E+00	0.000E+00	9.682E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.682E+01

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 1.000E+03 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Radio- Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk	risk	fract.	risk	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	4.731E-09	0.0005	1.304E-09	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.615E-07	0.0273
Ra-226	9.241E-06	0.9646	1.070E-09	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.070E-08	0.0074
Total	9.245E-06	0.9651	2.375E-09	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.322E-07	0.0347

Water Independent Pathways (Inhalation excludes radon)



Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Plant		Meat		Milk		All Pathways**			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.676E-07	0.0279
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.312E-06	0.9721
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.580E-06	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+03 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)													
	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	9.245E-06	0.9651	2.375E-09	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	9.245E-06	0.9651	2.375E-09	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.322E-07	0.0347

Total Excess Cancer Risk CNRS(i,P,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Radio- Nuclide	Water Dependent Pathways															
	Water		Fish		Radon		Plant		Meat		Milk		All pathways			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.580E-06	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.580E-06	1.0000

\*\*\*CNRSI(i,p,t) includes contribution from decay daughter radionuclides

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# APPENDIX B

## Preliminary Cleanup Goals for Soil Scenarios

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# Technical Memorandum

## Preliminary Cleanup Goals for Soil Scenarios for SHAD-041

### Sharpe Army Depot Lathrop, CA



Prepared By



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Preliminary Cleanup Goals for Soil Scenarios for SHAD-041  
Sharpe Army Depot Lathrop, CA

Prepared by:  Date: 12/3/2018  
James Reese, CHP, RRPT

Reviewed by:  Date: 12/3/2018  
Clif Gray, PM

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## 1.0 INTRODUCTION

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This report documents the calculations of benchmark dose, risk, and preliminary cleanup goals for radionuclides in soil at the SHAD-041 Site on the Sharpe Army Depot, Lathrop, CA. The results of the calculations are used to determine the residual concentration in soil that is protective of human health and the environment following the cleanup process. The calculations will be performed using the residual radioactivity computer code, RESRAD-ONSITE, version 7.2.

## 2.0 OBJECTIVES

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The primary objectives of this document are the following:

- Calculate residual Radium-226 soil concentration (preliminary cleanup goal in pCi/g) level equal to  $1.0 \times 10^{-4}$  industrial/commercial risk level,
- Calculate an industrial/commercial risk level expressed as excess cancer lifetime probability ( $\times 10^{-4}$ ) for Radium-226 based on 12 mrem/year dose,
- Convert a dose of 12 mrem/year to a CERCLA risk level value expressed as excess cancer lifetime risk probability (i.e.,  $\times 10^{-4}$  level),
- Calculate a derived 12 mrem/year dose based residual soil concentration (preliminary cleanup goal in pCi/g) for Radium-226, and
- Determine whether the potentially relevant and appropriate (ARAR) based residual soil concentration requirements/concentrations for Radium-226 Criterion 6(6) of 10 CFR 40 Appendix A (USNRC) are protective to human health and the environment under the residential, industrial and construction/commercial land use/exposure scenarios.

## 3.0 REGULATORY BASIS AND RELEVANT GUIDANCE

---

The cleanup levels analyzed in this technical memorandum are applicable for the SHAD-041 site at the Sharpe Depot. Guidance for cleanup of radioactively contaminated sites is provided by the Nuclear Regulatory Commission (NRC), the Environmental Protection Agency (EPA), and the State of California, Department of Public Health (CDPH). The following is a discussion of the potential applicable or relevant and appropriate requirements (ARAR) for the site.

The NRC in 10 CFR 40 Appendix A, criteria 6(6) provides requirements for the maximum concentration of radium in soil. The updated dose assessments were performed including the guidance of NUREG-1620, "*Standard Review Plan for the Review of a Reclamation Plan for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act of 1978*", Appendix H, "*Guidance to the U.S. Nuclear Regulatory Commission Staff on the Radium Benchmark Dose Approach*".

The following assumptions were used to develop the source term for the dose assessments:

1. Per NUREG-1620, the long lived progeny of radium are included with radium in benchmark dose assessments, e.g., Pb-210 (half-life of 22 years) is input at the same

activity concentration if Ra-226 is modeled, because Pb-210 is the only long lived decay progeny of Ra-226. Since Ra-228 was used to derive benchmark dose,

10 CFR 40 Appendix A, criteria 6(6) states in part:

*The design requirements in this criterion for longevity and control of radon releases apply to any portion of a licensed and/or disposal site unless such portion contains a concentration of radium in land, averaged over areas of 100 square meters, which, as a result of byproduct material, does not exceed the background level by more than: (i) 5 picocuries per gram (pCi/g) of radium-226, or, in the case of thorium byproduct material, radium-228, averaged over the first 15 centimeters (cm) below the surface, and (ii) 15 pCi/g of radium-226, or, in the case of thorium byproduct material, radium-228, averaged over 15-cm thick layers more than 15 cm below the surface.*

*Byproduct material containing concentrations of radionuclides other than radium in soil, and surface activity on remaining structures, must not result in a total effective dose equivalent (TEDE) exceeding the dose from cleanup of radium contaminated soil to the above standard (benchmark dose), and must be at levels which are as low as is reasonably achievable. If more than one residual radionuclide is present in the same 100-square-meter area, the sum of the ratios for each radionuclide of concentration present to the concentration limit will not exceed "1" (unity). A calculation of the potential peak annual TEDE within 1000 years to the average member of the critical group that would result from applying the radium standard (not including radon) on the site must be submitted for approval. The use of decommissioning plans with benchmark doses which exceed 100 mrem/yr, before application of ALARA, requires the approval of the Commission after consideration of the recommendation of the NRC staff. This requirement for dose criteria does not apply to sites that have decommissioning plans for soil and structures approved before June 11, 1999.*

In 1997, the EPA issued guidance entitled “*Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination*” (OSWER No. 9200.4-18, August 22, 1997). This 1997 guidance provided clarification on establishing protective cleanup levels for radioactive contamination at CERCLA sites. The guidance reiterated that cleanups of radionuclides are governed by the risk range for all carcinogens established in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) when Applicable or Relevant and Appropriate Requirements (ARARs) are not available or are not sufficiently protective. Cleanups generally should achieve a level of risk within the  $10^{-4}$  to  $10^{-6}$  carcinogenic risk range based on the reasonable maximum exposure for an individual.

In 1998 in OSWER Directive 9200.4-25, *Use of Soil Cleanup Criteria in 40 CFR 192 as Remediation Goals for CERCLA Sites*, February 12, 1998, the EPA established guidance for remediation of uranium mill tailing sites that were considered protection of the environment and the public. Subpart B of 40 CFR Part 192 contains two different soil standards. The concentration criterion for surface soil (5 pCi/g of radium-226) is a health-based standard. The relevant source of health risk for surface soil is exposure to gamma radiation, which is the basis for this standard.

Then in 2014, the EPA issued OSWER 9285.6-20, *Distribution of the “Radiation Risk Assessment at CERCLA Sites: Q&A*. This document considers remedial action at a site when cumulative excess cancer risk to any current or future population exceeds a risk range of  $1.0 \times 10^{-6}$  to  $1.0 \times 10^{-4}$  (i.e., one case of cancer in one-million to one case of cancer in ten-thousand). Based on OSWER 9285.6-20, the EPA identified a dose limit criterion of 12 mrem/yr as being protective and equates that



dose to a risk of  $3.0 \times 10^{-4}$ . A risk associated dose less than 12 mrem/yr is considered acceptable, by the EPA.

The State of California CDPH currently does promulgate a cleanup level for unrestricted release of a radiologically contaminated site. Instead, State regulations in 17 CCR 30256(k) state,

*(k) Specific licenses shall be terminated by written notice to the licensee when the Department determines that:*

- (1) Radioactive material has been properly disposed;*
- (2) Reasonable effort has been made to eliminate residual radioactive contamination, if present; and*
- (3) A radiation survey has been performed which demonstrates that the premises are suitable for release for unrestricted use; or other information submitted by the licensee is sufficient to demonstrate that the premises are suitable for release for unrestricted use.*

CDPH has stated that in order to meet the above criterion for unrestricted release, the residual radioactivity at a site must be statistically equivalent to background determined for the site.

## 4.0 Evaluation of Exposure Scenarios

---

The receptor scenarios along with their corresponding exposure pathways are summarized in the following. For each of the scenarios, calculations were performed to determine a concentration that equated to either a  $10^{-4}$  risk level or a 12 mrem/yr dose level for the reasonably maximally exposed receptor. Additionally, a calculation was made to determine if the concentration provided in 10 CFR 40 Appendix A Criteria 6(6) resulted in a risk or dose within the values specified by the EPA.

Doses and risk were calculated for three exposure pathways; external, inhalation, and ingestion for the three human critical groups. The report describes the parameters and assumptions such that a dose recalculation may be made to accommodate any other scenario.

- No water pathways are evaluated as this RI effort was only for Operable Unit 2 (OU 2) which addresses the soil and soil gas.
- Radiological doses for the resident assumes the resident is onsite 24 hours a day and is exposed to both surface and subsurface contamination.
- The resident does not grow vegetables for consumption in a home garden and derives all water from a city water supply.
- The assumptions for the industrial worker are conservative as it is assumed that a worker disobeys all fencing/signage and spends seven hours a day at the Site for 25 years.
- The parameters listed in 10 CFR 40, Appendix A, Criteria 6(6) were used to define the calculations.
- Only surface soil was evaluated.

## 4.1 Resident

Under this scenario, the resident lives on the site and may be exposed by external exposure to residual radioactive contamination in the surface soil and exposure to subsurface contamination. The resident lives on the Site, no remediation has occurred and the size of the contaminated area is 5000 square meters ( $m^2$ ), is at the site 24 hours per day and spends 7 hours per day outdoors. The exposure duration is 20 years (HERO Note 1, 2014). The inhalation rate for the receptor is 20 cubic meter ( $m^3$ ) per day (HERO Note 1, 2014). Since resident is assumed to be an adult, a body weight of 80 kilograms (kg) was used to assess exposure to contaminants. Exposure pathways evaluated for the industrial worker scenario include:

- external gamma radiation from radionuclides in the surface soil;
- incidental ingestion of surface soil; and
- inhalation of airborne contaminated dust from surface soil.

## 4.2 Industrial Worker

Under this scenario, the industrial worker may be exposed to the residual radioactive contamination that may be present in surface soil but is not expected to have regular contact with subsurface soil. The industrial worker is modeled as a typical site worker who spends most of the time indoors. The industrial worker is at the site for 250 days per year for 25 years (HERO Note 1, 2014). During a typical working day, the worker is assumed to spend 7 hours indoors and 1 hour outdoors and will ingest 100 milligram (mg) of soil (HERO Note 1, 2014). The inhalation rate for the receptor is 14 cubic meter ( $m^3$ ) per day (HERO Note 1, 2014). Since workers are assumed to be adults, a body weight of 80 kilograms (kg) was used to assess exposure to contaminants. Exposure pathways evaluated for the industrial worker scenario include:

- external gamma radiation from radionuclides in the surface soil;
- incidental ingestion of surface soil; and
- inhalation of airborne contaminated dust from surface soil.

## 4.3 Construction Worker

Since it is reasonable to assume that construction activities could occur at the Site, adult construction workers were identified as potential receptors. During construction activities these receptors could be exposed to residual contamination present in soil surface. Construction workers were assumed to be on the job 8 hours per day, 250 days per year over a 1-year period. During a typical working day, the construction worker is assumed to spend 8 hours at the site and will ingest 330 mg of soil per day (HERO Note 1, 2014). The inhalation rate for the receptor is 20  $m^3$  per day (HERO Note 1, 2014). Since construction workers are assumed to be adults, a body weight of 80 kg was used to assess exposure to chemical constituents. Exposure pathways evaluated for the construction worker scenario include:

- external gamma radiation from radionuclides in the soil;
- incidental ingestion of soil; and
- inhalation of airborne contaminated dust from soil.

## 5.0 Results

This effort was to identify levels of residual radioactivity that can be correlated to either the upper CERCLA risk range ( $10^{-4}$ ) or the EPA dose limit of 12 mrem/yr. **Appendix A** presents the output radiological dose and risk assessment summary reports for each exposure scenario. The results showed that a residual concentration on the order of 2.0 pCi/g of Ra-226 would meet both the dose and risk range limits. Table X below provides a summary of the results based upon the listed objectives.

Objective	Resident	Industrial Worker	Construction Worker	Comments
Residual Radium-226 soil concentration (preliminary cleanup goal in pCi/g) level equal to $1.0 \times 10^{-4}$ industrial/commercial risk level,	N/E	1.31 pCi/g	1292 pCi/g	
An industrial/commercial risk level expressed as excess cancer lifetime probability ( $\times 10^{-4}$ ) for Radium-226 based on 12 mrem/year dose	N/E	$2.2 \times 10^{-4}$	$9 \times 10^{-6}$	
Convert a dose of 12 mrem/year to a CERCLA risk level value expressed as excess cancer lifetime risk probability (i.e., $\times 10^{-4}$ level)	$1.8 \times 10^{-4}$	$2.2 \times 10^{-4}$	$9 \times 10^{-6}$	
ResRad-derived 12 mrem/year dose based residual soil concentration (preliminary cleanup goal in pCi/g) for Radium-226	1.74 pCi/g	1.31 pCi/g	1.29 pCi/g	

Resident- Surface



Dose Conversion Factor (and Related) Parameter Summary  
 Dose Library: FGR 11

Menu	Parameter	Current	Base	Case*	Parameter Name
A-1	DCFTs for external ground radiation, (mrem/yr)/(pCi/g)	5.847E-03	5.847E-03		DCF1 ( 1)
A-1	At-218 (Source: FGR 12)	3.606E-03	3.606E-03		DCF1 ( 2)
A-1	Bi-210 (Source: FGR 12)	9.808E+00	9.808E+00		DCF1 ( 3)
A-1	Bi-214 (Source: FGR 12)	2.447E-03	2.447E-03		DCF1 ( 4)
A-1	Pb-210 (Source: FGR 12)	1.341E+00	1.341E+00		DCF1 ( 5)
A-1	Pb-214 (Source: FGR 12)	5.231E-05	5.231E-05		DCF1 ( 6)
A-1	Po-210 (Source: FGR 12)	5.138E-04	5.138E-04		DCF1 ( 7)
A-1	Po-214 (Source: FGR 12)	5.642E-05	5.642E-05		DCF1 ( 8)
A-1	Ra-226 (Source: FGR 12)	3.176E-02	3.176E-02		DCF1 ( 9)
A-1	Rn-222 (Source: FGR 12)	2.354E-03	2.354E-03		DCF1 ( 10)
A-1	Tl-210 (Source: no data)	0.000E+00	-2.000E+00		DCF1 ( 11)
B-1	Dose conversion factors for inhalation, mrem/pCi:				
B-1	Pb-210+D	2.320E-02	1.360E-02		DCF2 ( 1)
B-1	Ra-226+D	8.594E-03	8.580E-03		DCF2 ( 2)
D-1	Dose conversion factors for ingestion, mrem/pCi:				
D-1	Pb-210+D	7.276E-03	5.370E-03		DCF3 ( 1)
D-1	Ra-226+D	1.321E-03	1.320E-03		DCF3 ( 2)
D-34	Food transfer factors:				
D-34	Pb-210+D , plant/soil concentration ratio, dimensionless	1.000E-02	1.000E-02		RTF ( 1,1)
D-34	Pb-210+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-04	8.000E-04		RTF ( 1,2)
D-34	Pb-210+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.000E-04	3.000E-04		RTF ( 1,3)
D-34	Ra-226+D , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02		RTF ( 2,1)
D-34	Ra-226+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03		RTF ( 2,2)
D-34	Ra-226+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-03	1.000E-03		RTF ( 2,3)
D-5	Bioaccumulation factors, fresh water, L/kg:				
D-5	Pb-210+D , fish	3.000E+02	3.000E+02		BIOFAC ( 1,1)
D-5	Pb-210+D , crustacea and mollusks	1.000E+02	1.000E+02		BIOFAC ( 1,2)
D-5	Ra-226+D , fish	5.000E+01	5.000E+01		BIOFAC ( 2,1)
D-5	Ra-226+D , crustacea and mollusks	2.500E+02	2.500E+02		BIOFAC ( 2,2)

#For DCF1 (xxx) only, factors are for infinite depth & area. See ETRG table in Ground Pathway of Detailed Report.  
 \*Base Case means Default.Lib w/o Associate Nuclide contributions.

Site-Specific Parameter Summary

Menu	Parameter	User	Default	Used by RESRAD	Parameter
		Input	(If different from user input)		Name
R011	Area of contaminated zone (m**2)	5.000E+03	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	1.500E-01	2.000E+00	---	THICKO
R011	Fraction of contamination that is submerged	0.000E+00	0.000E+00	---	SUBMFRACT
R011	Length parallel to aquifer flow (m)	not used	1.000E+02	---	LCZPAQ
R011	Basic radiation dose limit (mrem/yr)	1.200E+01	3.000E+01	---	BRDL
R011	Time since placement of material (yr)	0.000E+00	0.000E+00	---	TI
R011	Times for calculations (yr)	1.000E+00	1.000E+00	---	T ( 2)
R011	Times for calculations (yr)	3.000E+00	3.000E+00	---	T ( 3)
R011	Times for calculations (yr)	1.000E+01	1.000E+01	---	T ( 4)
R011	Times for calculations (yr)	2.600E+01	3.000E+01	---	T ( 5)
R011	Times for calculations (yr)	1.000E+02	1.000E+02	---	T ( 6)
R011	Times for calculations (yr)	3.000E+02	3.000E+02	---	T ( 7)
R011	Times for calculations (yr)	1.000E+03	1.000E+03	---	T ( 8)
R011	Times for calculations (yr)	not used	0.000E+00	---	T ( 9)
R011	Times for calculations (yr)	not used	0.000E+00	---	T (10)
R012	Initial principal radionuclide (pCi/g):	1.740E+00	0.000E+00	---	SI ( 2)
R012	Concentration in groundwater (pCi/L):	not used	0.000E+00	---	WI ( 2)
R013	Cover depth (m)	0.000E+00	0.000E+00	---	COVERO
R013	Density of cover material (g/cm**3)	not used	1.500E+00	---	DENSCV
R013	Cover depth erosion rate (m/yr)	not used	1.000E-03	---	VCV
R013	Density of contaminated zone (g/cm**3)	1.500E+00	1.500E+00	---	DENSCZ
R013	Contaminated zone erosion rate (m/yr)	1.000E-03	1.000E-03	---	VCZ
R013	Contaminated zone total porosity	4.000E-01	4.000E-01	---	TPCZ
R013	Contaminated zone field capacity	2.000E-01	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	1.000E+01	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	5.300E+00	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	2.000E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	not used	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	5.000E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	5.000E-01	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	0.000E+00	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	2.000E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	not used	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	not used	1.000E-03	---	EPS
R014	Density of saturated zone (g/cm**3)	not used	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	not used	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	not used	2.000E-01	---	EPSZ
R014	Saturated zone field capacity	not used	2.000E-01	---	FCSZ
R014	Saturated zone hydraulic conductivity (m/yr)	not used	1.000E+02	---	HCSZ
R014	Saturated zone hydraulic gradient	not used	2.000E-02	---	HGWT

R014	3	Saturated zone b parameter	3	not used	3	5.300E+00	3	BSZ
R014	3	Water table drop rate (m/yr)	3	not used	3	1.000E-03	3	VWT
R014	3	Well pump intake depth (m below water table)	3	not used	3	1.000E+01	3	DWIBWT
R014	3	Model: Nondispersion (ND) or Mass-Balance (MB)	3	not used	3	ND	3	MODEL
R014	3	Well pumping rate (m**3/yr)	3	not used	3	2.500E+02	3	UW



Site-Specific Parameter Summary (continued)

Menu	Parameter	User	Input	Default	(If different from user input)	Used by RESRAD	Parameter Name
R015	Number of unsaturated zone strata	3	not used	3	---	---	NS
R016	Distribution coefficients for Ra-226	3	3	3	---	---	
R016	Contaminated zone (cm**3/g)	3	7.000E+01	3	7.000E+01	---	DCNUCC ( 2)
R016	Saturated zone (cm**3/g)	3	not used	3	7.000E+01	---	DCNUCC ( 2)
R016	Leach rate (/yr)	3	0.000E+00	3	0.000E+00	1.266E-02	ALEACH ( 2)
R016	Solubility constant	3	0.000E+00	3	0.000E+00	not used	SOLUBK ( 2)
R016	Distribution coefficients for daughter Pb-210	3	3	3	---	---	
R016	Contaminated zone (cm**3/g)	3	1.000E+02	3	1.000E+02	---	DCNUCC ( 1)
R016	Saturated zone (cm**3/g)	3	not used	3	1.000E+02	---	DCNUCC ( 1)
R016	Leach rate (/yr)	3	0.000E+00	3	0.000E+00	8.871E-03	ALEACH ( 1)
R016	Solubility constant	3	0.000E+00	3	0.000E+00	not used	SOLUBK ( 1)
R017	Inhalation rate (m**3/yr)	3	7.300E+03	3	8.400E+03	---	INHALR
R017	Mass loading for inhalation (g/m**3)	3	1.000E-04	3	1.000E-04	---	MLINH
R017	Exposure duration	3	2.000E+01	3	3.000E+01	---	ED
R017	Shielding factor, inhalation	3	4.000E-01	3	4.000E-01	---	SHF1
R017	Shielding factor, external gamma	3	1.000E+00	3	7.000E-01	---	SHF3
R017	Fraction of time spent indoors	3	6.840E-01	3	5.000E-01	---	FIND
R017	Fraction of time spent outdoors (on site)	3	7.300E-02	3	2.500E-01	---	FOTD
R017	Shape factor flag, external gamma	3	1.000E+00	3	1.000E+00	>0 shows circular AREA.	FS
R017	Radii of shape factor array (used if FS = -1):	3	not used	3	5.000E+01	---	RAD_SHAPE ( 1)
R017	Outer annular radius (m), ring 1:	3	not used	3	7.071E+01	---	RAD_SHAPE ( 2)
R017	Outer annular radius (m), ring 2:	3	not used	3	0.000E+00	---	RAD_SHAPE ( 3)
R017	Outer annular radius (m), ring 3:	3	not used	3	0.000E+00	---	RAD_SHAPE ( 4)
R017	Outer annular radius (m), ring 4:	3	not used	3	0.000E+00	---	RAD_SHAPE ( 5)
R017	Outer annular radius (m), ring 5:	3	not used	3	0.000E+00	---	RAD_SHAPE ( 6)
R017	Outer annular radius (m), ring 6:	3	not used	3	0.000E+00	---	RAD_SHAPE ( 7)
R017	Outer annular radius (m), ring 7:	3	not used	3	0.000E+00	---	RAD_SHAPE ( 8)
R017	Outer annular radius (m), ring 8:	3	not used	3	0.000E+00	---	RAD_SHAPE ( 9)
R017	Outer annular radius (m), ring 9:	3	not used	3	0.000E+00	---	RAD_SHAPE (10)
R017	Outer annular radius (m), ring 10:	3	not used	3	0.000E+00	---	RAD_SHAPE (11)
R017	Outer annular radius (m), ring 11:	3	not used	3	0.000E+00	---	RAD_SHAPE (12)
R017	Outer annular radius (m), ring 12:	3	not used	3	0.000E+00	---	
R017	Fractions of annular areas within AREA:	3	not used	3	1.000E+00	---	FRACA ( 1)
R017	Ring 1	3	not used	3	2.732E-01	---	FRACA ( 2)
R017	Ring 2	3	not used	3	0.000E+00	---	FRACA ( 3)
R017	Ring 3	3	not used	3	0.000E+00	---	FRACA ( 4)
R017	Ring 4	3	not used	3	0.000E+00	---	FRACA ( 5)
R017	Ring 5	3	not used	3	0.000E+00	---	FRACA ( 6)
R017	Ring 6	3	not used	3	0.000E+00	---	FRACA ( 7)
R017	Ring 7	3	not used	3	0.000E+00	---	



Site-Specific Parameter Summary (continued)

Menu	Parameter	User	Input	Default	(If different from user input)	Used by RESRAD	Parameter Name
R018	Fruits, vegetables and grain consumption (kg/yr)	not used	1.600E+02				DIET(1)
R018	Leafy vegetable consumption (kg/yr)	not used	1.400E+01				DIET(2)
R018	Milk consumption (L/yr)	not used	9.200E+01				DIET(3)
R018	Meat and poultry consumption (kg/yr)	not used	6.300E+01				DIET(4)
R018	Fish consumption (kg/yr)	not used	5.400E+00				DIET(5)
R018	Other seafood consumption (kg/yr)	not used	9.000E-01				DIET(6)
R018	Soil ingestion rate (g/yr)	3.650E+01	3.650E+01				SOIL
R018	Drinking water intake (L/yr)	not used	5.100E+02				DWI
R018	Contamination fraction of drinking water	not used	1.000E+00				FDM
R018	Contamination fraction of household water	not used	1.000E+00				FHHW
R018	Contamination fraction of livestock water	not used	1.000E+00				FLW
R018	Contamination fraction of irrigation water	not used	1.000E+00				FIRW
R018	Contamination fraction of aquatic food	not used	5.000E-01				FR9
R018	Contamination fraction of plant food	not used	-1				FPLANT
R018	Contamination fraction of meat	not used	-1				FMEAT
R018	Contamination fraction of milk	not used	-1				FMILK
R019	Livestock fodder intake for meat (kg/day)	not used	6.800E+01				LF15
R019	Livestock fodder intake for milk (kg/day)	not used	5.500E+01				LF16
R019	Livestock water intake for meat (L/day)	not used	5.000E+01				LWI5
R019	Livestock water intake for milk (L/day)	not used	1.600E+02				LWI6
R019	Livestock soil intake (kg/day)	not used	5.000E-01				LSI
R019	Mass loading for foliar deposition (g/m**3)	not used	1.000E-04				MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01				DM
R019	Depth of roots (m)	not used	9.000E-01				DROOT
R019	Drinking water fraction from ground water	not used	1.000E+00				FGWDW
R019	Household water fraction from ground water	not used	1.000E+00				FGWHH
R019	Livestock water fraction from ground water	not used	1.000E+00				FGMLW
R019	Irrigation fraction from ground water	not used	1.000E+00				FGWIR
R19B	Wet weight crop yield for Non-Leafy (kg/m**2)	not used	7.000E-01				YV(1)
R19B	Wet weight crop yield for Leafy (kg/m**2)	not used	1.500E+00				YV(2)
R19B	Wet weight crop yield for Fodder (kg/m**2)	not used	1.100E+00				YV(3)
R19B	Growing Season for Non-Leafy (years)	not used	1.700E-01				TE(1)
R19B	Growing Season for Leafy (years)	not used	2.500E-01				TE(2)
R19B	Growing Season for Fodder (years)	not used	8.000E-02				TE(3)
R19B	Translocation Factor for Non-Leafy	not used	1.000E-01				TIV(1)
R19B	Translocation Factor for Leafy	not used	1.000E+00				TIV(2)
R19B	Translocation Factor for Fodder	not used	1.000E+00				TIV(3)
R19B	Dry Foliar Interception Fraction for Non-Leafy	not used	2.500E-01				RDRY(1)
R19B	Dry Foliar Interception Fraction for Leafy	not used	2.500E-01				RDRY(2)
R19B	Dry Foliar Interception Fraction for Fodder	not used	2.500E-01				RDRY(3)
R19B	Wet Foliar Interception Fraction for Non-Leafy	not used	2.500E-01				RWET(1)
R19B	Wet Foliar Interception Fraction for Leafy	not used	2.500E-01				RWET(2)

R19B	3	Wet Foliar Interception Fraction for Fodder	3	not used	3	2.500E-01	3	---	3	RWET(3)
R19B	3	Weathering Removal Constant for Vegetation	3	not used	3	2.000E+01	3	---	3	WLAM
C14	3	C-12 concentration in water (g/cm**3)	3	not used	3	2.000E-05	3	---	3	C12WTR
C14	3	C-12 concentration in contaminated soil (g/g)	3	not used	3	3.000E-02	3	---	3	C12CZ
C14	3	Fraction of vegetation carbon from soil	3	not used	3	2.000E-02	3	---	3	CSOIL

Site-Specific Parameter Summary (continued)

Menu	Parameter	User	Default	Used by RESRAD	Parameter Name
C14	Fraction of vegetation carbon from air	not used	9.800E-01	---	CAIR
C14	C-14 evasion layer thickness in soil (m)	not used	3.000E-01	---	DMC
C14	C-14 evasion flux rate from soil (1/sec)	not used	7.000E-07	---	EVSN
C14	C-12 evasion flux rate from soil (1/sec)	not used	1.000E-10	---	REVSN
C14	Fraction of grain in beef cattle feed	not used	8.000E-01	---	AVFG4
C14	Fraction of grain in milk cow feed	not used	2.000E-01	---	AVFG5
STOR	Storage times of contaminated foodstuffs (days):				
STOR	Fruits, non-leafy vegetables, and grain	1.400E+01	1.400E+01	---	STOR_T(1)
STOR	Leafy vegetables	1.000E+00	1.000E+00	---	STOR_T(2)
STOR	Milk	1.000E+00	1.000E+00	---	STOR_T(3)
STOR	Meat and poultry	2.000E+01	2.000E+01	---	STOR_T(4)
STOR	Fish	7.000E+00	7.000E+00	---	STOR_T(5)
STOR	Crustacea and mollusks	7.000E+00	7.000E+00	---	STOR_T(6)
STOR	Well water	1.000E+00	1.000E+00	---	STOR_T(7)
STOR	Surface water	1.000E+00	1.000E+00	---	STOR_T(8)
STOR	Livestock fodder	4.500E+01	4.500E+01	---	STOR_T(9)
R021	Thickness of building foundation (m)	not used	1.500E-01	---	FLOOR1
R021	Bulk density of building foundation (g/cm**3)	not used	2.400E+00	---	DENSFL
R021	Total porosity of the cover material	not used	4.000E-01	---	TPCV
R021	Total porosity of the building foundation	not used	1.000E-01	---	TPFL
R021	Volumetric water content of the cover material	not used	5.000E-02	---	PH2OCV
R021	Volumetric water content of the foundation	not used	3.000E-02	---	PH2OFL
R021	Diffusion coefficient for radon gas (m/sec):				
R021	in cover material	not used	2.000E-06	---	DIFCV
R021	in foundation material	not used	3.000E-07	---	DIFFL
R021	in contaminated zone soil	not used	2.000E-06	---	DIFCZ
R021	Radon vertical dimension of mixing (m)	not used	2.000E+00	---	HMX
R021	Average building air exchange rate (1/hr)	not used	5.000E-01	---	REXG
R021	Height of the building (room) (m)	not used	2.500E+00	---	HRM
R021	Building interior area factor	not used	0.000E+00	---	FAI
R021	Building depth below ground surface (m)	not used	-1.000E+00	---	DMFL
R021	Emanating power of Rn-222 gas	not used	2.500E-01	---	EMANA(1)
R021	Emanating power of Rn-220 gas	not used	1.500E-01	---	EMANA(2)
TITL	Number of graphical time points	32	---	---	NPTS
TITL	Maximum number of integration points for dose	17	---	---	LYMAX
TITL	Maximum number of integration points for risk	1	---	---	KYMAX

Summary of Pathway Selections

Pathway	<sup>3</sup>	User Selection
1 -- external gamma	<sup>3</sup>	active
2 -- inhalation (w/o radon)	<sup>3</sup>	active
3 -- plant ingestion	<sup>3</sup>	suppressed
4 -- meat ingestion	<sup>3</sup>	suppressed
5 -- milk ingestion	<sup>3</sup>	suppressed
6 -- aquatic foods	<sup>3</sup>	suppressed
7 -- drinking water	<sup>3</sup>	suppressed
8 -- soil ingestion	<sup>3</sup>	active
9 -- radon	<sup>3</sup>	suppressed
Find peak pathway doses	<sup>3</sup>	active

Contaminated Zone Dimensions Initial Soil Concentrations, pCi/g  
 AAAAAAAAAAAAAAAAAAAAAAAAAA AAAAAAAAAAAAAAAAAAAAAAAAAA  
 Area: 5000.00 square meters Ra-226 1.740E+00

Thickness: 0.15 meters  
 Cover Depth: 0.00 meters

Total Dose TDOSE(t), mrem/yr  
 Basic Radiation Dose Limit = 1.200E+01 mrem/yr  
 Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)  
 AAAAAAAAAAAAAAAAAAAAAAAAAA AAAAAAAAAAAAAAAAAAAAAAAAAA AAAAAAAAAAAAAAAAAAAAAAAAAA

t (years)	0.000E+00	1.000E+00	1.000E+01	2.600E+02	3.000E+02	1.000E+02	1.000E+03
TDOSE(t)	1.202E+01	1.185E+01	1.151E+01	1.038E+01	8.093E+00	1.916E+00	0.000E+00
M(t)	1.002E+00	9.876E-01	9.592E-01	8.646E-01	6.744E-01	1.597E-01	0.000E+00

Maximum TDOSE(t) : 1.202E+01 mrem/yr at t = 0.000E+00 years

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground mrem/yr fract.	Inhalation mrem/yr fract.	Radon mrem/yr fract.	Plant mrem/yr fract.	Meat mrem/yr fract.	Milk mrem/yr fract.	Soil mrem/yr fract.
A-226	1.195E+01	0.9943	6.151E-04	0.000E+00	0.000E+00	0.000E+00	6.820E-02
Total	1.195E+01	0.9943	6.151E-04	0.000E+00	0.000E+00	0.000E+00	6.820E-02

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water mrem/yr fract.	Fish mrem/yr fract.	Radon mrem/yr fract.	Plant mrem/yr fract.	Meat mrem/yr fract.	Milk mrem/yr fract.	All Pathways* mrem/yr fract.
A-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.202E+01
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.202E+01

\*Sum of all water independent and dependent pathways.



Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil
	AAAAA mrem/yr fract.	AAAAA mrem/yr fract.	AAAAA mrem/yr fract.	AAAAA mrem/yr fract.	AAAAA mrem/yr fract.	AAAAA mrem/yr fract.	AAAAA mrem/yr fract.
Ra-226	1.177E+01 0.9934	6.504E-04 0.0001	0.000E+00 0.0000	0.000E+00 0.0000	0.000E+00 0.0000	0.000E+00 0.0000	7.714E-02 0.0065
Total	1.177E+01 0.9934	6.504E-04 0.0001	0.000E+00 0.0000	0.000E+00 0.0000	0.000E+00 0.0000	0.000E+00 0.0000	7.714E-02 0.0065

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*
	AAAAA mrem/yr fract.	AAAAA mrem/yr fract.	AAAAA mrem/yr fract.	AAAAA mrem/yr fract.	AAAAA mrem/yr fract.	AAAAA mrem/yr fract.	AAAAA mrem/yr fract.
Ra-226	0.000E+00 0.0000	0.000E+00 0.0000	0.000E+00 0.0000	0.000E+00 0.0000	0.000E+00 0.0000	0.000E+00 0.0000	1.185E+01 1.0000
Total	0.000E+00 0.0000	0.000E+00 0.0000	0.000E+00 0.0000	0.000E+00 0.0000	0.000E+00 0.0000	0.000E+00 0.0000	1.185E+01 1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground mrem/yr fract.	Inhalation mrem/yr fract.	Radon mrem/yr fract.	Plant mrem/yr fract.	Meat mrem/yr fract.	Milk mrem/yr fract.	Soil mrem/yr fract.
A-226	1.142E+01	0.9918	7.123E-04	0.000E+00	0.000E+00	0.000E+00	9.311E-02
Total	1.142E+01	0.9918	7.123E-04	0.000E+00	0.000E+00	0.000E+00	9.311E-02

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water mrem/yr fract.	Fish mrem/yr fract.	Radon mrem/yr fract.	Plant mrem/yr fract.	Meat mrem/yr fract.	Milk mrem/yr fract.	All Pathways* mrem/yr fract.
A-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.151E+01
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.151E+01

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil
	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.
AAAAAAA	AAAAAAA	AAAAAAA	AAAAAAA	AAAAAAA	AAAAAAA	AAAAAAA	AAAAAAA
Ra-226	1.024E+01	0.9872	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.321E-01
IIIIII	IIIIIIII	IIIIII	IIIIIIII	IIIIIIII	IIIIIIII	IIIIIIII	IIIIIIII
Total	1.024E+01	0.9872	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.321E-01

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Dependent Pathways

Radio- Nuclide	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*
	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.
AAAAAAA	AAAAAAA	AAAAAAA	AAAAAAA	AAAAAAA	AAAAAAA	AAAAAAA	AAAAAAA
Ra-226	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.038E+01
IIIIII	IIIIIIII	IIIIII	IIIIIIII	IIIIIIII	IIIIIIII	IIIIIIII	IIIIIIII
Total	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.038E+01

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.600E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil
	AAAAA mrem/yr	AAAAA mrem/yr	AAAAA mrem/yr	AAAAA mrem/yr	AAAAA mrem/yr	AAAAA mrem/yr	AAAAA mrem/yr
	fract.	fract.	fract.	fract.	fract.	fract.	fract.
Ra-226	7.936E+00	8.992E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.569E-01
	0.9805	0.0001	0.0000	0.0000	0.0000	0.0000	0.0194
	IIIIII	IIIIII	IIIIII	IIIIII	IIIIII	IIIIII	IIIIII
Total	7.936E+00	8.992E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.569E-01
	0.9805	0.0001	0.0000	0.0000	0.0000	0.0000	0.0194

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.600E+01 years

Water Dependent Pathways

Radio- Nuclide	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*
	AAAAA mrem/yr	AAAAA mrem/yr	AAAAA mrem/yr	AAAAA mrem/yr	AAAAA mrem/yr	AAAAA mrem/yr	AAAAA mrem/yr
	fract.	fract.	fract.	fract.	fract.	fract.	fract.
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.093E+00
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
	IIIIII	IIIIII	IIIIII	IIIIII	IIIIII	IIIIII	IIIIII
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.093E+00
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil
	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.
Ra-226	1.877E+00	0.9795	2.066E-04	0.000E+00	0.000E+00	0.000E+00	3.904E-02
Total	1.877E+00	0.9795	2.066E-04	0.000E+00	0.000E+00	0.000E+00	3.904E-02

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Dependent Pathways

Radio- Nuclide	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*
	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.	mrem/yr fract.
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.916E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.916E+00

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Water Dependent Pathways

Radio- Nuclide	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground	Inhalation	Radon	Plant	Meat	Milk	Soil
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Dependent Pathways

Radio- Nuclide	Water	Fish	Radon	Plant	Meat	Milk	All Pathways*
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\*Sum of all water independent and dependent pathways.

