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REMEDIAL INVESTIGATION REPORT OPERABLE UNIT 2 VOLUME 3 OF 3 OCTOBER 1992

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REPORT

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REMEDIAL INVESTIGATION REPORT FOR OPERABLE UNIT 2

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

REMEDIAL INVESTIGATION and FEASIBILITY STUDY

VOLUME 3 OF 3
Appendices C - G

OCTOBER 1992

U. S. DEPARTMENT OF ENERGY
FERNALD FIELD OFFICE

DRAFT

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APPENDIX G

2A

APPENDIX C

SOLID WASTE LANDFILL DATA TABLES

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SOLID WASTE LANDFILL

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TABLE C-1

SURFACE MEDIA ANALYSES
ENVIRONMENTAL SURVEY
SOLID WASTE LANDFILL

TABLE C-1

ENVIRONMENTAL SURVEY
SOLID WASTE LANDFILL

Analyte (units)	FE0620SS	FE0621SS	FE0622SS	FE0623SS
Asbestos	ND	ND	ND	ND
TCLP Metals (mg/ℓ)				
Silver	<0.1	<0.1	<0.1	<0.1
Arsenic	<0.5	<0.5	<0.5	<0.5
Barium	0.63	0.91	0.54	0.58
Cadmium	<0.02	<0.02	<0.02	<0.02
Chromium	<0.03	<0.03	<0.03	<0.03
Mercury	<0.001	<0.001	<0.001	<0.001
Lead	<0.3	<0.3	<0.3	<0.3
Selenium	<0.5	<0.5	<0.5	<0.5
Volatile Organic Compounds (µg/kg)				
1,1,1-Tricloroethane	6.0	5.0	<5.0	NA
1,1,2,2-Tetrachloroethane	<5.0	<5.0	<5.0	NA
1,1,2-Trichloroethane	<5.0	<5.0	<5.0	NA
1,1-Dichloroethane	<5.0	<5.0	<5.0	NA
1,2-Dichloroethane	<5.0	<5.0	<5.0	NA
1,2-Dichloropropane	<5.0	<5.0	<5.0	NA
2-Butanone	<10.0	<10.0	<10.0	NA
2-Chloroethylvinyl Ether	<10.0	<10.0	<10.0	NA
2-Hexanone	<10.0	<10.0	<10.0	NA
4-Methyl-2-pentanone	<10.0	<10.0	<10.0	NA
Acetone	21.0(B)	12.0(B)	27.0(B)	NA
Benzene	<5.0	<5.0	<5.0	NA
Bromodichloromethane	<5.0	<5.0	<5.0	NA
Bromoform	<5.0	<5.0	<5.0	NA
Bromomethane	<10.0	<10.0	<10.0	NA
Carbon disulfide	<5.0	<5.0	<5.0	NA
Carbon tetrachloride	<5.0	<5.0	<5.0	NA
Chlorobenzene	<5.0	<5.0	<5.0	NA
Chloroethane	<10.0	<10.0	<10.0	NA
Chloroform	9.0	13.0	12.0	NA
Chloromethane	<10.0	<10.0	<10.0	NA
Cis-1,3-dichloropropene	<5.0	<5.0	<5.0	NA
Dibromiochloromethane	<5.0	<5.0	<5.0	NA
Ethyl benzene	<5.0	<5.0	<5.0	NA
Methylene chloride	16.0(B)	10.0(B)	8.0(B)	NA
Styrene	<5.0	<5.0	<5.0	NA
Tetrachloroethene	<5.0	<5.0	<5.0	NA
Toluene	3.0(BJ)	4.0(BJ)	4.0(BJ)	NA
Total Xylenes	<5.0	<5.0	<5.0	NA
Trans-1,2-Dichloroethene	<5.0	<5.0	<5.0	NA
Trans-1,3-Dichloropropene	<5.0	<5.0	<5.0	NA
Trichloroethene	<5.0	<5.0	<5.0	NA
Vinyl Acetate	<10.0	<10.0	<10.0	NA
Vinyl Chloride	<10.0	<10.0	<10.0	NA

TABLE C-1
(continued)

Analyte (unit)	FE0620SS	FE0621SS	FE0622SS	FE0623SS
PCBs (mg/kg)				
Aroclor-1242	<0.3	<0.3	<0.3	<0.3
Aroclor-1248	<0.4	<0.4	<0.4	<0.4
Aroclor-1254	<0.2	<0.2	<0.2	<0.2
Aroclor-1260	<0.3	<0.3	<0.3	<0.3
Radionuclides (pCi/g)				
Bismuth-214	0.88±0.4	2.2±0.1	0.83±0.09	0.69±0.03
Cesium-137	I	I	I	I
Radium-226	0.87±0.04	2.1±0.1(G)	0.83±0.07(G)	0.6±.03(G)
Thorium-228	1.0±0.1(G)	1.6±0.1(G)	1.3±0.1(G)	0.71±0.05(G)
Thorium-232	1.1±0.1(G)	1.2±0.1(G)	1.1±0.2(G)	0.8±0.7(G)
Total Uranium (mg/kg)	149.0	66.0	112.0	11.0
Uranium-235	0.89±0.01	N	1.2±0.1	0.69±0.04
Uranium-238	64±4	N	48±6	I

NA = Not Analyzed
N = Nuclide not identified by GAMANAL analysis as being present in the sample; no value reported.
I = Nuclide identified by GAMANAL analysis of sample spectrum, but values did not exceed room background at the 95% confidence level; no value reported.
B = Analyte was found in the blank as well as the sample.
J = Estimated value of compound present but less than the specified detection limit.
G = Gamma Spectroscopy Analysis.

TABLE C-2

SURFACE MEDIA ANALYSES
CHARACTERIZATION INVESTIGATION STUDY
SOLID WASTE LANDFILL

NOTES:

- CIS data not applicable to the OU2 waste unit have been shaded

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	* RADIONUCLIDE	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
36	FMP-SD-36-006	1378600.61	481369.83	.00	.50	531.0	TH-232	=	.30	.10
	FMP-SD-36-006	1378600.61	481369.83	.00	.50	531.0	U-234	=	126.00	3.00
	FMP-SD-36-006	1378600.61	481369.83	.00	.50	531.0	U-235	=	33.00	2.00
	FMP-SD-36-006	1378600.61	481369.83	.00	.50	531.0	U-238	=	696.00	7.00
45	FMP-SS-45-014S	.00	.00	.00	.50	588.0	CS-137	=	.30	.10
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	NP-237	<	.10	
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	PB-210	=		
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	PU-238	<	.10	
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	PU-239/240	<	.10	
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	RA-226	=	.63	.25
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	RA-228	=		
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	RU-106	<	.20	
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	SR-90	=	.50	.30
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	TC-99	<	.20	
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	TH-228	=		
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	TH-230	=	.80	.20
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	TH-232	=		
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	U-234	=	.90	.10
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	U-235	=	.10	.02
	FMP-SS-45-014S	.00	.00	.00	.50	588.0	U-238	=	.70	.10
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	CS-137	=	.40	.10
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	NP-237	<	.10	
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	PB-210	=		
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	PU-238	<	.10	
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	PU-239/240	<	.10	
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	RA-226	=	.94	.13
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	RA-228	=		
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	RU-106	<	.30	
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	SR-90	=	.40	.20
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	TC-99	<	.20	
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	TH-228	=		
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	TH-230	=	.90	.30
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	TH-232	=		
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	U-234	=	.70	.20
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	U-235	=	.10	.03
	FMP-SS-45-015S	.00	.00	.00	.50	524.0	U-238	=	.90	.20
46	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	CS-137	<	.20	
	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	NP-237	<	.10	
	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	PB-210	=		
	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	PU-238	<	.10	
	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	PU-239/240	<	.10	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
46	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	RA-226	=	.89	.63
	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	RA-228	=		
	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	RU-106	<	3.00	
	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	SR-90	<	.50	
	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	TC-99	<	1.60	
	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	TH-228	=	1.30	.30
	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	TH-230	=	8.90	.70
	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	TH-232	=	1.00	.30
	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	U-234	=	183.00	3.00
	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	U-235	=	17.00	1.00
	FMP-SL-46-238	1379710.97	482098.72	.50	1.00	575.0	U-238	=	330.00	5.00
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	CS-137	<	.20	
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	NP-237	<	.10	
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	PB-210	=		
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	PU-238	<	.10	
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	PU-239/240	<	.10	
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	RA-226	=	1.15	.77
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	RA-228	=		
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	RU-106	<	2.00	
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	SR-90	<	.50	
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	TC-99	<	1.50	
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	TH-228	=	1.00	.20
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	TH-230	=	14.00	1.00
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	TH-232	=	.80	.20
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	U-234	=	58.00	2.00
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	U-235	=	5.80	.70
	FMP-SL-46-242	1379151.60	481763.90	1.00	1.50	602.0	U-238	=	386.00	6.00
	FMP-SL-46-261	1378234.15	481138.77	1.00	1.50	472.0	CS-137	<	1.00	
	FMP-SL-46-261	1378234.15	481138.77	1.00	1.50	472.0	NP-237	=	4.60	1.00
	FMP-SL-46-261	1378234.15	481138.77	1.00	1.50	472.0	PB-210	=		
	FMP-SL-46-261	1378234.15	481138.77	1.00	1.50	472.0	PU-238	=	34.00	2.00
	FMP-SL-46-261	1378234.15	481138.77	1.00	1.50	472.0	PU-239/240	=	8.60	.80
	FMP-SL-46-261	1378234.15	481138.77	1.00	1.50	472.0	RA-226	=	19.49	5.75
	FMP-SL-46-261	1378234.15	481138.77	1.00	1.50	472.0	RA-228	=		
	FMP-SL-46-261	1378234.15	481138.77	1.00	1.50	472.0	RU-106	<	9.00	
	FMP-SL-46-261	1378234.15	481138.77	1.00	1.50	472.0	SR-90	<	.60	
	FMP-SL-46-261	1378234.15	481138.77	1.00	1.50	472.0	TC-99	=	1540.00	100.00
	FMP-SL-46-261	1378234.15	481138.77	1.00	1.50	472.0	TH-228	=	61.00	2.00
	FMP-SL-46-261	1378234.15	481138.77	1.00	1.50	472.0	TH-230	=	31.00	2.00
	FMP-SL-46-261	1378234.15	481138.77	1.00	1.50	472.0	TH-232	=	52.00	3.00
	FMP-SL-46-261	1378234.15	481138.77	1.00	1.50	472.0	U-234	=	780.00	20.00

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	* RADIONUCLIDE	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
46	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	CS-137	=	1.90	.50
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	NP-237	<	.10	
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	PB-210	=		
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	PU-238	<	.20	
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	PU-239/240	<	.10	
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	RA-226	=	2.91	.81
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	RA-228	=		
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	RU-106	<	2.00	
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	SR-90	<	.50	
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	TC-99	<	3.00	
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	TH-228	=	4.20	.30
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	TH-230	=	14.00	1.00
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	TH-232	=	2.00	.20
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	U-234	=	54.00	3.00
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	U-235	=	5.00	1.00
	FMP-SS-46-344	1380014.80	482234.46	.00	.16	533.0	U-238	=	292.00	8.00
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	CS-137	=	.30	.20
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	NP-237	<	.20	
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	PB-210	=		
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	PU-238	<	.10	
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	PU-239/240	<	.10	
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	RA-226	=	1.09	.62
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	RA-228	=		
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	RU-106	<	2.00	
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	SR-90	<	.80	
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	TC-99	<	2.10	
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	TH-228	=	1.70	.30
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	TH-230	=	3.30	.50
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	TH-232	=	1.60	.30
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	U-234	=	45.00	1.00
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	U-235	=	3.30	.40
	FMP-SS-46-348	1379672.65	482306.85	.00	.16	568.0	U-238	=	151.00	2.00
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	CS-137	<	.60	
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	NP-237	<	.20	
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	PB-210	=		
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	PU-238	=	1.00	.20
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	PU-239/240	=	.50	.20
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	RA-226	<	2.77	
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	RA-228	=		
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	RU-106	<	4.00	
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	SR-90	<	.60	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

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Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
46	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	TC-99	=	12.00	1.00
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	TH-228	=	1.90	.40
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	TH-230	=	7.10	.80
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	TH-232	=	1.40	.40
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	U-234	=	141.00	7.00
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	U-235	=	14.00	2.00
	FMP-SS-46-349	1379679.82	482349.67	.00	.16	709.0	U-238	=	983.00	18.00
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	CS-137	=	.80	.30
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	NP-237	<	.30	
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	PB-210	=		
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	PU-238	<	.20	
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	PU-239/240	<	.20	
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	RA-226	=	1.05	.45
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	RA-228	=		
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	RU-106	<	2.00	
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	SR-90	<	.80	
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	TC-99	<	2.00	
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	TH-228	=	1.70	.50
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	TH-230	=	7.40	.90
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	TH-232	=	1.40	.40
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	U-234	=	28.00	1.00
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	U-235	=	1.70	.20
	FMP-SS-46-358	1379488.47	481973.76	.00	.16	589.0	U-238	=	95.00	1.00
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	CS-137	<	.50	
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	NP-237	<	.40	
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	PB-210	=		
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	PU-238	=	4.10	.30
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	PU-239/240	=	.60	.10
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	RA-226	<	2.97	
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	RA-228	=		
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	RU-106	<	3.00	
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	SR-90	<	.80	
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	TC-99	<	3.00	
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	TH-228	=	35.00	2.00
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	TH-230	=	17.00	1.00
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	TH-232	=	38.00	2.00
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	U-234	=	35.00	1.00
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	U-235	=	1.70	.20
	FMP-SS-46-360	1379600.59	481976.70	.00	.16	846.0	U-238	=	45.00	1.00
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	CS-137	=	1.10	.40
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	NP-237	<	.30	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
46	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	PB-210	=		
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	PU-238	<	.20	
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	PU-239/240	<	.20	
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	RA-226	=	2.79	1.32
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	RA-228	=		
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	RU-106	<	2.00	
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	SR-90	<	.50	
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	TC-99	<	1.00	
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	TH-228	=	3.40	.40
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	TH-230	=	6.40	.50
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	TH-232	=	1.50	.30
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	U-234	=	57.00	2.00
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	U-235	=	4.70	.50
	FMP-SS-46-362	1379771.77	482054.04	.00	.16	476.0	U-238	=	304.00	4.00
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	CS-137	<	.30	
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	NP-237	<	.40	
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	PB-210	=		
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	PU-238	<	.20	
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	PU-239/240	<	.30	
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	RA-226	=	2.39	.80
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	RA-228	=		
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	RU-106	<	2.00	
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	SR-90	=	1.40	.50
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	TC-99	=	93.00	2.00
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	TH-228	=	3.70	.70
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	TH-230	=	58.00	3.00
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	TH-232	=	2.80	.60
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	U-234	=	298.00	3.00
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	U-235	=	18.00	1.00
	FMP-SS-46-364	1379664.31	481855.91	.00	.16	761.6	U-238	=	294.00	3.00
	FMP-SS-46-370	1379806.50	481714.96	.00	.16	573.0	CS-137	<	.20	
	FMP-SS-46-370	1379806.50	481714.96	.00	.16	573.0	NP-237	<	.10	
	FMP-SS-46-370	1379806.50	481714.96	.00	.16	573.0	PB-210	=		
	FMP-SS-46-370	1379806.50	481714.96	.00	.16	573.0	PU-238	=	3.30	.60
	FMP-SS-46-370	1379806.50	481714.96	.00	.16	573.0	PU-239/240	=	.10	.10
	FMP-SS-46-370	1379806.50	481714.96	.00	.16	573.0	RA-226	=	1.02	.64
	FMP-SS-46-370	1379806.50	481714.96	.00	.16	573.0	RA-228	=		
	FMP-SS-46-370	1379806.50	481714.96	.00	.16	573.0	RU-106	<	2.00	
	FMP-SS-46-370	1379806.50	481714.96	.00	.16	573.0	SR-90	=	1.70	.60
	FMP-SS-46-370	1379806.50	481714.96	.00	.16	573.0	TC-99	<	2.40	
	FMP-SS-46-370	1379806.50	481714.96	.00	.16	573.0	TH-228	=	11.00	1.00

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

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TABLE C-3

SURFACE MEDIA ANALYSES
RI/FS SAMPLING PROGRAM
SOLID WASTE LANDFILL

SOLID WASTE LANDFILL
SURFACE MEDIA RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	N 482300.1 E 1379552.5 005668 0 - 2	N 482300.1 E 1379552.5 005669 2 - 4	N 482300.1 E 1379552.5 005670 4 - 6
Actinium 231	NA	NA	NA
Cesium 137	NA	0.6 ± 0.2	0.5 ± 0.1
Lead 210	NA	NA	NA
Neptunium 237	NA	< 0.6	< 0.6
Plutonium 210	NA	NA	NA
Plutonium 238	NA	< 0.6	< 0.6
Plutonium 239/240	NA	< 0.6	< 0.6
Protactium 234	NA	NA	NA
Radium 224	NA	NA	NA
Radium 226	NA	3.6 ± 0.4	1.1 ± 0.1
Radium 228	NA	45.5 ± 2.9	2.7 ± 0.3
Ruthenium 106	NA	< 3.2	< 1.0
Strontium 90	NA	< 0.5	< 0.5
Technetium 99	NA	< 0.9	< 0.9
Thorium 228	NA	17.5 ± 2.2	2.4 ± 0.4
Thorium 230	NA	20.6 ± 2.5	2.4 ± 0.4
Thorium 232	NA	9.2 ± 1.2	1.0 ± 0.2
Total Thorium **	NA	NA	NA
Uranium 234	31.1 ± 7.4	40.2 ± 6.2	25.0 ± 4.2
Uranium 235/236	4.5 ± 1.4	4.6 ± 1.5	2.4 ± 0.7
Uranium 238	173.0 ± 39.0	228.0 ± 29.0	133.0 ± 21.0
Total Uranium **	NA	1180.0 ± 119.0	368.0 ± 38.0

** Results reported in mg/kg

- = Sample has not been validated

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TABLE C-4

SUBSURFACE MEDIA ANALYSES
TEST PIT SAMPLES
ENVIRONMENTAL SURVEY
SOLID WASTE LANDFILL

TABLE C-4

SUBSURFACE MEDIA ANALYSIS
ENVIRONMENTAL SURVEY
SOLID WASTE LANDFILL

Analyte	1015IS1B Depth 3.5 ft.	1015IS2B Depth 6.5 ft.
TCLP Metals (mg/ℓ)		
Arsenic	<0.5	<0.5
Barium	0.54(B)	0.86(B)
Cadmium	<0.02	<0.02
Chromium	<0.03	<0.03
Lead	<0.3	<0.3
Mercury	<0.001	<0.001
Selenium	<0.5	<0.5
Silver	<0.1	<0.1
Radionuclides		
Bismuth-214	0.78±0.05	0.93±0.06
Cesium-137	0.14±0.02	I
Radium-226	0.79±0.04	0.9±0.04
Thorium-228	0.97±0.07	0.97±0.06
Thorium-232	0.72±0.09	0.94±0.08
Uranium-235	0.72±0.01	0.41±0.01
Uranium-238	99±5	64±4
Total Uranium (mg/kg)	228.0	250.0

B = Analyte was detected in the blank as well as the sample.
I = Nuclide identified by GAMANAL analysis of sample spectrum, but values did not exceed room background at the 95% confidence level; no value reported.

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TABLE C-5

SUBSURFACE MEDIA ANALYSES FOR RADIONUCLIDES
BORING PROFILE SAMPLES
CHARACTERIZATION INVESTIGATION STUDY
SOLID WASTE LANDFILL

Mon Nov 23

Activity Concentrations Of Sanitary Landfill Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
49-01	.00	1.00	RA-226	=	1.80	.40
	.00	1.00	TH-232	=	1.00	.60
	.00	1.00	U-238	=	18.20	3.60
	1.00	2.00	RA-226	<	.60	
	1.00	2.00	TH-232	=	.70	.50
	1.00	2.00	U-238	=	6.70	3.50
	2.00	4.00	RA-226	=	.80	.50
	2.00	4.00	TH-232	<	5.30	
	2.00	4.00	U-238	=	6.10	3.90
	4.00	6.00	RA-226	=	4.60	.70
	4.00	6.00	TH-232	=	1.90	.70
	4.00	6.00	U-238	=	35.10	5.80
	6.00	7.00	RA-226	<	1.50	
	6.00	7.00	TH-232	<	2.20	
	6.00	7.00	U-238	=	9.30	4.00
	7.00	8.00	RA-226	=	.60	.20
	7.00	8.00	TH-232	<	.30	
	7.00	8.00	U-238	<	7.30	
	10.00	12.00	RA-226	<	1.00	
	10.00	12.00	TH-232	=	1.20	.50
	10.00	12.00	U-238	<	6.10	
	12.00	13.00	RA-226	<	.60	
	12.00	13.00	TH-232	=	1.00	.60
	12.00	13.00	U-238	=	8.10	5.60
	13.00	14.00	RA-226	=	.90	.40
	13.00	14.00	TH-232	<	2.60	
	13.00	14.00	U-238	<	11.30	
	14.00	16.00	RA-226	<	1.00	
	14.00	16.00	TH-232	=	.80	.60
	14.00	16.00	U-238	<	15.50	
	16.00	17.00	RA-226	=	.90	.30
	16.00	17.00	TH-232	<	.30	
	16.00	17.00	U-238	<	5.00	
	17.00	18.00	RA-226	=	.90	.40
	17.00	18.00	TH-232	=	.70	.30
	17.00	18.00	U-238	<	10.50	
49-02	.00	1.00	RA-226	<	.90	
	.00	1.00	TH-232	=	2.00	.60
	.00	1.00	U-238	=	15.40	3.60

Mon Nov 23

Activity Concentrations Of Sanitary Landfill Profile Samplee

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
49-02	1.00	2.00	RA-226	<	1.10	
	1.00	2.00	TH-232	=	1.00	.50
	1.00	2.00	U-238	=	4.90	2.60
	2.00	3.00	RA-226	=	.70	.50
	2.00	3.00	TH-232	=	1.30	.50
	2.00	3.00	U-238	=	7.10	2.60
	3.00	4.00	RA-226	=	.70	.30
	3.00	4.00	TH-232	<	4.70	
	3.00	4.00	U-238	<	9.60	
	4.00	5.00	RA-226	=	.70	.60
	4.00	5.00	TH-232	<	3.20	
	4.00	5.00	U-238	=	3.50	2.40
	5.00	6.00	RA-226	=	.60	.30
	5.00	6.00	TH-232	<	.30	
	5.00	6.00	U-238	<	9.20	
	6.00	8.00	RA-226	=	.90	.40
	6.00	8.00	TH-232	=	1.00	.50
	6.00	8.00	U-238	=	5.30	2.60
	8.00	9.00	RA-226	=	.90	.50
	8.00	9.00	TH-232	=	1.00	.40
	8.00	9.00	U-238	<	12.70	
	9.00	10.00	RA-226	=	.70	.50
	9.00	10.00	TH-232	=	1.10	.50
	9.00	10.00	U-238	<	12.60	
	10.00	11.00	RA-226	=	1.10	.40
	10.00	11.00	TH-232	=	1.00	.60
	10.00	11.00	U-238	<	8.30	
	11.00	12.00	RA-226	=	1.40	.50
	11.00	12.00	TH-232	=	1.60	.60
	11.00	12.00	U-238	=	4.30	2.40
49-03	.00	2.00	RA-226	<	.20	
	.00	2.00	TH-232	=	2.40	.80
	.00	2.00	U-238	=	19.30	7.50
	2.00	4.00	RA-226	<	.70	
	2.00	4.00	TH-232	=	1.20	.50
	2.00	4.00	U-238	=	6.10	3.10
	4.00	5.00	RA-226	=	.70	.40
	4.00	5.00	TH-232	<	3.50	
	4.00	5.00	U-238	=	4.40	3.80

Mon Nov 23

Activity Concentrations Of Sanitary Landfill Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
49-03	5.00	6.00	RA-226	=	1.00	.40
	5.00	6.00	TH-232	=	1.30	.40
	5.00	6.00	U-238	=	13.70	4.00
	6.00	8.00	RA-226	<	5.20	
	6.00	8.00	TH-232	=	79.70	4.00
	6.00	8.00	U-238	=	338.00	226.00
	8.00	10.00	RA-226	<	1.90	
	8.00	10.00	TH-232	=	17.10	2.90
	8.00	10.00	U-238	=	146.00	16.00
	10.00	12.00	RA-226	<	2.00	
	10.00	12.00	TH-232	=	12.80	1.50
	10.00	12.00	U-238	=	198.00	16.00
	12.00	13.00	RA-226	<	1.40	
	12.00	13.00	TH-232	=	3.10	.90
	12.00	13.00	U-238	=	48.90	7.10
	13.00	14.00	RA-226	<	1.70	
	13.00	14.00	TH-232	<	.40	
	13.00	14.00	U-238	=	9.20	2.80
	14.00	15.00	RA-226	<	.80	
	14.00	15.00	TH-232	=	.60	.40
	14.00	15.00	U-238	<	7.00	
	15.00	16.00	RA-226	=	.80	.40
	15.00	16.00	TH-232	=	1.10	.50
	15.00	16.00	U-238	=	6.30	2.60
49-04	.00	2.00	RA-226	=	.50	.30
	.00	2.00	TH-232	<	.30	
	.00	2.00	U-238	<	4.60	
	2.00	3.00	RA-226	=	1.00	.50
	2.00	3.00	TH-232	<	.30	
	2.00	3.00	U-238	<	10.30	
	3.00	4.00	RA-226	=	.90	.40
	3.00	4.00	TH-232	=	1.00	.50
	3.00	4.00	U-238	<	9.30	
	4.00	5.00	RA-226	<	1.50	
	4.00	5.00	TH-232	<	.30	
	4.00	5.00	U-238	<	4.70	
	5.00	6.00	RA-226	=	1.10	.60
	5.00	6.00	TH-232	=	1.00	.50
	5.00	6.00	U-238	<	8.60	

Mon Nov 23

Activity Concentrations Of Sanitary Landfill Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
49-04	6.00	8.00	RA-226	<	.70	
	6.00	8.00	TH-232	<	.30	
	6.00	8.00	U-238	<	5.30	
49-05	.00	2.00	RA-226	=	.80	.50
	.00	2.00	TH-232	=	1.60	.40
	.00	2.00	U-238	=	5.90	2.40
	2.00	3.00	RA-226	=	.70	.50
	2.00	3.00	TH-232	=	1.20	.50
	2.00	3.00	U-238	=	9.40	2.70
	3.00	4.00	RA-226	<	.50	
	3.00	4.00	TH-232	<	2.30	
	3.00	4.00	U-238	=	4.20	2.10
	4.00	5.00	RA-226	=	.60	.40
	4.00	5.00	TH-232	=	1.10	.70
	4.00	5.00	U-238	=	14.80	3.50
	5.00	6.00	RA-226	=	.70	.50
	5.00	6.00	TH-232	=	.80	.30
	5.00	6.00	U-238	<	7.70	
	6.00	7.00	RA-226	<	.10	
	6.00	7.00	TH-232	=	1.20	.30
	6.00	7.00	U-238	<	8.10	
	7.00	8.00	RA-226	<	.90	
	7.00	8.00	TH-232	<	1.40	
	7.00	8.00	U-238	<	10.60	
	8.00	9.00	RA-226	=	.90	.30
	8.00	9.00	TH-232	<	.30	
	8.00	9.00	U-238	<	9.80	
	9.00	10.00	RA-226	=	.40	.30
	9.00	10.00	TH-232	=	1.30	.40
	9.00	10.00	U-238	<	3.90	
	10.00	11.00	RA-226	=	.60	.40
	10.00	11.00	TH-232	=	.80	.30
	10.00	11.00	U-238	=	3.20	2.60
	11.00	12.00	RA-226	=	.60	.40
	11.00	12.00	TH-232	=	.60	.40
	11.00	12.00	U-238	<	10.40	
	13.00	14.00	RA-226	<	1.80	
	13.00	14.00	TH-232	<	1.40	
	13.00	14.00	U-238	=	11.30	2.00

Mon Nov 23

Activity Concentrations Of Sanitary Landfill Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
49-06	.00	1.00	RA-226	<	1.60	
	.00	1.00	TH-232	=	1.00	.40
	.00	1.00	U-238	=	13.90	4.80
	1.00	2.00	RA-226	<	2.50	
	1.00	2.00	TH-232	=	1.20	.80
	1.00	2.00	U-238	=	8.80	4.80
	4.00	6.00	RA-226	<	1.80	
	4.00	6.00	TH-232	=	.80	.50
	4.00	6.00	U-238	=	8.20	3.70
	6.00	7.00	RA-226	=	.70	.40
	6.00	7.00	TH-232	<	4.30	
	6.00	7.00	U-238	<	7.50	
	7.00	8.00	RA-226	=	.80	.40
	7.00	8.00	TH-232	=	1.20	.60
	7.00	8.00	U-238	<	8.30	
	10.00	11.00	RA-226	<	2.80	
	10.00	11.00	TH-232	<	4.10	
	10.00	11.00	U-238	<	8.10	
	11.00	12.00	RA-226	<	.20	
	11.00	12.00	TH-232	=	1.10	.60
	11.00	12.00	U-238	<	13.20	
	12.00	13.00	RA-226	<	.90	
	12.00	13.00	TH-232	=	.70	.40
	12.00	13.00	U-238	=	3.80	2.00
	13.00	14.00	RA-226	=	.60	.40
	13.00	14.00	TH-232	=	.80	.40
	13.00	14.00	U-238	<	6.60	
	14.00	15.00	RA-226	=	.80	.50
	14.00	15.00	TH-232	<	6.00	
	14.00	15.00	U-238	=	3.30	2.70
	15.00	16.00	RA-226	<	1.30	
	15.00	16.00	TH-232	<	3.20	
	15.00	16.00	U-238	<	5.70	
	16.00	17.00	RA-226	<	.80	
	16.00	17.00	TH-232	<	.40	
	16.00	17.00	U-238	<	16.10	
	17.00	18.00	RA-226	=	.80	.50
	17.00	18.00	TH-232	<	.40	
	17.00	18.00	U-238	<	12.30	

195 records selected.

