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U.S. NUCLEAR REGULATORY COMMISSION
DOCKET NO. 040-08714
SOURCE MATERIAL LICENSE NO. SUA-1352

QUARTERLY REPORT for April 1, 1982
to June 30, 1982

Prepared By

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NRC QUARTERLY REPORT

Period April - June, 1982

INTRODUCTION

Per Condition 29 of the United States Nuclear Regulatory Commission Source Material License No. SUA-1352, Docket Number 040-08714, this quarterly report is being submitted. This license authorizes the possession and use of source material in connection with a uranium solution extraction test program at the Collins Draw site in Campbell County, Wyoming.

STATUS of PROGRAM

All mine well fields at Collins Draw are believed to be restored and there are no plans for additional lixiviant injection. Figure 1 shows the A-1 and B pattern areas.

There were no major excursions, spills, or other permit or license events which would have resulted in a shutdown or change of operation. We have recorded a slightly elevated (2 ppm) uranium (U_3O_8) level in Monitor Well 298. Monitor Well 298 monitors the ore zone aquifer. Its location can also be found in Figure 1. Monitor Well 298 is located southeast of the B pattern area and is approximately 200 feet from the nearest production well. The uranium (U_3O_8) level in Monitor Well 298 is below drinking water standards.

RADIATION MONITORING PROGRAM

Sampling results for Radon/Radon Daughters still show levels below twenty-five (25) percent of the applicable maximum permissible concentration specified by 10CFR, Part 20. Results of these samplings are given below.

Radon/Radon Daughter sampling during the second quarter of 1982 has shown no recordable amounts. Working Levels/ Working Level Months results were recorded at 0.00 during the second quarter of 1982.

Uranium particulate sampling results are listed in Table A.

Water Quality

The baseline data and the biweekly well field monitor well analyses are given on Tables 1 through 6. The second quarter full suite of water quality parameters for these monitor wells is included in this report in Table 7.

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URANIUM PARTICULATE SAMPLING

SAMPLE NUMBER	SAMPLE COLLECTION TIME AND DATE	WEIGHT OF PAPER	WEIGHT OF PAPER AND PARTICULATES	WEIGHT OF PARTICULATES	URANIUM CONCENTRATION	COMMENTS
P-1	Jan. 6 - Jan. 13	.1225	.1541	.0316	223 μ g	3.7×10^{-19} μ Ci/ml Wamco Lab
P-2	Feb. 17 - Feb. 24	.1220	.1439	.0219	117 μ g	1.96×10^{-19} μ Ci/ml Wamco Lab
P-3	March 10 - March 17	.1232	.1474	.0242	112 μ g	1.88×10^{-19} μ Ci/ml Wamco Lab
P-4	April 7 - April 14	.1230	.1377	.0147	151 μ g	2.53×10^{-19} μ Ci/ml Wamco Lab
P-5	May 5 - May 12	.1218	.1450	.0232	105 μ g	1.76×10^{-19} μ Ci/ml Wamco Lab
P-6	June 9 - June 16	.1225	.1456	.0231	33 μ g	5.50×10^{-20} μ Ci/ml Wamco Lab

* μ g = microgram

* μ Ci = micro Curie

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Table 1 - Page 2
Thunderbird Joint Venture
Collins Draw Project
Environmental Monitoring - 230W, Upper Aquifer

Date	Remarks	Total Dissolved Solids- TDS mg/l	Car-bonate mg/l	Bicar-bonate mg/l	Sulfate mg/l	Uranium mg/l	(as N) Ammonia mg/l	pH	Arsenic mg/l	Selenium mg/l	Water Levels
03/16/81	Manco	--	--	--	304	--	--	--	<0.001	<0.001	--
03/17/81	Manco	--	--	--	294	--	--	--	<0.001	<0.001	--
03/18/81	Manco #2280	562	0	153	0.002	<0.01	<0.01	7.28	<0.001	<0.001	76' 0"
03/19/81	Manco	--	--	--	282	--	--	--	<0.001	<0.001	--
03/20/81	Manco	--	--	--	306	--	--	--	<0.001	<0.001	--
03/21/81	Manco	--	--	--	300	--	--	--	<0.001	<0.001	--
03/22/81	Manco	--	--	--	300	--	--	--	<0.001	<0.001	--
03/23/81	Manco	--	--	--	290	--	--	--	<0.001	<0.001	--
03/24/81	Manco	--	--	--	290	--	--	--	<0.001	<0.001	--
03/25/81	Manco	683	--	--	288	--	--	--	<0.001	<0.001	--
04/01/81	Manco #2318	510	0	140	0.003	<0.01	<0.01	7.26	--	--	77' 0"
04/14/81	Manco #2348	435	0	122	0.002	<0.01	<0.01	7.76	--	--	79' 0"
04/19/81	Manco #2380	531	0	129	0.001	<0.01	<0.01	7.42	--	--	80' 0"
05/13/81	Chem Lab	576	0	137	0.001	<0.01	<0.01	7.30	--	--	81' 2"
05/14/81	Manco #2429 Confirmation	--	--	--	287	--	--	--	--	--	--
05/27/81	Manco #2449	544	0	122	0.002	<0.01	<0.01	7.61	--	--	82' 3"
06/10/81	Chem Lab #37738	605	0	154	<0.001	<0.01	<0.01	7.30	<0.001	<0.001	--
06/12/81	Manco #2501 Confirmation Sample	--	--	--	275	--	--	--	--	--	--
06/24/81	Manco #2518	561	0	134	0.001	<0.01	<0.01	7.48	--	--	81' 0"
07/08/81	Manco #2556	564	0	128	0.002	<0.01	<0.01	7.40	--	--	78' 0"
07/22/81	Chem Lab #38150	526	0	123	<0.001	<0.01	<0.01	7.90	--	--	79' 1"
08/05/81	Manco #2623	536	0	95	0.018	<0.01	<0.01	7.25	--	--	79' 0"
08/19/81	Manco #2670	594	0	134	<0.001	<0.01	<0.01	7.55	--	--	79' 0"
09/02/81	Manco #2704	530	0	117	0.001	<0.01	<0.01	7.38	<0.001	<0.001	79' 0"
09/16/81	Manco #2746	536	0	122	0.003	<0.05	<0.05	7.64	--	--	81' 7"
09/30/81	Manco #2780	527	0	117	0.001	<0.05	<0.05	7.62	--	--	79' 0"
10/14/81	Manco #2810	595	0	146	0.033	<0.05	<0.05	7.54	--	--	79' 0"
10/28/81	Manco #2845	565	0	124	0.011	<0.10	<0.10	8.01	--	--	81' 0"
11/11/81	Manco #2879	576	0	134	0.001	<0.10	<0.10	8.01	--	--	77' 0"
11/25/81	Manco #2995	556	0	134	0.012	<0.10	<0.10	7.52	--	--	77' 0"
12/09/81	Manco #2917	543	0	122	0.017	<0.10	<0.10	7.88	<0.001	<0.001	78' 2"
12/23/81	Chem Lab #39493	520	0	139	0.001	<0.10	<0.10	7.60	--	--	79' 10"
01/06/82	Manco #2972	675	0	120	0.002	<0.05	<0.05	7.26	--	--	77' 5"
01/20/82	Manco #2999	575	0	122	<0.001	<0.05	<0.05	7.79	--	--	77' 8"
02/03/82	Manco #3034	555	0	126	<0.001	<0.05	<0.05	7.75	--	--	76' 0"
02/17/82	Manco #3066	555	0	134	<0.001	<0.10	<0.10	7.75	--	--	79' 3"
03/03/82	Manco #3101	604	0	126	0.005	<0.05	<0.05	8.02	<0.001	<0.001	81' 0"
03/17/82	Manco #3134	482	0	114	0.010	<0.05	<0.05	7.43	--	--	82' 0"
03/31/82	Manco #3171	370	0	110	0.003	<0.05	<0.05	7.49	--	--	82' 0"
04/14/82	Manco #3192	483	0	124	0.006	<0.05	<0.05	7.77	--	--	78' 6"
04/28/82	Manco #3222	479	0	118	0.015	<0.05	<0.05	7.59	--	--	78' 0"
05/11/82	Manco #3236	487	0	115	<0.001	<0.05	<0.05	7.59	--	--	77' 4"
05/26/82	Manco #3261	462	0	102	<0.001	<0.05	<0.05	7.94	--	--	76' 10"
06/09/82	Manco #3282	463	0	105	<0.001	<0.05	<0.05	7.78	<0.001	<0.001	77' 2"
06/23/82	Manco #3341	475	0	122	0.002	<0.05	<0.05	7.55	--	--	76' 6"

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Table 2
Thunderbird Joint Venture
Collins Draw Project
Environmental Monitoring - 238W