Dose/Source Ratios Summed Over All Pathways  
 Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread	DSR(j,t) At Time in Years (mrem/yr) / (pCi/g)
AAAAA	AAAAA	Fraction	0.000E+00 1.000E+00 3.000E+00 1.000E+01 2.600E+01 1.000E+02 3.000E+02 1.000E+03
Ra-226D	Ra-226D	1.000E+00	6.907E+00 6.802E+00 6.595E+00 5.915E+00 4.580E+00 1.081E+00 0.000E+00 0.000E+00
Ra-226D	Pb-210D	1.000E+00	3.137E-03 9.1139E-03 1.998E-02 4.762E-02 7.104E-02 2.033E-02 0.000E+00 0.000E+00
Ra-226D	ADSR(j)	6.910E+00	6.811E+00 6.615E+00 5.963E+00 4.651E+00 1.101E+00 0.000E+00 0.000E+00
iiiiiii	iiiiiii	iiiiiii	iiiiiii

The DSR includes contributions from associated (half-life 6 180 days) daughters.

Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 Basic Radiation Dose Limit = 1.200E+01 mrem/yr

Nuclide (i)	t=	0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.600E+01	1.000E+02	3.000E+02	1.000E+03
AAAAA	AAAAA	AAAAA	AAAAA	AAAAA	AAAAA	AAAAA	AAAAA	AAAAA	AAAAA
Ra-226	1.737E+00	1.762E+00	1.814E+00	2.013E+00	2.580E+00	1.090E+01	*9.885E+11	*9.885E+11	iiiiiii
iiiiii	iiiiiii	iiiiiii	iiiiiii	iiiiiii	iiiiiii	iiiiiii	iiiiiii	iiiiiii	iiiiiii

\*At specific activity limit

Summed Dose/Source Ratios DSR(i,t) in (mrem/yr) / (pCi/g)  
 and Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 at tmin = time of minimum single radionuclide soil guideline  
 and at tmax = time of maximum total dose = 0.000E+00 years

Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i,tmin) (pCi/g)	G(i,tmax) (pCi/g)
AAAAA	AAAAA	AAAAA	AAAAA	AAAAA
Ra-226	1.740E+00	0.000E+00	6.910E+00	1.737E+00
iiiiii	iiiiiii	iiiiiii	iiiiiii	iiiiiii





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Cancer Risk Slope Factors Summary Table  
 Risk Library: FGR 13 Morbidity

Menu	Parameter	Current Value	Base Case*	Parameter Name
Sf-1	Ground external radiation slope factors, 1/yr per (pCi/g):	4.21E-09	1.41E-09	SLPF ( 1,1)
Sf-1		8.49E-06	2.29E-08	SLPF ( 2,1)
Sf-1				
Sf-2	Inhalation, slope factors, 1/(pCi):	3.08E-08	1.58E-08	SLPF ( 1,2)
Sf-2		2.83E-08	2.82E-08	SLPF ( 2,2)
Sf-2				
Sf-3	Food ingestion, slope factors, 1/(pCi):	3.44E-09	1.18E-09	SLPF ( 1,3)
Sf-3		5.15E-10	5.14E-10	SLPF ( 2,3)
Sf-3				
Sf-3	Water ingestion, slope factors, 1/(pCi):	2.66E-09	8.81E-10	SLPF ( 1,4)
Sf-3		3.86E-10	3.85E-10	SLPF ( 2,4)
Sf-3				
Sf-3	Soil ingestion, slope factors, 1/(pCi):	3.44E-09	1.18E-09	SLPF ( 1,5)
Sf-3		5.15E-10	5.14E-10	SLPF ( 2,5)
Sf-3				
Sf-Rn	Radon Inhalation slope factors, 1/(pCi):	1.80E-12	1.80E-12	SLPFRN(1,1)
Sf-Rn		3.70E-12	3.70E-12	SLPFRN(1,2)
Sf-Rn		6.20E-12	6.20E-12	SLPFRN(1,3)
Sf-Rn		1.50E-11	1.50E-11	SLPFRN(1,4)
Sf-Rn	Radon K factors, (mrem/WLM):	7.60E+02	7.60E+02	KFACTR(1,1)
Sf-Rn		5.70E+02	5.70E+02	KFACTR(1,2)

\*Base Case means Default.Lib w/o Associate Nuclide contributions.

Risk Slope and Environmental Transport Factors for the Ground Pathway

Nuclide (i)	Slope(i)* t=	0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.600E+01	1.000E+02	3.000E+02	1.000E+03	
		ETFG(i,t) At Time in Years (dimensionless)								
At-218	3.570E-09	7.231E-01	7.232E-01	7.236E-01	7.248E-01	7.273E-01	7.039E-01	0.000E+00	0.000E+00	
Bi-210	2.760E-09	7.030E-01	7.024E-01	7.011E-01	6.961E-01	6.817E-01	5.008E-01	0.000E+00	0.000E+00	
Bi-214	7.480E-06	6.105E-01	6.091E-01	6.061E-01	5.954E-01	5.675E-01	3.503E-01	0.000E+00	0.000E+00	
Pb-210	1.410E-09	7.317E-01	7.318E-01	7.319E-01	7.324E-01	7.336E-01	7.244E-01	0.000E+00	0.000E+00	
Pb-214	9.820E-07	6.797E-01	6.787E-01	6.769E-01	6.697E-01	6.499E-01	4.422E-01	0.000E+00	0.000E+00	
Po-210	3.950E-11	6.451E-01	6.439E-01	6.413E-01	6.318E-01	6.066E-01	3.865E-01	0.000E+00	0.000E+00	
Po-214	3.860E-10	6.421E-01	6.408E-01	6.383E-01	6.288E-01	6.037E-01	3.863E-01	0.000E+00	0.000E+00	
Po-218	4.260E-11	6.419E-01	6.406E-01	6.380E-01	6.285E-01	6.031E-01	3.847E-01	0.000E+00	0.000E+00	
Ra-226	2.290E-08	7.005E-01	6.999E-01	6.987E-01	6.938E-01	6.794E-01	4.893E-01	0.000E+00	0.000E+00	
Rn-222	1.740E-09	6.610E-01	6.599E-01	6.576E-01	6.491E-01	6.260E-01	4.101E-01	0.000E+00	0.000E+00	
Tl-210	0.000E+00	7.570E-01	7.570E-01	7.570E-01	7.570E-01	7.570E-01	7.570E-01	7.570E-01	7.570E-01	

\* - Units are 1/yr per (pci/g) at infinite depth and area. Multiplication by EFG(i,t) converts to site conditions.

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 0.000E+00 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)				Water Dependent Pathways				Total Ingestion*		
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant		Meat	Milk
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	6.941E-02	0.000E+00	0.000E+00	0.000E+00	4.808E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.808E+01
* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways											

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 0.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 0.000E+00 years

Radio-Nuclide	Water Independent Pathways (Inhalation excludes radon)											
	Ground	Inhalation		Plant		Meat		Milk		Soil		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	1.827E-04	0.9971	3.924E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.950E-07	0.0027
Total	1.827E-04	0.9971	3.924E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.950E-07	0.0027

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Radio- Nuclide	Water Dependent Pathways						All Pathways**					
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.833E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.833E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 0.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)						Milk		Soil			
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.827E-04	0.9971	3.924E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	1.827E-04	0.9971	3.924E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.950E-07	0.0027

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 Years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.833E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.833E-04	1.0000

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+00 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)				Water Dependent Pathways				Total Ingestion*		
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant		Meat	Milk
Pb-210	2.087E-03	0.000E+00	0.000E+00	0.000E+00	1.446E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.446E+00
Ra-226	6.805E-02	0.000E+00	0.000E+00	0.000E+00	4.714E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.714E+01
* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways											

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+00 years

Radio-Nuclide	Water Independent Pathways (Inhalation excludes radon)											
	Ground	Inhalation		Plant		Meat		Milk		Soil		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	3.156E-09	0.0000	1.284E-09	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.954E-08	0.0006
Ra-226	1.800E-04	0.9965	3.847E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.853E-07	0.0027
Total	1.800E-04	0.9965	3.976E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.848E-07	0.0032



Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Water Dependent Pathways						All Pathways**					
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.040E-07	0.0006
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.805E-04	0.9994
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.806E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)						Milk		Soil			
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.800E-04	0.9965	3.976E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.848E-07	0.0032
Total	1.800E-04	0.9965	3.976E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.848E-07	0.0032

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 Years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.806E-04
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.806E-04

\*\*\*CNRSI (i,p, t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+00 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	5.859E-03	0.000E+00	0.000E+00	0.000E+00	4.058E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.058E+00
Ra-226	6.540E-02	0.000E+00	0.000E+00	0.000E+00	4.530E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.530E+01
* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways												

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 3.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 3.000E+00 years

Radio-Nuclide	Water Independent Pathways (Inhalation excludes radon)									
	Ground	Inhalation		Plant		Soil				
	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Pb-210	8.970E-09	0.0001	3.604E-09	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.795E-07	0.0016
Ra-226	1.745E-04	0.9955	3.698E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	4.664E-07	0.0027
Total	1.745E-04	0.9955	4.058E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	7.458E-07	0.0043

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Radio- Nuclide	Water Dependent Pathways						All Pathways**					
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.920E-07	0.0017
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.750E-04	0.9983
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.753E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 3.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)													
	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.745E-04	0.9955	4.058E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	1.745E-04	0.9955	4.058E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 Years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.753E-04
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.753E-04

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+01 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	1.549E-02	0.000E+00	0.000E+00	0.000E+00	1.073E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.073E+01
Ra-226	5.683E-02	0.000E+00	0.000E+00	0.000E+00	3.936E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.936E+01

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+01 years

Radio-Nuclide	Ground				Inhalation				Water Independent Pathways (Inhalation excludes radon)				
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	Meat	Milk	Soil	risk	fract.
Pb-210	2.479E-08	0.0002	9.528E-09	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.000E+00	0.0000	7.389E-07	0.0047
Ra-226	1.566E-04	0.9923	3.213E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.000E+00	0.0000	4.053E-07	0.0026
Total	1.566E-04	0.9925	4.166E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.000E+00	0.0000	1.144E-06	0.0073

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water Dependent Pathways						All Pathways**					
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.732E-07	0.0049
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.570E-04	0.9951
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.578E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)						Milk		Soil			
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.566E-04	0.9925	4.166E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	1.566E-04	0.9925	4.166E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.144E-06	0.0073

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.578E-04
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.578E-04

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides



Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 2.600E+01 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)				Water Dependent Pathways				Total Ingestion*		
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant		Meat	Milk
Pb-210	2.374E-02	0.000E+00	0.000E+00	0.000E+00	1.645E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.645E+01
Ra-226	4.082E-02	0.000E+00	0.000E+00	0.000E+00	2.827E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.827E+01
* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways											

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 2.600E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 2.600E+01 years

Radio-Nuclide	Water Independent Pathways (Inhalation excludes radon)											
	Ground	Inhalation		Plant		Meat		Milk		Soil		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	4.233E-08	0.0003	1.460E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.132E-06	0.0092
Ra-226	1.213E-04	0.9878	2.308E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.911E-07	0.0024
Total	1.213E-04	0.9881	3.768E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.424E-06	0.0116

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.600E+01 years

Radio- Nuclide	Water Dependent Pathways						All Pathways**					
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.189E-06	0.0097
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.216E-04	0.9903
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.228E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 2.600E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.600E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)						Milk		Soil			
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.213E-04	0.9881	3.768E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.424E-06	0.0116
Total	1.213E-04	0.9881	3.768E-08	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.424E-06	0.0116

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.600E+01 years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.228E-04
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.228E-04

\*\*\*CNRSI (i,p, t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+02 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	6.735E-03	0.000E+00	0.000E+00	0.000E+00	4.665E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.665E+00
Ra-226	6.245E-03	0.000E+00	0.000E+00	0.000E+00	4.326E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.326E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+02 years

Radio-Nuclide	Ground				Inhalation				Water Independent Pathways (Inhalation excludes radon)				
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	Meat	Milk	Soil	risk	fract.
Pb-210	2.450E-08	0.0008	4.143E-09	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.000E+00	0.0000	0.000E-07	0.0110
Ra-226	2.881E-05	0.9864	3.531E-09	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.000E+00	0.0000	4.454E-08	0.0015
Total	2.883E-05	0.9872	7.674E-09	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.000E+00	0.0000	3.658E-07	0.0125

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water Dependent Pathways						All Pathways**					
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.499E-07	0.0120
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.886E-05	0.9880
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.921E-05	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)						Milk		Soil			
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	2.883E-05	0.9872	7.674E-09	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0125
Total	2.883E-05	0.9872	7.674E-09	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.658E-07	0.0125

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	2.921E-05	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	2.921E-05	1.0000

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+02 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 3.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 3.000E+02 years

Radio-Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.	
Pb-210	0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000	
Ra-226	0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000	
Total	0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000	

Water Independent Pathways (Inhalation excludes radon)





Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+03 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+03 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+03 years

Radio-Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.	
Pb-210	0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000	
Ra-226	0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000	
Total	0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000	

Water Independent Pathways (Inhalation excludes radon)



Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 Years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides

Industrial Worker- Surface

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Dose Conversion Factor (and Related) Parameter Summary  
 Dose Library: FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
A-1	DCF1's for external ground radiation, (mrem/yr)/(pCi/g)			
A-1	At-218 (Source: FGR 12)	5.847E-03	5.847E-03	DCF1 ( 1)
A-1	Bi-210 (Source: FGR 12)	3.606E-03	3.606E-03	DCF1 ( 2)
A-1	Bi-214 (Source: FGR 12)	9.808E+00	9.808E+00	DCF1 ( 3)
A-1	Pb-210 (Source: FGR 12)	2.447E-03	2.447E-03	DCF1 ( 4)
A-1	Pb-214 (Source: FGR 12)	1.341E+00	1.341E+00	DCF1 ( 5)
A-1	Po-210 (Source: FGR 12)	5.231E-05	5.231E-05	DCF1 ( 6)
A-1	Po-214 (Source: FGR 12)	5.138E-04	5.138E-04	DCF1 ( 7)
A-1	Po-218 (Source: FGR 12)	5.642E-05	5.642E-05	DCF1 ( 8)
A-1	Ra-226 (Source: FGR 12)	3.176E-02	3.176E-02	DCF1 ( 9)
A-1	Rn-222 (Source: FGR 12)	2.354E-03	2.354E-03	DCF1 ( 10)
A-1	Tl-210 (Source: no data)	0.000E+00	-2.000E+00	DCF1 ( 11)
B-1	Dose conversion factors for inhalation, mrem/pCi:			
B-1	Pb-210+D	2.320E-02	1.360E-02	DCF2 ( 1)
B-1	Ra-226+D	8.594E-03	8.580E-03	DCF2 ( 2)
D-1	Dose conversion factors for ingestion, mrem/pCi:			
D-1	Pb-210+D	7.276E-03	5.370E-03	DCF3 ( 1)
D-1	Ra-226+D	1.321E-03	1.320E-03	DCF3 ( 2)
D-34	Food transfer factors:			
D-34	Pb-210+D , plant/soil concentration ratio, dimensionless	1.000E-02	1.000E-02	RTF ( 1,1)
D-34	Pb-210+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-04	8.000E-04	RTF ( 1,2)
D-34	Pb-210+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.000E-04	3.000E-04	RTF ( 1,3)
D-34	Ra-226+D , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF ( 2,1)
D-34	Ra-226+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF ( 2,2)
D-34	Ra-226+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-03	1.000E-03	RTF ( 2,3)
D-5	Bioaccumulation factors, fresh water, L/kg:			
D-5	Pb-210+D , fish	3.000E+02	3.000E+02	BIOFAC ( 1,1)
D-5	Pb-210+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC ( 1,2)
D-5	Ra-226+D , fish	5.000E+01	5.000E+01	BIOFAC ( 2,1)
D-5	Ra-226+D , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC ( 2,2)

#For DCF1 (xxx) only, factors are for infinite depth & area. See ETRG table in Ground Pathway of Detailed Report.  
 \*Base Case means Default.Lib w/o Associate Nuclide contributions.

Site-Specific Parameter Summary

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R011	Area of contaminated zone (m**2)	5.000E+03	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	1.500E-01	2.000E+00	---	THICKO
R011	Fraction of contamination that is submerged	2.000E-01	0.000E+00	---	SUBMFRACT
R011	Length parallel to aquifer flow (m)	not used	1.000E+02	---	LCZPAQ
R011	Basic radiation dose limit (mrem/yr)	1.200E+01	3.000E+01	---	BRDL
R011	Time since placement of material (yr)	0.000E+00	0.000E+00	---	TI
R011	Times for calculations (yr)	1.000E+00	1.000E+00	---	T ( 2)
R011	Times for calculations (yr)	3.000E+00	3.000E+00	---	T ( 3)
R011	Times for calculations (yr)	1.000E+01	1.000E+01	---	T ( 4)
R011	Times for calculations (yr)	2.500E+01	3.000E+01	---	T ( 5)
R011	Times for calculations (yr)	1.000E+02	1.000E+02	---	T ( 6)
R011	Times for calculations (yr)	3.000E+02	3.000E+02	---	T ( 7)
R011	Times for calculations (yr)	1.000E+03	1.000E+03	---	T ( 8)
R011	Times for calculations (yr)	not used	0.000E+00	---	T ( 9)
R011	Times for calculations (yr)	not used	0.000E+00	---	T(10)
R012	Initial principal radionuclide (pci/g): Ra-226	1.310E+00	0.000E+00	---	SI ( 2)
R012	Concentration in groundwater (pci/L): Ra-226	not used	0.000E+00	---	WI ( 2)
R013	Cover depth (m)	0.000E+00	0.000E+00	---	COVERO
R013	Density of cover material (g/cm**3)	not used	1.500E+00	---	DENSCV
R013	Cover depth erosion rate (m/yr)	not used	1.000E-03	---	VCV
R013	Density of contaminated zone (g/cm**3)	1.500E+00	1.500E+00	---	DENSCZ
R013	Contaminated zone erosion rate (m/yr)	1.000E-03	1.000E-03	---	VCZ
R013	Contaminated zone total porosity	4.000E-01	4.000E-01	---	TFCZ
R013	Contaminated zone field capacity	2.000E-01	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	1.000E+01	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	5.300E+00	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	2.000E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	not used	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	5.000E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	1.000E-01	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	0.000E+00	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	2.000E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	not used	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	not used	1.000E-03	---	EPS
R014	Density of saturated zone (g/cm**3)	not used	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	not used	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	not used	2.000E-01	---	EPSZ
R014	Saturated zone field capacity	not used	2.000E-01	---	FCSZ
R014	Saturated zone hydraulic conductivity (m/yr)	not used	1.000E+02	---	HCSZ
R014	Saturated zone hydraulic gradient	not used	2.000E-02	---	HGWT



R014	Saturated zone b parameter	5.300E+00	not used	5.300E+00	BSZ
R014	Water table drop rate (m/yr)	1.000E-03	not used	1.000E-03	VWT
R014	Well pump intake depth (m below water table)	1.000E+01	not used	1.000E+01	DWIBWT
R014	Model: Nondispersion (ND) or Mass-Balance (MB)	ND	not used	ND	MODEL
R014	Well pumping rate (m**3/yr)	2.500E+02	not used	2.500E+02	UW

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	(If different from user input)	Used by RESRAD	Parameter Name
R015	Number of unsaturated zone strata	not used	1		---	NS
R016	Distribution coefficients for Ra-226					
R016	Contaminated zone (cm**3/g)	7.000E+01	7.000E+01		---	DCNUCC ( 2)
R016	Saturated zone (cm**3/g)	not used	7.000E+01		---	DCNUCS ( 2)
R016	Leach rate (/yr)	0.000E+00	0.000E+00		2.534E-03	ALEACH ( 2)
R016	Solubility constant	0.000E+00	0.000E+00		not used	SOLUBK ( 2)
R016	Distribution coefficients for daughter Pb-210					
R016	Contaminated zone (cm**3/g)	1.000E+02	1.000E+02		---	DCNUCC ( 1)
R016	Saturated zone (cm**3/g)	not used	1.000E+02		---	DCNUCS ( 1)
R016	Leach rate (/yr)	0.000E+00	0.000E+00		1.776E-03	ALEACH ( 1)
R016	Solubility constant	0.000E+00	0.000E+00		not used	SOLUBK ( 1)
R017	Inhalation rate (m**3/yr)	3.500E+03	8.400E+03		---	INHALR
R017	Mass loading for inhalation (g/m**3)	1.000E-04	1.000E-04		---	MLINH
R017	Exposure duration	2.500E+01	3.000E+01		---	ED
R017	Shielding factor, inhalation	4.000E-01	4.000E-01		---	SHF3
R017	Shielding factor, external gamma	1.000E+00	7.000E-01		---	SHF1
R017	Fraction of time spent indoors	8.750E-01	5.000E-01		---	FIND
R017	Fraction of time spent outdoors (on site)	1.250E-01	2.500E-01		---	FOTD
R017	Shape factor flag, external gamma	1.000E+00	1.000E+00	>0 shows circular AREA.	---	FS
R017	Radial shape factor array (used if FS = -1):					
R017	Outer annular radius (m), ring 1:	not used	5.000E+01		---	RAD_SHAPE ( 1)
R017	Outer annular radius (m), ring 2:	not used	7.071E+01		---	RAD_SHAPE ( 2)
R017	Outer annular radius (m), ring 3:	not used	0.000E+00		---	RAD_SHAPE ( 3)
R017	Outer annular radius (m), ring 4:	not used	0.000E+00		---	RAD_SHAPE ( 4)
R017	Outer annular radius (m), ring 5:	not used	0.000E+00		---	RAD_SHAPE ( 5)
R017	Outer annular radius (m), ring 6:	not used	0.000E+00		---	RAD_SHAPE ( 6)
R017	Outer annular radius (m), ring 7:	not used	0.000E+00		---	RAD_SHAPE ( 7)
R017	Outer annular radius (m), ring 8:	not used	0.000E+00		---	RAD_SHAPE ( 8)
R017	Outer annular radius (m), ring 9:	not used	0.000E+00		---	RAD_SHAPE ( 9)
R017	Outer annular radius (m), ring 10:	not used	0.000E+00		---	RAD_SHAPE (10)
R017	Outer annular radius (m), ring 11:	not used	0.000E+00		---	RAD_SHAPE (11)
R017	Outer annular radius (m), ring 12:	not used	0.000E+00		---	RAD_SHAPE (12)
R017	Fractions of annular areas within AREA:					
R017	Ring 1	not used	1.000E+00		---	FRACA ( 1)
R017	Ring 2	not used	2.732E-01		---	FRACA ( 2)
R017	Ring 3	not used	0.000E+00		---	FRACA ( 3)
R017	Ring 4	not used	0.000E+00		---	FRACA ( 4)
R017	Ring 5	not used	0.000E+00		---	FRACA ( 5)
R017	Ring 6	not used	0.000E+00		---	FRACA ( 6)
R017	Ring 7	not used	0.000E+00		---	FRACA ( 7)

R017	Ring 8	not used	0.000E+00	---	FRACA ( 8)
R017	Ring 9	not used	0.000E+00	---	FRACA ( 9)
R017	Ring 10	not used	0.000E+00	---	FRACA (10)
R017	Ring 11	not used	0.000E+00	---	FRACA (11)
R017	Ring 12	not used	0.000E+00	---	FRACA (12)

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R018	Fruits, vegetables and grain consumption (kg/yr)	not used	1.600E+02	---	DIET (1)
R018	Leafy vegetable consumption (kg/yr)	not used	1.400E+01	---	DIET (2)
R018	Milk consumption (L/yr)	not used	9.200E+01	---	DIET (3)
R018	Meat and poultry consumption (kg/yr)	not used	6.300E+01	---	DIET (4)
R018	Fish consumption (kg/yr)	not used	5.400E+00	---	DIET (5)
R018	Other seafood consumption (kg/yr)	not used	9.000E-01	---	DIET (6)
R018	Soil ingestion rate (g/yr)	2.500E+01	3.650E+01	---	SOIL
R018	Drinking water intake (L/yr)	not used	5.100E+02	---	DWI
R018	Contamination fraction of drinking water	not used	1.000E+00	---	FDM
R018	Contamination fraction of household water	not used	1.000E+00	---	FHHW
R018	Contamination fraction of livestock water	not used	1.000E+00	---	FLW
R018	Contamination fraction of irrigation water	not used	1.000E+00	---	FIRW
R018	Contamination fraction of aquatic food	not used	5.000E-01	---	FR9
R018	Contamination fraction of plant food	not used	-1	---	FFPLANT
R018	Contamination fraction of meat	not used	-1	---	FMEAT
R018	Contamination fraction of milk	not used	-1	---	FMILK
R019	Livestock fodder intake for meat (kg/day)	not used	6.800E+01	---	LF15
R019	Livestock fodder intake for milk (kg/day)	not used	5.500E+01	---	LF16
R019	Livestock water intake for meat (L/day)	not used	5.000E+01	---	LW15
R019	Livestock water intake for milk (L/day)	not used	1.600E+02	---	LW16
R019	Livestock soil intake (kg/day)	not used	5.000E-01	---	LS1
R019	Mass loading for foliar deposition (g/m**3)	not used	1.000E-04	---	MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01	---	DM
R019	Drinking water fraction from ground water	not used	9.000E-01	---	DROOT
R019	Household water fraction from ground water	not used	1.000E+00	---	FGWDW
R019	Livestock water fraction from ground water	not used	1.000E+00	---	FGWHH
R019	Irrigation fraction from ground water	not used	1.000E+00	---	FGWLW
R019		not used	1.000E+00	---	FGWIR
R19B	Wet weight crop yield for Non-Leafy (kg/m**2)	not used	7.000E-01	---	YV (1)
R19B	Wet weight crop yield for Leafy (kg/m**2)	not used	1.500E+00	---	YV (2)
R19B	Wet weight crop yield for Fodder (kg/m**2)	not used	1.100E+00	---	YV (3)
R19B	Growing Season for Non-Leafy (years)	not used	1.700E-01	---	TE (1)
R19B	Growing Season for Leafy (years)	not used	2.500E-01	---	TE (2)
R19B	Growing Season for Fodder (years)	not used	8.000E-02	---	TE (3)
R19B	Translocation Factor for Non-Leafy	not used	1.000E-01	---	TIV (1)
R19B	Translocation Factor for Leafy	not used	1.000E+00	---	TIV (2)
R19B	Translocation Factor for Fodder	not used	1.000E+00	---	TIV (3)
R19B	Dry Foliar Interception Fraction for Non-Leafy	not used	2.500E-01	---	RDRY (1)
R19B	Dry Foliar Interception Fraction for Leafy	not used	2.500E-01	---	RDRY (2)
R19B	Dry Foliar Interception Fraction for Fodder	not used	2.500E-01	---	RDRY (3)
R19B	Wet Foliar Interception Fraction for Non-Leafy	not used	2.500E-01	---	RWET (1)
R19B	Wet Foliar Interception Fraction for Leafy	not used	2.500E-01	---	RWET (2)

R19B	Wet Foliar Interception Fraction for Fodder	not used	2.500E-01	---	RWET(3)
R19B	Weathering Removal Constant for Vegetation	not used	2.000E+01	---	WLAM
C14	C-12 concentration in water (g/cm**3)	not used	2.000E-05	---	C12WTR
C14	C-12 concentration in contaminated soil (g/g)	not used	3.000E-02	---	C12CZ
C14	Fraction of vegetation carbon from soil	not used	2.000E-02	---	CSOIL

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
C14	Fraction of vegetation carbon from air	not used	9.800E-01	---	CAIR
C14	C-14 evasion layer thickness in soil (m)	not used	3.000E-01	---	DMC
C14	C-14 evasion flux rate from soil (1/sec)	not used	7.000E-07	---	EVSN
C14	C-12 evasion flux rate from soil (1/sec)	not used	1.000E-10	---	REVSN
C14	Fraction of grain in beef cattle feed	not used	8.000E-01	---	AVFG4
C14	Fraction of grain in milk cow feed	not used	2.000E-01	---	AVFG5
STOR	Storage times of contaminated foodstuffs (days):				
STOR	Fruits, non-leafy vegetables, and grain	1.400E+01	1.400E+01	---	STOR_T(1)
STOR	Leafy vegetables	1.000E+00	1.000E+00	---	STOR_T(2)
STOR	Milk	1.000E+00	1.000E+00	---	STOR_T(3)
STOR	Meat and poultry	2.000E+01	2.000E+01	---	STOR_T(4)
STOR	Fish	7.000E+00	7.000E+00	---	STOR_T(5)
STOR	Crustacea and mollusks	7.000E+00	7.000E+00	---	STOR_T(6)
STOR	Well water	1.000E+00	1.000E+00	---	STOR_T(7)
STOR	Surface water	1.000E+00	1.000E+00	---	STOR_T(8)
STOR	Livestock fodder	4.500E+01	4.500E+01	---	STOR_T(9)
R021	Thickness of building foundation (m)	not used	1.500E-01	---	FLOOR1
R021	Bulk density of building foundation (g/cm**3)	not used	2.400E+00	---	DENSFL
R021	Total porosity of the cover material	not used	4.000E-01	---	TPCV
R021	Total porosity of the building foundation	not used	1.000E-01	---	TPFL
R021	Volumetric water content of the cover material	not used	5.000E-02	---	PH2OCV
R021	Volumetric water content of the foundation	not used	3.000E-02	---	PH2OFL
R021	Diffusion coefficient for radon gas (m/sec):				
R021	in cover material	not used	2.000E-06	---	DIFCV
R021	in foundation material	not used	3.000E-07	---	DIFFL
R021	in contaminated zone soil	not used	2.000E-06	---	DIFCZ
R021	Radon vertical dimension of mixing (m)	not used	2.000E+00	---	HMX
R021	Average building air exchange rate (1/hr)	not used	5.000E-01	---	REXG
R021	Height of the building (room) (m)	not used	2.500E+00	---	HRM
R021	Building interior area factor	not used	0.000E+00	---	FAI
R021	Building depth below ground surface (m)	not used	-1.000E+00	---	DMFL
R021	Emanating power of Rn-222 gas	not used	2.500E-01	---	EMANA(1)
R021	Emanating power of Rn-220 gas	not used	1.500E-01	---	EMANA(2)
TITL	Number of graphical time points	32	---	---	NPTS
TITL	Maximum number of integration points for dose	17	---	---	LYMAX
TITL	Maximum number of integration points for risk	1	---	---	KYMAX

Summary of Pathway Selections

Pathway	User Selection
1 -- external gamma	active
2 -- inhalation (w/o radon)	active
3 -- plant ingestion	suppressed
4 -- meat ingestion	suppressed
5 -- milk ingestion	suppressed
6 -- aquatic foods	suppressed
7 -- drinking water	suppressed
8 -- soil ingestion	active
9 -- radon	suppressed
Find peak pathway doses	active

Contaminated Zone Dimensions Initial Soil Concentrations, pCi/g

Area:	5000.00 square meters	Ra-226	1.310E+00
Thickness:	0.15 meters		
Cover Depth:	0.00 meters		

Total Dose TDOSE(t), mrem/yr  
 Basic Radiation Dose Limit = 1.200E+01 mrem/yr

Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
TDOSE(t):	1.200E+01	1.194E+01	1.183E+01	1.143E+01	1.052E+01	5.234E+00	0.000E+00	0.000E+00
M(t):	9.997E-01	9.951E-01	9.858E-01	9.524E-01	8.768E-01	4.362E-01	0.000E+00	0.000E+00

Maximum TDOSE(t): 1.200E+01 mrem/yr at t = 0.000E+00 years



Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)														
Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.195E+01	0.9961	3.058E-04	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.670E-02	0.0039
Total	1.195E+01	0.9961	3.058E-04	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.670E-02	0.0039

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Dependent Pathways														
Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.200E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.200E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Independent Pathways (Inhalation excludes radon)														
Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.189E+01	0.9955	3.266E-04	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.333E-02	0.0045
Total	1.189E+01	0.9955	3.266E-04	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.333E-02	0.0045

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Dependent Pathways														
Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.194E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.194E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)														
Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.176E+01	0.9944	3.647E-04	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.559E-02	0.0055
Total	1.176E+01	0.9944	3.647E-04	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.559E-02	0.0055

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Dependent Pathways														
Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.183E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.183E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.133E+01	0.9913	4.671E-04	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.916E-02	0.0087
<b>Total</b>	<b>1.133E+01</b>	<b>0.9913</b>	<b>4.671E-04</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>9.916E-02</b>	<b>0.0087</b>

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.143E+01	1.0000
<b>Total</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>1.143E+01</b>	<b>1.0000</b>

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)														
Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.039E+01	0.9871	5.670E-04	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.350E-01	0.0128
Total	1.039E+01	0.9871	5.670E-04	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.350E-01	0.0128

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Water Dependent Pathways														
Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.052E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.052E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	5.166E+00	0.9869	2.650E-04	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.828E-02	0.0130
Total	5.166E+00	0.9869	2.650E-04	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.828E-02	0.0130

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.234E+00	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.234E+00	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Water Independent Pathways (Inhalation excludes radon)														
Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,P,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Water Dependent Pathways														
Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

\*Sum of all water independent and dependent pathways.



Dose/Source Ratios Summed Over All Pathways  
 Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)
		0.000E+00	1.000E+00	3.000E+00
Ra-226+D	Ra-226+D	1.000E+00	9.155E+00	9.012E+00
Ra-226+D	Pb-210+D	1.000E+00	2.879E-03	8.452E-03
Ra-226+D	DSR(j)		9.158E+00	9.116E+00

The DSR includes contributions from associated (half-life % 180 days) daughters.

Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 Basic Radiation Dose Limit = 1.200E+01 mrem/yr

Nuclide (i)	t=	0.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
Ra-226		1.310E+00	1.316E+00	1.329E+00	1.375E+00	1.494E+00	3.003E+00

\*At specific activity limit

Summed Dose/Source Ratios DSR(i,t) in (mrem/yr)/(pCi/g)  
 and Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 at tmin = time of minimum single radionuclide soil guideline  
 and at tmax = time of maximum total dose = 0.000E+00 years

Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i,tmin) (pCi/g)	G(i,tmin) (pCi/g)	DSR(i,tmax) (pCi/g)	G(i,tmax) (pCi/g)
Ra-226	1.310E+00	0.000E+00	9.158E+00	1.310E+00	9.158E+00	1.310E+00

Individual Nuclide Dose Summed Over All Pathways  
 Parent Nuclide and Branch Fraction Indicated

Nuclide Parent (j)	THF (i)	t =	DOSE(j,t), mrem/yr
Ra-226	Ra-226	1.000E+00	3.000E+00
		1.199E+01	1.181E+01
		1.137E+01	1.042E+01
		5.172E+00	0.000E+00
Pb-210	Ra-226	1.000E+00	3.771E-03
		1.107E-02	2.463E-02
		6.240E-02	1.059E-01
		6.243E-02	0.000E+00

THF(i) is the thread fraction of the parent nuclide.

