FINAL STATUS SURVEY REPORT

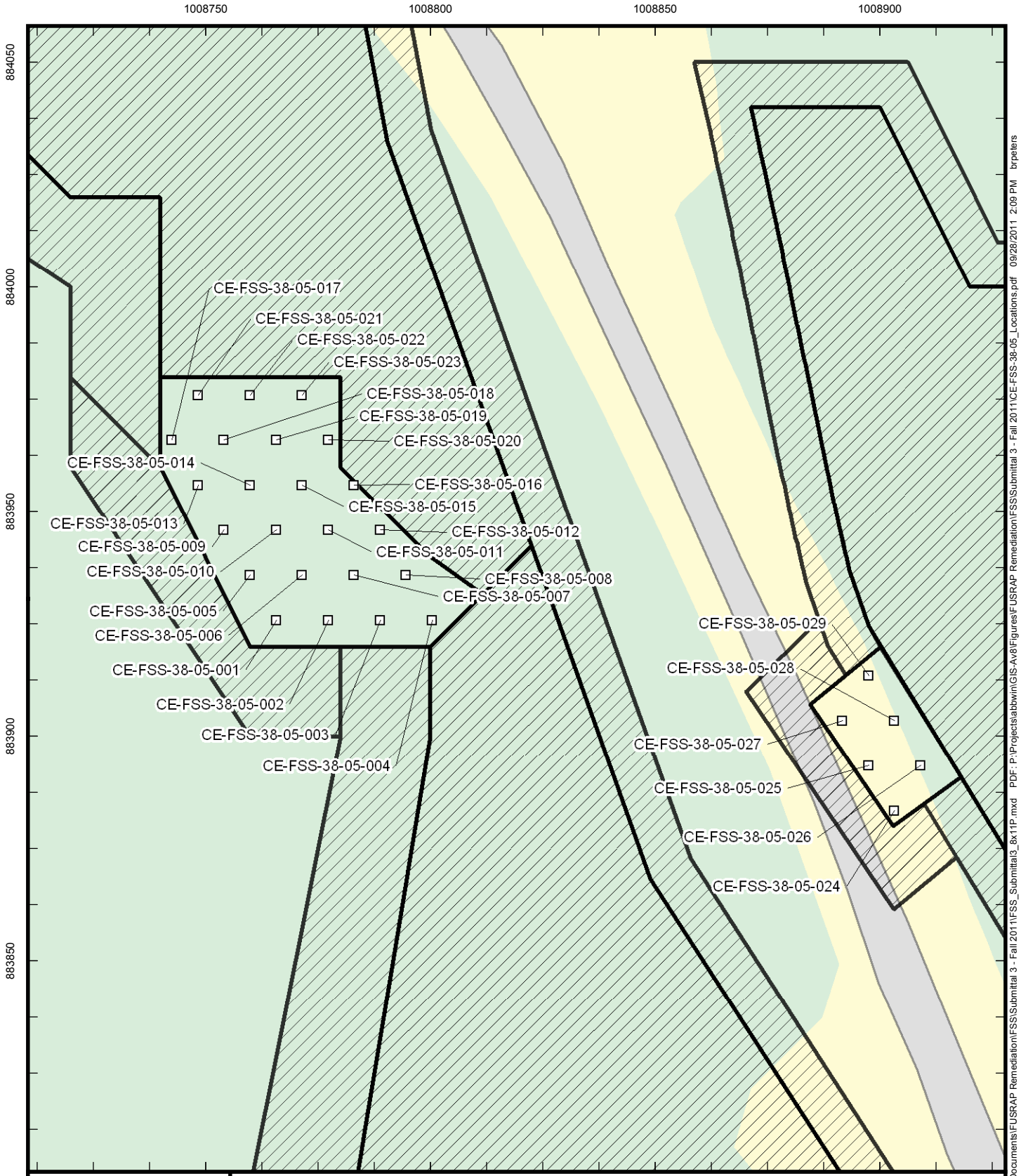
SUBMITTAL NUMBER 3

CE WINDSOR SITE

WINDSOR, CONNECTICUT

APPENDIX I

SURVEY UNIT CE-FSS-38-05
RESULTS AND DATA EVALUATION



CT State Plane NAD 83 Feet

Legend

- Sample Location
- CE-FSS-38-05
- Not in Survey Unit
- Forest
- Open
- Water
- Road

N

0 15 30 Feet

Prepared/Date: BRP 09/28/11 | Checked/Date: GSM 09/28/11

Sample Locations
Survey Unit CE-FSS-38-05

Final Status Survey
CE Windsor Site
Windsor, Connecticut

amec

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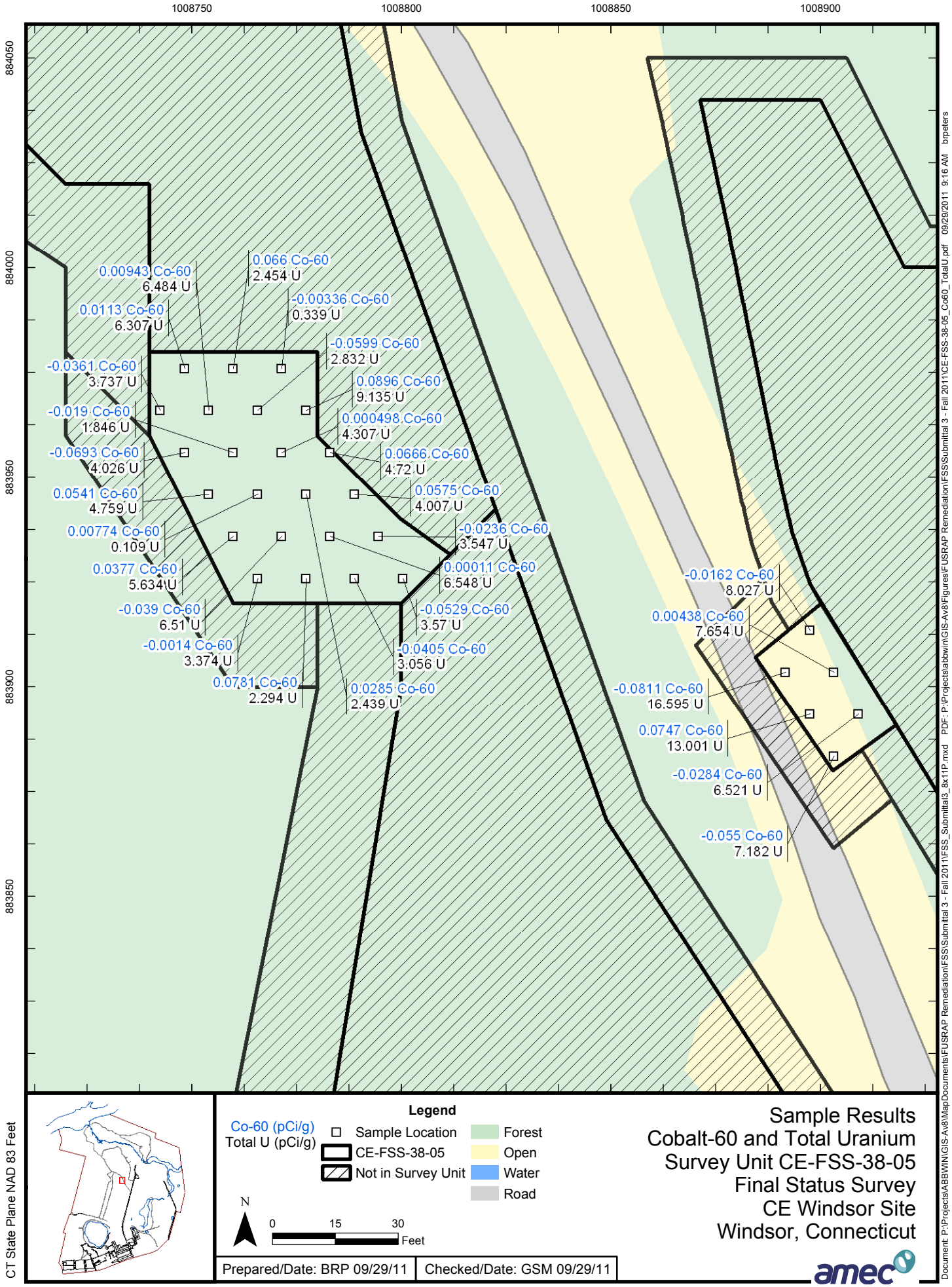
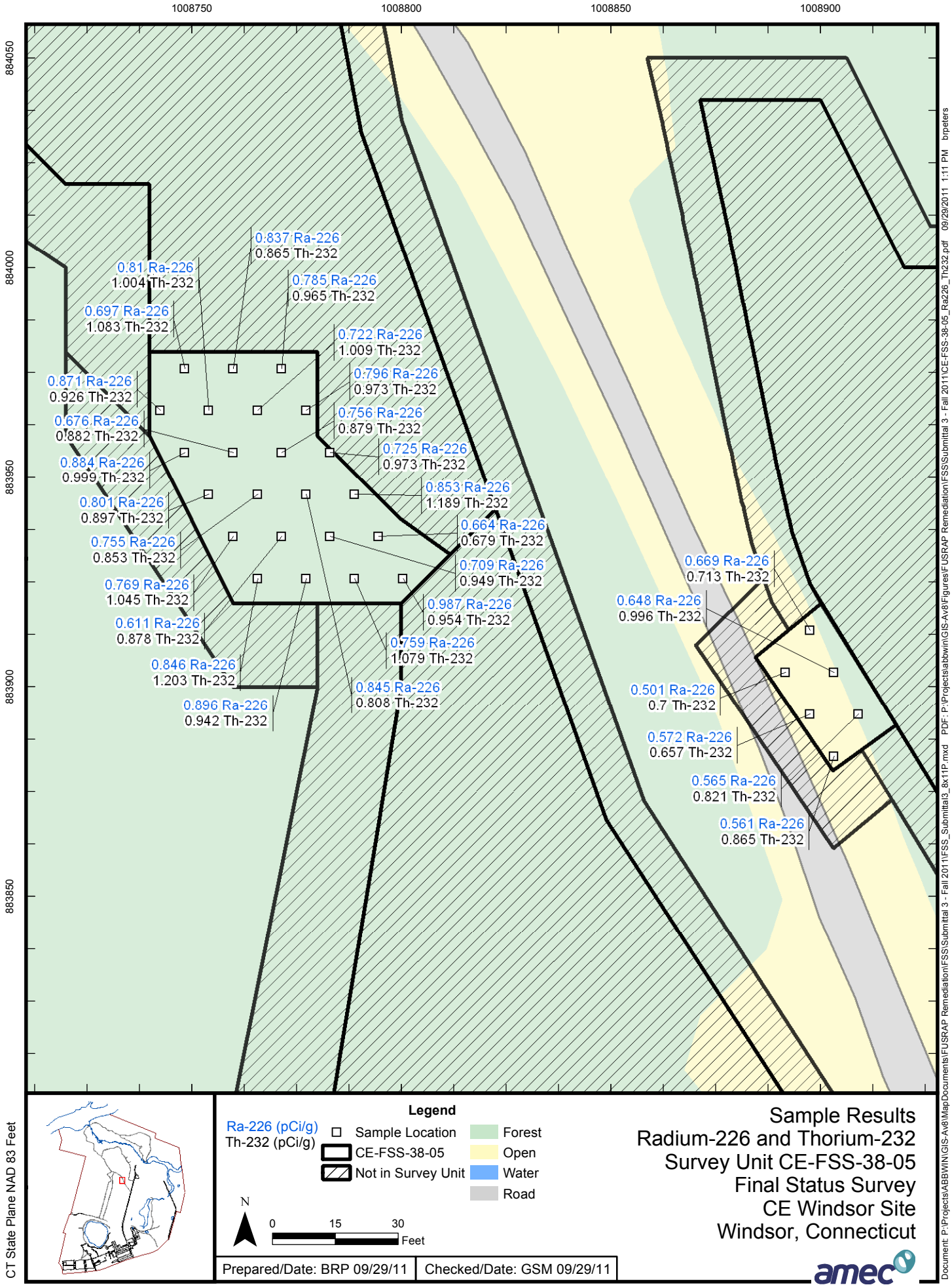

1008750
1008800
1008850
1008900
884050
884000
883950
883900
883850
0.00943 Co-60
6.484 U
0.066 Co-60
2.454 U
0.0113 Co-60
6.307 U
-0.00336 Co-60
0.339 U
-0.0599 Co-60
2.832 U
-0.0361 Co-60
3.737 U
0.0896 Co-60
9.135 U
-0.019 Co-60
1.846 U
0.000498 Co-60
4.307 U
-0.0693 Co-60
4.026 U
0.0666 Co-60
4.72 U
0.0541 Co-60
4.759 U
0.0575 Co-60
4.007 U
0.00774 Co-60
0.109 U
-0.0236 Co-60
3.547 U
0.0377 Co-60
5.634 U
0.00011 Co-60
6.548 U
-0.039 Co-60
6.51 U
-0.0529 Co-60
3.57 U
-0.0014 Co-60
3.374 U
-0.0405 Co-60
3.056 U
0.0781 Co-60
2.294 U
0.0285 Co-60
2.439 U
-0.0162 Co-60
8.027 U
0.00438 Co-60
7.654 U
-0.0811 Co-60
16.595 U
0.0747 Co-60
13.001 U
-0.0284 Co-60
6.521 U
-0.055 Co-60
7.182 U
CT State Plane NAD 83 Feet
Legend
Co-60 (pCi/g)
Total U (pCi/g)
Sample Location
CE-FSS-38-05
Not in Survey Unit
Forest
Open
Water
Road
N
0
15
30
Feet
Prepared/Date: BRP 09/29/11
Checked/Date: GSM 09/29/11
Sample Results
Cobalt-60 and Total Uranium
Survey Unit CE-FSS-38-05
Final Status Survey
CE Windsor Site
Windsor, Connecticut
amec
Document: P:\Projects\ABBWIN\GIS-Av8\MapDocuments\FUSRAP Remediation\FSS\Submittal 3 - Fall 2011\FSS_Submittal3_8x11P.mxd PDF: P:\Projects\abbwin\GIS-Av8\Figures\FUSRAP Remediation\FSS\Submittal 3 - Fall 2011\CE-FSS-38-05_Co60_TotalU.pdf 09/29/2011 9:16 AM brpeters


1008750
1008800
1008850
1008900
884050
884000
883950
883900
883850
0.837 Ra-226
0.865 Th-232
0.81 Ra-226
1.004 Th-232
0.785 Ra-226
0.965 Th-232
0.697 Ra-226
1.083 Th-232
0.722 Ra-226
1.009 Th-232
0.871 Ra-226
0.926 Th-232
0.796 Ra-226
0.973 Th-232
0.676 Ra-226
0.882 Th-232
0.756 Ra-226
0.879 Th-232
0.884 Ra-226
0.999 Th-232
0.725 Ra-226
0.973 Th-232
0.801 Ra-226
0.897 Th-232
0.853 Ra-226
1.189 Th-232
0.755 Ra-226
0.853 Th-232
0.664 Ra-226
0.679 Th-232
0.709 Ra-226
0.949 Th-232
0.769 Ra-226
1.045 Th-232
0.987 Ra-226
0.954 Th-232
0.611 Ra-226
0.878 Th-232
0.759 Ra-226
1.079 Th-232
0.846 Ra-226
1.203 Th-232
0.845 Ra-226
0.808 Th-232
0.896 Ra-226
0.942 Th-232
0.669 Ra-226
0.713 Th-232
0.648 Ra-226
0.996 Th-232
0.501 Ra-226
0.7 Th-232
0.572 Ra-226
0.657 Th-232
0.565 Ra-226
0.821 Th-232
0.561 Ra-226
0.865 Th-232
CT State Plane NAD 83 Feet
Legend
Ra-226 (pCi/g)
Th-232 (pCi/g)
Sample Location
CE-FSS-38-05
Not in Survey Unit
Forest
Open
Water
Road
N
0
15
30
Feet
Prepared/Date: BRP 09/29/11
Checked/Date: GSM 09/29/11
Sample Results
Radium-226 and Thorium-232
Survey Unit CE-FSS-38-05
Final Status Survey
CE Windsor Site
Windsor, Connecticut
amec
Document: P:\Projects\ABBWIN\GIS-Av8\MapDocuments\FUSRAP Remediation\FSS\Submittal 3 - Fall 2011\FSS_Submittal3_8x11P.mxd PDF: P:\Projects\abbwin\GIS-Av8\Figures\FUSRAP Remediation\FSS\Submittal 3 - Fall 2011\CE-FSS-38-05_Ra226_Th232.pdf 09/29/2011 1:11 PM brpeters

Survey Unit CE-FSS-38-05

Final Status Survey Volumetric Soil Sample Results

Sample ID	Ra-226 (pCi/g)				Co-60 (pCi/g)				Th-232 (pCi/g)				U-235 (pCi/g)				Total U	Sum of
	Activity	Uncert.	MDC	Qualifier	Activity	Uncert.	MDC	Qualifier	Activity	Uncert.	MDC	Qualifier	Activity	Uncert.	MDC	Qualifier	(pCi/g)	Fraction
FSS-38-05-001	8.46E-01	1.36E-01	2.20E-01		-1.40E-03	1.35E-01	1.97E-01	U	1.20E+00	2.10E-01	1.98E-01		1.09E-01	1.26E-01	1.93E-01	U	3.4	0.495
FSS-38-05-002	8.96E-01	1.56E-01	2.16E-01		7.81E-02	9.90E-02	1.95E-01	U	9.42E-01	1.49E-01	2.89E-01		7.40E-02	1.29E-01	1.93E-01	U	2.3	0.454
FSS-38-05-003	7.59E-01	1.48E-01	2.43E-01		-4.05E-02	1.16E-01	1.66E-01	U	1.08E+00	1.46E-01	2.56E-01		9.86E-02	1.21E-01	2.02E-01	UI	3.1	0.436
FSS-38-05-004	9.87E-01	1.75E-01	2.57E-01		-5.29E-02	1.02E-01	1.27E-01	U	9.54E-01	1.16E-01	2.01E-01		1.15E-01	1.09E-01	1.71E-01		3.6	0.454
FSS-38-05-005	7.69E-01	1.50E-01	2.71E-01		3.77E-02	1.39E-01	2.19E-01	U	1.04E+00	1.82E-01	3.21E-01		1.82E-01	2.05E-01	1.70E-01	UI	5.6	0.450
FSS-38-05-006	6.11E-01	1.45E-01	2.90E-01		-3.90E-02	1.11E-01	1.26E-01	U	8.78E-01	1.41E-01	2.59E-01		2.10E-01	1.57E-01	2.52E-01		6.5	0.359
FSS-38-05-007	7.09E-01	1.47E-01	2.72E-01		1.10E-04	1.35E-01	2.05E-01	U	9.49E-01	1.99E-01	2.08E-01		2.11E-01	1.17E-01	1.75E-01		6.5	0.407
FSS-38-05-008	6.64E-01	1.36E-01	3.20E-01		-2.36E-02	1.13E-01	1.59E-01	U	6.79E-01	1.19E-01	1.96E-01		1.14E-01	1.15E-01	1.91E-01	UI	3.5	0.319
FSS-38-05-009	8.01E-01	1.41E-01	2.24E-01		5.41E-02	1.18E-01	2.08E-01	U	8.97E-01	1.83E-01	2.27E-01		1.54E-01	1.29E-01	2.11E-01	UI	4.8	0.422
FSS-38-05-010	7.55E-01	1.33E-01	2.51E-01		7.74E-03	9.83E-02	1.55E-01	U	8.53E-01	1.23E-01	1.84E-01		3.51E-03	1.15E-01	1.63E-01	U	0.1	0.383
FSS-38-05-011	8.45E-01	1.68E-01	2.58E-01		2.85E-02	1.12E-01	1.87E-01	U	8.08E-01	1.39E-01	2.92E-01		7.87E-02	1.23E-01	1.87E-01	U	2.4	0.400
FSS-38-05-012	8.53E-01	1.40E-01	2.41E-01		5.75E-02	1.04E-01	1.86E-01	U	1.19E+00	1.49E-01	2.47E-01		1.29E-01	1.23E-01	1.96E-01		4.0	0.506
FSS-38-05-013	8.84E-01	1.44E-01	2.70E-01		-6.93E-02	1.60E-01	1.83E-01	U	9.99E-01	2.02E-01	2.23E-01		1.30E-01	1.19E-01	1.88E-01		4.0	0.440
FSS-38-05-014	6.76E-01	1.50E-01	3.35E-01		-1.90E-02	1.05E-01	1.55E-01	U	8.82E-01	1.50E-01	2.85E-01		5.95E-02	3.19E-02	1.06E-01		1.8	0.370
FSS-38-05-015	8.88E-01	1.38E-01	2.49E-01		-1.94E-02	1.34E-01	1.66E-01	U	8.02E-01	1.14E-01	2.11E-01		9.65E-02	1.09E-01	1.74E-01		3.0	0.399
FSS-38-05-015LR	6.25E-01	1.42E-01	2.84E-01		2.04E-02	1.13E-01	1.84E-01	U	9.55E-01	1.56E-01	2.40E-01		1.81E-01	1.24E-01	1.93E-01		5.6	0.392
FSS-38-05-015AVE	7.56E-01				4.98E-04				8.79E-01				1.39E-01				4.3	0.396
FSS-38-05-016	7.25E-01	1.36E-01	2.67E-01		6.66E-02	6.89E-02	1.59E-01	U	9.73E-01	1.43E-01	2.81E-01		1.52E-01	1.02E-01	1.57E-01		4.7	0.426
FSS-38-05-017	8.71E-01	1.55E-01	3.45E-01		-3.61E-02	1.19E-01	1.58E-01	U	9.26E-01	1.12E-01	1.95E-01		1.21E-01	1.24E-01	1.94E-01	U	3.7	0.425
FSS-38-05-018	8.10E-01	1.37E-01	2.16E-01		9.43E-03	1.25E-01	1.85E-01	U	1.00E+00	1.66E-01	3.37E-01		2.09E-01	1.13E-01	1.93E-01	U	6.5	0.445
FSS-38-05-019	7.22E-01	1.57E-01	3.61E-01		-5.99E-02	1.33E-01	1.73E-01	U	1.01E+00	1.91E-01	2.19E-01		9.13E-02	9.15E-02	1.51E-01	UI	2.8	0.406
FSS-38-05-020	7.96E-01	1.40E-01	2.70E-01		8.96E-02	5.86E-02	1.66E-01	U	9.73E-01	1.83E-01	1.92E-01		2.95E-01	1.56E-01	2.42E-01		9.1	0.454
FSS-38-05-021	6.97E-01	1.47E-01	2.54E-01		1.13E-02	9.36E-02	1.54E-01	U	1.08E+00	2.26E-01	3.42E-01		2.03E-01	1.08E-01	1.84E-01	U	6.3	0.439
FSS-38-05-022	8.37E-01	1.45E-01	2.35E-01		6.60E-02	1.31E-01	2.22E-01	U	8.65E-01	1.54E-01	2.46E-01		7.92E-02	1.32E-01	1.96E-01	U	2.5	0.420
FSS-38-05-023	7.85E-01	1.73E-01	2.99E-01		-3.36E-03	1.18E-01	1.83E-01	U	9.65E-01	1.71E-01	2.90E-01		1.09E-02	1.31E-01	1.87E-01	U	0.3	0.416
FSS-38-05-024	5.62E-01	1.06E-01	2.08E-01		-1.27E-03	6.85E-02	1.08E-01	U	8.55E-01	1.17E-01	1.65E-01		2.16E-01	1.03E-01	1.55E-01		6.7	0.350
FSS-38-05-024S	5.61E-01	1.05E-01	1.66E-01		-1.09E-01	1.08E-01	1.07E-01	U	8.76E-01	1.23E-01	2.23E-01		2.48E-01	9.03E-02	1.25E-01		7.7	0.336
FSS-38-05-024AVE	5.61E-01				-5.50E-02				8.65E-01				2.32E-01				7.2	0.343
FSS-38-05-025	5.72E-01	1.11E-01	1.86E-01		7.47E-02	7.39E-02	1.54E-01	U	6.57E-01	1.06E-01	1.78E-01		4.19E-01	1.75E-01	1.22E-01		13.0	0.330
FSS-38-05-026	5.98E-01	1.18E-01	2.67E-01		-1.03E-02	8.88E-02	1.31E-01	U	8.09E-01	1.25E-01	1.94E-01		2.28E-01	1.47E-01	2.36E-01		7.08	0.35
FSS-38-05-026S	5.31E-01	9.14E-02	1.93E-01		-4.66E-02	9.16E-02	1.07E-01	U	8.33E-01	1.30E-01	1.43E-01		1.92E-01	8.46E-02	1.25E-01		5.96	0.33
FSS-38-05-026AVE	5.65E-01				-2.84E-02				8.21E-01				2.10E-01				6.52	0.34
FSS-38-05-027	5.01E-01	9.87E-02	1.46E-01		-8.11E-02	8.67E-02	8.35E-02	U	7.00E-01	1.10E-01	2.02E-01		5.35E-01	1.72E-01	1.00E-01		16.60	0.30
FSS-38-05-028	6.48E-01	1.07E-01	1.83E-01		4.38E-03	9.52E-02	1.45E-01	U	9.96E-01	1.65E-01	1.60E-01		2.47E-01	9.24E-02	1.38E-01		7.65	0.41
FSS-38-05-029	5.72E-01	1.27E-01	1.34E-01		-3.57E-02	9.25E-02	1.27E-01	U	7.16E-01	1.08E-01	1.76E-01		2.52E-01	9.37E-02	1.34E-01		7.83	0.31
FSS-38-05-029LR	7.65E-01	1.26E-01	2.08E-01		3.41E-03	5.22E-02	8.94E-02	U	7.10E-01	1.01E-01	2.06E-01		2.65E-01	1.68E-01	2.80E-01		8.23	0.36
FSS-38-05-029AVE	6.69E-01				-1.62E-02				7.13E-01				2.59E-01				8.03	0.34