Date	Remarks	Well Depth		Distance from Well Field				Formation Sampled			
		303 Feet	113 Feet	113 Feet		#1 Sand					
		Total Dis-solved Solids-TDS mg/l	Car-bonate mg/l	Bicar-bonate mg/l	Sulfate mg/l	Uranium mg/l	(as N) Ammonia mg/l	pH	Arsenic mg/l	Selenium mg/l	Water Level
06/02/78	Baseline	391	24	116	138	0.450	0.03	8.6	--	--	--
06/22/78	Baseline	320	12	134	135	0.466	0.36	8.5	--	--	--
07/12/78	Baseline	350	0	146	143	0.406	0.07	8.0	--	--	--
07/31/78	Baseline	394	12	134	148	0.370	0.12	8.3	--	--	--
11/16/79	Baseline	346	0	165	125	0.081	< 0.01	8.12	--	--	--
E.P.A. Drinking Water Standards		500	None	None	250	None	None	6.5-8.5	0.05	0.01	--
Upper Control Limits											
N.R.C.		453	Carbonate-Bicarbonate 190		170	1.35	0.41	10.3	--	--	--
D.E.Q.		437	14	158	169	0.50	0.18		--	--	--
04/02/80 Start Chemicals											
04/02/80	Wamco #1501	363	0	156	140	0.088	0.27	7.62	--	--	--
04/16/80	Wamco #1544	456	0	151	166	0.069	0.37	7.71	--	--	--
04/30/80	C.G.L. #34039	350	0	156	147	0.120	0.10	7.90	--	--	--
04/30/80	Wamco #1580	352	0	154	168	0.122	0.12	7.58	--	--	80' 8"
05/14/80	Wamco #1619 Conf. Sample	262	0	196	115	0.096	< 0.01	7.94	--	--	93' 4"
05/28/80	Wamco	396	0	171	130	0.078	< 0.01	7.56	--	--	95' 0"
06/11/80	Wamco	380	0	171	100	0.093	< 0.01	7.72	--	--	93' 0"
06/25/80	Wamco #1714	366	0	149	88	0.097	< 0.01	7.63	--	--	93' 6"
07/09/80	Wamco #1747 Quarterly Sample	420	0	133	170	0.081	< 0.01	7.75	--	--	94' 3"
07/23/80	Wamco #1768	378	0	154	180	0.085	< 0.01	7.75	--	--	105' 10"
07/30/80	Wamco #1779	374	0	--	75	0.063	< 0.01	--	--	--	--
08/07/80	Wamco #1798	290	0	146	154	0.089	< 0.01	8.23	--	--	97' 6"
08/21/80	Wamco #1832	368	0	151	133	0.066	< 0.01	7.70	--	--	--
09/03/80	Wamco #1861	352	0	120	145	0.064	< 0.01	7.90	--	--	115' 1"
09/17/80	Wamco #1893	184	0	146	135	0.038	< 0.01	7.50	--	--	105' 0"
10/01/80	Wamco #1934	352	0	152	150	0.057	< 0.01	8.00	--	--	98' 3"
10/15/80	Wamco #1962	290	0	140	153	0.078	< 0.01	7.67	--	--	73' 9"
10/29/80	Wamco #1988	324	0	134	115	0.106	< 0.01	7.77	--	--	--
11/12/80	Wamco #0022	330	0	146	135	0.100	< 0.01	--	--	--	70' 0"
11/26/80	Wamco #2017	378	0	146	133	0.036	< 0.01	7.55	--	--	101' 0"
12/10/80	Wamco #2054	330	0	146	128	0.073	< 0.01	7.28	--	--	--
12/23/80	Wamco #2085	354	0	140	151	0.052	< 0.01	7.49	--	--	90' 0"
01/07/81	Wamco #2111	282	0	146	142	0.064	< 0.01	7.20	--	--	85' 0"
01/21/81	Wamco #2150	422	0	127	178	0.040	< 0.01	7.46	--	--	80' 3"
01/23/81	Wamco #2156	--	--	--	220	--	--	--	< 0.001	< 0.001	--
01/24/81	Wamco #2156	--	--	--	220	--	--	--	< 0.001	0.003	--
01/25/81	Wamco #2156	--	--	--	225	--	--	--	< 0.001	< 0.001	--
01/26/81	Wamco #2165	--	--	--	220	--	--	--	< 0.001	< 0.001	--
01/27/81	Wamco	--	--	--	205	--	--	--	< 0.001	< 0.001	--
01/28/81	Wamco	--	--	--	203	--	--	--	< 0.001	< 0.001	--
01/29/81	Wamco	384	--	--	207	--	--	--	< 0.001	< 0.001	--
01/30/81	Wamco	436	--	--	214	--	--	--	< 0.001	< 0.001	--
01/31/81	Wamco	--	--	--	191	--	--	--	< 0.001	< 0.001	--
02/01/81	Wamco	--	--	--	180	--	--	--	< 0.001	< 0.001	--
02/02/81	Wamco #2183	--	--	--	190	--	--	--	< 0.001	< 0.001	--
02/03/81	Wamco #2183	412	0	134	178	0.042	< 0.01	7.78	< 0.001	< 0.001	83' 0"
02/04/81	Wamco	--	--	--	202	--	--	--	< 0.001	< 0.001	--
02/05/81	Wamco	--	--	--	202	--	--	--	< 0.001	< 0.001	--
02/06/81	Wamco	--	--	--	(119)	--	--	--	< 0.001	< 0.001	--
02/07/81	Wamco	--	--	--	205	--	--	--	< 0.001	< 0.001	--
02/08/81	Wamco	--	--	--	219	--	--	--	< 0.001	< 0.001	--
02/09/81	Wamco	--	--	--	205	--	--	--	< 0.001	< 0.001	--
02/10/81	Wamco #2197	--	--	--	196	--	--	--	< 0.001	< 0.001	--
02/11/81	Wamco #2197	--	--	--	220	--	--	--	< 0.001	< 0.001	--
02/12/81	Wamco #2197	--	--	--	202	--	--	--	< 0.001	0.008	--
02/13/81	Wamco	--	--	--	219	--	--	--	< 0.001	0.017	--
02/14/81	Wamco	--	--	--	219	--	--	--	< 0.001	0.011	--

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Table 2 - Page two
 Thunderbird Joint Venture
 Collins Draw Project
 Environmental Monitoring - 238W

Date	Remarks	Well Depth 503 Feet				Distance from Well Field 113 Feet			Formation Sampled #1 Sand		Water Levels
		Total Dis- solved Solids- TDS mg/l	Car- bonate mg/l	Bicar- bonate mg/l	Sulfate mg/l	Uranium mg/l	(as N) Ammonia mg/l	pH	Arsenic mg/l	Selenium mg/l	
02/16/81	Wamco	--	--	--	204	--	--	--	<0.001	0.053	--
02/17/81	Wamco #2213	--	--	--	219	--	--	--	<0.001	0.070	--
02/18/81	Wamco #2213	504	0	116	229	0.026	<0.01	7.76	<0.001	0.072	85' 0"
02/19/81	Wamco	--	--	--	246	--	--	--	<0.001	0.090	--
02/20/81	Wamco	--	--	--	240	--	--	--	<0.001	0.150	--
02/21/81	Wamco Conf. Sample	638	--	--	240	--	--	--	<0.001	0.290	--
02/22/81	Wamco	605	--	--	258	--	--	--	<0.001	0.250	--
02/23/81	Wamco	--	--	--	276	--	--	--	<0.001	0.370	--
02/24/81	Wamco	--	--	--	285	--	--	--	<0.001	0.265	--
02/25/81	Wamco	--	--	--	272	--	--	--	<0.001	0.280	--
02/26/81	Wamco	--	--	--	284	--	--	--	<0.001	0.279	--
02/27/81	Wamco	637	--	--	284	--	--	--	<0.001	0.256	--
02/28/81	Wamco	588	--	--	270	--	--	--	<0.001	0.164	--
03/01/81	Wamco	718	--	--	292	--	--	--	<0.001	0.120	--
03/02/81	Wamco	741	--	--	328	--	--	--	<0.001	0.164	--
03/03/81	Wamco	732	--	--	304	--	--	--	<0.001	0.200	--
03/04/81	Wamco #2244 Quarterly Sample	753	0	90	315	0.037	<0.01	7.87	<0.001	0.232	88' 0"
03/05/81	Wamco	793	--	--	301	--	--	--	<0.001	0.292	--
03/06/81	Wamco	785	--	--	292	--	--	--	<0.001	0.304	--
03/07/81	Wamco	755	--	--	282	--	--	--	<0.001	0.304	--
03/08/81	Wamco	818	--	--	326	--	--	--	<0.001	0.328	--
03/09/81	Wamco	842	--	--	338	--	--	--	<0.001	0.336	--
03/10/81	Wamco	873	--	--	326	--	--	--	<0.001	0.320	--
03/11/81	Wamco	916	--	--	338	--	--	--	<0.001	0.430	--
03/12/81	Wamco	917	--	--	360	--	--	--	<0.001	0.340	--
03/13/81	Wamco	1,071	--	--	392	--	--	--	<0.001	0.340	--
03/14/81	Wamco	960	--	--	355	--	--	--	<0.001	0.450	--
03/15/81	Wamco	890	--	--	336	--	--	--	<0.001	0.330	--
03/16/81	Wamco	917	--	--	348	--	--	--	<0.001	0.400	--
03/17/81	Wamco	907	--	--	348	--	--	--	<0.001	0.360	--
03/18/81	Wamco #2280	984	0	128	370	0.220	<0.01	7.48	<0.001	0.300	87' 0"
03/19/81	Wamco	1,040	--	--	392	--	--	--	<0.001	0.480	--
03/20/81	Wamco	1,010	--	--	370	--	--	--	<0.001	0.600	--
03/21/81	Wamco	970	--	--	360	--	--	--	<0.001	0.520	--
03/22/81	Wamco	965	--	--	348	--	--	--	<0.001	0.520	--
03/23/81	Wamco	885	--	--	360	--	--	--	<0.001	0.480	--
03/24/81	Wamco	921	--	--	336	--	--	--	<0.001	0.560	--
03/25/81	Wamco	974	--	--	348	--	--	--	<0.001	0.310	--
03/26/81	Wamco	929	--	--	338	--	--	--	<0.001	0.420	--
03/27/81	Wamco	1,015	--	--	336	--	--	--	<0.001	0.410	--
03/28/81	Wamco	954	--	--	322	--	--	--	<0.001	0.480	--
03/29/81	Wamco	970	--	--	372	--	--	--	<0.001	0.460	--
03/30/81	Wamco	1,054	--	--	355	--	--	--	<0.001	0.400	--
03/31/81	Wamco	1,042	--	--	372	--	--	--	<0.001	0.490	--
04/01/81	Wamco #2318	1,204	0	68	458	0.263	<0.01	7.76	<0.001	0.670	--
04/02/81	Wamco	1,077	--	--	452	--	--	--	<0.001	0.500	--
04/03/81	Wamco	1,224	--	--	470	--	--	--	<0.001	0.440	--
04/04/81	Wamco	1,035	--	--	448	--	--	--	<0.001	0.440	--
04/05/81	Wamco	1,199	--	--	464	--	--	--	<0.001	0.430	--
04/06/81	Wamco	1,246	--	--	460	--	--	--	<0.001	0.450	88' 0"
04/07/81	Wamco	1,126	--	--	438	--	--	--	<0.001	0.360	--
04/08/81	Wamco	869	--	--	528	--	--	--	<0.001	0.470	--
04/09/81	Wamco #2334	1,246	0	59	526	0.525	<0.01	8.09	<0.001	0.058	--
04/15/81	Wamco #2350	1,213	0	46	480	0.575	<0.01	8.20	<0.001	0.610	86' 0"
04/22/81	Wamco #2357	1,279	0	42	516	0.575	<0.01	7.58	<0.001	0.730	--
04/29/81	Wamco #2381	1,436	0	46	543	0.767	<0.01	7.42	<0.001	1.520	110' 0"
05/06/81	Wamco #2397	1,317	0	51	474	0.901	<0.01	7.82	<0.001	0.860	--
05/13/81	Wamco #2418	1,274	0	24	547	0.748	<0.01	7.98	<0.001	0.430	128' 2"
05/20/81	Wamco #2441	1,461	5	29	508	1.278	<0.01	8.33	<0.001	1.120	--
05/27/81	Wamco #2450	891	0	63	430	0.360	<0.01	8.06	<0.001	0.380	139' 4"
06/03/81	Wamco #2470	1,217	0	49	590	0.75	<0.01	7.44	<0.001	1.600	--
06/10/81	Chem. Lab #37738	1,070	0	37	566	1.450	0.14	7.40	<0.001	0.400	116' 0"
06/17/81	Wamco #2513	1,407	0	29	522	0.680	<0.01	7.90	--	--	--