Individual Nuclide Soil Concentration  
 Parent Nuclide and Branch Fraction Indicated

Nuclide Parent (j)	THF (i)	t =	S(j,t), pCi/g
Ra-226	Ra-226	1.000E+00	3.000E+00
		1.310E+00	1.298E+00
		1.272E+00	1.216E+00
		9.737E-01	5.379E-01
Pb-210	Ra-226	1.000E+00	4.000E-02
		1.158E-01	3.417E-01
		6.657E-01	9.615E-01
		5.593E-01	7.009E-02

THF(i) is the thread fraction of the parent nuclide.

RESCALC.EXE execution time = 8.94 seconds

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Cancer Risk Slope Factors Summary Table  
 Risk Library: FGR 13 Morbidity

Menu	Parameter	Current Value	Base Case*	Parameter Name
Sf-1	Ground external radiation slope factors, 1/yr per (pCi/g):	4.21E-09	1.41E-09	SLPF ( 1,1)
Sf-1	Pb-210+D	8.49E-06	2.29E-08	SLPF ( 2,1)
Sf-1	Ra-226+D			
Sf-2	Inhalation, slope factors, 1/(pCi):	3.08E-08	1.58E-08	SLPF ( 1,2)
Sf-2	Pb-210+D	2.83E-08	2.82E-08	SLPF ( 2,2)
Sf-2	Ra-226+D			
Sf-3	Food ingestion, slope factors, 1/(pCi):	3.44E-09	1.18E-09	SLPF ( 1,3)
Sf-3	Pb-210+D	5.15E-10	5.14E-10	SLPF ( 2,3)
Sf-3	Ra-226+D			
Sf-3	Water ingestion, slope factors, 1/(pCi):	2.66E-09	8.81E-10	SLPF ( 1,4)
Sf-3	Pb-210+D	3.86E-10	3.85E-10	SLPF ( 2,4)
Sf-3	Ra-226+D			
Sf-3	Soil ingestion, slope factors, 1/(pCi):	3.44E-09	1.18E-09	SLPF ( 1,5)
Sf-3	Pb-210+D	5.15E-10	5.14E-10	SLPF ( 2,5)
Sf-3	Ra-226+D			
Sf-Rn	Radon Inhalation slope factors, 1/(pCi):			
Sf-Rn	Rn-222	1.80E-12	1.80E-12	SLPFRN(1,1)
Sf-Rn	Po-218	3.70E-12	3.70E-12	SLPFRN(1,2)
Sf-Rn	Pb-214	6.20E-12	6.20E-12	SLPFRN(1,3)
Sf-Rn	Bi-214	1.50E-11	1.50E-11	SLPFRN(1,4)
Sf-Rn	Radon K factors, (mrem/WLM):			
Sf-Rn	Rn-222 Indoor	7.60E+02	7.60E+02	KFACTR(1,1)
Sf-Rn	Rn-222 Outdoor	5.70E+02	5.70E+02	KFACTR(1,2)

\*Base Case means Default.Lib w/o Associate Nuclide contributions.

Risk Slope and Environmental Transport Factors for the Ground Pathway

Nuclide (i)	Slope(i) * t=	ETFG(i,t) At Time in Years (dimensionless)							
		0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
At-218	3.570E-09	9.552E-01	9.554E-01	9.559E-01	9.574E-01	9.606E-01	9.299E-01	0.000E+00	0.000E+00
Bi-210	2.760E-09	9.287E-01	9.279E-01	9.262E-01	9.196E-01	9.018E-01	6.615E-01	0.000E+00	0.000E+00
Bi-214	7.480E-06	8.065E-01	8.046E-01	8.007E-01	7.865E-01	7.521E-01	4.628E-01	0.000E+00	0.000E+00
Pb-210	1.410E-09	9.666E-01	9.667E-01	9.669E-01	9.676E-01	9.690E-01	9.570E-01	0.000E+00	0.000E+00
Pb-214	9.820E-07	8.978E-01	8.966E-01	8.941E-01	8.847E-01	8.604E-01	5.842E-01	0.000E+00	0.000E+00
Po-210	3.950E-11	8.522E-01	8.505E-01	8.472E-01	8.347E-01	8.037E-01	5.106E-01	0.000E+00	0.000E+00
Po-214	3.860E-10	8.482E-01	8.465E-01	8.432E-01	8.307E-01	7.998E-01	5.102E-01	0.000E+00	0.000E+00
Po-218	4.260E-11	8.479E-01	8.462E-01	8.428E-01	8.302E-01	7.990E-01	5.082E-01	0.000E+00	0.000E+00
Ra-226	2.290E-08	9.254E-01	9.246E-01	9.230E-01	9.165E-01	8.989E-01	6.464E-01	0.000E+00	0.000E+00
Rn-222	1.740E-09	8.732E-01	8.717E-01	8.687E-01	8.575E-01	8.291E-01	5.417E-01	0.000E+00	0.000E+00
Tl-210	0.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00

\* - Units are 1/yr per (pci/g) at infinite depth and area. Multiplication by ETFG(i,t) converts to site conditions.

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 0.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	3.433E-02	0.000E+00	0.000E+00	0.000E+00	3.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.275E+01
* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways												

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products as pCi/yr at t= 0.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)											
	Ground	Inhalation		Plant		Meat		Milk		Soil		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.000E+00	0.0000	0.000E+00	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	2.272E-04	0.9980	2.427E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.215E-07	0.0019
Total	2.272E-04	0.9980	2.427E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.215E-07	0.0019

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Radio- Nuclide	Water Dependent Pathways						All Pathways**					
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.276E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.276E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 0.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)						Milk		Soil			
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	2.272E-04	0.9980	2.427E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.215E-07	0.0019
Total	2.272E-04	0.9980	2.427E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.215E-07	0.0019

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 Years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.276E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.276E-04	1.0000

\*\*\*CNRSI (i,p, t) includes contribution from decay daughter radionuclides



Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+00 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	1.041E-03	0.000E+00	0.000E+00	0.000E+00	9.933E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.933E-01
Ra-226	3.400E-02	0.000E+00	0.000E+00	0.000E+00	3.244E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.244E+01
* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways												

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+00 years

Radio-Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.	
Pb-210	3.957E-09	0.0000		8.006E-10	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		8.549E-08	0.0004	
Ra-226	2.260E-04	0.9977		2.403E-08	0.0001		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		4.174E-07	0.0018	
Total	2.260E-04	0.9977		2.483E-08	0.0001		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		5.029E-07	0.0022	

Water Independent Pathways (Inhalation excludes radon)

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Water Dependent Pathways						All Pathways**					
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.025E-08	0.0004
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.264E-04	0.9996
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.265E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)						Milk		Soil			
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	2.260E-04	0.9977	2.483E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.029E-07	0.0022
Total	2.260E-04	0.9977	2.483E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.029E-07	0.0022

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 Years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	2.265E-04
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	2.265E-04

\*\*\*CNRSI (i,p, t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+00 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)				Water Dependent Pathways				Total Ingestion*		
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant		Meat	Milk
Pb-210	2.974E-03	0.000E+00	0.000E+00	0.000E+00	2.837E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.837E+00
Ra-226	3.335E-02	0.000E+00	0.000E+00	0.000E+00	3.181E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.181E+01

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 3.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 3.000E+00 years

Radio-Nuclide	Water Independent Pathways (Inhalation excludes radon)											
	Ground	Inhalation		Plant		Meat		Milk		Soil		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	1.144E-08	0.0001	2.287E-09	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.442E-07	0.0011
Ra-226	2.237E-04	0.9969	2.357E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.094E-07	0.0018
Total	2.237E-04	0.9970	2.586E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.536E-07	0.0029

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Radio- Nuclide	Water Dependent Pathways						All Pathways**					
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.579E-07	0.0011
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.241E-04	0.9989
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.243E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 3.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)						Milk		Soil			
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	2.237E-04	0.9970	2.586E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.536E-07	0.0029
Total	2.237E-04	0.9970	2.586E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.536E-07	0.0029

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 Years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.243E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.243E-04	1.0000

\*\*\*CNRSI (i,p, t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+01 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	8.358E-03	0.000E+00	0.000E+00	0.000E+00	7.972E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.972E+00
Ra-226	3.111E-02	0.000E+00	0.000E+00	0.000E+00	2.967E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.967E+01
* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways												

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+01 years

Radio-Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil			
	risk	fract.	risk fract.	risk	fract.	risk fract.	risk	fract.	risk fract.	risk	fract.	risk fract.	risk	fract.	risk fract.	risk	fract.	risk fract.	
Pb-210	3.361E-08	0.0002	6.426E-09	0.0000	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	6.862E-07	0.0032
Ra-226	2.154E-04	0.9948	2.199E-08	0.0001	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	3.819E-07	0.0018
Total	2.154E-04	0.9949	2.841E-08	0.0001	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	0.0000	0.0000E+00	1.068E-06	0.0049

Water Independent Pathways (Inhalation excludes radon)

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water Dependent Pathways						All Pathways**					
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.263E-07	0.0034
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.158E-04	0.9966
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.165E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)						Milk		Soil			
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	2.154E-04	0.9949	2.841E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.068E-06	0.0049
Total	2.154E-04	0.9949	2.841E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.068E-06	0.0049



Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.165E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.165E-04	1.0000

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 2.500E+01 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk	
Pb-210	1.454E-02	0.000E+00	0.000E+00	0.000E+00	1.387E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.387E+01
Ra-226	2.657E-02	0.000E+00	0.000E+00	0.000E+00	2.534E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.534E+01
* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways											

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 2.500E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 2.500E+01 years

Radio-Nuclide	Ground				Inhalation				Plant				Meat				Milk				Soil			
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.		
Pb-210	6.470E-08	0.0003	1.118E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	1.194E-06	0.0060
Ra-226	1.974E-04	0.9919	1.878E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	3.261E-07	0.0016
Total	1.975E-04	0.9922	2.996E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	0.000E+00	0.0000	0.0000	1.520E-06	0.0076

Water Independent Pathways (Inhalation excludes radon)

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.270E-06	0.0064
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.978E-04	0.9936
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.991E-04	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 2.500E+01 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	1.975E-04	0.9922	2.996E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.520E-06	0.0076
Total	1.975E-04	0.9922	2.996E-08	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.520E-06	0.0076

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Radio- Nuclide	Water Dependent Pathways														
	Water		Fish		Radon		Plant		Meat		Milk		All pathways		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.991E-04	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.991E-04	1.0000

\*\*\*CNRSI (i,p, t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+02 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	8.400E-03	0.000E+00	0.000E+00	0.000E+00	8.013E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.013E+00
Ra-226	8.507E-03	0.000E+00	0.000E+00	0.000E+00	8.114E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.114E+00
* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways												

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+02 years

Radio-Nuclide	Water Independent Pathways (Inhalation excludes radon)											
	Ground	Inhalation		Plant		Meat		Milk		Soil		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	7.681E-08	0.0008	6.459E-09	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.897E-07	0.0069
Ra-226	9.861E-05	0.9911	6.012E-09	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.044E-07	0.0010
Total	9.869E-05	0.9919	1.247E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.941E-07	0.0080

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water Dependent Pathways						All Pathways**					
	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.730E-07	0.0078
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.872E-05	0.9922
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.949E-05	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water Independent Pathways (Inhalation excludes radon)						Milk		Soil			
	Ground		Inhalation		Radon		Plant		Meat		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	9.869E-05	0.9919	1.247E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	9.869E-05	0.9919	1.247E-08	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.941E-07	0.0080

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.949E-05	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.949E-05	1.0000

\*\*\*CNRSI (i,p, t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+02 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 3.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 3.000E+02 years

Radio-Nuclide	Water Independent Pathways (Inhalation excludes radon)							
	Ground	Inhalation		Meat		Soil		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000





Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+03 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+03 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+03 years

Radio-Nuclide	Water Independent Pathways (Inhalation excludes radon)											
	Ground	Inhalation		Plant		Meat		Milk		Soil		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.000E+00	0.0000	0.000E+00	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	0.000E+00	0.000E+00	0.0000	0.000E+00	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.000E+00	0.0000	0.000E+00	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000



Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Radio- Nuclide	Water Dependent Pathways													
	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

\*\*\*CNRSI (i,p, t) includes contribution from decay daughter radionuclides

Construction Worker- Surface

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Dose Conversion Factor (and Related) Parameter Summary  
 Dose Library: FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
A-1	DCF1's for external ground radiation, (mrem/yr)/(pCi/g)			
A-1	At-218 (Source: FGR 12)	5.847E-03	5.847E-03	DCF1 ( 1)
A-1	Bi-210 (Source: FGR 12)	3.606E-03	3.606E-03	DCF1 ( 2)
A-1	Bi-214 (Source: FGR 12)	9.808E+00	9.808E+00	DCF1 ( 3)
A-1	Pb-210 (Source: FGR 12)	2.447E-03	2.447E-03	DCF1 ( 4)
A-1	Pb-214 (Source: FGR 12)	1.341E+00	1.341E+00	DCF1 ( 5)
A-1	Po-210 (Source: FGR 12)	5.231E-05	5.231E-05	DCF1 ( 6)
A-1	Po-214 (Source: FGR 12)	5.138E-04	5.138E-04	DCF1 ( 7)
A-1	Po-218 (Source: FGR 12)	5.642E-05	5.642E-05	DCF1 ( 8)
A-1	Ra-226 (Source: FGR 12)	3.176E-02	3.176E-02	DCF1 ( 9)
A-1	Rn-222 (Source: FGR 12)	2.354E-03	2.354E-03	DCF1 ( 10)
A-1	Tl-210 (Source: no data)	0.000E+00	-2.000E+00	DCF1 ( 11)
B-1	Dose conversion factors for inhalation, mrem/pCi:			
B-1	Pb-210+D	2.320E-02	1.360E-02	DCF2 ( 1)
B-1	Ra-226+D	8.594E-03	8.580E-03	DCF2 ( 2)
D-1	Dose conversion factors for ingestion, mrem/pCi:			
D-1	Pb-210+D	7.276E-03	5.370E-03	DCF3 ( 1)
D-1	Ra-226+D	1.321E-03	1.320E-03	DCF3 ( 2)
D-34	Food transfer factors:			
D-34	Pb-210+D , plant/soil concentration ratio, dimensionless	1.000E-02	1.000E-02	RTF ( 1,1)
D-34	Pb-210+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-04	8.000E-04	RTF ( 1,2)
D-34	Pb-210+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.000E-04	3.000E-04	RTF ( 1,3)
D-34	Ra-226+D , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF ( 2,1)
D-34	Ra-226+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF ( 2,2)
D-34	Ra-226+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-03	1.000E-03	RTF ( 2,3)
D-5	Bioaccumulation factors, fresh water, L/kg:			
D-5	Pb-210+D , fish	3.000E+02	3.000E+02	BIOFAC ( 1,1)
D-5	Pb-210+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC ( 1,2)
D-5	Ra-226+D , fish	5.000E+01	5.000E+01	BIOFAC ( 2,1)
D-5	Ra-226+D , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC ( 2,2)

#For DCF1 (xxx) only, factors are for infinite depth & area. See ETRG table in Ground Pathway of Detailed Report.  
 \*Base Case means Default.Lib w/o Associate Nuclide contributions.



Site-Specific Parameter Summary

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R011	Area of contaminated zone (m**2)	5.000E+03	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	1.500E-01	2.000E+00	---	THICKO
R011	Fraction of contamination that is submerged	2.000E-01	0.000E+00	---	SUBMFRACT
R011	Length parallel to aquifer flow (m)	not used	1.000E+02	---	LCZPAQ
R011	Basic radiation dose limit (mrem/yr)	2.500E+01	3.000E+01	---	BRDL
R011	Time since placement of material (yr)	0.000E+00	0.000E+00	---	TI
R011	Times for calculations (yr)	1.000E+00	1.000E+00	---	T ( 2)
R011	Times for calculations (yr)	3.000E+00	3.000E+00	---	T ( 3)
R011	Times for calculations (yr)	1.000E+01	1.000E+01	---	T ( 4)
R011	Times for calculations (yr)	2.500E+01	3.000E+01	---	T ( 5)
R011	Times for calculations (yr)	1.000E+02	1.000E+02	---	T ( 6)
R011	Times for calculations (yr)	3.000E+02	3.000E+02	---	T ( 7)
R011	Times for calculations (yr)	1.000E+03	1.000E+03	---	T ( 8)
R011	Times for calculations (yr)	not used	0.000E+00	---	T ( 9)
R011	Times for calculations (yr)	not used	0.000E+00	---	T(10)
R012	Initial principal radionuclide (pCi/g): Ra-226	1.290E+00	0.000E+00	---	SI ( 2)
R012	Concentration in groundwater (pCi/L): Ra-226	not used	0.000E+00	---	WI ( 2)
R013	Cover depth (m)	0.000E+00	0.000E+00	---	COVERO
R013	Density of cover material (g/cm**3)	not used	1.500E+00	---	DENSCV
R013	Cover depth erosion rate (m/yr)	not used	1.000E-03	---	VCV
R013	Density of contaminated zone (g/cm**3)	1.500E+00	1.500E+00	---	DENSCZ
R013	Contaminated zone erosion rate (m/yr)	1.000E-03	1.000E-03	---	VCZ
R013	Contaminated zone total porosity	4.000E-01	4.000E-01	---	TFCZ
R013	Contaminated zone field capacity	2.000E-01	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	1.000E+01	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	5.300E+00	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	2.000E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	not used	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	5.000E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	1.000E-01	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	0.000E+00	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	2.000E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	not used	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	not used	1.000E-03	---	EPS
R014	Density of saturated zone (g/cm**3)	not used	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	not used	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	not used	2.000E-01	---	EPSZ
R014	Saturated zone field capacity	not used	2.000E-01	---	FCSZ
R014	Saturated zone hydraulic conductivity (m/yr)	not used	1.000E+02	---	HCSZ
R014	Saturated zone hydraulic gradient	not used	2.000E-02	---	HGWT

R014	Saturated zone b parameter	not used	5.300E+00	---	BSZ
R014	Water table drop rate (m/yr)	not used	1.000E-03	---	VWT
R014	Well pump intake depth (m below water table)	not used	1.000E+01	---	DWIBWT
R014	Model: Nondispersion (ND) or Mass-Balance (MB)	not used	ND	---	MODEL
R014	Well pumping rate (m**3/yr)	not used	2.500E+02	---	UW

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	(If different from user input)	Used by RESRAD	Parameter Name
R015	Number of unsaturated zone strata	not used	1		---	NS
R016	Distribution coefficients for Ra-226					
R016	Contaminated zone (cm**3/g)	7.000E+01	7.000E+01		---	DCNUCC ( 2)
R016	Saturated zone (cm**3/g)	not used	7.000E+01		---	DCNUCS ( 2)
R016	Leach rate (/yr)	0.000E+00	0.000E+00		2.534E-03	ALEACH ( 2)
R016	Solubility constant	0.000E+00	0.000E+00		not used	SOLUBK ( 2)
R016	Distribution coefficients for daughter Pb-210					
R016	Contaminated zone (cm**3/g)	1.000E+02	1.000E+02		---	DCNUCC ( 1)
R016	Saturated zone (cm**3/g)	not used	1.000E+02		---	DCNUCS ( 1)
R016	Leach rate (/yr)	0.000E+00	0.000E+00		1.776E-03	ALEACH ( 1)
R016	Solubility constant	0.000E+00	0.000E+00		not used	SOLUBK ( 1)
R017	Inhalation rate (m**3/yr)	5.000E+03	8.400E+03		---	INHALLR
R017	Mass loading for inhalation (g/m**3)	1.000E-04	1.000E-04		---	MLINH
R017	Exposure duration	1.000E+00	3.000E+01		---	ED
R017	Shielding factor, inhalation	4.000E-01	4.000E-01		---	SHF3
R017	Shielding factor, external gamma	1.000E+00	7.000E-01		---	SHF1
R017	Fraction of time spent indoors	0.000E+00	5.000E-01		---	FIND
R017	Fraction of time spent outdoors (on site)	1.000E+00	2.500E-01		---	FOTD
R017	Shape factor flag, external gamma	1.000E+00	1.000E+00		>0 shows circular AREA.	FS
R017	Radii of shape factor array (used if FS = -1):					
R017	Outer annular radius (m), ring 1:	not used	5.000E+01		---	RAD_SHAPE ( 1)
R017	Outer annular radius (m), ring 2:	not used	7.071E+01		---	RAD_SHAPE ( 2)
R017	Outer annular radius (m), ring 3:	not used	0.000E+00		---	RAD_SHAPE ( 3)
R017	Outer annular radius (m), ring 4:	not used	0.000E+00		---	RAD_SHAPE ( 4)
R017	Outer annular radius (m), ring 5:	not used	0.000E+00		---	RAD_SHAPE ( 5)
R017	Outer annular radius (m), ring 6:	not used	0.000E+00		---	RAD_SHAPE ( 6)
R017	Outer annular radius (m), ring 7:	not used	0.000E+00		---	RAD_SHAPE ( 7)
R017	Outer annular radius (m), ring 8:	not used	0.000E+00		---	RAD_SHAPE ( 8)
R017	Outer annular radius (m), ring 9:	not used	0.000E+00		---	RAD_SHAPE ( 9)
R017	Outer annular radius (m), ring 10:	not used	0.000E+00		---	RAD_SHAPE (10)
R017	Outer annular radius (m), ring 11:	not used	0.000E+00		---	RAD_SHAPE (11)
R017	Outer annular radius (m), ring 12:	not used	0.000E+00		---	RAD_SHAPE (12)
R017	Fractions of annular areas within AREA:					
R017	Ring 1	not used	1.000E+00		---	FRACA ( 1)
R017	Ring 2	not used	2.732E-01		---	FRACA ( 2)
R017	Ring 3	not used	0.000E+00		---	FRACA ( 3)
R017	Ring 4	not used	0.000E+00		---	FRACA ( 4)
R017	Ring 5	not used	0.000E+00		---	FRACA ( 5)
R017	Ring 6	not used	0.000E+00		---	FRACA ( 6)
R017	Ring 7	not used	0.000E+00		---	FRACA ( 7)

R017	Ring 8	not used	0.000E+00	---	FRACA ( 8)
R017	Ring 9	not used	0.000E+00	---	FRACA ( 9)
R017	Ring 10	not used	0.000E+00	---	FRACA (10)
R017	Ring 11	not used	0.000E+00	---	FRACA (11)
R017	Ring 12	not used	0.000E+00	---	FRACA (12)

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R018	Fruits, vegetables and grain consumption (kg/yr)	not used	1.600E+02	---	DIET(1)
R018	Leafy vegetable consumption (kg/yr)	not used	1.400E+01	---	DIET(2)
R018	Milk consumption (L/yr)	not used	9.200E+01	---	DIET(3)
R018	Meat and poultry consumption (kg/yr)	not used	6.300E+01	---	DIET(4)
R018	Fish consumption (kg/yr)	not used	5.400E+00	---	DIET(5)
R018	Other seafood consumption (kg/yr)	not used	9.000E-01	---	DIET(6)
R018	Soil ingestion rate (g/yr)	8.250E+01	3.650E+01	---	SOIL
R018	Drinking water intake (L/yr)	not used	5.100E+02	---	DWI
R018	Contamination fraction of drinking water	not used	1.000E+00	---	FDM
R018	Contamination fraction of household water	not used	1.000E+00	---	FHHW
R018	Contamination fraction of livestock water	not used	1.000E+00	---	FLW
R018	Contamination fraction of irrigation water	not used	1.000E+00	---	FIRW
R018	Contamination fraction of aquatic food	not used	5.000E-01	---	FR9
R018	Contamination fraction of plant food	not used	-1	---	FFPLANT
R018	Contamination fraction of meat	not used	-1	---	FMEAT
R018	Contamination fraction of milk	not used	-1	---	FMILK
R019	Livestock fodder intake for meat (kg/day)	not used	6.800E+01	---	LF15
R019	Livestock fodder intake for milk (kg/day)	not used	5.500E+01	---	LF16
R019	Livestock water intake for meat (L/day)	not used	5.000E+01	---	LW15
R019	Livestock water intake for milk (L/day)	not used	1.600E+02	---	LW16
R019	Livestock soil intake (kg/day)	not used	5.000E-01	---	LS1
R019	Mass loading for foliar deposition (g/m**3)	not used	1.000E-04	---	MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01	---	DM
R019	Drinking water fraction from ground water	not used	9.000E-01	---	DROOT
R019	Household water fraction from ground water	not used	1.000E+00	---	FGWDW
R019	Livestock water fraction from ground water	not used	1.000E+00	---	FGWHH
R019	Irrigation fraction from ground water	not used	1.000E+00	---	FGWLW
R019		not used	1.000E+00	---	FGWIR
R19B	Wet weight crop yield for Non-Leafy (kg/m**2)	not used	7.000E-01	---	YV(1)
R19B	Wet weight crop yield for Leafy (kg/m**2)	not used	1.500E+00	---	YV(2)
R19B	Wet weight crop yield for Fodder (kg/m**2)	not used	1.100E+00	---	YV(3)
R19B	Growing Season for Non-Leafy (years)	not used	1.700E-01	---	TE(1)
R19B	Growing Season for Leafy (years)	not used	2.500E-01	---	TE(2)
R19B	Growing Season for Fodder (years)	not used	8.000E-02	---	TE(3)
R19B	Translocation Factor for Non-Leafy	not used	1.000E-01	---	TIV(1)
R19B	Translocation Factor for Leafy	not used	1.000E+00	---	TIV(2)
R19B	Translocation Factor for Fodder	not used	1.000E+00	---	TIV(3)
R19B	Dry Foliar Interception Fraction for Non-Leafy	not used	2.500E-01	---	RDRY(1)
R19B	Dry Foliar Interception Fraction for Leafy	not used	2.500E-01	---	RDRY(2)
R19B	Dry Foliar Interception Fraction for Fodder	not used	2.500E-01	---	RDRY(3)
R19B	Wet Foliar Interception Fraction for Non-Leafy	not used	2.500E-01	---	RWET(1)
R19B	Wet Foliar Interception Fraction for Leafy	not used	2.500E-01	---	RWET(2)



Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
C14	Fraction of vegetation carbon from air	not used	9.800E-01	---	CAIR
C14	C-14 evasion layer thickness in soil (m)	not used	3.000E-01	---	DMC
C14	C-14 evasion flux rate from soil (1/sec)	not used	7.000E-07	---	EVSN
C14	C-12 evasion flux rate from soil (1/sec)	not used	1.000E-10	---	REVSN
C14	Fraction of grain in beef cattle feed	not used	8.000E-01	---	AVFG4
C14	Fraction of grain in milk cow feed	not used	2.000E-01	---	AVFG5
STOR	Storage times of contaminated foodstuffs (days):				
STOR	Fruits, non-leafy vegetables, and grain	1.400E+01	1.400E+01	---	STOR_T(1)
STOR	Leafy vegetables	1.000E+00	1.000E+00	---	STOR_T(2)
STOR	Milk	1.000E+00	1.000E+00	---	STOR_T(3)
STOR	Meat and poultry	2.000E+01	2.000E+01	---	STOR_T(4)
STOR	Fish	7.000E+00	7.000E+00	---	STOR_T(5)
STOR	Crustacea and mollusks	7.000E+00	7.000E+00	---	STOR_T(6)
STOR	Well water	1.000E+00	1.000E+00	---	STOR_T(7)
STOR	Surface water	1.000E+00	1.000E+00	---	STOR_T(8)
STOR	Livestock fodder	4.500E+01	4.500E+01	---	STOR_T(9)
R021	Thickness of building foundation (m)	not used	1.500E-01	---	FLOOR1
R021	Bulk density of building foundation (g/cm**3)	not used	2.400E+00	---	DENSFL
R021	Total porosity of the cover material	not used	4.000E-01	---	TPCV
R021	Total porosity of the building foundation	not used	1.000E-01	---	TPFL
R021	Volumetric water content of the cover material	not used	5.000E-02	---	PH2OCV
R021	Volumetric water content of the foundation	not used	3.000E-02	---	PH2OFL
R021	Diffusion coefficient for radon gas (m/sec):				
R021	in cover material	not used	2.000E-06	---	DIFCV
R021	in foundation material	not used	3.000E-07	---	DIFFL
R021	in contaminated zone soil	not used	2.000E-06	---	DIFCZ
R021	Radon vertical dimension of mixing (m)	not used	2.000E+00	---	HMX
R021	Average building air exchange rate (1/hr)	not used	5.000E-01	---	REXG
R021	Height of the building (room) (m)	not used	2.500E+00	---	HRM
R021	Building interior area factor	not used	0.000E+00	---	FAI
R021	Building depth below ground surface (m)	not used	-1.000E+00	---	DMFL
R021	Emanating power of Rn-222 gas	not used	2.500E-01	---	EMANA(1)
R021	Emanating power of Rn-220 gas	not used	1.500E-01	---	EMANA(2)
TITL	Number of graphical time points	32	---	---	NPTS
TITL	Maximum number of integration points for dose	17	---	---	LYMAX
TITL	Maximum number of integration points for risk	1	---	---	KYMAX

Summary of Pathway Selections

Pathway	User Selection
1 -- external gamma	active
2 -- inhalation (w/o radon)	active
3 -- plant ingestion	suppressed
4 -- meat ingestion	suppressed
5 -- milk ingestion	suppressed
6 -- aquatic foods	suppressed
7 -- drinking water	suppressed
8 -- soil ingestion	active
9 -- radon	suppressed
Find peak pathway doses	active



Contaminated Zone Dimensions Initial Soil Concentrations, pCi/g

Area: 5000.00 square meters Ra-226 1.290E+00

Thickness: 0.15 meters

Cover Depth: 0.00 meters

Total Dose TDOSE(t), mrem/yr  
 Basic Radiation Dose Limit = 2.500E+01 mrem/yr

Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)	
t (years):	0.000E+00 1.000E+00 3.000E+00 1.000E+01 2.500E+01 1.000E+02 3.000E+02 1.000E+03
TDOSE(t):	1.192E+01 1.188E+01 1.180E+01 1.148E+01 1.067E+01 5.310E+00 0.000E+00 0.000E+00
M(t):	4.768E-01 4.752E-01 4.720E-01 4.592E-01 4.267E-01 2.124E-01 0.000E+00 0.000E+00

Maximum TDOSE(t): 1.192E+01 mrem/yr at t = 0.000E+00 years

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)														
Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.177E+01	0.9872	9.058E-04	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.517E-01	0.0127
Total	1.177E+01	0.9872	9.058E-04	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.517E-01	0.0127

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Dependent Pathways														
Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.192E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.192E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Independent Pathways (Inhalation excludes radon)														
Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.171E+01	0.9853	9.672E-04	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.733E-01	0.0146
Total	1.171E+01	0.9853	9.672E-04	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.733E-01	0.0146

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Dependent Pathways														
Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.188E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.188E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)														
Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.158E+01	0.9818	1.080E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.132E-01	0.0181
Total	1.158E+01	0.9818	1.080E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.132E-01	0.0181

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Dependent Pathways														
Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.180E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.180E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)														
Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.116E+01	0.9718	1.383E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.222E-01	0.0281
<b>Total</b>	<b>1.116E+01</b>	<b>0.9718</b>	<b>1.383E-03</b>	<b>0.0001</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>3.222E-01</b>	<b>0.0281</b>

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Dependent Pathways														
Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.148E+01	1.0000
<b>Total</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>1.148E+01</b>	<b>1.0000</b>

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)														
Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	1.023E+01	0.9587	1.679E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.387E-01	0.0411
Total	1.023E+01	0.9587	1.679E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.387E-01	0.0411

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Water Dependent Pathways														
Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.067E+01	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.067E+01	1.0000

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)														
Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	5.087E+00	0.9581	7.850E-04	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.219E-01	0.0418
<b>Total</b>	<b>5.087E+00</b>	<b>0.9581</b>	<b>7.850E-04</b>	<b>0.0001</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>2.219E-01</b>	<b>0.0418</b>

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Dependent Pathways														
Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.310E+00	1.0000
<b>Total</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>0.000E+00</b>	<b>0.0000</b>	<b>5.310E+00</b>	<b>1.0000</b>

\*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Water Independent Pathways (Inhalation excludes radon)														
Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Water Dependent Pathways														
Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

\*Sum of all water independent and dependent pathways.



Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)														
Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Dependent Pathways														
Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

\*Sum of all water independent and dependent pathways.

Dose/Source Ratios Summed Over All Pathways  
 Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr) / (pCi/g)	DSR(j,t) At Time in Years (mrem/yr) / (pCi/g)
Ra-226+D	Ra-226+D	1.000E+00	9.231E+00	9.183E+00
Ra-226+D	Pb-210+D	1.000E+00	9.295E-03	2.728E-02
Ra-226+D	DSR(j)	9.240E+00	9.210E+00	9.146E+00

The DSR includes contributions from associated (half-life % 180 days) daughters.

Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 Basic Radiation Dose Limit = 2.500E+01 mrem/yr

Nuclide (i)	t=	0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03
Ra-226		2.706E+00	2.714E+00	2.733E+00	2.809E+00	3.023E+00	6.074E+00	*9.885E+11	*9.885E+11

\*At specific activity limit

Summed Dose/Source Ratios DSR(i,t) in (mrem/yr) / (pCi/g)  
 and Single Radionuclide Soil Guidelines G(i,t) in pCi/g  
 at tmin = time of minimum single radionuclide soil guideline  
 and at tmax = time of maximum total dose = 0.000E+00 years

Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i,tmin) (pCi/g)	G(i,tmin) (pCi/g)	DSR(i,tmax) (pCi/g)	G(i,tmax) (pCi/g)
Ra-226	1.290E+00	0.000E+00	9.240E+00	2.706E+00	9.240E+00	2.706E+00

Individual Nuclide Dose Summed Over All Pathways  
 Parent Nuclide and Branch Fraction Indicated

Nuclide Parent (j)	THF (i)	t =	DOSE(j,t), mrem/yr
Ra-226	Ra-226	1.191E+01	1.185E+01
Pb-210	Ra-226	1.199E-02	3.520E-02
		1.172E+01	1.128E+01
		1.033E+01	5.117E+00
		3.353E-01	1.925E-01

THF(i) is the thread fraction of the parent nuclide.

Individual Nuclide Soil Concentration  
 Parent Nuclide and Branch Fraction Indicated

Nuclide Parent (j)	THF (i)	t =	S(j,t), pCi/g
Ra-226	Ra-226	1.290E+00	1.286E+00
Pb-210	Ra-226	0.000E+00	3.939E-02
		1.279E+00	1.252E+00
		1.198E+00	1.198E+00
		3.365E-01	6.556E-01

THF(i) is the thread fraction of the parent nuclide.

RESRAD.CALC execution time = 9.05 seconds

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Cancer Risk Slope Factors Summary Table  
 Risk Library: FGR 13 Morbidity

Menu	Parameter	Current Value	Base Case*	Parameter Name
Sf-1	Ground external radiation slope factors, 1/yr per (pCi/g):	4.21E-09	1.41E-09	SLPF ( 1,1)
Sf-1		8.49E-06	2.29E-08	SLPF ( 2,1)
Sf-1				
Sf-2	Inhalation, slope factors, 1/(pCi):	3.08E-08	1.58E-08	SLPF ( 1,2)
Sf-2		2.83E-08	2.82E-08	SLPF ( 2,2)
Sf-2				
Sf-3	Food ingestion, slope factors, 1/(pCi):	3.44E-09	1.18E-09	SLPF ( 1,3)
Sf-3		5.15E-10	5.14E-10	SLPF ( 2,3)
Sf-3				
Sf-3	Water ingestion, slope factors, 1/(pCi):	2.66E-09	8.81E-10	SLPF ( 1,4)
Sf-3		3.86E-10	3.85E-10	SLPF ( 2,4)
Sf-3				
Sf-3	Soil ingestion, slope factors, 1/(pCi):	3.44E-09	1.18E-09	SLPF ( 1,5)
Sf-3		5.15E-10	5.14E-10	SLPF ( 2,5)
Sf-3				
Sf-Rn	Radon Inhalation slope factors, 1/(pCi):	1.80E-12	1.80E-12	SLPFRN(1,1)
Sf-Rn		3.70E-12	3.70E-12	SLPFRN(1,2)
Sf-Rn		6.20E-12	6.20E-12	SLPFRN(1,3)
Sf-Rn		1.50E-11	1.50E-11	SLPFRN(1,4)
Sf-Rn	Radon K factors, (mrem/WLM):	7.60E+02	7.60E+02	KFACTR(1,1)
Sf-Rn		5.70E+02	5.70E+02	KFACTR(1,2)

\*Base Case means Default.Lib w/o Associate Nuclide contributions.