Survey Unit CE-FSS-38-05

One-Minute Static Field Measurement Results

Sample ID	Static Count Rate (cpm)	Ambient Background (cpm)	Net (cpm)	pCi/g
FSS-38-05-001	2750	2600	150	0.5
FSS-38-05-002	2682	2600	82	0.3
FSS-38-05-003	2879	2600	279	0.9
FSS-38-05-004	3036	2600	436	1.4
FSS-38-05-005	2758	2600	158	0.5
FSS-38-05-006	2651	2600	51	0.2
FSS-38-05-007	2919	2600	319	1.1
FSS-38-05-008	2963	2600	363	1.2
FSS-38-05-009	2836	2600	236	0.8
FSS-38-05-010	2659	2600	59	0.2
FSS-38-05-011	2693	2600	93	0.3
FSS-38-05-012	2773	2600	173	0.6
FSS-38-05-013	2716	2600	116	0.4
FSS-38-05-014	2802	2600	202	0.7
FSS-38-05-015	2612	2600	12	0.0
FSS-38-05-016	2890	2600	290	1.0
FSS-38-05-017	2668	2600	68	0.2
FSS-38-05-018	2761	2600	161	0.5
FSS-38-05-019	2858	2600	258	0.9
FSS-38-05-020	2695	2600	95	0.3
FSS-38-05-021	2786	2600	186	0.6
FSS-38-05-022	2658	2600	58	0.2
FSS-38-05-023	2721	2600	121	0.4
FSS-38-05-024	2612	2600	12	0.0
FSS-38-05-025	2587	2600	-13	0.0
FSS-38-05-026	2580	2600	-20	-0.1
FSS-38-05-027	2569	2600	-31	-0.1
FSS-38-05-028	2632	2600	32	0.1
FSS-38-05-029	2585	2600	-15	0.0

Survey Unit CE-FSS-38-05

Final Status Survey Sample GPS Coordinates

Sample ID	X_Coordinate	Y_Coordinate
FSS-38-05-001	1008765.73	883925.99
FSS-38-05-002	1008777.30	883925.99
FSS-38-05-003	1008788.88	883925.99
FSS-38-05-004	1008800.45	883925.99
FSS-38-05-005	1008759.94	883936.02
FSS-38-05-006	1008771.51	883936.02
FSS-38-05-007	1008783.09	883936.02
FSS-38-05-008	1008794.66	883936.02
FSS-38-05-009	1008754.15	883946.04
FSS-38-05-010	1008765.73	883946.04
FSS-38-05-011	1008777.30	883946.04
FSS-38-05-012	1008788.88	883946.04
FSS-38-05-013	1008748.37	883956.06
FSS-38-05-014	1008759.94	883956.06
FSS-38-05-015	1008771.51	883956.06
FSS-38-05-016	1008783.09	883956.06
FSS-38-05-017	1008742.58	883966.09
FSS-38-05-018	1008754.15	883966.09
FSS-38-05-019	1008765.73	883966.09
FSS-38-05-020	1008777.30	883966.09
FSS-38-05-021	1008748.37	883976.11
FSS-38-05-022	1008759.94	883976.11
FSS-38-05-023	1008771.51	883976.11
FSS-38-05-024	1008903.25	883883.54
FSS-38-05-025	1008897.46	883893.57
FSS-38-05-026	1008909.04	883893.57
FSS-38-05-027	1008891.68	883903.59
FSS-38-05-028	1008903.25	883903.59
FSS-38-05-029	1008897.46	883913.61

Descriptive Statistics Report

Summary Section of SU_3805_Co60

Count	Mean	Standard Deviation	Standard Error	Minimum	Maximum	Range
29	2.086138E-03	4.795518E-02	8.905052E-03	-0.0811	0.0896	0.1707

Counts Section of SU_3805_Co60

Rows	Sum of Frequencies	Missing Values	Distinct Values	Sum	Total Sum Squares	Adjusted Sum Squares
33	29	4	29	0.060498	6.451777E-02	6.439157E-02

Means Section of SU_3805_Co60

Parameter	Mean	Median	Geometric Mean	Harmonic Mean	Sum	Mode
Value	2.086138E-03	0.00011	0.0162974	2.774171E-03	0.060498	
Std Error	8.905052E-03				0.2582465	
95% LCL	-1.615504E-02	-0.0284			-0.468496	
95% UCL	2.032731E-02	0.0113			0.589492	
T-Value	0.2343					
Prob Level	0.816484					
Count	29		15	29		

Variation Section of SU_3805_Co60

Parameter	Variance	Standard Deviation	Unbiased Std Dev	Std Error of Mean	Interquartile Range	Range
Value	2.299699E-03	4.795518E-02	4.838517E-02	8.905052E-03	0.08345	0.1707
Std Error	4.344646E-04	6.406251E-03		1.189611E-03		
95% LCL	1.448278E-03	3.805624E-02		7.066867E-03		
95% UCL	4.206438E-03	6.485706E-02		1.204365E-02		

Skewness and Kurtosis Section of SU_3805_Co60

Parameter	Skewness	Kurtosis	Fisher's g1	Fisher's g2	Coefficient of Variation	Coefficient of Dispersion
Value	0.1992763	2.035058	0.2103148	-0.9153147	22.98754	348.5605
Std Error	0.2546635	0.3407882			96.01803	

Trimmed Section of SU_3805_Co60

Parameter	5% Trimmed	10% Trimmed	15% Trimmed	25% Trimmed	35% Trimmed	45% Trimmed
Trim-Mean	1.840536E-03	1.287845E-03	6.016256E-04	-1.986345E-03	-1.881207E-03	-2.575517E-04
Trim-Std Dev	4.230323E-02	3.719957E-02	3.208655E-02	0.0194262	9.580073E-03	1.004552E-03
Count	26.1	23.2	20.3	14.5	8.7	2.9

Mean-Deviation Section of SU_3805_Co60

Parameter	|X-Mean|	|X-Median|	(X-Mean)^2	(X-Mean)^3	(X-Mean)^4
Average	3.851932E-02	3.834166E-02	2.220399E-03	2.084981E-05	1.003319E-05
Std Error	5.356574E-03		4.194831E-04	2.548281E-05	2.719267E-06

Descriptive Statistics Report

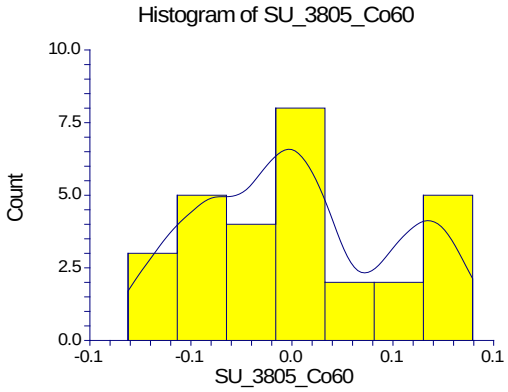
Quartile Section of SU_3805_Co60

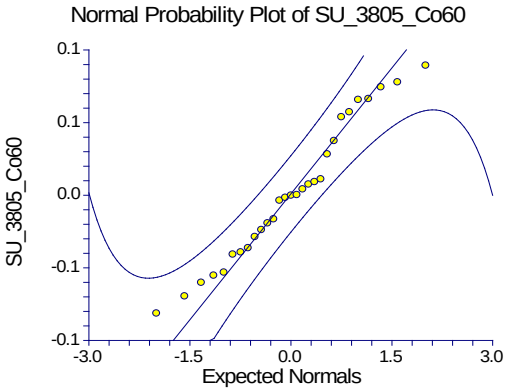
Parameter	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile
Value	-0.0599	-0.03755	0.00011	0.0459	0.0747
95% LCL	-0.0811	-0.0599	-0.0284	0.00438	0.0285
95% UCL	-0.0284	-0.00336	0.0113	0.0747	0.0896

Normality Test Section of SU_3805_Co60

Test Name	Test Value	Prob Level	10% Critical Value	5% Critical Value	Decision (5%)
Shapiro-Wilk W	0.961611	0.359954			Accept Normality
Anderson-Darling	0.3673106	0.431621			Accept Normality
Martinez-Iglewicz	0.9590513		1.153174	1.236092	Accept Normality
Kolmogorov-Smirnov	0.1134734		0.148	0.162	Accept Normality
D'Agostino Skewness	0.5124	0.608397	1.645	1.960	Accept Normality
D'Agostino Kurtosis	-1.4146	0.157197	1.645	1.960	Accept Normality
D'Agostino Omnibus	2.2635	0.322468	4.605	5.991	Accept Normality

Plots Section of SU_3805_Co60





Descriptive Statistics Report

Percentile Section of SU_3805_Co60

Percentile	Value	95% LCL	95% UCL	Exact Conf. Level
99.0	0.0896			
95.0	0.08385			
90.0	0.0747	0.0285	0.0896	95.1349
85.0	0.0663	0.0285	0.0896	96.8681
80.0	0.0575	0.00943	0.0781	96.7529
75.0	0.0459	0.00438	0.0747	97.0938
70.0	0.0285	0.000498	0.0666	95.8640
65.0	0.010365	-0.00336	0.0575	96.1771
60.0	0.00774	-0.0162	0.0541	96.3194
55.0	0.002439	-0.0236	0.0377	97.4848
50.0	0.00011	-0.0284	0.0113	95.7226
45.0	-0.00238	-0.0361	0.00943	96.1776
40.0	-0.0162	-0.0405	0.00438	95.9152
35.0	-0.0213	-0.0529	0.000498	96.9227
30.0	-0.0284	-0.055	-0.0014	95.8640
25.0	-0.03755	-0.0599	-0.00336	97.0938
20.0	-0.0405	-0.0811	-0.019	97.8748
15.0	-0.05395	-0.0811	-0.0284	96.8681
10.0	-0.0599	-0.0811	-0.0284	95.1349
5.0	-0.0752			
1.0	-0.0811			

Percentile Formula: Ave X(p[n+1])

Stem-Leaf Plot Section of SU_3805_Co60

Depth	Stem	Leaves
1	. |	8
2	S |	6
6	F |	5554
10	T |	3322
14	-0* |	1100
(6)	0* |	000001
9	T |	23
7	F |	55
5	S |	6677
1	. |	8

Unit = .01 Example: 1 |2 Represents 0.12

Descriptive Statistics Report

Summary Section of SU_3805_Total_U

Count	Mean	Standard Deviation	Standard Error	Minimum	Maximum	Range
29	5.2	3.497754	0.6495167	0.1	16.6	16.5

Counts Section of SU_3805_Total_U

Rows	Sum of Frequencies	Missing Values	Distinct Values	Sum	Total Sum Squares	Adjusted Sum Squares
33	29	4	25	150.8	1126.72	342.56

Means Section of SU_3805_Total_U

Parameter	Mean	Median	Geometric Mean	Harmonic Mean	Sum	Mode
Value	5.2	4.3	3.838584	1.472448	150.8	6.5
Std Error	0.6495167				18.83598	
95% LCL	3.869525	3.4			112.2162	
95% UCL	6.530475	6.5			189.3838	
T-Value	8.0060					
Prob Level	0.000000					
Count	29		29	29		4

Variation Section of SU_3805_Total_U

Parameter	Variance	Standard Deviation	Unbiased Std Dev	Std Error of Mean	Interquartile Range	Range
Value	12.23429	3.497754	3.529118	0.6495167	3.55	16.5
Std Error	4.866245	0.9837611		0.1826799		
95% LCL	7.704766	2.775746		0.5154431		
95% UCL	22.37805	4.730544		0.87844		

Skewness and Kurtosis Section of SU_3805_Total_U

Parameter	Skewness	Kurtosis	Fisher's g1	Fisher's g2	Coefficient of Variation	Coefficient of Dispersion
Value	1.41833	5.588056	1.496895	3.336135	0.6726451	0.5733761
Std Error	0.3702494	1.704027			0.1004259	

Trimmed Section of SU_3805_Total_U

Parameter	5% Trimmed	10% Trimmed	15% Trimmed	25% Trimmed	35% Trimmed	45% Trimmed
Trim-Mean	4.908621	4.784052	4.732266	4.696552	4.541954	4.332758
Trim-Std Dev	2.413372	1.82121	1.599018	1.237974	0.8788412	0.3512294
Count	26.1	23.2	20.3	14.5	8.7	2.9

Mean-Deviation Section of SU_3805_Total_U

Parameter	|X-Mean|	|X-Median|	(X-Mean)^2	(X-Mean)^3	(X-Mean)^4
Average	2.558621	2.465517	11.81241	57.58179	779.7189
Std Error	0.3906978		4.698443	37.62806	489.1772

Descriptive Statistics Report

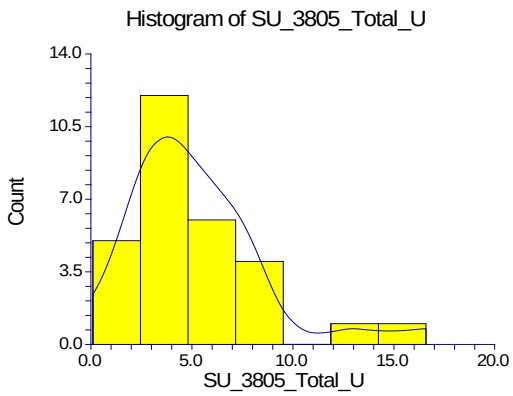
Quartile Section of SU_3805_Total_U

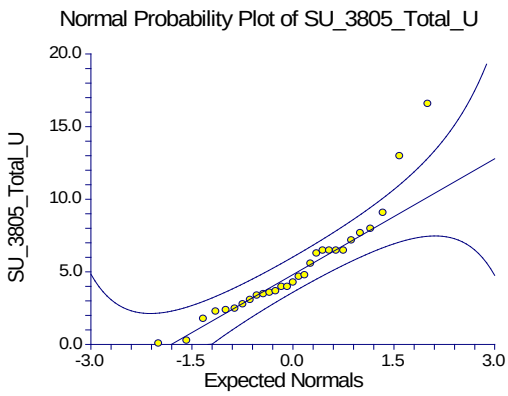
Parameter	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile
Value	1.8	2.95	4.3	6.5	9.1
95% LCL	0.1	1.8	3.4	4.8	6.5
95% UCL	3.4	4	6.5	9.1	16.6

Normality Test Section of SU_3805_Total_U

Test Name	Test Value	Prob Level	10% Critical Value	5% Critical Value	Decision (5%)
Shapiro-Wilk W	0.8856551	0.004519			Reject Normality
Anderson-Darling	0.9331975	0.017994			Reject Normality
Martinez-Iglewicz	1.597362		1.153174	1.236092	Reject Normality
Kolmogorov-Smirnov	0.1481738		0.148	0.162	Accept Normality
D'Agostino Skewness	3.0685	0.002151	1.645	1.960	Reject Normality
D'Agostino Kurtosis	2.5117	0.012016	1.645	1.960	Reject Normality
D'Agostino Omnibus	15.7242	0.000385	4.605	5.991	Reject Normality

Plots Section of SU_3805_Total_U





Descriptive Statistics Report

Percentile Section of SU_3805_Total_U

Percentile	Value	95% LCL	95% UCL	Exact Conf. Level
99.0	16.6			
95.0	14.8			
90.0	9.1	6.5	16.6	95.1349
85.0	7.85	6.5	16.6	96.8681
80.0	7.2	6.3	13	96.7529
75.0	6.5	4.8	9.1	97.0938
70.0	6.5	4.7	8	95.8640
65.0	6.4	4	7.2	96.1771
60.0	5.6	3.7	6.5	96.3194
55.0	4.75	3.5	6.5	97.4848
50.0	4.3	3.4	6.5	95.7226
45.0	4	3.1	6.3	96.1776
40.0	3.7	2.5	4.8	95.9152
35.0	3.55	2.4	4.7	96.9227
30.0	3.4	2.3	4	95.8640
25.0	2.95	1.8	4	97.0938
20.0	2.5	0.1	3.6	97.8748
15.0	2.35	0.1	3.4	96.8681
10.0	1.8	0.1	3.4	95.1349
5.0	0.2			
1.0	0.1			

Percentile Formula: Ave X(p[n+1])

Stem-Leaf Plot Section of SU_3805_Total_U

Depth	Stem	Leaves
2	0 |	13
3	1 |	8
7	2 |	3458
12	3 |	14567
(5)	4 |	00378
12	5 |	6
11	6 |	35555
6	7 |	27
4	8 |	0
3	9 |	1
High	|	130, 166

Unit = .1 Example: 1 |2 Represents 1.2

Descriptive Statistics Report

Summary Section of SU_3805_Ra226

Count	Mean	Standard Deviation	Standard Error	Minimum	Maximum	Range
29	0.7437931	0.1155911	2.146474E-02	0.501	0.987	0.486

Counts Section of SU_3805_Ra226

Rows	Sum of Frequencies	Missing Values	Distinct Values	Sum	Total Sum Squares	Adjusted Sum Squares
33	29	4	29	21.57	16.41773	0.3741167

Means Section of SU_3805_Ra226

Parameter	Mean	Median	Geometric Mean	Harmonic Mean	Sum	Mode
Value	0.7437931	0.756	0.7347291	0.7252607	21.57	
Std Error	2.146474E-02				0.6224774	
95% LCL	0.6998246	0.676			20.29491	
95% UCL	0.7877616	0.801			22.84509	
T-Value	34.6519					
Prob Level	0.000000					
Count	29		29	29		

Variation Section of SU_3805_Ra226

Parameter	Variance	Standard Deviation	Unbiased Std Dev	Std Error of Mean	Interquartile Range	Range
Value	1.336131E-02	0.1155911	0.1166276	2.146474E-02	0.1745	0.486
Std Error	3.053271E-03	1.867781E-02		3.468381E-03		
95% LCL	8.414532E-03	9.173076E-02		1.703397E-02		
95% UCL	2.443952E-02	0.1563314		2.903002E-02		

Skewness and Kurtosis Section of SU_3805_Ra226

Parameter	Skewness	Kurtosis	Fisher's g1	Fisher's g2	Coefficient of Variation	Coefficient of Dispersion
Value	-0.1922832	2.514365	-0.2029344	-0.3417855	0.1554077	0.1215107
Std Error	0.3097408	0.4332937			1.895175E-02	

Trimmed Section of SU_3805_Ra226

Parameter	5% Trimmed	10% Trimmed	15% Trimmed	25% Trimmed	35% Trimmed	45% Trimmed
Trim-Mean	0.7443046	0.7465905	0.7497833	0.751	0.7529023	0.7566552
Trim-Std Dev	9.583991E-02	8.296163E-02	6.868285E-02	4.868873E-02	2.858382E-02	2.084425E-03
Count	26.1	23.2	20.3	14.5	8.7	2.9

Mean-Deviation Section of SU_3805_Ra226

Parameter	|X-Mean|	|X-Median|	(X-Mean)^2	(X-Mean)^3	(X-Mean)^4
Average	9.305589E-02	9.186207E-02	1.290058E-02	-2.817443E-04	4.18453E-04
Std Error	1.291149E-02		2.947986E-03	4.38892E-04	1.638957E-04

Descriptive Statistics Report

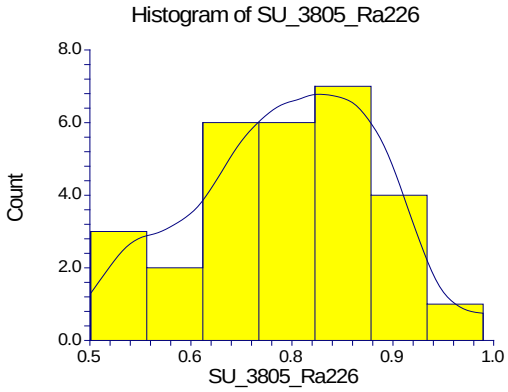
Quartile Section of SU_3805_Ra226

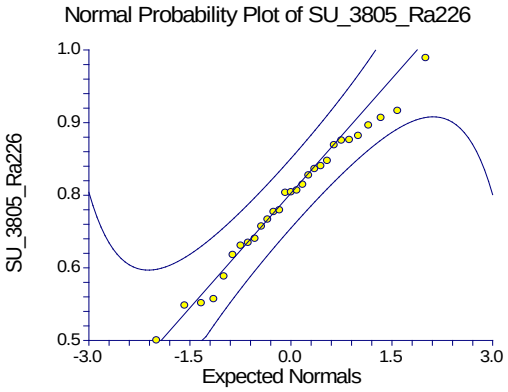
Parameter	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile
Value	0.565	0.6665	0.756	0.841	0.884
95% LCL	0.501	0.565	0.676	0.769	0.81
95% UCL	0.676	0.725	0.801	0.884	0.987

Normality Test Section of SU_3805_Ra226

Test Name	Test Value	Prob Level	10% Critical Value	5% Critical Value	Decision (5%)
Shapiro-Wilk W	0.9838551	0.923445			Accept Normality
Anderson-Darling	0.1981013	0.886972			Accept Normality
Martinez-Iglewicz	0.996052		1.153174	1.236092	Accept Normality
Kolmogorov-Smirnov	6.931969E-02		0.148	0.162	Accept Normality
D'Agostino Skewness	-0.4946	0.620913	1.645	1.960	Accept Normality
D'Agostino Kurtosis	-0.2574	0.796855	1.645	1.960	Accept Normality
D'Agostino Omnibus	0.3109	0.856051	4.605	5.991	Accept Normality

Plots Section of SU_3805_Ra226





Descriptive Statistics Report

Percentile Section of SU_3805_Ra226

Percentile	Value	95% LCL	95% UCL	Exact Conf. Level
99.0	0.987			
95.0	0.9415			
90.0	0.884	0.81	0.987	95.1349
85.0	0.862	0.81	0.987	96.8681
80.0	0.846	0.796	0.896	96.7529
75.0	0.841	0.769	0.884	97.0938
70.0	0.81	0.759	0.871	95.8640
65.0	0.7985	0.725	0.846	96.1771
60.0	0.785	0.722	0.845	96.3194
55.0	0.764	0.697	0.837	97.4848
50.0	0.756	0.676	0.801	95.7226
45.0	0.74	0.669	0.796	96.1776
40.0	0.722	0.648	0.769	95.9152
35.0	0.703	0.611	0.759	96.9227
30.0	0.676	0.572	0.755	95.8640
25.0	0.6665	0.565	0.725	97.0938
20.0	0.648	0.501	0.709	97.8748
15.0	0.5915	0.501	0.676	96.8681
10.0	0.565	0.501	0.676	95.1349
5.0	0.531			
1.0	0.501			

Percentile Formula: Ave X(p[n+1])

Stem-Leaf Plot Section of SU_3805_Ra226

Depth	Stem	Leaves
1	5*	0
4	.	667
6	6*	14
10	.	6679
13	7*	022
(6)	.	555689
10	8*	01344
5	.	5789
1	9*	
1	.	8

Unit = .01 Example: 1 |2 Represents 0.12

Descriptive Statistics Report

Summary Section of SU_3805_Th232

Count	Mean	Standard Deviation	Standard Error	Minimum	Maximum	Range
29	0.9232414	0.13497	0.0250633	0.657	1.2	0.543

Counts Section of SU_3805_Th232

Rows	Sum of Frequencies	Missing Values	Distinct Values	Sum	Total Sum Squares	Adjusted Sum Squares
33	29	4	26	26.774	25.22894	0.5100733

Means Section of SU_3805_Th232

Parameter	Mean	Median	Geometric Mean	Harmonic Mean	Sum	Mode
Value	0.9232414	0.942	0.9133941	0.9031833	26.774	
Std Error	0.0250633				0.7268357	
95% LCL	0.8719015	0.865			25.28514	
95% UCL	0.9745812	0.973			28.26286	
T-Value	36.8364					
Prob Level	0.000000					
Count	29		29	29		

Variation Section of SU_3805_Th232

Parameter	Variance	Standard Deviation	Unbiased Std Dev	Std Error of Mean	Interquartile Range	Range
Value	0.0182169	0.13497	0.1361802	0.0250633	0.1405	0.543
Std Error	4.641036E-03	2.431435E-02		4.515062E-03		
95% LCL	1.147243E-02	0.1071094		1.988972E-02		
95% UCL	0.033321	0.1825404		0.0338969		

Skewness and Kurtosis Section of SU_3805_Th232

Parameter	Skewness	Kurtosis	Fisher's g1	Fisher's g2	Coefficient of Variation	Coefficient of Dispersion
Value	-8.418763E-02	2.882257	-8.885105E-02	9.842648E-02	0.1461915	0.1093052
Std Error	0.2698622	0.536688			1.925898E-02	