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Table 2 - Page three
Thunderbird Joint Venture
Collins Draw Project
Environmental Monitoring - 238W

Well Depth 503 Feet
Distance from well Field 113 Feet
Formation Sampled #1 Sand

Date	Remarks	Total Dis-solved Solids TDS mg/l	Car-bonate mg/l	Bicar-bonate mg/l	Sulfate mg/l	Uranium mg/l	(as N) Ammonia mg/l	pH	Arsenic mg/l	Selenium mg/l	Water Levels
07/01/81	Manco #2543	1,419	0	27	522	3.173	<0.01	7.72	--	--	--
07/08/81	Manco #2556	1,366	0	29	536	0.410	<0.01	8.19	--	--	--
07/15/81	Manco #2572	1,240	0	146	542	1.714	<0.01	7.52	--	--	83' 0"
07/22/81	Chem. Lab. #38150	1,366	0	34	554	1.000	0.19	7.70	--	--	64' 10"
07/29/81	Manco #2600	1,366	0	39	540	0.560	<0.01	8.19	--	--	--
08/05/81	Manco #2623	1,246	7	22	540	0.258	<0.01	8.20	--	--	66' 0"
08/12/81	Manco #2641	1,270	0	34	215	2.004	<0.01	8.18	--	--	--
08/19/81	Manco #2670	1,203	0	27	476	0.644	<0.01	7.72	--	--	75' 0"
08/26/81	Manco #2684	1,233	0	29	440	0.501	0.20	8.15	--	--	--
09/02/81	Manco #2704	1,261	17	10	598	2.200	0.33	8.26	<0.001	0.810	77' 0"
09/06/81	Manco #2718	--	--	--	--	--	<0.05	--	--	--	--
09/09/81	Manco #2724	1,295	0	34	520	0.669	<0.05	7.61	--	--	--
09/16/81	Manco #2746	1,236	12	24	520	0.651	<0.05	9.42	--	--	57' 11"
09/23/81	Manco #2764	1,233	12	12	532	0.935	0.24	8.44	--	--	--
09/30/81	Manco #2783	1,275	7	22	660	1.360	0.45	8.35	--	--	52' 5"
10/02/81	Manco #2796	--	--	--	--	1.235	-0.36	--	--	--	--
10/03/81	Manco #2795	--	--	--	--	0.800	0.51	--	--	--	--
10/06/81	Manco #2798	1,276	--	--	520	0.700	13.80	--	<0.001	<0.001	--
10/07/81	Manco #2798	1,221	--	--	528	0.850	12.40	--	<0.001	<0.001	--
10/14/81	Manco #2810	1,304	--	159	580	0.651	0.45	7.71	--	--	75' 0"
10/23/81	Manco #2842	1,285	19	10	556	0.080	0.90	9.16	--	--	68' 0"
11/11/81	Manco #2879	1,209	10	20	532	1.640	8.50	8.71	--	--	101' 9"
11/25/81	Manco #2895	1,225	24	--	525	0.664	4.65	8.94	--	--	--
12/09/81	Manco #2917	1,192	0	41	513	1.000	6.50	7.58	<0.001	0.850	Pumping 62' 4"
12/23/81	Chem. Lab. #39493	1,154	20	39	522	2.400	5.50	9.00	--	--	104' 6"
01/07/82	Manco #2932	1,084	10	17	500	3.400	3.00	8.46	--	--	82' 8"
01/20/82	Manco #2959	942	2	34	428	0.420	1.62	8.72	--	--	220' 6"
02/03/82	Manco #3004	504	12	29	246	2.815	0.20	8.89	--	--	285' 0"
03/03/82	Manco #3101	448	7	63	188	3.924	0.15	8.62	0.006	0.515	310' 0"
03/14/82	Manco #3134	381	0	83	144	7.000	<0.05	7.50	--	--	Pumping
03/31/82	Manco #3171	307	0	81	152	7.000	<0.05	7.75	--	--	Pumping
04/14/82	Manco #3194	398	0	90	179	6.600	<0.05	7.65	--	--	Pumping
04/28/82	Manco #3222	394	0	89	170	4.200	<0.05	7.28	--	--	Pumping
05/13/82	Manco #3236	395	0	98	176	4.500	<0.05	7.40	--	--	99' 8"
05/26/82	Manco #3261	361	0	98	166	1.550	<0.05	8.28	--	--	Pumping
06/09/82	Manco #3282	417	0	106	174	2.300	<0.05	7.39	<0.001	0.104	Pumping
06/23/82	Manco #3341	377	0	110	177	6.900	<0.05	7.30	--	--	Pumping

Because of low water level, sample not obtainable.

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Date	Remarks	Total Dis- solved Solids- TDS mg/l	Car- bonate mg/l	Bicar- bonate mg/l	Sulfate mg/l	Uranium mg/l	(as N) Ammonia mg/l	pH	Water Levels
07/31/78	Baseline	438	9	220	136	0.180	0.10	7.7	--
06/05/78	Baseline	494	0	220	155	0.061	0.01	8.1	--
06/22/78	Baseline	440	0	195	130	0.050	0.14	7.9	--
07/12/78	Baseline	446	0	195	125	0.049	0.04	7.6	--
11/15/79	Baseline	345	0	177	113	0.004	0.01	7.9	--
	E.P.A. Drinking Water Standards	500	None	None	250	None	None	6.5-8.5	--
	Upper Control Limits								
	N.R.C.	568	Carbonate-Bicarbonate 263		178	1.07	0.16	9.8	--
	D.E.Q.	545	2.4	250	163	0.05	0.08	--	--
04/02/80	Start Chemicals								
04/12/80	Wamco #1501	343	0	159	132	0.027	0.23	7.62	--
04/16/80	Wamco #1544	388	0	163	138	0.021	0.27	7.65	--
04/30/80	C.G.L. #34039	324	0	176	124	0.030	0.10	7.60	54' 7"
04/30/80	Wamco #1580	348	0	173	129	0.038	0.01	7.04	54' 7"
05/14/80	Wamco #1619 Confirmation Sample	360	0	207	118	0.035	0.01	7.54	52' 9"
05/29/80	Wamco #1654 Monitor Round	410	0	159	120	0.130	0.01	8.76	56' 1"
06/11/80	Wamco	376	0	146	116	0.023	0.01	7.37	53' 5"
06/25/80	Wamco #1714	358	0	156	158	0.042	0.01	7.40	52' 5"
07/09/80	Wamco #1747 Quarterly Sample	412	0	159	146	0.010	0.01	7.45	53' 3"
07/23/80	Wamco #1768	402	0	154	180	0.011	0.01	7.62	65' 6"
07/30/80	Wamco #1779 Confirmation Sample	382	--	--	67	0.030	0.01	--	--
08/07/80	Wamco #1798	318	0	151	163	0.003	0.01	8.28	57' 0"
08/21/80	Wamco #1832	350	0	144	145	0.041	0.01	7.57	--
09/03/80	Wamco #1861	360	0	159	145	0.032	0.01	7.80	70' 11"
09/17/80	Wamco #1893	196	0	159	143	0.032	0.01	7.47	62' 8"
10/01/80	Wamco #1934	356	0	146	160	0.047	0.01	8.02	57' 9"
10/15/80	Wamco #1962	318	0	153	148	0.070	0.01	7.79	98' 9"
10/29/80	Wamco #1988	306	0	153	124	0.066	0.01	7.80	--
11/12/80	Wamco #0022	330	0	146	115	0.030	0.01	--	--
11/26/80	Wamco #2017	342	0	146	133	0.030	0.01	7.57	61' 0"
12/10/80	Wamco #2054	322	0	146	123	0.028	0.01	7.82	--
12/23/80	Wamco #2085	360	1	134	160	0.033	0.01	7.53	63' 0"
01/07/81	Wamco #2111	265	0	150	133	0.048	0.01	7.18	59' 0"
01/21/81	Wamco #2150	270	0	146	128	0.065	0.01	7.50	48' 0"
02/03/81	Wamco #2183	347	0	153	148	0.060	0.01	7.64	57' 0"
02/18/81	Wamco #2213	334	0	165	146	0.043	0.01	7.80	60' 0"
03/04/81	Wamco #2244	348	0	144	158	0.033	0.01	7.76	70' 0"
03/18/81	Wamco #2280	343	0	159	148	0.038	0.01	7.55	65' 0"
04/01/81	Wamco #2318	345	0	149	136	0.033	0.01	7.64	74' 0"
04/15/81	Wamco #2348	253	0	177	155	0.048	0.01	7.90	70' 0"
04/29/81	Wamco #2380	352	0	154	136	0.066	0.01	7.74	70' 0"
05/13/81	Chem. Lab. #37257-3	364	0	151	146	0.055	0.01	7.70	89' 9"
05/27/81	Wamco #2449	352	0	122	144	0.014	0.01	8.05	103' 9"
06/10/81	Chem. Lab.	298	0	166	162	0.054	0.01	7.90	77' 0"
06/24/81	Wamco #2518	366	0	146	118	0.033	0.01	7.7	67' 0"
07/08/81	Wamco #2556	362	0	151	138	0.019	0.01	7.5	67' 0"
07/22/81	Chem. Lab. #38150	334	0	155	144	0.044	0.01	8.00	47' 9"
08/05/81	Wamco #2623	332	0	149	130	0.029	0.01	7.31	42' 0"
08/19/81	Wamco #2670	405	0	146	124	0.029	0.01	7.91	31' 0"
09/02/81	Wamco #2704	360	0	146	148	0.044	0.01	7.79	45' 0"
09/16/81	Wamco #2746	360	0	144	136	0.028	0.05	7.60	31' 6"
09/30/81	Wamco #2780	363	0	146	124	0.044	0.05	7.56	28' 0"
10/14/81	Wamco #2810	369	0	134	135	0.048	0.05	7.63	36' 0"
10/28/81	Wamco #2845	360	0	151	136	0.024	0.10	7.67	32' 0"
11/11/81	Wamco #2879	341	0	151	132	0.014	0.10	7.86	48' 6"
11/25/81	Wamco #2895	351	0	155	139	0.037	0.10	7.50	53' 0"
12/09/81	Wamco #2917	356	0	195	123	0.033	0.10	7.62	52' 9"
12/23/81	Chem Lab #39493	364	0	173	143	0.062	0.10	8.00	53' 3"
01/06/82	Wamco #2972	468	0	151	100	0.050	0.05	7.87	51' 7"
01/20/82	Wamco #2999	415	0	146	136	0.005	0.05	8.04	41' 6"