Risk Slope and Environmental Transport Factors for the Ground Pathway

Nuclide (i)	Slope(i)* t=	ETFG(i,t) At Time in Years (dimensionless)									
		0.000E+00	1.000E+00	3.000E+00	1.000E+01	2.500E+01	1.000E+02	3.000E+02	1.000E+03		
At-218	3.570E-09	9.552E-01	9.554E-01	9.559E-01	9.574E-01	9.606E-01	9.299E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Bi-210	2.760E-09	9.287E-01	9.279E-01	9.262E-01	9.196E-01	9.018E-01	6.615E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Bi-214	7.480E-06	8.065E-01	8.046E-01	8.007E-01	7.865E-01	7.521E-01	4.628E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pb-210	1.410E-09	9.666E-01	9.667E-01	9.669E-01	9.676E-01	9.690E-01	9.570E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pb-214	9.820E-07	8.978E-01	8.966E-01	8.941E-01	8.847E-01	8.604E-01	5.842E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Po-210	3.950E-11	8.522E-01	8.505E-01	8.472E-01	8.347E-01	8.037E-01	5.106E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Po-214	3.860E-10	8.482E-01	8.465E-01	8.432E-01	8.307E-01	7.998E-01	5.102E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Po-218	4.260E-11	8.479E-01	8.462E-01	8.428E-01	8.302E-01	7.990E-01	5.082E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	2.290E-08	9.254E-01	9.246E-01	9.230E-01	9.165E-01	8.989E-01	6.464E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rn-222	1.740E-09	8.732E-01	8.717E-01	8.687E-01	8.575E-01	8.291E-01	5.417E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Tl-210	0.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00

\* - Units are 1/yr per (pci/g) at infinite depth and area. Multiplication by ETFG(i,t) converts to site conditions.

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 0.000E+00 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)				Water Dependent Pathways				Total Ingestion*		
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant		Meat	Milk
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	1.017E-01	0.000E+00	0.000E+00	0.000E+00	1.064E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.064E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 0.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 0.000E+00 years

Radio-Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.	risk fract.	risk	fract.	risk fract.	risk	fract.	risk fract.	risk	fract.	risk fract.	risk	fract.	risk fract.	risk	fract.	risk fract.
Pb-210	0.000E+00	0.0000	0.000E+00 0.0000	0.000E+00	0.0000	0.000E+00 0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	8.949E-06	0.9936	2.875E-09 0.0003	0.000E+00	0.0000	0.000E+00 0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.478E-08	0.0061	5.478E-08	0.0061
Total	8.949E-06	0.9936	2.875E-09 0.0003	0.000E+00	0.0000	0.000E+00 0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.478E-08	0.0061	5.478E-08	0.0061

Water Independent Pathways (Inhalation excludes radon)

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.006E-06	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.006E-06	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	8.949E-06	0.9936	2.875E-09	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.478E-08	0.0061
Total	8.949E-06	0.9936	2.875E-09	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.478E-08	0.0061



Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 0.000E+00 Years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.0000

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+00 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)				Water Dependent Pathways				Total Ingestion*		
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant		Meat	Milk
Pb-210	3.084E-03	0.000E+00	0.000E+00	0.000E+00	3.228E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.228E+00
Ra-226	1.007E-01	0.000E+00	0.000E+00	0.000E+00	1.054E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.054E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+00 years

Radio-Nuclide	Ground				Water Independent Pathways (Inhalation excludes radon)			
	risk	fract.	risk	fract.	Plant	Meat	Milk	Soil
Pb-210	1.559E-10	0.0000	9.485E-11	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	8.902E-06	0.9924	2.847E-09	0.0003	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	8.902E-06	0.9924	2.942E-09	0.0003	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.136E-08	0.0013
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.959E-06	0.9987
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.971E-06	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent  
 Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	8.902E-06	0.9924	2.942E-09	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.537E-08	0.0073
Total	8.902E-06	0.9924	2.942E-09	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.537E-08	0.0073

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+00 Years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	8.971E-06
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	8.971E-06

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 3.000E+00 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)				Water Dependent Pathways				Total Ingestion*		
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant		Meat	Milk
Pb-210	8.809E-03	0.000E+00	0.000E+00	0.000E+00	9.220E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.220E+00
Ra-226	9.877E-02	0.000E+00	0.000E+00	0.000E+00	1.034E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.034E+02

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 3.000E+00 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 3.000E+00 years

Radio-Nuclide	Ground				Water Independent Pathways (Inhalation excludes radon)			
	risk	fract.	risk	fract.	Plant	Meat	Milk	Soil
Pb-210	4.508E-10	0.0000	2.709E-10	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ra-226	8.809E-06	0.9901	2.792E-09	0.0003	0.000E+00	0.0000	0.000E+00	0.0000
Total	8.810E-06	0.9901	3.063E-09	0.0003	0.000E+00	0.0000	0.000E+00	0.0000

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.247E-08	0.0036
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.865E-06	0.9964
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.898E-06	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 3.000E+00 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent    Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	8.810E-06	0.9901	3.063E-09	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.495E-08	0.0095
Total	8.810E-06	0.9901	3.063E-09	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.495E-08	0.0095

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+00 Years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	8.898E-06
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	8.898E-06

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+01 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	2.475E-02	0.000E+00	0.000E+00	0.000E+00	2.591E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.591E+01
Ra-226	9.213E-02	0.000E+00	0.000E+00	0.000E+00	9.643E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.643E+01

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+01 years

Radio-Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil				
	risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.			
Pb-210	1.324E-09	0.0002	7.613E-10	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.920E-08	0.0103
Ra-226	8.483E-06	0.9834	2.605E-09	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.964E-08	0.0058
Total	8.485E-06	0.9835	3.366E-09	0.0004	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.388E-07	0.0161

Water Independent Pathways (Inhalation excludes radon)



Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.128E-08	0.0106
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.536E-06	0.9894
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.627E-06	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent  
 Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	8.485E-06	0.9835	3.366E-09	0.0004	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.388E-07	0.0161
Total	8.485E-06	0.9835	3.366E-09	0.0004	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.388E-07	0.0161

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+01 years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	8.627E-06	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	8.627E-06	1.0000

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 2.500E+01 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)				Water Dependent Pathways				Total Ingestion*		
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant		Meat	Milk
Pb-210	4.306E-02	0.000E+00	0.000E+00	0.000E+00	4.507E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.507E+01
Ra-226	7.868E-02	0.000E+00	0.000E+00	0.000E+00	8.235E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.235E+01
* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways											

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 2.500E+01 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 2.500E+01 years

Radio-Nuclide	Water Independent Pathways (Inhalation excludes radon)											
	Ground	Inhalation		Plant		Meat		Milk		Soil		
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	2.548E-09	0.0003	1.324E-09	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.552E-07	0.0194
Ra-226	7.777E-06	0.9745	2.224E-09	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.239E-08	0.0053
Total	7.780E-06	0.9748	3.549E-09	0.0004	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.976E-07	0.0248

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.591E-07	0.0199
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.822E-06	0.9801
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.981E-06	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 2.500E+01 years

Radionuclides

Radon Pathway	Rn-222		Po-218		Pb-214		Bi-214		Rn-220		Po-216		Pb-212		Bi-212	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Water-ind.	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	7.780E-06	0.9748	3.549E-09	0.0004	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.976E-07	0.0248
Total	7.780E-06	0.9748	3.549E-09	0.0004	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.976E-07	0.0248

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 2.500E+01 years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	1.0000

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+02 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways					Total Ingestion*	
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk		
Pb-210	2.488E-02	0.000E+00	0.000E+00	0.000E+00	2.604E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.604E+01
Ra-226	2.519E-02	0.000E+00	0.000E+00	0.000E+00	2.637E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.637E+01

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+02 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+02 years

Radio-Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil					
	risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.				
Pb-210	3.025E-09	0.0008		7.651E-10	0.0002		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		8.965E-08	0.0225	
Ra-226	3.884E-06	0.9730		7.122E-10	0.0002		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		1.357E-08	0.0034	
Total	3.887E-06	0.9738		1.477E-09	0.0004		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		1.032E-07	0.0259	

Water Independent Pathways (Inhalation excludes radon)

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Plant		Meat		Milk		All Pathways**	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.344E-08	0.0234
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.898E-06	0.9766
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.992E-06	1.0000

\*\* Sum of water independent ground, inhalation, plant, meat, milk, soil  
 and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of  
 Radon and its Decay Products at t= 1.000E+02 years

Radionuclides

Radon Pathway	Rn-222		Po-218		Pb-214		Bi-214		Rn-220		Po-216		Pb-212		Bi-212	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Water-ind.	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)\*\*\* for Initially Existing Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	3.887E-06	0.9738	1.477E-09	0.0004	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.032E-07	0.0259
Total	3.887E-06	0.9738	1.477E-09	0.0004	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.032E-07	0.0259

Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+02 years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	3.992E-06
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	3.992E-06

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides







Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 3.000E+02 years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)  
 As pCi/yr at t= 1.000E+03 years

Radio-Nuclide	Water Independent Pathways (Inhalation w/o radon)				Water Dependent Pathways				Total Ingestion*		
	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant		Meat	Milk
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ra-226	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W(irn,i,t) for Inhalation of Radon and its Decay Products as pCi/yr at t= 1.000E+03 years

Radon Pathway	Radionuclides							
	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p) and Fraction of Total Risk at t= 1.000E+03 years

Radio-Nuclide	Ground			Inhalation			Plant			Meat			Milk			Soil		
	risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.		risk	fract.	
Pb-210	0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000	
Ra-226	0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000	
Total	0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000		0.000E+00	0.0000	

Water Independent Pathways (Inhalation excludes radon)



Total Excess Cancer Risk CNRS(i,p,t)\*\* for Initially Existent Radionuclides (i) and Pathways (p)  
 and Fraction of Total Risk at t= 1.000E+03 years

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

\*\*\*CNRSI (i,p,t) includes contribution from decay daughter radionuclides

## **Appendix G**

### Remedial Alternatives Cost Summary and Assumptions

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## Acronyms and Abbreviations

APP	Accident prevention plan
Army	Department of the Army (inclusive of USACE and AEC)
bgs	Below ground surface
CAMU	Corrective action management unit
cy	Cubic yard
EPA	U.S. Environmental Protection Agency
CAMU	Corrective action management unit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
HASP	Health and safety plan
LUC	Land use controls
LUC RD	Land use control remedial design
mg/kg	Milligrams per kilogram
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
O&M	Operation and maintenance
OMB	Office of Management and Budget
OU	Operable Units
RA	Remedial action
RACER	Remedial action cost engineering and requirements system
RAO	Remedial action objective
RI/FS	Remedial Investigation/Feasibility Study
SAP	Sampling and Analysis plan
SHAD	Sharpe Army Depot
QAPP	Quality assurance project plan

## **G1.0 Introduction**

This appendix provides an initial estimate of costs associated with remedial alternatives for SHAD-041 (Sites 33/29), located at Sharpe Army Depot in Lathrop, California. The alternatives were developed and evaluated as part of this Remedial Investigation/Feasibility Study (RI/FS) Report. The remedial alternatives were developed to address Radium-226, PCDD/PCDF and lead in surface and subsurface soil (0 to 13 feet below ground surface [bgs]) that poses an unacceptable risk to humans and ecological receptors under the industrial/commercial and unrestricted land use scenarios.

Cost estimates are developed as part of an FS to compare remedial alternatives during the remedy selection process, and not to establish project budgets or to negotiate Superfund enforcement settlements. The cost estimate is typically carried over from the FS Report to the Proposed Plan for public comment during remedy selection. The cost estimate in the Record of Decision reflects any changes to the remedial alternative that occurred during the remedy selection process as a result of new information or public comment (U.S. Environmental Protection Agency [EPA] 2000).

Costs and components of the technologies were derived from the Remedial Action Cost Engineering and Requirements System (RACER) software developed by Earth Tech, Inc. for the U.S. Army and Air Force for cost estimating (Earth Tech, Inc. 2005). The components of the cost estimate are described in Section G 2.0. Section G 3.0 describes the remedial alternatives and the major assumptions for the cost estimates for each alternative. The costs are summarized in Section G 4.0. Documents and supporting information used to prepare the cost estimates in this appendix are listed in Section G 5.0.

## **G2.0 Cost Estimate Components**

Cost estimates for the remedial alternatives include capital costs, annual operations and maintenance (O&M) costs, and the present value of O&M costs or periodic costs. Each component is discussed in further detail in the following sections.

### **G2.1 Capital Costs**

Capital costs include direct and indirect costs. Costs incurred for equipment, material, labor, construction, development, and implementation of remedial technologies are included as direct costs. Indirect costs include health and safety items, site supervision, engineering, overhead and profit, and startup. Indirect costs are included in the estimate either as a separate line item or as a percentage of the direct capital cost.

### **G2.2 Annual Operation and Maintenance or Periodic Costs**

Annual O&M costs include costs incurred after construction. These costs are necessary to assure the effectiveness of a response action. Annual O&M costs typically include labor, consumable materials, purchased services (for example, laboratory analysis), sampling, permit fees, annual reports, and site reviews.

Periodic costs occur once every few years or once during the entire O&M period. Examples include 5-year reviews and site closeout.

### G2.3 Present Value Analysis

Remedial actions typically involve construction costs expended at the beginning of a project (capital costs) and costs in subsequent years (O&M or periodic costs). Present value analysis is a method to evaluate expenditures that occur over different periods. This standard methodology allows for cost comparisons of different remedial alternatives on the basis of a single cost figure for each alternative. This single value, referred to as the present value, investment required at the beginning of the project (the base year) to assure sufficient funds will be available for the expected duration of the project. The present value analysis uses a discount rate and period of analysis to calculate the present value of all future expenditures.

#### G2.3.1 Discount Rate

A discount rate is the difference between current interest and rates inflation. When inflation is neglected, the discount rate is simply an interest rate and is used to account for the time value of money. A dollar is worth more today than in the future because, if invested today, the dollar would earn interest. The choice of a discount rate is important because the selected rate directly affects the present value of a cost estimate, which is then used in making a remedy selection decision.

EPA policy on use of discount rates for cost analysis is set forth in the preamble to the National Oil and Hazardous Substances Pollution Contingency Plan (55 Federal Register 8722) and in Office of Solid Waste and Emergency Response Directive 9355.3-20 (EPA 1993). Discount rates used in economic analysis by the federal government are specified in Office of Management and Budget (OMB). The current discount rate for a 30-year stream of payments is 3.0 percent (OMB 2017).

#### G2.3.2 Present Value

The present value of a series of equal annual future payments, such as annual O&M payments, is calculated using the following equation:

$$PV = \sum_{t=1}^n \frac{x_t}{(1+i)^t}$$

where

PV = Present value

x<sub>t</sub> = Payment in year t (t = 0 for present or base year)

i = Discount factor

t = Number of years after construction that expenditures start

n = Number of years that the stream of equal annual future payments will run

The present value of a single periodic future payment is calculated using the following equation:

$$PV = \frac{xt}{(1+i)^t}$$

Where

PV = Present value

xt = Payment in year t (t = 0 for present or base year)

i = Discount factor

t = Number of years after construction that expenditures occur

The present value of a remedial alternative represents the sum of the present values of all future payments associated with the project. The present value for the cost estimates is calculated using 2018 dollars.

## G2.4 Types of Cost Estimating Methods

The cost estimates presented in this appendix were developed using both detailed and parametric approaches, both of which are accepted by EPA, as described below.

“The detailed approach estimates cost on an item-by-item basis. Detailed methods typically rely on quantity take-offs and compiled sources of unit cost data for each item, taken from either a built-in database (if part of a software package, for example) or other sources (e.g., cost estimating references). This method, also known as ‘bottom up’ estimating, is used when design information is available” (EPA 2000).

“The parametric approach relies on relationships between cost and design parameters. These relationships are usually ‘statistically-based’ or ‘model-based.’ Statistically-based approaches rely on ‘scaled-up’ or ‘scaled-down’ versions of projects where historical cost data is available. Model-based approaches utilize a generic design that is linked to a cost database and adjusted by the user for site-specific information. This method, also known as ‘top down’ estimating, is used when design information is not available” (EPA 2000).

## G2.5 Methodology

Cost estimates for this RI/FS Report were prepared in accordance with the “Guide for Developing and Documenting Cost Estimates during the Feasibility Study” (EPA 2000). RACER was the primary source of cost data. Costs for unique line items not included in RACER were based on vendor quotes.

## G2.6 Cost Estimate Presentation

Table G-1 summarizes the costs for each soil alternative. Present value calculations are presented in Tables G-2 through G-5. Cost details are presented in Tables G-6 through G-10.

### **G3.0 Introduction to Remedial Alternatives**

The remedial alternatives address Radium-226, PCDD/PCDF and lead-contaminated soil to protect human health and ecological health. Alternative 4 is divided into two alternatives (4 A and 4 B). One alternative must be selected as the remedial action for this site.

Remedial Alternatives to Protect Human and Ecological Health:

- Alternative 1: No Action
- Alternative 2: Land Use Controls
- Alternative 3: On-Site Treatment and Land Use Controls
- Alternative 4 (4 A and 4 B): Excavation and Off-Site Disposal
- Alternative 4 A: Excavation and Off-Site Disposal to Industrial/Commercial Site Use
- Alternative 4 B: Excavation and Off-Site Disposal to Unrestricted Exposure/Unlimited Land Use
- Alternative 5: Excavation, On-Site Containment, and Land Use Controls

The remedial alternatives and the cost assumptions for each alternative are described in the following sections.

#### **G.3.1 Alternative 1: No Action**

Alternative 1, no action, is required as part of the remedial screening process and provides a baseline used to compare with the other alternatives. Under this alternative, no action would be taken to alter any area of the site. Additionally, no costs are associated with this alternative.

#### **G.3.2 Alternative 2: Land Use Controls**

Under Alternative 2, land use controls (LUC) would be implemented through the use of access restrictions, land use restrictions, and covenants to restrict use of property. The LUCs would prohibit residential development of SHAD-041 (Sites 33/29). A land use control remedial design (LUC RD) would be prepared that describes the specific LUC implementation actions, including requirements for 5-year remedy reviews under the Comprehensive Environmental Response, Compensation, and Liability Act; frequency and requirements for periodic monitoring or visual inspection; notification procedures to the regulatory agencies for planned property conveyance; corrective action requirements or responses to actions inconsistent with the LUCs; a list of LUCs with expected durations; and maps identifying where the LUCs are to be implemented. Long-term O&M would include 5-year reviews to evaluate the protectiveness of the alternative.

The following assumptions were made for Alternative 2:

- LUCs will include preparation of a LUC RD and 5-year reviews. Annual inspections will be necessary. The specific LUCs for SHAD-041 (Sites 33/29) will be detailed in the Record of Decision. LUCs would be in place indefinitely.

- Implementation of the LUCs will require preparation of planning documents, planning meetings with the Army and other stakeholders at SHAD-041 (Sites 33/29), and implementation of the LUCs, including surveying and mapping of the area subject to LUCs.
- Five-year reviews will be required. Five-year reviews will consist of document review, a site visit and inspection, interviews with facility personnel, and a report.

Table G-6 presents the itemized costs associated with this alternative.

### **G3.3 Alternative 3: On-Site Treatment and Land Use Controls**

Under Alternative 3, on-site treatment would be implemented to remediate Radium-226, PCDD/PCDF and lead concentrations in surface and subsurface soil below the remedial goals (1.33 pCi/g, 0.29 pg/g and 1,000 mg/kg). Stabilization was selected to treat the 75,000 Radium-226 and 400 lead and PCDD/PCDF impacted -square-foot areas because of its short-term effectiveness, low cost, and ability to successfully treat surface and subsurface soil contaminated with lead, PCDD/PCDF and Radium-226. Contaminated surface and subsurface soil would be excavated to 13.0 feet bgs and mixed with Portland cement, bulking up the volume of soil by 50 percent. Approximately 14,622 cubic yards (cy) of soil would be excavated.

After soil is excavated, soil samples would be collected from the bottom of the excavation and analyzed for metals (lead), PCDD/PCDF and Radium-226 to confirm metals (lead), PCDD/PCDF and Radium-226 concentrations are below the remedial goals. If the confirmation samples show concentrations of lead, PCDD/PCDF and Radium-226 are below the remedial goals, the excavation would be backfilled with the concrete/soil mixture. If metals (lead), PCDD/PCDF and Radium-226 concentrations are above the remedial goals, the excavation would continue vertically another 6 inches and additional confirmation samples would be collected. This process would be repeated until the remedial goals are met. The excavated area would then be backfilled with stabilized soil consisting of a concrete/soil mixture (excavated soil and Portland cement). After treatment, metals (lead), PCDD/PCDF and Radium-226 concentrations in soil will be safe for wildlife known to occupy the site. LUCs are required to monitor and maintain the treated areas and restrict access to humans because the treated material contains metals (lead), PCDD/PCDF and Radium-226.

#### **General**

- This alternative will include preparing planning documents, including a remedial design (RD), accident prevention plan (APP) and health and safety plan (HASp), contingency plan, quality assurance project plan (QAPP), and sampling and analysis plan (SAP), as appropriate. Professional labor management will include permitting activities, construction oversight and management, preparation of as-built drawings, and reporting. The planning and construction of this alternative is expected to require less than 3 years to complete.
- It is assumed that following completion of this alternative the remediation goals will be met with the need for engineering controls or LUCs.

#### **Excavation**

- Soil contaminated with Radium-226, PCDD/PCDF and lead concentrations above remediation goals will be excavated to a depth of 13.0 feet bgs.
- A total of 2.0 acres will be cleared and grubbed for mobilizing heavy equipment into the area, excavation, and placement of the stockpiled soil.
- Only light vegetation exists in the clear-and-grub areas; no trees or stumps will be disturbed.
- Excavation activities will include preparation of decontamination facilities, stockpile areas, and contractor lay-down areas and mobilization of equipment and personnel to SHAD-041 (Sites 33/29) at Sharpe Army Depot in Lathrop, California.
- Soil beneath existing buildings, roadways, or other paved areas will not be disturbed. This alternative does not include demolition of site features, including existing buildings, roads, pavement, and so forth.
- Soil excavated from the vegetated areas of SHAD-041 (Sites 33/29) will be removed with excavators or backhoes. Approximately 14,622 cy will be excavated from the vegetated areas.
- No overhead utilities, such as power lines, at SHAD-041 (Sites 33/29) will need to be disconnected or removed prior to construction.
- The excavated areas will be backfilled with stabilized soil and compacted to match existing grades and drainage.
  - The excess soil will be characterized and disposed of at an approved landfill facility.
- Disturbed areas will be reseeded with native cover; vegetative cover will be watered and mowed 10 times to establish growth.
- Decontamination facilities will be constructed on site, and decontamination waste will be containerized, characterized and disposed of at approved landfill.

### Sampling

- Waste characterization sampling includes toxicity characteristic leaching procedure (TCLP) and waste extraction test (WET) analysis at a frequency of one 4-point composite sample every 2,500 cy of excavated soil; approximately 12 samples will be collected for waste characterization.
- Soil confirmation samples will be collected from the perimeter of the excavation and the bottom of the excavation and analyzed for Radium-226, PCDD/PCDF and lead to confirm concentrations meet the remediation goals. Samples will be collected every 200 feet; the excavation area will be approximately 2 acres and 15 perimeter confirmation samples (including quality assurance samples) will be collected.
- Confirmation sampling results will indicate Radium-226, PCDD/PCDF and lead is below the remediation goals and further excavation will not be necessary.

### **G3.4 Alternative 4 (4 A and 4 B): Excavation and Off-Site Disposal**

#### **Alternative 4 A: Excavation and Off-Site Disposal to Industrial/Commercial Site Use**



This alternative involves excavation and off-site disposal of surface and subsurface soil (0 to 5.0 feet bgs) posing an unacceptable risk to human and ecological receptors. Metals (lead), PCDD/PCDF and Radium 226 at concentrations in surface and subsurface soil above the concentrations of 1,000 mg/kg, 0.29 pg/g and 2.18 pCi/g would be excavated. Contaminated soil would be transported off site to a licensed disposal facility.

Approximately 7,000 cubic yards of soil would be excavated over a two -acre area. The area of excavation would be further defined in the RD if this alternative is chosen for remediation.

After soil is excavated, soil samples would be collected around the lateral extent of the excavation and from the excavation floor and analyzed for metals (lead), PCDD/PCDF and Radium-226 to confirm concentrations are below the remedial goals. If the confirmation samples show concentrations of metals (lead), PCDD/PCDF and Radium-226 are below the remedial goals, the excavations would be backfilled with 5.0 feet of clean soil. If metals (lead), PCDD/PCDF and Radium-226 concentrations are above the remedial goals, the excavations would be expanded laterally and additional confirmation samples would be collected. This process would be repeated until the remedial goals are met. The excavated areas would be backfilled with clean material and returned to approximately existing grades. However, costs for backfilling the top 5.0 feet of soil with clean fill material are substantial, and other approaches may be feasible, including locating an on-site source of fill.

A statistical analysis may be conducted to evaluate whether metals (lead), PCDD/PCDF and Radium 226 concentrations at the bottom of the excavations are above the cleanup goals concentrations. If the results of these confirmation samples and statistical analysis indicate the next 0.5 feet of soil contains metals, PCDD/PCDF and Radium-226 at or below the cleanup goals concentrations, backfill of the excavation with clean fill may not be required. While this may be an option for future discussion if this alternative is chosen for remediation, this RI/FS Report assumes the excavation would be backfilled with clean material.

Samples would be collected from the stockpiled soil for waste characterization before transport via trucks to a licensed disposal facility outside the Sharpe facility. The contaminated soil may be pretreated at the treatment/disposal facility to achieve the most economical disposal option. Pretreatment may include stabilization to reduce the leaching potential of metals (lead), PCDD/PCDF and Radium-226.

This alternative will include preparing planning documents, including a remedial design (RD), accident prevention plan (APP) and health and safety plan (HASP), contingency plan, quality assurance project plan (QAPP), and sampling and analysis plan (SAP), as appropriate. Professional labor management will include permitting activities, construction oversight and management, preparation of as-built drawings, and reporting. The planning and construction of this alternative is expected to require less than 3 years to complete.

## **General**

- The intent of Alternative 4 A is to eliminate the risk and achieve industrial/commercial use of the site. Following completion of this alternative, the RAOs would be achieved, however; LUCs will be required to prevent the residential use of the site.

## **Excavation**

- Soil contaminated with Radium-226, PCDD/PCDF and lead concentrations above remediation goals will be excavated to a depth of 5.0 feet bgs.
- A total of 2.0 acres will be cleared and grubbed for mobilizing heavy equipment into the area, excavation, and placement of the stockpiled soil.
- Only light vegetation exists in the clear-and-grub areas; no trees or stumps will be disturbed.
- Excavation activities will include preparation of decontamination facilities, stockpile areas, and contractor lay-down areas and mobilization of equipment and personnel to SHAD-041 (Sites 33/29) at Sharpe Army Depot in Lathrop, California.
- Soil beneath existing buildings, roadways, or other paved areas will not be disturbed. This alternative does not include demolition of site features, including existing buildings, roads, pavement, and so forth.
- Soil excavated from the vegetated areas of SHAD-041 (Sites 33/29) will be removed with excavators or backhoes. Approximately 7,000 cy will be excavated from the vegetated areas.
- No overhead utilities, such as power lines, at SHAD-041 (Sites 33/29) will need to be disconnected or removed prior to construction.
- Excavated soil will be stockpiled prior to loading onto trucks for transport to the disposal facility.
- The excavated areas will be backfilled with clean soil, obtained from an off-site location; backfill material will be spread and compacted to match existing grades and drainage.
- Disturbed areas will be reseeded with native cover; vegetative cover will be watered and mowed 10 times to establish growth.
- Decontamination facilities will be constructed on site, and decontamination waste will be containerized, characterized and disposed of at approved landfill.

### **Sampling**

- Waste characterization sampling includes toxicity characteristic leaching procedure (TCLP) and waste extraction test (WET) analysis at a frequency of one 4-point composite sample every 2,500 cy of excavated soil; approximately 3 samples will be collected for waste characterization.
- Soil confirmation samples will be collected from the perimeter and the bottom of the excavation and analyzed for Radium-226 and lead to confirm concentrations meet the remediation goals. Samples will be collected every 200 feet; the excavation area will be approximately 2 acres and 15 perimeter confirmation samples (including quality assurance samples) will be collected.
- Confirmation sampling results will indicate Radium-226, PCDD/PCDF and lead is below the remediation goals and further excavation will not be necessary.

### **Off-Site Disposal**

- Pretreatment will not be necessary.

- The excavated soil will be loaded onto trucks and transported out of state to an approved landfill, approximately 1000 miles from Sharpe Army Depot in Lathrop, California.
- Transportation and disposal costs are \$333 per ton of waste. A conversion factor of 1.5 tons per cubic yard of soil in place was used to calculate the tons of soil for disposal. Costs for transportation and disposal at landfill were obtained from Waste Management.

#### **Alternative 4 B: Excavation and Off-Site Disposal to Unrestricted Exposure/Unlimited Site Use**

This alternative involves excavation and off-site disposal of surface and subsurface soil (0 to 13.0 feet bgs) posing an unacceptable risk to humans under an unrestricted land use scenario. Radium-226, PCDD/PCDF and lead concentrations exceeding 1.33 pCi/g, 0.29 pg/g and the concentration of 1000 milligrams per kilogram (mg/kg), respectively would be excavated, and contaminated soil would be transported off site to a licensed disposal facility.

Approximately 14,622 cubic yards (cy) of soil would be excavated.

After soil is excavated, samples would be collected around the lateral extent of the excavation and excavation floor and analyzed for Radium-226, PCDD/PCDF and lead to confirm concentrations are below the remediation goals. If confirmation samples show Radium-226, PCDD/PCDF and lead concentrations are below the remediation goals, the excavations would be backfilled. If Radium-226, PCDD/PCDF and lead concentrations are above the remediation goals, the excavations would be expanded and additional confirmation samples would be collected. This process would be repeated until the remediation goals are met. The excavated areas would be backfilled with clean material and returned to approximately existing grades.

This cost estimate assumes the site would be backfilled with clean soil from off site. However, the costs for backfilling the top 13.0 feet of soil with clean fill material are substantial and other approaches may be feasible, including locating an on-site source of fill. Alternatively, it may be more economical to collect additional samples at the bottom of the excavation (13.0 feet bgs) to characterize the next 0.5 feet of soil at SHAD-041 (Sites 33/29). A statistical analysis may be conducted to determine if Radium-226, PCDD/PCDF and lead concentrations at the bottom of the excavations are above the remediation goals. If the results of these samples and statistical analysis indicate Radium-226, PCDD/PCDF and lead concentrations in the next 0.5 feet of soil at or below the remediation goals, backfill of the excavation with clean fill may not be required. This option may be further evaluated in the remedial design to optimize costs, if this alternative is chosen as the preferred alternative.

The stockpiled soil would be sampled for waste characterization before transport via trucks to a licensed disposal facility outside the Sharpe Army Depot in Lathrop, California. The contaminated soil may be pretreated at the treatment/disposal facility to achieve the most economical disposal option. However, this cost estimate assumes soil would be disposed of as a low level radiological and hazardous waste and would not be pretreated prior to disposal.

The following assumptions were used to evaluate and estimate the cost of Alternative 4 B. The quantities presented are estimates and will likely vary as the remedial design progresses and construction occurs. Table G-9 presents the itemized costs associated with this alternative. For the purposes of selecting the

preferred alternative, this cost estimate is judged accurate within the minus 30 percent, plus 50 percent accuracy required under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

### **General**

- This alternative will include preparing planning documents, including a remedial design (RD), accident prevention plan (APP) and health and safety plan (HASP), contingency plan, quality assurance project plan (QAPP), and sampling and analysis plan (SAP), as appropriate. Professional labor management will include permitting activities, construction oversight and management, preparation of as-built drawings, and reporting. The planning and construction of this alternative is expected to require less than 3 years to complete.
- The intent of Alternative 4B is to achieve unrestricted exposure and unlimited use of the site. It is assumed that following completion of this alternative the remediation goals will be met without the need for engineering controls or LUCs.

### **Excavation**

- Soil contaminated with Radium-226, PCDD/PCDF and lead concentrations above remediation goals will be excavated to a depth of 13.0 feet bgs.
- A total of 2.0 acres will be cleared and grubbed for mobilizing heavy equipment into the area, excavation, and placement of the stockpiled soil.
- Only light vegetation exists in the clear-and-grub areas; no trees or stumps will be disturbed.
- Excavation activities will include preparation of decontamination facilities, stockpile areas, and contractor lay-down areas and mobilization of equipment and personnel to SHAD-041 (Sites 33/29) at Sharpe Army Depot in Lathrop, California.
- Soil beneath existing buildings, roadways, or other paved areas will not be disturbed. This alternative does not include demolition of site features, including existing buildings, roads, pavement, and so forth.
- Soil excavated from the vegetated areas of SHAD-041 (Sites 33/29) will be removed with excavators or backhoes. Approximately 14,622 cy will be excavated from the vegetated areas.
- No overhead utilities, such as power lines, at SHAD-041 (Sites 33/29) will need to be disconnected or removed prior to construction.
- Excavated soil will be stockpiled prior to loading onto trucks for transport to the disposal facility.
- The excavated areas will be backfilled with clean soil, obtained from an off-site location; backfill material will be spread and compacted to match existing grades and drainage.
- Disturbed areas will be reseeded with native cover; vegetative cover will be watered and mowed 10 times to establish growth.

- Decontamination facilities will be constructed on site, and decontamination waste will be containerized, characterized and disposed of at approved landfill.

### Sampling

- Waste characterization sampling includes toxicity characteristic leaching procedure (TCLP) and waste extraction test (WET) analysis at a frequency of one 4-point composite sample every 2,500 cy of excavated soil; approximately 12 samples will be collected for waste characterization.
- Soil confirmation samples will be collected from the perimeter and the bottom of the excavation and analyzed for Radium-226, PCDD/PCDF and lead to confirm concentrations meet the remediation goals. Samples will be collected every 200 feet; the excavation area will be approximately 2 acres and 15 perimeter confirmation samples (including quality assurance samples) will be collected.
- Confirmation sampling results will indicate Radium-226, PCDD/PCDF and lead is below the remediation goals and further excavation will not be necessary.

### Off-Site Disposal

- Pretreatment will not be necessary.
- The excavated soil will be loaded onto trucks and transported out of state to an approved landfill, approximately 1000 miles from Sharpe Army Depot in Lathrop, California.
- Transportation and disposal costs are \$333 per ton of waste. A conversion factor of 1.5 tons per cubic yard of soil in place was used to calculate the tons of soil for disposal. Costs for transportation and disposal at landfill were obtained from Waste Management.

### G3.5 Alternative 5: Excavation, On-site Containment, and Land Use Controls

Under Alternative 5, surface and subsurface soil (0 to 13.0 feet bgs) posing an unacceptable risk to humans under the unrestricted/unlimited land use scenario would be excavated and placed in an on-site containment cell or corrective action management unit (CAMU). Soil with Radium-226, PCDD/PCDF and lead concentrations exceeding the remediation goals of 1.33 pCi/g, 0.29 pg/g and 1000 mg/kg, respectively would be excavated. This alternative includes the same excavation and confirmation sampling methods as Alternative 4 (4 A and 4 B). A containment cell would be constructed on site for permanent disposal of the excavated soil. LUCs would be implemented to maintain the effectiveness of the alternative. This alternative also includes long-term maintenance and monitoring of the CAMU.

The excavated soil would be hauled to the expected location of the on-site CAMU. The excavated soil would be placed on the existing grade, and the CAMU would extend approximately 13 feet above existing grade. The sides of the CAMU would be sloped to promote drainage to the exterior edges of the unit. The CAMU would not require a liner or leachate collection system, as discussed in the FS Report, because Radium-226, PCDD/PCDF and lead are relatively immobile in soil and therefore will not migrate into groundwater or surface water at SHAD-041 (Sites 33/29). The cover of the containment unit would consist of 0.5 feet of clean soil to prevent exposure of humans to contaminated soil. The containment cell would cover approximately 2 acres, plus additional space required for staging and stockpiling.

Construction of the containment cell would require the demolition of site features, such as the existing roads, and utilities. It is assumed that 4,000 square yards of roadways would be demolished.

The containment cell would be maintained and monitored for 30 years. LUCs would be implemented to restrict residential development of the area to protect the integrity of the containment cell.