Trimmed Section of SU_3805_Th232

Parameter	5% Trimmed	10% Trimmed	15% Trimmed	25% Trimmed	35% Trimmed	45% Trimmed
Trim-Mean	0.9224502	0.9243966	0.9274976	0.9294482	0.9297931	0.9390517
Trim-Std Dev	0.1100002	8.615395E-02	6.390062E-02	4.716723E-02	0.0351197	1.179969E-02
Count	26.1	23.2	20.3	14.5	8.7	2.9

Mean-Deviation Section of SU_3805_Th232

Parameter	|X-Mean|	|X-Median|	(X-Mean)^2	(X-Mean)^3	(X-Mean)^4
Average	0.1038026	0.1029655	1.758873E-02	-1.963813E-04	8.916652E-04
Std Error	0.0150761		0.004481	6.123935E-04	3.198096E-04

Descriptive Statistics Report

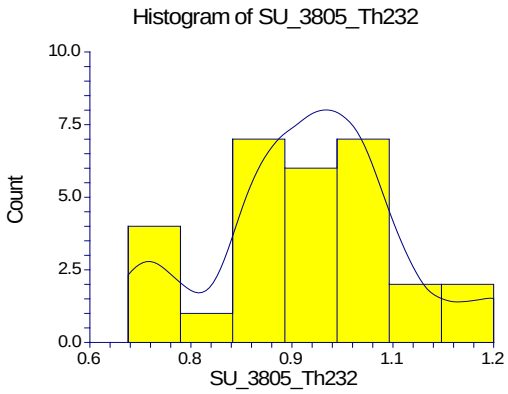
Quartile Section of SU_3805_Th232

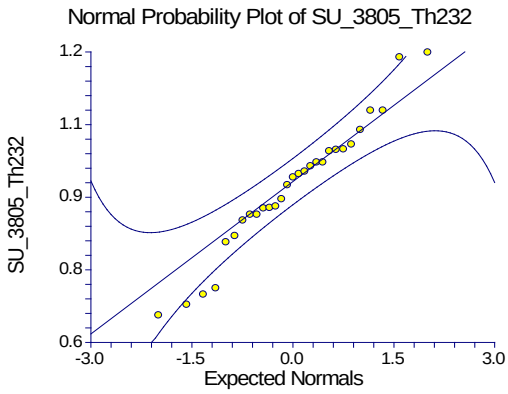
Parameter	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile
Value	0.7	0.859	0.942	0.9995	1.08
95% LCL	0.657	0.7	0.865	0.954	0.996
95% UCL	0.865	0.897	0.973	1.08	1.2

Normality Test Section of SU_3805_Th232

Test Name	Test Value	Prob Level	10% Critical Value	5% Critical Value	Decision (5%)
Shapiro-Wilk W	0.9685614	0.521352			Accept Normality
Anderson-Darling	0.343459	0.489314			Accept Normality
Martinez-Iglewicz	1.018009		1.153174	1.236092	Accept Normality
Kolmogorov-Smirnov	8.776339E-02		0.148	0.162	Accept Normality
D'Agostino Skewness	-0.2174	0.827921	1.645	1.960	Accept Normality
D'Agostino Kurtosis	0.3559	0.721929	1.645	1.960	Accept Normality
D'Agostino Omnibus	0.1739	0.916723	4.605	5.991	Accept Normality

Plots Section of SU_3805_Th232





Descriptive Statistics Report

Percentile Section of SU_3805_Th232

Percentile	Value	95% LCL	95% UCL	Exact Conf. Level
99.0	1.2			
95.0	1.195			
90.0	1.08	0.996	1.2	95.1349
85.0	1.06	0.996	1.2	96.8681
80.0	1.01	0.973	1.19	96.7529
75.0	0.9995	0.954	1.08	97.0938
70.0	0.996	0.949	1.08	95.8640
65.0	0.973	0.897	1.01	96.1771
60.0	0.965	0.882	1	96.3194
55.0	0.9515	0.878	0.999	97.4848
50.0	0.942	0.865	0.973	95.7226
45.0	0.9115	0.865	0.973	96.1776
40.0	0.882	0.821	0.954	95.9152
35.0	0.8785	0.808	0.949	96.9227
30.0	0.865	0.713	0.926	95.8640
25.0	0.859	0.7	0.897	97.0938
20.0	0.821	0.657	0.879	97.8748
15.0	0.7605	0.657	0.865	96.8681
10.0	0.7	0.657	0.865	95.1349
5.0	0.668			
1.0	0.657			

Percentile Formula: Ave X(p[n+1])

Stem-Leaf Plot Section of SU_3805_Th232

Depth	Stem	Leaves
Low		65
2	6.	7
4	7*	01
4	.	
6	8*	02
13	.	5667789
(3)	9*	244
13	.	567799
7	10*	014
4	.	88
2	11*	
2	.	9
1	12*	0

Unit = .01 Example: 1 |2 Represents 0.12

Descriptive Statistics Report

Summary Section of SU_3805_SOF

Count	Mean	Standard Deviation	Standard Error	Minimum	Maximum	Range
29	0.4061379	5.170571E-02	9.601509E-03	0.3	0.506	0.206

Counts Section of SU_3805_SOF

Rows	Sum of Frequencies	Missing Values	Distinct Values	Sum	Total Sum Squares	Adjusted Sum Squares
33	29	4	27	11.778	4.85835	7.485745E-02

Means Section of SU_3805_SOF

Parameter	Mean	Median	Geometric Mean	Harmonic Mean	Sum	Mode
Value	0.4061379	0.416	0.4028338	0.3994041	11.778	0.454
Std Error	9.601509E-03				0.2784438	
95% LCL	0.3864701	0.383			11.20763	
95% UCL	0.4258057	0.436			12.34837	
T-Value	42.2994					
Prob Level	0.000000					
Count	29		29	29		3

Variation Section of SU_3805_SOF

Parameter	Variance	Standard Deviation	Unbiased Std Dev	Std Error of Mean	Interquartile Range	Range
Value	2.67348E-03	5.170571E-02	5.216933E-02	9.601509E-03	0.078	0.206
Std Error	5.969417E-04	8.163538E-03		1.515931E-03		
95% LCL	1.683673E-03	4.103259E-02		7.61956E-03		
95% UCL	4.890131E-03	6.992947E-02		1.298558E-02		

Skewness and Kurtosis Section of SU_3805_SOF

Parameter	Skewness	Kurtosis	Fisher's g1	Fisher's g2	Coefficient of Variation	Coefficient of Dispersion
Value	-0.2813717	2.445799	-0.2969577	-0.4238305	0.1273107	9.698276E-02
Std Error	0.2924243	0.4721723			1.517998E-02	

Trimmed Section of SU_3805_SOF

Parameter	5% Trimmed	10% Trimmed	15% Trimmed	25% Trimmed	35% Trimmed	45% Trimmed
Trim-Mean	0.4063486	0.407431	0.4091527	0.4132069	0.4144942	0.4146897
Trim-Std Dev	4.311031E-02	0.0372552	3.247991E-02	1.935608E-02	9.264334E-03	6.113862E-03
Count	26.1	23.2	20.3	14.5	8.7	2.9

Mean-Deviation Section of SU_3805_SOF

Parameter	|X-Mean|	|X-Median|	(X-Mean)^2	(X-Mean)^3	(X-Mean)^4
Average	4.087277E-02	4.034483E-02	2.581291E-03	-3.690081E-05	1.629652E-05
Std Error	5.775507E-03		5.763575E-04	3.469945E-05	5.66983E-06

Descriptive Statistics Report

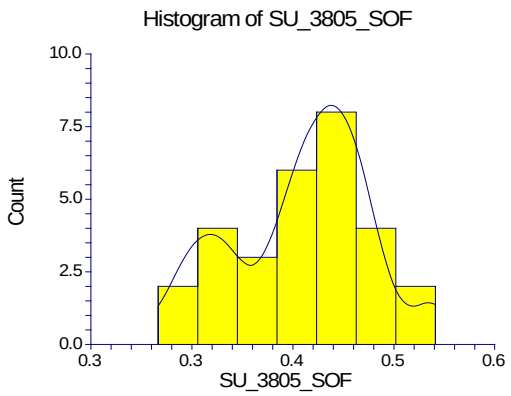
Quartile Section of SU_3805_SOF

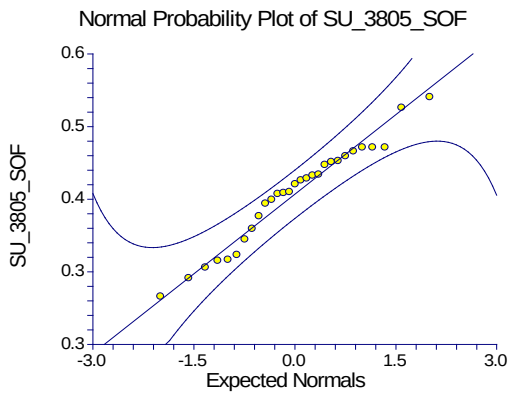
Parameter	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile
Value	0.33	0.3645	0.416	0.4425	0.454
95% LCL	0.3	0.33	0.383	0.422	0.439
95% UCL	0.383	0.407	0.436	0.454	0.506

Normality Test Section of SU_3805_SOF

Test Name	Test Value	Prob Level	10% Critical Value	5% Critical Value	Decision (5%)
Shapiro-Wilk W	0.9629841	0.388426			Accept Normality
Anderson-Darling	0.4828248	0.229923			Accept Normality
Martinez-Iglewicz	0.9903119		1.153174	1.236092	Accept Normality
Kolmogorov-Smirnov	0.108345		0.148	0.162	Accept Normality
D'Agostino Skewness	-0.7198	0.471621	1.645	1.960	Accept Normality
D'Agostino Kurtosis	-0.3926	0.694596	1.645	1.960	Accept Normality
D'Agostino Omnibus	0.6723	0.714505	4.605	5.991	Accept Normality

Plots Section of SU_3805_SOF





Descriptive Statistics Report

Percentile Section of SU_3805_SOF

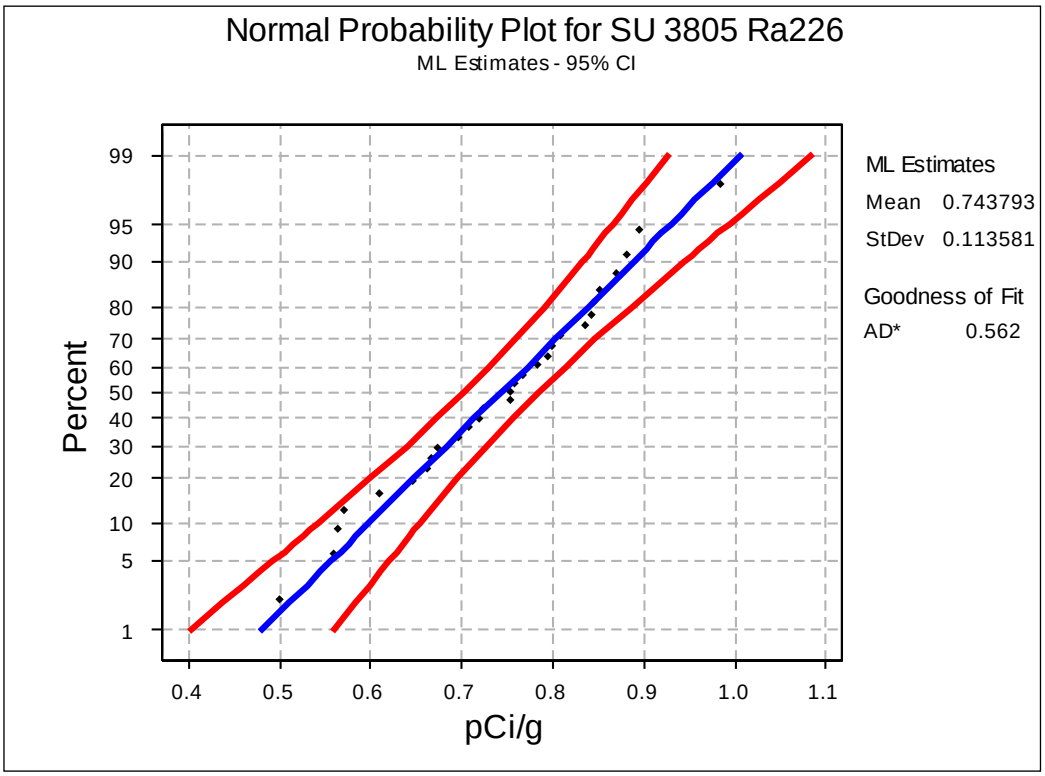
Percentile	Value	95% LCL	95% UCL	Exact Conf. Level
99.0	0.506			
95.0	0.5005			
90.0	0.454	0.439	0.506	95.1349
85.0	0.454	0.439	0.506	96.8681
80.0	0.45	0.426	0.495	96.7529
75.0	0.4425	0.422	0.454	97.0938
70.0	0.439	0.42	0.454	95.8640
65.0	0.431	0.407	0.45	96.1771
60.0	0.425	0.406	0.445	96.3194
55.0	0.421	0.396	0.44	97.4848
50.0	0.416	0.383	0.436	95.7226
45.0	0.4075	0.37	0.426	96.1776
40.0	0.406	0.343	0.422	95.9152
35.0	0.398	0.338	0.42	96.9227
30.0	0.383	0.337	0.408	95.8640
25.0	0.3645	0.33	0.407	97.0938
20.0	0.343	0.3	0.4	97.8748
15.0	0.3375	0.3	0.383	96.8681
10.0	0.33	0.3	0.383	95.1349
5.0	0.3095			
1.0	0.3			

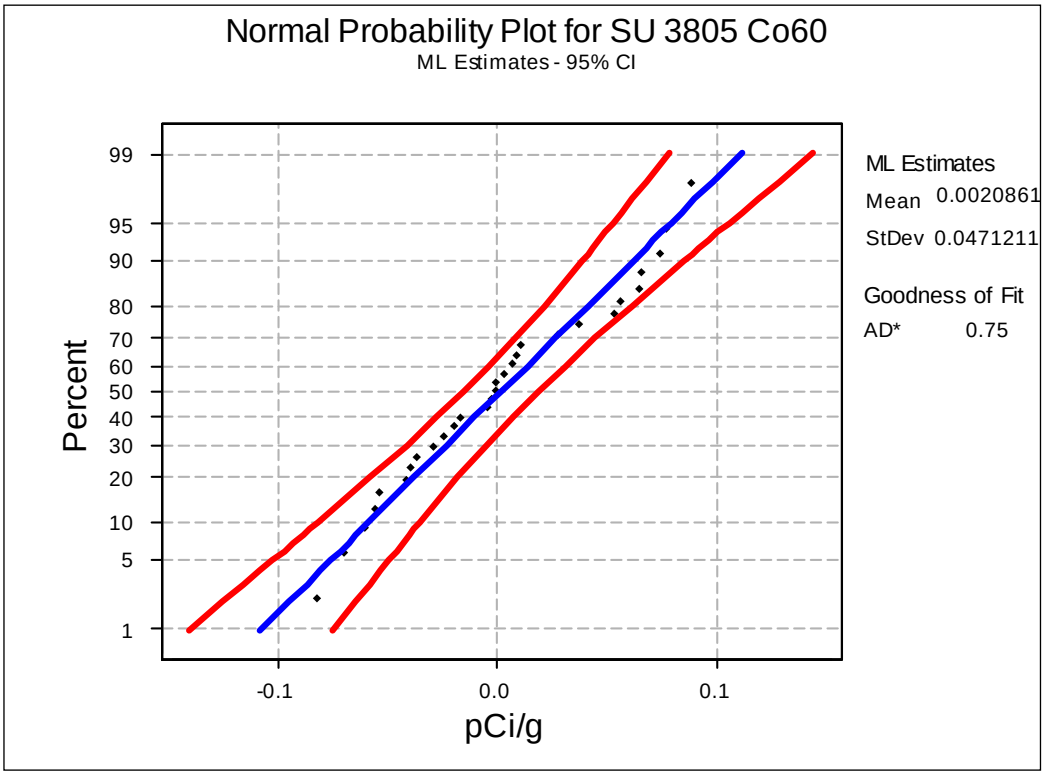
Percentile Formula: Ave X(p[n+1])

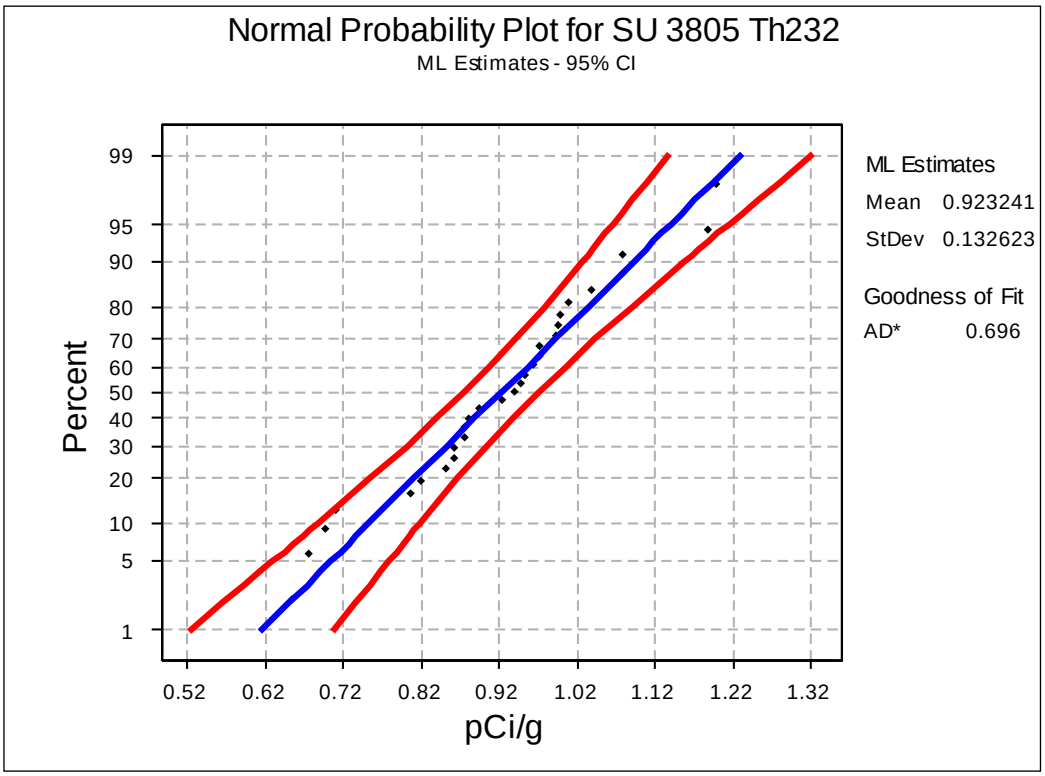
Stem-Leaf Plot Section of SU_3805_SOF

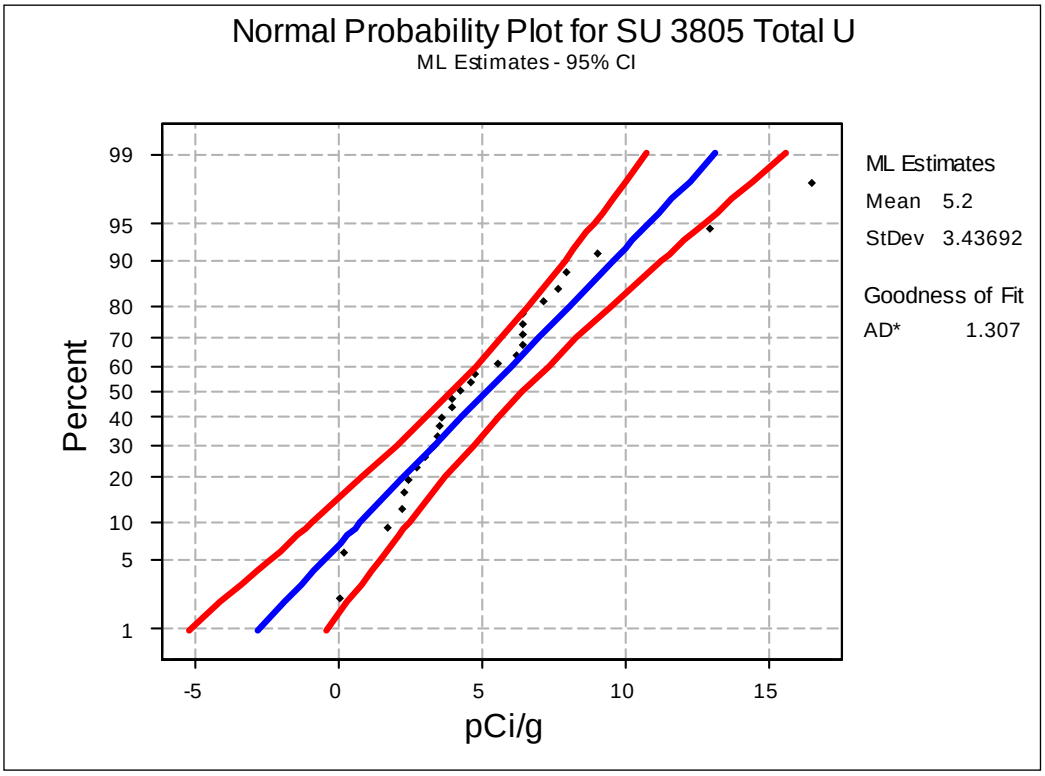
Depth	Stem	Leaves
2	3*	01
5	T	333
7	F	45
8	S	7
10	.	89
(5)	4*	00001
14	T	222233
8	F	445555
2	S	
2	.	9
1	5*	0

Unit = .01 Example: 1 |2 Represents 0.12

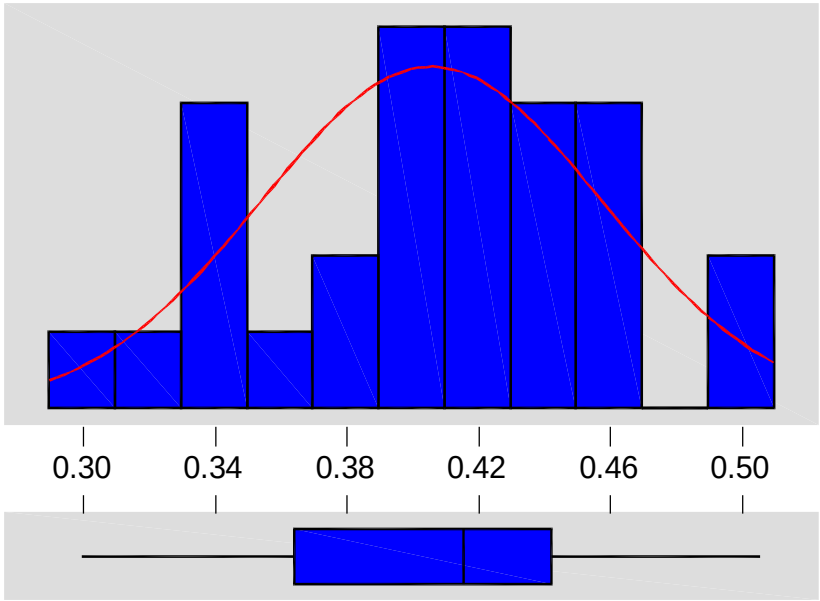

Normal Probability Plot for SU 3805 Ra226
ML Estimates - 95% CI
Percent
99
95
90
80
70
60
50
40
30
20
10
5
1
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
pCi/g
ML Estimates
Mean 0.743793
StDev 0.113581
Goodness of Fit
AD* 0.562

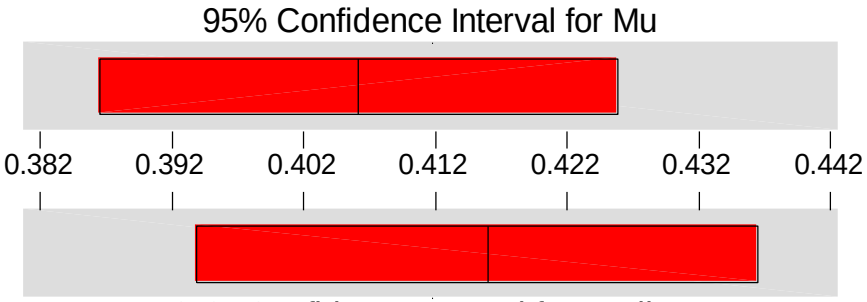

Normal Probability Plot for SU 3805 Co60
ML Estimates - 95% CI
Percent
99
95
90
80
70
60
50
40
30
20
10
5
1
-0.1
0.0
0.1
pCi/g
ML Estimates
Mean 0.0020861
StDev 0.0471211
Goodness of Fit
AD* 0.75


Normal Probability Plot for SU 3805 Th232
ML Estimates - 95% CI
Percent
99
95
90
80
70
60
50
40
30
20
10
5
1
0.52
0.62
0.72
0.82
0.92
1.02
1.12
1.22
1.32
pCi/g
ML Estimates
Mean 0.923241
StDev 0.132623
Goodness of Fit
AD* 0.696


Normal Probability Plot for SU 3805 Total U
ML Estimates - 95% CI
Percent
99
95
90
80
70
60
50
40
30
20
10
5
1
-5
0
5
10
15
pCi/g
ML Estimates
Mean 5.2
StDev 3.43692
Goodness of Fit
AD* 1.307