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Table 3 - Page two
 Thunderbird Joint Venture
 Collins Draw Project
 Environmental Monitoring - 239W

Well Depth
 465 Feet

Distance from Well Field
 200 Feet

Formation Sampled
 #1 Sand

Date	Remarks	Total Dis- solved Solids- TDS mg/l	Car- bonate mg/l	Bicar- bonate mg/l	Sulfate mg/l	Uranium mg/l	(as N) Ammonia mg/l	pH	Water Levels
02/03/82	Wamco #3034	374	0	142	121	0.027	0.05	8.06	122' 0"
02/17/82	Wamco #3066	365	0	142	134	0.039	0.10	8.06	201' 0"
03/03/82	Wamco #3101	380	0	146	122	0.024	0.05	8.13	196' 6"
03/17/82	Wamco #3134	346	0	146	121	0.160	0.05	8.00	192' 0"
03/31/82	Wamco #3171	473	0	146	121	0.024	0.05	7.88	101' 0"
04/14/82	Wamco #3192	335	0	156	139	0.037	0.05	7.95	77' 0"
04/28/82	Wamco #3222	348	0	156	137	0.038	0.05	7.84	68' 0"
05/13/82	Wamco #3236	374	0	154	146	0.054	0.05	7.76	61' 7"
05/26/82	Wamco #3261	358	0	151	150	0.028	0.05	7.86	54' 6"
06/09/82	Wamco #3282	361	0	146	127	0.017	0.05	7.95	114' 6"
06/23/82	Wamco #3341	348	0	155	154	0.006	0.05	7.26	74' 8"

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Date	Remarks	Total Dis-solved Solids- TDS mg/l	Car-bonate mg/l	Bicar-bonate mg/l	Sulfate mg/l	Uranium mg/l	(as N) Ammonia mg/l	pH	Arsenic mg/l	Selenium mg/l	Water Levels
05/23/78	Baseline	430	12	146	143	0.020	0.05	8.2	--	--	--
06/07/78	Baseline	442	12	146	139	--	0.03	8.2	--	--	--
06/22/78	Baseline	344	10	153	125	0.033	0.07	8.1	--	--	--
07/11/78	Baseline	378	0	146	128	0.029	0.11	7.2	--	--	--
		342	0	146	145	0.001	0.12	8.0	--	--	--
	E.P.A. Drinking Water Standards	500	None	None	250	None	None	6.5-8.5	0.05	0.01	--
	Upper Control Limits										
	N.R.C.	508	Carbonate-Bicarbonate 182		167	1.03	0.14	9.9	--	--	--
	D.E.Q.	464	6	176	163	0.012	0.10	--	--	--	--
04/02/80 Start Chemicals											
04/02/80	Wamco #1501	328	0	154	128	0.105	<0.01	7.63	--	--	--
04/16/80	Wamco #1544	389	0	151	133	0.015	0.16	7.67	--	--	--
04/30/80	Chem. Lab. #34039	358	0	151	137	0.010	<0.10	8.00	--	--	92' 4"
04/30/80	Wamco #1580	360	0	151	158	0.035	<0.01	7.54	--	--	92' 4"
05/14/80	Wamco #1619 Confirmation Sample	382	0	159	175	0.026	<0.01	7.86	--	--	82' 0"
05/28/80	Wamco #1654 Monitor Round	412	0	146	135	0.008	<0.01	7.64	--	--	97' 3"
06/11/80	Wamco	394	0	159	125	0.005	<0.01	7.73	--	--	86' 0"
06/25/80	Wamco #1714	368	0	146	67	0.013	<0.01	7.67	--	--	82' 0"
07/09/80	Wamco #1747 Quarterly Sample	398	0	153	148	0.005	<0.01	7.67	--	--	86' 6"
07/23/80	Wamco #1768	412	0	148	158	0.006	<0.01	7.82	--	--	101' 8"
08/07/80	Wamco #1798	320	0	144	172	0.070	<0.01	8.33	--	--	97' 10"
08/12/80	Wamco #1814	--	--	--	113	--	--	--	--	--	--
08/21/80	Wamco #1832	374	0	146	162	0.001	<0.01	7.75	--	--	--
09/03/80	Wamco #1861	368	0	146	149	0.005	<0.01	7.92	--	--	108' 8"
09/17/80	Wamco #1893	180	0	159	125	0.003	<0.01	7.52	--	--	103' 9"
10/01/80	Wamco #1934	366	0	146	145	0.007	<0.01	7.92	--	--	98' 1"
10/15/80	Wamco #1962	326	0	146	744	0.011	<0.01	7.85	--	--	149' 7"
10/29/80	Wamco #1988	334	0	146	133	0.011	<0.01	7.70	--	--	--
11/17/80	Wamco #0022	350	0	139	125	0.004	<0.01	--	--	--	152' 2"
11/26/80	Wamco #2017	356	0	140	128	0.001	<0.01	7.70	--	--	85' 0"
12/10/80	Wamco #2054	336	0	146	133	0.003	<0.01	7.85	--	--	--
12/23/80	Wamco #2055	362	0	140	151	0.004	<0.01	7.50	--	--	89' 0"
01/07/81	Wamco #2111	262	0	140	233	0.006	<0.01	7.24	--	--	86' 0"
01/21/81	Wamco #2150	280	0	146	133	0.011	<0.01	7.40	--	--	91' 0"
02/03/81	Wamco #2183	339	0	140	150	0.003	<0.01	7.71	--	--	90' 0"
02/18/81	Wamco #2213	337	0	146	141	0.005	<0.01	7.93	--	--	101' 0"
03/04/81	Wamco #2244	337	0	146	148	0.001	<0.01	7.78	--	--	95' 0"
03/18/81	Wamco #2280	348	0	146	148	0.008	<0.01	7.50	--	--	105' 0"
04/01/81	Wamco #2318	353	0	146	136	0.013	<0.01	7.57	--	--	109' 0"
04/15/81	Wamco #2348	251	0	149	147	0.005	<0.01	7.96	--	--	103' 0"
04/29/81	Wamco #2380	349	0	151	136	0.004	<0.01	7.72	--	--	102' 0"
05/13/81	Chem. Lab. #37257-3	376	0	161	151	0.006	<0.01	7.70	--	--	116' 5"
05/27/81	Wamco #2449	366	0	153	130	0.001	<0.01	7.93	--	--	141' 8"
06/10/81	Chem. Lab. #37738	392	0	163	155	<0.001	<0.01	7.90	--	--	115' 0"
06/24/81	Wamco #2518	708	0	140	253	0.004	<0.01	7.70	--	--	114' 0"
06/28/81	Wamco #2527 Confirmation Sample	847	--	--	346	--	--	--	--	--	--
06/29/81	Wamco #2539	819	--	--	301	--	--	--	<0.001	1.40	--
06/30/81	Wamco #2539	689	--	--	320	--	--	--	<0.001	1.50	--
07/01/81	Wamco #2543	781	--	--	327	--	--	--	<0.001	0.84	--
07/02/81	Wamco #2554	686	--	--	290	--	--	--	<0.001	1.90	--
07/03/81	Wamco #2554	606	--	--	260	--	--	--	<0.001	1.34	--
07/04/81	Wamco #2554	587	--	--	252	--	--	--	<0.001	1.33	--
07/05/81	Wamco #2554	556	--	--	252	--	--	--	<0.001	1.87	--
07/06/81	Wamco #2554	561	--	--	236	--	--	--	<0.001	2.30	--
07/07/81	Wamco #2554	548	--	--	240	--	--	--	<0.001	1.90	--
07/08/81	Wamco #2556	500	0	73	236	0.008	<0.01	7.65	<0.001	1.75	87' 0"
07/09/81	Wamco #2562	456	--	--	206	--	--	--	<0.001	0.85	--
07/10/81	Wamco #2570	420	--	--	210	--	--	--	<0.001	1.23	--
07/11/81	Wamco #2570	398	--	--	190	--	--	--	<0.001	1.00	--
07/12/81	Wamco #2565	413	--	--	195	--	--	--	<0.001	0.85	--
07/13/81	Wamco #2565	408	--	--	190	--	--	--	<0.001	0.85	--