The following assumptions were used to evaluate and estimate the cost of Alternative 5. The quantities presented are estimates and will likely vary as the remedial design progresses and construction occurs. Table G-10 presents the itemized costs associated with this alternative.

### **General**

- Alternative 5 will include preparing planning documents, including a RD, APP-HASP, contingency plan, QAPP, and SAP, as appropriate.
- Professional labor management will include permitting activities, construction oversight and management, preparation of as-built drawings, and reporting.
- Planning and construction will require less than 3 years to complete; O&M of the CAMU and monitoring and enforcement of the LUCs will be conducted for 30 years.

### **Land Use Controls**

- LUCs will include preparation of a LUC RD and 5-year reviews. Annual inspections of the LUCs will be implemented with the inspections and monitoring of the CAMU. The specific LUCs for SHAD-041 (Sites 33/29) will be detailed in the Record of Decision. LUCs would be in place indefinitely.
- Implementation of the LUCs will require preparation of planning documents, planning meetings with Army and other stakeholders at SHAD-041 (Sites 33/29), and implementation of the LUCs, including surveying and mapping of the area subject to LUCs.
- Five-year reviews will be required and consist of document review, a site visit and inspection, interviews with facility personnel, and a report.
- The description and location of the CAMU will be recorded in the geographic information system database for Sharpe Army Depot so the LUCs can be tracked and enforced.

### **Excavation**

- Soil containing Radium-226, PCDD/PCDF and lead concentrations above the remediation goals (1.33 pCi/g, 0.29 pg/g and 1000 mg/kg, respectively) will be excavated to a depth of 13.0 feet bgs.
- A total of 2 acres will be cleared and grubbed for mobilizing heavy equipment into the area, excavation, and placement of the stockpiled soil.
- Only light vegetation exists in the clear-and-grub areas; no trees or stumps are present in the areas will be disturbed.

- Excavation activities will include preparation of decontamination facilities, stockpile areas, and contractor lay-down areas and mobilization of equipment and personnel to SHAD-041 (Sites 33/29) at Sharpe Army Depot in Lathrop, California.
- Soil beneath existing buildings, roadways, or other paved areas will not be disturbed, except for demolition of site features as required for construction of the CAMU. The demolition of these features is discussed under "Construction of CAMU."
- Soil excavated from the vegetated areas of SHAD-041 (Sites 33/29) will be removed with excavators or backhoes. Approximately 14,622 cy will be excavated from the vegetated areas at SHAD-041 (Sites 33/29).
- Excavation activities and construction of the CAMU will not require clearance or abandonment of underground utilities.
- No overhead utilities, such as power lines, are at SHAD-041 (Sites 33/29) that need to be disconnected or removed prior to construction.
- Excavated soil will be placed directly into the CAMU area and spread. The soil will not be stockpiled.
- The excavated areas outside the CAMU area will be backfilled with clean soil, obtained from an off-site location. Backfill material will be spread and compacted to match existing grades and drainage.
- Disturbed areas will be reseeded with native cover. Vegetative cover will be watered and mowed 10 times to establish growth.
- Decontamination facilities will be constructed on site. Decontamination waste will be containerized and disposed of at an approved landfill facility.

### **Sampling**

- One soil sample will be collected every 200 linear feet along the perimeter of the excavation and analyzed for Radium-226, PCDD/PCDF and lead to confirm concentrations are less than or equal to the remediation goals (1.33 pCi/g, 1.9 pg/g and 1000 mg/kg, respectively).
- The excavation area will be 2 acres and approximately 15 perimeter confirmation samples will be collected. If sample results indicate Radium-226, PCDD/PCDF and lead concentrations exceed the remediation goals, the excavated area will be extended until the samples exhibit Radium-226, PCDD/PCDF and lead concentrations less than or equal to the remediation goals. If sample results indicate Radium-226, PCDD/PCDF and lead are below the remediation goals, the excavation will be backfilled.

### **Construction of CAMU**

- A total of 14,622 cy of soil will be placed within the CAMU.
- The CAMU will be no more than 13 feet above existing grade. The surface of the CAMU will be graded to promote drainage to the exterior edges of the CAMU. The CAMU will require approximately 2

acres, plus the area necessary to slope the edges to existing grade (assuming a 3 percent slope to existing grade).

- Excavated soil will be placed on existing grade; no excavation will be necessary for construction of the CAMU.
- The CAMU will not require a liner because of the immobility of Radium-226, PCDD/PCDF and lead in soil. The cover of the CAMU is designed only to prevent direct contact with the contaminated soil and will consist of 0.5 feet of clean fill material from off site. The cover will be revegetated with native plants and watered 10 times to establish growth.
- Surface features in the CAMU area, such as roadways, and pavement, will be demolished. 4,000 square yards of roads will be demolished. It is assumed the roads are 6 inches thick. The construction debris will be transported to an approved Landfill for disposal.
- Five groundwater monitoring wells will be installed within or around the CAMU, as required by Title 40 Code of Federal Regulations Section 264.552(e). These groundwater wells will be monitored for Radium-226, PCDD/PCDF and lead contamination as described under “Long-Term O&M of CAMU.”

#### **Long-Term O&M of CAMU**

- The CAMU cover will require minimal maintenance and monitoring for 30 years.
- The CAMU will be inspected annually for cracks, depressions, or damage to the soil cover that may result in exposure of humans to Radium-226, PCDD/PCDF and lead-contaminated soil; the CAMU will require maintenance once every year to repair minor damage and to reseed areas of the cover.
- One groundwater sample will be collected from each of the groundwater monitoring wells once every 5 years and analyzed for Radium-226, PCDD/PCDF and lead. The results of the groundwater samples will be reported in the 5-year review report.

#### **G4.0 Cost Summary**

Table G-1 summarizes the costs for each remedial alternative. These costs include capital costs and the future value of all O&M costs.

Tables G-2 through G-5 summarize the present value analysis of future costs for the alternatives. The itemized costs of the alternatives are presented in Tables G-6 through G-10.

#### **G5.0 References**

Office of Management and Budget (OMB). 2017.

U.S. Environmental Protection Agency (EPA). 1993. “Revisions to OMB Circular A-94.

EPA 1993 Guidelines and Discount Rates for Benefit-Cost Analysis.” Office of Solid Waste and Emergency Response Directive 9355.3-20. June 25.

2000. “A Guide to Developing and Documenting Cost Estimates during the Feasibility Study.” EPA 540-R-00-002. Office of Solid Waste and Emergency Response Directive 9355.0-75. August.



**TABLE G-1: SUMMARY OF ESTIMATED COSTS**

RI/FS Report for SHAD-041 (Sites 33/29) Sharpe Army Depot, Lathrop, California

<b>Alternative Description</b>	<b>Capital Cost</b>	<b>30-Year O&amp;M Cost</b>	<b>Total Cost (Capital Cost plus 30-year O&amp;M Cost)</b>	<b>Present Value Cost</b>
<b>Alternative 1:</b> No Action	\$0	\$0	\$0	<b>\$0</b>
<b>Alternative 2:</b> Land Use Controls	\$174,000	\$589,000	\$763,000	<b>\$536,000</b>
<b>Alternative 3:</b> On-Site Treatment and Land Use Controls	\$6,896,000	\$1,512,000	\$8,408,000	<b>\$7,584,000</b>
<b>Alternative 4A:</b> Excavation and Off-Site Disposal to Industrial/Commercial Land Use	\$5,195,000	\$1,512,000	\$6,707,000	<b>\$6,148,000</b>
<b>Alternative 4B:</b> Excavation and Off-Site Disposal to Unrestricted Exposure/Unlimited Land Use	\$11,455,000	\$0	\$11,455,000	<b>\$11,123,166</b>
<b>Alternative 5:</b> Excavation, On-Site Containment and Land Use Controls	\$7,899,000	\$1,512,000	\$9,411,000	<b>\$8,018,000</b>

Notes: Itemized costs for each alternative are shown in Tables G-6 through G-10. Present value costs for each alternative are shown in Tables G-2 through G-5.

O&M Operation and Maintenance

**TABLE G-2: PRESENT VALUE COST ESTIMATE FOR ALTERNATIVE 2, LAND USE CONTROLS**

RI/FS Report for SHAD-041 (Sites 33/29) Sharpe Army Depot, Lathrop, California

Year	Future Value of Costs for Alternative 2	Annual Discount Factor	Activity Description/ Present Value Cost for Alternative 2	Present Value Cost for Alternative 2
0	\$173,983	1	Land Use Control Planning Documents and Implementation	\$173,983
5	\$98,102	0.863	5-Year Review	\$84,624
10	\$98,102	0.744	5-Year Review	\$72,997
15	\$98,102	0.642	5-Year Review	\$62,968
20	\$98,102	0.554	5-Year Review	\$54,317
25	\$98,102	0.478	5-Year Review	\$46,854
30	\$98,102	0.412	5-Year Review Total Present Value Cost Over 30 Years	\$40,417 <b>\$536,160</b>

Notes:

Annual Discount Factor at 3.00%

Annual discount factor =  $1/(1+i)^t$ , where  $i=0.030$  and  $t=year$  (that is, the present value of \$1 paid in year  $t$  at 3.00%). Annual discount rate obtained from OMB Circular No. A-94, 2017.

**TABLE G-3: PRESENT VALUE COST ESTIMATE FOR ALTERNATIVE 3, EXCAVATION, ON-SITE TREATMENT AND LAND USE CONTROLS**

RI/FS Report for SHAD-041 (Sites 33/29) Sharpe Army Depot, Lathrop, California

Year	Future Value of O&M and Periodic Cost for Alternative 3	Annual Discount Factor	Activity Description/Present Value Cost for Alternative 3	Present Value Cost for Alternative 3
0	\$241,578	1	Design	\$241,578
1	\$6,896,000	0.971	Excavation, On-Site Treatment, and Land Use Controls	\$6,696.016
2	\$25,644	0.943	Site Inspection for Land Use Controls	\$24,172
3	\$25,644	0.915	Site Inspection for Land Use Controls	\$23,468
4	\$25,644	0.888	Site Inspection for Land Use Controls	\$22,784
5	\$136,773	0.863	5-Year Review, Site Inspection for Land Use Controls	\$118,035
6	\$25,644	0.837	Site Inspection for Land Use Controls	\$21,477
7	\$25,644	0.813	Site Inspection for Land Use Controls	\$20,851
8	\$25,644	0.789	Site Inspection for Land Use Controls	\$20,244
9	\$25,644	0.766	Site Inspection for Land Use Controls	\$19,654

10	\$136,773	0.744	5-Year Review, Site Inspection for Land Use Controls	\$101,759
11	\$25,644	0.722	Site Inspection for Land Use Controls	\$18,526
12	\$25,644	0.701	Site Inspection for Land Use Controls	\$17,986
13	\$25,644	0.681	Site Inspection for Land Use Controls	\$17,462
14	\$25,644	0.661	Site Inspection for Land Use Controls	\$16,954
15	\$136,773	0.642	5-Year Review, Site Inspection for Land Use Controls	\$87,808
16	\$25,644	0.623	Site Inspection for Land Use Controls	\$15,981
17	\$25,644	0.605	Site Inspection for Land Use Controls	\$15,515
18	\$25,644	0.587	Site Inspection for Land Use Controls	\$15,063
19	\$25,644	0.570	Site Inspection for Land Use Controls	\$14,624
20	\$136,773	0.554	5-Year Review, Site Inspection for Land Use Controls	\$75,772
21	\$25,644	0.538	Site Inspection for Land Use Controls	\$13,785
22	\$25,644	0.522	Site Inspection for Land Use Controls	\$13,383

23	\$25,644	0.507	Site Inspection for Land Use Controls	\$12,994
24	\$25,644	0.492	Site Inspection for Land Use Controls	\$12,615
25	\$136,773	0.478	5-Year Review, Site Inspection for Land Use Controls	\$65,377
26	\$25,644	0.464	Site Inspection for Land Use Controls	\$11,891
27	\$25,644	0.450	Site Inspection for Land Use Controls	\$11,545
28	\$25,644	0.437	Site Inspection for Land Use Controls	\$11,208
29	\$25,644	0.424	Site Inspection for Land Use Controls	\$10,882
30	\$136,773	0.412	5-Year Review, Site Inspection for Land Use Controls Total Present Value Cost Over 30 Years	\$56,350  <b>\$7,584,000</b>

Notes:

Annual Discount Factor at 3.00%

Annual discount factor =  $1/(1+i)^t$ , where  $i=0.030$  and  $t=year$  (that is, the present value of \$1 paid in year  $t$  at 3.00%). Annual discount rate obtained from OMB, 2017.

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**TABLE G-4A: PRESENT VALUE COST ESTIMATE FOR ALTERNATIVE 4A, EXCAVATION AND OFF-SITE DISPOSAL TO INDUSTRIAL/COMMERCIAL LAND USE**

RI/FS Report for SHAD-041 (Sites 33/29) Sharpe Army Depot, Lathrop, California

Year	Future Value of O&M and Periodic Cost for Alternative 4A	Annual Discount Factor	Activity Description/Present Value Cost for Alternative 4A	Present Value Cost for Alternative 4A
0	\$215,499	1	Design	\$215,499
1	\$5,195,000	0.971	Excavation and Off-Site Disposal to Industrial/Commercial Land Use	\$5,044,000
2	\$25,644	0.943	Site Inspection for Land Use Controls	\$24,172
3	\$25,644	0.915	Site Inspection for Land Use Controls	\$23,468
4	\$25,644	0.888	Site Inspection for Land Use Controls	\$22,784
5	\$136,773	0.863	5-Year Review, Site Inspection for Land Use Controls	\$118,035
6	\$25,644	0.837	Site Inspection for Land Use Controls	\$21,477
7	\$25,644	0.813	Site Inspection for Land Use Controls	\$20,851
8	\$25,644	0.789	Site Inspection for Land Use Controls	\$20,244
9	\$25,644	0.766	Site Inspection for Land Use Controls	\$19,654

10	\$136,773	0.744	5-Year Review, Site Inspection for Land Use Controls	\$101,759
11	\$25,644	0.722	Site Inspection for Land Use Controls	\$18,526
12	\$25,644	0.701	Site Inspection for Land Use Controls	\$17,986
13	\$25,644	0.681	Site Inspection for Land Use Controls	\$17,462
14	\$25,644	0.661	Site Inspection for Land Use Controls	\$16,954
15	\$136,773	0.642	5-Year Review, Site Inspection for Land Use Controls	\$87,808
16	\$25,644	0.623	Site Inspection for Land Use Controls	\$15,981
17	\$25,644	0.605	Site Inspection for Land Use Controls	\$15,515
18	\$25,644	0.587	Site Inspection for Land Use Controls	\$15,063
19	\$25,644	0.570	Site Inspection for Land Use Controls	\$14,624
20	\$136,773	0.554	5-Year Review, Site Inspection for Land Use Controls	\$75,772
21	\$25,644	0.538	Site Inspection for Land Use Controls	\$13,785
22	\$25,644	0.522	Site Inspection for Land Use Controls	\$13,383



23	\$25,644	0.507	Site Inspection for Land Use Controls	\$12,994
24	\$25,644	0.492	Site Inspection for Land Use Controls	\$12,615
25	\$136,773	0.478	5-Year Review, Site Inspection for Land Use Controls	\$65,377
26	\$25,644	0.464	Site Inspection for Land Use Controls	\$11,891
27	\$25,644	0.450	Site Inspection for Land Use Controls	\$11,545
28	\$25,644	0.437	Site Inspection for Land Use Controls	\$11,208
29	\$25,644	0.424	Site Inspection for Land Use Controls	\$10,882
30	\$136,773	0.412	5-Year Review, Site Inspection for Land Use Controls Total Present Value Cost Over 30 Years	\$56,350  <b>\$6,148,000</b>

Notes:

Annual Discount Factor at 3.00%

Annual discount factor =  $1/(1+i)^t$ , where  $i=0.030$  and  $t=year$  (that is, the present value of \$1 paid in year  $t$  at 3.00%). Annual discount rate obtained from OMB, 2017.

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**TABLE G-4B: PRESENT VALUE COST ESTIMATE FOR ALTERNATIVE 4B, EXCAVATION AND OFF-SITE DISPOSAL TO URESTRICTED EXPOSURE/UNLIMITED LAND USE**

RI/FS Report for SHAD-041 (Sites 33/29) Sharpe Army Depot, Lathrop, California

<b>Year</b>	<b>Future Value of O&amp;M and Periodic Cost for Alternative 4B</b>	<b>Annual Discount Factor</b>	<b>Activity Description/Present Value Cost for Alternative 4B</b>	<b>Present Value Cost for Alternative 4B</b>
0	\$458,710	1	Remedial Design and Planning Documents	\$458,710
1	\$11,455,372	0.971	Excavation and Off-Site Disposal Total Present Value Cost Over 30 Years	<b>\$11,123,166</b>

Notes:

Annual Discount Factor at 3.00%

Annual discount factor =  $1/(1+i)^t$ , where  $i=0.030$  and  $t=$ year (that is, the present value of \$1 paid in year  $t$  at 3.00%). Annual discount rate obtained from OMB, 2017.

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**TABLE G-5: PRESENT VALUE COST ESTIMATE FOR ALTERNATIVE 5, EXCAVATION, ON-SITE CONTAINMENT, AND LAND USE CONTROLS**

RI/FS Report for SHAD-041 (Sites 33/29) Sharpe Army Depot, Lathrop, California

<b>Year</b>	<b>Future Value of O&amp;M and Periodic Cost for Alternative 5</b>	<b>Annual Discount Factor</b>	<b>Activity Description/Present Value Cost for Alternative 5</b>	<b>Present Value Cost for Alternative 5</b>
0	\$215,499	1	Design	\$215,499
1	\$7,120,504	0.971	Excavation, On-Site Containment, and Land Use Controls	\$6,914,009
2	\$25,644	0.943	Site Inspection and Containment Unit O&M	\$24,172
3	\$25,644	0.915	Site Inspection and Containment Unit O&M	\$23,468
4	\$25,644	0.888	Site Inspection and Containment Unit O&M	\$22,784
5	\$136,773	0.863	5-Year Review, Containment Unit O&M, Groundwater Monitoring	\$118,035
6	\$25,644	0.837	Site Inspection and Containment Unit O&M	\$21,477
7	\$25,644	0.813	Site Inspection and Containment Unit O&M	\$20,851

8	\$25,644	0.789	Site Inspection and Containment Unit O&M	\$20,244
9	\$25,644	0.766	Site Inspection and Containment Unit O&M	\$19,654
10	\$136,773	0.744	5-Year Review, Containment Unit O&M, Groundwater Monitoring	\$101,759
11	\$25,644	0.722	Site Inspection and Containment Unit O&M	\$18,526
12	\$25,644	0.701	Site Inspection and Containment Unit O&M	\$17,986
13	\$25,644	0.681	Site Inspection and Containment Unit O&M	\$17,462
14	\$25,644	0.661	Site Inspection and Containment Unit O&M	\$16,954
15	\$136,773	0.642	5-Year Review, Containment Unit O&M, Groundwater Monitoring	\$87,808
16	\$25,644	0.623	Site Inspection and Containment Unit O&M	\$15,981
17	\$25,644	0.605	Site Inspection and Containment Unit O&M	\$15,515

18	\$25,644	0.587	Site Inspection and Containment Unit O&M	\$15,063
19	\$25,644	0.570	Site Inspection and Containment Unit O&M	\$14,624
20	\$136,773	0.554	5-Year Review, Containment Unit O&M, Groundwater Monitoring	\$75,772
21	\$25,644	0.538	Site Inspection and Containment Unit O&M	\$13,785
22	\$25,644	0.522	Site Inspection and Containment Unit O&M	\$13,383
23	\$25,644	0.507	Site Inspection and Containment Unit O&M	\$12,994
24	\$25,644	0.492	Site Inspection and Containment Unit O&M	\$12,615
25	\$136,773	0.478	5-Year Review, Containment Unit O&M, Groundwater Monitoring	\$65,377
26	\$25,644	0.464	Site Inspection and Containment Unit O&M	\$11,891
27	\$25,644	0.450	Site Inspection and Containment Unit O&M	\$11,545

28	\$25,644	0.437	Site Inspection and Containment Unit O&M	\$11,208
29	\$25,644	0.424	Site Inspection and Containment Unit O&M	\$10,882
30	\$136,773	0.412	5-Year Review, Containment Unit O&M, Groundwater Monitoring  Total Present Value Cost Over 30 Years	\$56,350  <b>\$8,017,673</b>

Notes:

Annual Discount Factor at 3.00%

Annual discount factor =  $1/(1+i)^t$ , where  $i=0.030$  and  $t$ =year (that is, the present value of \$1 paid in year  $t$  at 3.00%). Annual discount rate obtained from OMB, 2017.

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## **Appendix H**

### Evaluation of Potential Applicable or Relevant and Appropriate Requirements

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## Acronyms and Abbreviations

§	Section
§§	Sections
ARAR	Applicable or relevant and appropriate requirement
bgs	Below ground surface
Cal.	California
CAMU	Corrective action management unit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
ch.	Chapter
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
DFG	California Department of Fish and Game
div.	Division
DOD	Department of Defense
DTSC	Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
FS	Feasibility Study
FWS	United States Fish and Wildlife Service
LUC	Land use control
mg/kg	Milligram per kilogram
MOU	Memorandum of Understanding
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NRC	Nuclear Regulatory Commission
RAO	Remedial action objective
RCRA	Resource Conservation and Recovery Act
Regs.	Regulations
ROD	Record of Decision
STLC	Soluble threshold limit concentration
SWRCB	State Water Resources Control Board
TBC	To be considered
TCLP	Toxicity characteristic leaching procedure
Tit.	Title
TTLC	Total threshold limit concentration
U.S.C	United States Code
WDR	Waste discharge requirements
WET WQO	Waste extraction test Water quality objectives

## 1.0 Introduction

This appendix identifies and evaluates potential federal and State of California applicable or relevant and appropriate requirements (ARAR) from the universe of regulations, requirements, and guidance and sets forth the Department of the Army (Army) determinations on potential ARARs for each remedial alternative retained for detailed analysis in this Remedial Investigation/Feasibility Study (RI/FS) Report for SHAD-041 (Sites 33/29), Sharpe Army Depot in Lathrop, California.

This ARAR evaluation includes an initial determination of whether the potential ARARs actually qualify as ARARs and a comparison for stringency between the federal and state regulations to identify controlling ARARs. The identification of ARARs is an iterative process. The final determination of ARARs (no longer “potential”) will be made by the Army in the Record of Decision (ROD), after public review, as part of the process to select the response action.

### 1.1 Summary of CERCLA and NCP Contingency Plan Requirements

Section (§) 121(d) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) [Title 42 of the United States Code (U.S.C.) § 9621(d)], as amended, states that response actions on CERCLA sites must attain (or the decision document must justify the waiver of) any federal or more stringent state environmental standards, requirements, criteria, or limitations that are determined to be legally applicable or relevant and appropriate.

Applicable requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address the situation at a CERCLA site. The requirement is applicable if the jurisdictional prerequisites of the standard show a direct correspondence when objectively compared with the conditions at the site. An applicable federal requirement is an ARAR. An applicable state requirement is an ARAR only if it is more stringent than federal ARARs.

If the requirement is not legally applicable, then the requirement is evaluated to determine whether it is relevant and appropriate. Relevant and appropriate requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that, while not applicable, address problems or situations similar to the circumstances of the proposed response action and are well suited to the conditions of the site (U.S. Environmental Protection Agency [EPA] 1988a). A requirement must be determined to be both relevant and appropriate in order to be considered an ARAR.

The criteria for determining relevance and appropriateness are listed in Title 40 of the Code of Federal Regulations (CFR) § 300.400(g)(2) and include the following:

- The purpose of the requirement and the purpose of the CERCLA action
- The medium regulated or affected by the requirement and the medium contaminated or affected at the CERCLA site
- The substances regulated by the requirement and the substances found at the CERCLA site

- The actions or activities regulated by the requirement and the response action contemplated at the CERCLA site
- Any variances, waivers, or exemptions of the requirement and their availability for the circumstances at the CERCLA site
- The type of place regulated and the type of place affected by the release or CERCLA action
- The type and size of structure or facility regulated and the type and size of structure or facility affected by the release or contemplated by the CERCLA action
- Any consideration of use or potential use of affected resources in the requirement and the use or potential use of the affected resources at the CERCLA site

According to CERCLA ARARs guidance (EPA 1988a), a requirement may be “applicable” or “relevant and appropriate,” but not both. Identification of ARARs must be done on a site- specific basis and involve a two-part analysis. First, a determination of whether a given requirement is applicable. Second, if it is not applicable, a determination whether it is nevertheless both relevant and appropriate. It is important to explain that some regulations may be applicable or, if not applicable, may still be relevant and appropriate. When the analysis determines a requirement is both relevant and appropriate, such a requirement must be complied with to the same degree as if it were applicable (EPA 1988a).

Tables H-1 through H-6 included at the end of this appendix present each potential ARAR with an initial determination of ARAR status (applicable or relevant and appropriate). For the determination of relevance and appropriateness, the pertinent criteria were examined to determine whether the requirements addressed problems or situations sufficiently similar to the circumstances of the release or response action contemplated, and whether the requirement was well suited to the site.

To qualify as a state ARAR under CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), a state requirement must be:

- A state law or regulation
- An environmental or facility siting law or regulation
- Promulgated (of general applicability and legally enforceable)
- Substantive (not procedural or administrative)
- More stringent than federal requirements
- Identified in a timely manner
- Consistently applied

To constitute an ARAR, a requirement must be substantive; therefore, only the substantive provisions of requirements identified as ARARs in this analysis are considered to be ARARs. Permits are considered to be procedural or administrative requirements. Provisions of generally relevant federal and state statutes and regulations that were determined to be procedural or nonenvironmental, including permit requirements, are not considered to be ARARs. CERCLA § 121(e)(1), 42 U.S.C. § 9621(e)(1), states, “No Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely on-site, where such remedial action is selected and carried out in compliance with this section.” The term on-site is defined for purposes of this ARARs discussion as “the areal extent of

contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action” (40 CFR § 300.5).

Nonpromulgated advisories or guidance issued by federal or state governments are not legally binding and do not have the status of ARARs. Such requirements may, however, be useful and are “to be considered” (TBC). TBC [40 CFR § 300.400(g)(3)] requirements complement ARARs but do not override them. They are useful for guiding decisions on cleanup levels or methodologies when regulatory standards are not available.

Pursuant to EPA guidance (EPA 1988a), ARARs are generally divided into three categories: chemical-specific, location-specific, and action-specific requirements. This classification was developed to aid in the identification of ARARs; some ARARs do not fall precisely into one group or another. ARARs are identified on a site basis for response actions where CERCLA authority is the basis for cleanup.

As the lead federal agency at Sharpe Army Depot, the Army has primary responsibility for identifying federal ARARs at SHAD-041 (Sites 33/29). Pursuant to the definition of the term on-site in 40 CFR § 300.5, the on-site area is SHAD-041 (Sites 33/29).

Identification of potential state ARARs was initiated through Army requests that the California Environmental Protection Agency’s Department of Toxic Substances Control (DTSC) identify potential state ARARs, an action described in more detail in Section H1.2.2. The methodology, other general issues, and waste characterization are discussed below.

Only the substantive provisions of the specific citations discussed in the following sections are considered potential ARARs.

## **1.2 Methodology Description**

This section describes the process of identifying and evaluating potential federal and state ARARs.

### **1.2.1 General**

As the lead federal agency, the Army has primary responsibility for identification of potential ARARs for SHAD-041 (Sites 33/29). In preparing this ARARs analysis, the Army undertook the following measures consistent with CERCLA and the NCP:

- Identified federal ARARs for each remedial alternative addressed in the RI/FS Report, taking into account site-specific information for SHAD-041 (Sites 33/29)
- Reviewed potential state ARARs identified by the state to determine whether they satisfy CERCLA and NCP criteria that must be met in order to constitute state ARARs
- Evaluated and compared federal ARARs and their state counterparts to determine whether state ARARs are more stringent than the federal ARARs or are in addition to the federally required actions
- Reached a conclusion as to which federal and state ARARs are the most stringent and/or “controlling” ARARs for each alternative

Section 9.0 of the RI/FS Report discusses and presents the remedial action objectives (RAO) for the response action for surface and subsurface soil at SHAD-041 (Sites 33/29). Based on the potential for

humans and wildlife to be exposed to surface and subsurface soils containing elevated concentrations of Radium-226 and lead, the following RAOs were developed for SHAD-041 (Sites 33/29):

- Prevent exposure of potential future residents to metals (lead) and Radium-226 in surface and subsurface soils at SHAD-041 (Sites 33/29) through inhalation, ingestion, and dermal contact with soils containing metals above the metals concentration of 1000 mg/kg and Radium-226 concentration of 2.18 pCi/g.
- Prevent exposure of birds and mammals to metals and PCDD/PCDF in surface and subsurface soils at concentrations above 990 mg/kg and 0.29 pg/g respectively.

The risk-based remedial goals to protect wildlife were established based on ecological screening criteria.

The alternatives for soil for the protection of human health that are evaluated in this RI/FS Report are:

- Alternative 1: No Action
- Alternative 2: Land Use Controls
- Alternative 3: On-Site Treatment and Land Use Controls
- Alternative 4A: Excavation and Off-Site Disposal to Industrial Land Use
- Alternative 4B: Excavation and Off-Site Disposal to Unlimited Use/Unrestricted Exposure
- Alternative 5: Excavation, On-Site Containment, and Land Use Controls

### 1.2.2 Identifying and Evaluating Federal ARARs

The Army is responsible for identifying federal ARARs as the lead federal agency under CERCLA and the NCP. The final determination of federal ARARs will be made when the Army issues the ROD for SHAD-041 (Sites 33/29). The federal government implements a number of federal environmental statutes that are the source of potential federal ARARs, either in the form of the statutes or regulations promulgated thereunder. Examples include the Resource Conservation and Recovery Act (RCRA), the Clean Water Act (CWA), the Safe Drinking Water Act, the Toxic Substances Control Act, and their implementing regulations, to name a few. See NCP preamble at 55 Federal Register (Fed. Reg.) §§ 8764–8765 (1990) for a more complete listing.

The proposed response actions and alternatives were reviewed against all potential federal ARARs, including, but not limited to, those set forth at 55 Fed. Reg. §§ 8764–8765 (1990) in order to determine if they are applicable or relevant and appropriate using CERCLA and NCP criteria and procedures for ARARs identification by lead federal agencies.

This section describes the process of identifying and evaluating potential state ARARs by the state and the Army.

#### Solicitation of State ARARs under NCP

EPA guidance recommends that the lead federal agency consult with the state when identifying state ARARs for response actions (EPA 1988b). In essence, the CERCLA and NCP requirements at 40 CFR § 300.515 for response actions provide that the lead federal agency request that the state identify chemical- and location-specific state ARARs upon completion of site characterization. The requirements also provide that the lead federal agency request identification of all categories of state ARARs (chemical-, location-,

and action- specific) upon completion of identification of remedial alternatives for detailed analysis. The state must respond within 30 days of receipt of the lead federal agency requests.

### **Chronology of Efforts to Identify State ARARs**

The Army has evaluated requirements identified by the state regulatory agencies and identified those that qualify as potential state ARARs for SHAD-041 (Sites 33/29).

Key correspondence between the Army and the state regulatory agencies relating to this effort is included in the Administrative Record for the RI/FS Report for SHAD-041 (Sites 33/29).

## **1.3 Other General Issues**

This section discusses the general issues identified during the evaluation of ARARs for SHAD-041 (Sites 33/29).

### **1.3.1 General Approach to Federal RCRA Requirements**

RCRA is a federal statute passed in 1976 to meet four goals: (1) protection of human health and the environment, (2) reduction of waste, (3) conservation of energy and natural resources, and (4) elimination of the generation of hazardous waste as expeditiously as possible. The Hazardous and Solid Waste Amendments of 1984 significantly expanded the scope of RCRA by adding new corrective action requirements, land disposal restrictions, and technical requirements. RCRA, as amended, contains several provisions that are potential ARARs for CERCLA sites.

Substantive RCRA requirements are applicable to response actions on CERCLA sites if the waste is a RCRA hazardous waste, and either:

- The waste was initially treated, stored, or disposed of after the effective date of the particular RCRA requirement; or
- The activity at the CERCLA site constitutes treatment, storage, or disposal, as defined by RCRA (EPA 1988a).

The preamble to the NCP indicates that state regulations that are components of a federally authorized or delegated state program are generally considered federal requirements and potential federal ARARs for the purposes of ARARs analysis (55 Fed. Reg. §§ 8666, 8742 [1990]). The State of California received approval for its base RCRA hazardous waste management program on July 23, 1992 (57 Fed. Reg. § 32726 [1992]). The State of California “Environmental Health Standards for the Management of Hazardous Waste,” set forth in California Code of Regulations (Cal. Code Regs.), Title (tit.) 22, Division (div.) 4.5, were approved by EPA as a component of the federally authorized State of California RCRA program. On September 26, 2001, the State of California received final authorization of its revised State Hazardous Waste Management Program by EPA (63 Fed. Reg. § 49118 [2001]).

The regulations of Cal. Code Regs. tit. 22, div. 4.5 are therefore a source of potential federal ARARs for CERCLA response actions. The exception is when a state regulation is “broader in scope” than the corresponding federal RCRA regulations. In that case, such regulations are not considered part of the federally authorized program or potential federal ARARs. Instead, they are purely state law requirements and potential state ARARs.

The EPA July 23, 1992, notice approving the State of California RCRA program (57 FR § 32726 [1992]) specifically indicated that the state regulations addressed certain non-RCRA, state-regulated hazardous wastes that fell outside the scope of federal RCRA requirements. The Cal. Code Regs. tit. 22, div. 4.5 requirements would be potential state ARARs for such non-RCRA, state-regulated wastes.

A key threshold question for the ARARs analysis is whether Radium-226 and lead at SHAD-041 (Sites 33/29) constitutes federal hazardous waste as defined under RCRA and the state's authorized program or qualifies as non-RCRA, state-regulated hazardous wastes. Waste characterization is discussed below in Section 1.4.

## **1.4 Waste Characterization**

Selection of ARARs involves the characterization of wastes, as described below.

### **1.4.1 RCRA Hazardous Waste Determination**

Federal RCRA hazardous waste determination is necessary to determine whether a waste is subject to RCRA requirements at Cal. Code Regs. tit. 22, div. 4.5 and other state requirements at Cal. Code Regs. tit. 23, div. 3, Chapter (ch.) 15. The first step in the RCRA hazardous waste characterization process is to evaluate contaminated media at the site(s) and determine whether the contaminant constitutes a "listed" RCRA waste. The preamble to the NCP states that "... it is often necessary to know the origin of the waste to determine whether it is a listed waste and that, if such documentation is lacking, the lead agency may assume it is not a listed waste" (55 Fed. Reg. §§ 8666, 8758 [1990]).

This approach is confirmed in EPA guidance for CERCLA compliance with other laws (EPA 1988a), as follows below.

"To determine whether a waste is a listed waste under RCRA, it is often necessary to know the source. However, at many Superfund sites, no information exists on the source of wastes. The lead agency should use available site information, manifests, storage records, and vouchers in an effort to ascertain the nature of these contaminants. When this documentation is not available, the lead agency may assume that the wastes are not listed RCRA hazardous wastes, unless further analysis or information becomes available that allows the lead agency to determine that the wastes are listed RCRA hazardous wastes."

RCRA hazardous wastes that have been assigned EPA hazardous waste numbers (or codes) are listed in Cal. Code Regs. tit. 22, §§ 66261.30–66261.33. The lists include hazardous waste codes beginning with the letters "F," "K," "P," and "U."

Knowledge of the exact source of a waste is required for source-specific listed wastes ("K" waste codes). Some knowledge of the nature or source of the waste is required even for listed wastes from nonspecific sources, such as spent solvents ("F" waste codes) or commercial chemical products ("P" and "U" waste codes). These listed RCRA hazardous wastes are restricted to commercially pure chemicals used in particular processes such as degreasing.

"P" and "U" wastes cover only unused and unmixed commercial chemical products, particularly spilled or off-specification products (EPA 1992). Not every waste containing a "P"- or "U"- listed chemical is a hazardous waste. To determine whether a CERCLA investigation-derived waste contains a "P" or "U" waste, there must be direct evidence of product use. In particular, all the following criteria must be met.



The chemicals must be:

- Discarded (as described in 40 CFR § 261.2[a][2]),
- Either an off-specification commercial product or a commercially sold grade,
- Not used (soil contaminated with spilled unused wastes is a “P” or “U” waste), and
- The sole active ingredient in a formulation.