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TABLE C-6

SUBSURFACE MEDIA ANALYSES
BORING COMPOSITE SAMPLES
CHARACTERIZATION INVESTIGATION STUDY
SOLID WASTE LANDFILL

NOTES:

- Only positive detections are presented for organic and inorganic constituents. Non-detected analytes were not presented in the Characterization Investigation Study.
- Qualifiers given for CIS data are laboratory qualifiers. Validation of CIS data has not been completed.
- CIS data not applicable to the OU2 waste unit have been shaded.

Mon Nov 23

Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
48-02	PU-239/240	<	.05	
	RA-226	<	2.50	
	RA-228	=	NOT ANALYZED	
	RU-106	<	5.00	
	SR-90	<	.50	
	TC-99	<	.40	
	TH-228	=	.10	.10
	TH-230	=	1.10	.20
	TH-232	=	.10	.10
	U-234	=	1.80	.30
	U-235	=	.10	.10
	U-238	=	2.80	.30
48-03	CS-137	<	.50	
	NP-237	<	.03	
	PB-210	=	NOT ANALYZED	
	PU-238	<	.05	
	PU-239/240	<	.05	
	RA-226	<	1.10	
	RA-228	=	NOT ANALYZED	
	RU-106	<	5.00	
	SR-90	<	.50	
	TC-99	<	.30	
	TH-228	=	.20	.20
	TH-230	=	.90	.20
	TH-232	=	.20	.10
	U-234	=	2.00	.30
	U-235	=	.10	.10
	U-238	=	2.70	.30
49-01	CS-137	<	.30	
	NP-237	<	.30	
	PB-210	=	NOT ANALYZED	
	PU-238	<	.10	
	PU-239/240	<	.10	
	RA-226	=	1.00	.40
	RA-228	=	NOT ANALYZED	
	RU-106	<	2.00	
	SR-90	<	.70	

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations

(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

Mon Nov 23

Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
49-01	TC-99	=		
	TH-228	<	.10	
	TH-230	=	.10	.10
	TH-232	<	.10	
	U-234	=	9.30	.50
	U-235	=	.50	.10
	U-238	=	16.00	1.00
49-02	CS-137	<	.20	
	NP-237	<	.20	
	PB-210	=	NOT ANALYZED	
	PU-238	=	.10	.10
	PU-239/240	<	.10	
	RA-226	=	1.00	.50
	RA-228	=	NOT ANALYZED	
	RU-106	<	1.00	
	SR-90	<	.30	
	TC-99	=		
	TH-228	<	.10	
	TH-230	=	.10	.10
	TH-232	<	.10	
	U-234	=	8.50	.40
	U-235	=	.40	.10
	U-238	=	13.00	1.00
49-03	CS-137	<	.20	
	NP-237	<	.10	
	PB-210	=	NOT ANALYZED	
	PU-238	<	.10	
	PU-239/240	<	.10	
	RA-226	=	1.00	.50
	RA-228	=	NOT ANALYZED	
	RU-106	<	1.00	
	SR-90	<	.40	
	TC-99	<	.60	
	TH-228	<	.10	
	TH-230	=	.10	.10
	TH-232	<	.10	
	U-234	=	28.00	1.00

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations

(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

Mon Nov 23

Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
49-03	U-235	=	1.40	.20
	U-238	=	35.00	1.00
49-04	CS-137	<	.20	
	NP-237	<	.10	
	PB-210	=	NOT ANALYZED	
	PU-238	<	.10	
	PU-239/240	<	.10	
	RA-226	=	.80	.30
	RA-228	=	NOT ANALYZED	
	RU-106	<	1.00	
	SR-90	<	.50	
	TC-99	<	.40	
	TH-228	<	.10	
	TH-230	<	.10	
	TH-232	<	.10	
	U-234	=	4.90	.40
	U-235	=	.40	.10
	U-238	=	12.00	1.00
49-05	CS-137	<	.30	
	NP-237	<	.10	
	PB-210	=	NOT ANALYZED	
	PU-238	<	.10	
	PU-239/240	<	.10	
	RA-226	=	.50	.40
	RA-228	=	NOT ANALYZED	
	RU-106	<	2.00	
	SR-90	<	.30	
	TC-99	<	.60	
	TH-228	<	.10	
	TH-230	=	.10	.10
	TH-232	<	.10	
	U-234	=	6.40	.40
	U-235	=	.40	.10
	U-238	=	13.00	1.00
49-06	CS-137	<	.20	

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations
(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

Mon Nov 23

Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
49-06	NP-237	<	.20	
	PB-210	=	NOT ANALYZED	
	PU-238	<	.10	
	PU-239/240	<	.10	
	RA-226	=	.80	.20
	RA-228	=	NOT ANALYZED	
	RU-106	<	1.00	
	SR-90	<	.40	
	TC-99	<	4.00	
	TH-228	<	.10	
	TH-230	=	.20	.10
	TH-232	<	.10	
	U-234	=	8.40	.50
	U-235	=	.60	.10
	U-238	=	30.00	1.00

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations
(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

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Sanitary Landfill Organic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure	Qualifier
49-01	FMP-PS-49-001	8704-286-0060	ACENAPHTHENE	1300.00	UG/KG	
			BUTYL BENZYL PHTHALATE	320.00	UG/KG	J
			BENZO(B)FLUORANTHENE	6700.00	UG/KG	
			ANTHRACENE	2700.00	UG/KG	
			DIBENZO(A,H)ANTHRACENE	2100.00	UG/KG	
			ACETONE	190.00	UG/KG	J*
			BENZO(A)PYRENE	7000.00	UG/KG	
			FLUORENE	1400.00	UG/KG	
			2-METHYLNAPHTHALENE	66.00	UG/KG	
			BENZO(G,H,I)PERYLENE	6000.00	UG/KG	
			DIBENZOFURAN	620.00	UG/KG	
			INDENO(1,2,3-CD)PYRENE	5700.00	UG/KG	
			BENZO(K)FLUORANTHENE	4000.00	UG/KG	
			DI-N-BUTYL PHTHALATE	55.00	UG/KG	J*
			DI-N-OCTYL PHTHALATE	350.00	UG/KG	J*
			AROCLOR-1248	180.00	UG/KG	J
49-02	FMP-PS-49-018	8705-305-0010	BENZO(A)PYRENE	100.00	UG/KG	J
			NAPHTHALENE	19000.00	UG/KG	
			ACETONE	210.00	UG/KG	J*
			PYRENE	240.00	UG/KG	J
			FLUORANTHENE	330.00	UG/KG	J
			BENZO(A)ANTHRACENE	130.00	UG/KG	J
			BENZO(K)FLUORANTHENE	84.00	UG/KG	J
			BENZO(B)FLUORANTHENE	98.00	UG/KG	J
			AROCLOR-1242	260.00	UG/KG	
			PHENANTHRENE	320.00	UG/KG	J
			METHYLENE CHLORIDE	160.00	UG/KG	J*
			2-METHYLNAPHTHALENE	11000.00	UG/KG	
49-03	FMP-PS-49-032	8705-305-0020	METHYLENE CHLORIDE	84.00	UG/KG	J*
			TOTAL XYLENES	320.00	UG/KG	
			DIBENZOFURAN	1900.00	UG/KG	
			ACENAPHTHENE	28000.00	UG/KG	
			BENZO(G,H,I)PERYLENE	4300.00	UG/KG	
			CHRYSENE	4600.00	UG/KG	
			ACETONE	130.00	UG/KG	J*
			BENZO(K)FLUORANTHENE	4900.00	UG/KG	
			INDENO(1,2,3-CD)PYRENE	3100.00	UG/KG	

J = Concentration is below quantification level; * = Common laboratory contaminant

Tue Nov 24

Sanitary Landfill Organic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure	Qualifier
49-03	FMP-PS-49-032	8705-305-0020	FLUORENE	2500.00	UG/KG	
			DIBENZO(A,H)ANTHRACENE	1100.00	UG/KG	
			PYRENE	6300.00	UG/KG	
			TOLUENE	180.00	UG/KG	J*
			TETRACHLOROETHENE	97.00	UG/KG	J
			ANTHRACENE	2800.00	UG/KG	
			BENZO(A)ANTHRACENE	5100.00	UG/KG	
			AROCLOR-1242	1600.00	UG/KG	J
			BENZO(A)PYRENE	4800.00	UG/KG	
			ETHYLBENZENE	91.00	UG/KG	J
49-05	FMP-PS-49-055	8705-305-0060	BIS(2-ETHYLHEXYL)PHTHALATE	150.00	UG/KG	J*
			METHYLENE CHLORIDE	130.00	UG/KG	J*
			ANTHRACENE	85.00	UG/KG	J
			PHENANTHRENE	330.00	UG/KG	J
			INDENO(1,2,3-CD)PYRENE	81.00	UG/KG	J
			PYRENE	300.00	UG/KG	J
			BENZO(A)PYRENE	120.00	UG/KG	J
			AROCLOR-1242	130.00	UG/KG	
			BENZO(B)FLUORANTHENE	120.00	UG/KG	J
			N-NITROSODIPHENYLAMINE(1)	67.00	UG/KG	J
			DI-N-OCTYL PHTHALATE	300.00	UG/KG	J*
			BENZO(G,H,I)PERYLENE	110.00	UG/KG	J
			BENZO(K)FLUORANTHENE	110.00	UG/KG	J
			CHRYSENE	170.00	UG/KG	J
			FLUORANTHENE	450.00	UG/KG	J
			BENZO(A)ANTHRACENE	150.00	UG/KG	J
			ACETONE	130.00	UG/KG	J*
49-06	FMP-PS-49-071	8705-342-0020	NAPHTHALENE	2700.00	UG/KG	
			AROCLOR-1248	565.00	UG/KG	
			DI-N-BUTYL PHTHALATE	330.00	UG/KG	J*
			BENZO(G,H,I)PERYLENE	1300.00	UG/KG	
			DIBENZO(A,H)ANTHRACENE	560.00	UG/KG	
			2,4-DIMETHYLPHENOL	240.00	UG/KG	J
			DIBENZOFURAN	1700.00	UG/KG	
			4-METHYLPHENOL	360.00	UG/KG	J
			ACENAPHTHENE	1900.00	UG/KG	
			2-BUTANONE	120.00	UG/KG	J*

J = Concentration is below quantification level; * = Common laboratory contaminant

Tue Nov 24

Sanitary Landfill Organic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure	Qualifier
49-06	FMP-PS-49-071	8705-342-0020	METHYLENE CHLORIDE	140.00	UG/KG	J*
			BIS(2-ETHYLHEXYL)PHTHALATE	49.00	UG/KG	J*
			INDENO(1,2,3-CD)PYRENE	1400.00	UG/KG	
			AROCLOR-1254	719.00	UG/KG	J
			PHENOL	310.00	UG/KG	J
			ACETONE	250.00	UG/KG	J*
			2-METHYPHENOL	96.00	UG/KG	J
			DI-N-BUTYL PHTHALATE	50.00	UG/KG	J*
			AROCLOR-1242	78.00	UG/KG	J
			2-METHYLNAPHTHALENE	1100.00	UG/KG	
		8705-342-0020DIL	PYRENE	1900.00	UG/KG	
			BENZO(K)FLUORANTHENE	1900.00	UG/KG	
			DIBENZOFURAN	1700.00	UG/KG	J
			BENZO(B)FLUORANTHENE	1900.00	UG/KG	
			BENZO(A)ANTHRACENE	1900.00	UG/KG	
			PHENANTHRENE	1900.00	UG/KG	
			BENZO(A)PYRENE	1900.00	UG/KG	
			ANTHRACENE	1900.00	UG/KG	
			FLUORANTHENE	1900.00	UG/KG	
			BENZO(G,H,I)PERYLENE	1900.00	UG/KG	J
			FLUORENE	1900.00	UG/KG	
			CHRYSENE	1900.00	UG/KG	
49-04	FMP-PS-49-046	8705-305-0030	METHYLENE CHLORIDE	100.00	UG/KG	J*
			AROCLOR-1242	110.00	UG/KG	
			ACETONE	130.00	UG/KG	J*

J = Concentration is below quantification level; * = Common laboratory contaminant

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Sanitary Landfill Inorganic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure
49-01	FMP-PS-49-001	8704-286-0060	ALUMINUM, TOTAL	17247.25	MG/KG
			BARIUM, TOTAL	124.13	MG/KG
			CADMIUM, TOTAL	2.54	MG/KG
			CALCIUM, TOTAL	15714.06	MG/KG
			CHROMIUM, TOTAL	21.30	MG/KG
			COPPER, TOTAL	19.91	MG/KG
			IRON, TOTAL	16538.55	MG/KG
			LEAD, TOTAL	19.04	MG/KG
			MAGNESIUM, TOTAL	7367.19	MG/KG
			MANGANESE, TOTAL	247.58	MG/KG
			MERCURY, TOTAL	.20	MG/KG
			NICKEL, TOTAL	12.73	MG/KG
			POTASSIUM, TOTAL	625.32	MG/KG
			VANADIUM, TOTAL	26.63	MG/KG
			ZINC, TOTAL	63.92	MG/KG
49-02	FMP-PS-49-018	8705-305-0010	ALUMINUM, TOTAL	10229.70	MG/KG
			ARSENIC, TOTAL	3.28	MG/KG
			BARIUM, TOTAL	115.37	MG/KG
			CADMIUM, TOTAL	2.90	MG/KG
			CALCIUM, TOTAL	23196.26	MG/KG
			CHROMIUM, TOTAL	14.08	MG/KG
			COPPER, TOTAL	16.09	MG/KG
			IRON, TOTAL	18100.42	MG/KG
			LEAD, TOTAL	13.40	MG/KG
			MAGNESIUM, TOTAL	8201.64	MG/KG
			MANGANESE, TOTAL	436.02	MG/KG
			MERCURY, TOTAL	.14	MG/KG
			NICKEL, TOTAL	21.91	MG/KG
			POTASSIUM, TOTAL	491.92	MG/KG
			VANADIUM, TOTAL	20.34	MG/KG
			ZINC, TOTAL	60.81	MG/KG
		8705-305-0070	BARIUM, EP LEACHATE	3307.00	UG/L
49-03	FMP-PS-49-032	8705-305-0020	ALUMINUM, TOTAL	9667.62	MG/KG
			ARSENIC, TOTAL	5.77	MG/KG
			BARIUM, TOTAL	82.23	MG/KG
			CADMIUM, TOTAL	2.92	MG/KG
			CALCIUM, TOTAL	67619.28	MG/KG

Sanitary Landfill Inorganic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure
49-03	FMP-PS-49-032	8705-305-0020	CHROMIUM, TOTAL	20.95	MG/KG
			COPPER, TOTAL	13.06	MG/KG
			IRON, TOTAL	15584.00	MG/KG
			LEAD, TOTAL	16.10	MG/KG
			MAGNESIUM, TOTAL	21962.24	MG/KG
			MANGANESE, TOTAL	716.45	MG/KG
			MERCURY, TOTAL	.16	MG/KG
			NICKEL, TOTAL	42.35	MG/KG
			POTASSIUM, TOTAL	811.08	MG/KG
			SODIUM, TOTAL	180.24	MG/KG
			VANADIUM, TOTAL	13.29	MG/KG
			ZINC, TOTAL	166.72	MG/KG
		8705-305-0080	BARIUM, EP LEACHATE	2502.00	UG/L
49-04	FMP-PS-49-046	8705-305-0030	ALUMINUM, TOTAL	6367.05	MG/KG
			ARSENIC, TOTAL	6.69	MG/KG
			CADMIUM, TOTAL	1.92	MG/KG
			CALCIUM, TOTAL	78377.63	MG/KG
			CHROMIUM, TOTAL	9.23	MG/KG
			COPPER, TOTAL	11.15	MG/KG
			IRON, TOTAL	13466.76	MG/KG
			LEAD, TOTAL	13.82	MG/KG
			MAGNESIUM, TOTAL	25714.35	MG/KG
			MANGANESE, TOTAL	338.44	MG/KG
			NICKEL, TOTAL	13.46	MG/KG
			POTASSIUM, TOTAL	653.82	MG/KG
			VANADIUM, TOTAL	12.11	MG/KG
			ZINC, TOTAL	39.61	MG/KG
		8705-305-0090	BARIUM, EP LEACHATE	1276.00	UG/L
49-05	FMP-PS-49-055	8705-305-0060	ALUMINUM, TOTAL	10069.43	MG/KG
			ARSENIC, TOTAL	4.84	MG/KG
			BARIUM, TOTAL	67.58	MG/KG
			CADMIUM, TOTAL	2.98	MG/KG
			CALCIUM, TOTAL	67605.72	MG/KG
			CHROMIUM, TOTAL	14.49	MG/KG
			COPPER, TOTAL	29.63	MG/KG
			IRON, TOTAL	17301.18	MG/KG

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Sanitary Landfill Inorganic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure
49-05	FMP-PS-49-055	8705-305-0060	LEAD, TOTAL	12.68	MG/KG
			MAGNESIUM, TOTAL	19765.77	MG/KG
			MANGANESE, TOTAL	558.58	MG/KG
			NICKEL, TOTAL	19.18	MG/KG
			POTASSIUM, TOTAL	724.88	MG/KG
			VANADIUM, TOTAL	17.69	MG/KG
			ZINC, TOTAL	55.64	MG/KG
		8705-305-0100	BARIUM, EP LEACHATE	2421.00	UG/L
49-06	FMP-PS-49-071	8705-342-0010	ALUMINUM, TOTAL	9493.98	MG/KG
			ARSENIC, TOTAL	5.25	MG/KG
			BARIUM, TOTAL	68.64	MG/KG
			CADMIUM, TOTAL	5.33	MG/KG
			CALCIUM, TOTAL	129975.31	MG/KG
			CHROMIUM, TOTAL	19.24	MG/KG
			COPPER, TOTAL	12.52	MG/KG
			IRON, TOTAL	21844.98	MG/KG
			LEAD, TOTAL	10.08	MG/KG
			MAGNESIUM, TOTAL	30105.25	MG/KG
			MANGANESE, TOTAL	667.87	MG/KG
			NICKEL, TOTAL	18.32	MG/KG
			POTASSIUM, TOTAL	1971.15	MG/KG
			SODIUM, TOTAL	162.33	MG/KG
			VANADIUM, TOTAL	19.71	MG/KG
			ZINC, TOTAL	50.32	MG/KG
		8705-342-0080	BARIUM, EP LEACHATE	2871.00	UG/L

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TABLE C-7

SUBSURFACE MEDIA ANALYSES
RI/FS SAMPLING PROGRAM
SOLID WASTE LANDFILL

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOLID WASTE LANDFILL
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
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RADIOLOGICAL PARAMETERS	1035 008388 21.0 - 22.5 -	1035 008392 - RINSATE -
Actinium 231	NA	NA
Cesium 137	< 0.2	< 20.0
Lead 210	NA	NA
Neptunium 237	< 0.6	< 1.0
Plutonium 210	NA	NA
Plutonium 238	< 0.6	< 1.0
Plutonium 239/240	< 0.6	< 1.0
Protactium 234	NA	NA
Radium 224	NA	NA
Radium 226	0.8 ± 0.1	< 1.0
Radium 228	0.6 ± 0.1	< 3.0
Ruthenium 106	< 1.0	< 150.0
Strontium 90	< 0.5	< 5.0
Technetium 99	< 0.9	< 30.0
Thorium 228	0.8 ± 0.4	< 1.0
Thorium 230	1.1 ± 0.4	< 1.0
Thorium 232	0.7 ± 0.3	< 1.0
Total Thorium **	NA	NA
Uranium 234	5.2 ± 1.3	< 1.0
Uranium 235/236	< 0.26	< 1.0
Uranium 238	18.1 ± 3.4	< 1.0
Total Uranium **	NA	2.0 ± 1.0

** Results reported in mg/kg or µg/ℓ

b = Validation qualifiers

- = Sample has not been validated

SOLID WASTE LANDFILL
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

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RADIOLOGICAL PARAMETERS	1038 007901 7.5 - 9.0				1038 007952 - RINSATE			
Actinium 231		NA				NA		
Cesium 137	<	0.2			<	20.0		
Lead 210		NA				NA		
Neptunium 237	<	0.6			<	0.6		
Plutonium 210		NA				NA		
Plutonium 238	<	0.6			<	0.6		
Plutonium 239/240	<	0.6			<	0.6		
Protactium 234		NA				NA		
Radium 224		NA				NA		
Radium 226		0.8	±	0.1	<	2.1		
Radium 228		1.0	±	0.1	<	5.1		
Ruthenium 106	<	1.0			<	150.0		
Strontium 90	<	0.5			<	5.0		
Technetium 99	<	2.8			<	30.0		
Thorium 228		2.3	±	0.7	<	0.6		
Thorium 230		1.2	±	0.4		1.0	±	0.6
Thorium 232		1.2	±	0.4		0.8	±	0.4
Total Thorium b**		NA				NA		
Uranium 234		0.8	±	0.3		3.2	±	1.0
Uranium 235/236	<	0.6			<	0.6		
Uranium 238		0.9	±	0.3		1.3	±	0.6
Total Uranium *b		NA				2.0	±	1.0

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- = Sample has not been validated

SOLID WASTE LANDFILL
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

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RADIOLOGICAL PARAMETERS	1718 067266 1.5 - 3.0				b	1718 067275 9.0 - 10.5				b	1718 067279 15.0 - 16.5				b
Actinium 231		NA					NA					NA			
Cesium 137	<	0.2			J	<	0.2			J	<	0.2			J
Lead 210		NA					NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6				<	0.6			
Protactium 234		NA					NA					NA			
Radium 224		NA					NA					NA			
Radium 226		1.4	±	0.1	J		1.1	±	0.1	J		1.0	±	0.1	J
Radium 228		3.2	±	0.3	J		1.1	±	0.1	J		0.8	±	0.1	J
Ruthenium 106	<	1.0			J	<	1.0			J	<	1.0			J
Strontium 90		0.7	±	0.2	R		0.9	±	0.2	R	<	0.5			R
Technetium 99	<	0.9				<	0.9				<	0.9			
Thorium 228		3.4	±	0.9	J		2.3	±	0.6	J		1.0	±	0.4	J
Thorium 230		2.3	±	0.6	J		1.7	±	0.5	J		0.7	±	0.3	J
Thorium 232		2.2	±	0.6			1.3	±	0.4		<	0.6			
Total Thorium **		20.0	±	6.0			11.3	±	3.9			4.0	±	2.6	
Uranium 234		23.3	±	2.9	J		8.7	±	1.4	FJ		0.9	±	0.1	J
Uranium 235/236		1.6	±	0.3	J		1.1	±	0.4	J	<	0.6			J
Uranium 238		22.1	±	2.8			40.8	±	5.5			1.1	±	0.2	
Total Uranium **		67.2	±	8.2	J		124.0	±	13.0	J		3.0	±	2.0	J

** Results reported in mg/kg or µg/ℓ

b = Validation qualifiers

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
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RADIOLOGICAL PARAMETERS	1719 067286 1.5 - 3.0				b	1719 067292 10.5 - 12.0				b	1719 067296 16.5 - 18.0				b
Actinium 231		NA					NA					NA			
Cesium 137	<	0.2			J	<	0.2			J	<	0.2			J
Lead 210		NA					NA					NA			
Neptunium 237	<	0.6				<	1.0			DJ	<	0.6			
Plutonium 210		NA					NA					NA			
Plutonium 238	<	0.6				<	1.0			D	<	0.6			
Plutonium 239/240	<	0.6				<	1.0			D	<	0.6			
Protactium 234		NA					NA					NA			
Radium 224		NA					NA					NA			
Radium 226		1.2	±	0.2	J		1.0	±	0.1	J		0.4	±	0.1	J
Radium 228		1.1	±	0.2	J		1.0	±	0.1	J	<	0.5			J
Ruthenium 106	<	1.0			J	<	1.0			J	<	1.0			J
Strontium 90		0.9	±	0.2			1.1	±	0.3	J		1.2	±	0.3	J
Technetium 99	<	0.9				<	0.9				<	0.9			
Thorium 228		1.2	±	0.3			NA					1.1	±	0.3	
Thorium 230		1.9	±	0.4			NA					1.1	±	0.3	
Thorium 232		0.6	±	0.2			NA					0.7	±	0.2	
Total Thorium **		5.8	±	2.2			NA					6.7	±	2.5	
Uranium 234		5.5	±	0.8			20.5	±	3.8	F		0.9	±	0.2	
Uranium 235/236		1.2	±	0.2	E		4.5	±	1.3		<	0.6			
Uranium 238		8.7	±	1.1	C		141.0	±	22.0			1.6	±	0.2	
Total Uranium **		10.6	±	4.1	J		393.0	±	40.0	J		19.7	±	3.5	J

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

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RADIOLOGICAL PARAMETERS	1720 067306 1.5 - 3.0				b	1720 067310 7.5 - 9.0				b	1720 067313 9.0 - 10.5				b
Actinium 231		NA					NA					NA			
Cesium 137	<	0.2			J	<	0.2			J	<	0.2			J
Lead 210		NA					NA					NA			
Neptunium 237	<	0.6				<	0.6				<	0.6			
Plutonium 210		NA					NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6			J	<	0.6			J	<	0.6			J
Protactium 234		NA					NA					NA			
Radium 224		NA					NA					NA			
Radium 226		1.1	±	0.1	J		1.0	±	0.1	J		1.5	±	0.1	J
Radium 228		1.4	±	0.2	J		1.1	±	0.2	J		1.5	±	0.2	J
Ruthenium 106	<	1.0			J	<	1.0			J	<	1.0			J
Strontium 90		1.6	±	0.3	J		3.1	±	0.4	J		0.9	±	0.2	J
Technetium 99	<	0.9				<	0.9				<	0.9			
Thorium 228		2.1	±	0.5	J		1.2	±	0.3	J		2.0	±	0.5	J
Thorium 230		3.5	±	0.8	J		2.5	±	0.5	J		1.9	±	0.5	J
Thorium 232		1.4	±	0.4	R		0.7	±	0.2	R		1.1	±	0.3	R
Total Thorium **		12.7	±	3.9	R		6.7	±	2.0	R		9.6	±	3.2	R
Uranium 234		18.5	±	2.7	J		1.4	±	0.2	FJ		1.2	±	0.2	J
Uranium 235/236		1.3	±	0.4	J	<	0.6			J	<	0.6			J
Uranium 238		45.2	±	6.1			3.5	±	0.5			1.8	±	0.3	
Total Uranium **		150.0	±	22.0	J		13.0	±	3.1	J		5.8	±	2.6	J