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Date	Remarks	Total Dissolved Solids- TDS mg/l	Car- bonate mg/l	Bicar- bonate mg/l	Sulfate mg/l	Uranium mg/l	(as N) Ammonia mg/l	pH	Arsenic mg/l	Selenium mg/l	Water Levels
07/14/81	Wamco #2570	388	--	--	200	--	--	--	<0.001	0.50	--
07/15/81	Wamco #2572	304	--	--	166	--	--	--	<0.001	0.52	--
07/16/81	Wamco #2576	--	--	--	178	--	--	--	<0.001	0.120	--
07/17/81	Wamco #2585	--	--	--	178	--	--	--	0.028	0.123	--
07/18/81	Wamco #2585	--	--	--	178	--	--	--	0.018	0.121	--
07/19/81	Wamco #2585	--	--	--	160	--	--	--	0.034	0.123	--
07/20/81	Wamco #2585	--	--	--	166	--	--	--	0.055	0.122	--
07/21/81	Wamco #2586	--	--	--	222	--	--	--	0.060	0.120	--
07/22/81	Wamco #2589	387	0	66	206	0.034	0.01	7.48	0.050	0.167	88' 3"
07/23/81	Wamco #2589	--	--	--	194	--	--	--	0.040	0.169	--
07/24/81	Wamco #2595	--	--	--	176	--	--	--	0.096	0.086	--
07/25/81	Wamco #2595	--	--	--	176	--	--	--	0.108	0.082	--
07/26/81	Wamco #2595	--	--	--	192	--	--	--	0.156	0.105	--
07/27/81	Wamco #2597	--	--	--	192	--	--	--	0.172	0.060	--
07/28/81	Wamco #2600	--	--	--	178	--	--	--	0.215	0.059	--
07/29/81	Wamco #2600	--	--	--	178	--	--	--	0.071	0.051	--
07/30/81	Wamco #2603	--	--	--	130	--	--	--	0.220	0.035	--
07/31/81	Wamco #2610	--	--	--	130	--	--	--	0.042	0.019	--
08/01/81	Wamco #2610	--	--	--	142	--	--	--	0.124	0.008	--
08/02/81	Wamco #2610	--	--	--	142	--	--	--	0.062	<0.001	--
08/03/81	Wamco #2610	--	--	--	154	--	--	--	0.172	<0.001	--
08/05/81	Wamco #2623	373	0	68	176	0.001	0.01	7.43	--	--	94' 0"
08/09/81	Wamco #2640 Confirmation Samples	--	--	--	184	--	--	--	0.133	<0.001	--
08/10/81	Wamco #2640	--	--	--	188	--	--	--	0.103	<0.001	--
08/11/81	Wamco #2636	--	--	--	200	--	--	--	0.128	<0.001	--
08/12/81	Wamco #2636	--	--	--	212	--	--	--	0.110	<0.001	--
08/13/81	Wamco #2646	--	--	--	170	--	--	--	0.087	<0.001	--
08/14/81	Wamco #2657	--	--	--	185	--	--	--	0.119	<0.001	--
08/15/81	Wamco #2661	--	--	--	224	--	--	--	0.168	<0.001	--
08/16/81	Wamco #2661	--	--	--	212	--	--	--	0.168	<0.001	--
08/17/81	Wamco #2661	--	--	--	212	--	--	--	0.152	<0.001	--
08/18/81	Wamco #2665	--	--	--	218	--	--	--	0.176	<0.001	--
08/19/81	Wamco #2670	604	0	102	210	0.002	0.01	7.83	0.168	<0.001	83' 0"
08/21/81	Wamco #2667 Confirmation Sample	513	--	--	200	--	--	--	0.126	<0.001	--
08/22/81	Wamco #2667	546	--	--	190	--	--	--	0.167	<0.001	--
08/23/81	Wamco #2667	576	--	--	194	--	--	--	0.149	<0.001	--
08/24/81	Wamco #2683	494	--	--	210	--	--	--	0.116	<0.001	--
08/25/81	Wamco #2683	567	--	--	216	--	--	--	0.112	<0.001	--
08/26/81	Wamco #2683	572	--	--	216	--	--	--	0.113	<0.001	--
08/27/81	Wamco #2691	562	--	--	190	--	--	--	0.131	<0.001	--
08/28/81	Wamco #2693	554	--	--	188	--	--	--	0.115	<0.001	--
08/29/81	Wamco #2697	601	--	--	206	--	--	--	0.110	<0.001	--
08/30/81	Wamco #2709	699	--	--	236	--	--	--	0.101	0.100	--
08/31/81	Wamco #2709	687	--	--	266	--	--	--	<0.001	0.213	--
09/01/81	Wamco #2702	687	--	--	238	--	--	--	0.370	<0.001	--
09/02/81	Wamco #2704	658	0	159	244	0.015	<0.01	7.84	0.043	<0.001	56' 0"
09/06/81	Wamco #2718 Confirmation Sample	614	--	--	220	--	--	--	--	--	--
09/09/81	Wamco #2723	642	--	--	244	--	--	--	0.114	<0.001	--
09/10/81	Wamco #2730	640	--	--	244	--	--	--	0.101	<0.001	--
09/11/81	Wamco #2740	616	--	--	208	--	--	--	0.198	<0.001	--
09/12/81	Wamco #2740	639	--	--	208	--	--	--	0.149	<0.001	--
09/13/81	Wamco #2740	629	--	--	194	--	--	--	0.176	<0.001	--
09/14/81	Wamco #2740	637	--	--	194	--	--	--	0.132	<0.001	--
09/15/81	Wamco #2742	624	--	--	172	--	--	--	0.141	<0.001	--
09/16/81	Wamco #2746	574	0	151	195	0.012	<0.05	7.86	--	--	81' 3"
09/18/81	Wamco #2752 Confirmation Sample	552	--	--	208	--	--	--	0.165	<0.001	--
09/20/81	Wamco #2760	564	--	--	224	--	--	--	0.109	<0.001	--
09/21/81	Wamco #2760	572	--	--	224	--	--	--	0.134	<0.001	--
09/22/81	Wamco #2763	569	--	--	206	--	--	--	0.118	<0.001	--
09/23/81	Wamco #2763	571	--	--	214	--	--	--	0.148	<0.001	--
09/24/81	Wamco #2769	543	--	--	210	--	--	--	0.165	<0.001	--
09/25/81	Wamco #2776	562	--	--	214	--	--	--	0.180	<0.001	--
09/26/81	Wamco #2776	544	--	--	236	--	--	--	0.123	<0.001	--
09/27/81	Wamco #2776	553	--	--	222	--	--	--	0.199	<0.001	--
09/28/81	Wamco #2776	553	--	--	230	--	--	--	0.174	<0.001	--
09/29/81	Wamco #2776	541	--	--	222	--	--	--	0.177	<0.001	--
09/30/81	Wamco #2780	531	0	154	230	0.016	<0.05	7.67	--	--	75' 0"