Descriptive Statistics





Variable: SU 3805 SOF

Anderson-Darling Normality Test

A-Squared:	0.482
P-Value:	0.214
Mean	0.406138
StDev	0.051706
Variance	2.67E-03
Skewness	-3.0E-01
Kurtosis	-4.2E-01
N	29
Minimum	0.300000
1st Quartile	0.364500
Median	0.416000
3rd Quartile	0.442500
Maximum	0.506000

95% Confidence Interval for Mu

0.386470	0.425806

95% Confidence Interval for Sigma

0.041033	0.069929

95% Confidence Interval for Median

0.393845	0.436497

One-Sample T-Test Report

Variable SU_3805_SOF

Descriptive Statistics Section

Variable	Count	Mean	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
SU_3805_SOF	29	0.4061379	5.170571E-02	9.601509E-03	0.3864701	0.4258057

T for Confidence Limits = 2.0484

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality	-0.7198	0.471621	Cannot reject normality
Kurtosis Normality	-0.3926	0.694596	Cannot reject normality
Omnibus Normality	0.6723	0.714505	Cannot reject normality
Correlation Coefficient			

T-Test For Difference Between Mean and Value Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
SU_3805_SOF<>1	-61.8509	0.000000	Reject Ho	1.000000	1.000000
SU_3805_SOF<1	-61.8509	0.000000	Reject Ho	1.000000	1.000000
SU_3805_SOF>1	-61.8509	1.000000	Accept Ho	0.000000	0.000000

Nonparametric Tests Section

Quantile (Sign) Test

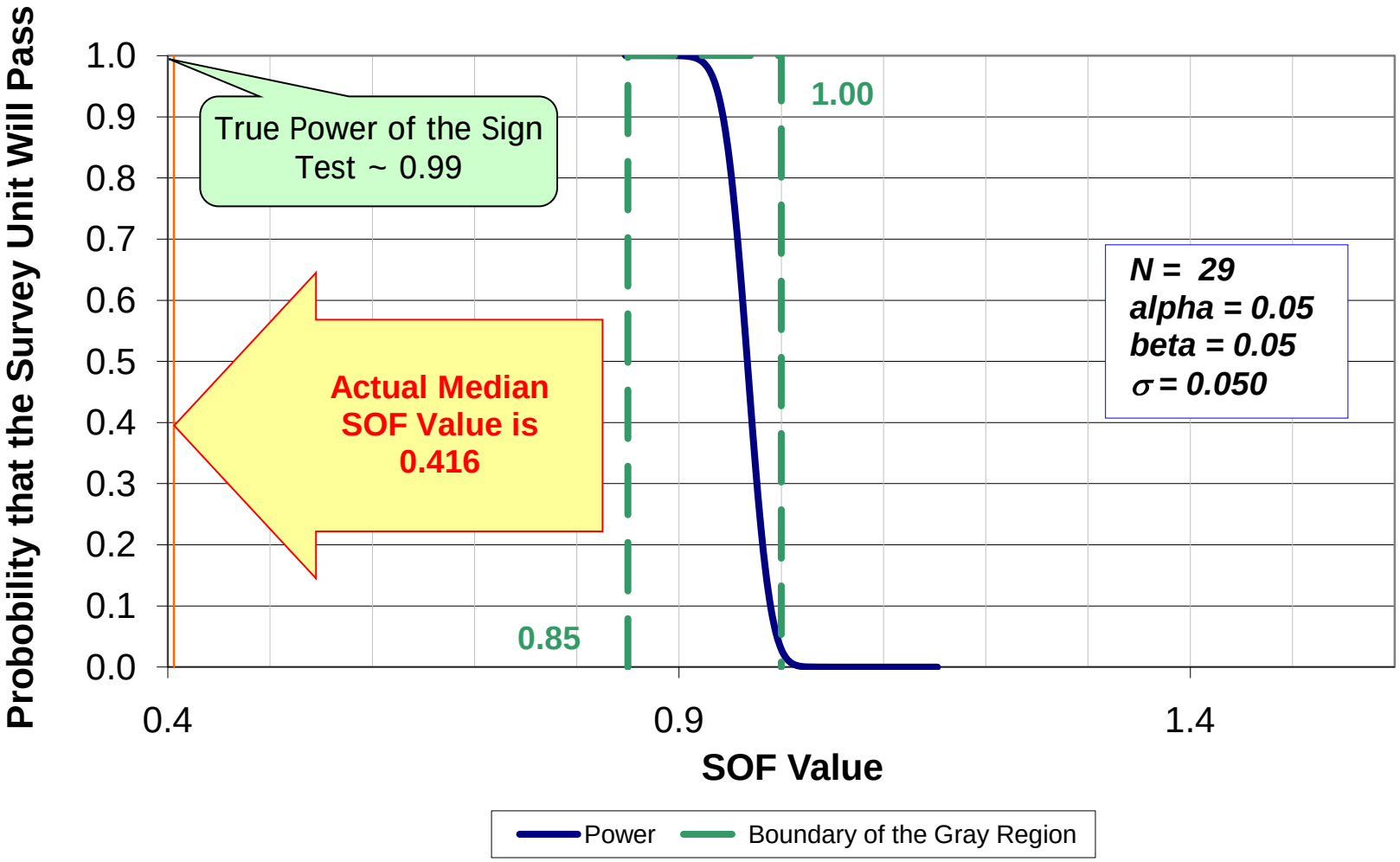
Hypothesized Value	Quantile	Number Lower	Number Higher	Prob Lower	Prob Higher	Prob Both
1	0.5	29	0	1.000000	0.000000	0.000000

Wilcoxon Signed-Rank Test for Difference in Medians

W Sum Ranks	Mean of W	Std Dev of W	Number of Zeros	Number Sets of Ties	Multiplicity Factor
0	217.5	46.24121	0	1	24

	Exact Probability		Approximation Without Continuity Correction			Approximation With Continuity Correction		
Alternative Hypothesis	Prob Level	Decision (5%)	Z-Value	Prob Level	Decision (5%)	Z-Value	Prob Level	Decision (5%)
Median<>1			4.7036	0.000003	Reject Ho	4.6928	0.000003	Reject Ho
Median<1			-4.7036	0.000001	Reject Ho	-4.6928	0.000001	Reject Ho
Median>1			-4.7036	0.999999	Accept Ho	-4.7144	0.999999	Accept Ho

Retrospective Power of the Sign Test
Surface Soil Volumetric Measurements SOF Values
Survey Unit CE-FSS-38-05



Survey Cover Sheet

Survey Unit CE-FSS-38-05

Surveyor	Larry Fitzsimmons Gary Walker Print	Sign	8/11/2011 Survey Date	N/A Count date
Reviewer	Print	Sign	8/24/11 Review Date	

SURVEY METERS

	Inst. No. 1	Inst. No. 2	Inst. No. 3	Inst. No. 4
Instrument ID	γ 9	γ 10		
Meter Serial #	168806	172705		
Probe Serial #	277910	277925		
Cal Due	11/01/11	11-30-11		
Efficiency	n/a	n/a		
Type (α, β, γ)	γ	γ		
Sample Duration	n/a	n/a		
BKG	2.6 kcpm	2.6 kcpm		
LLD	n/a	n/a		
Guideline	n/a	n/a		
Action level	1504 ncpm	n/a		

LOCATION:	Survey Unit CE-FSS-38-05	RWP 10-001
PURPOSE:	Two Small Reclassified Areas, portions of which were previously located in Class II survey unit 38-04.	

	kcpm ave	kcpm max	60 sec	Smear #	dpm/100cm² α	dpm/100cm² βγ
CE-FSS-38-05-001	na	na	2750		NA	NA
CE-FSS-38-05-002	na	na	2682		NA	NA
CE-FSS-38-05-003	na	na	2879		NA	NA
CE-FSS-38-05-004	na	na	3036		NA	NA
CE-FSS-38-05-005	na	na	2758		NA	NA
CE-FSS-38-05-006	na	na	2651		NA	NA
CE-FSS-38-05-007	na	na	2919		NA	NA
CE-FSS-38-05-008	na	na	2963		NA	NA
CE-FSS-38-05-009	na	na	2836		NA	NA
CE-FSS-38-05-010	na	na	2659		NA	NA
CE-FSS-38-05-011	na	na	2693		NA	NA
CE-FSS-38-05-012	na	na	2773		NA	NA
CE-FSS-38-05-013	na	na	2716		NA	NA
CE-FSS-38-05-014	na	na	2802		NA	NA
CE-FSS-38-05-015	na	na	2612		NA	NA
CE-FSS-38-05-016	na	na	2890		NA	NA
CE-FSS-38-05-017	na	na	2668		NA	NA
CE-FSS-38-05-018	na	na	2761		NA	NA
CE-FSS-38-05-019	na	na	2858		NA	NA
CE-FSS-38-05-020	na	na	2695		NA	NA
CE-FSS-38-05-021	na	na	2786		NA	NA
CE-FSS-38-05-022	na	na	2658		NA	NA
CE-FSS-38-05-023	na	na	2721		NA	NA
CE-FSS-38-05-024	na	na	2612		NA	NA
CE-FSS-38-05-025	na	na	2587		NA	NA
CE-FSS-38-05-026	na	na	2580		NA	NA

Survey Cover Sheet

Survey Unit CE-FSS-38-05

Surveyor	Larry Fitzsimmons Gary Walker Print	Sign	8/11/2011 Survey Date	N/A Count date
Reviewer	Print	Sign	8/24/11 Review Date	

SURVEY METERS

	Inst. No. 1	Inst. No. 2	Inst. No. 3	Inst. No. 4
Instrument ID	γ 9	γ 11		
Meter Serial #	168806	172718		
Probe Serial #	277910	277926		
Cal Due	11/01/11	11-30-11		
Efficiency	n/a	n/a		
Type (α, β, γ)	γ	γ		
Sample Duration	n/a	n/a		
BKG	2.6 kcpm	2.6 kcpm		
LLD	n/a	n/a		
Guideline	n/a	n/a		
Action level	1504 ncpm	n/a		

LOCATION: Survey Unit CE-FSS-38-05 RWP 10-001

PURPOSE: Two Small Reclassified Areas, portions of which were previously located in Class II survey unit 38-04.

	kcpm ave	kcpm max	60 sec	Smear #	dpm/100cm² α	dpm/100cm² βγ
CE-FSS-38-05-027	na	na	2569		NA	NA
CE-FSS-38-05-028	na	na	2632		NA	NA
CE-FSS-38-05-029	na	na	2585		NA	NA
CE-FSS-38-05-010 QC	na	na	2613		NA	NA
CE-FSS-38-05-026 QC	na	na	2622		NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA
CE-FSS-38-05-___	na	na			NA	NA

Survey Cover Sheet

(Revision 10/7/11)

Surveyor	L. Fitzsimmons (Print)	(Sign)	08/10/11 (Survey Date)	(Count date)
Reviewer	G. Seeley (Print)	(Sign)	8/10/11 (Review Date)	

SURVEY METERS

	Inst. No. 1	Inst. No. 2	Inst. No. 3	Inst. No. 4
Instrument ID	gamma 9	gamma 10		
Meter Serial #	168806	172705		
Probe Serial #	277910	277925		
Cal Due	11/14/12	11/30/11		
Efficiency	n/a	n/a		
Type (α, β, γ)	γ	γ		
Sample Duration	n/a	n/a		
Background Duration	n/a	n/a		
BKG	2.6 Kcpm	2.6 Kcpm		
LLD	**n/a**	**n/a**		
Guideline	n/a	n/a		
Action level	1504 ncpm	1504 ncpm		

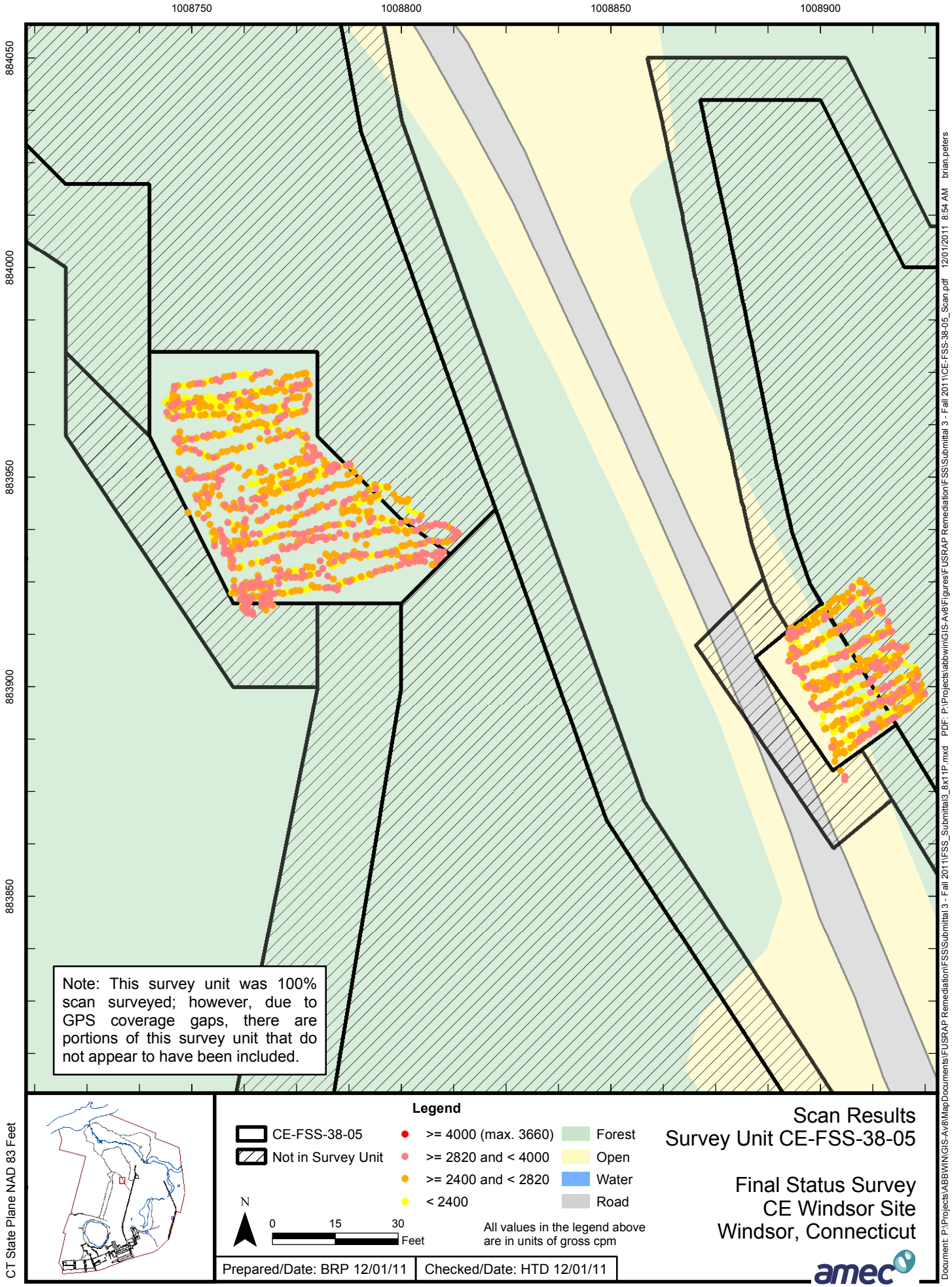
LOCATION: Gamma scan	RWP: 11-001
PURPOSE: CE-FSS-38-05	

Performed a 100% gamma scan walkover of survey unit # CE-FSS-38-05 using gamma meters 9 &10 on the date of 8-10-11

Smear #	dpm/100cm^2 α	βγ
----	see attached	---

PROCEDURE RPP-4	REVISION NO: 3	ATTACHMENT 1 PAGE 1 OF 1

C:\Documents and Settings\lfitzsimmons\Desktop\Blank Survey 10-7-11.xlsx


1008750
1008800
1008850
1008900
884050
884000
883950
883900
883850
Note: This survey unit was 100% scan surveyed; however, due to GPS coverage gaps, there are portions of this survey unit that do not appear to have been included.
Legend
CE-FSS-38-05
Not in Survey Unit
>= 4000 (max. 3660)
>= 2820 and < 4000
>= 2400 and < 2820
< 2400
Forest
Open
Water
Road
N
0
15
30
Feet
All values in the legend above are in units of gross cpm
Prepared/Date: BRP 12/01/11
Checked/Date: HTD 12/01/11
CT State Plane NAD 83 Feet
Scan Results
Survey Unit CE-FSS-38-05
Final Status Survey
CE Windsor Site
Windsor, Connecticut
amec
Document: P:\Projects\ABBWIN\GIS-Av8\MapDocuments\FUSRAP Remediation\FSS\Submittal 3 - Fall 2011\FSS_Submittal3_8x11P.mxd PDF: P:\Projects\abbwin\GIS-Av8\Figures\FUSRAP Remediation\FSS\Submittal 3 - Fall 2011\CE-FSS-38-05_Scan.pdf 12/01/2011 8:54 AM brian.peters

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008762.384	883918.895	2820
1008762.356	883918.983	2220
1008762.327	883919.074	2460
1008762.328	883919.153	2160
1008762.217	883919.39	2160
1008762.157	883919.568	2100
1008762.415	883919.336	2040
1008762.505	883920.295	1980
1008762.709	883922.379	2640
1008762.725	883923.158	2520
1008762.633	883922.442	2460
1008762.314	883919.163	2100
1008762.308	883919.147	2340
1008762.301	883919.165	2400
1008762.339	883921.12	2640
1008762.333	883924.412	2160
1008761.949	883923.239	2340
1008761.737	883922.866	2220
1008761.77	883922.773	2280
1008761.826	883922.826	2940
1008761.783	883922.884	2880
1008761.729	883923.107	2820
1008761.954	883923.359	2940
1008762.144	883923.523	2880
1008762.263	883923.675	2460
1008762.297	883923.75	2280
1008762.195	883923.743	2640
1008762.285	883923.869	2640
1008762.469	883923.882	2460
1008762.332	883923.751	2280
1008762.03	883923.586	2580
1008762.282	883923.585	2280
1008761.581	883923.474	2340
1008759.74	883922.965	2160
1008759.637	883922.566	2160
1008759.93	883922.651	2160
1008759.967	883922.56	2520
1008760.882	883922.459	2760
1008763.256	883921.422	2940
1008762.637	883918.867	2280
1008762.639	883918.687	2580

Easting	Northing	CPM
1008767.298	883965.955	2700
1008766.381	883965.853	2340
1008765.962	883965.513	2160
1008764.883	883964.999	2160
1008763.846	883965.2	2400
1008762.839	883964.693	2280
1008761.963	883964.914	2160
1008761.162	883964.483	2700
1008760.093	883965	2400
1008758.784	883964.888	2280
1008757.89	883965.425	2040
1008756.636	883965.164	2580
1008755.476	883965.332	2580
1008754.372	883964.731	2340
1008753.3	883965.059	2520
1008752.248	883964.905	2460
1008751.262	883965.232	2280
1008750.248	883965.067	2460
1008749.217	883965.166	2400
1008747.907	883964.64	2700
1008746.675	883964.748	2880
1008746.025	883964.251	2880
1008745.717	883964.26	2820
1008744.661	883964.795	2760
1008744.175	883965.684	3180
1008745.19	883966.22	2340
1008746.159	883966.328	2400
1008747.198	883967.008	1800
1008748.26	883966.269	2220
1008749.392	883966.414	2820
1008750.811	883966.271	2340
1008751.988	883966.822	2520
1008753.188	883966.593	2340
1008754.222	883967.091	2280
1008755.721	883966.907	2220
1008757.139	883967.067	2700
1008758.596	883966.865	2100
1008759.68	883967.04	2340
1008760.918	883966.943	2580
1008762.106	883967.423	2700
1008763.229	883967.276	2640

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008763.438	883919.97	2220
1008764.705	883921.894	2460
1008762.668	883918.578	2340
1008762.652	883918.53	2520
1008763.317	883920.092	2520
1008764.911	883923.674	2640
1008765.175	883923.833	2280
1008765.221	883924.135	2700
1008765.082	883924.306	2520
1008764.948	883924.286	2400
1008765.056	883924.142	2220
1008765.051	883924.08	2280
1008764.958	883924.063	2100
1008764.84	883924.044	2580
1008765.013	883924.044	1920
1008765.326	883923.998	1980
1008765.473	883924.028	2160
1008766.45	883923.819	2460
1008767.103	883923.371	2580
1008767.306	883922.829	2400
1008767.63	883922.076	2820
1008768.062	883922.526	2220
1008768.099	883922.936	2160
1008768.374	883922.714	2640
1008768.23	883922.452	2640
1008767.684	883921.731	2460
1008768.151	883921.5	2340
1008768.473	883921.506	2580
1008768.749	883921.039	2880
1008768.502	883919.958	2520
1008768.591	883919.774	2280
1008769.042	883919.667	2820
1008769.512	883919.538	2760
1008768.884	883919.642	2340
1008768.949	883919.772	2520
1008768.801	883920.737	2280
1008767.52	883920.564	2100
1008767.326	883919.524	2520
1008767.85	883918.53	2400
1008767.748	883918.723	2640

Easting	Northing	CPM
1008764.54	883967.259	2400
1008765.665	883966.655	2640
1008766.783	883966.933	2760
1008767.658	883966.596	3000
1008768.422	883966.502	2040
1008769.149	883966.693	2640
1008769.768	883966.957	2520
1008771.127	883967.38	2340
1008772.196	883967.278	2880
1008772.898	883968.566	2880
1008773.98	883969.169	2760
1008774.984	883969.186	2460
1008775.308	883969.206	2640
1008775.363	883969.28	2460
1008776.038	883969.324	2460
1008777.054	883971.209	2760
1008777.604	883972.611	3180
1008777.565	883972.435	2580
1008778.221	883972.349	2700
1008778.294	883972.394	2340
1008777.265	883972.599	2700
1008776.046	883972.19	3120
1008775.028	883972.233	3240
1008774.005	883971.663	2400
1008772.6	883971.869	2100
1008771.496	883971.519	2460
1008770.233	883971.022	2700
1008769.147	883970.327	2400
1008767.824	883970.57	2400
1008767.06	883970.652	2580
1008766.546	883970.038	2220
1008765.45	883969.616	2700
1008764.219	883969.21	2820
1008763.516	883968.461	2700
1008762.553	883968.244	2760
1008761.768	883968.511	2580
1008761.085	883968.406	3120
1008759.762	883969.026	2280
1008758.29	883968.4	2640
1008757.251	883968.405	2280

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008767.785	883919.113	1920
1008767.533	883919.467	2100
1008767.265	883919.742	2400
1008767.434	883919.68	2520
1008767.595	883919.919	2880
1008767.48	883920.13	2400
1008767.173	883920.289	2400
1008766.868	883920.513	2400
1008766.8	883920.553	2580
1008766.947	883920.671	2580
1008766.961	883920.729	2220
1008766.967	883920.8	2280
1008766.836	883921.028	2880
1008767.199	883921.673	2880
1008768.255	883921.584	2880
1008766.762	883919.387	3120
1008764.552	883917.947	3000
1008764.586	883917.684	2880
1008764.703	883917.411	3180
1008764.783	883917.375	3180
1008763.445	883919.894	2700
1008760.175	883925.5	2700
1008760.314	883924.069	3000
1008761.007	883923.028	2580
1008762.327	883921.533	2880
1008762.391	883921.105	2640
1008762.402	883922.292	2940
1008762.595	883922.363	2580
1008762.568	883920.359	2400
1008763.285	883917.892	2820
1008763.397	883917.817	2880
1008763.646	883917.764	2880
1008763.558	883917.817	2640
1008763.418	883918.41	2700
1008763.186	883919.114	2940
1008763.374	883918.994	2940
1008763.45	883919.223	2340
1008763.556	883920.033	2640
1008763.837	883920.599	2880
1008763.863	883920.372	2940

Easting	Northing	CPM
1008756.032	883968.093	2160
1008754.717	883968.47	2160
1008753.11	883967.659	2460
1008752.077	883967.689	2400
1008750.978	883966.897	2220
1008749.739	883966.921	2280
1008748.751	883966.82	2220
1008748.063	883967.464	2700
1008747.032	883967.048	2760
1008745.943	883967.71	2880
1008745.462	883967.142	2940
1008745.257	883967.109	3060
1008744.576	883967.524	2580
1008743.925	883968.15	2280
1008744.783	883968.9	2340
1008745.467	883968.842	2580
1008746.793	883969.285	2700
1008747.858	883968.67	2280
1008748.89	883969.136	2220
1008750.1	883968.653	2280
1008751.284	883969.192	2640
1008752.295	883969.055	2400
1008753.188	883969.116	2040
1008754.178	883969.372	2040
1008755.465	883969.04	2280
1008756.877	883969.261	3180
1008757.801	883969.189	2940
1008758.86	883969.794	3000
1008760.141	883969.855	2580
1008761.253	883970.184	2160
1008761.993	883969.992	1920
1008762.75	883970.534	3180
1008764.252	883970.462	2460
1008765.597	883971.006	2280
1008766.992	883970.681	2760
1008768.578	883971.191	2760
1008770.328	883970.602	2160
1008772.458	883970.639	2580
1008773.971	883970.855	2820
1008775.208	883971.419	3360