** Results reported in mg/kg or µg/ℓ

b = Validation qualifiers

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
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RADIOLOGICAL PARAMETERS	1721 067230 3.0 - 8.5				b	1721 067233 7.5 - 9.0				b	1721 067238 15.0 - 16.5				b
Actinium 231		NA					NA					NA			
Cesium 137	<	0.2				<	0.2				<	0.2			
Lead 210		NA					0.7	±	0.4	J		NA			
Neptunium 237	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA					NA			
Plutonium 238	<	0.6			J	<	0.6				<	0.6			J
Plutonium 239/240	<	0.6				<	0.6				<	0.6			
Protactium 234		NA					NA					NA			
Radium 224		NA					1.2	±	0.2			NA			
Radium 226		0.9	±	0.1	J		0.9	±	0.1	J		1.0	±	0.9	J
Radium 228		0.7	±	0.1	J		1.0	±	0.2	J		0.7	±	0.1	J
Ruthenium 106	<	1.0				<	1.1			D	<	1.0			
Strontium 90		0.8	±	0.2	J	<	0.9			D		0.7	±	0.2	J
Technetium 99	<	0.9				<	0.9				<	0.9			
Thorium 228		1.6	±	0.4	J		1.0	±	0.3	J		1.4	±	0.4	J
Thorium 230		1.4	±	0.4	J	<	0.6			J		1.7	±	0.4	J
Thorium 232		0.7	±	0.2			0.9	±	0.3			0.9	±	0.3	
Total Thorium **		6.4	±	2.5			8.5	±	2.3			8.4	±	3.0	
Uranium 234		1.4	±	0.2	J		1.6	±	0.4	J		1.8	±	0.2	J
Uranium 235/236	<	0.6			J	<	0.6			J		0.1	±	0.1	J
Uranium 238		2.3	±	0.3			1.9	±	0.5	J		3.6	±	0.4	
Total Uranium **		6.7	±	2.0			8.9	±	3.1	J		11.2	±	2.0	

** Results reported in mg/kg or µg/ℓ

b = Validation qualifiers

SOLID WASTE LANDFILL
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

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RADIOLOGICAL PARAMETERS	1722 067251 3.0 - 4.5				b	1722 067257 11.0 - 12.5				b	1722 067258 12.5 - 14.0				b
Actinium 231		NA					NA					NA			
Cesium 137	<	0.2			J	<	0.2				<	0.2			
Lead 210		NA					0.7	±	0.4		<	0.4			
Neptunium 237		NA				<	0.6			J	<	0.6			J
Plutonium 210		NA					NA					NA			
Plutonium 238		NA				<	0.6			J	<	0.6			J
Plutonium 239/240		NA				<	0.6				<	0.6			
Protactium 234		NA					NA					NA			
Radium 224		NA					1.5	±	0.2			1.1	±	0.1	
Radium 226		1.5	±	0.1	J		1.0	±	0.1	J		0.9	±	0.1	J
Radium 228		1.0	±	0.1	J		1.3	±	0.2	J		1.0	±	0.2	J
Ruthenium 106	<	1.0			J	<	1.0				<	1.2			D
Strontium 90	<	0.5			J		1.42	±	0.63		<	0.9			D
Technetium 99		NA				<	0.9				<	0.9			
Thorium 228		1.6	±	0.4	J		1.09	±	0.32	J		0.96	±	0.31	J
Thorium 230		12.3	±	2.3	J		2.40	±	0.53	J		3.81	±	0.74	J
Thorium 232	<	1.0					1.20	±	0.34			0.85	±	0.28	
Total Thorium **		9.0	±	3.2			10.8	±	3.0			2.65	±	2.55	
Uranium 234		334.0	±	46.0	J		4.51	±	0.70	J		30.9	±	3.9	J
Uranium 235		NA				<	0.4					1.89	±	0.36	
Uranium 235/236		22.4	±	5.7	J	<	0.6			J		2.47	±	0.61	J
Uranium 238		420.0	±	57.0	C		4.4	±	0.6	J		37.2	±	2.9	J
Total Uranium **		940.0	±	133.0	J		17.5	±	3.9	J		146.0	±	16.0	

** Results reported in mg/kg or µg/ℓ

b = Validation qualifiers

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

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RADIOLOGICAL PARAMETERS	1808 067393 1.5 - 3				b	1808 067398 10.5 - 12				b	1808 067400 13.5 - 15				b
Actinium 231		NA					NA					NA			
Cesium 137	<	0.2			R	<	0.2			J	<	0.2			J
Lead 210		NA					NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6				<	0.6			
Protactium 234		NA					NA					NA			
Radium 224		NA					NA					NA			
Radium 226		1.0	±	0.1	R		1.0	±	0.1	J		0.7	±	0.1	J
Radium 228		3.6	±	0.3	R		1.2	±	0.1	J		0.6	±	0.1	J
Ruthenium 106	<	1.0			R	<	1.0			J	<	1.0			J
Strontium 90	<	0.5			J	<	0.5			J	<	0.5			J
Technetium 99	<	0.9				<	0.9				<	0.9			
Thorium 228		4.0	±	0.7	J		1.2	±	0.3	J		1.2	±	0.3	J
Thorium 230		2.8	±	0.5	J		2.4	±	0.5	J		1.9	±	0.5	J
Thorium 232		3.6	±	0.6			1.1	±	0.3		<	0.6			
Total Thorium **		32.4	±	5.9			10.1	±	2.7			5.1	±	2.3	
Uranium 234		17.6	±	2.4	J		6.3	±	1.0	FJ		0.9	±	0.2	J
Uranium 235/236		1.2	±	0.3	J		0.6	±	0.2	J	<	0.6			J
Uranium 238		17.3	±	2.4			21.0	±	2.9			1.1	±	0.2	
Total Uranium **		49.9	±	7.7	R		66.8	±	10.0	J		3.2	±	1.3	J

** Results reported in mg/kg or µg/ℓ

b = Validation qualifiers

SOLID WASTE LANDFILL
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

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Data presented by boring number, sample number, and depth in feet.
A indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument

RADIOLOGICAL PARAMETERS	1888 067718 6.0 - 7.5				b	1888 067728 RINSATE				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			J	<	20.0			
Lead 210		1.0	±	0.5	J		NA			
Neptunium 237		NA				<	1.0			R
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	1.0			J
Plutonium 239/240	<	0.6				<	1.0			
Protactium 234		NA					NA			
Radium 224		2.1	±	0.2	J	<	20.0			DJ
Radium 226		1.1	±	0.1	J	<	27.0			DJ
Radium 228		1.6	±	0.2	J	<	61.0			DJ
Ruthenium 106	<	1.3			DJ	<	150.0			
Strontium 90		1.01	±	0.4	J	<	5.0			
Technetium 99	<	0.9				<	30.0			
Thorium 228		1.37	±	0.38	J	<	1.0			R
Thorium 230		2.30	±	0.54	J	<	1.0			R
Thorium 232		1.58	±	0.41		<	1.0			J
Total Thorium **		14.3	±	3.7		<	3.2			J
Uranium 234		4.1	±	0.6	J		1.90	±	0.65	FJ
Uranium 235		0.27	±	0.22	J	<	54.0			DJ
Uranium 235/236	<	0.6			J		1.65	±	0.61	EJ
Uranium 238		4.3	±	0.6	J	<	241.0			DJ
Total Uranium **		19.0	±	4.0	J	<	1.0			J

** Results reported in mg/kg or µg/ℓ

b = Validation qualifiers

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	3037 007968 22.5 - 24.0			b	3037 008107 45.0 - 46.5			b	3037 008117 95.0 - 96.5			b	3037 008125 RINSATE			b
Actinium 231		NA				NA				NA				NA		
Cesium 137	<	0.2		J	<	0.2		J	<	0.2		J	<	20.0		R
Lead 210		NA				NA				NA				NA		
Neptunium 237	<	0.6		J	<	0.6		J	<	0.6		J	<	1.0		R
Plutonium 210		NA				NA				NA				NA		
Plutonium 238	<	0.6		R	<	0.6		R	<	0.6		R	<	1.0		J
Plutonium 239/240	<	0.6		R	<	0.6		R	<	0.6		R	<	1.0		J
Protactium 234		NA				NA				NA				NA		
Radium 224		NA				NA				NA				NA		
Radium 226		0.6	± 0.1	J	<	0.3		J	<	0.3		J	<	1.0		J
Radium 228		0.6	± 0.2	DJ	<	0.6		J	<	0.6		DJ	<	3.0		J
Ruthenium 106	<	1.0		J	<	1.0		J	<	1.0		J	<	150.0		R
Strontium 90	<	0.5		J	<	0.5		J	<	0.5		J	<	5.0		J
Technetium 99	<	2.5		DR	<	2.9		DR	<	2.5		DR	<	30.0		R
Thorium 228		1.2	± 0.4	J		0.7	± 0.3	J	<	0.6		J	<	1.0		
Thorium 230		1.3	± 0.4	R	<	0.6		J		0.7	± 0.3	J	<	1.0		
Thorium 232	<	0.6			<	0.6			<	0.6		J	<	1.0		
Total Thorium **		NA				NA				NA				NA		
Uranium 234	<	0.6			<	0.6			<	0.6				1.0	± 0.6	J
Uranium 235/236	<	0.6			<	0.6			<	0.6			<	1.0		J
Uranium 238		0.9	± 0.3		<	0.6			<	0.6				1.1	± 0.6	J
Total Uranium **		NA				NA				NA				2.0	± 1.0	R

** Results reported in mg/kg or µg/ℓ

b = Validation qualifiers

EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING HAZARDOUS SUBSTANCE LIST RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

J = Indicates an estimated value. This flag is used when the mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.

C = This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E = This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to pesticides/PCBs analyzed by GC/EC methods.

D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.

F = Estimated value due to a confirmed compound which is off-scale in both columns.

X = A flag that FORMASTER III CLP software automatically inserts to indicate that the data was entered manually.

Z = No estimated value reported, or an elevated CRQL reported because matrix effects interfere with or obscure the compound on one or both columns. In either situation, the compound does not confirm as a positive identification.

* = Values outside of contract laboratory-required QC limits.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1038 008186 0 - .5 RINSATE			1719 067287 3.0 - 4.5		1719 067295 15.0 - 16.5		1719 067298 - FIELD BLANK	
		a		a	b	a	b	a	b
DIOXINS									
1,2,3,4,6,7,8-Heptachlorodib	NA			0.00038		< 0.00003		NA	
1,2,3,4,6,7,8-Heptachlorodib	NA			0.00007		< 0.00002		NA	
1,2,3,4,7,8,9-Heptachlorodib	NA		<	0.00001		< 0.00002		NA	
1,2,3,4,7,8-Hexachlorodibenz	NA		<	0.00006		< 0.00008		NA	
1,2,3,4,7,8-Hexachlorodibenz	NA		<	0.00005		< 0.00003		NA	
1,2,3,6,7,8-Hexachlorodibenz	NA		<	0.00006		< 0.00006		NA	
1,2,3,6,7,8-Hexachlorodibenz	NA		<	0.00004		< 0.00002		NA	
1,2,3,7,8,9-Hexachlorodibenz	NA		<	0.00004		< 0.00006		NA	
1,2,3,7,8,9-Hexachlorodibenz	NA		<	0.00008		< 0.00003		NA	
1,2,3,7,8-Pentachlorodibenzo	NA		<	0.00001	UJ	< 0.00017	UJ	NA	
1,2,3,7,8-Pentachlorodibenzo	NA		<	0.00008	UJ	< 0.00013	UJ	NA	
2,3,4,6,7,8-Hexachlorodibenz	NA		<	0.00008		< 0.00003	UJ	NA	
2,3,4,7,8-Pentachlorodibenzo	NA		<	0.00001	UJ	< 0.00013	UJ	NA	
2,3,7,8-TCDD	NA		<	0.00031		< 0.00035		NA	
2,3,7,8-TCDF	NA		<	0.00014		< 0.00037		NA	
Heptachlorodibenzofuran	NA			0.00025		< 0.00002		NA	
Heptachlorodibenzo-p-dioxin	NA			0.00065		< 0.00003		NA	
Hexachlorodibenzo-p-dioxin	NA		<	0.00005		< 0.00007		NA	
Hexachlorodibenzofuran	NA		<	0.00007	J	< 0.00003		NA	
Octachlorodibenzo-p-dioxin	NA			0.00710	J	0.00071	J	NA	
Octachlorodibenzofuran	NA			0.00047	UJ	< 0.00014	UJ	NA	
Pentachlorodibenzo-p-dioxin	NA		<	0.00008	UJ	< 0.00017	UJ	NA	
Pentachlorodibenzofuran	NA		<	0.00001	UJ	< 0.00013	UJ	NA	
Tetrachlorodibenzofuran	NA		<	0.00002		< 0.00006		NA	
Tetrachlorodibenzo-p-dioxin	NA		<	0.00002		< 0.00002		NA	

a = lab qualifiers
b = validation qualifiers

- = Sample has not been validated

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1038 008186 0 - .5 RINSATE	a	1719 067287 3.0 - 4.5	a	b	1719 067295 15.0 - 16.5	a	b	1719 067298 - FIELD BLANK	a	b
HERBICIDE ORGANICS											
2,4,5-T	< 0.00010		NA			< 0.04900			NA		
2,4,5-TP (Silvex)	< 0.00010		NA			< 0.04500			NA		
2,4-D	< 0.00010		NA			< 0.25000			NA		
ORGANOPHOSPOROUS PESTICIDES											
Azinphosmethyl	NA		< 0.20000			< 0.20000			NA		
Demeton	NA		< 0.20000			< 0.20000			NA		
Diazinon	NA		< 0.10000			< 0.10000			NA		
Dimethoate	NA		< 0.10000			< 0.10000			NA		
Disulfoton	NA		< 0.10000			< 0.10000			NA		
Ethion	NA		< 0.10000			< 0.10000			NA		
Famphur	NA		< 0.10000			< 0.10000			NA		
Malathion	NA		< 0.10000			< 0.10000			NA		
Parathion, ethyl	NA		< 0.10000			< 0.10000			NA		
Parathion, methyl	NA		< 0.10000			< 0.10000			NA		
Phorate	NA		< 0.10000			< 0.10000			NA		
Sulfotepp	NA		< 0.10000			< 0.10000			NA		
Tetraethylpyrophosphate	NA		< 0.40000			< 0.40000			NA		
Thionazin	NA		< 0.10000			< 0.10000			NA		
PESTICIDES											
4,4'-DDD	< 0.00010		< 0.05300		R	< 0.02000		R	NA		
4,4'-DDE	< 0.00010		< 0.05300		R	< 0.02000		R	NA		
4,4'-DDT	< 0.00010		< 0.05300		R	< 0.02000		R	NA		
Aldrin	< 0.00005		< 0.02600		R	< 0.01000		R	NA		

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1038 008186 0 - .5 RINSATE -		a	1719 067287 3.0 - 4.5		a	b	1719 067295 15.0 - 16.5		a	b	1719 067298 - FIELD BLANK	a	b
Aroclor-1016	<	0.00050		<	0.26000		R	<	0.10000		R	NA		
Aroclor-1221	<	0.00050		<	0.26000		R	<	0.10000		R	NA		
Aroclor-1232	<	0.00050		<	0.26000		R	<	0.10000		R	NA		
Aroclor-1242	<	0.00050		<	0.26000		R	<	0.10000		R	NA		
Aroclor-1248	<	0.00050		<	0.26000		R	<	0.10000		R	NA		
Aroclor-1254	<	0.00100		<	0.05300		R	<	0.20000		R	NA		
Aroclor-1260	<	0.00100		<	0.05300		R	<	0.20000		R	NA		
Dieldrin	<	0.00010		<	0.05300		R	<	0.02000		R	NA		
Endosulfan II	<	0.00010		<	0.05300		R	<	0.02000		R	NA		
Endosulfan sulfate	<	0.00010		<	0.05300		R	<	0.02000		R	NA		
Endosulfan-I	<	0.00005		<	0.02600		R	<	0.01000		R	NA		
Endrin	<	0.00010		<	0.05300		R	<	0.02000		R	NA		
Endrin ketone	<	0.00010		<	0.05300		R	<	0.02000		R	NA		
Heptachlor	<	0.00005		<	0.02600		R	<	0.01000		R	NA		
Heptachlor epoxide	<	0.00005		<	0.02600		R	<	0.01000		R	NA		
Methoxychlor	<	0.00050		<	0.26000		R	<	0.10000		R	NA		
Toxaphene	<	0.00100		<	0.05300		R	<	0.20000		R	NA		
alpha-BHC	<	0.00005		<	0.02600		R	<	0.01000		R	NA		
alpha-Chlordane	<	0.00050		<	0.26000		R	<	0.10000		R	NA		
beta-BHC	<	0.00005		<	0.02600		R	<	0.01000		R	NA		
delta-BHC	<	0.00005		<	0.02600		R	<	0.01000		R	NA		
gamma-BHC (Lindane)	<	0.00005		<	0.02600		R	<	0.01000		R	NA		
gamma-Chlordane	<	0.00050		<	0.26000		R	<	0.10000		R	NA		
Isodrin		NA			NA			<	0.01000		R	NA		
Kepone		NA			NA			<	0.02000		R	NA		
SEMI-VOLATILE ORGANICS														
1,2,4-Trichlorobenzene	<	0.01000		<	0.36000			<	0.84000			NA		
1,2-Dichlorobenzene	<	0.01000		<	0.36000			<	0.84000			NA		
1,3-Dichlorobenzene	<	0.01000		<	0.36000			<	0.84000			NA		
1,4-Dichlorobenzene	<	0.01000		<	0.36000			<	0.84000			NA		
2,4,5-Trichlorophenol	<	0.05000		<	1.70000			<	4.10000			NA		
2,4,6-Trichlorophenol	<	0.01000		<	0.36000			<	0.84000			NA		
2,4-Dichlorophenol	<	0.01000		<	0.36000			<	0.84000			NA		
2,4-Dimethylphenol	<	0.01000		<	0.36000			<	0.84000			NA		
2,4-Dinitrophenol	<	0.05000		<	1.70000			<	4.10000		UJ	NA		
2,4-Dinitrotoluene	<	0.01000		<	0.36000			<	0.84000			NA		
2,6-Dinitrotoluene	<	0.01000		<	0.36000			<	0.84000			NA		
2-Chloronaphthalene	<	0.01000		<	0.36000			<	0.84000			NA		
2-Chlorophenol	<	0.01000		<	0.33000			<	0.84000			NA		
2-Methylnaphthalene	<	0.01000			0.09300	J	J	<	0.84000			NA		
2-Methylphenol	<	0.01000		<	0.36000				NA			NA		

a = lab qualifiers
b = validation qualifiers

- = Sample has not been validated

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

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CHEMICAL PARAMETERS	1038 008186 0 - .5 RINSATE a		1719 067287 3.0 - 4.5 a	b	1719 067295 15.0 - 16.5 a	b	1719 067298 - FIELD BLANK a	b
2-Nitroaniline	< 0.05000	<	1.70000		< 4.10000		NA	
2-Nitrophenol	< 0.01000	<	0.36000		< 0.84000		NA	
3,3'-Dichlorobenzidine	< 0.02000	<	0.72000	UJ	< 1.70000		NA	
3-Nitroaniline	< 0.05000	<	1.70000		< 4.10000		NA	
4,6-Dinitro-2-methylphenol	< 0.05000	<	1.70000		< 4.10000		NA	
4-Bromophenyl phenyl ether	< 0.01000	<	0.36000		< 0.84000		NA	
4-Chloro-3-methylphenol	< 0.01000	<	0.36000		< 0.84000		NA	
4-Chloroaniline	< 0.01000	<	0.36000		< 0.84000		NA	
4-Chlorophenylphenyl ether	< 0.01000	<	0.36000		< 0.84000		NA	
4-Methylphenol	< 0.01000	<	0.36000		< 0.84000		NA	
4-Nitroaniline	< 0.05000	<	1.70000		< 4.10000		NA	
4-Nitrophenol	< 0.05000	<	1.70000		< 4.10000		NA	
Acenaphthene	< 0.01000		0.84000		< 0.84000		NA	
Acenaphthylene	< 0.01000	<	0.36000		< 0.84000		NA	
Anthracene	< 0.01000		1.00000		0.13000	J	NA	
Benzo(a)anthracene	< 0.01000		6.10000	E R	0.29000	J	NA	
Benzo(a)pyrene	< 0.01000		6.80000	E R	0.29000	J	NA	
Benzo(b)fluoranthene	< 0.01000		12.00000	E R	0.26000	J	NA	
Benzo(g,h,i)perylene	< 0.01000	<	0.36000		0.30000	J	NA	
Benzo(k)fluoranthene	< 0.01000	<	0.36000		0.30000	J	NA	
Benzoic acid	< 0.05000	<	1.70000	UJ	< 0.11000		NA	
Benzyl alcohol	< 0.01000	<	0.36000		< 0.84000		NA	
Butyl benzyl phthalate	< 0.01000	<	0.36000		< 0.84000		NA	
Chrysene	< 0.01000		5.60000		0.37000	J	NA	
Di-n-butyl phthalate	< 0.01000	<	0.36000		0.12000	J	NA	
Di-n-octyl phthalate	< 0.01000	<	0.36000		< 0.84000		NA	
Dibenzo(a,h)anthracene	< 0.01000		0.04900	J J	0.11000	J	NA	
Dibenzofuran	< 0.01000		0.34000	J J	< 0.84000		NA	
Diethyl phthalate	< 0.01000	<	0.36000		< 0.84000		NA	
Dimethyl phthalate	< 0.01000	<	0.36000		< 0.84000		NA	
Fluoranthene	< 0.01000		7.80000	E R	0.72000	J	NA	
Fluorene	< 0.01000		0.64000		< 0.84000		NA	
Hexachlorobenzene	< 0.01000	<	0.36000		< 0.84000		NA	
Hexachlorobutadiene	< 0.01000	<	0.36000		< 0.84000		NA	
Hexachlorocyclopentadiene	< 0.01000	<	0.36000		< 0.84000	UJ	NA	
Hexachloroethane	< 0.01000	<	0.36000		< 0.84000		NA	
Indeno(1,2,3-cd)pyrene	< 0.01000		5.50000		0.21000	J	NA	
Isophorone	< 0.01000	<	0.36000		< 0.84000		NA	
N-Nitroso-di-n-propylamine	< 0.01000	<	0.36000		< 0.84000		NA	
N-Nitrosodiphenylamine	< 0.01000	<	0.36000		< 0.84000		NA	
Naphthalene	< 0.01000		0.14000	J J	< 0.84000		NA	
Nitrobenzene	< 0.01000	<	0.36000		< 0.84000		NA	
Pentachlorophenol	< 0.05000	<	1.70000		< 4.10000		NA	
Phenanthrene	< 0.01000		4.80000		0.62000	J	NA	
3-Methylphenol	NA		NA		< 0.84000	UJ	NA	

a = lab qualifiers
b = validation qualifiers

- = Sample has not been validated

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1038 008186 0 - 0.5 RINSATE -			1719 067287 3.0 - 4.5			1719 067295 15.0 - 16.5			1719 067298 - FIELD BLANK		
		a			a	b		a	b		a	b
Phenol	< 0.01000			< 0.36000			< 0.84000			NA		
Pyrene	< 0.01000			8.70000	E	R	NA			NA		
bis(2-Chloroethoxy)methane	< 0.01000			< 0.36000			NA			NA		
bis(2-Chloroethyl)ether	< 0.01000			< 0.36000			NA			NA		
bis(2-Chloroisopropyl) ether	< 0.01000			< 0.36000			NA			NA		
bis(2-Ethylhexyl) phthalate	0.00200	BJ		< 0.36000			NA			NA		
O,O,O-Triethylphosphorothioa	NA			< 0.10000			< 0.01800			NA		
Dinoseb	NA			NA			< 0.01800			NA		
O,O,O-Triethylphosphorothioa	NA			NA			NA			NA		
O,O,O-Triethylphosphorothioa	NA			NA			< 0.10000			NA		
Hexachloropropane	NA			NA			< 1.70000		R	NA		
VOLATILE ORGANICS												
1,1,1-Trichloroethane	NA			< 0.00600		UJ	< 0.00600		UJ	< 0.00500		
1,1,2,2-Tetrachloroethane	NA			< 0.00600			< 0.00600			< 0.00500		
1,1,2-Trichloroethane	NA			< 0.00600			< 0.00600			< 0.00500		
1,1-Dichloroethane	NA			< 0.00600			< 0.00600			< 0.00500		
1,1-Dichloroethene	NA			< 0.00600			< 0.00600			< 0.00500		
1,2-Dichloroethane	NA			0.00600	J		< 0.00600			< 0.00500		
1,2-Dichloroethylene	NA			< 0.00600			< 0.00600			< 0.00500		
1,2-Dichloropropane	NA			< 0.00600			< 0.00600			< 0.00500		
2-Butanone	NA			< 0.01200		UJ	0.01200	J	U	0.00100	BJ	J
2-Hexanone	NA			< 0.01200		UJ	0.00100	J	J	< 0.01000		
4-Methyl-2-pentanone	NA			< 0.01200		UJ	0.00100	J	J	0.00200	BJ	J
Acetone	NA			0.00700	J		0.01000	J	J	0.00700	BJ	J
Benzene	NA			< 0.00600			< 0.00600			< 0.00500		
Bromodichloromethane	NA			< 0.00600			< 0.00600			< 0.00500		
Bromoform	NA			< 0.00600			< 0.00600			< 0.00500		UJ
Bromomethane	NA			< 0.01200			< 0.01200			< 0.01000		UJ
Carbon Tetrachloride	NA			< 0.00600			< 0.00600			< 0.00500		
Carbon disulfide	NA			< 0.00600			< 0.00600			< 0.00500		
Chlorobenzene	NA			0.00200	J		0.00600	J		< 0.00500		
Chloroethane	NA			< 0.01200			< 0.01200			< 0.01000		UJ
Chloroform	NA			< 0.00600			< 0.00600			< 0.00500		
Chloromethane	NA			< 0.01200			< 0.01200			< 0.01000		UJ
Dibromochloromethane	NA			< 0.00600			< 0.00600			< 0.00500		
Ethylbenzene	NA			< 0.00600			0.01800			< 0.00500		
Methylene chloride	NA			0.00600	BJ		0.00700	B	U	< 0.00500		
Styrene	NA			< 0.00600			< 0.00600			< 0.00500		
Tetrachlorethene	NA			< 0.00600			< 0.00600			< 0.00500		
Toluene	NA			0.00600	BJ	U	0.00800	B	U	0.00200	BJ	J
Total xylenes	NA			< 0.00600			0.10000			< 0.00500		
Trichloroethene	NA			< 0.00600			< 0.00600			< 0.00500		

a = lab qualifiers
b = validation qualifiers
-- = Sample has not been validated

SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1038 008186 0 - 0.5 RINSATE -	1719 067287 3.0 - 4.5		1719 067295 15.0 - 16.5		1719 067298 - FIELD BLANK	
	a	a	b	a	b	a	b
Vinyl Acetate	NA	< 0.01200	UJ	< 0.01200	UJ	< 0.01000	
Vinyl chloride	NA	< 0.01200		< 0.01200		< 0.01000	
cis-1,3-Dichloropropene	NA	< 0.00600		< 0.00600		< 0.00500	
trans-1,3-Dichloropropene	NA	< 0.00600		< 0.00600		< 0.00500	
1,1,1,2-Tetrachloroethane	NA	NA		< 0.00631		< 0.00500	
1,2,3-Trichloropropane	NA	NA		< 0.00631		< 0.00500	UJ
1,2-Dibromo-3-chloropropane	NA	NA		< 0.01260	UJ	NA	
1,2-Dibromoethane	NA	NA		< 0.00631		< 0.00500	
1,4-Dioxane	NA	NA		< 6.31000	R	NA	
2-Chloro-1,3-butadiene	NA	NA		< 0.00631		< 0.00500	
3-Chloropropene	NA	NA		< 0.00631		< 0.00500	
Acetonitrile	NA	NA		< 1.26000	UJ	NA	
Acrolein	NA	NA		< 0.01260	UJ	NA	
Acrylonitrile	NA	NA		< 0.01260	UJ	NA	
Dibromomethane	NA	NA		< 0.01260		< 0.01000	
Dichlorodifluoromethane	NA	NA		< 0.25300	R	NA	
Ethyl cyanide	NA	NA		< 0.12600	UJ	NA	
Ethyl methacrylate	NA	NA		< 0.01260	UJ	< 0.01000	
Iodomethane	NA	NA		< 0.00631		< 0.00500	
Isobutyl alcohol	NA	NA		< 0.02530	R	NA	
Methacrylonitrile	NA	NA		< 0.01260		NA	
Methyl methacrylate	NA	NA		< 0.01260	UJ	< 0.01000	UJ
Pyridine	NA	NA		< 0.02530 B		NA	
Trichlorofluoromethane	NA	NA		2.01000	R	NA	
trans-1,4-Dichloro-2-butene	NA	NA		< 0.12600	R	< 0.01000	