The second step in the RCRA hazardous waste characterization process is to evaluate potential hazardous characteristics of the waste. The evaluation of characteristic waste is described in EPA guidance (EPA 1988a), as follows below.

Under certain circumstances, although no historical information exists about the waste, it may be possible to identify the waste as RCRA characteristic waste. This is important in the event that (1) remedial alternatives under consideration at the site involve on-site treatment, storage, or disposal, in which case RCRA may be triggered as discussed in this section; or (2) a remedial alternative involves off-site shipment. Since the generator (in this case, the agency or responsible party conducting the Superfund action) is responsible for determining whether the wastes exhibit any of these characteristics (defined in 40 CFR Sections 261.21 through 261.24), testing may be required. The lead agency must use best professional judgment to determine, on a site-specific basis, if testing for hazardous characteristics is necessary.

In determining whether to test for the toxicity characteristic using the extraction procedures (EP) toxicity test, it may be possible to assume that certain low concentrations of waste are not toxic. For example, if the total waste concentration in soil is 20 times or less the EP toxicity concentration, the waste cannot be characteristic hazardous waste. In such a case, RCRA requirements would not be applicable. In other instances, where it appears that the substances may be characteristic hazardous waste (ignitable, corrosive, reactive, or EP toxic), testing should be performed.

Hazardous waste characteristics as defined in 40 CFR §§ 261.21 through 261.24 are commonly referred to as ignitability, corrosivity, reactivity, and toxicity. California environmental health standards for the management of hazardous waste set forth in Cal. Code Regs. tit. 22, div. 4.5 were approved by EPA as a component of the federally authorized California RCRA program; therefore, the characterization of RCRA waste is based on the state requirements.

The characteristics of ignitability, corrosivity, reactivity, and toxicity are defined in Cal. Code Regs. tit. 22, §§ 66261.21 through 66261.24. According to Cal. Code Regs. tit. 22,

§ 66261.24(a)(1)(A), “A waste that exhibits the characteristic of toxicity pursuant to Subsection (a)(1) of this section has the EPA Hazardous Waste Number specified in Table I of this section which corresponds to the toxic contaminant causing it to be hazardous.” Table I assigns hazardous waste codes beginning with the letter “D” to wastes that exhibit the characteristic of toxicity; D waste codes are limited to “characteristic” hazardous wastes.

According to Cal. Code Regs. tit. 22, § 66261.10, waste characteristics can be measured by an available standardized test method or be reasonably classified by generators of waste based on their knowledge of the waste provided that the waste has already been reliably tested or if there is documentation of chemicals used.

The requirements at Cal. Code Regs. tit. 22, § 66261.24 list the toxic contaminant concentrations that determine the characteristic of toxicity. The concentration limits are in milligrams per liter (mg/L). These units are directly comparable to total concentrations in waste groundwater and surface water. For waste soils, these concentrations apply to the extract or leachate produced by the toxicity characteristic leaching procedure (TCLP).

A waste is considered hazardous if the contaminants in the wastewater or in the soil TCLP extract equal or exceed the TCLP limits. TCLP testing is required only if total contaminant concentrations in soil equal or exceed 20 times the TCLP limits because TCLP uses a 20-to-1 dilution for the extract (EPA 1988a).

#### **1.4.2 California-Regulated, Non-RCRA Hazardous Waste**

A waste determined not to be a RCRA hazardous waste may still be considered a state-regulated, non-RCRA hazardous waste. The state is broader in scope in its RCRA program in determining hazardous waste. Cal. Code Regs. tit. 22, § 66261.24(a)(2) lists the total threshold limit concentrations (TTL) and soluble threshold limit concentrations (STLC) for non-RCRA hazardous wastes. The state applies its own leaching procedure, the waste extraction test (WET), which uses a different acid reagent and has a different dilution factor (10-fold). There are other state requirements that may be broader in scope than federal ARARs for identifying non-RCRA wastes regulated by the state. These may be potential ARARs for wastes not covered under federal ARARs. See additional subsections of Cal. Code Regs. tit. 22, § 66261.24. A waste is considered hazardous if its total concentrations exceed the TTLs or if the extract concentrations from the WET exceed the STLCs.

A WET is required when the total concentrations exceed the STLC but are less than the TTLs [Cal. Code Regs. tit. 22, div. 4.5, ch. 11, Appendix II (b)].

#### **1.4.3 Other California Waste Classifications**

For waste discharged after July 18, 1997, solid waste classifications at Cal. Code Regs. tit. 27, §§ 20210, 20220, and 20230 are used to determine applicability of waste management requirements. These classifications are summarized below.

A “designated waste” under Cal. Code Regs. tit. 27, § 20210, is defined at Cal. Water Code § 13173. Under Cal. Water Code § 13173, designated waste is hazardous waste that has been granted a variance from hazardous waste management requirements or nonhazardous waste that consists of or contains pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state.

A nonhazardous solid waste under Cal. Code Regs. tit. 27, § 20220 consists of all putrescible and nonputrescible solid, semisolid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid wastes, and other discarded waste (whether of solid or semisolid consistency), provided that such wastes do not contain wastes that must be managed as hazardous wastes or wastes that contain soluble pollutants in

concentrations that exceed applicable water quality objectives or could cause degradation of waters of the state.

Under Cal. Code Regs. tit. 27, § 20230, inert waste is that subset of solid waste that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives and does not contain significant quantities of decomposable waste.

## 2.0 Chemical-Specific Applicable or Relevant and Appropriate Requirements

Chemical-specific ARARs are generally health- or risk-based numerical values or methodologies applied to site-specific conditions that result in the establishment of a cleanup level. Many potential ARARs associated with particular remedial alternatives (such as closure or discharge) can be characterized as action-specific but include numerical values or methods to establish them so they fit in both categories (chemical- and action-specific). To simplify the comparison of numerical values, most action-specific requirements that include numerical values are included in this chemical-specific section and, if repeated in the action-specific section, the discussion refers back to this section.

This section presents chemical-specific ARAR determinations for soil. There are no other media of concern at SHAD-041 (Sites 33/29). Tables H-1 and H-2 summarize potential federal and state chemical-specific ARARs.

### 2.1 Summary of Chemical-Specific ARARs Conclusions for Soil

Soil is the only the environmental medium potentially affected by the response action at SHAD-041 (Sites 33/29). The Army is evaluating remedial alternatives that would reduce the risk posed by soil to meet the remedial goals identified in this RI/FS Report for SHAD-041 (Sites 33/29).

The Army is evaluating excavation and off-site disposal of soil in this RI/FS Report.

In addition, the Army anticipates generating investigation-derived waste and disposing of it off-site in conjunction with some alternatives evaluated in this RI/FS Report.

Potential chemical-specific ARARs are associated with these waste generation activities. These potential ARARs require characterization of the waste for proper off-site disposal.

Potential federal and state chemical-specific ARARs are:

- Uranium Mill Tailings Radiation Control Act at 40 CFR § 192.12 (a)
- U.S. Nuclear Regulatory Commission Standards for protection of Radiation at 10 CFR § 20.1301 and 20.1402
- U.S. Nuclear Regulatory Commission Criteria relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentrations of Source Material from Ores Processed Primarily for Their Source Material Content at 10 CFR Part 40 Appendix A Criterion 6(6)
- RCRA hazardous waste definitions at Cal. Code Regs. tit. 22, §§ 66261.21, 66261.22(a) (1), 66261.23, 66261.24(a)(1), and 66261.100
- Non-RCRA, state-regulated hazardous waste definitions at Cal. Code Regs. tit. 22, § 66261.22(a)(3) and (a)(4), 66261.24(a)(2) through (a)(8), 66261.101, 66261.3(a)(2)(C) and (a)(2)(F)
- Designated and nonhazardous solid waste definitions at Cal. Code Regs. tit. 27, §§ 20210 and 20220

Because the CAMU alternative involves groundwater monitoring, groundwater ARARs will only apply if the CAMU is selected. The groundwater ARARs are discussed in Section H 2.3.

## 2.2 Detailed Discussion of Chemical-Specific ARARs for Soil

There are no potential chemical-specific ARARs for soil that present a cleanup standard. However, there are potential chemical-specific ARARs for soil remedial alternatives that generate waste or investigation-derived waste, such as excavation and off-site disposal. These potential federal and state chemical-specific ARARs are discussed below.

The key threshold question for soil ARARs is whether or not the wastes and soil exceeding screening criteria at SHAD-041 (Sites 33/29) would be classified as hazardous waste. The soil and waste may be classified as a federal hazardous waste as defined by RCRA and the state- authorized program, or as non-RCRA, state-regulated hazardous waste. If the soil and waste are determined to be hazardous waste, the appropriate requirements apply.

### 2.2.1 Federal ARARs

#### Resource Conservation and Recovery Act

The federal RCRA requirements at 40 CFR Part 261 do not apply in California because the state RCRA program is authorized. The authorized state RCRA requirements are therefore considered potential federal ARARs. The applicability of RCRA requirements depends on whether the waste is a RCRA hazardous waste; whether the waste was initially treated, stored, or disposed of after the effective date of the particular RCRA requirement; and whether the activity at the site constitutes treatment, storage, or disposal as defined by RCRA. However, RCRA requirements may be relevant and appropriate even if they are not applicable. Examples include activities that are similar to the definition of RCRA treatment, storage, or disposal for waste that is similar to RCRA hazardous waste.

The determination of whether a waste is a RCRA hazardous waste can be made by comparing the site waste to the definition of RCRA hazardous waste. The RCRA requirements at Cal. Code Regs. tit. 22, §§ 66261.21, 66261.22(a)(1), 66261.23, 66261.24(a)(1), and 66261.100 are potential ARARs because they define RCRA hazardous waste. These requirements are potential ARARs for soil and for any investigation-derived waste. A waste can meet the definition of hazardous waste if it has the toxicity characteristic of hazardous waste. This determination is made by using the TCLP. The maximum concentrations allowable for the TCLP listed in § 66261.24(a)(1)(B) are potential federal ARARs for determining whether the site has hazardous waste. If the site waste has concentrations exceeding these values, it is determined to be a characteristic RCRA hazardous waste.

Some soil alternatives will result in the generation of waste for off-site disposal. If the Army determines that this waste is RCRA hazardous waste, the Army will comply with all applicable requirements for proper off-site disposal, such as packaging, manifesting, and land disposal restrictions. The Army has not identified any of these requirements as potential ARARs because none of the alternatives evaluate permanent on-site disposal of RCRA hazardous waste.

As long as the excavated material remains inside the area of contamination, it is not considered newly generated waste and will not be subject to RCRA generator, treatment, or other waste management requirements. If excavated material is moved outside the area of contamination, the substantive RCRA requirements associated with managing hazardous waste (including RCRA land disposal restrictions) will be applicable.

### Uranium Mill Tailings Radiation Control Act 40 CFR 192.12(a)

The U.S. Nuclear Regulatory Commission Standards for Protection of Radiation at 10 CFR 20.1301 and 20.1402 will be potentially applicable in determining whether excavated waste or investigation-derived waste is a radioactive waste and meets the Uranium Mill Tailings Radiation Control Act and Nuclear Regulatory Commission (NRC) Standards for protection of Radiation during excavation and disposal activities.

The U.S. NRC Criteria relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes produced by the extraction or Concentrations of Source Material from Ores processed primarily for their Source Material Content at 10 CFR Part 40 Appendix A Criterion 6(6) will be potentially relevant and appropriate to determine whether residual Radium-226 soil concentrations are protective of human health and the environment under CERCLA and the NCP.

### **2.2.2 State ARARs**

State RCRA requirements included within the EPA-authorized RCRA program for California are considered to be potential federal ARARs and are discussed above. When state regulations are either broader in scope or more stringent than their federal counterparts, they are considered potential state ARARs. State requirements such as the non-RCRA, state-regulated hazardous waste requirements may be potential state ARARs because they are not within the scope of the federal ARARs (57 Fed. Reg. § 60848). The Cal. Code Regs. tit. 22, div. 4.5 requirements that are part of the state-approved RCRA program would be potential state ARARs for non-RCRA, state-regulated hazardous wastes.

The site waste characteristics need to be compared to the definition of non-RCRA, state-regulated hazardous waste. The non-RCRA, state-regulated waste definition requirements at Cal. Code Regs. tit. 22, § 66261.24(a)(2) are potential state ARARs for determining whether other RCRA requirements are potential state ARARs. This section lists the TTLCs and STLCs. The site waste may be compared to these thresholds to determine whether it meets the characteristics for a non-RCRA, state-regulated hazardous waste. Section 66261.24(a)(2) lists the TTLCs and STLCs. The Army will determine whether any waste it generates meets the characteristics for a non-RCRA, state-regulated hazardous waste prior to off-site disposal.

#### Cal. Code Reg. tit. 23, div. 3, ch. 15

The requirements at this section define a hazardous waste that is covered by ch. 15. These requirements are not more stringent than the federal or state RCRA ARARs for identifying hazardous waste; therefore, they are not potential chemical-specific ARARs.

#### Cal. Code Reg. tit. 27, div. 2, Subdivision 1

The former requirements at Cal. Code Regs. tit. 23, div. 3, ch. 15 were repealed and recodified at Cal. Code Regs. tit. 27, div. 2, Subdivision 1, and became effective July 18, 1997. The following sections of Cal. Code Regs. tit. 27, div. 2, Subdivision 1 define waste characteristics for discharge of waste to land. These requirements may be applicable for soil left in place that was discharged after the effective date of the requirements. They are not potentially applicable to discharges before that date, but may be relevant and appropriate.

Cal. Code Regs. tit. 27, § 20230(a) defines inert waste as waste “that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives, and does not contain significant quantities of decomposable waste.” Furthermore, Cal. Code Regs.

tit. 27 § 20230(b) states that “inert wastes do not need to be discharged at classified waste management units.” Cal. Code Regs. tit. 27, § 20230(a) and (b) are potential state ARARs for excavated soil that will be disposed of off-site.

Cal. Code Regs. tit. 27, §§ 20210 and 20220 are state definitions for designated waste and nonhazardous waste, respectively. They are also potential state ARARs for excavated soil that will be disposed of off-site. These soil classifications determine state classification and siting requirements for discharging waste to land. The Army will determine if excavated soil meets the definition of inert, designated, or nonhazardous solid waste at the time it is generated and will dispose of the soil in an appropriate landfill.

## **2.3 Detailed Discussion of Chemical-Specific ARARs for Groundwater**

### **2.3.1 Federal ARARs**

No federal ARARs have been identified for groundwater at the site.

### **2.3.2 State ARARs**

#### Comprehensive Water Quality Control Plan for Central Valley Region (Basin Plan)

The state identified the Comprehensive Water Quality Control Plan for the Central Valley Region (Basin Plan) as a potential chemical-specific ARARs for groundwater at SHAD-041 (Sites 33/29) (Water Board 2018).

The Army accepts the substantive provisions for groundwater in Chapters 2 and 3 of the Basin Plan, including beneficial use, water quality objectives (WQO), and waste discharge requirements as potential state ARARs.

The Basin Plan was prepared and implemented by the Central Valley Regional Water Quality Control Board (Water Board) to protect and enhance the quality of the waters in the Central Valley region. The Basin Plan establishes location-specific beneficial uses and WQOs for the surface water and groundwater of the region and is the basis of the Water Board’s regulatory program for Central Valley region. The Basin Plan includes both numeric and narrative WQOs for specific groundwater subbasins. The WQOs are intended to protect the beneficial uses of the waters of the region and to prevent nuisance.

#### Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) became Division 7 of the California Water Code in 1969. The Porter-Cologne Act requires each regional board to formulate and adopt basin plans for all areas within the region (Cal. Water Code § 13240). It also requires each regional board to establish WQOs that will protect the beneficial uses of the water basin (Cal. Water Code § 13241) and to prescribe waste discharge requirements (WDRs) that would implement the Basin Plan for any discharge of waste to the waters of the state (Cal. Water Code § 13263[a]).

Other sections of the Porter-Cologne Act include Cal. Water Code § 13243, which allows regional boards to specify conditions or areas where waste discharge is not permitted. Cal. Water Code § 13269 provides

the boards authority for waivers for reports or compliance with requirements as long as it is not against the public interest. Cal. Water Code § 13360 specifies circumstances for regional boards to order compliance in a specific manner.

The Army accepts the substantive provisions of Cal. Water Code §§ 13263(a) and 13269 of the Porter-Cologne Act as enabling legislation as implemented through the beneficial uses, WQOs, WDRs, promulgated policies of the Basin Plan as potential state ARARs.



### **3.0 Location-Specific Applicable or Relevant and Appropriate Requirements**

Potential location-specific ARARs are identified and discussed in this section. The discussions are presented based on various attributes of the site location, such as whether it is within a floodplain.

#### **3.1 Summary of Location-Specific ARARs**

Eight general resource categories are associated with evaluating and identifying location-specific ARARs. These resource categories are cultural resources, wetland protection, floodplain management, hydrologic resources, biological resources, coastal resources, other natural resources, and geologic characteristics. Biological resources are the only category potentially affected by the response action at SHAD-041 (Sites 33/29), as discussed below. There are no protected wetlands or hydrologic resources on SHAD-041 (Sites 33/29), and SHAD-041 (Sites 33/29) is not within a floodplain. Furthermore, there are no regulated geologic characteristics at the site; none of the alternatives evaluated in this RI/FS Report contemplate construction of a RCRA facility within 61 meters of a fault that has had displacement in Holocene time or disposal of hazardous waste in salt dome formations, salt bed formations, or underground mines or caves. Location-specific ARARs are also presented in Table H-3 at the end of this appendix.

##### ARARs Conclusions for Biological Resources

Birds, mammals and amphibians are the regulated biological resources found at SHAD-041 (Sites 33/29). The Army has identified the substantive provisions of the Migratory Bird Treaty Act as potential federal ARARs. The Migratory Bird Treaty Act (16 U.S.C. §§ 703 through 712) prohibits at any time, using any means or manner, the pursuit, hunting, capturing, and killing or attempting to take, capture, or kill any migratory bird. The Army has identified several state requirements relating to birds, amphibians and mammals. These state ARARs were identified by state agencies in response to the Army's solicitation of state ARARs.

#### **3.2 Detailed Discussion of Location-Specific ARARs**

Potential location-specific ARARs are identified and discussed in this section. The discussions are presented based on various attributes of the site location, such as whether it is within a floodplain.

Requirements that are determined to be ARARs are identified in Table H-3 (federal) at the end of this appendix. ARARs determinations are presented in the column with the heading "ARAR Determination." Determinations of status for location-specific ARARs were generally based on maps or lists included in the regulation or prepared by the administering agency. References to the document or agency consulted, if any, are provided in the "Comments" column and may be provided in footnotes to the table. Specific issues concerning some of the requirements are discussed in the following sections.

##### **3.2.1 Biological Resources ARARs**

###### **Federal ARARs**

###### Migratory Bird Treaty Act of 1972

The Migratory Bird Treaty Act (16 U.S.C. §§ 703 through 712) prohibits at any time, using any means or manner, the pursuit, hunting, capturing, and killing or attempting to take, capture, or kill any migratory bird. This act also prohibits the possession, sale, export, and import of any migratory bird or any part of a

migratory bird, as well as nests and eggs. A list of migratory birds for which this requirement applies is found at 50 CFR § 10.13. It is the Army's position that this act is not legally applicable to Army actions; however, Executive Order No. 13186 (dated January 10, 2001) requires each federal agency taking actions that have or are likely to have a measurable effect on migratory bird populations to develop and implement, within 2 years, a memorandum of understanding (MOU) with the U.S. Fish and Wildlife Service (FWS) to promote the conservation of such populations. The Department of Defense (DOD) signed (July 2006) a MOU with the FWS (DOD 2006). The MOU describes the responsibilities of the DOD with respect to conservation of migratory birds for all DOD activities, including "hazardous waste cleanup."

Because migratory birds have been observed at SHAD-041 (Sites 33/29), the substantive provisions of the Migratory Bird Treaty Act are potential ARARs.

### **State ARARs**

In response to the Army's request for state ARARs, the California Department of Fish and Game (DFG) provided a list of ARARs in September 2007 (DFG 2007). Requirements of the California Fish and Game Code for protection of endangered species, nongame birds and mammals, habitats, and native plants are not enforceable by DFG at Army facilities, because the requisite federal sovereign immunity waiver does not exist to authorize applicability of the California Endangered Species Act. However, the Army will nevertheless take into account specific standards of control and other relevant and appropriate requirements of state authority to protect state species when practicable and will consult appropriate state authority when conflicts arise. The Army determined that the substantive provisions of the requirements listed below are potential relevant and appropriate location- specific ARARs:

- California Fish and Game Code § 3005: Birds and mammals will be protected by achieving the identified RAOs. Further, the scope of the remedial actions does not include intentional taking of birds and mammals with unlawful devices. State- protected species will be protected when practicable and the appropriate state authority will be consulted if conflicts arise.
- California Fish and Game Code § 3503: This requirement includes specific standards of control. The Army will take all reasonable steps to avoid the needless destruction of any nest or eggs.
- California Fish and Game Code § 3503.5: This requirement includes specific standards of control. The Army will take all practicable steps to protect birds of prey.
- California Fish and Game Code § 3511: This requirement includes specific standards of control that may apply to any fully protected birds found at the site. Vegetation clearance activities should occur outside the nesting seasons for these protected birds. State-protected species will be protected when practicable and the appropriate state authority will be consulted if conflicts arise.
- California Fish and Game Code § 3800: This requirement includes specific standards of control that may apply to any nongame birds found at the site. Vegetation clearance activities should occur outside the nesting seasons for nongame birds. State- protected species will be protected when practicable and the appropriate state authority will be consulted if conflicts arise.
- California Fish and Game Code § 4150: This requirement includes specific standards of control that may apply to any nongame mammals found at the site. State-protected species will be

protected when practicable and the appropriate state authority will be consulted if conflicts arise.

- California Fish and Game Code § 5650(a) and (b): The Army will take all practicable steps to avoid depositing, or placing where it can pass into waters of the state, any substance deleterious to fish, plant life, or bird life.
- Cal. Code Regs. tit. 14, § 40: This requirement includes specific standards of control that may apply to any native reptiles or amphibians found at the site. State-protected species will be protected when practicable and the appropriate state authority will be consulted if conflicts arise.
- Cal. Code Regs. tit. 14, § 472(a): This requirement includes specific standards of control that may apply to any nongame birds found at the site. Vegetation clearance activities should occur outside the nesting seasons for nongame birds. State-protected species will be protected when practicable and the appropriate state authority will be consulted if conflicts arise

## 4.0 Action-Specific Applicable or Relevant and Appropriate Requirements

Potential action-specific ARARs are identified below for each alternative considered for the response action for contaminated soil at SHAD-041 (Sites 33/29).

### 4.1 Alternatives for the Protection of Human Health and the Environment

#### 4.1.1 Alternative 1: No Action

There is no need to identify action-specific ARARs for the no-action alternative because ARARs apply only to “any removal or remedial action conducted entirely on-site” and “no action” is not a removal or remedial action (CERCLA § 121(e), 42 U.S.C. § 9621[e]). Cleanup standards for selection of a CERCLA remedy, including the requirement to meet ARARs, are not triggered by the no-action alternative (EPA 1991); therefore, a discussion of compliance with ARARs is not appropriate for this alternative.

#### 4.1.2 Alternative 2: Land Use Controls

Alternative H2 uses land use controls (LUC) to meet all ARARs and RAOs. Under Alternative H2, LUCs would be implemented through the use of access restrictions, land use restrictions, and covenants to restrict use of the property. The LUCs will prohibit the use of SHAD-041 (Sites 33/29) for future residential development without further response action.

##### Federal ARARs

###### Land Use Controls

There are no potential federal ARARs for LUCs.

##### State ARARs

###### Land Use Controls

State statutes that have been accepted by the Army as potential ARARs for implementing LUCs and entering into an environmental restrictive covenant and agreement with DTSC include substantive provisions of Cal. Civil Code § 1471 and Cal. Health and Safety Code §§ 25202.5, 25222.1, 25232(b)(1)(A)-(E), 25233(c), 25234, and 25355.5. DTSC promulgated a regulation on April 19, 2003, regarding “Requirements for Land Use Covenants” at Cal. Code Regs. tit. 22, § 67391.1. The substantive provisions of this regulation have been determined to be relevant and appropriate state ARARs by the Army.

The substantive provisions of Cal. Civil Code § 1471 are the following general narrative standard: “...to do or refrain from doing some act on his or her own land where (c) Each such act relates to the use of land and each such act is reasonably necessary to protect present or future human health or safety or the environment as a result of the presence on the land of hazardous materials, as defined in Section 25260 of the Health and Safety Code.” This narrative standard would be implemented through incorporation of restrictive environmental covenants in the deed at the time of transfer. These covenants would be recorded with the Environmental Restriction Covenant and Agreement and run with the land.

The substantive provisions of Cal. Health and Safety Code § 25202.5 are the general narrative standard to restrict “present and future uses of all or part of the land on which the facility is located.” These substantive provisions would be implemented by incorporation of restrictive environmental covenants in

the Environmental Restriction Covenant and Agreement at the time of transfer for purposes of protecting present and future public health and safety.

Actual land use restriction requirements are set forth in Cal. Health and Safety Code § 25232(b)(1)(A)–(E).

These requirements include prohibitions on construction of residences, hospitals for humans, schools for persons under 21 years of age, daycare centers, or any permanently occupied human habitation on hazardous waste property. Cal. Health and Safety Code § 25233(c) sets forth substantive criteria for granting variances from the uses prohibited in Cal. Health and Safety Code § 25232(b)(1)(A)–(E) based on specified environmental and health criteria.

Cal. Health and Safety Code §§ 25222.1 and 25355.5(a)(1)(C) provide the authority for the state to enter into voluntary agreements to establish land use covenants with the owner of property. The substantive requirements of the following Cal. Health and Safety Code § 25222.1 provisions are relevant and appropriate: (1) the general narrative standard: “restricting specified uses of the property,.” and (2) “...the agreement is irrevocable, and shall be recorded by the owner, as a hazardous waste easement, covenant, restriction or servitude, or any combination thereof, as appropriate, upon the present and future uses of the land.” The substantive requirements of the following Cal. Health and Safety Code § 25355.5(a)(1)(C) provisions are relevant and appropriate: “...execution and recording of a written instrument that imposes an easement, covenant, restriction, or servitude, or combination thereof, as appropriate, upon the present and future uses of the land.” The Army will comply with the substantive requirements of Cal. Health and Safety Code §§ 25222.1 and 25355.5(a)(1)(C) by incorporating the CERCLA use restrictions into the Army’s deed of conveyance in the form of restrictive covenants under the authority of Cal. Civil Code § 1471 and into the environmental restriction covenant and agreement. The substantive provisions of Cal. Health and Safety Code §§ 25222.1 and 25355.5(a)(1)(C) may be interpreted in a manner that is consistent with the substantive provisions of Cal. Civil Code § 1471. The covenants will be recorded with the deed and will run with the land.

Cal. Health and Safety Code § 25233(c) sets forth “relevant and appropriate” substantive criteria for granting variances from prohibited uses based on specified environmental and health criteria. Cal. Health and Safety Code § 25234 sets forth the following “relevant and appropriate” substantive criteria for the removal of a land use restriction on the grounds that “...the waste no longer creates a significant existing or potential hazard to present or future public health or safety.”

In addition to being implemented through the Environmental Restriction Covenant and Agreement between the Army and DTSC, the appropriate and relevant portions of Cal. Health and Safety Code §§ 25202.5, 25222.1, 25233(c), 25234, and 25355.5(a)(1)(C) and Cal. Civil Code § 1471 will also be implemented through any deed between the Army and the transferee.

EPA agrees that the substantive portions of the state statutes and regulations referenced in this section are ARARs. EPA specifically considers §§ (a), (b), (d), and (e) of Cal. Code Regs. tit. 22, § 67391.1 to be ARARs for this RI/FS Report. DTSC’s position is that all of the state statutes and regulations referenced in this section are ARARs.

### 4.1.3 Alternative H3: On-Site Treatment and Land Use Controls

Under Alternative 3, on-site treatment would be implemented to remediate Radium-226, PCDD/PCDF and lead impacted surface and subsurface soil. Stabilization was selected to treat the 300-square-foot area because of its short-term effectiveness, low cost, and ability to successfully treat surface soil contaminated with lead, PCDD/PCDF and Radium-226.

Contaminated surface and subsurface soil would be excavated to 13.0 feet bgs and mixed with Portland cement, bulking up the volume of soil by 50 percent.

After soil is excavated, soil samples would be collected from the bottom of the excavation and analyzed for lead to confirm lead, PCDD/PCDF and Radium-226 concentrations are below the remedial goal. If the confirmation samples show concentrations of lead are below the remedial goal, the excavation would be backfilled with the concrete/soil mixture. If lead, PCDD/PCDF and Radium-226 concentrations are above the remedial goal, the excavation would continue vertically another 0.5 inches and additional confirmation samples would be collected. This process would be repeated until the remedial goal is met. The excavated area would then be backfilled with stabilized soil consisting of a concrete/soil mixture (excavated soil and Portland cement). After treatment, lead, PCDD/PCDF and Radium-226 concentrations in soil will be safe for wildlife known to occupy the site. LUCs are required to monitor and maintain the treated area and restrict access to humans because the treated material contains lead, PCDD/PCDF and Radium-226.

The same ARARs identified in Section 4.1.4 are potential ARARs for the excavation component of Alternative 3.

#### Federal ARARs

The potential federal action-specific ARARs for excavation and on-site containment are as follows:

- Uranium Mill Tailings Radiation Control Act 40 CFR 192.12(a)
- U.S. NRC Standards for Protection of Radiation at 10 CFR 20.1301 and 20.1402
- U.S. NRC Criteria relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentrations of Source Material from Ores Processed Primarily for Their Source Material Content at 10 CFR Part 40 Appendix A Criterion 6(6)
- Clean Air Act requirements for radionuclides at 40 CFR 61.92 and 61.102
- RCRA requirements that would allow consolidation of waste into a permanent disposal unit, at Cal. Code Regs. tit. 22, § 66264.552(c) and (e)
- RCRA temporary staging pile requirements at 40 CFR § 264.554(d)(1)(i) through (ii), (d)(2), (e), (f), (h), (i), (j), and (k)
- RCRA waste pile requirements at Cal. Code Regs. tit. 22, § 66264.251 (except 251[j], 251[e][11]), and § 66264.252(c) and (e) and (f)
- RCRA waste pile closure requirements Cal. Code Regs. tit. 22, § 66264.258(a) and (b) except references to procedural requirements
- RCRA groundwater detection monitoring requirements at Cal. Code Regs, tit. 22, §§ 66264.91 and 66264.98

- RCRA general water quality monitoring and system requirements at Cal. Code Regs. tit. 22, § 66264.97(a)(b)(1)(A) and (B)
- RCRA container requirements at Cal. Code Regs, tit. 22, §§ 66264.171-178
- The Army identified the following potential federal action-specific ARAR under the CWA because on-site treatment will affect at least 1 acre:
- CWA § 402 stormwater discharge requirements for construction that will disturb 1 or more acres and implementing regulations at 40 CFR §§ 122.44(k)(2) and (4) requiring the use of best management practices.

#### Land Use Controls

There are no potential federal ARARs for LUCs.

#### **State ARARs**

##### Excavation

The same ARARs identified in Section 4.1.4 are potential ARARs for the excavation component of Alternative 3.

##### Land Use Controls

The same ARARs identified in Section 4.1.2 are potential ARARs for the LUC component of Alternative 3.

#### **4.1.4 Alternative H4 (H4A and H4B): Excavation and Off-Site Disposal to Industrial and Residential Land Use**

These alternatives involve excavation and off-site disposal of surface and subsurface soil (0 to 5 and 0 to 13.0 feet below ground surface, respectively) posing an unacceptable risk to humans under the industrial and residential land use scenarios. Soil containing Radium-226 and lead at concentrations above the cleanup goals (2.18 pCi/g/1.33 pCi/g and 1000 mg/kg, respectively) would be excavated. The contaminated soil would be transported off-site to a licensed disposal facility. Approximately 7,000 and 14,622 cubic yards of soil would be excavated.

#### **Federal ARARs**

##### Excavation and Off-Site Disposal

The Army has identified the following potential federal ARARs under RCRA for excavation and off-site disposal:

- Uranium Mill Tailings Radiation Control Act 40 CFR 192.12(a)
- U.S. NRC Standards for Protection of Radiation at 10 CFR 20.1301 and 20.1402
- U.S. NRC Criteria relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentrations of Source Material from Ores Processed Primarily for Their Source Material Content at 10 CFR Part 40 Appendix A Criterion 6(6)
- Clean Air Act requirements for radionuclides at 40 CFR 61.92 and 61.102
- The requirement to determine if generated waste is hazardous waste at Cal. Code Regs. tit. 22, §§ 66262.10(a) and 66262.11

- The requirement to analyze generated waste to determine if it is hazardous at Cal. Code Regs. tit. 22, § 66264.13(a) and (b)
- Temporary staging pile requirements at 40 CFR § 264.554(d)(1)(i) through (ii), (d)(2), (e), (f), (h), (i), (j), and (k)
- RCRA waste pile requirements at Cal. Code Regs. tit. 22, § 66264.251 (except 251[j], 251[e][11]), and § 66264.252(c) and (e) and (f)
- RCRA waste pile closure requirements Cal. Code Regs. tit. 22, § 66264.258(a) and (b) except references to procedural requirements

In addition, the Army has identified the following potential federal action-specific ARAR under the Clean Air Act for the excavation:

- The requirement that source emissions not equal or exceed 20 percent opacity under Bay Area Air Quality Management District Regulation 6-302

Finally, the Army has identified the following potentially applicable federal action-specific ARAR under the CWA:

- Stormwater discharge requirements for construction that will disturb 1 or more acres at 40 CFR §§ 122.44(k)(2) and (4)

This regulation requires the use of best management practices to control or abate the discharge of pollutants when authorized under CWA § 402(p) to control stormwater discharges. Under the CWA and its implementing regulations, individual National Pollutant Discharge Elimination System permits, or coverage under promulgated stormwater general permits, are required for construction that disturbs at least 1 acre. State Water Resources Control Board (SWRCB) Order 99-08-DWQ is the State of California General Permit for Discharge of Stormwater Associated with Construction Activities, issued pursuant to 40 CFR 122 Subpart C. The substantive permit requirements are the use of best management practices to prevent construction pollutants from contacting stormwater and to keep erosion products from moving off-site. During excavation, best management practices would be used to prevent construction pollutants from contacting stormwater and to minimize erosional products from moving off-site in accordance with SWRCB Order 99-08-DWQ. Under CERCLA § 121, the Army is not required to obtain an individual stormwater permit or submit a notice of intent to discharge under the state's general permit. The Army will, however, use the substantive requirements of the state's general permit for stormwater discharges as TBCs for complying with the requirement to apply best management practices for stormwater discharges promulgated at 40 CFR § 122.44(k)(2) and (4).

## State ARARs

### Excavation and Off-Site Disposal

The Army has reviewed the regulations and requirements identified by the state in its response to the Army's request for ARARs. This analysis resulted in the Army accepting the following potential state ARARs and TBCs:

- The requirement to accurately characterize wastes under Cal. Code Regs. tit. 27, § 20200(c)
- The discharge requirements for designated waste to Class I or Class II waste management units at Cal. Code Regs. tit. 27, § 20210



- The discharge requirements for nonhazardous solid to classified units at Cal. Code Regs. tit. 27, §§ 20220(b), (c), and (d)
- Stormwater discharge requirements under SWRCB General Permit for Stormwater Discharges 99-08-DWQ

#### **4.1.5 Alternative H5: Excavation, On-Site Containment, and Land Use Controls**

Alternative H5 involves excavation and on-site containment of surface and subsurface soil (0 to 13.0 feet below ground surface [bgs]) posing an unacceptable risk to humans under the residential land use scenario and LUCs to maintain the effectiveness of the alternative. Soil containing Radium-226, PCDD/PCDF and lead at concentrations above the cleanup goals (2.18 pCi/ g/1.33 pCi/g and 1000 mg/kg, respectively) would be excavated. The excavated soil would be placed in an on-site containment cell or corrective action management unit (CAMU). Construction of the containment cell would require the demolition of site features, such as existing roads and utilities. This alternative also includes long-term maintenance and monitoring of the CAMU. LUCs will prohibit the use of SHAD-041 (Sites 33/29) for future residential development without further response action.

#### **Federal ARARs**

##### Excavation

The same ARARs identified in Section 4.1.4 are potential ARARs for the excavation component of Alternative 5.