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008763.21	883920.674	2820
1008763.129	883920.196	3060
1008762.51	883920.604	3300
1008761.67	883921.056	3060
1008763.301	883920.712	2460
1008763.695	883921.633	2700
1008764.435	883921.308	3000
1008765.136	883921.392	2640
1008766.054	883921.712	2580
1008766.908	883921.513	2700
1008767.63	883922.202	2640
1008768.232	883922.354	2880
1008768.601	883922.414	3120
1008768.926	883922.674	2940
1008769.221	883922.306	2760
1008769.826	883922.324	3060
1008770.88	883922.623	2520
1008771.921	883922.382	2460
1008772.751	883922.778	2280
1008773.338	883922.559	2220
1008774.012	883922.861	2580
1008774.954	883923.176	2700
1008775.925	883923.056	2400
1008776.994	883923.456	2280
1008777.893	883923.478	2340
1008778.819	883924.36	2580
1008779.449	883923.906	2700
1008780.421	883923.795	2520
1008782.003	883923.716	2880
1008782.79	883923.916	3240
1008783.997	883923.663	3240
1008784.911	883923.435	3120
1008784.809	883923.262	3060
1008784.709	883923.497	3000
1008785.089	883924.275	2580
1008785.728	883924.538	2220
1008786.084	883924.887	2280
1008786.882	883925.336	2400
1008787.619	883925.255	3240
1008788.351	883925.7	2460

Easting	Northing	CPM
1008776.281	883971.195	2520
1008777.01	883971.722	2040
1008777.668	883973.296	2940
1008777.793	883974.338	2220
1008777.3	883975.01	2640
1008776.615	883974.819	2400
1008775.32	883974.607	2580
1008773.731	883974.172	2460
1008772.652	883974.129	2760
1008772.091	883973.477	2580
1008771.465	883972.422	3060
1008770.423	883972.771	2580
1008908.571	883917.713	2640
1008908.631	883917.63	2520
1008908.529	883917.474	2100
1008908.056	883917.487	2880
1008908.092	883917.413	2460
1008908.531	883917.48	2460
1008909.019	883917.621	2580
1008909.075	883917.671	2220
1008908.924	883917.625	2820
1008909.192	883917.696	2640
1008909.225	883917.605	2820
1008909.227	883917.561	2700
1008909.266	883917.661	2880
1008909.326	883917.774	2580
1008909.334	883917.71	2580
1008909.35	883917.691	2700
1008909.375	883917.663	2400
1008909.411	883917.634	2940
1008909.405	883917.627	2160
1008909.346	883917.637	2520
1008909.292	883917.603	2820
1008908.878	883917.754	2700
1008908.223	883917.93	2400
1008908.25	883917.743	2400
1008908.832	883917.877	2760
1008909.13	883918.561	2400
1008909.79	883918.765	1920
1008910.139	883919.612	2100

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008789.192	883925.809	2220
1008789.905	883926.107	2220
1008790.471	883926.368	2640
1008791.233	883926.254	2220
1008792.489	883926.965	2580
1008793.149	883926.906	2580
1008793.945	883927.601	2880
1008795.165	883927.931	2760
1008795.894	883928.011	3000
1008796.725	883928.508	2640
1008797.628	883928.332	2940
1008798.33	883928.891	2280
1008799.244	883928.944	2520
1008800.064	883929.286	3000
1008801.204	883929.838	2820
1008801.991	883929.583	3240
1008803.25	883930.034	3660
1008804.317	883930.159	3000
1008804.801	883930.757	3120
1008804.681	883930.097	2580
1008805.697	883930.031	3000
1008807.486	883929.265	2760
1008807.908	883929.376	2760
1008808.644	883930.377	3180
1008809.618	883931.205	2820
1008810.231	883932.215	2940
1008809.262	883932.391	3060
1008808.398	883932.143	2880
1008807.643	883931.536	2940
1008806.164	883931.846	2940
1008805.204	883932.113	3300
1008804.221	883931.411	3360
1008803.54	883931.58	3420
1008803.171	883930.897	2580
1008802.614	883930.946	2640
1008801.554	883931.103	2760
1008800.46	883930.895	2940
1008799.188	883931.663	2400
1008797.792	883931.607	2700
1008796.472	883931.93	2280

Easting	Northing	CPM
1008910.929	883919.497	2400
1008911.643	883920.281	2880
1008912.448	883920.074	2580
1008913.125	883920.584	2700
1008913.996	883920.886	3060
1008914.182	883920	2280
1008914.612	883919.21	2520
1008914.685	883917.746	2520
1008914.833	883918.395	2820
1008914.673	883919.058	3060
1008914.165	883918.657	2880
1008913.722	883918.175	2520
1008912.751	883917.755	2100
1008911.931	883917.516	2820
1008911.332	883916.946	2880
1008910.612	883916.987	2460
1008910.133	883916.24	2700
1008909.397	883916.357	2820
1008909.244	883915.458	3240
1008908.274	883915.374	2580
1008907.571	883914.865	2580
1008906.752	883914.525	3060
1008905.977	883914.38	3120
1008905.346	883913.797	2520
1008904.643	883913.788	2820
1008903.968	883913.023	2580
1008903.193	883913.067	2400
1008902.532	883912.328	1740
1008901.317	883911.808	2040
1008900.84	883911.148	2100
1008899.729	883910.782	2280
1008899.082	883910.213	2460
1008898.474	883909.891	2160
1008897.925	883909.603	2160
1008897.182	883909.359	2580
1008896.371	883908.623	2520
1008895.458	883908.358	2280
1008894.778	883907.917	2760
1008894.166	883907.364	2820
1008894.17	883905.246	2820

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Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008795.625	883931.696	2280
1008794.509	883931.574	2460
1008793.443	883931.659	2220
1008792.363	883931.194	1980
1008791.599	883931.662	2820
1008790.405	883930.964	2700
1008789.51	883931.293	2760
1008788.498	883931.663	3060
1008787.295	883931.299	2640
1008786.451	883931.418	3300
1008785.787	883930.781	3180
1008784.909	883931.415	2760
1008784.063	883931.826	2460
1008782.953	883931.202	2400
1008782.198	883931.76	2760
1008780.732	883930.161	2940
1008778.967	883928.589	2640
1008778.592	883928.803	2340
1008777.886	883928.681	2700
1008777.416	883928.823	2520
1008776.499	883927.749	3120
1008775.589	883927.691	2340
1008774.757	883928.036	2220
1008773.752	883927.138	2280
1008773.233	883927.613	2520
1008772.472	883926.854	2520
1008771.36	883926.494	3120
1008770.545	883926.245	3180
1008769.295	883925.199	2700
1008768.274	883924.784	2640
1008767.895	883924.528	2340
1008767.894	883924.761	2760
1008767.218	883924.455	2820
1008766.353	883924.603	3060
1008765.218	883924.089	2940
1008764.113	883923.877	2940
1008763.739	883923.755	2460
1008762.918	883924.154	2520
1008762.23	883924.32	2820
1008762.48	883924.406	2880

Easting	Northing	CPM
1008893.968	883903.928	3360
1008894.432	883904.166	2940
1008894.603	883903.954	3120
1008894.428	883904.068	2700
1008894.996	883903.839	3180
1008895.371	883903.904	2580
1008895.38	883903.508	2940
1008895.256	883903.273	2820
1008895.301	883903.638	2040
1008895.329	883904.433	2400
1008895.546	883904.186	2760
1008895.836	883903.625	2340
1008895.753	883903.751	2280
1008895.748	883903.724	2460
1008896.025	883904.159	2340
1008896.22	883904.777	2220
1008896.664	883904.463	2880
1008897.281	883905.068	1740
1008898.03	883905.012	2340
1008898.518	883905.265	2460
1008898.919	883905.434	2460
1008899.423	883905.208	2220
1008899.869	883905.88	1980
1008900.461	883905.893	2100
1008901.023	883906.309	2220
1008901.427	883906.845	2280
1008902.073	883906.645	2340
1008902.522	883907.334	2280
1008903.107	883907.402	2160
1008903.825	883907.857	2220
1008904.546	883907.799	2400
1008905.17	883907.928	1860
1008905.556	883908.467	2340
1008906.291	883908.502	2100
1008906.785	883909.164	2280
1008907.252	883909.072	2400
1008907.788	883909.334	3180
1008908.473	883909.963	2520
1008909.163	883909.915	2940
1008909.563	883910.499	2820

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008763.116	883925.084	2700
1008763.928	883924.821	3000
1008764.64	883925.074	2760
1008765.667	883925.192	3060
1008766.005	883925.567	2700
1008765.916	883926.665	2520
1008766.046	883926.101	3060
1008767.033	883924.547	3240
1008768.819	883924.055	3000
1008770.901	883924.816	3120
1008772.602	883926.154	2760
1008771.211	883927.762	3060
1008771.195	883928.03	2520
1008771.305	883926.715	2520
1008771.312	883926.773	2640
1008771.911	883926.4	2280
1008772.779	883926.865	2880
1008773.887	883926.24	3300
1008774.859	883926.215	2820
1008775.861	883926.212	2700
1008776.428	883926.118	3060
1008776.78	883926.815	3000
1008777.601	883926.609	2760
1008778.46	883926.849	2400
1008779.454	883927.308	2340
1008780.269	883927.187	3180
1008781.378	883928.304	3060
1008782.593	883926.598	2880
1008783.957	883925.845	2460
1008783.816	883928.927	2280
1008783.023	883929.529	2760
1008784.133	883930.066	2940
1008784.888	883929.554	2340
1008786.164	883930.145	2460
1008787.783	883931.151	2220
1008788.838	883932.368	2400
1008790.142	883931.814	2880
1008790.949	883931.614	2400
1008791.683	883934.068	2520
1008792.103	883936.512	3000

Easting	Northing	CPM
1008768.765	883975.143	2760
1008767.758	883975.27	3060
1008766.827	883974.846	2820
1008765.547	883974.571	2940
1008764.609	883973.68	2700
1008764.663	883974.355	2340
1008764.058	883974.454	1680
1008763.026	883974.887	1860
1008762.021	883974.538	2220
1008760.872	883974.735	2280
1008760.02	883974.47	2940
1008758.991	883974.267	2640
1008758.034	883974.067	2400
1008756.994	883973.117	3120
1008756.1	883973.436	3180
1008754.924	883973.283	2760
1008753.849	883973.176	2100
1008752.932	883972.397	2400
1008752.107	883972.667	2880
1008751.237	883972.417	3120
1008750.467	883972.408	2400
1008749.626	883972.177	2400
1008748.446	883972.032	2100
1008746.879	883971.954	2520
1008746.003	883971.797	2820
1008746.029	883971.291	2820
1008745.749	883970.207	2580
1008745.939	883969.155	2400
1008745.809	883968.559	2700
1008746.926	883968.266	3120
1008749.263	883967.796	3420
1008750.689	883968.18	2880
1008752.114	883968.162	2700
1008753.325	883967.253	2580
1008754.684	883966.927	2580
1008756.029	883966.152	1680
1008757.754	883965.356	2640
1008759.187	883964.347	2880
1008761.013	883963.974	2460
1008762.927	883963.132	2160

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008794.366	883931.708	3060
1008795.253	883931.628	3180
1008796.228	883932.07	2760
1008797.105	883932.122	2580
1008797.904	883932.412	2940
1008798.832	883932.711	2760
1008799.493	883933.088	1980
1008800.291	883933.691	2580
1008801.114	883933.728	2700
1008802.238	883934.396	2700
1008803.637	883933.937	2520
1008804.673	883934.254	2820
1008805.708	883934.395	2400
1008806.637	883935.059	2820
1008807.68	883934.975	2760
1008808.792	883934.82	2940
1008810.007	883934.634	2640
1008811.078	883934.676	2700
1008811.908	883935.06	2760
1008812.489	883935.509	3360
1008813.112	883936.045	3300
1008813.186	883936.787	2520
1008813.267	883937.134	2940
1008813.734	883936.692	2760
1008813.668	883936.786	3300
1008812.894	883937.171	2940
1008812.329	883937.726	2820
1008811.44	883938.191	2580
1008810.451	883938.746	3120
1008809.474	883938.645	3240
1008808.416	883938.971	3240
1008807.447	883938.525	3120
1008806.456	883938.597	2940
1008805.551	883937.998	2700
1008804.575	883937.948	2820
1008803.737	883937.321	2820
1008802.997	883937.381	2700
1008802.475	883937.522	2640
1008801.518	883936.773	2700
1008801.016	883937.294	2460

Easting	Northing	CPM
1008764.856	883962.836	2160
1008766.788	883962.3	2280
1008768.813	883962.274	2340
1008770.912	883961.389	2520
1008773.528	883961.605	2160
1008775.335	883961.227	2520
1008776.41	883960.113	2520
1008777.287	883959.707	2880
1008777.803	883957.711	3060
1008778.777	883957.095	2460
1008779.108	883957.251	3120
1008779.126	883957.163	2520
1008779.163	883957.159	2520
1008779.182	883957.287	2760
1008779.084	883957.207	2640
1008778.986	883957.249	2640
1008779.02	883957.147	2760
1008779.074	883957.135	3120
1008779.163	883957.179	2820
1008779.274	883957.157	2700
1008779.199	883956.837	2340
1008779.193	883956.702	2400
1008779.219	883956.623	2040
1008779.236	883956.554	2340
1008779.266	883956.478	2820
1008779.26	883956.339	2580
1008779.225	883956.19	2520
1008779.274	883956.127	3120
1008779.279	883956.056	2880
1008779.339	883955.995	3000
1008779.346	883955.89	3300
1008779.513	883955.874	2880
1008779.528	883955.786	3000
1008779.618	883955.746	3540
1008779.72	883955.667	3300
1008779.752	883955.598	3000
1008779.78	883955.693	2880
1008779.797	883955.808	2760
1008779.564	883955.982	3180
1008779.409	883956.262	2880

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008800.343	883937.896	2280
1008799.299	883937.368	2460
1008798.79	883937.789	2520
1008798.002	883937.88	2580
1008797.117	883937.488	2820
1008796.16	883937.45	2880
1008794.805	883937.087	2400
1008793.735	883937.36	2700
1008792.8	883936.717	2520
1008791.841	883936.749	3180
1008791.03	883936.25	2640
1008789.666	883936.211	2820
1008789.334	883936.214	3180
1008789.403	883935.477	2520
1008786.938	883936.21	2760
1008786.988	883936.332	2700
1008785.369	883936.83	3300
1008784.116	883935.662	2880
1008782.933	883935.865	2700
1008782.125	883935.212	3240
1008781.607	883935.827	2940
1008781.05	883935.845	3300
1008780.104	883935.685	3000
1008779.355	883935.726	3000
1008778.766	883935	2820
1008777.882	883935.282	2460
1008776.952	883935.091	3000
1008776.059	883934.506	3060
1008775.73	883935.006	2700
1008775.542	883935.023	2400
1008775.412	883934.656	2220
1008775.383	883934.348	2280
1008775.239	883934.159	2400
1008775.176	883933.928	2580
1008774.74	883933.408	3060
1008773.564	883933.585	2820
1008772.923	883933.018	3000
1008771.916	883933.109	3420
1008771.853	883932.966	3180
1008771.638	883933.668	2460

Easting	Northing	CPM
1008894.502	883908.588	2220
1008894.494	883908.585	2400
1008894.486	883908.578	2460
1008894.376	883908.286	2400
1008893.933	883907.632	2460
1008894.151	883907.854	1800
1008894.763	883908.46	2160
1008894.808	883908.481	2340
1008894.76	883908.485	2460
1008894.753	883908.493	2220
1008894.711	883908.557	2340
1008894.598	883908.587	2520
1008894.498	883908.604	2460
1008894.369	883908.731	2520
1008894.458	883908.742	2220
1008894.603	883908.676	1620
1008894.606	883908.631	2160
1008894.662	883908.576	2220
1008894.796	883908.592	2280
1008894.713	883908.727	2040
1008895.026	883909.645	2280
1008894.563	883911.313	2340
1008893.426	883912.652	2520
1008892.467	883913.061	2820
1008892.496	883912.494	2220
1008892.93	883912.703	2640
1008893.106	883913.704	2820
1008893.047	883913.682	2400
1008893.115	883914.217	2460
1008893.025	883914.07	1860
1008892.809	883912.946	2400
1008893.105	883913.274	2760
1008893.612	883913.409	2880
1008894.036	883913.807	2040
1008894.569	883914.012	2760
1008894.962	883914.388	2760
1008895.402	883914.917	2520
1008896.239	883914.994	2220
1008896.749	883915.728	2400
1008897.53	883915.833	2100

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008770.763	883930.211	2400
1008770.058	883928.252	2700
1008770.441	883931.029	3300
1008769.608	883930.928	3360
1008768.241	883930.327	3000
1008767.003	883929.847	2520
1008765.894	883930.23	2340
1008764.429	883929.523	2460
1008762.236	883928.995	2160
1008761.429	883928.565	2580
1008760.271	883928.631	2580
1008759.785	883928.517	3000
1008759.546	883928.972	2640
1008759.513	883930.103	2640
1008759.891	883930.143	2940
1008760.01	883930.665	2400
1008759.323	883931.386	2940
1008758.751	883932.487	3180
1008758.049	883933.18	3480
1008757.836	883931.99	2940
1008758.788	883931.968	3120
1008759.682	883932.298	2940
1008760.803	883932.994	2520
1008761.788	883932.967	2940
1008761.237	883933.486	3180
1008761.004	883933.874	2700
1008761.795	883934.305	2520
1008762.954	883934.06	2700
1008763.938	883934.238	3120
1008765.306	883934.33	2640
1008765.989	883934.61	1920
1008766.791	883934.99	2340
1008767.788	883934.819	2460
1008768.835	883935.48	2520
1008769.632	883935.599	2220
1008770.152	883936.052	2640
1008771.024	883935.991	2640
1008771.841	883936.297	2940
1008773.22	883936.599	2640
1008774.582	883936.59	2880

Easting	Northing	CPM
1008897.762	883916.574	2220
1008898.437	883916.627	2400
1008898.825	883916.901	2580
1008899.452	883917.676	2400
1008900.378	883917.738	2400
1008900.58	883918.538	2220
1008900.946	883918.52	2220
1008900.985	883918.366	2580
1008901.532	883919.421	2340
1008901.984	883919.348	2700
1008902.615	883920.248	2400
1008902.994	883920.399	2160
1008903.378	883920.984	2520
1008903.34	883921.245	2100
1008904.252	883921.156	2580
1008903.553	883921.281	2400
1008903.633	883921.177	1980
1008904.221	883921.29	2160
1008905.076	883921.314	2520
1008905.5	883921.618	2400
1008906.614	883922.48	2460
1008907.686	883923.573	2400
1008907.637	883924.032	2820
1008907.624	883923.832	3000
1008908.284	883924.666	2160
1008909.43	883925.137	2520
1008909.668	883925.455	2460
1008910.679	883924.545	2640
1008911.24	883923.53	2700
1008912.027	883922.813	2640
1008912.211	883922.98	2520
1008912.158	883923.313	2280
1008911.755	883923.237	2280
1008910.862	883923.305	2820
1008910.35	883922.491	3300
1008909.379	883922.477	2580
1008908.756	883921.501	2340
1008907.702	883921.46	2520
1008907.371	883920.835	3480
1008906.472	883920.593	2760

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008775.585	883936.524	2940
1008776.734	883936.599	2940
1008777.883	883937.094	2940
1008778.834	883937.27	2700
1008779.868	883937.753	3420
1008781.015	883937.802	3060
1008781.972	883938.376	2760
1008782.843	883938.714	2640
1008784.025	883938.724	2820
1008785.19	883938.798	2640
1008786.405	883938.703	2160
1008787.53	883939.088	2520
1008788.599	883938.907	2820
1008790.093	883939.994	2520
1008791.901	883941.934	2580
1008792.717	883941.978	2760
1008792.601	883939.496	2880
1008793.365	883940.314	2820
1008794.779	883940.44	2220
1008795.506	883940.378	2400
1008796.841	883939.881	2280
1008797.97	883939.613	2460
1008798.954	883939.359	2340
1008799.973	883939.111	2880
1008801.322	883939.825	2640
1008802.72	883939.517	2820
1008804.269	883939.898	3000
1008804.989	883940.954	2520
1008803.401	883941.507	2280
1008801.905	883942.284	2100
1008801.208	883944.096	1860
1008801.572	883945.038	2280
1008801.807	883944.896	2400
1008801.792	883944.302	2280
1008801.269	883944.231	2400
1008800.602	883944.357	2640
1008800.016	883944.369	2460
1008799.478	883944.842	2460
1008799.109	883944.869	2700
1008798.408	883946.081	2460

Easting	Northing	CPM
1008905.945	883920.252	2520
1008905.359	883919.362	2340
1008904.252	883919.046	2400
1008903.699	883918.129	2760
1008902.977	883918.112	2760
1008902.385	883917.267	2760
1008901.433	883917.146	2940
1008900.878	883916.275	2880
1008900.082	883915.959	2280
1008899.222	883915.425	2520
1008898.4	883915.03	2640
1008897.507	883914.751	2580
1008896.987	883913.849	2760
1008896.06	883913.832	2880
1008895.575	883913.225	2580
1008894.687	883913.044	3000
1008894.17	883912.133	3300
1008893.102	883911.797	2700
1008892.484	883911.748	2400
1008892.414	883911.816	2520
1008892.858	883911.623	2820
1008893.11	883910.309	2340
1008893.377	883909.104	2520
1008893.908	883908.814	2460
1008893.719	883909.231	3060
1008893.682	883909.251	2760
1008893.574	883909.291	2760
1008893.364	883909.276	2400
1008893.381	883909.362	2220
1008893.549	883909.397	2820
1008893.402	883909.308	3480
1008893.394	883909.281	2880
1008893.351	883909.327	2400
1008893.436	883909.172	2100
1008892.838	883907.749	2580
1008892.568	883906.377	2880
1008892.539	883906.261	2760
1008892.602	883906.361	2760
1008893.02	883906.785	2520
1008893.521	883906.602	1920

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008796.991	883947.691	2640
1008796.727	883947.772	2700
1008796.616	883947.929	2760
1008796.144	883947.559	2220
1008795.392	883947.901	2220
1008793.889	883948.318	2580
1008793.296	883948.125	1980
1008792.195	883946.996	2460
1008791.353	883945.026	2400
1008792.815	883944.187	2520
1008794.463	883938.49	2340
1008793.99	883936.775	2340
1008792.43	883940.208	2640
1008792.124	883940.824	2520
1008792.246	883941.328	2100
1008791.263	883941.741	1740
1008790.003	883942.037	2460
1008788.773	883942.121	2520
1008787.829	883942.486	2340
1008786.878	883941.943	2700
1008786.078	883942.342	2760
1008786.23	883941.609	2700
1008787.515	883942.202	2640
1008788.732	883943.017	2640
1008789.673	883943.694	2280
1008790.828	883944.296	2340
1008791.917	883944.982	2220
1008792.818	883945.231	2400
1008793.636	883945.471	2520
1008794.787	883945.105	2220
1008794.521	883945.933	2400
1008793.916	883947.397	3120
1008793.278	883947.388	2280
1008792.398	883947.126	2520
1008791.41	883946.034	2880
1008790.301	883946.054	2760
1008789.161	883945.203	2580
1008787.781	883944.878	3180
1008786.681	883944.209	2880
1008786.4	883943.815	2940

Easting	Northing	CPM
1008894.928	883908.096	2940
1008895.817	883908.445	2640
1008896.236	883909.069	2280
1008896.869	883909.575	2640
1008897.581	883909.834	2520
1008898.307	883910.439	2460
1008899.119	883910.655	3060
1008899.63	883911.43	2460
1008900.502	883911.548	2520
1008901.37	883912.501	2220
1008902.259	883912.616	2760
1008902.645	883913.222	2760
1008903.46	883913.678	2520
1008904.318	883913.927	2160
1008904.768	883914.77	2760
1008905.705	883914.83	2280
1008906.218	883915.618	2400
1008906.888	883915.902	2160
1008907.331	883916.596	2580
1008907.979	883917.27	2700
1008908.634	883917.334	2700
1008908.595	883917.644	2400
1008910.321	883910.751	2640
1008910.166	883910.687	2340
1008909.923	883910.867	2220
1008909.431	883910.403	2820
1008909.952	883911.04	2820
1008910.6	883911.723	2580
1008911.5	883911.822	2700
1008912.241	883912.141	2280
1008913.261	883912.312	2220
1008914.024	883912.983	2460
1008914.935	883913.082	2520
1008915.565	883913.568	2220
1008916.162	883913.406	2640
1008916.218	883914.709	2280
1008916.232	883915.772	2880
1008916.242	883914.665	2760
1008917.166	883913.412	3000
1008916.802	883913.298	2520

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008786.293	883943.283	2580
1008784.118	883944.184	2640
1008783.609	883943.991	2820
1008782.46	883943.074	2820
1008781.299	883943.469	2700
1008780.547	883942.973	2640
1008779.966	883943.062	2580
1008779.337	883942.1	3240
1008779.403	883942.364	2760
1008778.83	883942.145	2580
1008777.856	883941.556	2940
1008776.5	883941.262	2580
1008775.048	883940.583	2520
1008774.521	883940.599	2340
1008774.517	883939.464	3000
1008773.97	883939.346	3000
1008773.467	883938.893	2700
1008772.282	883938.853	2460
1008771.366	883938.688	2700
1008770.502	883938.247	2220
1008769.362	883938.033	2280
1008768.35	883937.487	2160
1008767.408	883937.078	2340
1008766.212	883936.655	3000
1008764.759	883936.605	3060
1008763.349	883935.671	2640
1008762.365	883935.162	2400
1008761.315	883934.961	2640
1008760.462	883934.986	2760
1008759.954	883934.539	2040
1008758.628	883934.826	2700
1008757.861	883935.482	3060
1008757.41	883936.129	3360
1008755.624	883933.801	3060
1008755.546	883934.294	2580
1008755.631	883936.252	2220
1008756.156	883936.623	2520
1008758.004	883934.695	3120
1008759.863	883933.502	2640
1008760.321	883937.512	2640