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	1719 067299 - FIELD BLANK			1719 067300 18.0 - 19.5			1719 067301 COMPOSITE TCLP			1720 067307 3.0 - 4.5			1720 067309 6.0 - 7.5 TCLP		
		a	b		a	b		a	b		a	b		a	b
DIOXINS															
1,2,3,4,6,7,8-Heptachlorodib	NA			<	0.00007		NA			<	0.00006		NA		
1,2,3,4,6,7,8-Heptachlorodib	NA			<	0.00002		NA			<	0.00001		NA		
1,2,3,4,7,8,9-Heptachlorodib	NA			<	0.00008		NA			<	0.00001		NA		
1,2,3,4,7,8-Hexachlorodibenz	NA			<	0.00003		NA			<	0.00001		NA		
1,2,3,4,7,8-Hexachlorodibenz	NA			<	0.00002		NA			<	0.00002		NA		
1,2,3,6,7,8-Hexachlorodibenz	NA			<	0.00002		NA			<	0.00002		NA		
1,2,3,6,7,8-Hexachlorodibenz	NA			<	0.00001		NA			<	0.00001		NA		
1,2,3,7,8,9-Hexachlorodibenz	NA			<	0.00003		NA			<	0.00001		NA		
1,2,3,7,8,9-Hexachlorodibenz	NA			<	0.00001		NA			<	0.00002		NA		
1,2,3,7,8-Pentachlorodibenzo	NA			<	0.00002	UJ	NA			<	0.00005	UJ	NA		
1,2,3,7,8-Pentachlorodibenzo	NA			<	0.00008	UJ	NA			<	0.00003	UJ	NA		
2,3,4,6,7,8-Hexachlorodibenz	NA			<	0.00003		NA			<	0.00001		NA		
2,3,4,7,8-Pentachlorodibenzo	NA			<	0.00002	UJ	NA			<	0.00002	UJ	NA		
2,3,7,8-TCDD	NA			<	0.00025		NA			<	0.00017		NA		
2,3,7,8-TCDF	NA			<	0.00013		NA			<	0.00012		NA		
Heptachlorodibenzofuran	NA			<	0.00008		NA			<	0.00001		NA		
Heptachlorodibenzo-p-dioxin	NA			<	0.00002		NA			<	0.00006	J	NA		
Hexachlorodibenzo-p-dioxin	NA			<	0.00002		NA			<	0.00002		NA		
Hexachlorodibenzofuran	NA			<	0.00003		NA			<	0.00001		NA		
Octachlorodibenzo-p-dioxin	NA				0.00006	J	NA				0.00780	J	NA		
Octachlorodibenzofuran	NA			<	0.00006	UJ	NA			<	0.00003	UJ	NA		
Pentachlorodibenzo-p-dioxin	NA			<	0.00008	UJ	NA			<	0.00005	UJ	NA		
Pentachlorodibenzofuran	NA			<	0.00002	UJ	NA			<	0.00003		NA		
Tetrachlorodibenzofuran	NA			<	0.00008		NA			<	0.00003		NA		
Tetrachlorodibenzo-p-dioxin	NA			<	0.00001		NA			<	0.00001		NA		
HERBICIDE ORGANICS															

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REPORT DATE : 26-APR-92

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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CHEMICAL PARAMETERS	1719 067299 - FIELD BLANK			1719 067300 18.0 - 19.5			1719 067301 COMPOSITE TCLP			1720 067307 3.0 - 4.5			1720 067309 6.0 - 7.5 TCLP		
		a	b		a	b		a	b		a	b		a	b
HERBICIDE ORGANICS															
2,4,5-TP (Silvex)	NA			NA			< 0.00180		J	NA			< 0.00180		
2,4-D	NA			NA			< 0.01000			NA			< 0.01000		
ORGANOPHOSPOROUS PESTICIDES															
Azinphosmethyl	NA			< 0.20000			NA			< 1.00000			NA		
Demeton	NA			< 0.20000			NA			< 0.20000			NA		
Diazinon	NA			< 0.10000			NA			< 0.10000			NA		
Dimethoate	NA			< 0.10000			NA			< 0.10000			NA		
Disulfoton	NA			< 0.10000			NA			< 0.10000			NA		
Ethion	NA			< 0.10000			NA			< 0.10000			NA		
Famphur	NA			< 0.10000			NA			< 0.10000			NA		
Malathion	NA			< 0.10000			NA			< 0.10000			NA		
Parathion, ethyl	NA			< 0.10000			NA			< 0.10000			NA		
Parathion, methyl	NA			< 0.10000			NA			< 0.10000			NA		
Phorate	NA			< 0.10000			NA			< 0.10000			NA		
Sulfotepp	NA			< 0.10000			NA			< 0.10000			NA		
Tetraethylpyrophosphate	NA			< 0.40000			NA			< 0.40000			NA		
Thionazin	NA			< 0.10000			NA			< 0.10000			NA		
PESTICIDES															
4,4'-DDD	NA			< 0.01800			NA			< 0.01900			NA		
4,4'-DDE	NA			< 0.01800			NA			< 0.01900			NA		
4,4'-DDT	NA			< 0.01800			NA			< 0.01900			NA		
Aldrin	NA			< 0.00910			NA			< 0.00960			NA		
Aroclor-1016	NA			< 0.09100			NA			< 0.09600			NA		
Aroclor-1221	NA			< 0.09100			NA			< 0.09600			NA		
Aroclor-1232	NA			< 0.09100			NA			< 0.09600			NA		
Aroclor-1242	NA			< 0.09100			NA			< 0.09600			NA		
Aroclor-1248	NA			< 0.09100			NA			< 0.09600			NA		
Aroclor-1254	NA			< 0.18000			NA			< 0.19000			NA		
Aroclor-1260	NA			< 0.18000			NA			< 0.19000			NA		
Dieldrin	NA			< 0.01800			NA			< 0.01900			NA		
Endosulfan II	NA			< 0.01800			NA			< 0.01900			NA		
Endosulfan sulfate	NA			< 0.01800			NA			< 0.01900			NA		
Endosulfan-I	NA			< 0.00910			NA			< 0.00960			NA		
Endrin	NA			< 0.01800			< 0.00010			< 0.01900			NA		

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RI/FS DATA

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CHEMICAL PARAMETERS	1719 067299 - FIELD BLANK	a	b	1719 067300 18.0 - 19.5	a	b	1719 067301 COMPOSITE TCLP	a	b	1720 067307 3.0 - 4.5	a	b	1720 067309 6.0 - 7.5 TCLP	a	b
Endrin ketone	NA			< 0.01800			NA			< 0.01900			NA		
Heptachlor	NA			< 0.00910			< 0.00005			< 0.00960			NA		
Heptachlor epoxide	NA			< 0.00910			< 0.00005			< 0.00960			NA		
Methoxychlor	NA			< 0.09100			< 0.00050			< 0.09600			NA		
Toxaphene	NA			< 0.18000			< 0.00100			< 0.19000			NA		
alpha-BHC	NA			< 0.00910			NA			< 0.00960			NA		
alpha-Chlordane	NA			< 0.09100			< 0.00050			< 0.09600			NA		
beta-BHC	NA			< 0.00910			NA			< 0.00960			NA		
delta-BHC	NA			< 0.00910			NA			< 0.00960			NA		
gamma-BHC (Lindane)	NA			< 0.00910			< 0.00005			< 0.00960			NA		
gamma-Chlordane	NA			< 0.09100			< 0.00050			< 0.09600			NA		
SEMI-VOLATILE ORGANICS															
1,2,4-Trichlorobenzene	NA			< 0.37000			NA			< 0.40000		R	NA		
1,2-Dichlorobenzene	NA			< 0.37000			NA			< 0.40000		R	NA		
1,3-Dichlorobenzene	NA			< 0.37000			NA			< 0.40000		R	NA		
1,4-Dichlorobenzene	NA			< 0.37000			< 0.02000			< 0.40000		R	< 0.02000		
2,4,5-Trichlorophenol	NA			< 1.80000			< 0.10000	J		< 1.90000		R	< 0.10000		
2,4,6-Trichlorophenol	NA			< 0.37000			< 0.02000			< 0.40000		R	< 0.20400		
2,4-Dichlorophenol	NA			< 0.37000			NA			< 0.40000		R	NA		
2,4-Dimethylphenol	NA			< 0.37000			NA			< 0.40000		R	NA		
2,4-Dinitrophenol	NA			< 1.80000			NA			< 1.90000		R	NA		
2,4-Dinitrotoluene	NA			< 0.37000			< 0.02000			< 0.40000		R	< 0.02000		
2,6-Dinitrotoluene	NA			< 0.37000			NA			< 0.40000		R	NA		
2-Chloronaphthalene	NA			< 0.37000			NA			< 0.40000		R	NA		
2-Chlorophenol	NA			< 0.37000			NA			0.04900	J	J	NA		
2-Methylnaphthalene	NA			< 0.37000			NA			< 0.40000		R	NA		
2-Methylphenol	NA			< 0.37000			< 0.02000			< 0.40000		R	< 0.02000		
2-Nitroaniline	NA			< 1.80000			NA			< 1.90000		R	NA		
2-Nitrophenol	NA			< 0.37000			NA			< 0.40000		R	NA		
3,3'-Dichlorobenzidine	NA			< 0.75000	UJ		NA			< 0.79000		R	NA		
3-Nitroaniline	NA			< 1.80000			NA			< 1.90000		R	NA		
4,6-Dinitro-2-methylphenol	NA			< 1.80000			NA			< 1.90000		R	NA		
4-Bromophenyl phenyl ether	NA			< 0.37000			NA			< 0.40000		R	NA		
4-Chloro-3-methylphenol	NA			< 0.37000			NA			0.05500	J	J	NA		
4-Chloroaniline	NA			< 0.37000			NA			< 0.40000		R	NA		
4-Chlorophenylphenyl ether	NA			< 0.37000			NA			< 0.40000		R	NA		
4-Methylphenol	NA			< 0.37000			< 0.02000			< 0.40000		R	< 0.02000		
4-Nitroaniline	NA			< 1.80000			NA			< 1.90000		R	NA		
4-Nitrophenol	NA			< 1.80000			NA			< 1.90000		R	NA		
Acenaphthene	NA			< 0.37000			NA			0.05300	J	J	NA		
Acenaphthylene	NA			< 0.37000			NA			< 0.40000		R	NA		

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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CHEMICAL PARAMETERS	1719 067299 - FIELD BLANK	a	b	1719 067300 18.0 - 19.5	a	b	1719 067301 COMPOSITE TCLP	a	b	1720 067307 3.0 - 4.5	a	b	1720 067309 6.0 - 7.5 TCLP	a	b
Anthracene	NA			< 0.37000			NA			< 0.40000		R	NA		
Benzo(a)anthracene	NA			0.07200	J	J	NA			0.13000	J	J	NA		
Benzo(a)pyrene	NA			< 0.37000			NA			0.06900	J	J	NA		
Benzo(b)fluoranthene	NA			0.15000	J	J	NA			0.19000	J	J	NA		
Benzo(g,h,i)perylene	NA			< 0.37000			NA			< 0.40000		R	NA		
Benzo(k)fluoranthene	NA			< 0.37000			NA			< 0.40000		R	NA		
Benzoic acid	NA			< 1.80000		UJ	NA			< 1.90000		R	NA		
Benzyl alcohol	NA			< 0.37000			NA			< 0.40000		R	NA		
Butyl benzyl phthalate	NA			< 0.37000			NA			< 0.40000		R	NA		
Chrysene	NA			0.07400	J	J	NA			0.14000	J	J	NA		
Di-n-butyl phthalate	NA			< 0.37000			NA			< 0.40000		R	NA		
Di-n-octyl phthalate	NA			< 0.37000			NA			< 0.40000		R	NA		
Dibenzo(a,h)anthracene	NA			< 0.37000			NA			< 0.40000		R	NA		
Dibenzofuran	NA			< 0.37000			NA			< 0.40000		R	NA		
Diethyl phthalate	NA			< 0.37000			NA			< 0.40000		R	NA		
Dimethyl phthalate	NA			< 0.37000			NA			< 0.40000		R	NA		
Fluoranthene	NA			0.15000	J	J	NA			0.25000	J	J	NA		
Fluorene	NA			< 0.37000			NA			< 0.40000		R	NA		
Hexachlorobenzene	NA			< 0.37000			< 0.02000			< 0.40000		R	< 0.02000		
Hexachlorobutadiene	NA			< 0.37000			< 0.02000			< 0.40000		R	< 0.02000		
Hexachlorocyclopentadiene	NA			< 0.37000			NA			< 0.40000		R	NA		
Hexachloroethane	NA			< 0.37000			< 0.02000			< 0.40000		R	< 0.02000		
Indeno(1,2,3-cd)pyrene	NA			< 0.37000			NA			< 0.40000		R	NA		
Isophorone	NA			< 0.37000			NA			< 0.40000		R	NA		
N-Nitroso-di-n-propylamine	NA			< 0.37000			NA			< 0.40000		R	NA		
N-Nitrosodiphenylamine	NA			< 0.37000			NA			< 0.40000		R	NA		
Naphthalene	NA			< 0.37000			NA			< 0.40000		R	NA		
Nitrobenzene	NA			< 0.37000			< 0.02000			< 0.40000		R	< 0.02000		
O,O,O-Triethylphosphorothioa	NA			< 0.10000			NA			NA			NA		
Pentachlorophenol	NA			< 1.80000			< 0.10000			< 1.90000		R	< 0.10000		
Phenanthrene	NA			0.08300	J	J	NA			0.16000	J	J	NA		
Phenol	NA			< 0.37000			NA			0.06100	J	J	NA		
Pyrene	NA			0.14000	J	J	NA			0.27000	J	J	NA		
bis(2-Chloroethoxy)methane	NA			< 0.37000			NA			< 0.40000		R	NA		
bis(2-Chloroethyl)ether	NA			< 0.37000			NA			< 0.40000		R	NA		
bis(2-Chloroisopropyl) ether	NA			< 0.37000			NA			< 0.40000		R	NA		
bis(2-Ethylhexyl) phthalate	NA			0.04000	J	J	NA			< 0.40000		R	NA		
3-Methylphenol	NA			NA			< 0.02000			NA			< 0.02000		
O,O,O-Triethylphosphorothioa	NA			NA			NA			< 0.10000			NA		
VOLATILE ORGANICS															
1,1,1-Trichloroethane	< 0.00500	J	UJ	< 0.00500		UJ	NA			< 0.00600			NA		

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CHEMICAL PARAMETERS	1719 067299 - FIELD BLANK	a	b	1719 067300 18.0 - 19.5	a	b	1719 067301 COMPOSITE TCLP	a	b	1720 067307 3.0 - 4.5	a	b	1720 067309 6.0 - 7.5 TCLP	a	b
1,1,2,2-Tetrachloroethane	< 0.00500			< 0.00500			NA			< 0.00600			NA		
1,1,2-Trichloroethane	< 0.00500			< 0.00500			NA			< 0.00600			NA		
1,1-Dichloroethane	< 0.00500			< 0.00500			NA			< 0.00600			NA		
1,1-Dichloroethene	< 0.00500			< 0.00500			NA			< 0.00600			< 0.00500		
1,2-Dichloroethane	< 0.00500			< 0.00500			NA			< 0.00600			< 0.00500		
1,2-Dichloroethylene	< 0.00500			< 0.00500			NA			< 0.00600			NA		
1,2-Dichloropropane	< 0.00500			< 0.00500			NA			< 0.00600			NA		
2-Butanone	0.00200	J	J	0.01100	J		NA			0.01200	BJ	U	0.00400	J	
2-Hexanone	< 0.01000		UJ	< 0.01100		UJ	NA			< 0.01200			NA		
4-Methyl-2-pentanone	< 0.01000		UJ	< 0.01100		UJ	NA			< 0.01200			NA		
Acetone	< 0.01000		UJ	0.01000	J		NA			0.01200	BJ	UJ	NA		
Benzene	< 0.00500		UJ	< 0.00500			NA			< 0.00600			< 0.00500		
Bromodichloromethane	< 0.00500			< 0.00500			NA			< 0.00600			NA		
Bromoform	< 0.00500			< 0.00500			NA			< 0.00600		UJ	NA		
Bromomethane	< 0.01000			< 0.01100			NA			< 0.01200		UJ	NA		
Carbon Tetrachloride	< 0.00500			< 0.00500			NA			< 0.00600			< 0.00500		
Carbon disulfide	< 0.00500			< 0.00500			NA			< 0.00600			NA		
Chlorobenzene	< 0.00500		UJ	< 0.00500			NA			< 0.00600			< 0.00500		
Chloroethane	< 0.01000			< 0.01100			NA			< 0.01200		UJ	NA		
Chloroform	< 0.00500			< 0.00500			NA			< 0.00600			< 0.00500		
Chloromethane	< 0.01000			< 0.01100			NA			< 0.01200		UJ	NA		
Dibromochloromethane	< 0.00500			< 0.00500			NA			< 0.00600			NA		
Ethylbenzene	< 0.00500		UJ	< 0.00500			NA			< 0.00600			NA		
Methylene chloride	< 0.00500			0.00800	B		NA			0.00600	BJ	U	NA		
Styrene	< 0.00500		UJ	< 0.00500			NA			< 0.00600			NA		
Tetrachloroethene	< 0.00500			< 0.00500			NA			< 0.00600			< 0.00500		
Toluene	0.00200	BJ	UJ	0.00500	BJ	U	NA			0.00600	BJ	U	NA		
Total xylenes	< 0.00500		UJ	< 0.00500			NA			< 0.00600			NA		
Trichloroethene	< 0.00500			< 0.00500			NA			< 0.00600			< 0.00500		
Vinyl Acetate	< 0.01000		UJ	< 0.01100		UJ	NA			< 0.01200			NA		
Vinyl chloride	< 0.01000			< 0.01100			NA			< 0.01200			< 0.01000		
cis-1,3-Dichloropropene	< 0.00500			< 0.00500			NA			< 0.00600			NA		
trans-1,3-Dichloropropene	< 0.00500			< 0.00500			NA			< 0.00600			NA		
Pyridine	NA			NA			< 0.02000			NA			< 0.02000		

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	1720 067311 7.5 - 9.0		1720 067312 9.0 - 10.5		1720 067318 COMPOSITE TCLP		1721 067234 9.0 - 10.5		1721 067236 12.0 - 13.5 EP TOXICITY	
	a	b	a	b	a	b	a	b	a	b
DIOXINS										
1,2,3,4,6,7,8-Heptachlorodib	< 0.00008		< 0.00002		NA		< 0.00002		NA	
1,2,3,4,6,7,8-Heptachlorodib	< 0.00003		< 0.00001		NA		< 0.00004		NA	
1,2,3,4,7,8,9-Heptachlorodib	< 0.00004		< 0.00001		NA		< 0.00002		NA	
1,2,3,4,7,8-Hexachlorodibenz	< 0.00001		< 0.00003		NA		< 0.00001		NA	
1,2,3,4,7,8-Hexachlorodibenz	< 0.00001		< 0.00002		NA		< 0.00008		NA	
1,2,3,6,7,8-Hexachlorodibenz	< 0.00001		< 0.00002		NA		< 0.00006		NA	
1,2,3,6,7,8-Hexachlorodibenz	< 0.00001		< 0.00002		NA		< 0.00001		NA	
1,2,3,7,8,9-Hexachlorodibenz	< 0.00001		< 0.00002		NA		< 0.00002		NA	
1,2,3,7,8,9-Hexachlorodibenz	< 0.00001		< 0.00002		NA		< 0.00006		NA	
1,2,3,7,8-Pentachlorodibenzo	< 0.00017		< 0.00009	UJ	NA		< 0.00001		NA	
1,2,3,7,8-Pentachlorodibenzo	< 0.00003	UJ	< 0.00007	UJ	NA		< 0.00005		NA	
2,3,4,6,7,8-Hexachlorodibenz	< 0.00001		< 0.00002		NA		< 0.00002		NA	
2,3,4,7,8-Pentachlorodibenzo	< 0.00003	UJ	< 0.00009	UJ	NA		< 0.00005		NA	
2,3,7,8-TCDD	< 0.00013		< 0.00015		NA		< 0.00012		NA	
2,3,7,8-TCDF	< 0.00008		< 0.00015		NA		< 0.00011		NA	
Heptachlorodibenzo-p-dioxin	< 0.00008		< 0.00002		NA		< 0.00004		NA	
Heptachlorodibenzofuran	< 0.00003		< 0.00001		NA		< 0.00002		NA	
Hexachlorodibenzo-p-dioxin	< 0.00001		< 0.00002		NA		< 0.00007		NA	
Hexachlorodibenzofuran	< 0.00001		< 0.00002		NA		< 0.00001		NA	
Octachlorodibenzo-p-dioxin	0.00720	J	0.00086	J	NA		0.00031	J	NA	
Octachlorodibenzofuran	< 0.00001	UJ	< 0.00004	UJ	NA		< 0.00012	UJ	NA	
Pentachlorodibenzofuran	< 0.00003	UJ	< 0.00009	UJ	NA		< 0.00005	J	NA	
Pentachlorodibenzo-p-dioxin	< 0.00017		< 0.00007	UJ	NA		< 0.00014		NA	
Tetrachlorodibenzofuran	< 0.00002		< 0.00006		NA		< 0.00001		NA	
Tetrachlorodibenzo-p-dioxin	< 0.00003		< 0.00001		NA		< 0.00002		NA	

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CHEMICAL PARAMETERS	1720 067311 7.5 - 9.0	a	b	1720 067312 9.0 - 10.5	a	b	1720 067318 COMPOSITE TCLP	a	b	1721 067234 9.0 - 10.5	a	b	1721 067236 12.0 - 13.5 EP TOXICITY	a	b
HERBICIDE ORGANICS															
2,4,5-T	< 0.04800			NA			NA			< 0.05000			NA		
2,4,5-TP (Silvex)	< 0.04400			NA			< 0.00180			< 0.04600			< 0.00180		
2,4-D	< 0.25000			NA			< 0.01000			< 0.25000			< 0.01000		
ORGANOPHOSPOROUS PESTICIDES															
Azinphosmethyl	< 1.00000			< 1.00000			NA			< 1.00000			NA		
Demeton	< 0.20000			< 0.20000			NA			< 0.20000			NA		
Diazinon	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Dimethoate	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Disulfoton	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Ethion	< 0.10000			< 0.10000			NA			NA			NA		
Famphur	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Malathion	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Parathion, ethyl	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Parathion, methyl	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Phorate	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Sulfotepp	< 0.10000			< 0.10000			NA			0.44000	R		NA		
Sulfotepp	< 0.41000	R		NA			NA			NA			NA		
Tetraethylpyrophosphate	< 0.40000			< 0.40000			NA			< 0.40000			NA		
Thionazin	< 0.10000			< 0.10000			NA			< 0.10000			NA		
PESTICIDES															
4,4'-DDD	< 0.02000			< 0.01900			NA			< 0.02100			NA		
4,4'-DDE	< 0.02000			< 0.01900			NA			< 0.02100			NA		
4,4'-DDT	< 0.02000			< 0.01900			NA			< 0.02100	J		NA		

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CHEMICAL PARAMETERS	1720 067311 7.5 - 9.0	a	b	1720 067312 9.0 - 10.5	a	b	1720 067318 COMPOSITE TCLP	a	b	1721 067234 9.0 - 10.5	a	b	1721 067236 12.0 - 13.5 EP TOXICITY	a	b
Aldrin	< 0.01000			< 0.00930			NA			< 0.01100		J	NA		
Aroclor-1016	< 0.10000			< 0.09300			NA			< 0.11000			NA		
Aroclor-1221	< 0.10000			< 0.09300			NA			< 0.11000			NA		
Aroclor-1232	< 0.10000			< 0.09300			NA			< 0.11000			NA		
Aroclor-1242	< 0.10000			< 0.09300			NA			< 0.11000			NA		
Aroclor-1248	< 0.10000			< 0.09300			NA			< 0.11000			NA		
Aroclor-1254	< 0.20000			< 0.19000			NA			< 0.21000			NA		
Aroclor-1260	< 0.20000			< 0.19000			NA			0.61000	XF		NA		
Dieldrin	< 0.02000			< 0.01900			NA			< 0.02100		J	NA		
Endosulfan II	< 0.02000			< 0.01900			NA			< 0.02100			NA		
Endosulfan sulfate	< 0.02000			< 0.01900			NA			< 0.02100			NA		
Endosulfan-I	< 0.01000			< 0.00930			NA			< 0.01100			NA		
Endrin	< 0.02000			< 0.01900			< 0.00010			< 0.02100			< 0.00010		
Endrin ketone	< 0.02000			< 0.01900			NA			< 0.02100			NA		
Heptachlor	< 0.01000			< 0.00930			< 0.00005			< 0.01100			< 0.00005		
Heptachlor epoxide	< 0.01000			< 0.00930			< 0.00005			< 0.01100			< 0.00005		
Methoxychlor	< 0.10000			< 0.09300			< 0.00050			< 0.11000			< 0.00050		
Toxaphene	< 0.20000			< 0.19000			< 0.00100			< 0.21000			< 0.00100		
alpha-BHC	< 0.01000			< 0.00930			NA			< 0.01100			NA		
alpha-Chlordane	< 0.10000			< 0.09300			< 0.00050			< 0.11000			< 0.00050		
beta-BHC	< 0.01000			< 0.00930			NA			< 0.01100			NA		
delta-BHC	< 0.01000			< 0.00930			NA			< 0.01100			NA		
gamma-BHC (Lindane)	< 0.01000			< 0.00930			< 0.00005			< 0.01100			< 0.00005		
gamma-Chlordane	< 0.10000			< 0.09300			< 0.00050			< 0.11000			< 0.00050		
Isodrin	NA			NA			NA			< 0.01100			NA		
Kepone	NA			NA			NA			< 0.02100			NA		
Chlorobenzilate	NA			NA			NA			< 0.02100			NA		
Chlorodane	NA			NA			< 0.00050			NA			NA		
SEMI-VOLATILE ORGANICS															
1,2,4,5-Tetrachlorobenzene	< 0.41000			NA			NA			< 0.44000		UJ	NA		
1,2,4-Trichlorobenzene	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
1,2-Dichlorobenzene	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
1,3,5-Trinitrobenzene	< 0.41000			NA			NA			< 0.44000		R	NA		
1,3-Dichlorobenzene	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
1,4-Dichlorobenzene	< 0.41000			< 0.39000	R		< 0.02000			< 0.44000			NA		
1,4-Naphthoquinone	< 0.41000			NA			NA			< 0.44000		UJ	NA		
1-Naphthylamine	< 5.00000			NA			NA			< 5.40000		UJ	NA		
2,3,4,6-Tetrachlorophenol	< 0.41000			NA			NA			< 0.44000		UJ	NA		
2,4,5-Trichlorophenol	< 2.00000			< 1.90000	R		< 0.10000			< 2.20000			NA		
2,4,6-Trichlorophenol	< 0.41000	J		< 0.39000	R		< 0.02000			< 0.44000			NA		
2,4-Dichlorophenol	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
2,4-Dimethylphenol	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
2,4-Dinitrophenol	< 2.00000			< 1.90000	R		NA			< 2.20000			NA		