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20602

D 4008714160E

502 Feet
133 Feet
#1 Sand

Date	Remarks	Total Dis-solved Solids-20S mg/l	Cr- bonate mg/l	Bicar- bonate mg/l	Sulfate mg/l	Uranium mg/l	(as N) Ammonia mg/l	pH	Arsenic mg/l	Selenium mg/l	Water Levels
10/01/81	Wasco #2787	553	---	---	244	---	---	---	0.168	< 0.001	---
10/02/81	Wasco #2784	555	---	---	250	---	---	---	0.207	< 0.001	---
10/03/81	Wasco #2791	573	---	---	210	---	---	---	0.174	< 0.001	---
10/04/81	Wasco #2791	571	---	---	202	---	---	---	0.177	< 0.001	---
10/05/81	Wasco #2791	564	---	---	194	---	---	---	0.192	< 0.001	---
10/06/81	Wasco #2798	529	---	---	200	---	---	---	0.088	< 0.001	---
10/07/81	Wasco #2798	514	---	---	180	---	---	---	0.128	< 0.001	---
10/08/81	Wasco #2802	585	---	---	208	---	---	---	0.154	< 0.001	---
10/09/81	Wasco #2802	538	---	---	194	---	---	---	0.135	< 0.001	---
10/10/81	Wasco #2802	549	---	---	202	---	---	---	0.135	< 0.001	---
10/11/81	Wasco #2802	549	---	---	208	---	---	---	0.170	< 0.001	---
10/12/81	Wasco #2811	538	---	---	194	---	---	---	0.140	< 0.001	---
10/13/81	Wasco #2811	542	---	---	194	---	---	---	0.156	< 0.001	---
10/14/81	Wasco #2810	539	0	122	194	0.006	< 0.05	7.54	0.127	< 0.001	82' 0"
10/15/81	Wasco #2815	525	---	---	200	---	---	---	0.070	---	---
10/16/81	Wasco #2824	534	---	---	200	---	---	---	0.212	0.136	---
10/17/81	Wasco #2824	473	---	---	176	---	---	---	0.224	0.136	---
10/18/81	Wasco #2824	512	---	---	200	---	---	---	0.256	0.144	---
10/19/81	Wasco #2832	542	---	---	197	---	---	---	0.128	0.168	---
10/20/81	Wasco #2832	542	---	---	180	---	---	---	0.288	0.208	---
10/21/81	Wasco #2838	543	---	---	207	---	---	---	0.188	0.352	---
10/22/81	Wasco #2838	528	---	---	203	---	---	---	0.192	0.135	---
10/23/81	Wasco #2843	514	---	---	208	---	---	---	0.186	0.162	---
10/24/81	Wasco #2843	521	---	---	196	---	---	---	0.183	0.186	---
10/25/81	Wasco #2843	506	---	---	196	---	---	---	0.240	0.159	---
10/26/81	Wasco #2843	502	---	---	200	---	---	---	---	---	72' 0"
10/28/81	Wasco #2845	503	0	156	176	0.010	< 0.10	7.85	---	---	---
10/29/81	Wasco #2847	---	---	---	230	---	---	---	0.210	0.400	---
10/30/81	Wasco #2850	---	---	---	166	---	---	---	0.192	0.380	---
10/31/81	Wasco #2850	---	---	---	166	---	---	---	0.192	0.390	---
11/01/81	Wasco #2850	---	---	---	186	---	---	---	0.234	0.350	---
11/02/81	Wasco #2850	---	---	---	---	---	---	---	0.234	0.320	---
11/11/81	Wasco #2879	499	0	149	175	0.070	< 0.10	7.37	---	---	89' 6"
11/25/81	Wasco #2895	495	0	151	180	0.020	< 0.10	7.41	---	---	80' 0"
12/09/81	Wasco #2917	504	0	146	200	0.008	< 0.10	7.71	0.530	< 0.001	78' 8"
12/23/81	Chem Lab #19493	498	0	158	198	0.007	0.12	8.00	---	---	77' 2"
01/06/82	Wasco #2972	633	0	137	210	0.012	< 0.05	7.85	---	---	82' 8"
01/20/82	Wasco #2999	588	0	134	228	0.001	< 0.05	8.13	---	---	71' 8"
02/03/82	Wasco #3066	477	0	138	169	0.006	< 0.10	7.83	---	---	171' 6"
03/03/82	Wasco #3101	472	0	146	171	0.006	< 0.05	7.96	---	---	236' 0"
03/17/82	Wasco #3134	392	0	148	138	0.023	< 0.05	8.07	0.504	< 0.001	234' 6"
03/31/82	Wasco #3171	444	0	100	136	0.018	< 0.05	7.99	---	---	231' 6"
04/14/82	Wasco #3192	398	0	151	169	0.014	< 0.05	8.03	---	---	118' 0"
04/28/82	Wasco #3222	407	0	151	161	0.011	< 0.05	7.84	---	---	99' 0"
05/13/82	Wasco #3236	436	0	146	167	0.042	< 0.05	7.91	---	---	90' 0"
05/26/82	Wasco #3261	422	0	149	174	0.003	< 0.05	8.02	---	---	88' 6"
06/09/82	Wasco #3282	422	0	146	167	0.006	< 0.05	7.63	---	---	82' 4"
06/23/82	Wasco #3341	423	0	142	187	0.001	< 0.05	7.66	0.134	< 0.001	151' 9"
											85' 4"

Because of low water level, sample not obtainable.

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20602

Date	Remarks	Total Dis-solved Solids- TDS mg/l	Car-bonate mg/l	Bicar-bonate mg/l	Sulfate mg/l	Uranium mg/l	(as N) Ammonia mg/l	pH	Arsenic mg/l	Selenium mg/l	Water Levels
05/17/81	Wamco #2430	455	--	--	210	--	--	--	<0.001	0.108	--
05/18/81	Wamco #2430	--	--	--	200	--	--	--	<0.001	0.078	--
05/19/81	Wamco #2440	--	--	--	253	--	--	--	<0.001	0.106	--
05/20/81	Wamco #2440	--	--	--	225	--	--	--	<0.001	0.108	--
05/21/81	Wamco #2440	--	--	--	237	--	--	--	<0.001	0.084	--
05/22/81	Wamco #2451	--	--	--	165	--	--	--	<0.001	0.070	--
05/23/81	Wamco #2451	--	--	--	176	--	--	--	<0.001	0.071	--
05/24/81	Wamco #2451	--	--	--	206	--	--	--	<0.001	0.078	--
05/25/81	Wamco #2451	--	--	--	188	--	--	--	<0.001	0.108	--
05/26/81	Wamco #2451	--	--	--	184	--	--	--	<0.001	0.087	--
05/27/81	Wamco #2449	458	0	140	184	0.018	<0.01	7.87	<0.001	0.070	--
05/28/81	Wamco #2457	--	--	--	194	--	--	--	<0.001	0.049	--
05/29/81	Wamco #2457	--	--	--	176	--	--	--	<0.001	0.065	--
05/30/81	Wamco #2457	--	--	--	188	--	--	--	<0.001	0.061	--
05/31/81	Wamco #2474	--	--	--	212	--	--	--	<0.001	0.059	--
06/01/81	Wamco #2474	--	--	--	164	--	--	--	<0.001	0.082	--
06/02/81	Wamco #2474	--	--	--	190	--	--	--	<0.001	0.085	--
06/03/81	Wamco #2471	--	--	--	188	--	--	--	<0.001	0.082	--
06/04/81	Wamco #2483	--	--	--	166	--	--	--	<0.001	0.072	--
06/05/81	Wamco #2483	--	--	--	190	--	--	--	<0.001	0.069	--
06/06/81	Wamco #2483	--	--	--	178	--	--	--	<0.001	0.065	--
06/07/81	Wamco #2486	--	--	--	172	--	--	--	<0.001	0.054	--
06/08/81	Wamco #2468	--	--	--	166	--	--	--	<0.001	0.063	--
06/09/81	Wamco #2492	--	--	--	166	--	--	--	<0.001	0.067	--
06/10/81	Chem. Lab. #37738	435	0	149	184	0.084	<0.01	7.80	<0.001	0.066	Pumping
06/11/81	Wamco #2501	--	--	--	168	--	--	--	<0.001	0.094	--
06/12/81	Wamco #2501	--	--	--	171	--	--	--	<0.001	0.090	--
06/13/81	Wamco #2501	--	--	--	174	--	--	--	<0.001	0.044	--
06/14/81	Wamco #2505	--	--	--	141	--	--	--	<0.001	0.056	--
06/15/81	Wamco #2505	--	--	--	153	--	--	--	<0.001	0.058	--
06/16/81	Wamco #2505	--	--	--	139	--	--	--	<0.001	0.068	--
06/17/81	Wamco #2505	--	--	--	130	--	--	--	<0.001	0.080	--
06/24/81	Wamco #2518	449	0	141	144	0.051	<0.01	7.90	--	--	Pumping
07/08/81	Wamco #2556	624	0	117	215	0.050	<0.01	7.66	--	--	48' 0"
07/11/81	Wamco #2570	433	--	--	220	--	--	--	<0.001	0.010	--
07/12/81	Wamco #2565	453	--	--	172	--	--	--	<0.001	0.070	--
07/13/81	Wamco #2565	456	--	--	166	--	--	--	<0.001	0.010	--
07/14/81	Wamco #2570	445	--	--	36	--	--	--	<0.001	0.010	--
07/15/81	Wamco #2572	368	--	--	166	--	--	--	<0.001	0.070	--
07/16/81	Wamco #2576	--	--	--	166	--	--	--	<0.001	0.035	--
07/17/81	Wamco #2585	--	--	--	172	--	--	--	<0.001	0.030	--
07/18/81	Wamco #2585	--	--	--	178	--	--	--	<0.001	0.034	--
07/19/81	Wamco #2585	--	--	--	178	--	--	--	<0.001	0.033	--
07/20/81	Wamco #2585	--	--	--	172	--	--	--	<0.001	0.029	--
07/21/81	Wamco #2586	--	--	--	206	--	--	--	<0.001	0.028	--
07/22/81	Wa. #2589	459	0	134	194	0.056	<0.01	7.77	<0.001	0.057	Pumping
07/23/81	Wamco #2595	--	--	--	184	--	--	--	<0.001	0.041	--
07/24/81	Wamco #2595	--	--	--	176	--	--	--	<0.001	0.055	--
07/25/81	Wamco #2595	--	--	--	188	--	--	--	<0.001	0.078	--
07/26/81	Wamco #2595	--	--	--	176	--	--	--	<0.001	0.076	--
07/27/81	Wamco #2597	--	--	--	184	--	--	--	<0.001	0.053	--
07/28/81	Wamco #2600	--	--	--	160	--	--	--	<0.001	0.057	--
07/29/81	Wamco #2600	--	--	--	148	--	--	--	<0.001	0.057	--
07/30/81	Wamco #2603	--	--	--	154	--	--	--	<0.001	0.017	--
07/31/81	Wamco #2611	--	--	--	154	--	--	--	<0.001	0.036	--
08/01/81	Wamco #2611	--	--	--	135	--	--	--	<0.001	0.150	--
08/02/81	Wamco #2611	--	--	--	112	--	--	--	<0.001	0.270	--
08/03/81	Wamco #2611	--	--	--	118	--	--	--	<0.001	0.585	--
08/05/81	Wamco #2623	365	0	149	148	0.074	<0.01	7.38	--	--	62' 0"
08/19/81	Wamco #2670	447	0	139	136	0.070	<0.01	7.94	--	--	48' 0"
09/02/81	Wamco #2704	399	0	137	168	0.066	<0.01	7.86	<0.001	0.064	72' 0"
09/16/81	Wamco #2746	609	0	115	256	0.090	<0.05	7.79	--	--	40' 3"
09/20/81	Wamco #2760 Confirmation Sample	646	--	--	278	--	--	--	<0.001	0.052	--
09/22/81	Wamco #2763	641	--	--	264	--	--	--	<0.001	0.044	--
09/23/81	Wamco #2763	632	--	--	264	--	--	--	<0.001	0.096	--
09/24/81	Wamco #2769	583	--	--	250	--	--	--	<0.001	0.040	--
09/25/81	Wamco #2776	626	--	--	270	--	--	--	<0.001	0.177	--