##### On-Site Containment

The potential federal action-specific ARARs for excavation and on-site containment are as follows:

- RCRA CAMU requirements that would allow consolidation of waste into a permanent disposal unit, at Cal. Code Regs. tit. 22, § 66264.552(c) and (e)
- RCRA temporary staging pile requirements at 40 CFR § 264.554(d)(1)(i) through (ii), (d)(2), (e), (f), (h), (i), (j), and (k)
- RCRA waste pile requirements at Cal. Code Regs. tit. 22, § 66264.251 (except 251[j], 251[e][11]), and § 66264.252(c) and (e) and (f)
- RCRA waste pile closure requirements Cal. Code Regs. tit. 22, § 66264.258(a) and (b) except references to procedural requirements
- RCRA groundwater detection monitoring requirements at Cal. Code Regs, tit. 22, §§ 66264.91 and 66264.98
- RCRA general water quality monitoring and system requirements at Cal. Code Regs. tit. 22, § 66264.97(a)(b)(1)(A) and (B)
- RCRA container requirements at Cal. Code Regs, tit. 22, §§ 66264.171-178

The Army identified the following potential federal action-specific ARAR under the CWA because on-site containment will affect at least 1 acre:

- CWA § 402 stormwater discharge requirements for construction that will disturb 1 or more acres and implementing regulations at 40 CFR §§ 122.44(k)(2) and (4) requiring the use of best management practices

Land Use Controls

There are no potential federal ARARs for LUCs.

**State ARARs**

Excavation

The same ARARs identified in Section 4.1.4 are potential ARARs for the excavation component of Alternative 5.

On-Site Consolidation

There are no potential state ARARs for the on-site consolidation of waste in a CAMU.

Land Use Controls

The same ARARs identified in Section 4.1.2 are potential ARARs for the LUC component of Alternative 5.

## 5.0 References

San Francisco Bay Regional Water Quality Control Board. 2007 “Water Quality Control Plan (Basin Plan) for the Central Valley Region.” January.

Department of Defense. 2006. “Memorandum of Understanding Between the United States Department of Defense and the U.S. Fish and Wildlife Service to Promote the Conservation of Migratory Birds.”

U.S. Environmental Protection Agency (EPA). 1988a. “CERCLA Compliance with Other Laws Manual: Interim Final.” EPA/540/G-89/006. Office of Emergency and Remedial Response. Washington, DC. August. Available Online at:

USEPA. 1988b. “Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA.” Office of Solid Waste and Emergency Response Directives 9355.3-01 and 9355.3-02. EPA/540G-89/004. October.

USEPA. 1991. “ARARs Q’s and A’s: General Policy, RCRA, CWA, SDWA, Post-ROD Information, and Contingent Waivers.” OSWER Directive No. 9234.2-01/FS-A, Washington, DC. June.

USEPA. 1992. “Guide to Management of Investigation-Derived Wastes During Site Inspections.” EPA/540/G-91/009. January 15.

## Tables

**TABLE H-1: POTENTIAL FEDERAL CHEMICAL-SPECIFIC ARARs FOR SOIL**

Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
<b>Resource Conservation and Recovery Act (42 U.S.C., ch. 82, §§ 6901 through 6991(i))<sup>c</sup></b>				
This requirement defines RCRA hazardous waste. Solid wastes are characterized as toxic based on the TCLP results if the wastes exceed the TCLP maximum concentrations. Uranium Mill Tailings Radiation Control Act at 40 CFR § 192.12 (a). NRC Standards for protection of Radiation at 10 CFR § 20.1301 and 20.1402, and Criteria relating to operation of Uranium Mills and the Disposition of Tailings or Wastes at 10 CFR Part 40 Appendix A Criterion 6(6).  Clean Air Act requirements for radionuclides	Waste	Cal. Code Regs. tit.22,§ 66261.21 66261.22(a)(1), 66261.23, 66261.24(a)(1), and 66261.100 and 40 CFR § 192.12 (a) and 10 CFR § 20.1301 and 20.1402. 40 CFR § 192.12 (a). 10 CFR § 20.1301 and 20.1402, and 10 CFR Part 40 Appendix A Criterion 6(6)., and 40 CFR § 61.92 and 61.102.	Applicable	Applicable for determining whether excavated waste or investigation-derived waste is hazardous and meets the Uranium Mill Tailings Radiation Control Act and NRC Standards for protection of Radiation during excavation and disposal activities.  Relevant and appropriate for determining whether residual Radium-226 soil concentrations are protective of human health and the environment.

**Notes:**

Many potential action-specific ARARs may contain chemical-specific limitations and are addressed in the action-specific tables. Only the substantive provisions of the requirements cited in this table are potential ARARs. Statutes and policies and their citations are provided as headings to identify general categories of potential ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the Army accepts the entire statutes or policies as potential ARARs; specific potential ARARs are addressed in the table below each general heading; only pertinent substantive requirements of the specific citations are considered potential ARARs.

§§ = Sections

ARAR = Applicable or relevant and appropriate requirement

Cal. Code Regs. = California Code of Regulations

ch. = Chapter

NRC = Nuclear Regulatory Commission

RCRA = Resource Conservation and Recovery Act

TCLP = Toxicity characteristic leaching procedure

tit. = Title

U.S.C. = United States Code

**TABLE H-2: POTENTIAL STATE CHEMICAL-SPECIFIC ARAR S FOR SOIL**

Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
<b>Cal/EPA Department of Toxic Substances Control</b>				
Defines “non-RCRA hazardous waste.”	Waste	Cal. Code Regs. tit. 22, §§ 66261.22(a)(3) and (4), 66261.24(a)(2)–(a)(8), 66261.101, 66261.3(a)(2)(C), or 66261.3(a)(2)(F)	Applicable	Applicable for determining whether a waste is a non-RCRA hazardous waste
<b>Cal/EPA Regional Water Quality Control Board</b>				
Defines designated waste and nonhazardous and inert waste.	Waste	Cal. Code Regs. tit. 27, §§ 20210, 20220, 20230	Applicable	Potential ARARs for classifying waste and determining ARAR status of other requirements.
Describes the water basins in the Central Valley Basin, establishes beneficial uses of groundwater and surface water, establishes WQOs (including narrative and numerical standards), establishes implementation plans to meet WQOs and protect beneficial uses, and incorporates statewide water quality control plans and policies.	Waters of the state	Basin Plan, Chapters 2 and 3	Applicable	Substantive requirements pertaining to beneficial uses, WQOs, and certain statewide water quality control plans are potential state ARARs for any groundwater monitoring

Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
Authorizes the SWRCB and Water Board to establish in water quality control plans beneficial uses and numerical and narrative standards to protect both surface water and groundwater quality. Authorizes regional water boards to issue permits for discharges to land or surface or groundwater that could affect water quality, including NPDES permits, and to take enforcement action to protect water quality.	Waters of the state	Cal. Water Code, div. 7, §§ 13243 and 13269 (Porter-Cologne Water Quality Control Act)	Applicable	The Army accepts the substantive provisions of §§ 13243 and 13269, of the Porter-Cologne Act enabling legislation, as implemented through the beneficial uses, WQOs, waste discharge requirements, promulgated policies of the Basin Plan for the Central Valley region, as potential ARARs

**Notes:**

Many potential action-specific ARARs may contain chemical-specific limitations and are addressed in the action-specific tables. Only the substantive provisions of the requirements cited in this table are potential ARARs. Statutes and policies and their citations are provided as headings to identify general categories of potential ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the Army accepts the entire statutes or policies as potential ARARs; specific potential ARARs are addressed in the table below each general heading; only pertinent substantive requirements of the specific citations are considered potential ARARs.

Cal. Code Regs. = California Code of Regulations

Cal/EPA = California Environmental Protection Agency

NPDES = National Pollutant Discharge Elimination System

RCRA = Resource Conservation and Recovery Act

tit. = Title

WQO = Water quality objective

**TABLE H-3: POTENTIAL FEDERAL LOCATION-SPECIFIC ARARs**

Location	Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
Migratory bird area	Protects almost all species of migratory birds in the United States from unregulated "take," which can include poisoning at hazardous waste sites	Presence of migratory birds	16 U.S.C. § 703	Relevant and appropriate	Potential ARAR because migratory birds have been observed at SHAD-041 (Sites 33/29)

**Notes:**

Only the substantive provisions of the requirements cited in this table are potential ARARs. Statutes and policies and their citations are provided as headings to identify general categories of potential ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the Army accepts the entire statute or policy as a potential ARAR; specific potential ARARs are addressed in the table below each general heading; only substantive requirements of the specific citations are considered potential ARARs

§ = Section

§§ = Sections

ARAR = Applicable or relevant and appropriate requirement

IR = Installation Restoration

U.S.C. = United States Code



**TABLE H-4: POTENTIAL STATE LOCATION-SPECIFIC ARARs**

Location	Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
<b>California Fish and Game Code</b>					
Birds and mammals	Action must be taken to prohibit the taking of birds and mammals.	Taking of birds and mammals	Cal. Fish and Game Code § 3005	Relevant and Appropriate	Potentially relevant and appropriate. Birds and mammals will be protected by achieving the identified RAOs. Further, the scope of the remedial actions does not include intentional taking of birds and mammals with unlawful devices. State-protected species will be protected when practicable and the appropriate state authority will be consulted if conflicts arise.
Birds	Prohibits the take, possession or needless destruction of the nest or eggs of any bird except as otherwise provided.	Taking of birds	Cal. Fish and Game Code § 3503	Relevant and Appropriate	Potentially relevant and appropriate. This requirement includes specific standards of control. The Army will take all reasonable steps to avoid the needless destruction of any nest or eggs. State-protected species will be protected when practicable and the appropriate state authority will be consulted if conflicts arise.

<b>Location</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>Preliminary ARAR Determination</b>	<b>Comments</b>
Birds of prey	Prohibits the take, possession, or destruction of any birds in the orders of Falconiformes or Strigiformes (birds of prey) or to take, possess or destroy the nests or eggs of such birds	Taking of birds of prey	Cal. Fish and Game Code § 3503.5	Relevant and Appropriate	Potentially relevant and appropriate. This requirement includes specific standards of control. The Army will take all practicable steps to protect birds of prey. State-protected species will be protected when practicable and the appropriate state authority will be consulted if conflicts arise.
Fully protected bird species/ habitat	Prohibits the take or possession of listed fully protected birds	Taking of protected birds	Cal. Fish and Game Code § 3511	Relevant and Appropriate	Potentially relevant and appropriate. This requirement includes specific standards of control that may apply to any fully protected birds found at the site. Vegetation clearance activities should occur outside the nesting seasons for these protected birds. State-protected species will be protected when practicable and the appropriate state authority will be consulted if conflicts arise.

<b>Location</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>Preliminary ARAR Determination</b>	<b>Comments</b>
Nongame birds	Prohibits the take of nongame birds except in accordance with the regulations of the commission	Taking of nongame birds	Cal. Fish and Game Code § 3800	Relevant and Appropriate	Potentially relevant and appropriate. This requirement includes specific standards of control that may apply to any nongame birds found at the site. Vegetation clearance activities should occur outside the nesting seasons for nongame birds. State-protected species will be protected when practicable and the appropriate state authority will be consulted if conflicts arise.
Nongame mammals	Provides that nongame mammals may not be taken or possessed except as otherwise provided.	Taking of nongame mammals	Cal. Fish and Game Code § 4150	Relevant and Appropriate	Potentially relevant and appropriate. This requirement includes specific standards of control that may apply to any nongame mammals found at the site. State-protected species will be protected when practicable and the appropriate state authority will be consulted if conflicts arise.

Location	Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
Aquatic habitat	<p>Prohibits deposit in, permit to pass into, or place where it can pass into the waters of this state any of the following:</p> <ul style="list-style-type: none"> <li>• Any petroleum, acid, coal or oil tar, lampblack, aniline, asphalt, bitumen, or residuary product of petroleum, or carbonaceous material or substance.</li> <li>• Any refuse, liquid or solid, from any refinery, gas house, tannery, distillery, chemical works, mill, or factory of any kind.</li> <li>• Any sawdust, shavings, slabs, or edgings.</li> <li>• Any factory refuse, lime, or slag.</li> <li>• Any cocculus indicus.</li> <li>• Any substance or material deleterious to fish, plant life, mammals, or bird life.</li> </ul>	Materials entering the waters of the state	Cal. Fish and Game Code § 5650(a) and(b)	Relevant and Appropriate	Potentially relevant and appropriate. The Army will take all practicable steps to avoid depositing, or placing where it can pass into waters of the state, any substance deleterious to fish, plant life, or bird life.

Location	Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
Protected amphibians	Makes it unlawful to capture, collect, intentionally kill or injure, possess, purchase, propagate, sell, transport, import, or export any native reptile or amphibian, or parts thereof unless a permit has been issued	Taking of protected amphibians	Cal. Code Regs. tit. 14 Part 40	Relevant and Appropriate	Potentially relevant and appropriate. This requirement includes specific standards of control that may apply to any native reptiles or amphibians found at the site. State-protected species will be protected when practicable and the appropriate state authority will be consulted if conflicts arise.
Nongame animals	Provides that nongame birds and mammals may not be taken except as provided in this section.	Taking of nongame animals	Cal. Code Regs. tit. 14, Part 472(a)	Relevant and Appropriate	Potentially relevant and appropriate. This requirement includes specific standards of control that may apply to any nongame birds found at the site. Vegetation clearance activities should occur outside the nesting seasons for nongame birds. State-protected species will be protected when practicable and the appropriate state authority will be consulted if conflicts arise.

**Notes:**

- a Only the substantive provisions of the requirements cited in this table are potential ARARs.
- b Statutes and policies, and their citations, are provided as headings to identify general categories of potential ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the Army accepts the entire statutes or policies as potential ARARs. Specific potential ARARs are addressed in the table below each general heading; only substantive requirements of the specific citations are considered potential ARARs.

**TABLE H-5: POTENTIAL FEDERAL ACTION-SPECIFIC ARARs**

<b>Excavation and Off-Site Disposal and On-Site Treatment</b>					
<b>Resource Conservation and Recovery Act (42 U.S.C., Chapter 82, §§ 6901 through 6991[j])</b>					
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>Preliminary ARAR Determination</b>	<b>Comments</b>
On-site waste generation	Person who generates waste shall determine if that waste is a hazardous waste.	Generator of waste.	Cal. Code Regs. tit. 22, §§ 66262.10(a), 66262.11	Applicable	Applicable where hazardous waste is generated.
Excavate soil or generate waste	Requirements for analyzing waste for determining whether waste is hazardous.	Generator of waste.	Cal. Code Regs. tit. 22, § 66264.13(a) and (b)	Applicable	Applicable to the excavation of soil and the generation of waste. The Army will determine whether the soil or any waste is RCRA hazardous waste when it is generated.
Waste piles	Allows generators to accumulate solid remediation waste in an EPA-designated pile for storage only, up to 2 years, during remedial operations without triggering LDRs.	Hazardous remediation waste temporarily stored in piles	40 CFR §§ 264.554(d)(1)(i-ii) and (d)(2), (e), (f), (h), (i), (j), and (k)	Applicable	Potentially applicable if hazardous waste is to be stored on-site.

Action	Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
Waste pile	Use a single liner and leachate collection system. Waste put into waste pile is subject to land ban regulations.	RCRA hazardous waste, noncontainerized accumulation of solid, nonflammable hazardous waste that is used for treatment or storage.	Cal. Code Regs. tit. 22, § 66264.251 (except 251[j], 251[e][11]) and § 66264.252(c) and (e) and (f)	Applicable	Potentially applicable if hazardous waste is to be stored on-site
Closure of waste pile	At closure, owner shall remove or decontaminate all waste residues, contaminated containment system components, contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste. If waste is left on-site, perform postclosure care in accordance with the closure and postclosure care requirements that apply to landfills.	Waste pile used to store hazardous waste	Cal. Code Regs. tit. 22, § 66264.258(a) and (b) except references to procedural requirements	Applicable	Potentially applicable if hazardous waste is to be stored on-site
<b>Clean Air Act (42 U.S.C. § 7401 et seq.)<sup>a</sup></b>					
On-site waste generation	Person who generates waste shall determine if that waste is a hazardous waste.	Generator of waste.	Cal. Code Regs. tit. 22, §§ 66262.10(a), 66262.11	Applicable	Applicable where hazardous waste is generated.

Action	Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
Excavation	Prohibits emissions equal to or greater than 20 percent opacity.	Emission from a source.	BAAQMD Regulation 6-302	Applicable	Applicable for excavation activities.
<b>Clean Water Act of 1988 as Amended, § 404 (33 U.S.C., § 1344)<sup>a</sup></b>					
Stormwater discharge	Order 99-08-DQW is the State of California general permit for stormwater discharge from construction activities. It requires use of best management practices to reduce pollutants.	Stormwater discharge	Clean Water Act § 402 (33 U.S.C. ch.26, § 1342) 40 CFR § 122.44(k)(2) and (4)	Applicable	Order 99-08-DQW applies to excavation activities that affect at least 1 acre. Pursuant to the substantive permit requirements, best management practices will be taken to prevent construction pollutants from stormwater and keep erosion products from moving off-site.



Action	Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
CAMU	An area at a RCRA facility may be designated as a CAMU. Placement of remediation wastes into or within a CAMU does not constitute land disposal of hazardous wastes nor creation of a unit subject to minimum technology requirements or LDRs.	RCRA CAMU	Cal. Code Regs. tit. 22, § 66264.552(c) and (e)	Applicable	Applicable for construction of the containment cell.
Waste piles	Allows generators to accumulate solid remediation waste in an EPA-designated pile for storage only, up to 2 years, during remedial operations without triggering LDRs	Hazardous remediation waste temporarily stored in piles	40 CFR §§ 264.554(d)(1)(i-ii) and (d)(2), (e), (f),(h), (i), (j), and (k)	Applicable	Potentially applicable if hazardous waste is to be stored on-site.
Waste pile	Use a single liner and leachate collection system. Waste put into waste pile is subject to land ban regulations.	RCRA hazardous waste, noncontainerized accumulation of solid, nonflammable hazardous waste that is used for treatment or storage.	Cal. Code Regs. tit. 22, § 66264.251 (except 251[j], 251[e][11]) and §66264.252(c) and (e) and (f)	Applicable	Potentially applicable if hazardous waste is to be stored on-site

Action	Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
Closure of waste pile	At closure, owner shall remove or decontaminate all waste residues, contaminated containment system components, contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste. If waste is left on-site, perform postclosure care in accordance with the closure and postclosure care requirements that apply to landfills.	Waste pile used to store hazardous waste	Cal. Code Regs. tit. 22, § 66264.258(a) and (b) except references to procedural requirements	Applicable	Potentially applicable if hazardous waste is to be stored on-site
Monitoring	Owners/operators of RCRA surface impoundment, waste pile, land treatment unit, or landfill shall conduct a monitoring and response program for each regulated unit.	Surface impoundment, waste pile, land treatment unit, or landfill for which chemicals in or derived from waste in the unit may pose a threat to human health or the environment.	Cal. Code Regs. tit. 22, § 66264.91(a)(1)-(4) and (c), except as it cross-references permit requirements	Relevant and appropriate	Applicable to RCRA hazardous waste facilities; however, the Army has determined that they are relevant and appropriate to the monitoring component of the groundwater response action.

Action	Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
Groundwater monitoring	Owner or operator shall establish a groundwater monitoring system for each regulated unit and include a sufficient number of monitoring points installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer that represent the quality of groundwater passing the point of compliance.	RCRA hazardous waste management unit.	Cal. Code Regs. tit. 22 § 66264.97(a),(b)(1)(A), (b)(1)(D)(1) and (b)(1)(D)(2)	Relevant and appropriate	Applicable to RCRA hazardous waste facilities; however, the Army has determined that they are relevant and appropriate to the monitoring component of the groundwater response action.
Groundwater monitoring	Establishes requirements for a detection monitoring program.	Hazardous waste treatment, storage, or disposal facility	Cal. Code Regs. tit. 22, § 66264.98(e)(1-5), (i), (j), (k)(1-3), (4)(A) and (D),(5), (7)(C) and (D),(n)(1),(2)(B), and (C)	Relevant and appropriate	Potentially relevant and appropriate for monitoring groundwater following the construction of the containment cell.
Container storage	Requires containers of RCRA hazardous waste to be: maintained in good condition, compatible with hazardous waste to be stored, closed during storage except to add or remove waste.	Storage of RCRA hazardous waste not meeting small- quantity generator criteria before treatment, disposal, or storage elsewhere, in a container.	Cal. Code Regs. tit. 22, § 66264.171, 66264.172, and 66264.173	Relevant and appropriate	Potentially relevant and appropriate for monitoring groundwater following the construction of the containment cell.

Action	Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
Stormwater discharge	Order 99-08-DWQ is the State of California general permit for stormwater discharge from construction activities. It requires use of best management practices to reduce pollutants.	Stormwater discharge	Clean Water Act § 402 (33 U.S.C. ch.26, §1342) 40 CFR § 122.44(k)(2) and (4)	Applicable	Order 99-08-DWQ applies to excavation activities that affect at least 1 acre. Pursuant to the substantive permit requirements, best management practices will be taken to prevent construction pollutants from contacting stormwater and keep erosion products from moving off-site.

Notes:

- a Statutes and policies and their citations are provided as headings to identify general categories of potential ARARs for the convenience of the reader. Listing the statutes and policies does not indicate that the Army accepts the entire statutes or policies as potential ARARs; specific potential ARARs are addressed in the table below each general heading; only substantive requirements of specific citations are considered potential ARARs.

ARAR = Applicable or relevant and appropriate requirement

SIAPCD = San Joaquin Air Pollution Control District

Cal. Code Regs. = *California Code of Regulations*

CAMU = Corrective Action Management Unit

CFR = *Code of Federal Regulations*

ch. = Chapter

DWQ = Department of Water Quality

EPA = U.S. Environmental Protection Agency

LDR = Land disposal restriction

Army = Department of the Army

RCRA = Resource Conservation and Recovery Act

tit. = Title

U.S.C. = *United States Code*

**TABLE H-6: POTENTIAL STATE ACTION-SPECIFIC ARARs**

Action	Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
<b>Excavation and Off-Site Disposal</b>					
<b>State Water Resources Control Board</b>					
Excavation and off-site disposal of soil	Dischargers shall be responsible for accurate characterization of wastes	Waste	Cal. Code Regs. tit. 27, § 20200(c)	Applicable	Applicable to operations that generate waste. The Army will accurately characterize waste prior to off-site disposal
Off-site disposal of soil	Requires that designated waste as defined at Cal. Water Code § 13173 be discharged to Class I or class II waste management units	Discharge of designated waste after July 18, 1997 (nonhazardous waste that could cause degradation of surface or ground waters), to land for treatment, storage, or disposal.	Cal. Code Regs. tit. 27, § 20210	Applicable	Applicable to operations that generate waste. The Army will determine if the waste meets the definition of designated waste prior to off-site disposal. If the waste meets the definition of designated waste, the Army will dispose of the waste at an appropriate facility
Off-site disposal of soil	Requires that nonhazardous solid waste as defined at § 20220(a) be discharged to a classified waste management unit	Discharge of nonhazardous solid waste after July 18, 1997, to land for treatment, storage, or disposal	Cal. Code Regs. tit. 27, § 20220(b), (c), and (d)	Applicable	Applicable to operations that generate waste. The Army will determine if the waste meets the definition of nonhazardous solid waste prior to off-site disposal. If the waste meets the definition of nonhazardous solid waste, the Army will dispose of the waste at an appropriate facility

Action	Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
<b>Land Use Controls</b>					
<b>California Civil Code</b>					
Land use controls	Provides conditions under which land use restrictions will apply to successive owners of land	Transfer of property from the Army to a nonfederal agency	Cal Civil Code § 1471	Relevant and appropriate	The Army is evaluating the placement of LUC for soil and groundwater
Land use controls	Provides conditions under which land use restrictions will apply to successive owners of land	Transfer of property from the Army to a nonfederal agency	Cal Civil Code § 1471	Relevant and appropriate	The Army is evaluating the placement of LUC for soil and groundwater
Land use controls	Allows DTSC to enter into an agreement with the owner of a hazardous waste facility to restrict present and future land uses.	Transfer property from the Army to a nonfederal agency	Cal. Health & Safety Code § 25202.5	Relevant and appropriate	Potential ARAR where the Army is transferring property to a nonfederal agency. The substantive provisions of Cal. Health & Safety Code § 25202.5 are the general narrative standards to restrict "present and future uses of all or part of the land on which the...facility...is located..."
Land use controls	Provides a streamlined process to be used to enter into an agreement to restrict specific use of property in order to implement the substantive use restrictions of Cal. Health &	Transfer property from the Army to a nonfederal agency	Cal. Health & Safety Code §§ 25222.1 And 25355.5(a)(1)(C)	Relevant and appropriate	Potential ARAR where the Army is transferring property to a nonfederal agency. Generally, Cal. Health & Safety Code §§ 25222.1 and 25355.5(a)(1)(C) provide the authority for DTSC to enter into voluntary agreements with land

Action	Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
	Safety Code § 25232(b)(1)(A)–(E)				<p>owners to restrict the use of property. The agreements run with the land, restricting present and future uses of the land. The substantive requirements of the following Cal. Health &amp; Safety Code § 25222.1 provisions are “relevant and appropriate”: (1) the general narrative standard: “restricting specified uses of the property...” and (2) “...the agreement is irrevocable, and shall be recorded by the owner, ...as a hazardous waste easement, covenant, restriction or servitude, or any combination thereof, as appropriate, upon the present and future uses of the land.” The substantive requirements of the following Cal. Health &amp; Safety Code § 25355.5(a)(1)(C) provisions are “relevant and appropriate”: “...execution and recording of a written instrument that imposes an easement, covenant, restriction, or servitude, or combination thereof, as appropriate, upon the present and future uses of the land.”</p>

<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>Preliminary ARAR Determination</b>	<b>Comments</b>
Land use controls	Prohibits certain uses of land containing hazardous waste without a specific variance.	Hazardous waste property	Cal. Health & Safety Code § 25232(b)(1)(A)-(E)	Relevant and appropriate	Potential ARAR for LUC that prohibit construction of residences, hospitals for humans, schools for persons under 21 years of age, daycare centers, or any permanently occupied human habitation on hazardous waste property.
Land use controls	Provides processes and criteria for obtaining written variances from a land use restriction and for removing a land use restriction	Transfer of property from the Army to a nonfederal entity	Cal. Health & Safety Code §§ 25233(c) and 25234	Relevant and appropriate	Cal. Health & Safety Code § 25233(c) sets forth substantive criteria for granting variances based upon specified environmental and health criteria. Cal. Health & Safety Code § 25234 sets forth the substantive criteria for the removal of a land use restriction on the grounds that "...the waste no longer creates a significant existing or potential hazard to present or future public health or safety."



Action	Requirement	Prerequisite	Citation	Preliminary ARAR Determination	Comments
Land use controls	<p><b>California Environmental Protection Agency, Department of Toxic Substances Control<sup>a</sup></b></p> <p>A land use covenant imposing appropriate limitations on land use shall be executed and recorded when facility closure, corrective action, remedial or removal action, or other response actions are undertaken; and hazardous materials, hazardous wastes, or constituents, or hazardous substances will remain at the property at levels that are not suitable for unrestricted use of the land.</p>	Property transfer by federal government to nonfederal entity.	Cal. Code Regs. tit. 22, § 67391.1	Relevant and appropriate	Potential “relevant and appropriate” ARAR where the Army is transferring property to a nonfederal or federal agency. This section provides for a land use covenant to be executed and recorded when remedial actions are taken and hazardous substances will remain at the property at concentrations that are unsuitable for unrestricted use of the land. The substantive provisions of this regulation have been determined to be “relevant and appropriate” state ARARs by the Army.

**Notes:**

a Statutes and policies, and their citations, are provided as headings to identify general categories of potential ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the Army accepts the entire statutes or policies as potential ARARs. Specific potential ARARs follow each general heading, and only substantive requirements of the specific citations are considered potential ARARs.

§ = Section

§§ = Sections

ARAR = Applicable or relevant and appropriate requirement

Cal. Code Regs. = California Code of Regulations

DTSC = Department of Toxic Substances Control

Army = Department of the Army

U.S.C. = United States Code

## **Appendix I**

### Responses to Regulatory Comments

<b>Project</b>	Sites 33/29 (SHAD-041)	
<b>Document</b>	Draft Remedial Investigation/Feasibility Study Report, Sites 33/29 (SHAD-041)	<b>Date</b> June 2018
<b>Contractor</b>	Sharpe Army Depot, Lathrop, California	
<b>Contract</b>	Ahtna Environmental, Inc. USACE Contract No. W91238-16-C-0013	

<b>Reviewer</b>	Nadia Burke	<b>Organization</b>	U.S. Environmental Protection Agency	<b>Date</b>	Sept. 5, 2018
<b>Item</b>	<b>Reference</b>	<b>Review Comment</b>	<b>Organization</b>	<b>Date</b>	<b>Response</b>
<b>General Comment</b>					
1.	Section 12.0	Alternative 2, Land Use Controls (LUCs), does not meet the threshold criteria (i.e., Overall Protection of Human Health and the Environment, Compliance with ARARs) established in the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, EPA/540/G-89/004, dated October 1988 (the RI/FS Guidance). Specifically, LUCs will not protect ecological wildlife receptors from exposure to the constituents of concern (COCs) in soil or meet the ecological risk-based numeric remedial action objectives (ecological RBSLs). As noted in the Section 10.2.3, Land Use Controls, "LUCs are not protective of potential ecological receptors." As such, Alternative 2 should be eliminated as a remedial alternative. Please revise the Draft Remedial Investigation (RI)/Feasibility Study (FS) Report, Sites 33/29 (SHAD-041), Sharpe Army Depot, Lathrop, Californian (the RI/FS Report), dated July 2018, to eliminate Alternative 2 as a remedial alternative given that it does not meet the threshold criteria established in the RI/FS Guidance.	U.S. Environmental Protection Agency		Section 12.0 has been revised to state the Alternative 2 (LUCs) does not meet the threshold criteria. LUCs are maintained as components of Alternatives 3, 4 A and 5.
2.	Figure 10	The figures presented in the RI/FS Report do not include the analytical results for samples for which chemical concentrations fall below screening criteria. For example, Figure 10, PCB Concentrations in Soil, lists "No PCBs			Figures 10, 11 and 12 have been revised to include figure-specific COC concentrations in soil.

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Item	Reference	Review Comment	Response		
3.	Section 10.2	<p>detected above screening levels” in multiple analytical results boxes. As a result, it is difficult to assess the distribution of contamination and confirm the adequacy of the investigation. Please revise the RI/FS Report figures to include all appropriately qualified analytical results to demonstrate the adequacy of the investigation and more clearly support the FS.</p> <p>Consistent with Section 10.1.1, Effectiveness, “The protectiveness of the technology to the environment during implementation” should be discussed for each remediation technology; however, such discussions are presented inconsistent. For example, while Section 10.2.3, Land Use Controls, discusses the lack of protectiveness for ecological receptors offered by LUCs, Section 10.2.4, Active Remediation, does not discuss the potential ecological impacts of the various technologies (e.g., In Situ Soil Flushing) that rely upon use of materials that may themselves present risk through direct exposure or mobilize contaminants that may be harmful to ecological receptors. Please revise the RI/FS Report to discuss the protectiveness of each remedial technology to the environment.</p>	<p>Section 10.2.4 subsections have been revised to include a discussion of the protectiveness to the environment of each remedial technology.</p>		
4.	Section 3.2.4	<p>Section 3.2.4 (Borehole Advancement and Downhole Gamma Logging) states that nine of the planned twenty-five systematic and 5 biased samples preselected in the Work Plan were eliminated based on the downhole gamma logging to allow the depths of the remaining boring locations to be extended; however, the text does not state how it was determined the extent of contamination was still adequately investigated. For example, the text does not state how the twenty-five systematic samples were</p>	<p>Clarification. The rationale and the minimum number of sampling locations determined with the MARSSIM equations are described in the RI/FS Work Plan. The calculations resulted in 15 sampling locations (the equation adds 40 percent over minimum quantities). Six sampling locations were added for a total of 21 locations to allow a greater confidence.</p>		

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		determined. If the number of samples was determined using the Multi-Agency Radiological Site and Survey Manual (MARSSIM) calculations or Visual Sample Plan software for satisfying a statistical evaluation with a specified level of confidence, then the assumptions of the statistical test will not have been met with the fewer number of samples. In the case of MARSSIM, the twenty-five locations would still need to be sampled, and the additional samples collected to depth for delineating the vertical extent would be added as extra samples. Please revise the RI/FS Report to state how it was determined that collecting samples at nine fewer locations was sufficient to delineate the extent of contamination and whether the results are being used to satisfy a statistical evaluation, and if so, to explain how the evaluation is still valid.	Text has been added to Section 3.2.4 that provides information explaining the number of needed sampling locations.  It is the Army's position the extent of contamination has been adequately investigated.		
5.	Section 4.2.2	Section 4.2.2, Radium-226, concludes that a detection of Ra-226 at 75.4 pCi/g at the 14-foot level is the result of cross-contamination, and therefore, is anomalous but does not provide sufficient evidence or justification supporting this conclusion. Text under the subheading labeled '10 to 15 ft bgs', and under the Summary subheading, states that one anomalous detection for Ra-226 of 75.4 pCi/g was detected at 14 feet below ground surface (ft bgs). The text concludes that the detection of Ra-226 is not representative of the site conditions as indicated by the lack of similar concentrations at similar depth locations. However, radiological contamination may be dispersed as discreet particles and is easily spread through environmental media, and as such, the detection of a radionuclide such as	The Army believes the lateral and vertical extent of Ra-226 in soil is sufficiently defined for the purposes of this RI/FS and the evaluation of soil remedial alternatives.  After remedy selection and during the remedial design phase, the Army will collect additional soil samples from step-out locations to further delineate the extent of Ra-226 in soil and excavation footprint at SHAD-041.  Also, for purposes of the FS, Sections 4.2.2 subsection '10 to 15 ft bgs' and 'Summary' has been revised to remove language that states contamination was only found above the 13-foot level bgs.  In addition, Section 10.2.4 has been revised accordingly, where applicable.		

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		<p>Ra-226 in a discreet location regardless of the analytical results from the surrounding location(s) may be present due to the original extent of contamination. Since the source of the detection of Ra-226 at the 14-foot depth can be determined definitively, it should be considered present due to contamination at Sites 33/29 and addressed as such. Please revise the RI/FS Report to include original extent of contamination as a possible source of the detection of Ra-226 at the 14-foot level in Section 4.2.2 and to remove language that states contamination was only found above the 13-foot level bgs. Please also ensure that associated evaluations and presentations associated with the development and evaluation of remedial alternatives (e.g., Section 10.2.4, Active Remediation) are revised accordingly.</p>			
<b>Specific Comment</b>					
6.	Section 2.6 Pages 5 to 6	<p>This section discusses hydrogeological characteristics of the site but does not discuss regional and site-specific groundwater flow in each of the hydrostratigraphic zones. As a result, it is not possible to assess the impacts of hydraulic gradients on contaminant distribution. Please revise Section 2.6 to include any information regarding hydraulic gradients.</p>	<p>Section 2.6 has been revised to include information from the 2017 Annual FFA Report regarding regional and site-specific groundwater flow in each of the hydrostratigraphic zones and zone-specific hydraulic gradients.</p>		
7.	Section 3.3.1 Pages 12 to 13	<p>The Quality Control Review section of the RI/FS Report is insufficiently detailed. Examples of insufficient detail include the following:</p> <ul style="list-style-type: none"> <li>The RI/FS states that “data quality goals stated in the project Quality Assurance Project Plan were met,” and a summary of the qualified data is provided; however, the RI/FS does not include an evaluation of how the data answered the principal questions of the</li> </ul>	<p>Section 3.3.1 of the RI/FS Report has been revised to provide a summary of the data validation and to include additional information on the detailed discussion of data usability, as well as information to allow for a determination of usability and sufficiency of the data set.</p>		

Reviewer	Nadia Burke	Organization	U.S. Environmental Protection Agency	Date	Sept. 5, 2018
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		<p>investigation and how the data support project decisions.</p> <ul style="list-style-type: none"> <li>For several analytical methods, the RI/FS Report indicates that results were qualified as estimated based on internal standard outliers. However, non-detected data with internal standard recoveries below the acceptance criteria are usually rejected. The RI/FS Report should clarify the criteria used to qualify these results as either estimated or rejected and ensure that the validation guidelines used for other QC samples are clearly defined.</li> <li>The RI/FS Report does not include a discussion of overall biases and trends in the data or whether any overall biases or trends in the data impacted project decisions. The RI/FS Report should discuss whether significant trends and biases were noted in the data, how the trends and biases were evaluated, and provide sufficient information to verify all conclusions drawn from the data.</li> <li>The RI Report does not discuss whether results for QC samples were acceptable (e.g., rinsate blanks, trip blanks, and field duplicates) or if these QC samples were collected and analyzed at the required frequencies. It is also unclear if the results or collection frequencies for these samples impacted data quality and usability. The RI/FS Report should include a discussion of QC sample results, if the QC samples were collected at the required frequencies and if the results or collection frequencies of QC samples impacted data quality and usability.</li> </ul>			

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		<ul style="list-style-type: none"> <li>The RI/FS Report does not provide a summary of the extent of all QC exceedances that led to qualifications of the data. Without this information, the impact of these QC outliers on data usability is unclear. The data quality evaluation should discuss the exceedances of acceptance criteria, and the range of these exceedances, so the impact on data usability is clear. Although it is not necessary to discuss every exceedance, it is recommended that a table summarizing the exceedances and extent of exceedances be provided.</li> </ul> <p>Please revise the RI/FS Report to provide a detailed discussion of data usability considering the examples listed above. In addition, while details are provided in Appendix C, Laboratory Reports, and Appendix D, Chemical Quality Control Reports, the RI/FS Report should be revised to provide a summary of the data validation so that document users do not need to review all of Appendices C and D in order to determine the usability and sufficiency of the data set.</p>			
8.	Section 5.0 Page 18	<p>Based on the results of the HHRA, with the exception of the need to address lead contamination in soil, the report concludes that remediation for non-radiological contaminants is not warranted. However, the risk to a future potential resident was estimated to be as high as 4E-05, attributable primarily to exposure to polychlorinated dibenzodioxin/polychlorinated dibenzofuran and hexavalent chromium in surface soil. Please remove the conclusion that remediation for non-radiological contaminants is not warranted, as the levels are at the higher end of the risk range, and a risk management decision still needs to be made.</p>	Section 5.0 has been revised to include a sentence that states the need for remediation of other analytes with cancer risks greater than $1 \times 10^{-6}$ , the point of departure, will be determined in conjunction with risk management decision making.		