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2,4-Dinitrotoluene	< 0.41000			< 0.39000	R		< 0.02000			< 0.44000			NA		
2,6-Dichlorophenol	< 0.41000			NA			NA			< 0.44000		UJ	NA		
2,6-Dinitrotoluene	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
2-Acetylaminofluorene	< 0.41000			NA			NA			< 0.44000			NA		
2-Chloronaphthalene	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
2-Chlorophenol	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
2-Methylnaphthalene	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
2-Methylphenol	< 0.41000			< 0.39000	R		< 0.02000			< 0.44000			NA		
2-Naphthylamine	< 7.10000			NA			NA			7.70000		UJ	NA		
2-Nitroaniline	< 2.00000			< 1.90000	R		NA			< 2.20000			NA		
2-Nitrophenol	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
2-Picoline	< 2.90000			NA			NA			3.10000		R	NA		
3,3'-Dichlorobenzidine	< 0.82000			< 0.78000	R		NA			< 0.89000			NA		
3,3'-Dimethylbenzidine	< 3.40000			NA			NA			< 3.60000			NA		
3-Methylcholanthrene	< 1.20000			NA			NA			< 1.30000		UJ	NA		
3-Methylphenol	< 0.41000			NA			< 0.02000			< 0.44000		R	NA		
3-Nitroaniline	< 2.00000		J	< 1.90000	R		NA			< 2.20000			NA		
4,6-Dinitro-2-methylphenol	< 2.00000			< 1.90000	R		NA			< 2.20000			NA		
4-Aminobiphenyl	< 2.10000			NA			NA			< 2.20000		UJ	NA		
4-Bromophenyl phenyl ether	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
4-Chloro-3-methylphenol	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
4-Chloroaniline	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
4-Chlorophenylphenyl ether	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
4-Methylphenol	< 0.41000			< 0.39000	R		< 0.02000			< 0.44000			NA		
4-Nitroaniline	< 2.00000			< 1.90000	R		NA			< 2.20000			NA		
4-Nitrophenol	< 2.00000		J	< 1.90000	R		NA			< 2.20000			NA		
4-Nitroquinoline-1-oxide	< 0.41000			NA			NA			< 0.44000		R	NA		
5-Nitro-o-toluidine	< 0.83000			NA			NA			< 0.90000		UJ	NA		
7,12-Dimethylbenz(a)anthrace	< 0.83000			NA			NA			< 0.90000		UJ	NA		
Acenaphthene	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
Acenaphthylene	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
Acetophenone	< 0.41000			NA			NA			< 0.44000		UJ	NA		
Aniline	< 2.10000			NA			NA			< 2.30000			NA		
Anthracene	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
Aramite	< 0.41000			NA			NA			< 0.44000		R	NA		
Benzo(a)anthracene	0.04300	J		< 0.39000	R		NA			< 0.44000			NA		
Benzo(a)pyrene	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
Benzo(b)fluoranthene	0.05400	J		< 0.39000	R		NA			< 0.44000			NA		
Benzo(g,h,i)perylene	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
Benzo(k)fluoranthene	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
Benzoic acid	< 2.00000		J	< 1.90000	R		NA			2.20000	BJ	U	NA		
Benzyl alcohol	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
Butyl benzyl phthalate	< 0.41000			< 0.39000	R		NA			< 0.44000			NA		
Chrysene	0.04700	J		< 0.39000	R		NA			< 0.44000			NA		

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CHEMICAL PARAMETERS	1720 067311 7.5 - 9.0			1720 067312 9.0 - 10.5			1720 067318 COMPOSITE TCLP			1721 067234 9.0 - 10.5			1721 067236 12.0 - 13.5 EP TOXICITY		
		a	b		a	b		a	b		a	b		a	b
Di-n-butyl phthalate	< 0.41000			< 0.39000		R		NA		< 0.44000				NA	
Di-n-octyl phthalate	< 0.41000			< 0.39000		R		NA		< 0.44000				NA	
Diallate	< 0.41000				NA			NA		< 0.44000		UJ		NA	
Dibenzo(a,h)anthracene	< 0.41000			< 0.39000		R		NA		< 0.44000				NA	
Dibenzofuran	< 0.41000			< 0.39000		R		NA		< 0.44000				NA	
Diethyl phthalate	< 0.41000				0.75000	J		NA		< 0.44000				NA	
Dimethyl phthalate	< 0.41000			< 0.39000		R		NA		< 0.44000				NA	
Dinoseb	< 0.83000		R		NA			NA		< 0.01800				NA	
Dinoseb	< 0.01700				NA			NA		< 0.90000		R		NA	
Diphenylamine	< 0.41000				NA			NA		< 0.44000		UJ		NA	
Ethyl methanesulfonate	< 0.41000				NA			NA		< 0.44000		R		NA	
Fluoranthene	0.09400	J		< 0.39000		R		NA		< 0.44000				NA	
Fluorene	< 0.41000			< 0.39000		R		NA		< 0.44000				NA	
Hexachlorobenzene	< 0.41000			< 0.39000		R	<	0.02000		< 0.44000				NA	
Hexachlorobutadiene	< 0.41000			< 0.39000		R	<	0.02000		< 0.44000				NA	
Hexachlorocyclopentadiene	< 0.41000			< 0.39000		R		NA		< 0.44000				NA	
Hexachloroethane	< 0.41000		J	< 0.39000		R	<	0.02000		< 0.44000				NA	
Hexachlorophene	< 2.10000				NA			NA		< 2.30000		UJ		NA	
Hexachloropropene	< 0.83000				NA			NA		< 0.90000		R		NA	
Indeno(1,2,3-cd)pyrene	< 0.41000			< 0.39000		R		NA		< 0.44000				NA	
Isophorone	< 0.41000			< 0.39000		R		NA		< 0.44000				NA	
Isosafrole	< 0.41000				NA			NA		< 0.44000		UJ		NA	
Methapyrilene	< 1.70000				NA			NA		< 1.80000		R		NA	
Methyl methanesulfonate	< 0.41000				NA			NA		< 0.44000		UJ		NA	
M-Dinitrobenzene	NA				NA			NA		< 0.44000				NA	
N-Nitroso-di-n-propylamine	< 0.41000			< 0.39000		R		NA		< 0.44000				NA	
N-Nitrosodi-n-butylamine	< 0.83000				NA			NA		< 0.90000		R		NA	
N-Nitrosodiethylamine	< 0.41000				NA			NA		< 0.44000		R		NA	
N-Nitrosodimethylamine	< 0.41000				NA			NA		< 0.44000		R		NA	
N-Nitrosodiphenylamine	< 0.41000			< 0.39000		R		NA		< 0.44000				NA	
N-Nitrosomethylethylamine	< 0.41000				NA			NA		< 0.44000		R		NA	
N-Nitrosomorpholine	< 0.41000				NA			NA		< 0.44000		R		NA	
N-Nitrosopiperidine	< 0.41000				NA			NA		< 0.44000		R		NA	
N-Nitrosopyrrolidine	< 0.41000				NA			NA		< 0.44000		R		NA	
Naphthalene	< 0.41000		J	< 0.39000		R		NA		< 0.44000				NA	
Nitrobenzene	< 0.41000		J	< 0.39000		R	<	0.02000		< 0.44000				NA	
O,O,O-Triethylphosphorothioa	< 0.41000		R		NA			NA		< 0.10000				NA	
O,O,O-Triethylphosphorothioa	< 0.10000				NA			NA		< 0.44000		UJ		NA	
Pentachlorobenzene	< 0.83000				NA			NA		< 0.90000		UJ		NA	
Pentachloroethane	< 0.83000				NA			NA		< 0.90000		UJ		NA	
Pentachloronitrobenzene	< 0.83000				NA			NA		< 0.90000		UJ		NA	
Pentachlorophenol	< 2.00000			< 1.90000		R	<	0.10000		< 2.20000				NA	
Phenacetin	< 0.41000				NA			NA		< 0.44000		UJ		NA	
Phenanthrene	0.05300	J		< 0.39000		R		NA		< 0.44000				NA	
Phenol	< 0.41000			< 0.39000		R		NA		< 0.44000				NA	

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SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
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CHEMICAL PARAMETERS	1720 067311 7.5 - 9.0	a	b	1720 067312 9.0 - 10.5	a	b	1720 067318 COMPOSITE TCLP	a	b	1721 067234 9.0 - 10.5	a	b	1721 067236 12.0 - 13.5 EP TOXICITY	a	b
Pronamide	< 1.20000			NA			NA			< 1.30000		UJ	NA		
Pyrene	0.07300	J		< 0.39000		R	NA			< 0.44000			NA		
Safrole	< 0.41000			NA			NA			< 0.44000		UJ	NA		
a,a-Dimethylphenethylamine	< 0.41000			NA			NA			< 0.44000		UJ	NA		
bis(2-Chloroethoxy)methane	< 0.41000			< 0.39000		R	NA			< 0.44000			NA		
bis(2-Chloroethyl)ether	< 0.41000			< 0.39000		R	NA			< 0.44000			NA		
bis(2-Chloroisopropyl) ether	< 0.41000			< 0.39000		R	NA			< 0.44000			NA		
bis(2-Ethylhexyl) phthalate	< 0.41000			< 0.39000		R	NA			< 0.44000			NA		
o-Toluidine	< 0.41000			NA			NA			< 0.44000		UJ	NA		
p-Dimethylaminoazobenzene	< 1.20000			NA			NA			< 1.30000		UJ	NA		
p-Phenylenediamine	< 2.10000			NA			NA			< 2.20000		R	NA		
O,O,O-Triethylphosphorothioa	NA			< 0.10000			NA			NA			NA		
7,12-Dimethylbenz(a)anthrace	NA			NA			NA			< 0.90000		UJ	NA		
O,O,O-Triethylphosphorothioa	NA			NA			NA			< 0.10000			NA		
O,O,O-Triethylphosphorothioa	NA			NA			NA			< 0.44000		UJ	NA		
VOLATILE ORGANICS															
1,1,1-Trichloroethane	< 0.00600		UJ	< 0.00600			NA			< 0.00600			NA		
1,1,2,2-Tetrachloroethane	< 0.00600			< 0.00600			NA			< 0.00600			NA		
1,1,2-Trichloroethane	< 0.00600			< 0.00600			NA			< 0.00600			NA		
1,1-Dichloroethane	< 0.00600			< 0.00600			NA			0.01600			NA		
1,1-Dichloroethene	< 0.00600			< 0.00600			NA			< 0.00600			NA		
1,2-Dichloroethane	< 0.00600			< 0.00600			NA			< 0.00600			NA		
1,2-Dichloroethylene	0.01200			< 0.00600			NA			< 0.00600			NA		
1,2-Dichloropropane	< 0.00600			< 0.00600			NA			< 0.00600			NA		
2-Butanone	0.01200	J	UJ	< 0.01200			NA			< 0.01300			NA		
2-Hexanone	0.01200	J	UJ	0.01200	BJ	U	NA			< 0.01300			NA		
4-Methyl-2-pentanone	< 0.01200		UJ	< 0.01200			NA			< 0.01300			NA		
Acetone	0.03300		UJ	0.01600	B	UJ	NA			0.03900	B		NA		
Benzene	< 0.00600		J	< 0.00600			NA			< 0.00600			NA		
Bromodichloromethane	< 0.00600			< 0.00600			NA			< 0.00600			NA		
Bromoform	< 0.00600			< 0.00600		UJ	NA			< 0.00600			NA		
Bromomethane	< 0.01200			< 0.01200		UJ	NA			< 0.01300			NA		
Carbon Tetrachloride	< 0.00600			< 0.00600			NA			< 0.00600			NA		
Carbon disulfide	< 0.00600			< 0.00600			NA			< 0.00600			NA		
Chlorobenzene	< 0.00600			< 0.00600			NA			< 0.00600			NA		
Chloroethane	< 0.01200			< 0.01200		UJ	NA			< 0.01300			NA		
Chloroform	< 0.00600			< 0.00600			NA			< 0.00600			NA		
Chloromethane	< 0.01200			< 0.01200		UJ	NA			0.00600	J		NA		
Dibromochloromethane	< 0.00600			< 0.00600			NA			< 0.00600			NA		
Ethylbenzene	< 0.00600			< 0.00600			NA			< 0.00600			NA		
Methylene chloride	0.00600	BJ	U	0.02500	B	U	NA			0.00800	B		NA		

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CHEMICAL PARAMETERS	1720 067311 7.5 - 9.0	a	b	1720 067312 9.0 - 10.5	a	b	1720 067318 COMPOSITE TCLP	a	b	1721 067234 9.0 - 10.5	a	b	1721 067236 12.0 - 13.5 EP TOXICITY	a	b
Styrene	< 0.00600			< 0.00600			NA			< 0.00600			NA		
Tetrachlorethene	< 0.00600			< 0.00600			NA			< 0.00600			NA		
Toluene	0.00600	BJ	U	0.00600	BJ	U	NA			< 0.00600			NA		
Total xylenes	< 0.00600			< 0.00600			NA			< 0.00600			NA		
Trichloroethene	< 0.00600			< 0.00600			NA			< 0.00600			NA		
Vinyl Acetate	< 0.01200		UJ	< 0.01200			NA			< 0.01300			NA		
Vinyl chloride	< 0.01200			< 0.01200			NA			< 0.01300			NA		
cis-1,3-Dichloropropene	< 0.00600			< 0.00600			NA			< 0.00600			NA		
trans-1,3-Dichloropropene	< 0.00600			< 0.00600			NA			< 0.00600			NA		
Pyridine	< 0.02400	B	R	NA			< 0.02000			< 0.02580			NA		
1,1,1,2-Tetrachloroethane	< 0.00600			NA			NA			< 0.00644			NA		
1,2,3-Trichloropropane	< 0.00600		UJ	NA			NA			< 0.00644			NA		
1,2-Dibromo-3-chloropropane	< 0.01200		UJ	NA			NA			< 0.01290			NA		
1,2-Dibromoethane	< 0.00600			NA			NA			< 0.00644			NA		
1,4-Dioxane	< 0.24000	B	R	NA			NA			12.90000		J	NA		
2-Chloro-1,3-butadiene	< 0.00600			NA			NA			< 0.00644			NA		
3-Chloropropene	< 0.00600			NA			NA			< 0.00644			NA		
Acetonitrile	< 1.20000		UJ	NA			NA			< 1.29000			NA		
Acrolein	< 0.01200		UJ	NA			NA			< 0.01290			NA		
Acrylonitrile	< 0.01200		R	NA			NA			< 0.01290			NA		
Dibromomethane	< 0.01200			NA			NA			< 0.01290			NA		
Dichlorodifluoromethane	< 0.24000		R	NA			NA			0.57600			NA		
Ethyl cyanide	< 0.12000		UJ	NA			NA			< 0.12900			NA		
Ethyl methacrylate	< 0.01200			NA			NA			< 0.01290			NA		
Iodomethane	< 0.00600			NA			NA			< 0.00644			NA		
Isobutyl alcohol	< 0.02400		R	NA			NA			< 0.02580			NA		
Methacrylonitrile	< 0.01200			NA			NA			< 0.01290			NA		
Methyl methacrylate	< 0.01200		UJ	NA			NA			< 0.01290			NA		
Trichlorofluoromethane	< 0.00600		UJ	NA			NA			< 0.00644			NA		
trans-1,4-Dichloro-2-butene	< 0.12000		R	NA			NA			< 0.12900			NA		

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CHEMICAL PARAMETERS	1721 067237 13.5 - 15.0	a	b	1721 067239 - FIELD BLANK	a	b	1721 067243 - FIELD BLANK	a	b	1721 067245 COMPOSITE TCLP	a	b	1722 067250 1.5 - 3.0	a	b
DIOXINS															
1,2,3,4,6,7,8-Heptachlorodib	< 0.00001			NA			NA			NA			< 0.00002		
1,2,3,4,6,7,8-Heptachlorodib	< 0.00002			NA			NA			NA			< 0.00004		
1,2,3,4,7,8,9-Heptachlorodib	< 0.00003			NA			NA			NA			< 0.00005		
1,2,3,4,7,8-Hexachlorodibenz	< 0.00002			NA			NA			NA			< 0.00003		
1,2,3,4,7,8-Hexachlorodibenz	< 0.00002			NA			NA			NA			< 0.00001		
1,2,3,6,7,8-Hexachlorodibenz	< 0.00001			NA			NA			NA			< 0.00003		
1,2,3,6,7,8-Hexachlorodibenz	< 0.00002			NA			NA			NA			< 0.00001		
1,2,3,7,8,9-Hexachlorodibenz	< 0.00002			NA			NA			NA			< 0.00001		
1,2,3,7,8,9-Hexachlorodibenz	< 0.00002			NA			NA			NA			< 0.00003		
1,2,3,7,8-Pentachlorodibenzo	< 0.00006			NA			NA			NA			< 0.00009		
1,2,3,7,8-Pentachlorodibenzo	< 0.00001			NA			NA			NA			< 0.00001		
2,3,4,6,7,8-Hexachlorodibenz	< 0.00002			NA			NA			NA			< 0.00001		
2,3,4,7,8-Pentachlorodibenzo	< 0.00001			NA			NA			NA			< 0.00001		
2,3,7,8-TCDD	< 0.00007			NA			NA			NA			< 0.00005		
2,3,7,8-TCDF	< 0.00004			NA			NA			NA			< 0.00004		
Heptachlorodibenzo-p-dioxin	< 0.00001			NA			NA			NA			< 0.00002		
Heptachlorodibenzofuran	< 0.00002			NA			NA			NA			< 0.00004		
Hexachlorodibenzo-p-dioxin	< 0.00002			NA			NA			NA			< 0.00003		
Hexachlorodibenzofuran	< 0.00002			NA			NA			NA			< 0.00001		
Octachlorodibenzo-p-dioxin	0.00005		J	NA			NA			NA			0.00006		J
Octachlorodibenzofuran	< 0.00004		UJ	NA			NA			NA			< 0.00001		UJ
Pentachlorodibenzo-p-dioxin	< 0.00006			NA			NA			NA			< 0.00009		
Pentachlorodibenzofuran	< 0.00001			NA			NA			NA			< 0.00001		
Tetrachlorodibenzofuran	< 0.00002			NA			NA			NA			< 0.00001		
Tetrachlorodibenzo-p-dioxin	< 0.00003			NA			NA			NA			< 0.00001		

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CHEMICAL PARAMETERS	1721 067237 13.5 - 15.0 a b	1721 067239 - FIELD BLANK a b	1721 067243 - FIELD BLANK a b	1721 067245 COMPOSITE TCLP a b	1722 067250 1.5 - 3.0 a b
HERBICIDE ORGANICS					
2,4,5-TP (Silvex)	NA	NA	NA	< 0.00180	NA
2,4-D	NA	NA	NA	< 0.01000	NA
ORGANOPHOSPOROUS PESTICIDES					
Azinphosmethyl	< 1.00000	NA	NA	NA	< 0.20000
Demeton	< 0.20000	NA	NA	NA	< 0.20000
Diazinon	< 0.10000	NA	NA	NA	< 0.10000
Dimethoate	< 0.10000	NA	NA	NA	< 0.10000
Disulfoton	< 0.10000	NA	NA	NA	< 0.10000
Ethion	< 0.10000	NA	NA	NA	< 0.10000
Famphur	< 0.10000	NA	NA	NA	< 0.10000
Malathion	< 0.10000	NA	NA	NA	< 0.10000
Parathion, ethyl	< 0.10000	NA	NA	NA	< 0.10000
Parathion, methyl	< 0.10000	NA	NA	NA	< 0.10000
Phorate	< 0.10000	NA	NA	NA	< 0.10000
Sulfotepp	< 0.10000	NA	NA	NA	< 0.10000
Tetraethylpyrophosphate	< 0.40000	NA	NA	NA	< 0.40000
Thionazin	< 0.10000	NA	NA	NA	< 0.10000
PESTICIDES					
4,4'-DDD	< 0.02100	NA	NA	NA	< 0.01800
4,4'-DDE	< 0.02100	NA	NA	NA	< 0.01800
4,4'-DDT	< 0.02100	NA	NA	NA	< 0.01800
Aldrin	< 0.01000	NA	NA	NA	< 0.00910
Aroclor-1016	< 0.10000	NA	NA	NA	< 0.09100
Aroclor-1221	< 0.10000	NA	NA	NA	< 0.09100
Aroclor-1232	< 0.10000	NA	NA	NA	< 0.09100
Aroclor-1242	< 0.10000	NA	NA	NA	< 0.09100
Aroclor-1248	< 0.10000	NA	NA	NA	< 0.09100
Aroclor-1254	< 0.21000	NA	NA	NA	< 0.18000
Aroclor-1260	< 0.21000	NA	NA	NA	< 0.18000
Dieldrin	< 0.02100	NA	NA	NA	< 0.01800
Endosulfan II	< 0.02100	NA	NA	NA	< 0.01800
Endosulfan sulfate	< 0.02100	NA	NA	NA	< 0.01800
Endosulfan-I	< 0.01000	NA	NA	NA	< 0.00910
Endrin	< 0.02100	NA	NA	< 0.00010	< 0.01800

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Endrin ketone	< 0.02100			NA			NA			NA			< 0.01800		
Heptachlor	< 0.01000			NA			NA			< 0.00005			< 0.00910		
Heptachlor epoxide	< 0.01000			NA			NA			< 0.00005			< 0.00910		
Methoxychlor	< 0.10000			NA			NA			< 0.00050			< 0.09100		
Toxaphene	< 0.21000			NA			NA			< 0.00100			< 0.18000		
alpha-BHC	< 0.01000			NA			NA			NA			< 0.00910		
alpha-Chlordane	< 0.10000			NA			NA			< 0.00050			< 0.09100		
beta-BHC	< 0.01000			NA			NA			NA			< 0.00910		
delta-BHC	< 0.01000			NA			NA			NA			< 0.00910		
gamma-BHC (Lindane)	< 0.01000			NA			NA			< 0.00005			< 0.00910		
gamma-Chlordane	< 0.10000			NA			NA			< 0.00050			< 0.09100		
SEMI-VOLATILE ORGANICS															
1,2,4-Trichlorobenzene	< 0.43000			NA			NA			NA			< 0.37000		
1,2-Dichlorobenzene	< 0.43000			NA			NA			NA			< 0.37000		
1,3-Dichlorobenzene	< 0.43000			NA			NA			NA			< 0.37000		
1,4-Dichlorobenzene	< 0.43000			NA			NA			< 0.02000			< 0.37000		
2,4,5-Trichlorophenol	< 2.10000			NA			NA			< 0.10000			< 1.80000		
2,4,6-Trichlorophenol	< 0.43000			NA			NA			< 0.02000			< 0.37000		
2,4-Dichlorophenol	< 0.43000			NA			NA			NA			< 0.37000		
2,4-Dimethylphenol	< 0.43000			NA			NA			NA			< 0.37000		
2,4-Dinitrophenol	< 2.10000			NA			NA			NA			< 1.80000		
2,4-Dinitrotoluene	< 0.43000			NA			NA			< 0.02000			< 0.37000		
2,6-Dinitrotoluene	< 0.43000			NA			NA			NA			< 0.37000		
2-Chloronaphthalene	< 0.43000			NA			NA			NA			< 0.37000		
2-Chlorophenol	< 0.43000			NA			NA			NA			< 0.37000		
2-Methylnaphthalene	< 0.43000			NA			NA			NA			< 0.37000		
2-Methylphenol	< 0.43000			NA			NA			< 0.02000			< 0.37000		
2-Nitroaniline	< 2.10000			NA			NA			NA			< 1.80000		
2-Nitrophenol	< 0.43000			NA			NA			NA			< 0.37000		
3,3'-Dichlorobenzidine	< 0.85000	UJ		NA			NA			NA			< 0.74000	UJ	
3-Nitroaniline	< 2.10000	UJ		NA			NA			NA			< 1.80000		
4,6-Dinitro-2-methylphenol	< 2.10000			NA			NA			NA			< 1.80000		
4-Bromophenyl phenyl ether	< 0.43000			NA			NA			NA			< 0.37000		
4-Chloro-3-methylphenol	< 0.43000			NA			NA			NA			< 0.37000		
4-Chloroaniline	< 0.43000	UJ		NA			NA			NA			< 0.37000	UJ	
4-Chlorophenylphenyl ether	< 0.43000			NA			NA			NA			< 0.37000		
4-Methylphenol	< 0.43000			NA			NA			< 0.02000			< 0.37000		
4-Nitroaniline	< 2.10000	UJ		NA			NA			NA			< 1.80000	UJ	
4-Nitrophenol	< 2.10000	UJ		NA			NA			NA			< 1.80000	UJ	
Acenaphthene	< 0.43000			NA			NA			NA			< 0.37000		
Acenaphthylene	< 0.43000			NA			NA			NA			< 0.37000		

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Anthracene	< 0.43000			NA			NA			NA			< 0.37000		
Benzo(a)anthracene	< 0.43000			NA			NA			NA			< 0.37000		
Benzo(a)pyrene	< 0.43000			NA			NA			NA			< 0.37000		
Benzo(b)fluoranthene	< 0.43000			NA			NA			NA			< 0.37000		
Benzo(g,h,i)perylene	< 0.43000		UJ	NA			NA			NA			< 0.37000		UJ
Benzo(k)fluoranthene	< 0.43000			NA			NA			NA			< 0.37000		
Benzoic acid	< 2.10000		UJ	NA			NA			NA			< 1.80000		UJ
Benzyl alcohol	< 0.43000			NA			NA			NA			< 0.37000		
Butyl benzyl phthalate	< 0.43000			NA			NA			NA			< 0.37000		
Chrysene	< 0.43000			NA			NA			NA			< 0.37000		
Di-n-butyl phthalate	< 0.43000			NA			NA			NA			< 0.37000		
Di-n-octyl phthalate	< 0.43000			NA			NA			NA			< 0.37000		
Dibenzo(a,h)anthracene	< 0.43000			NA			NA			NA			< 0.37000		
Dibenzofuran	< 0.43000			NA			NA			NA			< 0.37000		
Diethyl phthalate	< 0.43000			NA			NA			NA			< 0.37000		
Dimethyl phthalate	< 0.43000			NA			NA			NA			< 0.37000		
Fluoranthene	< 0.43000			NA			NA			NA			< 0.37000		
Fluorene	< 0.43000			NA			NA			NA			< 0.37000		
Hexachlorobenzene	< 0.43000			NA			NA			< 0.02000			< 0.37000		
Hexachlorobutadiene	< 0.43000			NA			NA			< 0.02000			< 0.37000		
Hexachlorocyclopentadiene	< 0.43000			NA			NA			NA			< 0.37000		
Hexachloroethane	< 0.43000		UJ	NA			NA			< 0.02000			< 0.37000		UJ
Indeno(1,2,3-cd)pyrene	< 0.43000			NA			NA			NA			< 0.37000		
Isophorone	< 0.43000			NA			NA			NA			< 0.37000		
N-Nitroso-di-n-propylamine	< 0.43000			NA			NA			NA			< 0.37000		
N-Nitrosodiphenylamine	< 0.43000			NA			NA			NA			< 0.37000		
Naphthalene	< 0.43000			NA			NA			NA			< 0.37000		
Nitrobenzene	< 0.43000			NA			NA			< 0.02000			< 0.37000		
O,O,O-Triethylphosphorothioa	< 0.10000			NA			NA			NA			NA		
Pentachlorophenol	< 2.10000			NA			NA			< 0.10000			< 1.80000		
Phenanthrene	< 0.43000			NA			NA			NA			< 0.37000		
Phenol	< 0.43000			NA			NA			NA			< 0.37000		
Pyrene	< 0.43000			NA			NA			NA			< 0.37000		
bis(2-Chloroethoxy)methane	< 0.43000			NA			NA			NA			< 0.37000		
bis(2-Chloroethyl)ether	< 0.43000			NA			NA			NA			< 0.37000		
bis(2-Chloroisopropyl) ether	< 0.43000		UJ	NA			NA			NA			< 0.37000		UJ
bis(2-Ethylhexyl) phthalate	< 0.43000			NA			NA			NA			< 0.37000		
3-Methylphenol	NA			NA			NA			< 0.02000			NA		
O,O,O-Triethylphosphorothioa	NA			NA			NA			NA			< 0.10000		
VOLATILE ORGANICS															
1,1,1-Trichloroethane	< 0.00600			< 0.00500			< 0.00500			NA			< 0.00500		