Easting	Northing	CPM
1008916.648	883913.339	2640
1008916.501	883913.248	2520
1008916.231	883913.119	2340
1008915.815	883912.795	1800
1008915.304	883912.708	2940
1008914.751	883912.274	3240
1008913.999	883912.445	2760
1008913.534	883911.845	2640
1008912.772	883911.907	2280
1008912.369	883911.307	2640
1008911.613	883911.408	2520
1008911.164	883911.072	3000
1008910.46	883910.522	2400
1008909.851	883910.325	2160
1008909.345	883909.842	2280
1008908.656	883909.712	2520
1008908.153	883908.965	2580
1008907.462	883908.997	2280
1008907.027	883908.473	2220
1008906.182	883908.514	2880
1008905.942	883908.01	2160
1008905.716	883907.655	2460
1008905.695	883907.581	2580
1008905.84	883907.528	2400
1008906.199	883907.336	2100
1008906.25	883907.377	2160
1008906.186	883907.389	2520
1008906.101	883907.426	2820
1008906.039	883907.366	2220
1008905.981	883907.625	2880
1008905.775	883908.184	2940
1008905.149	883907.795	3000
1008904.335	883907.544	2700
1008904.012	883907.035	2940
1008903.05	883906.86	2640
1008902.47	883906.772	2940
1008902.12	883906.133	2280
1008901.396	883906.041	2220
1008901.466	883905.361	1860
1008901.427	883905.191	2100

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008760.427	883938.325	2340
1008761.144	883938.74	2700
1008762.055	883938.434	2100
1008762.55	883938.157	1800
1008762.699	883938.016	2520
1008762.555	883937.966	2340
1008762.621	883937.721	2160
1008762.642	883937.261	2520
1008762.619	883936.628	3060
1008762.642	883936.404	2880
1008762.563	883936.461	2820
1008762.56	883936.926	2460
1008762.866	883938.001	2520
1008763.073	883938.206	2520
1008762.705	883939.31	2820
1008763.01	883940.109	2940
1008765.986	883939.746	2580
1008766.638	883939.713	2940
1008767.024	883940.043	2760
1008768.022	883940.739	2940
1008769.424	883941.852	2760
1008771.006	883942.197	2400
1008771.639	883942.748	2760
1008773.236	883942.791	3120
1008774.916	883943.045	2760
1008775.351	883943.599	2940
1008775.975	883943.644	3240
1008776.542	883944.745	3120
1008776.329	883945.706	2880
1008776.93	883945.832	3000
1008777.293	883946.186	2880
1008777.769	883946.448	2520
1008778.399	883946.609	2640
1008779.184	883946.212	2520
1008780.183	883946.757	2760
1008781.189	883946.701	3000
1008782.383	883947.569	3120
1008783.7	883947.492	2520
1008784.425	883948.323	2520
1008785.404	883948.33	2460

Easting	Northing	CPM
1008901.293	883905.63	2400
1008900.889	883905.881	2580
1008900.151	883905.418	2400
1008899.323	883905.649	2160
1008898.569	883904.995	2400
1008897.534	883904.786	2040
1008896.687	883904.199	2460
1008896.035	883904.304	2880
1008896.046	883902.368	2940
1008895.924	883900.746	2280
1008896.535	883900.217	2520
1008897.143	883899.912	2520
1008897.365	883900.437	2820
1008897.838	883900.696	2460
1008898.223	883901.186	2700
1008898.328	883901.431	2220
1008898.441	883900.856	2220
1008898.932	883900.271	2640
1008899.653	883901.256	2580
1008900.565	883901.105	2700
1008901.155	883901.981	2220
1008901.91	883901.939	2400
1008902.489	883902.416	3000
1008903.352	883902.637	2760
1008903.95	883902.784	2940
1008904.633	883903.388	2700
1008905.482	883903.436	2160
1008906.161	883904.256	2220
1008907.108	883904.338	2340
1008907.872	883905.13	2400
1008908.729	883905.142	2340
1008909.309	883905.464	2640
1008909.701	883906.05	2460
1008909.175	883906.965	2460
1008909.332	883906.973	2460
1008910.138	883906.084	2040
1008910.91	883906.319	2700
1008911.722	883906.521	2760
1008912.391	883907.053	2220
1008913.073	883907.211	2580

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008786.262	883948.256	2760
1008787.176	883948.485	2760
1008788.15	883948.713	2580
1008789.13	883948.992	2160
1008789.901	883949.143	2760
1008790.215	883949.969	2520
1008788.956	883951.528	2520
1008788.019	883952.847	2640
1008788.009	883953.209	2400
1008787.733	883953.364	2940
1008786.895	883953.183	3120
1008785.754	883952.873	2340
1008787.454	883950.925	2580
1008788.851	883949.316	2760
1008784.994	883952.732	3060
1008784.69	883952.936	2820
1008784.777	883953.034	2460
1008784.634	883953.026	2640
1008784.583	883953.12	2640
1008784.324	883953.19	2640
1008784.2	883953.034	3060
1008783.933	883952.535	3000
1008783.501	883951.634	2820
1008783.77	883951.944	2940
1008784.224	883952.595	2760
1008784.339	883952.656	2760
1008784.382	883952.808	2580
1008784.112	883953.296	2700
1008783.856	883953.027	2940
1008783.228	883952.586	3300
1008782.604	883951.845	3060
1008782.016	883950.892	2580
1008780.871	883950.845	2340
1008779.993	883950.166	2280
1008778.969	883950.314	2640
1008778.23	883949.543	2460
1008777.087	883949.283	2760
1008776.462	883948.744	2760
1008775.514	883948.378	2400
1008774.552	883948.206	2400

Easting	Northing	CPM
1008913.661	883908.083	2280
1008914.484	883908.13	2160
1008915.081	883909.115	3000
1008915.888	883909.398	2520
1008916.506	883909.911	2820
1008917.125	883909.887	2400
1008917.333	883910.624	2640
1008917.577	883910.057	2820
1008917.82	883909.898	2700
1008918.211	883909.542	3000
1008918.884	883909.706	2940
1008920.127	883909.439	3000
1008920.589	883909.839	2580
1008920.605	883909.571	2460
1008920.182	883909.353	2880
1008919.738	883908.761	2700
1008919.058	883908.563	2640
1008918.752	883908.028	2640
1008917.883	883907.546	2520
1008917.53	883906.802	2340
1008917.072	883906.417	2160
1008916.983	883906.113	2580
1008916.936	883906.16	2220
1008916.916	883906.509	2160
1008916.81	883907.282	2340
1008916.312	883907.014	2040
1008915.435	883906.773	2640
1008914.984	883906.417	2760
1008914.304	883905.651	3060
1008913.709	883905.97	3300
1008913.747	883905.13	3000
1008913.216	883904.469	2880
1008913.243	883904.633	2640
1008913.363	883904.643	2280
1008913.618	883904.961	2220
1008912.952	883905.716	2700
1008912.384	883905.327	3180
1008911.556	883905.172	2520
1008911.336	883905.006	2520
1008910.818	883904.159	2700

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008773.584	883947.606	2700
1008772.582	883947.528	2820
1008771.837	883946.723	2280
1008770.935	883946.763	2400
1008770.214	883946.252	2760
1008769.327	883946.299	2640
1008768.358	883946.595	2700
1008767.746	883945.649	2760
1008766.908	883945.212	2340
1008767.067	883944.229	2340
1008767.635	883943.883	2580
1008765.889	883944.851	3000
1008761.875	883944.641	2880
1008762.414	883943.008	2580
1008760.814	883942.812	2700
1008760.255	883943.03	2820
1008759.31	883942.501	2760
1008758.264	883942.988	2760
1008758.504	883942.924	2640
1008758.108	883943.474	2820
1008757.694	883943.477	2520
1008752.852	883942.845	2580
1008749.285	883941.669	2460
1008754.022	883941.055	2700
1008754.591	883938.81	2760
1008757.007	883937.457	2820
1008756.868	883936.789	2640
1008757.465	883934.621	3060
1008757.513	883935.365	2700
1008755.449	883937.295	2580
1008755.151	883937.124	2460
1008754.921	883936.568	2040
1008755.422	883935.056	1740
1008755.621	883934.999	2400
1008756.192	883936.116	2520
1008758.732	883939.354	2880
1008759.484	883939.478	2280
1008759.469	883942.709	2400
1008760.311	883943.979	2460
1008762.048	883943.838	2940

Easting	Northing	CPM
1008909.92	883904.336	2460
1008909.292	883903.797	2820
1008908.348	883903.784	2640
1008907.713	883903.363	3060
1008907.056	883902.689	2700
1008906.186	883902.741	2880
1008905.891	883901.873	2580
1008905.261	883902.118	2760
1008904.759	883901.654	2280
1008903.903	883901.33	3180
1008903.847	883901.15	2460
1008903.834	883900.649	2520
1008903.732	883900.658	2580
1008903.403	883900.983	2700
1008902.924	883901.159	2400
1008902.554	883900.38	2160
1008901.816	883900.583	2460
1008901.559	883899.793	2580
1008900.879	883899.825	2640
1008900.176	883899.365	2580
1008899.395	883899.546	2580
1008898.866	883899.829	2940
1008898.715	883899.506	2400
1008898.555	883897.756	2640
1008910.602	883888.572	2820
1008910.208	883887.736	2640
1008909.507	883887.752	2820
1008909.125	883886.992	2940
1008908.477	883886.831	2700
1008908.303	883886.136	2580
1008907.206	883885.465	2520
1008906.323	883884.69	2340
1008905.596	883884.733	2760
1008905.791	883884.268	2520
1008904.742	883884.317	2520
1008903.774	883884.752	1920
1008903.752	883885.101	2100
1008903.829	883884.975	2400
1008903.857	883884.942	2640
1008903.956	883884.746	2280

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008764.333	883942.048	3060
1008763.618	883942.637	2400
1008762.261	883942.632	2820
1008763.277	883942.825	2580
1008765.179	883943.081	2940
1008766.938	883944.582	2520
1008767.22	883945.492	2940
1008764.626	883944.911	3300
1008765.379	883945.189	2940
1008766.355	883946.381	2160
1008766.897	883946.741	2460
1008767.389	883947.105	2520
1008768.033	883947.226	2340
1008768.799	883947.803	2640
1008769.704	883947.998	2220
1008770.708	883947.787	2280
1008771.742	883948.584	2700
1008773.103	883948.749	2460
1008774.315	883949.826	2460
1008775.997	883950.026	2100
1008777.371	883950.614	2460
1008778.521	883950.99	2940
1008779.575	883951.821	2580
1008781.004	883952.056	2220
1008781.843	883953.077	2460
1008782.516	883953.267	2760
1008781.722	883954.243	2700
1008780.62	883955.5	2880
1008780.085	883955.488	2580
1008779.575	883955.368	3000
1008778.942	883955.208	3000
1008778.864	883954.205	3420
1008778.097	883953.88	2640
1008777.41	883953.519	2520
1008775.934	883953.338	2400
1008774.631	883952.201	2040
1008773.753	883951.916	2580
1008773.495	883951.378	2940
1008772.368	883951.264	2940
1008771.387	883950.793	2580

Easting	Northing	CPM
1008903.909	883884.763	2100
1008904.213	883884.668	2280
1008904.076	883884.815	2520
1008903.975	883884.94	2700
1008904.166	883884.533	2700
1008903.782	883883.744	2580
1008903.49	883882.247	2520
1008904.887	883880.126	2640
1008905.886	883878.768	2880
1008905.841	883878.098	2640
1008905.88	883878.004	2400
1008905.887	883878.002	2340
1008905.893	883878	2820
1008905.898	883877.998	2940
1008905.905	883877.995	3240
1008905.91	883877.993	2160
1008905.91	883877.993	2460
1008897.955	883896.227	2820
1008898.354	883895.56	2820
1008898.919	883894.749	2460
1008899.376	883895.12	3060
1008900.144	883895.201	2820
1008900.675	883895.642	3180
1008901.393	883895.904	2940
1008902.128	883895.908	2880
1008902.458	883896.701	2700
1008903.139	883896.85	2640
1008903.914	883897.77	2580
1008904.514	883897.896	2340
1008905.007	883898.425	2400
1008905.789	883898.955	2160
1008906.64	883898.848	2640
1008907.202	883899.625	2460
1008908.069	883899.646	2160
1008908.644	883900.4	1980
1008909.383	883900.25	1980
1008910.218	883900.62	2520
1008911.088	883900.93	2580
1008911.668	883901.125	3000
1008911.973	883901.932	2880

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008770.393	883950.147	2340
1008769.242	883950.281	2760
1008767.98	883949.53	2520
1008766.925	883949.226	2400
1008766.01	883948.739	2340
1008764.487	883948.517	2220
1008764.107	883948.449	2280
1008762.059	883947.417	2520
1008756.723	883945.776	2580
1008751.737	883941.469	2640
1008753.022	883940.291	2820
1008754.045	883944.022	2700
1008755.689	883947.796	2700
1008755.163	883947.522	2700
1008754.828	883946.348	2640
1008754.377	883945.56	2640
1008754.06	883945.155	2820
1008753.366	883944.435	2340
1008752.963	883943.898	2520
1008752.625	883943.806	2460
1008752.044	883944.834	2400
1008751.456	883944.916	2940
1008751.359	883945.087	3000
1008751.119	883945.807	2640
1008751.91	883945.632	2100
1008752.645	883946.372	2760
1008753.541	883946.39	3000
1008753.291	883947.514	2520
1008753.418	883947.837	2460
1008755.153	883948.058	2700
1008756.304	883947.923	2880
1008756.413	883948.234	3660
1008756.719	883949.444	2880
1008757.253	883949.513	3000
1008756.612	883949.396	2760
1008756.309	883949.883	2880
1008756.083	883950.15	2820
1008755.292	883950.609	2580
1008754.846	883950.465	2460
1008754.012	883950.647	2520

Easting	Northing	CPM
1008912.624	883901.848	3060
1008913.266	883902.761	2520
1008914.068	883903.029	2580
1008914.529	883903.733	2640
1008915.037	883904.232	2880
1008915.657	883904.198	2820
1008915.776	883904.592	2940
1008915.775	883904.714	2760
1008915.895	883904.88	2520
1008916.374	883904.923	2760
1008917.219	883904.661	2640
1008917.665	883905.5	3060
1008918.503	883905.501	2760
1008919.028	883906.485	2820
1008919.707	883906.138	2220
1008920.288	883905.807	1860
1008921.982	883904.746	1980
1008922.86	883904.671	2100
1008923.024	883904.166	2580
1008923.176	883903.698	2760
1008923.39	883902.967	2760
1008923.181	883902.388	2940
1008923.154	883903.3	2760
1008923.362	883903.439	2460
1008922.754	883903.507	2460
1008922.054	883903.092	2400
1008921.308	883902.923	2700
1008920.529	883902.505	2280
1008919.546	883902.396	2340
1008919.151	883902.195	2460
1008918.533	883901.797	2700
1008917.993	883901.537	2040
1008917.544	883901.016	2640
1008917	883901.043	2880
1008916.245	883900.18	2820
1008915.417	883900.241	2880
1008914.739	883899.58	2880
1008913.709	883899.5	2640
1008913.049	883898.653	2220
1008912.074	883898.841	2940

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008752.941	883950.111	3000
1008751.801	883950.183	3240
1008750.795	883949.906	2880
1008749.647	883949.939	2460
1008748.77	883949.588	2880
1008747.869	883950.751	3060
1008747.372	883951.869	2640
1008747.212	883952.158	2460
1008747.032	883951.893	2400
1008747.13	883951.145	2400
1008747.654	883950.784	2340
1008748.38	883951.492	2640
1008749.419	883951.549	2880
1008749.8	883951.942	2280
1008750.106	883951.809	2700
1008749.655	883952.042	2520
1008749.966	883950.956	2400
1008750.939	883950.555	2580
1008752.096	883949.97	2820
1008752.897	883950.369	3540
1008753.824	883950.172	2820
1008754.698	883950.603	2460
1008755.4	883951.057	2580
1008755.392	883950.23	2220
1008755.34	883950.088	2400
1008755.816	883950.94	2580
1008756.607	883951.509	2880
1008757.074	883951.62	2580
1008757.456	883951.914	3060
1008757.414	883951.907	2820
1008757.529	883952.529	2220
1008757.894	883952.051	2940
1008758.045	883952.347	3360
1008758.817	883952.705	2940
1008759.614	883953.164	2640
1008760.346	883952.952	2280
1008761.296	883952.482	2460
1008762.872	883950.616	2460
1008763.765	883951.49	2460
1008764.609	883951.716	2160

Easting	Northing	CPM
1008911.324	883897.927	2220
1008909.993	883897.792	2340
1008909.504	883896.896	2400
1008908.419	883896.936	2760
1008907.743	883896.109	2520
1008906.945	883896.352	2580
1008906.63	883895.851	2400
1008905.748	883895.933	2820
1008904.8	883895.302	2580
1008903.559	883895.214	2520
1008902.665	883894.437	2520
1008901.433	883894.512	2700
1008900.803	883892.978	2220
1008900.711	883890.999	2280
1008901.044	883889.904	2460
1008901.442	883890.054	2700
1008902.226	883890.389	2160
1008903.039	883890.76	2520
1008903.579	883891.338	2460
1008904.12	883891.896	2760
1008904.898	883891.572	2640
1008905.474	883892.354	3000
1008906.386	883892.251	2160
1008907.061	883893.038	1800
1008908.001	883893.125	2160
1008908.573	883893.865	1920
1008909.52	883894.265	2220
1008910.013	883895.117	2160
1008910.774	883895.396	2700
1008911.802	883895.981	2460
1008912.63	883895.845	2880
1008913.225	883896.186	2580
1008914.07	883896.9	2820
1008914.848	883896.724	3300
1008915.03	883897.217	2700
1008914.94	883896.9	2340
1008914.983	883896.762	2100
1008915.287	883897.018	2220
1008915.697	883897.635	2520
1008916.325	883897.646	2220

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008765.488	883951.112	2280
1008766.172	883951.527	2760
1008766.879	883951.434	2460
1008767.171	883951.907	2760
1008766.668	883952.441	3180
1008767.63	883951.873	2520
1008769.198	883948.913	2640
1008770.427	883952.872	2460
1008771.77	883953.147	2520
1008772.609	883953.883	2280
1008773.401	883953.792	2280
1008774.059	883954.021	2580
1008775.106	883954.561	2760
1008776.105	883954.616	2700
1008777.425	883954.844	3060
1008777.527	883955.389	3000
1008776.778	883956.577	2580
1008777.018	883958.226	2280
1008777.567	883959.528	2520
1008777.193	883960.302	2520
1008776.317	883960.681	2280
1008775.206	883960.503	2160
1008774.082	883960.743	3300
1008773.235	883960.197	2820
1008772.389	883960.363	2760
1008771.386	883959.91	2640
1008770.258	883959.367	2820
1008769.014	883959.244	2400
1008768.358	883958.959	2400
1008768.257	883961.05	2880
1008766.357	883959.466	2700
1008764.961	883957.802	2280
1008763.963	883957.552	2820
1008763.072	883957.384	2220
1008761.952	883957.337	2460
1008760.964	883956.745	2580
1008759.868	883957.021	2640
1008758.601	883956.471	2700
1008757.43	883956.273	2580
1008756.21	883955.135	2400

Easting	Northing	CPM
1008917.084	883898.291	2760
1008918.221	883898.32	2820
1008918.765	883899.105	2460
1008919.33	883899.488	2940
1008919.25	883899.568	2460
1008919.204	883899.521	2580
1008919.249	883899.383	2460
1008919.728	883899.234	2940
1008920.11	883900.038	2760
1008920.891	883899.913	2160
1008921.658	883900.85	2700
1008922.27	883900.789	2880
1008922.231	883901.338	2640
1008922.295	883901.251	2400
1008923.036	883899.942	2220
1008923.428	883899.087	2220
1008923.473	883898.913	1920
1008923.04	883898.9	2340
1008923.119	883898.405	2700
1008923.88	883899.699	2760
1008924.234	883900.712	2760
1008923.737	883900.329	2400
1008923.179	883900.283	2880
1008922.636	883899.595	3000
1008921.931	883899.734	2580
1008921.639	883899.077	2520
1008920.884	883898.642	2460
1008920.171	883898.957	2340
1008919.997	883898.053	2700
1008919.443	883898.221	2520
1008918.732	883898.13	2700
1008918.207	883897.437	2400
1008917.394	883897.438	2820
1008917.271	883896.437	2760
1008916.765	883896.253	3480
1008916.233	883897.038	3300
1008916.048	883896.903	2700
1008915.542	883896.338	2100
1008914.865	883896.442	2520
1008914.404	883895.54	2760

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008755.318	883954.837	2820
1008754.648	883954.578	2340
1008754.103	883955.224	2460
1008753.421	883955.23	2160
1008752.84	883955.909	2160
1008751.928	883955.988	2880
1008751.008	883956.74	2940
1008750.002	883956.814	2580
1008748.695	883957.178	2820
1008747.621	883956.815	2400
1008747.889	883956.9	2400
1008747.247	883956.206	2460
1008746.915	883956.575	2280
1008747.025	883958.291	2880
1008747.006	883959.228	3000
1008746.209	883959.306	2820
1008746.262	883959.37	2400
1008746.711	883959.138	2160
1008746.901	883959.221	2940
1008747.149	883959.656	2580
1008747.305	883960.987	2580
1008747.161	883960.809	2340
1008747.162	883959.928	2640
1008747.712	883958.909	2280
1008748.256	883958.972	2520
1008749.332	883959.407	2580
1008750.248	883959.31	2880
1008751.226	883959.611	2700
1008752.161	883959.553	2220
1008752.94	883959.986	3000
1008753.747	883959.711	2580
1008754.163	883960.341	2880
1008754.958	883960.231	2760
1008755.628	883960.55	2640
1008756.675	883960.2	2460
1008757.529	883960.503	2520
1008758.712	883960.731	2220
1008759.654	883960.909	2340
1008760.624	883961.598	2460
1008761.686	883961.491	2460

Easting	Northing	CPM
1008913.193	883895.782	2580
1008912.621	883894.908	2760
1008911.716	883894.685	2520
1008911.146	883893.836	3060
1008910.193	883893.624	2580
1008909.471	883893.229	1980
1008908.798	883892.437	2520
1008907.594	883892.084	2580
1008906.856	883891.14	2100
1008905.843	883890.873	2580
1008905.088	883889.853	2640
1008903.918	883889.935	2160
1008903.383	883889.204	2040
1008903.249	883887.27	2580
1008902.787	883885.631	2580
1008902.742	883885.772	2940
1008902.861	883885.743	2820
1008903.693	883885.752	2460
1008904.332	883886.426	2700
1008905.037	883886.524	2640
1008905.876	883887.418	2280
1008906.869	883887.384	2340
1008907.257	883888.421	2580
1008907.319	883888.515	2460
1008907.672	883888.398	2460
1008908.672	883888.981	2220
1008909.686	883889.26	2400
1008910.158	883890.009	2160
1008911.263	883890.245	2340
1008912.319	883891.169	2880
1008913.358	883891.352	2460
1008914.124	883892.41	2640
1008915.22	883892.573	2340
1008916.204	883893.585	2040
1008917.195	883894.029	2340
1008917.988	883894.943	2460
1008919.346	883895.177	2460
1008920.235	883896.131	2340
1008921.612	883896.478	2160
1008922.429	883897.456	2340

Survey Unit: CE-FSS-38-05

Gamma Walkover Survey

Instrument: Ludlum Model 12 (168806) with 44-10 (277910)

Easting	Northing	CPM
1008762.686	883962.278	2580
1008763.872	883962.392	2700
1008764.92	883963.047	2460
1008765.713	883962.94	2760
1008766.21	883963.397	2700
1008766.975	883963.219	2700
1008767.889	883962.711	2400
1008768.439	883962.707	2280
1008769.355	883962.902	2220
1008770.107	883963.291	2640
1008770.484	883963.366	2640
1008770.76	883964.222	2940
1008771.345	883964.234	3120
1008771.698	883964.8	2700
1008772.43	883965.026	2820
1008774.209	883965.105	2520
1008775.367	883965.576	2520
1008776.555	883965.861	2640
1008777.434	883966.974	2040
1008777.802	883968.859	2640
1008778.013	883969.241	3000
1008777.87	883969.664	2460
1008777.409	883967.837	3360
1008777.222	883966.087	2820
1008776.367	883965.827	2400
1008775.072	883966.107	2280
1008774.006	883966.168	2160
1008772.857	883966.148	2460
1008771.898	883966.611	2220
1008770.817	883966.276	2220
1008769.591	883966.138	2520
1008768.266	883966.189	2400
1008767.467	883966.457	2640