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Well Depth 475 Feet
 Distance from Well 172 Feet
 Formation Sample #1 Sand

Date	Remarks	Total Dissolved Solids- TDS mg/l	Car-bonate mg/l	Bicar-bonate mg/l	Sulfate mg/l	Uranium mg/l	(as N) Ammonia mg/l	pH	Arsenic mg/l	Selenium mg/l	Water Levels
09/26/81	Wamco #2776	595	--	--	250	--	--	--	< 0.001	0.100	--
09/27/81	Wamco #2776	619	--	--	264	--	--	--	< 0.001	0.080	--
09/28/81	Wamco #2776	616	--	--	264	--	--	--	< 0.001	0.124	--
09/29/81	Wamco #2776	668	0	117	292	0.078	< 0.05	7.63	< 0.001	0.096	31' 0"
09/30/81	Wamco #2780	621	--	--	306	--	--	--	< 0.001	0.108	--
10/01/81	Wamco #2787	695	--	--	335	--	--	--	< 0.001	0.076	--
10/02/81	Wamco #2784	659	--	--	250	--	--	--	< 0.001	0.480	--
10/03/81	Wamco #2791	659	--	--	256	--	--	--	< 0.001	0.160	--
10/04/81	Wamco #2791	666	--	--	264	--	--	--	< 0.001	0.320	--
10/05/81	Wamco #2791	591	--	--	236	--	--	--	< 0.001	0.230	--
10/07/81	Wamco #2798	619	--	--	250	--	--	--	< 0.001	0.260	--
10/08/81	Wamco #2802	577	--	--	256	--	--	--	< 0.001	0.280	--
10/09/81	Wamco #2802	606	--	--	222	--	--	--	< 0.001	0.290	--
10/10/81	Wamco #2802	581	--	--	230	--	--	--	< 0.001	0.250	--
10/11/81	Wamco #2802	570	--	--	222	--	--	--	< 0.001	0.180	--
10/12/81	Wamco #2811	638	--	--	222	--	--	--	< 0.001	0.110	--
10/13/81	Wamco #2811	680	0	73	222	0.065	< 0.05	7.43	< 0.001	0.100	44' 0"
10/14/81	Wamco #2810	658	--	--	272	--	--	--	< 0.001	0.110	--
10/15/81	Wamco #2815	659	--	--	272	--	--	--	< 0.001	0.240	--
10/16/81	Wamco #2824	639	--	--	250	--	--	--	< 0.001	0.424	--
10/17/81	Wamco #2824	638	--	--	256	--	--	--	< 0.001	0.440	--
10/18/81	Wamco #2824	686	--	--	292	--	--	--	< 0.001	0.414	--
10/19/81	Wamco #2824	711	--	--	278	--	--	--	< 0.001	0.376	--
10/20/81	Wamco #2812	696	--	--	278	--	--	--	< 0.001	0.336	--
10/21/81	Wamco #2838	591	--	--	214	--	--	--	< 0.001	0.296	--
10/22/81	Wamco #2838	709	--	--	272	--	--	--	< 0.001	0.240	--
10/23/81	Wamco #2843	686	--	--	272	--	--	--	< 0.001	0.222	--
10/24/81	Wamco #2843	798	--	--	286	--	--	--	< 0.001	0.306	--
10/25/81	Wamco #2843	697	--	--	286	--	--	--	< 0.001	0.120	--
10/26/81	Wamco #2843	928	--	--	244	--	--	7.83	< 0.001	0.650	31' 0"
10/27/81	Wamco #2854	707	0	107	266	0.054	< 0.10	--	0.004	0.330	--
10/28/81	Wamco #2845	686	--	--	278	--	--	--	< 0.001	0.520	--
10/29/81	Wamco #2847	484	--	--	166	--	--	--	< 0.001	0.300	--
10/30/81	Wamco #2850	725	--	--	266	--	--	--	< 0.001	0.310	--
10/31/81	Wamco #2850	468	--	--	130	--	--	--	< 0.001	0.410	--
11/01/81	Wamco #2850	453	--	--	138	--	--	7.90	< 0.001	0.410	61' 0"
11/02/81	Wamco #2850	458	0	136	122	0.076	< 0.10	7.64	--	0.290	61' 0"
11/11/81	Wamco #2879	383	0	138	153	0.070	< 0.10	7.82	< 0.001	0.290	55' 0"
11/25/81	Wamco #2895	400	0	138	152	0.039	< 0.10	8.00	--	--	68' 4"
12/09/81	Wamco #2917	450	0	156	174	0.125	< 0.10	7.93	--	--	52' 6"
12/23/81	Chem Lab #39493	547	0	129	172	0.096	< 0.05	8.14	--	--	174' 0"
01/06/82	Wamco #2972	490	0	130	192	0.008	< 0.05	8.16	--	--	Not Available
01/20/82	Wamco #2999	387	0	155	99	0.064	< 0.05	8.21	--	0.058	239' 0"
02/03/82	Wamco #3034	361	7	146	104	0.525	< 0.10	8.01	0.003	0.058	232' 0"
02/17/82	Wamco #3066	357	0	163	105	0.006	< 0.05	8.01	--	--	97' 0"
03/03/82	Wamco #3101	339	0	159	104	0.038	< 0.05	8.12	--	--	86' 0"
03/17/82	Wamco #3134	372	0	156	114	0.098	< 0.05	8.12	--	--	73' 0"
03/31/82	Wamco #3171	348	0	154	139	0.084	< 0.05	8.06	--	--	62' 8"
04/14/82	Wamco #3192	354	0	154	137	0.091	< 0.05	7.87	--	--	63' 8"
04/28/82	Wamco #3222	389	0	148	149	0.110	< 0.05	7.94	--	--	150' 0"
05/13/82	Wamco #3236	370	0	144	134	0.019	< 0.05	8.00	--	--	65' 0"
05/26/82	Wamco #3261	353	0	146	134	0.038	< 0.05	7.62	< 0.001	0.013	--
06/09/82	Wamco #3282	383	0	151	164	0.030	< 0.05	7.72	--	--	--
06/23/82	Wamco #3341										

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WAMCO LAB

P. O. Box 2953 - Casper, WY 82602

ANALYSIS REPORT

COMPANY: Cleveland Cliffs Iron Company

DATE: June 25, 1982

Sample type Monitor Wells - Dated 6-9-82

W. O. No. 3282

Analysis in Milligrams per Liter except where Noted
Limits of Detection are Noted Following Less Than Mark (<)

Monitor Well #	230	238	239	240	241
Total Diss. Solids	463	417	361	422	353
Sodium (Na)	117	91	84	105	87
Potassium (K)	9	9	7	7	7
Calcium (Ca)	23	28	27	27	27
Magnesium (Mg)	8	7	3	5	4
Sulfate (SO4)	244	178	134	167	137
Chloride (Cl)	8	22	8	20	13
Carbonate (CO3)	0	0	0	0	0
Bicarbonate (HCO3)	105	106	146	146	146
pH, Units	7.78	7.39	7.95	7.63	7.62
Conduct. uMhos/cm 25 C	635	550	500	570	510
Major Cations, Millieq.	7.13	6.17	5.43	6.51	5.64
Major Anions, Millieq.	7.03	6.06	5.41	6.42	5.61
Absolute Value, Chg. Bal.	0.71	0.90	0.18	0.70	0.27
Ammonia (NH3 as N)	<.05	<.05	<.05	<.05	<.05
Nitrate (NO3 as N)	0.16	0.17	0.10	<.05	<.05
Nitrite (NO2 as N)	<.001	0.50	0.011	0.039	<.001
Fluoride (F)	0.18	0.27	0.27	0.24	0.30
Total Alkalinity (CaCO3)	91	87	120	120	120
Total Hardness (CaCO3)	91	99	80	88	84
Boron (B)	0.32	0.31	0.30	0.24	0.26
Aluminum (Al)	<.10	<.10	<.10	<.10	<.10
Arsenic (As)	<.001	<.001	0.001	0.134	<.001
Barium (Ba)	<.10	<.10	<.10	<.10	<.10
Cadmium (Cd)	<.002	<.002	<.002	<.002	<.002
Chromium (Cr)	<.01	<.01	<.01	<.01	<.01
Copper (Cu)	<.01	<.01	<.01	<.01	<.01
Iron (Fe)	0.02	0.01	<.01	0.01	0.03
Lead (Pb)	<.05	<.05	<.05	<.05	<.05
Manganese (Mn)	0.06	<.01	0.01	0.03	0.02
Mercury (Hg)	<.0002	<.0002	<.0002	<.0002	<.0002
Nickel (Ni)	<.02	<.02	<.02	<.02	<.02
Selenium (Se)	<.001	0.104	<.001	<.001	0.013
Zinc (Zn)	<.005	<.005	<.005	<.005	<.005
Molybdenum (Mo)	<.10	<.10	<.10	<.10	<.10
Uranium (U308) PPB	<1	2300	17	6	38
Vanadium (V205)	<.10	<.10	<.10	<.10	<.10
Radium-226 pCi/L	0.8+-0.5	21+-2.5	14+-1.9	1.7+-0.7	4.2+-1.0

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WAMCO LAB

P. O. Box 2953 - Casper, WY 82602

ANALYSIS REPORT

COMPANY: Cleveland Cliffs Iron Company

DATE: June 25, 1982

Sample type Monitor Wells - Dated 6-9-82

W. O. No. 3282

Analysis in Milligrams per Liter except where Noted
Limits of Detection are Noted Following Less Than Mark (<)

Monitor Well #	298	250
Total Dissolved Solids	366	386
Sodium (Na)	87	
Potassium (K)	8	
Calcium (Ca)	28	
Magnesium (Mg)	4	
Sulfate (SO4)	133	164
Chloride (Cl)	9	
Carbonate (CO3)	0	0
Bicarbonate (HCO3)	154	146
Hydroxide (OH)		
pH, Units	7.84	7.86
Conductivity uMhos/cm 25 C	500	
Major Cations, Milliequiv.	5.71	
Major Anions, Milliequiv.	5.61	
Absolute Value, Charged Bal.	0.08	
Ammonia (NH3 as N)	<.05	<.05
Nitrate (NO3 as N)	<.05	
* Nitrite (NO2 as N)	0.034	
Fluoride (F)	0.30	
Total Alkalinity as CaCO3	130	
Total Hardness as CaCO3	87	
Boron (B)	0.12	
Aluminum (Al)	<.10	
Arsenic (As)	0.006	
Barium (Ba)	<.10	
Cadmium (Cd)	<.002	
Chromium (Cr)	<.01	
Copper (Cu)	<.01	
Iron (Fe)	0.08	
Lead (Pb)	<.05	
Manganese (Mn)	<.01	
Mercury (Hg)	<.0002	
Nickel (Ni)	<.02	
Selenium (Se)	0.002	
Zinc (Zn)	<.005	
Molybdenum (Mo)	<.10	
Uranium (U308) PPB	1700	19
Vanadium (V205)	<.10	
Radium-226 pCi/L +- Prec	112+-5.4	

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Surface Discharge

All information regarding surface discharge can be found in Exhibit 1, which is the quarterly discharge report. Table 8 contains the lab assay results from the June 9, 1982, injection grab sample. The injection grab sample from June 10, 1982, was analyzed for Thorium 230. The Thorium 230 level was 2.1 ± 0.3 pCi/l.