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1721 067237 13.5 - 15.0	a	b	1721 067239 - FIELD BLANK	a	b	1721 067243 - FIELD BLANK	a	b	1721 067245 COMPOSITE TCLP	a	b	1722 067250 1.5 - 3.0	a	b
1,1,2,2-Tetrachloroethane	< 0.00600		UJ	< 0.00500			< 0.00500		UJ	NA			< 0.00500		
1,1,2-Trichloroethane	< 0.00600			< 0.00500			< 0.00500			NA			< 0.00500		
1,1-Dichloroethane	< 0.00600			< 0.00500			< 0.00500			NA			0.13000		
1,1-Dichloroethene	< 0.00600			< 0.00500			< 0.00500			< 0.00500			< 0.00500		
1,2-Dichloroethane	< 0.00600			< 0.00500			< 0.00500			< 0.00500			< 0.00500		
1,2-Dichloroethylene	0.00200	J	J	< 0.00500			< 0.00500			NA			< 0.00500		
1,2-Dichloropropane	< 0.00600			< 0.00500			< 0.00500			NA			< 0.00500		
2-Butanone	< 0.01300		R	< 0.01000		J	< 0.01000		R	0.00700	J	J	< 0.01100		
2-Hexanone	< 0.01300		R	< 0.01000		J	< 0.01000		R	NA			< 0.01100		
4-Methyl-2-pentanone	< 0.01300		R	< 0.01000		J	< 0.01000		R	NA			< 0.01100		
Acetone	0.09300	B	R	< 0.01000			< 0.01000		R	NA			0.01000	BJ	
Benzene	< 0.00600			< 0.00500			< 0.00500			< 0.00500			< 0.00500		
Bromodichloromethane	< 0.00600			0.00400	J		< 0.00500			NA			< 0.00500		
Bromoform	< 0.00600			< 0.00500			< 0.00500			NA			< 0.00500		
Bromomethane	< 0.01300			< 0.01000			< 0.01000			NA			< 0.01100		
Carbon Tetrachloride	< 0.00600			< 0.00500			< 0.00500			< 0.00500			< 0.00500		
Carbon disulfide	< 0.00600			< 0.00500			< 0.00500			NA			< 0.00500		
Chlorobenzene	< 0.00600			< 0.00500			< 0.00500			< 0.00500			< 0.00500		
Chloroethane	< 0.01300			< 0.01000			< 0.01000			NA			< 0.01100		
Chloroform	< 0.00600			0.02600			0.00200	J	J	< 0.00500			< 0.00500		
Chloromethane	< 0.01300			< 0.01000			< 0.01000			NA			< 0.01100		
Dibromochloromethane	< 0.00600			< 0.00500			< 0.00500			NA			< 0.00500		
Ethylbenzene	< 0.00600			< 0.00500			< 0.00500			NA			< 0.00500		
Methylene chloride	< 0.01700	B		0.00200	BJ	UJ	0.00100	BJ	J	NA			0.00500	BJ	U
Styrene	< 0.00600			< 0.00500			< 0.00500			NA			< 0.00500		
Tetrachloroethene	< 0.00600			< 0.00500			< 0.00500			< 0.00500			< 0.00500		
Toluene	0.00600	BJ	U	0.00100	BJ		0.00100	BJ	J	NA			0.00500	BJ	J
Total xylenes	< 0.00600			< 0.00500			< 0.00500			NA			< 0.00500		
Trichloroethene	< 0.00600			< 0.00500			< 0.00500			< 0.00500			< 0.00500		
Vinyl Acetate	< 0.01300		UJ	< 0.01000			< 0.01000		UJ	NA			< 0.01100		
Vinyl chloride	< 0.01300			< 0.01000			< 0.01000			< 0.01000			< 0.01100		
cis-1,3-Dichloropropene	< 0.00600			< 0.00500			< 0.00500			NA			< 0.00500		
trans-1,3-Dichloropropene	< 0.00600		UJ	< 0.00500			< 0.00500		UJ	NA			< 0.00500		
1,1,1,2-Tetrachloroethane	NA			< 0.00500			NA			NA			NA		
1,2,3-Trichloropropane	NA			< 0.00500			NA			NA			NA		
1,2-Dibromo-3-chloropropane	NA			< 0.01000			NA			NA			NA		
1,2-Dibromoethane	NA			< 0.00500			NA			NA			NA		
1,4-Dioxane	NA			< 5.00000		R	NA			NA			NA		
2-Chloro-1,3-butadiene	NA			< 0.00500			NA			NA			NA		
3-Chloropropene	NA			< 0.00500			NA			NA			NA		
Acetonitrile	NA			< 1.00000		R	NA			NA			NA		
Acrolein	NA			< 0.01000		R	NA			NA			NA		
Acrylonitrile	NA			< 0.01000		R	NA			NA			NA		
Dibromomethane	NA			< 0.01000			NA			NA			NA		

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SOLID WASTE LANDFILL
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CHEMICAL PARAMETERS	1721 067237 13.5 - 15.0			1721 067239 - FIELD BLANK			1721 067243 - FIELD BLANK			1721 067245 COMPOSITE TCLP			1722 067250 1.5 - 3.0		
		a	b		a	b		a	b		a	b		a	b
Dichlorodifluoromethane	NA			<	0.20000	R	NA			NA			NA		
Ethyl cyanide	NA			<	0.10000		NA			NA			NA		
Ethyl methacrylate	NA			<	0.01000		NA			NA			NA		
Iodomethane	NA			<	0.00500		NA			NA			NA		
Isobutyl alcohol	NA			<	0.02000	R	NA			NA			NA		
Methacrylonitrile	NA			<	0.01000		NA			NA			NA		
Methyl methacrylate	NA			<	0.01000		NA			NA			NA		
Pyridine	NA			<	0.02000		NA			<	0.02000		NA		
Trichlorofluoromethane	NA			<	0.00500		NA			NA			NA		
trans-1,4-Dichloro-2-butene	NA			<	0.10000		NA			NA			NA		

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CHEMICAL PARAMETERS	1722 067253 6.0 - 7.5 EP TOXICITY a	b	1722 067256 11.0 - 12.5 EP TOXICITY a	b	1722 067259 14.0 - 16.5 a	b	1722 067261 COMPOSITE TCLP a	b
DIOXINS								
1,2,3,4,6,7,8-Heptachlorodib	NA		NA		< 0.00002		NA	
1,2,3,4,6,7,8-Heptachlorodib	NA		NA		< 0.00005		NA	
1,2,3,4,7,8,9-Heptachlorodib	NA		NA		< 0.00003		NA	
1,2,3,4,7,8-Hexachlorodibenz	NA		NA		< 0.00001		NA	
1,2,3,4,7,8-Hexachlorodibenz	NA		NA		< 0.00002		NA	
1,2,3,6,7,8-Hexachlorodibenz	NA		NA		< 0.00001		NA	
1,2,3,6,7,8-Hexachlorodibenz	NA		NA		< 0.00002		NA	
1,2,3,7,8,9-Hexachlorodibenz	NA		NA		< 0.00002		NA	
1,2,3,7,8,9-Hexachlorodibenz	NA		NA		< 0.00002		NA	
1,2,3,7,8-Pentachlorodibenzo	NA		NA		< 0.00003		NA	
1,2,3,7,8-Pentachlorodibenzo	NA		NA		< 0.00001		NA	
2,3,4,6,7,8-Hexachlorodibenz	NA		NA		< 0.00002		NA	
2,3,4,7,8-Pentachlorodibenzo	NA		NA		< 0.00001		NA	
2,3,7,8-TCDD	NA		NA		< 0.00002		NA	
2,3,7,8-TCDF	NA		NA		< 0.00004		NA	
Heptachlorodibenzo-p-dioxin	NA		NA		< 0.00005		NA	
Heptachlorodibenzofuran	NA		NA		< 0.00003		NA	
Hexachlorodibenzo-p-dioxin	NA		NA		< 0.00002		NA	
Hexachlorodibenzofuran	NA		NA		< 0.00002		NA	
Octachlorodibenzo-p-dioxin	NA		NA		0.00005	J	NA	
Octachlorodibenzofuran	NA		NA		< 0.00006	UJ	NA	
Pentachlorodibenzofuran	NA		NA		< 0.00001		NA	
Pentachlorodibenzo-p-dioxin	NA		NA		< 0.00003		NA	
Tetrachlorodibenzofuran	NA		NA		< 0.00001		NA	
Tetrachlorodibenzo-p-dioxin	NA		NA		< 0.00001		NA	
HERBICIDE ORGANICS								
2,4,5-TP (Silvex)	NA		NA		NA		< 0.00180	
2,4-D	NA		NA		NA		< 0.01000	
Azinphosmethyl	NA		NA		< 0.20000		NA	
Demeton	NA		NA		< 0.20000		NA	
Diazinon	NA		NA		< 0.10000		NA	
Dimethoate	NA		NA		< 0.10000		NA	
Disulfoton	NA		NA		< 0.10000		NA	
Ethion	NA		NA		< 0.10000		NA	
Famphur	NA		NA		< 0.10000		NA	
Malathion	NA		NA		< 0.10000		NA	
Parathion, ethyl	NA		NA		< 0.10000		NA	

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CHEMICAL PARAMETERS	1722 067253 6.0 - 7.5 EP TOXICITY a b	1722 067256 11.0 - 12.5 EP TOXICITY a b	1722 067259 14.0 - 16.5 a b	1722 067261 COMPOSITE TCLP a b
ORGANOPHOSPOROUS PESTICIDES				
Parathion, methyl	NA	NA	< 0.10000	NA
Phorate	NA	NA	< 0.10000	NA
Sulfotepp	NA	NA	< 0.10000	NA
Tetraethylpyrophosphate	NA	NA	< 0.40000	NA
Thionazin	NA	NA	< 0.10000	NA
PESTICIDES				
Endrin	< 0.00010	< 0.00010	< 0.02100	< 0.00010
Methoxychlor	< 0.00050	< 0.00050	< 0.10000	< 0.00050
Toxaphene	< 0.00100	< 0.00100	< 0.21000	< 0.00100
gamma-BHC (Lindane)	< 0.00005	< 0.00005	< 0.01000	< 0.00005
4,4'-DDD	NA	NA	< 0.02100	NA
4,4'-DDE	NA	NA	< 0.02100	NA
4,4'-DDT	NA	NA	< 0.02100	NA
Aldrin	NA	NA	< 0.01000	NA
Aroclor-1016	NA	NA	< 0.10000	NA
Aroclor-1221	NA	NA	< 0.10000	NA
Aroclor-1232	NA	NA	< 0.10000	NA
Aroclor-1242	NA	NA	< 0.10000	NA
Aroclor-1248	NA	NA	< 0.10000	NA
Aroclor-1254	NA	NA	< 0.21000	NA
Aroclor-1260	NA	NA	< 0.21000	NA
Dieldrin	NA	NA	< 0.02100	NA
Endosulfan II	NA	NA	< 0.02100	NA
Endosulfan sulfate	NA	NA	< 0.02100	NA
Endosulfan-I	NA	NA	< 0.01000	NA
Endrin ketone	NA	NA	< 0.02100	NA
Heptachlor	NA	NA	< 0.01000	< 0.00005
Heptachlor epoxide	NA	NA	< 0.01000	< 0.00005
alpha-BHC	NA	NA	< 0.01000	NA
alpha-Chlordane	NA	NA	< 0.10000	< 0.00050
beta-BHC	NA	NA	< 0.01000	NA
delta-BHC	NA	NA	< 0.01000	NA
gamma-Chlordane	NA	NA	< 0.10000	< 0.00050
SEMI-VOLATILE ORGANICS				

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CHEMICAL PARAMETERS	1722 067253 6.0 - 7.5 EP TOXICITY	a	b	1722 067256 11.0 - 12.5 EP TOXICITY	a	b	1722 067259 14.0 - 16.5	a	b	1722 067261 COMPOSITE TCLP	a	b
SEMI-VOLATILE ORGANICS												
1,2,4-Trichlorobenzene	NA			NA			< 0.43000			NA		
1,2-Dichlorobenzene	NA			NA			< 0.43000			NA		
1,3-Dichlorobenzene	NA			NA			< 0.43000			NA		
1,4-Dichlorobenzene	NA			NA			< 0.43000			< 0.02000		R
2,4,5-Trichlorophenol	NA			NA			< 2.10000			< 0.10000		R
2,4,6-Trichlorophenol	NA			NA			< 0.43000			< 0.02000		R
2,4-Dichlorophenol	NA			NA			< 0.43000			NA		
2,4-Dimethylphenol	NA			NA			< 0.43000			NA		
2,4-Dinitrophenol	NA			NA			< 2.10000			NA		
2,4-Dinitrotoluene	NA			NA			< 0.43000			< 0.02000		R
2,6-Dinitrotoluene	NA			NA			< 0.43000			NA		
2-Chloronaphthalene	NA			NA			< 0.43000			NA		
2-Chlorophenol	NA			NA			< 0.43000			NA		
2-Methylnaphthalene	NA			NA			< 0.43000			NA		
2-Methylphenol	NA			NA			< 0.43000			< 0.02000		R
2-Nitroaniline	NA			NA			< 2.10000			NA		
2-Nitrophenol	NA			NA			< 0.43000			NA		
3,3'-Dichlorobenzidine	NA			NA			< 0.85000	UJ		NA		
3-Nitroaniline	NA			NA			< 2.10000	UJ		NA		
4,6-Dinitro-2-methylphenol	NA			NA			< 2.10000			NA		
4-Bromophenyl phenyl ether	NA			NA			< 0.43000			NA		
4-Chloro-3-methylphenol	NA			NA			< 0.43000			NA		
4-Chloroaniline	NA			NA			< 0.43000	UJ		NA		
4-Chlorophenylphenyl ether	NA			NA			< 0.43000			NA		
4-Methylphenol	NA			NA			< 0.43000			< 0.02000		R
4-Nitroaniline	NA			NA			< 2.10000	UJ		NA		
4-Nitrophenol	NA			NA			< 2.10000	UJ		NA		
Acenaphthene	NA			NA			< 0.43000			NA		
Acenaphthylene	NA			NA			< 0.43000			NA		
Anthracene	NA			NA			< 0.43000			NA		
Benzo(a)anthracene	NA			NA			< 0.43000			NA		
Benzo(a)pyrene	NA			NA			< 0.43000			NA		
Benzo(b)fluoranthene	NA			NA			< 0.43000			NA		
Benzo(g,h,i)perylene	NA			NA			< 0.43000			NA		
Benzo(k)fluoranthene	NA			NA			< 0.43000			NA		
Benzoic acid	NA			NA			< 2.10000	UJ		NA		
Benzyl alcohol	NA			NA			< 0.43000			NA		
Butyl benzyl phthalate	NA			NA			< 0.43000			NA		
Chrysene	NA			NA			< 0.43000			NA		
Di-n-butyl phthalate	NA			NA			< 0.43000			NA		

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Di-n-octyl phthalate	NA			NA			< 0.43000			NA		
Dibenzo(a,h)anthracene	NA			NA			< 0.43000			NA		
Dibenzofuran	NA			NA			< 0.43000			NA		
Diethyl phthalate	NA			NA			< 0.43000			NA		
Dimethyl phthalate	NA			NA			< 0.43000			NA		
Fluoranthene	NA			NA			< 0.43000			NA		
Fluorene	NA			NA			< 0.43000			NA		
Hexachlorobenzene	NA			NA			< 0.43000			< 0.02000		R
Hexachlorobutadiene	NA			NA			< 0.43000			< 0.02000		R
Hexachlorocyclopentadiene	NA			NA			< 0.43000			NA		
Hexachloroethane	NA			NA			< 0.43000		UJ	< 0.02000		R
Indeno(1,2,3-cd)pyrene	NA			NA			< 0.43000			NA		
Isophorone	NA			NA			< 0.43000			NA		
N-Nitroso-di-n-propylamine	NA			NA			< 0.43000			NA		
N-Nitrosodiphenylamine	NA			NA			< 0.43000			NA		
Naphthalene	NA			NA			< 0.43000			NA		
Nitrobenzene	NA			NA			< 0.43000			< 0.02000		R
O,O,O-Triethylphosphorothioa	NA			NA			< 0.10000			NA		
Pentachlorophenol	NA			NA			< 2.10000			0.00800	J	J
Phenanthrene	NA			NA			< 0.43000			NA		
Phenol	NA			NA			< 0.43000			NA		
Pyrene	NA			NA			< 0.43000			NA		
bis(2-Chloroethoxy)methane	NA			NA			< 0.43000			NA		
bis(2-Chloroethyl)ether	NA			NA			< 0.43000			NA		
bis(2-Chloroisopropyl) ether	NA			NA			< 0.43000			NA		
bis(2-Ethylhexyl) phthalate	NA			NA			< 0.43000			NA		
3-Methylphenol	NA			NA			NA			< 0.02000		
VOLATILE ORGANICS												
1,1,1-Trichloroethane	NA			NA			< 0.00600			NA		
1,1,2,2-Tetrachloroethane	NA			NA			< 0.00600			NA		
1,1,2-Trichloroethane	NA			NA			< 0.00600			NA		
1,1-Dichloroethane	NA			NA			< 0.00600			NA		
1,1-Dichloroethene	NA			NA			< 0.00600			< 0.00500		
1,2-Dichloroethane	NA			NA			< 0.00600			< 0.00500		
1,2-Dichloroethylene	NA			NA			< 0.00600			NA		
1,2-Dichloropropane	NA			NA			< 0.00600			NA		
2-Butanone	NA			NA			0.00300	J	J	0.00200	JB	J
2-Hexanone	NA			NA			< 0.01300			NA		
4-Methyl-2-pentanone	NA			NA			< 0.01300			NA		
Acetone	NA			NA			0.02600	B		NA		
Benzene	NA			NA			< 0.00600			< 0.00500		

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CHEMICAL PARAMETERS	1722 067253 6.0 - 7.5 EP TOXICITY	a	b	1722 067256 11.0 - 12.5 EP TOXICITY	a	b	1722 067259 14.0 - 16.5	a	b	1722 067261 COMPOSITE TCLP	a	b
Bromodichloromethane	NA			NA			< 0.00600			NA		
Bromoform	NA			NA			< 0.00600			NA		
Bromomethane	NA			NA			< 0.01300			NA		
Carbon Tetrachloride	NA			NA			< 0.00600			< 0.00500		
Carbon disulfide	NA			NA			< 0.00600			NA		
Chlorobenzene	NA			NA			< 0.00600			< 0.00500		
Chloroethane	NA			NA			< 0.01300			NA		
Chloroform	NA			NA			< 0.00600			< 0.00500		
Chloromethane	NA			NA			< 0.01300			NA		
Dibromochloromethane	NA			NA			< 0.00600			NA		
Ethylbenzene	NA			NA			< 0.00600			NA		
Methylene chloride	NA			NA			0.00600	BJ	U	NA		
Styrene	NA			NA			< 0.00600			NA		
Tetrachloroethene	NA			NA			< 0.00600			0.03000		
Toluene	NA			NA			0.00600	BJ	U	NA		
Total xylenes	NA			NA			< 0.00600			NA		
Trichloroethene	NA			NA			< 0.00600			< 0.00500		
Vinyl Acetate	NA			NA			< 0.01300			NA		
Vinyl chloride	NA			NA			< 0.01300			< 0.01000		
cis-1,3-Dichloropropene	NA			NA			< 0.00600			NA		
trans-1,3-Dichloropropene	NA			NA			< 0.00600			NA		
Pyridine	NA			NA			NA			< 0.02000		R

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
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CHEMICAL PARAMETERS	1808 067394 3.0 - 4.5			1808 067396 7.5 - 9.0			1808 067397 9.0 - 10.5 TCLP			1808 067401 15.0 - 16.5			1808 067402 0 - 12.75 TCLP		
		a	b		a	b		a	b		a	b		a	b
DIOXINS															
1,2,3,4,6,7,8-Heptachlorodib	<	0.00008		<	0.00016			NA		<	0.00004			NA	
1,2,3,4,6,7,8-Heptachlorodib	<	0.00008		<	0.00007			NA		<	0.00003			NA	
1,2,3,4,7,8,9-Heptachlorodib	<	0.00011		<	0.00010			NA		<	0.00004			NA	
1,2,3,4,7,8-Hexachlorodibenz	<	0.00012		<	0.00022			NA		<	0.00005			NA	
1,2,3,4,7,8-Hexachlorodibenz	<	0.00005		<	0.00008			NA		<	0.00005			NA	
1,2,3,6,7,8-Hexachlorodibenz	<	0.00005		<	0.00007			NA		<	0.00005			NA	
1,2,3,6,7,8-Hexachlorodibenz	<	0.00010		<	0.00018			NA		<	0.00004			NA	
1,2,3,7,8,9-Hexachlorodibenz	<	0.00006		<	0.00019			NA		<	0.00006			NA	
1,2,3,7,8,9-Hexachlorodibenz	<	0.00010		<	0.00009			NA		<	0.00004			NA	
1,2,3,7,8-Pentachlorodibenzo	<	0.00009	UJ	<	0.00006	UJ		NA		<	0.00005	UJ		NA	
1,2,3,7,8-Pentachlorodibenzo	<	0.00004	UJ	<	0.00022	UJ		NA		<	0.00004	UJ		NA	
2,3,4,6,7,8-Hexachlorodibenz	<	0.00006		<	0.00008			NA		<	0.00005			NA	
2,3,4,7,8-Pentachlorodibenzo	<	0.00005	UJ	<	0.00007	UJ		NA		<	0.00004	UJ		NA	
2,3,7,8-TCDD	<	0.00014		<	0.00018	UJ		NA		<	0.00017			NA	
2,3,7,8-TCDF	<	0.00010	UJ	<	0.00240			NA		<	0.00011	UJ		NA	
Heptachlorodibenzo-p-dioxin	<	0.00008			0.00090	J		NA		<	0.00004			NA	
Heptachlorodibenzofuran	<	0.00009		<	0.00009			NA		<	0.00003			NA	
Hexachlorodibenzo-p-dioxin	<	0.00011		<	0.00019			NA		<	0.00004			NA	
Hexachlorodibenzofuran	<	0.00005		<	0.00008			NA		<	0.00005			NA	
Octachlorodibenzo-p-dioxin		0.00031	J		0.00270			NA			0.00009	J		NA	
Octachlorodibenzofuran	<	0.00008		<	0.00010			NA		<	0.00005			NA	
Pentachlorodibenzo-p-dioxin	<	0.00009	UJ	<	0.00022	UJ		NA		<	0.00005	UJ		NA	
Pentachlorodibenzofuran	<	0.00004	UJ	<	0.00006	UJ		NA		<	0.00004	UJ		NA	
Tetrachlorodibenzo-p-dioxin	<	0.00003		<	0.00003			NA		<	0.00020			NA	
Tetrachlorodibenzofuran	<	0.00004	UJ	<	0.00005	UJ		NA		<	0.00003	UJ		NA	

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SOLID WASTE LANDFILL
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CHEMICAL PARAMETERS	1808 067394 3.0 - 4.5	a	b	1808 067396 7.5 - 9.0	a	b	1808 067397 9.0 - 10.5 TCLP	a	b	1808 067401 15.0 - 16.5	a	b	1808 067402 0 - 12.75 TCLP	a	b
HERBICIDE ORGANICS															
2,4,5-T	NA			< 0.04800			NA			NA			NA		
2,4,5-TP (Silvex)	NA			< 0.04500			NA			NA			< 0.00180		
2,4-D	NA			< 0.25000			NA			NA			< 0.01000		
ORGANOPHOSPOROUS PESTICIDES															
Azinphosmethyl	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Demeton	< 0.20000			< 0.20000			NA			< 0.20000			NA		
Diazinon	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Dimethoate	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Disulfoton	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Ethion	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Famphur	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Malathion	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Parathion, ethyl	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Parathion, methyl	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Phorate	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Sulfotepp	< 0.10000			< 0.10000			NA			< 0.10000			NA		
Sulfotepp	NA			< 0.84000		R	NA			NA			NA		
Tetraethylpyrophosphate	< 0.40000			< 0.40000			NA			< 0.40000			NA		
Thionazin	< 0.10000			< 0.10000			NA			< 0.10000			NA		
PESTICIDES															
4,4'-DDD	< 0.01800			< 0.20000			NA			< 0.01900			NA		
4,4'-DDE	< 0.01800			< 0.20000			NA			< 0.01900			NA		
4,4'-DDT	< 0.01800			< 0.20000			NA			< 0.01900			NA		
Aldrin	< 0.00890			< 0.10000			NA			< 0.00930			NA		

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CHEMICAL PARAMETERS	1808 067394 3.0 - 4.5	a	b	1808 067396 7.5 - 9.0	a	b	1808 067397 9.0 - 10.5 TCLP	a	b	1808 067401 15.0 - 16.5	a	b	1808 067402 0 - 12.75 TCLP	a	b
Aroclor-1016	< 0.08900			< 1.00000			NA			< 0.09300			NA		
Aroclor-1221	< 0.08900			< 1.00000			NA			< 0.09300			NA		
Aroclor-1232	< 0.08900			< 1.00000			NA			< 0.09300			NA		
Aroclor-1242	< 0.08900			< 1.00000			NA			< 0.09300			NA		
Aroclor-1248	< 0.08900			< 1.00000			NA			< 0.09300			NA		
Aroclor-1254	0.15000	JX	J	< 2.00000			NA			< 0.19000			NA		
Aroclor-1260	< 0.18000			< 2.00000			NA			< 0.19000			NA		
Dieldrin	< 0.01800			< 0.20000			NA			< 0.01900			NA		
Endosulfan II	< 0.01800			< 0.20000			NA			< 0.01900			NA		
Endosulfan sulfate	< 0.01800			< 0.20000			NA			< 0.01900		J	NA		
Endosulfan-I	< 0.00890			< 0.10000			NA			< 0.00930			NA		
Endrin	< 0.01800			< 0.20000			NA			< 0.01900			< 0.00010		
Endrin ketone	< 0.01800			< 0.20000			NA			< 0.01900			NA		
Heptachlor	< 0.00890			< 0.10000			NA			< 0.00930			< 0.00005		
Heptachlor epoxide	< 0.00890			< 0.10000			NA			< 0.00930			< 0.00005		J
Methoxychlor	< 0.08900			< 1.00000			NA			< 0.09300			< 0.00050		
Toxaphene	< 0.18000			< 2.00000			NA			< 0.19000			< 0.00100		
alpha-BHC	< 0.00890			< 0.10000			NA			< 0.00930			NA		
alpha-Chlordane	< 0.08900			< 1.00000			NA			< 0.09300			< 0.00050		
beta-BHC	< 0.00890			< 0.10000			NA			< 0.00930			NA		
delta-BHC	< 0.00890			< 0.10000			NA			< 0.00930			NA		
gamma-BHC (Lindane)	< 0.00890			< 0.10000			NA			< 0.00930			< 0.00005		
gamma-Chlordane	< 0.08900			< 1.00000			NA			< 0.09300			< 0.00050		
Isodrin	NA			< 0.10000			NA			NA			NA		
Kepone	NA			< 0.20000			NA			NA			NA		
SEMI-VOLATILE ORGANICS															
1,2,4-Trichlorobenzene	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
1,2-Dichlorobenzene	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
1,3-Dichlorobenzene	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
1,4-Dichlorobenzene	< 0.36000		UJ	< 0.84000			< 0.02000			< 0.38000		UJ	NA		
2,4,5-Trichlorophenol	< 1.80000			< 4.00000		R	< 0.10000			< 1.80000		UJ	NA		
2,4,6-Trichlorophenol	< 0.36000			< 0.84000		R	< 0.02000			< 0.38000		UJ	NA		
2,4-Dichlorophenol	< 0.36000			< 0.84000		R	NA			< 0.38000		UJ	NA		
2,4-Dimethylphenol	< 0.36000			< 0.84000		R	NA			< 0.38000		UJ	NA		
2,4-Dinitrophenol	< 1.80000		UJ	< 4.00000		R	NA			< 1.80000		UJ	NA		
2,4-Dinitrotoluene	< 0.36000		UJ	< 0.84000		R	< 0.02000			< 0.38000		UJ	NA		
2,6-Dinitrotoluene	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
2-Chloronaphthalene	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
2-Chlorophenol	< 0.36000			< 0.84000		R	NA			< 0.38000		UJ	NA		
2-Methylnaphthalene	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
2-Methylphenol	< 0.36000			< 0.84000		R	< 0.02000			< 0.38000		UJ	NA		