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9.	Section 7.0 Page 20	The current and potential future land uses should be included in the conceptual site model (CSM) for SHAD-041 to aid in clarifying the potential receptors to be evaluated later in the process. Consistent with Section 2.2.2.2, Develop a Conceptual Site Model, of the RI/FS Guidance, please revise Section 7.0 to discuss land use and associated receptors.	Section 7.0 has been revised to discuss the current and potential future land use and associated receptors.		
10.	Figure 17	Figure 17 is inconsistent with Figure F1-1, Conceptual Site Model for Human Health Exposure Pathways. Review of the two figures indicates that Figure F1-1 most accurately represents the conceptual site model discussed in the text, with the noted exceptions discussed in the comments below. Please revise Figure 17 for consistency with Figure F1-1.	Figure 17 has been revised to match information in Figure F1-1.		
11.	Section F1.1 App F1	Several issues were identified in review of the selection of constituents of potential concern (COPCs). a. The COPCs selection process is not clearly discussed. For example, Section F1.1, Hazard Assessment, does not provide the screening criteria used in the selection of COPCs. Similarly, Table F1-1, October 2017 SHAD-041 Soil Sample Results and Summary Statistics, provides an incomplete citation ("Soil Screening Levels are June 2017 USEPA Regional") for the source of the screening levels. Review of the screening levels indicates that they are the EPA Regional Screening Levels (RSLs) for industrial soil, but this is not specified in the report. b. It is unclear why the EPA RSLs for industrial soil, and not residential soil, were used in the selection of	a. Section F1.1 has been updated to discuss the COPC selection process. Table F1-1 notes were reviewed and revised for accuracy and completeness. The COPCs include analytes where the maximum concentrations exceeding the lower and more protective of the residential soil screening values listed in the U.S. EPA Regional Screening Levels (RSLs) (November 2018) and the Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3 (June, 2018). b. Section F1.1 has been revised to indicate the maximum analyte concentrations were compared to the lower of the USEPA RSLs (November 2018) and HERO HHRA Note 3 (June 2018) residential soil screening levels for the selection of COPCs. There		

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		<p>COPCs, given that a future potential resident is considered to be an applicable receptor population. The list of COPCs should be revised such that maximum detected concentrations are screened against the EPA RSLs for residential soil.</p> <p>c. A summary list of COPCs, based on the results of the screening presented in Table F1-1, October 2017 SHAD-041 Soil Sample Results and Summary Statistics, is not provided.</p> <p>Please revise Appendix F to address the above-listed concerns.</p>	<p>were no changes to the list of COPCs previously identified.</p> <p>c. A list of COPCs, based on the results of the screening, is presented in Section F1.1.</p>		
12.	Section F1.2.4 App F1 Page 3	This section states that commercial/industrial workers may be exposed to subsurface soil; however, this exposure pathway is listed as incomplete on Figure F1-1, Conceptual Site Model for Human Health Exposure Pathways. Please revise Section F1.2.4 to address this inconsistency.	Section F1.2.4 and Figure F1-1 have been revised to resolve this inconsistency.		
13.	Section F1.2.7 App F1 Page 4	The last sentence on this page states, "Where there were fewer than four detected data points in a dataset, the maximum concentration of that particular analyte was used as the EPC [exposure point concentration] for estimating groundwater concentrations." Given that no groundwater data were collected, please revise this sentence to correct this inconsistency.	The sentence has been revised to correct this inconsistency.		
14.	Section F1.4 App F1 Page 5	This section indicates that the risk-based screening levels (RBSLs) used to calculate risk and hazard were selected from the Department of Toxic Substances Control Human and Ecological Risk Assessment Office screening levels, the EPA RSLs, and the San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels. However, the criteria used to select a RBSL for each COPC	<p>Section F1.4 has been revised to provide clarification on the hierarchy of screening criteria.</p> <p>The most conservative of the EPA RSLs and HERO DTSC screening levels (SL) were used to calculate risk/hazard to potential future residents and commercial/industrial workers.</p>		

Reviewer	Nadia Burke	Organization	U.S. Environmental Protection Agency	Date	Sept. 5, 2018
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15.	Tables F1-1 through F1-4 App F1	The format of the tables included in Appendix F1 does not support reader understanding of the HHRA. Please adjust the page breaks for each table such that the entirety of each table fits within the width of one page.	is unclear. Please revise this section to clarify the screening criteria hierarchy. It is noted that should screening levels other than EPA RSLs be used, the most conservative value should be selected in the assessment of risk/hazard to future potential residents and commercial/industrial workers.	The format of the tables has been revised per the comment where possible.	
16.	Tables F1-1 through F1-4 App F1	Appendix F1 indicates that the June 2017 and/or November 2017 versions (the citation varies by table) of the EPA RSLs was used in the selection of COPCs and calculation of risk and hazard estimates. Please be advised that the RSLs have been updated since then and were last updated in May 2018. Please revise the Uncertainty Analysis to evaluate whether changes to the RSLs affect the selection of COPCs, calculation of risk and hazard estimates, and the conclusions of the RI/FS Report. In addition, please provide a consistent citation for the version used.	The EPA RSLs were reviewed and updated to the November 2018 values in Tables F1-1 through F1-4 if needed. Also updated were the reference citations. The update did not change the list of COPCs, calculation of risk and hazard estimates, uncertainty analysis, and the conclusions of the RI/FS Report.		
17.	Figure F1-1 App F1	The conceptual site model indicates that the subsurface soil exposure pathway is incomplete for a potential future resident. However, site redevelopment activities and regrading may allow for periodic subsurface soil exposure. Please revise Figure F1-1 to indicate that the subsurface soil exposure pathway is complete for a future potential resident.	Figure F1-1 has been revised to indicate that the subsurface soil exposure pathway is complete for a potential future resident.		

Reviewer	Nadia Burke	Organization	U.S. Environmental Protection Agency	Date	Sept. 5, 2018
<b>Item</b>	<b>Reference</b>	<b>Review Comment</b>	<b>Response</b>		
18.	Table F2-2 App F2	The mammalian No-Observed Adverse Effect Level (NOAEL) Ecological Screening Levels (ESLs) for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) and lead listed in Table F2-2 are not accurate. For example, this table indicates the Los Alamos National Laboratory (LANL) NOAEL-based ESL for TCDD and lead was 1.9 picograms per gram (pg/g) and 170 milligrams per kilogram (mg/kg), respectively. However, the LANL NOAEL-based ESL for TCDD is 0.29 pg/g (mammals) and 93 mg/kg (mammals) for lead. It appears that that the mammalian NOAELs were switched with the Low-Observed Adverse Effect Levels (LOAELs) for TCDD and lead. Please address these discrepancies.	Table F2-2 has been revised to include values for ESLs consistent with DTSC recommendations (see DTSC Specific Comment 21).		
19.	Table F2-3 App F2	As mentioned in Specific Comment 12, the LANL NOAEL-based ESLs for TCDD and lead are not accurate and need to be updated. The same ESLs are listed in Table F2-3. Please revise Table F2-3 to address these discrepancies.	Table F2-3 has been revised to include values for ESLs consistent with DTSC recommendations (see DTSC Specific Comment 21).		
20.	Table F2-4 App F2	Table F2-4 uses the same inaccurate ESL for TCDD to derive hazard quotients. Please update the hazard quotients using the correct ESL.	Table F2-4 has been updated to include the ESL values consistent with DTSC recommendations (DTSC Specific Comment 21), and the hazard quotients have been updated.		
<b>Minor Comment</b>					
21.	Section ES-1.2.2 Page xii	The second bullet point for RCOC concentrations lists the maximum depth but does not provide the minimum depth for the Ra-226 exceedances within the Eastern portion of SHAD-041 (i.e., the text states, "to 12 ft bgs"). Please revise text to include the full depth range in which Ra-226 exceedances were noted.	The text has been revised to provide the full depth range for RA-226 exceedances.		

Reviewer	Nadia Burke	Organization	U.S. Environmental Protection Agency	Date	Sept. 5, 2018
Item	Reference	Review Comment	Response		
22.	Section 2.7 Page 6	While no surface water bodies are identified as present in SHAD-041, the text indicates that surface water is present during and following rainfall events; it is unclear if these surface water bodies may be characterized as ephemeral. It is also unclear what ephemeral and/or perennial surface water bodies are closest to SHAD-041 as they are not listed. Please revise Section 2.7 to clarify the discussion of surface water present during and following rainfall events and to include the closest body of water to SHAD-041.	Section 2.7 has been revised to clarify the discussion of surface water present during and following rainfall events and to include the closest body of water to SHAD-041.		
23.	Tables 2 through 7	The referenced tables do not clearly identify analytical results that exceed relevant screening criteria. While exceedances are noted as being presented in bold text, the difference between standard and bold text is not easily distinguished. Please revise the table to more clearly identify exceedances.	Tables 2 through 7 have been revised with larger bold text to more clearly identify exceedances of residential and commercial/industrial screening levels.		

Reviewer	Michael Darrett	Organization	Department of Toxic Substances Control	Date	Nov. 2, 2018
Item	Reference	Review Comment	Response		
General Comment					
1.	Tables	Please verify all text fields in all tables are large enough to ensure all text is visible. For example, Table 5 has several instances of unreadable text due to insufficient row height for Screening Levels for m-p-Xylene and o-Xylene.	The text fields have been adjusted to ensure that all text is visible.		
2.	Table 12	The report does not present an adequate radiological risk assessment. The assumptions presented in Table 12 are outdated and not consistent with current EPA exposure parameters. DTSC recommends that a more detailed radiological risk assessment be provided for both workers and future residents, including all exposure assumptions and rationale for those assumptions. Such an assessment should include currently accepted methods, parameters and specify and provide supporting for any assumptions made. Screening levels provided and used for comparison to those detected cannot be accepted or approved without additional supporting information.	Table 12 has been revised to include updated assumptions and current EPA exposure parameters. Additionally, the radiological risk assessment (Appendix F3) has been supplemented with a technical memorandum on the preliminary cleanup goals and exposure scenarios evaluation to provide additional supporting information.		
3.		Given that the Ra-226 "hot spot", VSP-26, was at the northern portion of the site (Figure 13) and was not shown on the GWS (Figure 5), DTSC recommends additional step-out samples to the north, west and east to delineate the lateral extent of radiological contamination, as the majority of contamination is associated with surface and near-surface soils. For VSP-18, step-out samples should be collected to the east. For VSP-12, step-out samples should be collected to east and south to fully delineate the extent of Ra-226 contamination. Likewise, additional step-out samples should be collected around VSP-28 in four directions for the same reasons.	The Army believes the lateral and vertical extent of Ra-226 in soil is sufficiently defined for the purposes of this RI/FS and the evaluation of soil remedial alternatives.  After remedy selection and during the remedial design phase, the Army will collect additional soil samples from step-out locations to further delineate the extent of Ra-226 in soil and excavation footprint at SHAD-041.		

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4.		Given that elevated levels of Ra-226 were detected in soils down to 15-feet at sampling locations VSP-26, VSP-18, VSP-11, VSP-8, VSP-13 and VSP-28, groundwater samples should be collected from the A zone and analyzed for beta and gamma activity, as well as Ra-226, considering that shallow groundwater occurs at 15-20 feet in the-Victor Formation. Given the connectivity between the upper groundwater zones, additional samples should also be collected and analyzed for at least beta and gamma activity in the B zone.	Note that this RI/FS report addresses only chemical and Ra-226 soil contamination and evaluation of soil remedial alternatives. Therefore, no groundwater sampling has been performed. The Army may consider assessing groundwater quality at SHAD-041 in the future under separate investigation.		
5.	Sections ES-1.1.3, 4.1, and 4.2	The text in Sections ES-1.1.3, 4.1, and 4.2 needs to be revised to reflect that the risk-based screening levels used for the human health risk assessment (Appendix F) were based on the recommended screening levels from DTSC's Human Health Risk Assessment (HHRA) Note 3 and the U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSLs). The risk assessment presented in Appendix F used the more protective screening levels between the two sources. The text in the rest of the report only references the U.S. EPA RSLs.	The text in the cited sections have been revised to indicate that the risk-based screening levels (RBSL) were based on the more protective of the recommended screening levels from DTSC's HHRA Note 3 and the U.S. EPA RSLs.		
6.		Lead Cleanup Level. a. The industrial cleanup level for lead in soil established in the 1996 OU 2 ROD was 1,000 mg/kg. The cleanup standard was addressed in the June 2011 OU 2 ROD Amendment which states, "an acceptable level is a soil concentration that results in a predicted 95th-percentile blood-lead concentration that does not exceed 10 micrograms of total lead per deciliter of blood. The ALM [Adult Lead Model] documentation provides several estimates of acceptable	Clarification. The ROD specifies a 1,000 mg/kg clean-up for lead, which the 3rd Five Year Review (2013) concludes is protective of human health under the industrial exposure scenario. Regulatory agencies, including the DTSC, concurred with this finding. The 4th Five Year Review will also consider protectiveness. The misleading sentence has been removed from the text in Section 9.1.1. The 1,000 mg/kg has been proposed as an industrial use lead cleanup level not the background lead		

Reviewer	Michael Darrett	Organization	Department of Toxic Substances Control	Date	Nov. 2, 2018
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		<p>concentrations of total lead in soil, depending on ethnicity or national region, which range from approximately 800 mg/kg to approximately 1,370 mg/kg. The overall average acceptable concentration of total lead in soil... predicted by the ALM to be approximately 1,200 mg/kg" for the Site. The ROD then goes on to conclude that the 1,000 mg/kg lead cleanup goal is protective.</p> <p>The 10 µg/dL blood lead level is not protective of children or fetus of an adult worker as determined by both OEHHA and Center for Disease Control and Prevention (CDC) (<a href="http://www.cdc.gov/nceh/lead/">http://www.cdc.gov/nceh/lead/</a>). Research has clearly shown that using a 10 µg/dL blood lead level is not protective and is no longer recommended by the CDC. As discussed in the 22 December 2016 USEPA OSWER Memorandum titled, Updated Scientific Considerations for Lead in Soil Cleanups, "Current scientific literature on lead toxicity and epidemiology provides evidence that adverse health effects are associated with blood lead levels (BLLs) less than 10 µg/dL" There is clear evidence in the literature that using 10 µg/dL is no longer protective. DTSC does not concur with the cleanup goal of 1,000 mg/kg and recommends that it be re-evaluated during the next 5-Year Review for the OU 2 ROD. Given that the report should utilize currently accepted levels and assessment methods, DTSC recommends using the DTSC-screening level (SL) of 320 mg/kg for lead as the cleanup goal which is protective and corresponds to a</p>	<p>concentration at SHAD-041. The remedial action to industrial land use will include implementation of Land Use Controls.</p>		



Reviewer	Michael Darrett	Organization	Department of Toxic Substances Control	Date	Nov. 2, 2018
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		<p>1 µg/dL incremental change of blood lead concentration in the fetus of a pregnant adult worker.</p> <p>b. Please explain and provide evidence as to how a lead concentration of 1,000 mg/kg is background at SHAD-041. The text on page 23 states, "Risk-based concentrations of lead, 80 mg/kg and 320 mg/kg, were developed based on target lead concentrations that correspond to the blood lead concentration of 1 ug/dL in children (hypothetical resident) and the fetus of a pregnant adult industrial/commercial worker, respectively. Army policy does not permit cleanup goals for metals below established background concentrations. The OU 2 ROD (ESE, 1996) defined the industrial use lead cleanup level for lead to 1,000 mg/kg in surface and subsurface soil." DTSC interprets this as a level that is acceptable for an industrial exposure and as such areas where contamination exceeds this concentration would be subject to remedial action which includes implementation of a Land Use Control.</p>			
7.		<p>Please note recently the State of California Office of Administrative Law approved and adopted Title 22, California Code of Regulations section 69021 of the Toxicity Criteria for Human Health Risk Assessments, Screening Levels, and Remediation Goals rule. The rule is a list of required toxicity criteria for specific chemicals to be used in human health risk assessments, human health risk-based screening levels and human health risk-based remediation goals (cleanup levels). The rule went into</p>	<p>Clarification. The ROD specifies a 1,000 mg/kg clean-up for lead, which the 3rd Five Year Review (2013) concludes is protective of human health under the industrial exposure scenario. Regulatory agencies, including the DTSC, concurred with this finding.</p> <p>The protectiveness of the lead cleanup level will be re-evaluated in the 4th Five Year Review.</p>		

Reviewer	Michael Darrett	Organization	Department of Toxic Substances Control	Date	Nov. 2, 2018
Item	Reference	Review Comment	Response		
8.	Section 5.0	Please include in the text of Section 5.0 the actual calculated cancer risk and non-cancer hazard for all receptors evaluated in Appendix F, e.g., future residential, industrial and construction worker. The text currently just states that the total cancer risks were within the risk management range and the non-cancer hazard was less than the threshold of 1.	Section 5.0 describes the calculated cancer risk and noncancer hazard for the receptors selected.		
9.	Appendix F Section F1.2.3	The vapor intrusion to the indoor air pathway was not evaluated at the Site due to the lack of soil gas data. Given that the vapor intrusion pathway has not been evaluated, as stated in Appendix F Section F1.2.3, "should the site be redeveloped with office/industrial buildings or for residential land use in the future, exposure will need to [be] re-evaluated to address the potential for exposure to VOCs through the indoor air pathway." DTSC recommends that any Land Use Control placed on SHAD-041 should include language to reflect that the vapor intrusion pathway needs to be evaluated before the site is re-developed to include office/industrial buildings or residential land use.	Noted. The recommendation for land use control for SHAD-041 will include language for evaluating the vapor intrusion pathway before the site is redeveloped that include office/industrial buildings or residential land use.		
10.	Appendix F Section F1.4	a. Construction Worker. The San Francisco Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for the	a. While the Army acknowledges the DTSC does not support use of the SFRWQCB ESLs, the construction worker ESLs were correctly derived using		

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		<p>construction worker were used in the human health risk assessment to evaluate risk to future construction workers. DTSC does not support the use of the ESLs and recommends that a forward risk assessment be conducted for the construction worker using the recommended exposure parameters in HHRA Note 1. Please revise the construction worker risk assessment</p> <p>b. Acceptable risk language - The words "generally acceptable" should be removed from the text on page 6 of Appendix F Section F1.4. For risk assessment purposes, DTSC's point of departure is 1.0 x 10<sup>-6</sup>.</p>	<p>conservative exposure assumptions and the hierarchy of toxicity values consistent with Title 22, CCR Section 69021 of the Toxicity Criteria for Human Health Risk Assessments, Screening Levels, and Remediation Goals Rule.</p> <p>While the exposure factors used DTSC for the construction worker are not identical to those used by the SFRWQCB, the cancer risks and noncancer hazards will not differ by orders of magnitude. Further, the site requires remedial action that is not driven based on the risk/hazard to the construction worker. Consequently, the use of the SFRWQCB ESLs to back-calculate the construction worker risk is discussed as an uncertainty in Bullet 5 of Section F1.5.</p> <p>b. The phrases, "commonly accepted target" and "accepted exposure level" were removed from the text on pages 5 and 6 of Appendix F Section F1.4, respectively.</p>		
<b>Specific Comment</b>					
11.	Section 2.2, fourth paragraph, final sentence Page 2	This sentence mentions where radioactive commodities are stored since October 2001. Since this is a public document, consider stating that radioactive commodities have been stored "elsewhere" since October 2001.	The final sentence in the fourth paragraph in Section 2.2 states the radioactive commodities have been stored "elsewhere" since October 2001.		
12.	Figure 4	The logo "Ahtna" is on top of the sampling result for sampling location SS0038. Please revise.	The extraneous logo has been removed from Figure 4.		

Reviewer	Michael Darrett	Organization	Department of Toxic Substances Control	Date	Nov. 2, 2018
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13.	Figures 10, 11, and 12	Please include the sampling data for PCBs, VOCs, and PAHs in soil regardless if the sample results were below screening levels. Include the detection limits so that we can evaluate the potential for false non-detects.	The detection limits for locations and sample depths where results were below screening levels have been added to Figures 10, 11, and 12.		
14.	Figure 17 - Conceptual Site Model	Please update the Conceptual Site Model in Figure 17 to show all potential receptors that were evaluated in the human health risk assessment in Appendix F. Figure 17 should look like Figure F1-1.	The Figure 17 Conceptual Site Model in Figure 17 shows the receptors evaluated.		
15.	Tables 1, 2, 3, 4, 5, 6, 7 and F1-1	Please revise the screening levels listed in Tables 1, 2, 3, 4, 5, 6, 7 and F1-1 so that they are the same values that are used in the risk assessment presented in Appendix F; utilize the more protective screening levels between the U.S. EPA RSLs and DTSC-SLs. These risk-based screening levels are listed in Appendix F Tables F1- 2 and F1-3.	The screening levels in Tables 1, 2, 3, 4, 5, 6, 7 and F1-1 have been revised to match values used in the risk assessment presented in Appendix F. Risk has been calculated using the lower screening level listed in the US EPA RSLs and DTSC-SLs.		
16.	Table F1-1 - Notes	Note 1 of Table F1-1 references that the screening level values listed in the table are the soil screening levels from the June 2017 U.S. EPA RSLs. The screening level listed for chromium is not the RSL but the cleanup goal from the OU 2 ROD. Please revise to reflect the current value.	Table F-1 has been revised to list the current screening value for chromium.		

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17.	Section F2.2.1, and globally:	DTSC recommends that the terminology for ecological screening values be more tightly defined. DTSC recommends that the "Eco-SSL" label be restricted to the specific values published by the U.S. Environmental Protection Agency (USEPA) and that the "ESSL" label be restricted to the site-specific ecological soil-screening levels retained from the URS (2011) reference. A new collective acronym could be used for ecological screening values (e.g., ESVs) that would encompass Eco-SSLs, ESSLs, and screening values obtained from other reference sources. DTSC recommends that the text be revised accordingly for specificity when referencing various screening values.	Section F2.2.1 and Appendix F2 have been revised as recommended, where applicable.		
18.	Section F2.2.1:	As revealed in the uncertainty section, the ecological screening value for exposure of burrowing owls to dioxin is based on mammalian toxicity data. DTSC does not accept this extrapolation, but a value can be derived using avian toxicity data. Efroymson et al. (1997) derived a soil "preliminary remediation goal" (PRG) for birds exposed to dioxins based on a lowest-observed-adverse-effect-level (LOAEL) toxicity value obtained from Sample et al. (1996). Sample et al. (1996) also provides a no-observed- adverse-effect-level (NOAEL) toxicity value and a derived NOAEL-based PRG would be 1.6 picograms (pg) per gram (g) of soil using the Efroymson et al. method. DTSC requires the use of 1.6 pg/g as the NOAEL-based screening value for exposure of bird receptors to dioxin. Tables F2-2 through F2-4 should be corrected and any related text should be accordingly revised.	Screening and risk characterization use the recommended PRG NOAEL-based screening value for dioxin (1.6 pg/g), and Tables F2-2 through F2-4 have been updated.		

Reviewer	Michael Darrett	Organization	Department of Toxic Substances Control	Date	Nov. 2, 2018
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19.	Appendix F2 Page F2-4	At the end of Section F2.2.1 and within Section F2.2.2, the text states that site concentrations are compared to the most-conservative or most-stringent ecological screening values. This is not borne out in Tables F2-2.through F2-4; for example, the ESSs for the juvenile burrowing owl receptor are more stringent than the ESSs for the adult receptor, but the adult values are listed. Additionally, as addressed in later Specific Comments, LOAEL values are listed when NOAEL values are called for. The tables should be corrected accordingly.	The lowest ecological screening values were used to screen COPCs, and listed in Tables F2-2 through F2-4.		
20.	Appendix F2. 1'st complete paragraph Page F2-6	Provide a complete reference for "USEPA, 2011 b" as it is not in the reference list.	The reference to USEPA, 2011b has been corrected to USEPA, 1997.		
21.	Appendix F2, Tables F2-2 to F2-4: Primarily	Table F2-2, but all these tables require some corrections: a. The dioxin values need correction (see Specific Comment #18). b. It is noted that the entries in the "LANL NOAEL-based ESL, birds and mammals" column are LOAEL values for chromium and lead; further, these are not the most-conservative values among the available screening values. c. Entries in the "LANL NOAEL-based ESL, birds and mammals" column for hexavalent chromium and benzo[a]anthracene cannot be confirmed from the stated reference (the Los Alamos National Laboratory ECORISK Database 4.1 ). We believe that these values are from version 3.3 of the LANL database.	Reviewed and corrected as noted in the DTSC comments.		

Reviewer	Michael Darrett	Organization	Department of Toxic Substances Control	Date	Nov. 2, 2018
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		<p>d. The concentrations of PAHs (including some listed as semivolatiles organic compounds) should also be evaluated as done for the US EPA Eco-SSLs for PAHs: summing the concentrations of the low- and the high-molecular-weight constituents and comparing the sums to the corresponding Eco-SSLs.</p> <p>e. The values from the Note "d" reference (EPA Region 5 RCRA screening values) are not acceptable to DTSC: the underlying exposure and toxicity information cannot be verified, and the derivation of the values cannot be confirmed. Replacement values for some analytes are available in the LANL database (version 4.1).</p> <p>These are not all the necessary corrections because the breadth of the problems indicates that the Army should carefully review the ecological screening values in the entire table and revise the entire document accordingly. Subsequent review may reveal additional problems that are not specifically identified here.</p>			
22.	Section 2.8	Statements in this section that SHAD-041 is "frequently occupied by colonies of burrowing owls" contradicts information provided in the soil ERA. These statements should be reconciled with those in the soil ERA.	The RI text has been corrected for consistency with findings of the SLERA.		
23.	Section 6.0	This section will need some revising once necessary corrections to the soil ERA are completed.	The RI text has been corrected for consistency with findings of the SLERA.		
24.	Section 9.1.2	The values of the ecological remedial action objectives will change based on necessary corrections in the soil ERA.	The RI text has been corrected for consistency with findings of the SLERA.		

## Additional Comments



<b>Project</b>	Sites 33/29 (SHAD-041)	
<b>Document</b>	Draft Final Remedial Investigation/Feasibility Study Report, Sites 33/29 (SHAD-041)	<b>Date</b> January 2019
<b>Contractor</b>	Sharpe Army Depot, Lathrop, California	
<b>Contract</b>	Ahtna Environmental, Inc. USACE Contract No. W91238-16-C-0013	

<b>Reviewer</b>	<b>Reference</b>	<b>Review Comment</b>	<b>Organization</b>	<b>U.S. Environmental Protection Agency</b>	<b>Date</b>

<b>Specific Comment</b>		<b>Response</b>
1.	<p>Table F1-1</p> <p>Evaluation of the Response to Specific Comment (SC) 11b: The response does not address the comment. The lower residential screening values were not used consistently in Table F1-1, October 2017 SHAD-041 Soil Sample Results and Summary Statistics. For example, the screening level for naphthalene in Table F1-1 is 17,000 micrograms per kilogram (µg/kg); however, this value represents the industrial screening level in the May 2018 EPA Regional Screening Levels (RSLs) table. The lower screening level in the 2018 EPA RSL table is 3.8 milligrams per kilogram (mg/kg) or 3,800 µg/kg for residential soil, which should be used in the table. The table should be revised to ensure that the lower residential screening levels are used for each analyte. Please revise the Table F1-1 to ensure that each analyte's soil screening level refers to the lower residential RSL.</p>	<p>Table F1-1 has been revised to include residential RSLs.</p>

Reviewer	Nadia Burke	Organization	U.S. Environmental Protection Agency	Date	Feb. 20, 2019
Item	Reference	Review Comment	Response		
2.	Table F1-1	Evaluation of the Response to SC 16: The response addresses the comment; however, the reference citation for footnote 1 in Table F1-1 was not revised and still reads, "1Soil Screening Levels are June 2017 USEPA Regional." Please ensure citations are updated in the Table and throughout the text to reference the May 2018 EPA RSLs.	Table F1-1 has been revised to reference the November 2018 USEPA RSLs (most current version) and June 2018 DTSC Screening Levels.		

Reviewer	Michael Darrett	Organization	Department of Toxic Substances Control	Date	Feb. 26, 2019
Item	Reference	Review Comment	Response		
General Comment					
1.	Comment Letter	The primary impediment to the approval and acceptance of this document is the proposal to utilize a cleanup goal of 1000 mg/kg for lead. The proposed level is not protective of certain workers and cannot be accepted in conjunction with the proposed usage. The Report and associated evaluations should have used the DTSC-accepted level of 320 mg/kg for lead as the cleanup goal. This level is protective of pregnant adult workers who may be employed at the site under the proposed usage. Based upon our review of the document and available information, DTSC does not envision approval of the Report with the less protective cleanup goal.	Clarification. The Sharpe OU 2 ROD-specified cleanup level of 1,000 mg/kg for lead was used in the report and evaluations. Please note that confirmation sampling will be a part of the SHAD-041 removal action and lead concentrations will be evaluated at that time to ensure protectiveness of human health and environment for the proposed usage of the site.		
2.	Appendix F Section F1 .2.3 - Relevant Exposure Pathways and Section 10.2.3 - Land Use Controls.	Appendix F Section F1 .2.3 - Relevant Exposure Pathways and Section 10.2.3- Land Use Controls. The Army proposes a land use control recommendation which will include language regarding the need to conduct a vapor intrusion evaluation prior to constructing office/industrial buildings or residential land use. The land use control should require a vapor intrusion evaluation that is reviewed and approved	Section 10.2.3 has been revised to include requirements to prohibit construction of schools, daycare centers, hospitals, or convalescent homes, as well as prohibiting construction of offices, industrial buildings or residences without a vapor intrusion evaluation and risk assessment using the applicable risk parameters.		

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	10.2.3- Land Use Controls.	by cognizant agencies prior to the initiation of construction of an office, industrial building, or any sensitive use. The land use controls should prohibit construction of a school, daycare center, hospital, or convalescent home, in addition to prohibiting construction of offices, industrial buildings or residences without further vapor intrusion evaluation and risk assessment using the applicable risk parameters.			
<b>Specific Comment</b>					
3.	Section 5.0 Page 22	The text on page 22 states, "For COPCs, potential human health exposures to a hypothetical resident, commercial/industrial worker, and commercial worker were evaluated." Please replace this sentence with "For COPCs, potential human health exposures to a hypothetical resident, commercial/industrial worker, and construction worker were evaluated." This corrects the repetitive "commercial worker" and inserts "construction worker."	Section 5.0 has been revised accordingly.		
4.	Specific Comment 15	DTSC concurs and appreciates the Army's response to Specific Comment 15. Please ensure that the Notes section for the fourth pages of Tables 2, 3, 4, 5, 6 and 7 are not cut off. In addition, please ensure the fields for Table F1-1 are not cut off for m-p-xylene on page 48 of 98, for o-xylene on pages 49 through 72 of 98, and ensure that the Notes section is not cut off throughout Table F1-1.	Tables 2, 3, 4, 5, 6, 7, and Table F1-1 has been revised to reformat the tables to print correctly accordingly.		
5.	Specific Comment 16	DTSC notes that the Army's response to Specific Comment 16 resulted in numerous changes to Table F1-1. However, the reference to the June 2017 U.S. EPA RSLs in Note 1 of Table F1-1 should be revised to reflect that the November 2018 USEPA RSLs and June 2018 DTSC-SLs are the screening level values listed.	Table F1-1 has been revised. The reference to the June 2017 US EPA RSLs in Note 1 was revised to reflect the November 2018 USEPA RSLs and June 2018 DTSC-SLs.		

Reviewer	Michael Darrett	Organization	Department of Toxic Substances Control	Date	Feb. 26, 2019
Item	Reference	Review Comment	Response		
6.	Specific Comment 19	<p>a) The evaluation of low-molecular-weight (LMW) and high-molecular-weight (HMW) polycyclic aromatic hydrocarbons (PAHs) is incorrect. LMW PAHs are those with fewer than four aromatic ("ring") structures and HMW PAHs are those with four or more rings. For the detected PAH analytes in soil at SHAD-041, the LMW PAHs are acenaphthene, anthracene, fluorene, 2 methylanthracene, and naphthalene; the HMW PAHs are benzo[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[b]pyrene, chrysene, fluoranthene, indeno[1,2,3-cd] pyrene, and pyrene. The summations presented in Table F2-1 should be recalculated and footnotes corrected accordingly.</p> <p>b) The ecological screening values for the LMW PAHs and HMW PAHs should be listed in the "Eco-SSL" column, not the "LANL NOAEL-based ESL (Birds and Mammals)" column.</p> <p>c) The "LANL NOAEL-based ESL (Birds and Mammals)" for chromium should be 23 milligrams per kilogram (mg/kg), not 73 mg/kg. This changes the original conclusion to now retain chromium as a COPC. Therefore, the relevant text and tables in the Draft Final RI/FS Report will need to be revised to address chromium as an ecological COPC.</p>	<p>a) The values and summations in Table F2-1 have been revised/recalculated and the footnotes corrected accordingly.</p> <p>b) Table F2-1 has been revised to list the ecological screening values for the LMW PAHs and HMW PAHs as recommended.</p> <p>c) Table F2-1 has been revised to include 23 mg/kg as the chromium "LANL NOAEL-based ESL (Birds and Mammals)". Appendix F-2 Sections F2.2.2 and F2.3, and RI/FS Report Section 6.0 have been revised to address chromium as an ecological COPC. Total Chromium does not have an HQ greater than 1 using the 95 UCLs for 0-5 and 0-10 ft bgs, indicating that adverse ecological effects to burrowing owls as a result of exposure to hexavalent chromium at the Sharpe Army Depot are not expected to occur.</p>		
7.	Specific Comment 21	<p>Responses adequate, except as noted above (Specific Comment #19).</p>	<p>Comment noted.</p>		
8.	Specific Comment 23	<p>The text of Section 6.0 of the Report will need to be revised to include the evaluation of chromium as an ecological COPC (see Specific Comment 19c, above).</p>	<p>The text of Section 6.0 has been revised to include chromium evaluation as an ecological COPC. In addition, the RI/FS Report text was corrected to be consistent with findings of the SLERA, where applicable.</p>		

<b>Reviewer</b>	Michael Darrett	<b>Organization</b>	Department of Toxic Substances Control	<b>Date</b>	Feb. 26, 2019
<b>Item</b>	<b>Reference</b>	<b>Review Comment</b>	<b>Response</b>		
9.	Specific Comment 24	The ecological remedial action objectives in Section 9.1.2 of the Report may need to be revised depending on the outcome of the evaluation of chromium as an ecological COPC (see Specific Comment 19c, above).	Based on the outcome of the chromium evaluation as an ecological COPC, no change to the ecological remedial action objectives in Section 9.1.2 is required.		