This concludes the report for the second quarter of 1982 as specified by Condition 29 of License SUA-1352.

Attachments: Figure 1
Exhibit A

DJW:ceg
Casper, Wyoming
July 21, 1982

CD5H

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WAMCO LAB

P. O. Box 2953 - Casper, WY 82602

ANALYSIS REPORT

COMPANY: Cleveland Cliffs Iron Company

DATE: July 9, 1982

Sample type Injection: 6-9-82

W. O. No. 3311

Analysis in Milligrams per Liter except where Noted
Limits of Detection are Noted Following Less Than Mark (<)

Sample No.	1
Total Dissolved Solids	823
Sodium (Na)	88
Potassium (K)	128
Calcium (Ca)	2
Magnesium (Mg)	2
Sulfate (SO ₄)	368
Chloride (Cl)	94
Carbonate (CO ₃)	222
Bicarbonate (HCO ₃)	0
Hydroxide (OH)	5
pH: Units	9.21
Conductivity uMhos/cm 25 C	1414
Major Cations, Milliequiv.	
Major Anions, Milliequiv.	Not
Absolute Value, Charged Bal.	Feasible
Ammonia (NH ₃ as N)	116
Nitrate (NO ₃ as N)	0.53
Nitrite (NO ₂ as N)	0.30
Fluoride (F)	0.42
Total Alkalinity as CaCO ₃	384
Total Hardness as CaCO ₃	13
Boron (B)	0.08
Aluminum (Al)	<.10
Arsenic (As)	0.036
Barium (Ba)	<.10
Cadmium (Cd)	<.002
Chromium (Cr)	<.01
Copper (Cu)	<.01
Iron (Fe)	<.01
Lead (Pb)	<.05
Manganese (Mn)	<.01
Mercury (Hg)	<.0002
Nickel (Ni)	<.02
Selenium (Se)	0.116
Zinc (Zn)	<.005
Molybdenum (Mo)	<.10
Uranium (U308) Mg/L	10.0
Vanadium (V205)	1.55
Radium-226 pCi/L +- Prec	29+-2.3

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04008714160E



Western Division

R. M. DeGabriele, General Manager, Western Operations
 R. M. Tuthill, Manager Uranium
 R. W. Riedel, Assistant to the General Manager
 E. D. Lindquist, Assistant Manager Special Projects

300 Country Club Road
 P.O. Box 3140
 Casper, Wyoming 82602-3140
 Phone: 307-234-9133

July 13, 1982

Mr. John Wagner
 Wyoming Department of Environmental Quality
 Water Quality Division
 1111 East Lincolnway
 Cheyenne, Wyoming 82002

Dear John:

Re: NPDES Permit No. Wy-0030783

During the second quarter of 1982, there were only four days of surface discharge. From June 8 through June 11, a total of 221,000 gallons of water were discharged. A new resin from Dow Chemical was placed on-line to implement radium 226 removal.

Surface discharge was discontinued on June 11 after noticing in-house lab results with elevated uranium ion concentrations. The lab assay for total uranium was 8.5 ppm in the June 9 grab sample sent to Wamco Laboratory. This concentration for total uranium is 2.5 ppm over our maximum allowable discharge concentration.

The new Dow Chemical resin did not effectively remove enough radium 226 to meet discharge limits. The July 9 grab sample showed the radium 226 concentration to be 29 ± 2.3 pCi/l. Further research is currently being done to further reduce the radium 226 concentration before resuming surface discharge. Lab assay results for radium 226 from the June 9 grab sample were not received until July 9. This letter is serving as an explanation to the quarterly discharge report and also as notification of noncompliance for exceeding total uranium and radium 226 maximum concentration discharge levels.

Sincerely,

CLEVELAND-CLIFFS

Donald J. Wodek
 Administrator of Health and Safety

DJW/ceg

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Mr. John Wagner

July 13, 1982

Page 2

0400 8714160E

CC: Mr. Roger Williams, Regional Administrator
U. S. Environmental Protection Agency
1860 Lincoln St., Suite 900
Denver, Colorado 80295

Mr. R. A. Scarano, Branch Chief
Uranium Recovery Division
Division of Waste Management
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Source Material License No. SUA-1352
Docket No. 040-08714

MJW

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20602

NAME THE CLEVELAND CLIFFS IRON CO.
 ADDRESS P. O. BOX 3140
 CASPER, WY
 82602
 FACILITY COLLINS DRAW R AND U IN-SITU
 LOCATION

WYD030783
 PERMIT NUMBER

001
 DISCHARGE NUMBER

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
82	04	01		82	06	30
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	X	(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUALITY OR CONCENTRATION (54-61)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
FLOW	SAMPLE MEASUREMENT	0.055	0.071	MGD	N/A	N/A	N/A	N/A		Daily	Inst
	PERMIT REQUIREMENT	N/A	N/A		N/A	N/A	N/A			1/7	INST
TOTAL SUSPENDED SOLIDS	SAMPLE MEASUREMENT	N/A	N/A	N/A	4	4	4	MG/L		1/7	Grab
	PERMIT REQUIREMENT	N/A	N/A		N/A	20	30			1/7	GRAB
TOTAL ZINC	SAMPLE MEASUREMENT	N/A	N/A	N/A	N/A	N/A	<0.005	MG/L		1/90	Grab
	PERMIT REQUIREMENT	N/A	N/A		N/A	.5	1.0			1/90	GRAB
DISS. RADIUM 226	SAMPLE MEASUREMENT	N/A	N/A	N/A	29	29	29	PC/L		1/30	Grab
	PERMIT REQUIREMENT	N/A	N/A		N/A	3	10			1/30	GRAB
TOTAL RADIUM 226	SAMPLE MEASUREMENT	N/A	N/A	N/A	-	-	-	PC/L		-	-
	PERMIT REQUIREMENT	N/A	N/A		N/A	10	30			NOT	RQ'D
TOTAL URANIUM	SAMPLE MEASUREMENT	N/A	N/A	N/A	8.5	8.5	8.5	MG/L		1/30	Grab
	PERMIT REQUIREMENT	N/A	N/A		N/A	2.0	4.0			1/30	GRAB
COD	SAMPLE MEASUREMENT	N/A	N/A	N/A	-	-	-	MG/L		-	-
	PERMIT REQUIREMENT	N/A	N/A		N/A	100	200			NOT	RQ'D

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
 Donald J. Wodek
 Adm. of Health + Safety
 TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE 18 USC § 1001 AND 33 USC § 1319. (Penalties under these statutes may include fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years.)

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
 Donald J. Wodek

TELEPHONE DATE
 307 234-9133 '82 7 13
 AREA CODE NUMBER YEAR MO DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) IN ADDITION TO THE DAILY MAXIMUM LIMITATION, ANALYSIS OF ANY SINGLE GRAB SAMPLE SHALL NOT EXCEED 150% OF THE DAILY MAXIMUM CONCENTRATION FOR TSS., DISS. RA. 226, T. RA. 226 AND T. URANIUM.

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20602

NAME THE CLEVELAND CLIFFS IRON CO.
 ADDRESS P. O. BOX 3140
 CASPER, WY
 82602
 FACILITY COLLINS DRAW R AND U IN-SITU
 LOCATION

WY0030783
 PERMIT NUMBER
 001
 DISCHARGE NUMBER

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
82	04	01	82	06	30
(20-21)	(22-23)	(24-25)	(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	X	(3 Card Only) (46-53) QUANTITY OR LOADING (54-61)			(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) (54-61)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAM. TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
PH		N/A	N/A	N/A	9.21	N/A	9.21	S.U.		1/90	Grab
		N/A	N/A		6.0	N/A	9.0			1/90	GRAB
OIL AND GREASE		N/A	N/A	N/A	-	-	-	MG/L		Cont.	VISL
		N/A	N/A		N/A	N/A	10			CONT	VISL

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NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Donald J. Wudek Adm. of Health + Safety TYPED OR PRINTED	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC § 1001 AND 33 USC § 1319. (Penalties under these statutes may include fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years.)	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>Donald J. Wudek</i>	TELEPHONE 307 234-9133	DATE 82 7 13
--	--	--	---------------------------	-----------------

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) IN ADDITION TO THE DAILY MAXIMUM LIMITATION, ANALYSIS OF AN SINGLE GRAB SAMPLE SHALL NOT EXCEED 150% OF THE DAILY MAXIMUM CONCENTRATION FOR TSS., DISS. RA. 226, T. RA. 226 AND T. URANIUM. 2 2

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