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2-Nitroaniline	< 1.80000		UJ	< 4.00000		R	NA			< 1.80000		UJ	NA		
2-Nitrophenol	< 0.36000			< 0.84000		R	NA			< 0.38000		UJ	NA		
3,3'-Dichlorobenzidine	< 0.73000		UJ	< 1.70000		J	NA			< 0.76000		UJ	NA		
3-Nitroaniline	< 1.80000		UJ	< 4.00000		R	NA			< 1.80000		UJ	NA		
4,6-Dinitro-2-methylphenol	< 1.80000			< 4.00000		R	NA			< 1.80000		UJ	NA		
4-Bromophenyl phenyl ether	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
4-Chloro-3-methylphenol	< 0.36000			< 0.84000		R	NA			< 0.38000		UJ	NA		
4-Chloroaniline	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
4-Chlorophenylphenyl ether	< 0.36000		UJ	< 0.84000			NA			< 0.38000		UJ	NA		
4-Methylphenol	< 0.36000			< 0.84000		R	< 0.02000			< 0.38000		UJ	NA		
4-Nitroaniline	< 1.80000		UJ	< 4.00000		R	NA			< 1.80000		UJ	NA		
4-Nitrophenol	< 1.80000			< 4.00000		R	NA			< 1.80000		UJ	NA		
Acenaphthene	0.25000	J	J	0.09800	J	J	NA			< 0.38000		UJ	NA		
Acenaphthylene	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
Anthracene	0.27000	J	J	0.26000	J	J	NA			< 0.38000		UJ	NA		
Benzo(a)anthracene	0.91000		J	0.60000	J	J	NA			< 0.38000		UJ	NA		
Benzo(a)pyrene	0.70000		J	0.60000	J	J	NA			< 0.38000		UJ	NA		
Benzo(b)fluoranthene	1.50000		J	0.56000	J	J	NA			< 0.38000		UJ	NA		
Benzo(g,h,i)perylene	0.49000		J	0.48000	J	J	NA			< 0.38000		UJ	NA		
Benzo(k)fluoranthene	< 0.36000		UJ	0.60000	J	J	NA			< 0.38000		UJ	NA		
Benzoic acid	< 1.80000		UJ	< 4.00000		R	NA			< 1.80000		UJ	NA		
Benzyl alcohol	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
Butyl benzyl phthalate	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
Chrysene	1.10000		J	0.81000	J	J	NA			< 0.38000		UJ	NA		
Di-n-butyl phthalate	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
Di-n-octyl phthalate	< 0.36000		UJ	< 0.84000		J	NA			< 0.38000		UJ	NA		
Dibenzo(a,h)anthracene	0.09200	J	J	0.18000	J	J	NA			< 0.38000		UJ	NA		
Dibenzofuran	0.16000	J	J	< 0.84000		R	NA			< 0.38000		UJ	NA		
Diethyl phthalate	< 0.36000		UJ	0.68000	J	J	NA			< 0.38000		UJ	NA		
Dimethyl phthalate	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
Fluoranthene	2.20000		J	1.60000		J	NA			< 0.38000		UJ	NA		
Fluorene	0.25000	J	J	0.08800	J	J	NA			< 0.38000		UJ	NA		
Hexachlorobenzene	< 0.36000		UJ	< 0.84000		R	< 0.02000			< 0.38000		UJ	NA		
Hexachlorobutadiene	< 0.36000		UJ	< 0.84000		R	< 0.02000			< 0.38000		UJ	NA		
Hexachlorocyclopentadiene	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
Hexachloroethane	< 0.36000		UJ	< 0.84000		R	< 0.02000			< 0.38000		UJ	NA		
Indeno(1,2,3-cd)pyrene	0.44000		J	0.43000	J	J	NA			< 0.38000		UJ	NA		
Isophorone	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
N-Nitroso-di-n-propylamine	< 0.36000			< 0.84000		R	NA			< 0.38000		UJ	NA		
N-Nitrosodiphenylamine	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
Naphthalene	0.04100	J	J	< 0.84000		R	NA			< 0.38000		UJ	NA		
Nitrobenzene	< 0.36000		UJ	< 0.84000		R	< 0.02000			< 0.38000		UJ	NA		
O,O,O-Triethylphosphorothioa	< 0.10000			NA			NA			NA			NA		
Pentachlorophenol	1.80000			< 4.00000		J	< 0.10000			< 1.80000		UJ	NA		

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Phenanthrene	1.90000		J	1.20000		J	NA			< 0.38000		UJ	NA		
Phenol	< 0.36000			< 0.84000		R	NA			< 0.38000		UJ	NA		
Pyrene	1.80000		J	1.40000		J	NA			< 0.38000		UJ	NA		
bis(2-Chloroethoxy)methane	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
bis(2-Chloroethyl)ether	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
bis(2-Chloroisopropyl) ether	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
bis(2-Ethylhexyl) phthalate	< 0.36000		UJ	< 0.84000		R	NA			< 0.38000		UJ	NA		
1,2,4,5-Tetrachlorobenzene	NA			< 0.84000		R	NA			NA			NA		
1,3,5-Trinitrobenzene	NA			< 0.84000		R	NA			NA			NA		
1,4-Naphthoquinone	NA			< 0.84000		R	NA			NA			NA		
1-Naphthylamine	NA			< 10.00000		R	NA			NA			NA		
2,3,4,6-Tetrachlorophenol	NA			< 0.84000		R	NA			NA			NA		
2,6-Dichlorophenol	NA			< 0.84000		R	NA			NA			NA		
2-Acetylaminofluorene	NA			< 0.84000		R	NA			NA			NA		
2-Naphthylamine	NA			< 14.00000		R	NA			NA			NA		
2-Picoline	NA			< 5.80000		R	NA			NA			NA		
3,3'-Dimethylbenzidine	NA			< 6.80000		R	NA			NA			NA		
3-Methylcholanthrene	NA			< 2.50000		R	NA			NA			NA		
3-Methylphenol	NA			< 0.84000		R	< 0.02000			NA			NA		
4-Aminobiphenyl	NA			< 4.20000		R	NA			NA			NA		
4-Nitroquinoline-1-oxide	NA			< 0.84000		R	NA			NA			NA		
5-Nitro-o-toluidine	NA			< 1.70000		R	NA			NA			NA		
7,12-Dimethylbenz(a)anthrace	NA			< 1.70000		R	NA			NA			NA		
Acetophenone	NA			< 0.84000		R	NA			NA			NA		
Aniline	NA			< 4.30000		R	NA			NA			NA		
Aramite	NA			< 0.84000		R	NA			NA			NA		
Diallate	NA			< 0.84000		R	NA			NA			NA		
Dinoseb	NA			< 1.70000			NA			NA			NA		
Diphenylamine	NA			< 0.84000		R	NA			NA			NA		
Ethyl methanesulfonate	NA			< 0.84000		R	NA			NA			NA		
Hexachlorophene	NA			< 4.30000		R	NA			NA			NA		
Hexachloropropene	NA			< 1.70000		R	NA			NA			NA		
Isosafrole	NA			< 0.84000		R	NA			NA			NA		
Methapyrilene	NA			< 3.40000		R	NA			NA			NA		
Methyl methanesulfonate	NA			< 0.84000		R	NA			NA			NA		
N-Nitrosodi-n-butylamine	NA			< 1.70000		R	NA			NA			NA		
N-Nitrosodiethylamine	NA			< 0.84000		R	NA			NA			NA		
N-Nitrosodimethylamine	NA			< 0.84000		R	NA			NA			NA		
N-Nitrosomethylethylamine	NA			< 0.84000		R	NA			NA			NA		
N-Nitrosomorpholine	NA			< 0.84000		R	NA			NA			NA		
N-Nitrosopiperidine	NA			< 0.84000		R	NA			NA			NA		
N-Nitrosopyrrolidine	NA			< 0.84000		R	NA			NA			NA		
O,O,O-Triethylphosphorothioa	NA			< 0.84000		R	NA			NA			NA		
O,O,O-Triethylphosphorothioa	NA			< 0.10000			NA			NA			NA		

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b = validation qualifiers

REPORT DATE : 26-APR-92

SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1808 067394 3.0 - 4.5	a	b	1808 067396 7.5 - 9.0	a	b	1808 067397 9.0 - 10.5 TCLP	a	b	1808 067401 15.0 - 16.5	a	b	1808 067402 0 - 12.75 TCLP	a	b
Pentachlorobenzene	NA			< 1.70000		R	NA			NA			NA		
Pentachloroethane	NA			< 1.70000		R	NA			NA			NA		
Pentachloronitrobenzene	NA			< 1.70000		R	NA			NA			NA		
Phenacetin	NA			< 0.84000		R	NA			NA			NA		
Pronamide	NA			< 2.50000		R	NA			NA			NA		
Safrole	NA			< 0.84000		R	NA			NA			NA		
a,a-Dimethylphenethylamine	NA			< 0.84000		R	NA			NA			NA		
o-Toluidine	NA			< 0.84000		R	NA			NA			NA		
p-Dimethylaminoazobenzene	NA			< 2.50000		R	NA			NA			NA		
p-Phenylenediamine	NA			< 4.20000		R	NA			NA			NA		
O,O,O-Triethylphosphorothioa	NA			NA			NA			< 0.10000			NA		
VOLATILE ORGANICS															
1,1,1-Trichloroethane	< 0.00500		UJ	< 0.00600		UJ	NA			< 0.00600		UJ	NA		
1,1,2,2-Tetrachloroethane	< 0.00500		UJ	< 0.00600		UJ	NA			< 0.00600		UJ	NA		
1,1,2-Trichloroethane	< 0.00500		UJ	< 0.00600		UJ	NA			< 0.00600		UJ	NA		
1,1-Dichloroethane	< 0.00500		UJ	< 0.00600		UJ	NA			< 0.00600		UJ	NA		
1,1-Dichloroethene	< 0.00500		UJ	< 0.00600		UJ	< 0.00500			< 0.00600		UJ	NA		
1,2-Dichloroethane	< 0.00500		UJ	< 0.00600		UJ	< 0.00500	J		< 0.00600		UJ	NA		
1,2-Dichloroethylene	< 0.00500		UJ	< 0.00600		UJ	NA			< 0.00600		UJ	NA		
1,2-Dichloropropane	< 0.00500		UJ	< 0.00600		UJ	NA			< 0.00600		UJ	NA		
2-Butanone	< 0.01100		UJ	0.01200	BJ	UJ	0.00500	J		0.01100	BJ	UJ	NA		
2-Hexanone	< 0.01100		UJ	< 0.01200		UJ	NA			< 0.01100		UJ	NA		
4-Methyl-2-pentanone	< 0.01100		UJ	0.00100	J	J	NA			< 0.01100		UJ	NA		
Acetone	0.01100	BJ	UJ	0.01900	B	UJ	NA			0.05600	B	UJ	NA		
Benzene	< 0.00500		UJ	< 0.00600		UJ	< 0.00500			< 0.00600		UJ	NA		
Bromodichloromethane	< 0.00500		UJ	< 0.00600		UJ	NA			< 0.00600		UJ	NA		
Bromoform	< 0.00500		UJ	< 0.00600		UJ	NA			< 0.00600		UJ	NA		
Bromomethane	< 0.01100		UJ	< 0.01200		UJ	NA			< 0.01100		UJ	NA		
Carbon Tetrachloride	< 0.00500		UJ	< 0.00600		UJ	< 0.00500	J		< 0.00600		UJ	NA		
Carbon disulfide	< 0.00500		UJ	< 0.00600		UJ	NA			< 0.00600		UJ	NA		
Chlorobenzene	< 0.00500		UJ	< 0.00600		UJ	< 0.00500	J		< 0.00600		UJ	NA		
Chloroethane	< 0.01100		UJ	< 0.01200		UJ	NA			< 0.01100		UJ	NA		
Chloroform	< 0.00500		UJ	< 0.00600		UJ	< 0.00500			< 0.00600		UJ	NA		
Chloromethane	< 0.01100		UJ	< 0.01200		UJ	NA			< 0.01100		UJ	NA		
Dibromochloromethane	< 0.00500		UJ	< 0.00600		UJ	NA			< 0.00600		UJ	NA		
Ethylbenzene	< 0.00500		UJ	< 0.00600		UJ	NA			< 0.00600		UJ	NA		
Methylene chloride	0.01200	B	UJ	0.01200	B	UJ	NA			0.02600	B	UJ	NA		
Styrene	< 0.00500		UJ	< 0.00600		UJ	NA			0.00200	J	J	NA		
Tetrachlorethene	0.03000		J	< 0.00600		UJ	0.00100	J	J	< 0.00600		UJ	NA		
Toluene	< 0.00500		UJ	< 0.00600		UJ	NA			0.00100	J	J	NA		
Total xylenes	< 0.00500		UJ	< 0.00600		UJ	NA			0.00600		UJ	NA		

a = lab qualifiers
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SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	1808 067394 3.0 - 4.5	a	b	1808 067396 7.5 - 9.0	a	b	1808 067397 9.0 - 10.5 TCLP	a	b	1808 067401 15.0 - 16.5	a	b	1808 067402 0 - 12.75 TCLP	a	b
Trichloroethene	< 0.00500		UJ	< 0.00600		UJ	< 0.00500			< 0.00600		UJ	NA		
Vinyl Acetate	< 0.01100		UJ	< 0.01200		UJ	NA			< 0.01100		UJ	NA		
Vinyl chloride	< 0.01100		UJ	< 0.01200		UJ	< 0.01000			< 0.01100		UJ	NA		
cis-1,3-Dichloropropene	< 0.00500		UJ	< 0.00600		UJ	NA			< 0.00600		UJ	NA		
trans-1,3-Dichloropropene	< 0.00500		UJ	< 0.00600		UJ	NA			< 0.00600		UJ	NA		
1,1,1,2-Tetrachloroethane	NA			< 0.01200		UJ	NA			NA			NA		
1,2,3-Trichloropropane	NA			< 0.01200		UJ	NA			NA			NA		
1,2-Dibromo-3-chloropropane	NA			< 0.01200		UJ	NA			NA			NA		
1,2-Dibromoethane	NA			< 0.01200		UJ	NA			NA			NA		
1,4-Dioxane	NA			0.06600	J	J	NA			NA			NA		
2-Chloro-1,3-butadiene	NA			< 0.01200		UJ	NA			NA			NA		
3-Chloropropene	NA			< 0.01200		UJ	NA			NA			NA		
Acetonitrile	NA			< 0.02500		UJ	NA			NA			NA		
Acrolein	NA			< 0.02500		R	NA			NA			NA		
Acrylonitrile	NA			< 0.02500		UJ	NA			NA			NA		
Dibromomethane	NA			< 0.01200		J	NA			NA			NA		
Dichlorodifluoromethane	NA			< 0.25000		R	NA			NA			NA		
Ethyl cyanide	NA			< 0.01200		UJ	NA			NA			NA		
Ethyl methacrylate	NA			< 0.01200		UJ	NA			NA			NA		
Iodomethane	NA			< 0.01200		UJ	NA			NA			NA		
Isobutyl alcohol	NA			< 0.25000		R	NA			NA			NA		
Methacrylonitrile	NA			< 0.01200		UJ	NA			NA			NA		
Methyl methacrylate	NA			< 0.01200		UJ	NA			NA			NA		
Pyridine	NA			0.00300	J	J	< 0.02000			NA			NA		
Trichlorofluoromethane	NA			< 0.01200		R	NA			NA			NA		
trans-1,4-Dichloro-2-butene	NA			< 0.01200		UJ	NA			NA			NA		

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1808 067403 - FIELD BLANK			1808 067407 - TRIP BLANK			1888 067714 0.0 - 1.5			1888 067717 5.0 - 6.0			1888 067719 6.0 - 7.5 TCLP		
		a	b		a	b		a	b		a	b		a	b
DIOXINS															
1,2,3,4,6,7,8-Heptachlorodib	NA			NA			< 0.00005			< 0.00017			NA		
1,2,3,4,6,7,8-Heptachlorodib	NA			NA			< 0.00005			< 0.00013			NA		
1,2,3,4,7,8,9-Heptachlorodib	NA			NA			< 0.00007			< 0.00031			NA		
1,2,3,4,7,8-Hexachlorodibenz	NA			NA			< 0.00007			< 0.00009			NA		
1,2,3,4,7,8-Hexachlorodibenz	NA			NA			< 0.00007			< 0.00010			NA		
1,2,3,6,7,8-Hexachlorodibenz	NA			NA			< 0.00006			< 0.00010			NA		
1,2,3,6,7,8-Hexachlorodibenz	NA			NA			< 0.00006			< 0.00008			NA		
1,2,3,7,8,9-Hexachlorodibenz	NA			NA			< 0.00006			< 0.00008			NA		
1,2,3,7,8,9-Hexachlorodibenz	NA			NA			< 0.00008			< 0.00011			NA		
1,2,3,7,8-Pentachlorodibenzo	NA			NA			< 0.00006	UJ		< 0.00014	UJ		NA		
1,2,3,7,8-Pentachlorodibenzo	NA			NA			< 0.00005	UJ		< 0.00026	UJ		NA		
2,3,4,6,7,8-Hexachlorodibenz	NA			NA			< 0.00007			< 0.00015			NA		
2,3,4,7,8-Pentachlorodibenzo	NA			NA			< 0.00007	UJ		< 0.00015	UJ		NA		
2,3,7,8-TCDD	NA			NA			< 0.00003			< 0.00001			NA		
2,3,7,8-TCDF	NA			NA			< 0.00001			< 0.00003			NA		
Heptachlorodibenzofuran	NA			NA			< 0.00006			< 0.00060			NA		
Heptachlorodibenzo-p-dioxin	NA			NA			< 0.00005			< 0.00013			NA		
Hexachlorodibenzo-p-dioxin	NA			NA			< 0.00006			< 0.00008			NA		
Hexachlorodibenzofuran	NA			NA			< 0.00007			< 0.00015			NA		
Octachlorodibenzo-p-dioxin	NA			NA			0.00100			0.00380			NA		
Octachlorodibenzofuran	NA			NA			< 0.00011			< 0.00078			NA		
Pentachlorodibenzofuran	NA			NA			< 0.00006	UJ		< 0.00027	UJ		NA		
Pentachlorodibenzo-p-dioxin	NA			NA			< 0.00005	UJ		< 0.00021	UJ		NA		
Tetrachlorodibenzo-p-dioxin	NA			NA			< 0.00003			< 0.00006			NA		
Tetrachlorodibenzofuran	NA			NA			< 0.00004			< 0.00007			NA		
HERBICIDE ORGANICS															

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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CHEMICAL PARAMETERS	1808 067403 - FIELD BLANK a	b	1808 067407 - TRIP BLANK a	b	1888 067714 0.0 - 1.5 a	b	1888 067717 5.0 - 6.0 a	b	1888 067719 6.0 - 7.5 TCLP a	b
HERBICIDE ORGANICS										
2,4,5-T	NA		NA		NA		< 0.04800	UJ	NA	
2,4,5-TP (Silvex)	NA		NA		NA		< 0.04400	UJ	NA	
2,4-D	NA		NA		NA		< 0.24000	UJ	NA	
ORGANOPHOSPOROUS PESTICIDES										
Sulfotepp	NA		NA		NA		< 0.41000		NA	
PESTICIDES										
4,4'-DDD	NA		NA		< 0.01900		< 0.02000	UJ	NA	
4,4'-DDE	NA		NA		< 0.01900		< 0.02000	UJ	NA	
4,4'-DDT	NA		NA		< 0.01900		< 0.02000	UJ	NA	
Aldrin	NA		NA		< 0.00940		< 0.00990	UJ	NA	
Aroclor-1016	NA		NA		< 0.09400		< 0.09900	UJ	NA	
Aroclor-1221	NA		NA		< 0.09400		< 0.09900	UJ	NA	
Aroclor-1232	NA		NA		< 0.09400		< 0.09900	UJ	NA	
Aroclor-1242	NA		NA		< 0.09400		< 0.09900	UJ	NA	
Aroclor-1248	NA		NA		< 0.09400		< 0.09900	UJ	NA	
Aroclor-1254	NA		NA		< 0.19000		< 0.20000	UJ	NA	
Aroclor-1260	NA		NA		< 0.19000		< 0.20000	UJ	NA	
Dieldrin	NA		NA		< 0.01900		< 0.02000	UJ	NA	
Endosulfan II	NA		NA		< 0.01900		< 0.02000	UJ	NA	
Endosulfan sulfate	NA		NA		< 0.01900		< 0.02000	UJ	NA	
Endosulfan-I	NA		NA		< 0.00940		< 0.00990	UJ	NA	
Endrin	NA		NA		< 0.01900		< 0.02000	UJ	NA	
Endrin ketone	NA		NA		< 0.01900		< 0.02000	UJ	NA	
Heptachlor	NA		NA		< 0.00940		< 0.00990	UJ	NA	
Heptachlor epoxide	NA		NA		< 0.00940		< 0.00990	UJ	NA	
Methoxychlor	NA		NA		< 0.09400		< 0.09900	UJ	NA	
Toxaphene	NA		NA		< 0.19000		< 0.20000	UJ	NA	
alpha-BHC	NA		NA		< 0.00940		< 0.00990	UJ	NA	
alpha-Chlordane	NA		NA		< 0.09400		< 0.09900	UJ	NA	
beta-BHC	NA		NA		< 0.00940		< 0.00990	UJ	NA	
delta-BHC	NA		NA		< 0.00940		< 0.00990	UJ	NA	
gamma-BHC (Lindane)	NA		NA		< 0.00940		< 0.00990	UJ	NA	
gamma-Chlordane	NA		NA		< 0.09400		< 0.09900	UJ	NA	
Isodrin	NA		NA		NA		< 0.00990	UJ	NA	

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		a	b		a	b		a	b		a	b		a	b
Kepone	NA			NA			NA			< 0.02000		UJ	NA		
SEMI-VOLATILE ORGANICS															
1,2,4-Trichlorobenzene	NA			NA			< 0.38000			< 0.41000			NA		
1,2-Dichlorobenzene	NA			NA			< 0.38000			< 0.41000			NA		
1,3-Dichlorobenzene	NA			NA			< 0.38000			< 0.41000			NA		
1,4-Dichlorobenzene	NA			NA			< 0.38000			< 0.41000			< 0.02000		
2,4,5-Trichlorophenol	NA			NA			< 1.80000			< 2.00000			< 0.10000		
2,4,6-Trichlorophenol	NA			NA			< 0.38000			< 0.41000			< 0.02000		
2,4-Dichlorophenol	NA			NA			< 0.38000			< 0.41000			NA		
2,4-Dimethylphenol	NA			NA			< 0.38000			< 0.41000			NA		
2,4-Dinitrophenol	NA			NA			< 1.80000			< 2.00000			NA		
2,4-Dinitrotoluene	NA			NA			< 0.38000			< 0.41000			< 0.02000		
2,6-Dinitrotoluene	NA			NA			< 0.38000			< 0.41000			NA		
2-Chloronaphthalene	NA			NA			< 0.38000			< 0.41000			NA		
2-Chlorophenol	NA			NA			< 0.38000			< 0.41000			NA		
2-Methylnaphthalene	NA			NA			< 0.38000			< 0.41000			NA		
2-Methylphenol	NA			NA			< 0.38000			< 0.41000			< 0.02000		
2-Nitroaniline	NA			NA			< 1.80000			< 2.00000			NA		
2-Nitrophenol	NA			NA			< 0.38000			< 0.41000			NA		
3,3'-Dichlorobenzidine	NA			NA			< 0.76000			< 0.83000			NA		
3-Nitroaniline	NA			NA			< 1.80000			< 2.00000			NA		
4,6-Dinitro-2-methylphenol	NA			NA			< 1.80000			< 2.00000			NA		
4-Bromophenyl phenyl ether	NA			NA			< 0.38000			< 0.41000			NA		
4-Chloro-3-methylphenol	NA			NA			< 0.38000			< 0.41000			NA		
4-Chloroaniline	NA			NA			< 0.38000			< 0.41000			NA		
4-Chlorophenylphenyl ether	NA			NA			< 0.38000			< 0.41000			NA		
4-Methylphenol	NA			NA			< 0.38000			< 0.41000		UJ	< 0.02000		
4-Nitroaniline	NA			NA			< 1.80000			< 2.00000			NA		
4-Nitrophenol	NA			NA			< 1.80000			< 2.00000			NA		
Acenaphthene	NA			NA			< 0.38000			< 0.41000			NA		
Acenaphthylene	NA			NA			< 0.38000			< 0.41000			NA		
Anthracene	NA			NA			< 0.38000			< 0.41000			NA		
Benzo(a)anthracene	NA			NA			< 0.38000			< 0.41000			NA		
Benzo(a)pyrene	NA			NA			< 0.38000			< 0.41000			NA		
Benzo(b)fluoranthene	NA			NA			< 0.38000			< 0.41000			NA		
Benzo(g,h,i)perylene	NA			NA			< 0.38000			< 0.41000			NA		
Benzo(k)fluoranthene	NA			NA			< 0.38000			< 0.41000			NA		
Benzoic acid	NA			NA			< 1.80000			0.04600	BJ		NA		
Benzyl alcohol	NA			NA			< 0.38000			< 0.41000			NA		
Butyl benzyl phthalate	NA			NA			< 0.38000			< 0.41000			NA		
Chrysene	NA			NA			< 0.38000			0.04700	J	J	NA		