Easting	Northing	CPM
1008923.328	883897.651	2400
1008923.487	883898.732	2220
1008923.257	883898.736	2400
1008923.529	883898.753	2460
1008924.842	883898.736	2460
1008924.949	883898.458	2820
1008924.913	883898.019	2280
1008923.99	883898.015	2460
1008923.753	883897.115	2400
1008923.049	883897.064	2220
1008922.558	883896.423	2520
1008922.209	883895.865	2160
1008921.611	883895.55	2700
1008921.38	883894.956	2700
1008920.772	883894.961	2820
1008920.38	883894.402	2640
1008919.713	883894.137	2760
1008919.094	883894.156	2340
1008918.913	883893.392	2760
1008918.156	883893.322	2340
1008917.958	883892.879	3000
1008917.431	883892.722	2520
1008916.975	883892.347	3000
1008916.419	883891.889	2940
1008915.806	883891.79	2700
1008915.598	883891.137	2700
1008914.873	883891.286	2640
1008914.471	883890.396	2460
1008913.501	883890.372	2880
1008913.012	883889.556	3060
1008912.191	883889.524	2880
1008911.785	883888.825	3000
1008911.125	883888.619	3420

FSS INTERNAL CHAIN OF CUSTODY FORM

MACTEC

Project Info		Laboratory Info		INVOICE (if other than MACTEC contact)	
MACTEC Contact	Project No.	Laboratory Name	Phone	Laboratory Name	Phone
Project Title	Purchase Order No.	Lab Contact	Fax	Lab Contact	Fax
Address		Address		Address	
City/State/Zip		City/State/Zip		City/State/Zip	
Special Handling Instructions					

Sample ID No.	Date Collected	time	Type[1]	Media	Volume	Description if necessary	Analysis			
FSS-38-05- 001 - 01	8-11-11	0815	Rad	Soil	1 pint					
FSS-38-05- 002 - 01		0820	Rad	Soil	1 pint					
FSS-38-05- 003 - 01		0825	Rad	Soil	1 pint					
FSS-38-05- 004 - 01		0830	Rad	Soil	1 pint					
FSS-38-05- 005 - 01		0835	Rad	Soil	1 pint					
FSS-38-05- 006 - 01		0840	Rad	Soil	1 pint					
FSS-38-05- 007 - 01		0845	Rad	Soil	1 pint					
FSS-38-05- 008 - 01		0850	Rad	Soil	1 pint					
FSS-38-05- 009 - 01		0855	Rad	Soil	1 pint					
FSS-38-05- 010 - 01		0900	Rad	Soil	1 pint					
FSS-38-05- 011 - 01		0935	Rad	Soil	1 pint					
FSS-38-05- 012 - 01		0940	Rad	Soil	1 pint					
FSS-38-05- 013 - 01		0945	Rad	Soil	1 pint					
FSS-38-05- 014 - 01		0950	Rad	Soil	1 pint					
FSS-38-05- 015 - 01	8-11-11	0955	Rad	Soil	1 pint					

Relinquished By:	Larry Fitzsimmons	Received By:		[1]Type
Signed/Date/Time	8-11-11 @ 1135	Signed/Date/Time		RS-Radioactive
Received By:	Brianna Sullivan	Relinquished By:		Chem-Chemical
Signed/Date/Time	8-11-11 @ 1135	Signed/Date/Time		Mix-Rad+Chemical
Relinquished By:		Received By:		
Signed/Date/Time		Signed/Date/Time		

PROCEDURE RPP-32	REVISION No.0	ATTACHMENT 2

FSS INTERNAL CHAIN OF CUSTODY FORM

Page ___ of ____

MACTEC

Project Info		Laboratory Info		INVOICE (if other than MACTEC contact)	
MACTEC Contact	Project No.	Laboratory Name	Phone	Laboratory Name	Phone
Project Title	Purchase Order No.	Lab Contact	Fax	Lab Contact	Fax
Address		Address		Address	
City/State/Zip		City/State/Zip		City/State/Zip	
Special Handling Instructions					

Sample ID No.	Date Collected	time	Type[1]	Media	Volume	Description if necessary	Analysis			
FSS-38-05- 016 - 01	8-11-11	1000	Rad	Soil	1 pint					
FSS-38-05- 017 - 01		1005	Rad	Soil	1 pint					
FSS-38-05- 018 - 01		1010	Rad	Soil	1 pint					
FSS-38-05- 019 - 01		1015	Rad	Soil	1 pint					
FSS-38-05- 020 - 01		1020	Rad	Soil	1 pint					
FSS-38-05- 021 - 01		1025	Rad	Soil	1 pint					
FSS-38-05- 022 - 01		1030	Rad	Soil	1 pint					
FSS-38-05- 023 - 01		1035	Rad	Soil	1 pint					
FSS-38-05- 024 - 01		1040	Rad	Soil	1 pint					
FSS-38-05- 024 - 1S		1040	Rad	Soil	1 pint					
FSS-38-05- 025 - 01		1045	Rad	Soil	1 pint					
FSS-38-05- 026 - 01		1050	Rad	Soil	1 pint					
FSS-38-05- 026 - 1S		1050	Rad	Soil	1 pint					
FSS-38-05- 027 - 01		1055	Rad	Soil	1 pint					
FSS-38-05- 028 - 01	8-11-11	1100	Rad	Soil	1 pint					

Relinquished By:	Larry Fitzsimmons	Received By:		[1]Type
Signed/Date/Time	8-11-11 @ 1135	Signed/Date/Time		RS-Radioactive
Received By:	B. Sullivan	Relinquished By:		Chem-Chemical
Signed/Date/Time	8-11-11 @ 1135	Signed/Date/Time		Mix-Rad+Chemical
Relinquished By:		Received By:		
Signed/Date/Time		Signed/Date/Time		

PROCEDURE RPP-32	REVISION No.0	ATTACHMENT 2

FSS INTERNAL CHAIN OF CUSTODY FORM

MACTEC

Project Info		Laboratory Info		INVOICE (if other than MACTEC contact)	
MACTEC Contact	Project No.	Laboratory Name	Phone	Laboratory Name	Phone
Project Title	Purchase Order No.	Lab Contact	Fax	Lab Contact	Fax
Address		Address		Address	
City/State/Zip		City/State/Zip		City/State/Zip	
Special Handling Instructions					

Sample ID No.	Date Collected	time	Type[1]	Media	Volume	Description if necessary	Analysis			
FSS-38-05- 029 - 01	8-11-11	1105	Rad	Soil	1 pint					
FSS-38-05-			Rad	Soil	1 pint					
FSS-38-05-			Rad	Soil	1 pint					
FSS-38-05-			Rad	Soil	1 pint					
FSS-38-05-			Rad	Soil	1 pint					
FSS-38-05-			Rad	Soil	1 pint					
FSS-38-05-			Rad	Soil	1 pint					
FSS-38-05-			Rad	Soil	1 pint					
FSS-38-05-			Rad	Soil	1 pint					
FSS-38-05-			Rad	Soil	1 pint					
FSS-38-05-			Rad	Soil	1 pint					
FSS-38-05-			Rad	Soil	1 pint					
FSS-38-05-			Rad	Soil	1 pint					
FSS-38-05-			Rad	Soil	1 pint					
FSS-38-05-	8-11-11		Rad	Soil	1 pint					

Relinquished By:	L. Fitzsimmons	Received By:		[1]Type
Signed/Date/Time	8-11-11 @ 1135	Signed/Date/Time		RS-Radioactive
Received By:		Relinquished By:		Chem-Chemical
Signed/Date/Time		Signed/Date/Time		Mix-Rad+Chemical
Relinquished By:		Received By:		
Signed/Date/Time		Signed/Date/Time		

PROCEDURE RPP-32	REVISION No.0	ATTACHMENT 2

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-001
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-001
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 6.259E+002 g
Sample Taken On: 8/11/2011 8:15:00 AM
Acquisition Started: 8/11/2011 6:55:14 PM
Live Time: 1000.0 seconds
Real Time: 1000.4 seconds
Dead Time: 0.04 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.73E+001	2.73E+000	1.19E+000
CO-60	U	-1.40E-003	1.35E-001	1.97E-001
SB-125	UI	1.25E-002	2.65E-001	3.87E-001
CS-137		2.77E-001	9.69E-002	1.03E-001
Ra-226		8.46E-001	1.36E-001	2.20E-001
TH-230	U	2.37E+001	2.42E+001	3.95E+001
PA-231	U	-2.80E+000	3.38E+000	4.13E+000
Th-231		2.80E+000	2.75E+000	1.29E+000
Th-232		1.20E+000	2.10E-001	1.98E-001
PA-234M	U	2.16E+000	1.52E+001	2.37E+001
U-234	U	-1.23E+002	1.47E+002	1.64E+002
U-235	U	1.09E-001	1.26E-001	1.93E-001
U-238	U	3.20E+000	1.55E+000	2.59E+000
AM-241	U	2.24E-001	3.73E-001	5.18E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-002
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-002
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.918E+002 g
Sample Taken On: 8/11/2011 8:20:00 AM
Acquisition Started: 8/11/2011 7:32:55 PM
Live Time: 1000.0 seconds
Real Time: 1000.4 seconds
Dead Time: 0.04 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.63E+001	2.79E+000	1.71E+000
CO-60	U	7.81E-002	9.90E-002	1.95E-001
SB-125	U	-7.17E-002	2.88E-001	4.04E-001
CS-137		4.38E-001	1.26E-001	1.32E-001
Ra-226		8.96E-001	1.56E-001	2.16E-001
TH-230	U	-8.00E+000	3.30E+001	4.08E+001
PA-231	U	-7.65E-001	3.06E+000	4.87E+000
Th-231	U	2.03E+000	1.14E+000	1.90E+000
Th-232		9.42E-001	1.49E-001	2.89E-001
PA-234M	U	4.06E+000	1.09E+001	1.88E+001
U-234	U	-6.04E+001	1.41E+002	1.70E+002
U-235	U	7.40E-002	1.29E-001	1.93E-001
U-238	U	2.30E+000	1.64E+000	2.67E+000
AM-241	U	4.30E-001	3.27E-001	5.06E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-003
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-003
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 6.694E+002 g
Sample Taken On: 8/11/2011 8:25:00 AM
Acquisition Started: 8/11/2011 7:52:34 PM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.79E+001	2.72E+000	1.32E+000
CO-60	U	-4.05E-002	1.16E-001	1.66E-001
SB-125	U	1.36E-001	2.37E-001	3.83E-001
CS-137		1.39E-001	8.26E-002	1.18E-001
Ra-226		7.59E-001	1.48E-001	2.43E-001
TH-230	U	1.57E+001	2.88E+001	3.94E+001
PA-231	U	9.95E-002	1.26E+000	4.41E+000
Th-231	U	1.53E+000	1.12E+000	1.80E+000
Th-232		1.08E+000	1.46E-001	2.56E-001
PA-234M	U	2.87E+000	1.24E+001	2.00E+001
U-234	U	-1.71E+001	1.23E+002	1.56E+002
U-235	UI	9.86E-002	1.21E-001	2.02E-001
U-238	UI	1.25E+000	1.76E+000	1.78E+000
AM-241	U	1.22E-001	3.51E-001	4.68E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-004
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-004
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.806E+002 g
Sample Taken On: 8/11/2011 8:30:00 AM
Acquisition Started: 8/11/2011 8:22:55 PM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.71E+001	2.87E+000	1.65E+000
CO-60	U	-5.29E-002	1.02E-001	1.27E-001
SB-125	U	2.30E-001	2.47E-001	4.22E-001
CS-137		4.47E-001	1.29E-001	1.36E-001
Ra-226		9.87E-001	1.75E-001	2.57E-001
TH-230	U	-2.52E+001	3.33E+001	3.86E+001
PA-231	U	-6.28E-001	3.47E+000	4.84E+000
Th-231		1.37E+000	1.15E+000	1.87E+000
Th-232		9.54E-001	1.16E-001	2.01E-001
PA-234M	U	7.73E+000	1.38E+001	2.36E+001
U-234	U	-6.04E+000	1.47E+002	1.86E+002
U-235		1.15E-001	1.09E-001	1.71E-001
U-238	U	2.33E+000	1.63E+000	2.66E+000
AM-241	U	-5.93E-001	4.29E-001	4.47E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
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Site Location: CE Windsor
Sample ID: FSS-38-05-005
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-005
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.230E+002 g
Sample Taken On: 8/11/2011 8:35:00 AM
Acquisition Started: 8/11/2011 8:46:22 PM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.91E+001	3.22E+000	1.93E+000
CO-60	U	3.77E-002	1.39E-001	2.19E-001
SB-125	U	6.92E-002	2.93E-001	4.46E-001
CS-137		8.14E-001	1.66E-001	1.15E-001
Ra-226		7.69E-001	1.50E-001	2.71E-001
TH-230	U	4.12E+000	3.30E+001	4.29E+001
PA-231	U	-2.34E+000	4.27E+000	5.64E+000
Th-231		1.90E+000	1.24E+000	1.97E+000
Th-232		1.04E+000	1.82E-001	3.21E-001
PA-234M	U	1.57E+000	1.64E+001	2.39E+001
U-234	U	2.80E+001	1.59E+002	2.12E+002
U-235	UI	1.82E-001	2.05E-001	1.70E-001
U-238	UI	1.78E+000	1.79E+000	2.94E+000
AM-241	U	4.48E-003	4.53E-001	5.83E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
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Site Location: CE Windsor
Sample ID: FSS-38-05-006
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-006
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.842E+002 g
Sample Taken On: 8/11/2011 8:40:00 AM
Acquisition Started: 8/11/2011 10:24:08 PM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.77E+001	2.91E+000	1.65E+000
CO-60	U	-3.90E-002	1.11E-001	1.26E-001
SB-125	U	1.86E-001	2.18E-001	3.84E-001
CS-137		5.12E-001	1.39E-001	1.47E-001
Ra-226		6.11E-001	1.45E-001	2.90E-001
TH-230	U	1.15E+001	3.01E+001	4.07E+001
PA-231	U	-3.79E+000	3.77E+000	4.52E+000
Th-231		2.53E+000	1.69E+000	1.43E+000
Th-232		8.78E-001	1.41E-001	2.59E-001
PA-234M	U	-6.51E-001	1.36E+001	2.08E+001
U-234	U	1.16E+002	1.36E+002	1.96E+002
U-235		2.10E-001	1.57E-001	2.52E-001
U-238	U	2.28E+000	1.50E+000	2.49E+000
AM-241	U	1.37E-001	3.87E-001	5.25E-001

Uncertainty reported at 1.9600 sigma

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***** C E R T I F I C A T E O F A N A L Y S I S *****
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Site Location: CE Windsor
Sample ID: FSS-38-05-007
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-007
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.574E+002 g
Sample Taken On: 8/11/2011 8:45:00 AM
Acquisition Started: 8/11/2011 10:42:17 PM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.87E+001	3.09E+000	1.84E+000
CO-60	U	1.10E-004	1.35E-001	2.05E-001
SB-125	U	4.23E-002	2.76E-001	4.19E-001
CS-137		6.34E-001	1.57E-001	1.58E-001
Ra-226		7.09E-001	1.47E-001	2.72E-001
TH-230	U	2.49E+001	2.79E+001	4.06E+001
PA-231	U	-2.35E+000	3.85E+000	5.04E+000
Th-231	U	2.10E+000	1.23E+000	2.04E+000
Th-232		9.49E-001	1.99E-001	2.08E-001
PA-234M	U	4.40E+000	1.42E+001	2.35E+001
U-234	U	6.86E+001	1.55E+002	2.10E+002
U-235		2.11E-001	1.17E-001	1.75E-001
U-238	U	2.27E+000	1.51E+000	2.52E+000
AM-241	U	-8.39E-002	4.15E-001	5.24E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
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Site Location: CE Windsor
Sample ID: FSS-38-05-008
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-008
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 6.420E+002 g
Sample Taken On: 8/11/2011 8:50:00 AM
Acquisition Started: 8/11/2011 11:00:18 PM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.72E+001	6.05E+000	1.26E+000
CO-60	U	-2.36E-002	1.13E-001	1.59E-001
SB-125	U	-1.90E-001	2.71E-001	3.29E-001
CS-137		2.03E-001	1.04E-001	1.46E-001
Ra-226		6.64E-001	1.36E-001	3.20E-001
TH-230	U	2.25E+001	2.58E+001	3.72E+001
PA-231	U	-1.61E+000	3.03E+000	3.95E+000
Th-231		1.52E+000	2.40E-001	1.26E+000
Th-232		6.79E-001	1.19E-001	1.96E-001
PA-234M	U	4.30E+000	1.29E+001	2.09E+001
U-234	U	-5.57E+001	1.40E+002	1.71E+002
U-235	UI	1.14E-001	1.15E-001	1.91E-001
U-238	U	2.56E+000	1.39E+000	2.34E+000
AM-241	U	-1.36E-002	3.93E-001	5.05E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
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Site Location: CE Windsor
Sample ID: FSS-38-05-009
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-009
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.647E+002 g
Sample Taken On: 8/11/2011 8:55:00 AM
Acquisition Started: 8/11/2011 11:18:23 PM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.64E+001	2.83E+000	1.55E+000
CO-60	U	5.41E-002	1.18E-001	2.08E-001
SB-125	U	7.01E-002	2.54E-001	3.97E-001
CS-137		3.88E-001	1.27E-001	1.45E-001
Ra-226		8.01E-001	1.41E-001	2.24E-001
TH-230	U	-3.43E+001	3.63E+001	4.08E+001
PA-231	U	-2.99E+000	3.77E+000	4.72E+000
Th-231		1.30E+000	1.14E+000	1.86E+000
Th-232		8.97E-001	1.83E-001	2.27E-001
PA-234M	U	-8.17E-001	1.23E+001	2.43E+001
U-234	U	6.77E+001	1.36E+002	1.90E+002
U-235	UI	1.54E-001	1.29E-001	2.11E-001
U-238	U	1.87E+000	1.54E+000	2.52E+000
AM-241	U	4.85E-001	3.73E-001	5.64E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
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Site Location: CE Windsor
Sample ID: FSS-38-05-010
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-010
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 6.282E+002 g
Sample Taken On: 8/11/2011 9:00:00 AM
Acquisition Started: 8/11/2011 11:38:00 PM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.72E+001	2.71E+000	1.14E+000
CO-60	U	7.74E-003	9.83E-002	1.55E-001
SB-125	U	1.58E-002	2.50E-001	3.67E-001
CS-137		2.96E-001	1.08E-001	1.30E-001
Ra-226		7.55E-001	1.33E-001	2.51E-001
TH-230	U	2.17E+001	2.85E+001	4.00E+001
PA-231	U	-1.71E+000	3.07E+000	3.99E+000
Th-231	UI	1.04E+000	1.18E+000	1.97E+000
Th-232		8.53E-001	1.23E-001	1.84E-001
PA-234M	U	3.93E+000	1.33E+001	2.18E+001
U-234	U	-1.00E+002	1.47E+002	1.62E+002
U-235	U	3.51E-003	1.15E-001	1.63E-001
U-238	U	2.14E+000	1.44E+000	2.37E+000
AM-241	U	9.77E-002	3.53E-001	4.74E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
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Site Location: CE Windsor
Sample ID: FSS-38-05-011
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-011
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.971E+002 g
Sample Taken On: 8/11/2011 9:35:00 AM
Acquisition Started: 8/11/2011 11:56:54 PM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.51E+001	2.63E+000	1.40E+000
CO-60	U	2.85E-002	1.12E-001	1.87E-001
SB-125	U	1.17E-001	2.51E-001	4.01E-001
CS-137		4.38E-001	1.29E-001	1.41E-001
Ra-226		8.45E-001	1.68E-001	2.58E-001
TH-230	U	2.47E+001	2.96E+001	4.21E+001
PA-231	U	-2.55E+000	3.76E+000	4.78E+000
Th-231	U	3.07E+000	1.10E+000	1.93E+000
Th-232		8.08E-001	1.39E-001	2.92E-001
PA-234M	U	8.43E+000	8.74E+000	1.86E+001
U-234	U	4.52E+001	1.25E+002	1.72E+002
U-235	U	7.87E-002	1.23E-001	1.87E-001
U-238	U	2.39E+000	1.44E+000	2.43E+000
AM-241	U	1.78E-001	3.74E-001	5.15E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
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Site Location: CE Windsor
Sample ID: FSS-38-05-012
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-012
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 6.231E+002 g
Sample Taken On: 8/11/2011 9:40:00 AM
Acquisition Started: 8/12/2011 12:15:07 AM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.64E+001	2.69E+000	1.41E+000
CO-60	U	5.75E-002	1.04E-001	1.86E-001
SB-125	U	1.01E-002	2.47E-001	3.65E-001
CS-137		3.01E-001	1.33E-001	1.87E-001
Ra-226		8.53E-001	1.40E-001	2.41E-001
TH-230	U	-6.15E+000	2.59E+001	3.88E+001
PA-231	U	-3.21E+000	4.04E+000	4.80E+000
Th-231	U	2.33E+000	1.16E+000	1.93E+000
Th-232		1.19E+000	1.49E-001	2.47E-001
PA-234M	U	-3.31E+000	1.35E+001	1.84E+001
U-234	U	-3.75E+001	1.25E+002	1.51E+002
U-235		1.29E-001	1.23E-001	1.96E-001
U-238		2.14E+000	2.67E+000	2.55E+000
AM-241	U	8.00E-002	3.85E-001	5.07E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
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Site Location: CE Windsor
Sample ID: FSS-38-05-013
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-013
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.833E+002 g
Sample Taken On: 8/11/2011 9:45:00 AM
Acquisition Started: 8/12/2011 12:33:41 AM
Live Time: 1000.0 seconds
Real Time: 1000.4 seconds
Dead Time: 0.04 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.71E+001	2.82E+000	1.41E+000
CO-60	U	-6.93E-002	1.60E-001	1.83E-001
SB-125	U	6.66E-002	2.67E-001	4.10E-001
CS-137		4.88E-001	1.23E-001	9.59E-002
Ra-226		8.84E-001	1.44E-001	2.70E-001
TH-230	U	1.78E+001	2.83E+001	3.97E+001
PA-231	U	-1.10E+000	3.40E+000	4.45E+000
Th-231		1.28E+000	1.15E+000	1.89E+000
Th-232		9.99E-001	2.02E-001	2.23E-001
PA-234M	U	-4.83E+000	1.74E+001	2.08E+001
U-234	U	-3.37E+001	1.41E+002	1.77E+002
U-235		1.30E-001	1.19E-001	1.88E-001
U-238	U	1.89E+000	1.64E+000	2.64E+000
AM-241	U	8.83E-002	3.63E-001	4.83E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
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Site Location: CE Windsor
Sample ID: FSS-38-05-014
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-014
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.187E+002 g
Sample Taken On: 8/11/2011 9:50:00 AM
Acquisition Started: 8/12/2011 12:53:41 AM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.88E+001	3.15E+000	1.67E+000
CO-60	U	-1.90E-002	1.05E-001	1.55E-001
SB-125	U	-1.75E-001	2.54E-001	3.17E-001
CS-137		5.13E-001	1.42E-001	1.40E-001
Ra-226		6.76E-001	1.50E-001	3.35E-001
TH-230	U	3.25E+001	2.76E+001	4.20E+001
PA-231	U	-1.35E+000	3.72E+000	4.99E+000
Th-231		1.62E+000	9.67E-001	1.64E+000
Th-232		8.82E-001	1.50E-001	2.85E-001
PA-234M	U	-1.30E+001	1.56E+001	1.83E+001
U-234	U	-8.98E+000	1.50E+002	1.91E+002
U-235		5.95E-002	3.19E-002	1.06E-001
U-238	U	2.16E+000	1.64E+000	2.70E+000
AM-241	U	-1.15E-001	3.88E-001	4.77E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
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Site Location: CE Windsor
Sample ID: FSS-38-05-015
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-015
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.569E+002 g
Sample Taken On: 8/11/2011 9:55:00 AM
Acquisition Started: 8/12/2011 1:11:42 AM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.81E+001	2.92E+000	9.38E-001
CO-60	U	-1.94E-002	1.34E-001	1.66E-001
SB-125	U	4.12E-003	2.71E-001	4.02E-001
CS-137		6.04E-001	1.52E-001	1.53E-001
Ra-226		8.88E-001	1.38E-001	2.49E-001
TH-230	U	3.93E+001	2.96E+001	4.44E+001
PA-231	U	-2.56E+000	3.77E+000	4.83E+000
Th-231	U	2.05E+000	1.18E+000	1.97E+000
Th-232		8.02E-001	1.14E-001	2.11E-001
PA-234M	U	3.33E+000	1.44E+001	2.35E+001
U-234	U	1.14E+002	1.44E+002	2.04E+002
U-235		9.65E-002	1.09E-001	1.74E-001
U-238	U	2.42E+000	1.52E+000	2.56E+000
AM-241	U	-2.94E-001	4.13E-001	4.75E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
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Site Location: CE Windsor
Sample ID: FSS-38-05-015LR
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-015LR
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.569E+002 g
Sample Taken On: 8/11/2011 9:55:00 AM
Acquisition Started: 8/12/2011 1:11:39 PM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.75E+001	3.02E+000	1.99E+000
CO-60	U	2.04E-002	1.13E-001	1.84E-001
SB-125	U	-1.88E-002	2.68E-001	3.85E-001
CS-137		4.21E-001	1.37E-001	1.63E-001
Ra-226		6.25E-001	1.42E-001	2.84E-001
TH-230	U	5.32E-001	3.30E+001	4.21E+001
PA-231	U	-1.67E+000	3.87E+000	4.83E+000
Th-231		1.41E+000	1.15E+000	1.87E+000
Th-232		9.55E-001	1.56E-001	2.40E-001
PA-234M	U	6.82E+000	1.14E+001	2.12E+001
U-234	U	-1.02E+002	1.58E+002	1.84E+002
U-235		1.81E-001	1.24E-001	1.93E-001
U-238	U	4.40E+000	1.72E+000	2.93E+000
AM-241	U	3.24E-002	3.63E-001	4.78E-001

Uncertainty reported at 1.9600 sigma

QC Analysis Comparison

Table I-1

FSS Quality Control Accuracy and Precision Comparison										
	Sample ID CE- FSS-38-05-015				Sample ID CE- FSS-38-05-015LR					
Isotope	Activity Value (pCi/g)	Uncert.	Resolution	Agreement Range	Activity Value (pCi/g)	Uncert.	Agreement Ratio (Accuracy)	% Deviation (Precision)	Acceptable	Comments
Th-232	8.02E-01	5.83E-02	14	0.6 - 1.66	9.55E-01	7.97E-02	1.19	-8.7	Yes	N/A
K-40	1.81E+01	1.49E+00	12	0.6 - 1.66	1.75E+01	1.54E+00	0.97	1.7	Yes	N/A

Note:

Resolution = Standard Activity Value /Standard Error

Resolution	Agreement Range
<4	No Comparison
4 - 7	0.4 - 2.0
8 - 15	0.6 - 1.66
16 - 50	0.75 - 1.33
51- 200	0.80 - 1.25
> 200	0.85 - 1.18

Prepared/Date: GSM 08/19/11

Checked/Date: HTD 08/19/11

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-016
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-016
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 6.437E+002 g
Sample Taken On: 8/11/2011 10:00:00 AM
Acquisition Started: 8/12/2011 7:12:34 AM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		2.02E+001	2.97E+000	1.53E+000
CO-60	U	6.66E-002	6.89E-002	1.59E-001
SB-125	U	-1.96E-001	2.68E-001	3.33E-001
CS-137		3.39E-001	1.06E-001	1.12E-001
Ra-226		7.25E-001	1.36E-001	2.67E-001
TH-230	U	-1.34E+001	2.83E+001	3.42E+001
PA-231	UI	2.46E+000	2.40E+000	3.91E+000
Th-231	U	1.41E+000	1.12E+000	1.81E+000
Th-232		9.73E-001	1.43E-001	2.81E-001
PA-234M	U	6.08E+000	1.20E+001	2.04E+001
U-234	U	1.97E+001	1.24E+002	1.65E+002
U-235		1.52E-001	1.02E-001	1.57E-001
U-238	U	1.83E+000	1.43E+000	2.33E+000
AM-241	U	-1.04E-001	3.74E-001	4.65E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-017
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-017
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.830E+002 g
Sample Taken On: 8/11/2011 10:05:00 AM
Acquisition Started: 8/12/2011 7:31:25 AM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.79E+001	2.99E+000	2.00E+000
CO-60	U	-3.61E-002	1.19E-001	1.58E-001
SB-125	U	1.00E-001	2.40E-001	3.84E-001
CS-137		4.46E-001	1.35E-001	1.53E-001
Ra-226		8.71E-001	1.55E-001	3.45E-001
TH-230	U	1.71E+000	3.23E+001	4.19E+001
PA-231	U	-1.39E+000	3.37E+000	4.41E+000
Th-231		3.14E+000	2.90E+000	1.37E+000
Th-232		9.26E-001	1.12E-001	1.95E-001
PA-234M	U	-5.70E+000	1.36E+001	1.84E+001
U-234	U	-1.17E+001	1.57E+002	1.99E+002
U-235	U	1.21E-001	1.24E-001	1.94E-001
U-238	U	1.83E+000	1.58E+000	2.55E+000
AM-241	U	-6.74E-003	3.95E-001	5.11E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-018
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-018
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.995E+002 g
Sample Taken On: 8/11/2011 10:10:00 AM
Acquisition Started: 8/12/2011 7:50:43 AM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.77E+001	2.79E+000	9.43E-001
CO-60	U	9.43E-003	1.25E-001	1.85E-001
SB-125	U	-3.51E-002	2.46E-001	3.52E-001
CS-137		5.24E-001	1.36E-001	1.38E-001
Ra-226		8.10E-001	1.37E-001	2.16E-001
TH-230	U	-1.17E+001	3.31E+001	3.98E+001
PA-231	U	-3.92E+000	3.95E+000	4.84E+000
Th-231		1.62E+000	1.03E+000	1.63E+000
Th-232		1.00E+000	1.66E-001	3.37E-001
PA-234M	U	1.87E+000	1.25E+001	1.97E+001
U-234	U	-4.87E+001	1.49E+002	1.80E+002
U-235	U	2.09E-001	1.13E-001	1.93E-001
U-238	U	3.25E+000	1.52E+000	2.58E+000
AM-241	U	-2.98E-001	4.13E-001	4.80E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-019
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-019
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.640E+002 g
Sample Taken On: 8/11/2011 10:15:00 AM
Acquisition Started: 8/12/2011 8:15:18 AM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.94E+001	3.14E+000	1.93E+000
CO-60	U	-5.99E-002	1.33E-001	1.73E-001
SB-125	U	5.09E-002	2.44E-001	3.80E-001
CS-137		5.76E-001	1.52E-001	1.63E-001
Ra-226		7.22E-001	1.57E-001	3.61E-001
TH-230	U	-1.45E+001	3.17E+001	3.76E+001
PA-231	U	-1.57E+000	3.72E+000	4.81E+000
Th-231	U	2.07E+000	1.27E+000	2.09E+000
Th-232		1.01E+000	1.91E-001	2.19E-001
PA-234M	U	6.02E+000	1.27E+001	2.15E+001
U-234	U	-1.46E+002	1.55E+002	1.66E+002
U-235	UI	9.13E-002	9.15E-002	1.51E-001
U-238	U	2.83E+000	1.43E+000	2.48E+000
AM-241	U	1.82E-002	3.81E-001	4.99E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-020
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-020
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 6.173E+002 g
Sample Taken On: 8/11/2011 10:20:00 AM
Acquisition Started: 8/12/2011 8:32:51 AM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.88E+001	2.97E+000	1.84E+000
CO-60	U	8.96E-002	5.86E-002	1.66E-001
SB-125	UI	1.03E-001	2.41E-001	3.83E-001
CS-137		2.57E-001	9.90E-002	1.16E-001
Ra-226		7.96E-001	1.40E-001	2.70E-001
TH-230	U	9.14E+000	2.72E+001	3.68E+001
PA-231	U	-1.38E+000	3.68E+000	4.85E+000
Th-231	U	1.53E+000	1.19E+000	1.91E+000
Th-232		9.73E-001	1.83E-001	1.92E-001
PA-234M	U	1.48E+000	1.06E+001	1.74E+001
U-234	U	-3.89E+001	1.43E+002	1.70E+002
U-235		2.95E-001	1.56E-001	2.42E-001
U-238	U	2.08E+000	1.47E+000	2.42E+000
AM-241	U	4.38E-001	3.33E-001	5.10E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-021
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-021
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 6.328E+002 g
Sample Taken On: 8/11/2011 10:25:00 AM
Acquisition Started: 8/12/2011 9:09:54 AM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.65E+001	2.68E+000	1.39E+000
CO-60	U	1.13E-002	9.36E-002	1.54E-001
SB-125	UI	-1.15E-001	2.59E-001	3.49E-001
CS-137		2.29E-001	1.02E-001	1.35E-001
Ra-226		6.97E-001	1.47E-001	2.54E-001
TH-230	U	7.73E+000	2.77E+001	3.71E+001
PA-231	UI	-2.12E+000	3.57E+000	4.44E+000
Th-231	UI	9.83E-001	4.86E+000	1.23E+000
Th-232		1.08E+000	2.26E-001	3.42E-001
PA-234M	U	-2.92E+000	1.60E+001	2.16E+001
U-234	U	2.90E+001	1.30E+002	1.74E+002
U-235	U	2.03E-001	1.08E-001	1.84E-001
U-238		1.74E+000	1.44E+000	2.25E+000
AM-241	U	5.73E-002	3.91E-001	5.08E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-022
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-022
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.719E+002 g
Sample Taken On: 8/11/2011 10:30:00 AM
Acquisition Started: 8/12/2011 9:28:11 AM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.82E+001	2.99E+000	1.70E+000
CO-60	U	6.60E-002	1.31E-001	2.22E-001
SB-125	U	7.86E-002	2.90E-001	4.44E-001
CS-137		1.60E-001	9.89E-002	1.44E-001
Ra-226		8.37E-001	1.45E-001	2.35E-001
TH-230	U	-3.48E+000	3.18E+001	3.94E+001
PA-231	U	-4.05E+000	3.82E+000	4.61E+000
Th-231	U	1.12E+000	1.17E+000	1.86E+000
Th-232		8.65E-001	1.54E-001	2.46E-001
PA-234M	U	-5.45E+000	1.34E+001	1.81E+001
U-234	U	3.74E+001	1.46E+002	1.95E+002
U-235	U	7.92E-002	1.32E-001	1.96E-001
U-238	U	1.47E-001	1.60E+000	2.39E+000
AM-241	U	4.29E-001	3.40E-001	5.21E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-023
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-023
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 5.334E+002 g
Sample Taken On: 8/11/2011 10:35:00 AM
Acquisition Started: 8/12/2011 9:56:55 AM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.97E+001	3.14E+000	1.25E+000
CO-60	U	-3.36E-003	1.18E-001	1.83E-001
SB-125	U	-2.60E-001	3.30E-001	4.02E-001
CS-137		5.98E-001	1.55E-001	1.59E-001
Ra-226		7.85E-001	1.73E-001	2.99E-001
TH-230	U	-1.30E+001	3.46E+001	4.14E+001
PA-231	U	-1.29E+000	3.54E+000	4.82E+000
Th-231	U	2.01E+000	1.32E+000	2.16E+000
Th-232		9.65E-001	1.71E-001	2.90E-001
PA-234M	U	-1.30E+001	1.81E+001	2.22E+001
U-234	U	1.59E+001	1.35E+002	1.81E+002
U-235	U	1.09E-002	1.31E-001	1.87E-001
U-238	U	2.22E+000	1.62E+000	2.68E+000
AM-241	U	2.74E-001	3.85E-001	5.50E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-024
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-024
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 8.044E+002 g
Sample Taken On: 8/11/2011 10:40:00 AM
Acquisition Started: 8/12/2011 10:16:03 AM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.71E+001	2.43E+000	1.08E+000
CO-60	U	-1.27E-003	6.85E-002	1.08E-001
SB-125	U	-8.82E-002	1.83E-001	2.40E-001
CS-137	U	2.43E-002	8.35E-002	1.29E-001
Ra-226		5.62E-001	1.06E-001	2.08E-001
TH-230	U	-8.15E+000	2.59E+001	3.02E+001
PA-231	U	-7.53E-001	2.47E+000	3.34E+000
Th-231	U	1.51E+000	8.84E-001	1.54E+000
Th-232		8.55E-001	1.17E-001	1.65E-001
PA-234M	U	2.70E+000	9.02E+000	1.51E+001
U-234	U	2.94E+001	1.13E+002	1.49E+002
U-235		2.16E-001	1.03E-001	1.55E-001
U-238	U	2.89E+000	1.26E+000	2.11E+000
AM-241	U	7.63E-002	2.90E-001	3.86E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-024S
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-024S
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 8.096E+002 g
Sample Taken On: 8/11/2011 10:40:00 AM
Acquisition Started: 8/12/2011 10:34:21 AM
Live Time: 1000.0 seconds
Real Time: 1000.4 seconds
Dead Time: 0.04 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.61E+001	2.42E+000	1.53E+000
CO-60	U	-1.09E-001	1.08E-001	1.07E-001
SB-125	UI	3.45E-002	1.83E-001	2.81E-001
CS-137	U	-4.13E-002	9.80E-002	1.24E-001
Ra-226		5.61E-001	1.05E-001	1.66E-001
TH-230	U	-1.07E+001	2.49E+001	3.03E+001
PA-231	U	-1.36E+000	2.80E+000	3.50E+000
Th-231	U	1.71E+000	9.99E-001	1.62E+000
Th-232		8.76E-001	1.23E-001	2.23E-001
PA-234M	U	-3.94E+000	9.95E+000	1.37E+001
U-234	U	3.70E+001	1.14E+002	1.52E+002
U-235		2.48E-001	9.03E-002	1.25E-001
U-238	U	2.15E+000	1.22E+000	2.01E+000
AM-241	U	6.14E-002	2.84E-001	3.77E-001

Uncertainty reported at 1.9600 sigma

QC Analysis Comparison

Table I-2

FSS Quality Control Accuracy and Precision Comparison										
	Sample ID CE-FSS- FSS-38-05-024				Sample ID CE-FSS- FSS-38-05-024S					
Isotope	Activity Value (pCi/g)	Uncert.	Resolution	Agreement Range	Activity Value (pCi/g)	Uncert.	Agreement Ratio (Accuracy)	% Deviation (Precision)	Acceptable	Comments
Ra-226	5.62E-01	5.40E-02	10	0.6 - 1.66	5.61E-01	5.36E-02	1.00	0.1	Yes	N/A
Th-232	8.55E-01	5.95E-02	14	0.6 - 1.66	8.76E-01	6.27E-02	1.02	-1.2	Yes	N/A
K-40	1.71E+01	1.24E+00	14	0.6 - 1.66	1.61E+01	1.23E+00	0.94	3.0	Yes	N/A

Note:

Resolution = Standard Activity Value /Standard Error

Resolution	Agreement Range
<4	No Comparison
4 - 7	0.4 - 2.0
8 - 15	0.6 - 1.66
16 - 50	0.75 - 1.33
51- 200	0.80 - 1.25
> 200	0.85 - 1.18

Prepared/Date: GSM 08/19/11

Checked/Date: HTD 08/19/11

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-025
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-025
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 8.032E+002 g
Sample Taken On: 8/11/2011 10:45:00 AM
Acquisition Started: 8/12/2011 10:51:48 AM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.52E+001	2.32E+000	1.28E+000
CO-60	U	7.47E-002	7.39E-002	1.54E-001
SB-125	U	4.04E-002	1.57E-001	2.50E-001
CS-137		4.32E-002	4.98E-002	8.18E-002
Ra-226		5.72E-001	1.11E-001	1.86E-001
TH-230	U	6.60E+000	2.42E+001	3.20E+001
PA-231	U	-1.07E+000	2.75E+000	3.68E+000
Th-231	U	1.33E+000	9.97E-001	1.59E+000
Th-232		6.57E-001	1.06E-001	1.78E-001
PA-234M	U	-2.25E+000	1.23E+001	1.71E+001
U-234	U	3.18E+001	1.09E+002	1.45E+002
U-235		4.19E-001	1.75E-001	1.22E-001
U-238		1.42E+000	9.88E-001	1.84E+000
AM-241	U	-1.93E-001	3.38E-001	4.02E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-026
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-026
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 8.180E+002 g
Sample Taken On: 8/11/2011 10:50:00 AM
Acquisition Started: 8/12/2011 11:11:00 AM
Live Time: 1000.0 seconds
Real Time: 1000.4 seconds
Dead Time: 0.04 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.73E+001	2.44E+000	1.17E+000
CO-60	U	-1.03E-002	8.88E-002	1.31E-001
SB-125	U	1.15E-001	1.57E-001	2.66E-001
CS-137	U	-2.24E-002	9.22E-002	1.29E-001
Ra-226		5.98E-001	1.18E-001	2.67E-001
TH-230	U	-1.90E+001	2.62E+001	3.06E+001
PA-231		1.63E+000	1.82E+000	2.78E+000
Th-231	U	1.44E+000	8.64E-001	1.43E+000
Th-232		8.09E-001	1.25E-001	1.94E-001
PA-234M	U	5.58E+000	1.06E+001	1.74E+001
U-234	U	-5.79E+000	1.13E+002	1.45E+002
U-235		2.28E-001	1.47E-001	2.36E-001
U-238	U	1.45E+000	1.23E+000	1.98E+000
AM-241	U	2.04E-001	2.89E-001	4.06E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-026S
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-026S
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 9.531E+002 g
Sample Taken On: 8/11/2011 10:50:00 AM
Acquisition Started: 8/12/2011 11:28:14 AM
Live Time: 1000.0 seconds
Real Time: 1000.4 seconds
Dead Time: 0.04 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.64E+001	2.20E+000	1.02E+000
CO-60	U	-4.66E-002	9.16E-002	1.07E-001
SB-125	U	-5.33E-002	1.90E-001	2.54E-001
CS-137		4.61E-002	4.45E-002	7.05E-002
Ra-226		5.31E-001	9.14E-002	1.93E-001
TH-230	U	1.30E+001	1.95E+001	2.70E+001
PA-231	U	-1.53E+000	2.34E+000	2.95E+000
Th-231	U	1.12E+000	8.09E-001	1.30E+000
Th-232		8.33E-001	1.30E-001	1.43E-001
PA-234M	U	4.80E+000	7.84E+000	1.38E+001
U-234	U	6.78E+001	9.35E+001	1.32E+002
U-235		1.92E-001	8.46E-002	1.25E-001
U-238	U	2.96E-001	1.13E+000	1.71E+000
AM-241	U	7.66E-002	2.61E-001	3.49E-001

Uncertainty reported at 1.9600 sigma

QC Analysis Comparison

Table I-3

FSS Quality Control Accuracy and Precision Comparison										
	Sample ID CE- FSS-38-05-026				Sample ID CE- FSS-38-05-026S					
Isotope	Activity Value (pCi/g)	Uncert.	Resolution	Agreement Range	Activity Value (pCi/g)	Uncert.	Agreement Ratio (Accuracy)	% Deviation (Precision)	Acceptable	Comments
Ra-226	5.98E-01	6.03E-02	10	0.6 - 1.66	5.31E-01	4.66E-02	0.89	5.9	Yes	N/A
Th-232	8.09E-01	6.39E-02	13	0.6 - 1.66	8.33E-01	6.63E-02	1.03	-1.5	Yes	N/A
K-40	1.73E+01	1.24E+00	14	0.6 - 1.66	1.64E+01	1.12E+00	0.95	2.7	Yes	N/A

Note:

Resolution = Standard Activity Value /Standard Error

Resolution	Agreement Range
<4	No Comparison
4 - 7	0.4 - 2.0
8 - 15	0.6 - 1.66
16 - 50	0.75 - 1.33
51- 200	0.80 - 1.25
> 200	0.85 - 1.18

Prepared/Date: GSM 08/19/11

Checked/Date: HTD 08/19/11

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-027
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-027
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 8.842E+002 g
Sample Taken On: 8/11/2011 10:55:00 AM
Acquisition Started: 8/12/2011 11:46:08 AM
Live Time: 1000.0 seconds
Real Time: 1000.4 seconds
Dead Time: 0.04 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.66E+001	2.28E+000	9.32E-001
CO-60	U	-8.11E-002	8.67E-002	8.35E-002
SB-125	U	1.46E-001	1.78E-001	2.99E-001
CS-137	U	-1.58E-002	8.51E-002	1.18E-001
Ra-226		5.01E-001	9.87E-002	1.46E-001
TH-230	U	1.87E+001	2.42E+001	3.30E+001
PA-231	U	-9.64E-001	2.36E+000	3.15E+000
Th-231	U	1.56E+000	9.16E-001	1.48E+000
Th-232		7.00E-001	1.10E-001	2.02E-001
PA-234M	U	4.91E+000	7.98E+000	1.45E+001
U-234	U	1.25E+001	1.09E+002	1.43E+002
U-235		5.35E-001	1.72E-001	1.00E-001
U-238	U	1.79E+000	1.24E+000	1.99E+000
AM-241	U	5.58E-002	2.70E-001	3.59E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
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Site Location: CE Windsor
Sample ID: FSS-38-05-028
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-028
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 8.267E+002 g
Sample Taken On: 8/11/2011 11:00:00 AM
Acquisition Started: 8/12/2011 12:04:57 PM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.84E+001	2.47E+000	8.13E-001
CO-60	U	4.38E-003	9.52E-002	1.45E-001
SB-125	U	8.17E-002	2.09E-001	3.23E-001
CS-137	U	3.13E-002	9.68E-002	1.50E-001
Ra-226		6.48E-001	1.07E-001	1.83E-001
TH-230	U	1.79E+001	2.31E+001	3.24E+001
PA-231	U	1.06E+000	2.39E+000	3.65E+000
Th-231	U	1.73E+000	8.85E-001	1.47E+000
Th-232		9.96E-001	1.65E-001	1.60E-001
PA-234M	U	1.44E+001	8.67E+000	1.85E+001
U-234	U	1.87E+001	1.01E+002	1.34E+002
U-235		2.47E-001	9.24E-002	1.38E-001
U-238	UI	1.34E+000	1.28E+000	2.10E+000
AM-241	U	-1.47E-001	3.37E-001	4.11E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-029
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-029
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 9.015E+002 g
Sample Taken On: 8/11/2011 11:05:00 AM
Acquisition Started: 8/12/2011 12:35:34 PM
Live Time: 1000.0 seconds
Real Time: 1000.3 seconds
Dead Time: 0.03 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.57E+001	2.20E+000	9.65E-001
CO-60	U	-3.57E-002	9.25E-002	1.27E-001
SB-125		6.83E-001	6.32E-001	2.82E-001
CS-137	U	4.41E-002	9.26E-002	1.47E-001
Ra-226		5.72E-001	1.27E-001	1.34E-001
TH-230	U	1.77E+001	2.08E+001	2.91E+001
PA-231	UI	1.77E+000	1.39E+000	2.17E+000
Th-231	U	1.87E+000	8.66E-001	1.43E+000
Th-232		7.16E-001	1.08E-001	1.76E-001
PA-234M	U	-7.94E+000	1.04E+001	1.27E+001
U-234	U	2.82E+001	9.87E+001	1.33E+002
U-235		2.52E-001	9.37E-002	1.34E-001
U-238		1.65E+000	1.19E+000	1.83E+000
AM-241	U	-1.91E-001	2.99E-001	3.52E-001

Uncertainty reported at 1.9600 sigma

****
***** C E R T I F I C A T E O F A N A L Y S I S *****
****

Site Location: CE Windsor
Sample ID: FSS-38-05-029LR
Sample Title: CE-FSS-38-05
Sample Description: FSS-38-05-029LR
Detector Name: 25%HPGE
Nuclide Library Used: C:\GENIE2K\CAMFILES\FUSRAP_R4.NLB
Sample Size: 9.015E+002 g
Sample Taken On: 8/11/2011 11:05:00 AM
Acquisition Started: 8/12/2011 1:29:58 PM
Live Time: 1000.0 seconds
Real Time: 1000.4 seconds
Dead Time: 0.04 %
Efficiency ID: 1316-45_04-30-10

Nuclide Name	Qualifier	Nuclide Activity (pCi/g)	Activity Uncert. (pCi/g)	Nuclide MDA (pCi/g)
K-40		1.85E+001	2.40E+000	9.74E-001
CO-60	U	3.41E-003	5.22E-002	8.94E-002
SB-125	UI	1.46E-001	1.86E-001	3.05E-001
CS-137	U	6.78E-002	7.72E-002	1.33E-001
Ra-226		7.65E-001	1.26E-001	2.08E-001
TH-230	U	-1.35E+001	2.36E+001	2.79E+001
PA-231		2.36E+000	1.79E+000	2.64E+000
Th-231		1.37E+000	1.21E+000	2.00E+000
Th-232		7.10E-001	1.01E-001	2.06E-001
PA-234M	U	3.27E+000	1.08E+001	1.73E+001
U-234	U	-7.62E+001	1.13E+002	1.28E+002
U-235		2.65E-001	1.68E-001	2.80E-001
U-238	U	1.38E+000	1.17E+000	1.87E+000
AM-241	U	3.90E-002	2.72E-001	3.58E-001

Uncertainty reported at 1.9600 sigma

QC Analysis Comparison

Table I-4

FSS Quality Control Accuracy and Precision Comparison										
	Sample ID CE- FSS-38-05-029				Sample ID CE- FSS-38-05-029LR					
Isotope	Activity Value (pCi/g)	Uncert.	Resolution	Agreement Range	Activity Value (pCi/g)	Uncert.	Agreement Ratio (Accuracy)	% Deviation (Precision)	Acceptable	Comments
Ra-226	5.72E-01	6.49E-02	9	0.6 - 1.66	7.65E-01	6.43E-02	1.34	-14.5	Yes	N/A
Th-232	7.16E-01	5.50E-02	13	0.6 - 1.66	7.10E-01	5.16E-02	0.99	0.5	Yes	N/A
K-40	1.57E+01	1.12E+00	14	0.6 - 1.66	1.85E+01	1.22E+00	1.18	-8.2	Yes	N/A

Note:

Resolution = Standard Activity Value /Standard Error

Resolution	Agreement Range
<4	No Comparison
4 - 7	0.4 - 2.0
8 - 15	0.6 - 1.66
16 - 50	0.75 - 1.33
51- 200	0.80 - 1.25
> 200	0.85 - 1.18

Prepared/Date: GSM 08/19/11

Checked/Date: HTD 08/19/11