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SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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		a	b		a	b		a	b		a	b		a	b
Di-n-butyl phthalate	NA			NA			< 0.38000			< 0.41000			NA		
Di-n-octyl phthalate	NA			NA			< 0.38000			< 0.41000			NA		
Dibenzo(a,h)anthracene	NA			NA			< 0.38000			< 0.41000			NA		
Dibenzofuran	NA			NA			< 0.38000			< 0.41000			NA		
Diethyl phthalate	NA			NA			< 0.38000			0.04500	J	J	NA		
Dimethyl phthalate	NA			NA			< 0.38000			< 0.41000			NA		
Fluoranthene	NA			NA			< 0.38000			< 0.41000			NA		
Fluorene	NA			NA			< 0.38000	UJ		< 0.41000			NA		
Hexachlorobenzene	NA			NA			< 0.38000			< 0.41000			< 0.02000		
Hexachlorobutadiene	NA			NA			< 0.38000			< 0.41000			< 0.02000		
Hexachlorocyclopentadiene	NA			NA			< 0.38000			< 0.41000		UJ	NA		
Hexachloroethane	NA			NA			< 0.38000			< 0.41000			< 0.02000		
Indeno(1,2,3-cd)pyrene	NA			NA			< 0.38000			< 0.41000			NA		
Isophorone	NA			NA			< 0.38000			< 0.41000			NA		
N-Nitroso-di-n-propylamine	NA			NA			< 0.38000			< 0.41000			NA		
N-Nitrosodiphenylamine	NA			NA			< 0.38000			< 0.41000			NA		
Naphthalene	NA			NA			< 0.38000			< 0.41000			NA		
Nitrobenzene	NA			NA			< 0.38000			< 0.41000			< 0.02000		
Pentachlorophenol	NA			NA			< 1.80000			< 2.00000			< 0.10000		
Phenanthrene	NA			NA			< 0.38000			0.16000	J	J	NA		
Phenol	NA			NA			< 0.38000			< 0.41000			NA		
Pyrene	NA			NA			< 0.38000			0.08100	J	J	NA		
bis(2-Chloroethoxy)methane	NA			NA			< 0.38000			< 0.41000			NA		
bis(2-Chloroethyl)ether	NA			NA			< 0.38000			< 0.41000			NA		
bis(2-Chloroisopropyl) ether	NA			NA			< 0.38000			< 0.41000		UJ	NA		
bis(2-Ethylhexyl) phthalate	NA			NA			< 0.38000			0.92000			NA		
1,2,4,5-Tetrachlorobenzene	NA			NA			NA			< 0.41000			NA		
1,3,5-Trinitrobenzene	NA			NA			NA			< 0.41000			NA		
1,4-Naphthoquinone	NA			NA			NA			< 0.41000			NA		
1-Naphthylamine	NA			NA			NA			< 5.00000			NA		
2,3,4,6-Tetrachlorophenol	NA			NA			NA			< 0.41000			NA		
2,6-Dichlorophenol	NA			NA			NA			< 0.41000			NA		
2-Acetylaminofluorene	NA			NA			NA			< 0.41000			NA		
2-Naphthylamine	NA			NA			NA			< 7.20000			NA		
2-Picoline	NA			NA			NA			< 2.90000			NA		
3,3'-Dimethylbenzidine	NA			NA			NA			< 3.40000			NA		
3-Methylcholanthrene	NA			NA			NA			< 1.30000			NA		
3-Methylphenol	NA			NA			NA			< 0.41000			< 0.02000		
4-Aminobiphenyl	NA			NA			NA			< 2.10000			NA		
4-Nitroquinoline-1-oxide	NA			NA			NA			< 0.41000		R	NA		
5-Nitro-o-toluidine	NA			NA			NA			< 0.84000			NA		
7,12-Dimethylbenz(a)anthrace	NA			NA			NA			< 0.84000			NA		
Acetophenone	NA			NA			NA			< 0.41000			NA		
Aniline	NA			NA			NA			< 2.10000			NA		

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SOLID WASTE LANDFILL
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RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1808 067403 - FIELD BLANK	a	b	1808 067407 - TRIP BLANK	a	b	1888 067714 0.0 - 1.5	a	b	1888 067717 5.0 - 6.0	a	b	1888 067719 6.0 - 7.5 TCLP	a	b
Aramite	NA			NA			NA			< 0.41000		UJ	NA		
Diallate	NA			NA			NA			< 0.41000		UJ	NA		
Dinoseb	NA			NA			NA			< 0.84000		UJ	NA		
Diphenylamine	NA			NA			NA			< 0.41000			NA		
Ethyl methanesulfonate	NA			NA			NA			< 0.41000			NA		
Hexachlorophene	NA			NA			NA			< 2.10000			NA		
Hexachloropropene	NA			NA			NA			< 0.84000		R	NA		
Isosafrole	NA			NA			NA			< 0.41000			NA		
Methapyrilene	NA			NA			NA			< 1.70000		UJ	NA		
Methyl methanesulfonate	NA			NA			NA			< 0.41000		UJ	NA		
N-Nitrosodi-n-butylamine	NA			NA			NA			< 0.84000		UJ	NA		
N-Nitrosodiethylamine	NA			NA			NA			< 0.41000			NA		
N-Nitrosodimethylamine	NA			NA			NA			< 0.41000		UJ	NA		
N-Nitrosomethylethylamine	NA			NA			NA			< 0.41000		UJ	NA		
N-Nitrosomorpholine	NA			NA			NA			< 0.41000		UJ	NA		
N-Nitrosopiperidine	NA			NA			NA			< 0.41000			NA		
N-Nitrosopyrrolidine	NA			NA			NA			< 0.41000		UJ	NA		
O,O,O-Triethylphosphorothioa	NA			NA			NA			< 0.41000			NA		
Pentachlorobenzene	NA			NA			NA			< 0.84000			NA		
Pentachloroethane	NA			NA			NA			< 0.84000			NA		
Pentachloronitrobenzene	NA			NA			NA			< 0.84000			NA		
Phenacetin	NA			NA			NA			< 0.41000			NA		
Pronamide	NA			NA			NA			< 1.30000			NA		
Safrole	NA			NA			NA			< 0.41000			NA		
a,a-Dimethylphenethylamine	NA			NA			NA			< 0.41000			NA		
o-Toluidine	NA			NA			NA			< 0.41000		UJ	NA		
p-Dimethylaminoazobenzene	NA			NA			NA			< 1.30000			NA		
p-Phenylenediamine	NA			NA			NA			< 2.10000		R	NA		
Dinoseb	NA			NA			NA			< 0.01700		UJ	NA		
VOLATILE ORGANICS															
1,1,1-Trichloroethane	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			NA		
1,1,2,2-Tetrachloroethane	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			NA		
1,1,2-Trichloroethane	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			NA		
1,1-Dichloroethane	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			NA		
1,1-Dichloroethene	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			< 0.00500		
1,2-Dichloroethane	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			< 0.00500		
1,2-Dichloroethylene	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			0.00300	J	J	NA		
1,2-Dichloropropane	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			NA		
2-Butanone	0.00300	BJ	J	0.00200	BJ	J	< 0.01100		UJ	0.00200	BJ	UJ	< 0.01000		
2-Hexanone	< 0.01000		UJ	< 0.01000		UJ	< 0.01100		UJ	< 0.01200			NA		
4-Methyl-2-pentanone	< 0.01000		UJ	< 0.01000		UJ	< 0.01100		UJ	< 0.01200		UJ	NA		
Acetone	0.01400	B	J	0.00800	BJ	J	0.00500	BJ	UJ	0.00700	BJ		NA		

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RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	1808 067403 - FIELD BLANK	a	b	1808 067407 - TRIP BLANK	a	b	1888 067714 0.0 - 1.5	a	b	1888 067717 5.0 - 6.0	a	b	1888 067719 6.0 - 7.5 TCLP	a	b
Benzene	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			< 0.00500		
Bromodichloromethane	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			NA		
Bromoform	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			NA		
Bromomethane	< 0.01000		UJ	< 0.01000		UJ	< 0.01100		UJ	< 0.01200		UJ	NA		
Carbon Tetrachloride	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			< 0.00500		
Carbon disulfide	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			NA		
Chlorobenzene	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			< 0.00500		
Chloroethane	< 0.01000		UJ	< 0.01000		UJ	< 0.01100			< 0.01200			NA		
Chloroform	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			< 0.00500		
Chloromethane	< 0.01000		UJ	< 0.01000		UJ	< 0.01100			< 0.01200			NA		
Dibromochloromethane	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			NA		
Ethylbenzene	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			NA		
Methylene chloride	0.01000	B	J	0.00600	B	J	0.00600	B		0.00600	BJ		NA		
Styrene	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			NA		
Tetrachloroethene	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			< 0.00500		
Toluene	< 0.00500		UJ	< 0.00500		UJ	0.00200	J	J	< 0.00600			NA		
Total xylenes	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			NA		
Trichloroethene	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00600			< 0.00500		
Vinyl Acetate	< 0.01000		UJ	< 0.01000		UJ	< 0.01100			< 0.01200			NA		
Vinyl chloride	< 0.01000		UJ	< 0.01000		UJ	< 0.01100			< 0.01200			< 0.01000		
cis-1,3-Dichloropropene	< 0.00500		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600			NA		
trans-1,3-Dichloropropene	< 0.00500		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600		UJ	NA		
1,1,1,2-Tetrachloroethane	NA			NA			< 0.01140			< 0.01210		UJ	NA		
1,2,3-Trichloropropane	NA			NA			< 0.01140			< 0.01210			NA		
1,2-Dibromo-3-chloropropane	NA			NA			< 0.01140			< 0.01210			NA		
1,2-Dibromoethane	NA			NA			< 0.01140			< 0.01210			NA		
1,4-Dioxane	NA			NA			< 0.22900		R	< 0.24200		R	NA		
2-Chloro-1,3-butadiene	NA			NA			< 0.01140			< 0.01210			NA		
3-Chloropropene	NA			NA			< 0.01140			< 0.01210			NA		
Acetonitrile	NA			NA			< 0.02290			< 0.02420			NA		
Acrolein	NA			NA			< 0.02290			< 0.02420			NA		
Acrylonitrile	NA			NA			< 0.02290			< 0.02420			NA		
Dibromomethane	NA			NA			< 0.01140			< 0.01210			NA		
Dichlorodifluoromethane	NA			NA			< 0.22900		R	< 0.24200		R	NA		
Ethyl cyanide	NA			NA			< 0.01140			< 0.01210			NA		
Ethyl methacrylate	NA			NA			< 0.01140			< 0.01210			NA		
Iodomethane	NA			NA			< 0.01140			< 0.01210			NA		
Isobutyl alcohol	NA			NA			< 0.22900			< 0.24200			NA		
Methacrylonitrile	NA			NA			< 0.01140			< 0.01210			NA		
Methyl methacrylate	NA			NA			< 0.01140			< 0.01210			NA		
Trichlorofluoromethane	NA			NA			< 0.01140			< 0.01210			NA		
trans-1,4-Dichloro-2-butene	NA			NA			< 0.01140			< 0.01210			NA		
Pyridine	NA			NA			NA			< 0.41000			< 0.02000		

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SOLID WASTE LANDFILL
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CHEMICAL PARAMETERS	1888 067727 - TRIP/FIELD BLANK			1888 067728 - RINSATE			1889 067740 15.5 - 17.5			1889 067741 - TRIP BLANK			3037 008125 - RINSATE		
		a	b		a	b		a	b		a	b		a	b
DIOXINS															
1,2,3,4,6,7,8-Heptachlorodib	NA			< 0.00028			< 0.00009			NA			NA		
1,2,3,4,6,7,8-Heptachlorodib	NA			< 0.00042			< 0.00006			NA			NA		
1,2,3,4,7,8,9-Heptachlorodib	NA			< 0.00039			< 0.00013			NA			NA		
1,2,3,4,7,8-Hexachlorodibenz	NA			< 0.00054			< 0.00006			NA			NA		
1,2,3,4,7,8-Hexachlorodibenz	NA			< 0.00058			< 0.00008			NA			NA		
1,2,3,6,7,8-Hexachlorodibenz	NA			< 0.00046			< 0.00006			NA			NA		
1,2,3,6,7,8-Hexachlorodibenz	NA			< 0.00048			< 0.00005			NA			NA		
1,2,3,7,8,9-Hexachlorodibenz	NA			< 0.00099			< 0.00007			NA			NA		
1,2,3,7,8,9-Hexachlorodibenz	NA			< 0.00049			< 0.00014			NA			NA		
1,2,3,7,8-Pentachlorodibenzo	NA			< 0.00039	UJ		< 0.00018	UJ		NA			NA		
1,2,3,7,8-Pentachlorodibenzo	NA			< 0.00062	UJ		< 0.00010			NA			NA		
2,3,4,6,7,8-Hexachlorodibenz	NA			< 0.00049			< 0.00006			NA			NA		
2,3,4,7,8-Pentachlorodibenzo	NA			< 0.00047	UJ		< 0.00007			NA			NA		
2,3,7,8-TCDD	NA			< 0.00009			< 0.00002			NA			NA		
2,3,7,8-TCDF	NA			< 0.00011			< 0.00003			NA			NA		
Heptachlorodibenzofuran	NA			< 0.00032			< 0.00011			NA			NA		
Heptachlorodibenzo-p-dioxin	NA			< 0.00042			< 0.00006			NA			NA		
Hexachlorodibenzo-p-dioxin	NA			< 0.00050			< 0.00007			NA			NA		
Hexachlorodibenzofuran	NA			< 0.00086			< 0.00012			NA			NA		
Octachlorodibenzo-p-dioxin	NA			< 0.00068			< 0.00016			NA			NA		
Octachlorodibenzofuran	NA			< 0.00074			< 0.00011			NA			NA		
Pentachlorodibenzofuran	NA			< 0.00045	UJ		< 0.00021			NA			NA		
Pentachlorodibenzo-p-dioxin	NA			< 0.00062	UJ		< 0.00018	UJ		NA			NA		
Tetrachlorodibenzo-p-dioxin	NA			< 0.00030			< 0.00004			NA			NA		
Tetrachlorodibenzofuran	NA			< 0.00053			< 0.00006			NA			NA		

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CHEMICAL PARAMETERS	1888 067727 - TRIP/FIELD BLANK a b	1888 067728 - RINSATE a b	1889 067740 15.5 - 17.5 a b	1889 067741 - TRIP/BLANK a b	3037 008125 - RINSATE a b
HERBICIDE ORGANICS					
2,4,5-T	NA	< 0.00200	NA	NA	NA
2,4,5-TP (Silvex)	NA	< 0.00180	NA	NA	NA
2,4-D	NA	< 0.01000	NA	NA	NA
ORGANOPHOSPOROUS PESTICIDES					
Sulfotepp	NA	< 0.01000	NA	NA	NA
PESTICIDES					
4,4'-DDD	NA	< 0.00010	< 0.01800	NA	< 0.00010
4,4'-DDE	NA	< 0.00010	< 0.01800	NA	< 0.00010
4,4'-DDT	NA	< 0.00010	< 0.01800	NA	< 0.00010
Aldrin	NA	< 0.00005	< 0.00920	NA	< 0.00005
Aroclor-1016	NA	< 0.00050	< 0.09200	NA	< 0.00050
Aroclor-1221	NA	< 0.00050	< 0.09200	NA	< 0.00050
Aroclor-1232	NA	< 0.00050	< 0.09200	NA	< 0.00050
Aroclor-1242	NA	< 0.00050	< 0.09200	NA	< 0.00050
Aroclor-1248	NA	< 0.00050	< 0.09200	NA	< 0.00050
Aroclor-1254	NA	< 0.00100	< 0.18000	NA	< 0.00100
Aroclor-1260	NA	< 0.00100	< 0.18000	NA	< 0.00100
Dieldrin	NA	< 0.00010	< 0.01800	NA	< 0.00010
Endosulfan II	NA	< 0.00010	< 0.01800	NA	< 0.00010
Endosulfan sulfate	NA	< 0.00010	< 0.01800	NA	< 0.00010
Endosulfan-I	NA	< 0.00005	< 0.00920	NA	< 0.00005
Endrin	NA	< 0.00010	< 0.01800	NA	< 0.00010
Endrin ketone	NA	< 0.00010	< 0.01800	NA	< 0.00010

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CHEMICAL PARAMETERS	1888 067727 - TRIP/BLANK	a	b	1888 067728 - RINSATE	a	b	1889 067740 15.5 - 17.5	a	b	1889 067741 - TRIP/FIELD BLANK	a	b	3037 008125 - RINSATE	a	b
Heptachlor	NA			< 0.00005			< 0.00920			NA			< 0.00005		
Heptachlor epoxide	NA			< 0.00005			< 0.00920			NA			< 0.00005		
Isodrin	NA			< 0.00005			NA			NA			NA		
Kepone	NA			< 0.00010			NA			NA			NA		
Methoxychlor	NA			< 0.00050			< 0.09200			NA			< 0.00050		
Toxaphene	NA			< 0.00100			< 0.18000			NA			< 0.00100		
alpha-BHC	NA			< 0.00005			< 0.00920			NA			< 0.00005		
alpha-Chlordane	NA			< 0.00050			< 0.09200			NA			< 0.00050		
beta-BHC	NA			< 0.00005			< 0.00920			NA			< 0.00005		
delta-BHC	NA			< 0.00005			< 0.00920			NA			< 0.00005		
gamma-BHC (Lindane)	NA			< 0.00005			< 0.00920			NA			< 0.00005		
gamma-Chlordane	NA			< 0.00050			< 0.09200			NA			< 0.00050		
SEMI-VOLATILE ORGANICS															
1,2,4,5-Tetrachlorobenzene	NA			< 0.01000	UJ		NA			NA			NA		
1,2,4-Trichlorobenzene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
1,2-Dichlorobenzene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
1,3,5-Trinitrobenzene	NA			< 0.01000			NA			NA			NA		
1,3-Dichlorobenzene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
1,4-Dichlorobenzene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
1,4-Naphthoquinone	NA			< 0.01000			NA			NA			NA		
1-Naphthylamine	NA			< 0.12000			NA			NA			NA		
2,3,4,6-Tetrachlorophenol	NA			< 0.01000	UJ		NA			NA			NA		
2,4,5-Trichlorophenol	NA			< 0.05000			< 1.80000			NA			< 0.05000		
2,4,6-Trichlorophenol	NA			< 0.01000			< 0.37000			NA			< 0.01000		
2,4-Dichlorophenol	NA			< 0.01000			< 0.37000			NA			< 0.01000		
2,4-Dimethylphenol	NA			< 0.01000			< 0.37000			NA			< 0.01000		
2,4-Dinitrophenol	NA			< 0.05000	UJ		< 1.80000			NA			< 0.05000		
2,4-Dinitrotoluene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
2,6-Dichlorophenol	NA			< 0.01000	UJ		NA			NA			NA		
2,6-Dinitrotoluene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
2-Acetylaminofluorene	NA			< 0.01000			NA			NA			NA		
2-Chloronaphthalene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
2-Chlorophenol	NA			< 0.01000			< 0.37000			NA			< 0.01000		
2-Methylnaphthalene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
2-Methylphenol	NA			< 0.01000			< 0.37000			NA			< 0.01000		
2-Naphthylamine	NA			< 0.17000			NA			NA			NA		
2-Nitroaniline	NA			< 0.05000	UJ		< 1.80000			NA			< 0.05000		
2-Nitrophenol	NA			< 0.01000			< 0.37000			NA			< 0.01000		
2-Picoline	NA			< 0.07000			NA			NA			NA		
3,3'-Dichlorobenzidine	NA			< 0.02000			< 0.74000			NA			< 0.02000		
3,3'-Dimethylbenzidine	NA			< 0.08000			NA			NA			NA		

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b = validation qualifiers

SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

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CHEMICAL PARAMETERS	1888 067727 - TRIP/FIELD BLANK	a	b	1888 067728 - RINSATE	a	b	1889 067740 15.5 - 17.5	a	b	1889 067741 - TRIP/BLANK	a	b	3037 008125 - RINSATE	a	b
3-Methylcholanthrene	NA			< 0.03000			NA			NA			NA		
3-Methylphenol	NA			< 0.02000			NA			NA			NA		
3-Nitroaniline	NA			< 0.05000			< 1.80000			NA			< 0.05000		
4,6-Dinitro-2-methylphenol	NA			< 0.05000			< 1.80000		UJ	NA			< 0.05000		
4-Aminobiphenyl	NA			< 0.05000		UJ	NA			NA			NA		
4-Bromophenyl phenyl ether	NA			< 0.01000			< 0.37000			NA			< 0.01000		
4-Chloro-3-methylphenol	NA			< 0.01000			< 0.37000			NA			< 0.01000		
4-Chloroaniline	NA			< 0.01000			< 0.37000			NA			< 0.01000		
4-Chlorophenylphenyl ether	NA			< 0.01000			< 0.37000			NA			< 0.01000		
4-Methylphenol	NA			< 0.01000			< 0.37000			NA			< 0.01000		
4-Nitroaniline	NA			< 0.05000			< 1.80000		UJ	NA			< 0.05000		
4-Nitrophenol	NA			< 0.05000			< 1.80000			NA			< 0.05000		
4-Nitroquinoline-1-oxide	NA			< 0.01000		UJ	NA			NA			NA		
5-Nitro-o-toluidine	NA			< 0.02000			NA			NA			NA		
7,12-Dimethylbenz(a)anthrace	NA			< 0.02000			NA			NA			NA		
7,12-Dimethylbenz(a)anthrace	NA			< 0.02000			NA			NA			NA		
Acenaphthene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Acenaphthylene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Acetophenone	NA			< 0.01000			NA			NA			NA		
Aniline	NA			< 0.05000			NA			NA			NA		
Anthracene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Aramite	NA			< 0.01000			NA			NA			NA		
Benzo(a)anthracene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Benzo(a)pyrene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Benzo(b)fluoranthene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Benzo(g,h,i)perylene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Benzo(k)fluoranthene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Benzoic acid	NA			< 0.05000			< 1.80000		R	NA			< 0.05000		
Benzyl alcohol	NA			< 0.01000			< 0.37000		UJ	NA			< 0.01000		
Butyl benzyl phthalate	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Chrysene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Di-n-butyl phthalate	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Di-n-octyl phthalate	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Diallate	NA			< 0.01000		UJ	NA			NA			NA		
Dibenzo(a,h)anthracene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Dibenzofuran	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Diethyl phthalate	NA			< 0.01000			< 0.37000			NA			0.00200	J	
Dimethyl phthalate	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Dinoseb	NA			< 0.00070			NA			NA			NA		
Diphenylamine	NA			< 0.01000			NA			NA			NA		
Ethyl methanesulfonate	NA			< 0.01000			NA			NA			NA		
Fluoranthene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Fluorene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Hexachlorobenzene	NA			< 0.01000			< 0.37000			NA			< 0.01000		

a = lab qualifiers
b = validation qualifiers

SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analysed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1888 067727 - TRIP/FIELD BLANK	a	b	1888 067728 - RINSATE	a	b	1889 067740 15.5 - 17.5	a	b	1889 067741 - TRIP/BLANK	a	b	3037 008125 - RINSATE	a	b
Hexachlorobutadiene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Hexachlorocyclopentadiene	NA			< 0.01000		UJ	< 0.37000			NA			< 0.01000		
Hexachloroethane	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Hexachlorophene	NA			< 0.05000			NA			NA			NA		
Hexachloropropene	NA			< 0.02000		UJ	NA			NA			NA		
Indeno(1,2,3-cd)pyrene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Isophorone	NA			< 0.01000			< 0.37000		UJ	NA			< 0.01000		
Isosafrole	NA			< 0.01000			NA			NA			NA		
Methapyrilene	NA			< 0.04000		UJ	NA			NA			NA		
Methyl methanesulfonate	NA			< 0.01000			NA			NA			NA		
N-Nitroso-di-n-propylamine	NA			< 0.01000			< 0.37000		UJ	NA			< 0.01000		
N-Nitrosodi-n-butylamine	NA			< 0.02000			NA			NA			NA		
N-Nitrosodiethylamine	NA			< 0.01000			NA			NA			NA		
N-Nitrosodimethylamine	NA			< 0.01000			NA			NA			NA		
N-Nitrosodiphenylamine	NA			< 0.01000			< 0.37000			NA			< 0.01000		
N-Nitrosomethylethylamine	NA			< 0.01000			NA			NA			NA		
N-Nitrosomorpholine	NA			< 0.01000			NA			NA			NA		
N-Nitrosopiperidine	NA			< 0.01000			NA			NA			NA		
N-Nitrosopyrrolidine	NA			< 0.01000		UJ	NA			NA			NA		
Naphthalene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Nitrobenzene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
O,O,O-Triethylphosphorothioa	NA			< 0.01000			NA			NA			NA		
O,O,O-Triethylphosphorothioa	NA			< 0.01000			NA			NA			NA		
Pentachlorobenzene	NA			< 0.02000		UJ	NA			NA			NA		
Pentachloroethane	NA			< 0.01000			NA			NA			NA		
Pentachloronitrobenzene	NA			< 0.02000		R	NA			NA			NA		
Pentachlorophenol	NA			< 0.05000			< 1.80000			NA			< 0.05000		
Phenacetin	NA			< 0.01000			NA			NA			NA		
Phenanthrene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Phenol	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Pronamide	NA			< 0.03000			NA			NA			NA		
Pyrene	NA			< 0.01000			< 0.37000			NA			< 0.01000		
Safrole	NA			< 0.01000			NA			NA			NA		
a,a-Dimethylphenethylamine	NA			< 0.01000		R	NA			NA			NA		
bis(2-Chloroethoxy)methane	NA			< 0.01000		UJ	< 0.37000			NA			< 0.01000		
bis(2-Chloroethyl)ether	NA			< 0.01000			< 0.37000			NA			< 0.01000		
bis(2-Chloroisopropyl) ether	NA			< 0.01000		UJ	< 0.37000		UJ	NA			< 0.01000		
bis(2-Ethylhexyl) phthalate	NA			< 0.01000			< 0.37000			NA			0.02300	B	
o-Toluidine	NA			< 0.01000			NA			NA			NA		
p-Dimethylaminoazobenzene	NA			< 0.03000			NA			NA			NA		
p-Phenylenediamine	NA			< 0.05000		UJ	NA			NA			NA		

VOLATILE ORGANICS

a = lab qualifiers
b = validation qualifiers

SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1888 067727 - TRIP/FIELD BLANK	a	b	1888 067728 - RINSATE	a	b	1889 067740 15.5 - 17.5	a	b	1889 067741 - TRIP/BLANK	a	b	3037 008125 - RINSATE	a	b
VOLATILE ORGANICS															
1,1,1,2-Tetrachloroethane	< 0.01000			< 0.01000			NA			NA			NA		
1,1,1-Trichloroethane	< 0.00500			< 0.00500		UJ	< 0.00600			< 0.00500		UJ	< 0.00500		
1,1,2,2-Tetrachloroethane	< 0.00500			< 0.00500			< 0.00600			< 0.00500			< 0.00500		
1,1,2-Trichloroethane	< 0.00500			< 0.00500			< 0.00600			< 0.00500			< 0.00500		
1,1-Dichloroethane	< 0.00500			< 0.00500			< 0.00600			< 0.00500		UJ	< 0.00500		
1,1-Dichloroethene	< 0.00500			< 0.00500			< 0.00600			< 0.00500			< 0.00500		
1,2,3-Trichloropropane	< 0.01000			< 0.01000			NA			NA			NA		
1,2-Dibromo-3-chloropropane	< 0.01000			< 0.01000			NA			NA			NA		
1,2-Dibromoethane	< 0.01000			< 0.01000			NA			NA			NA		
1,2-Dichloroethane	< 0.00500			< 0.00500		UJ	< 0.00600			< 0.00500			< 0.00500		
1,2-Dichloroethylene	< 0.00500			< 0.00500			< 0.00600			< 0.00500			< 0.00500		
1,2-Dichloropropane	< 0.00500			< 0.00500			< 0.00600			< 0.00500			< 0.00500		
1,4-Dioxane	< 0.20000		R	< 0.20000		R	NA			NA			NA		
2-Butanone	< 0.01000		UJ	< 0.01000			< 0.01100			< 0.01000			0.00500	J	
2-Chloro-1,3-butadiene	< 0.01000			< 0.01000		UJ	NA			NA			NA		
2-Hexanone	< 0.01000		UJ	< 0.01000			0.00100	BJ	UJ	< 0.01000			< 0.01000		
3-Chloropropene	< 0.01000			< 0.01000			NA			NA			NA		
4-Methyl-2-pentanone	< 0.01000		UJ	< 0.01000			< 0.01100		UJ	0.00200	BJ	J	< 0.01000		
Acetone	0.00200	BJ	J	0.00500	BJ	J	0.00400	BJ	UJ	0.00400	BJ	J	< 0.01000		
Acetonitrile	< 0.02000			< 0.02000		UJ	NA			NA			NA		
Acrolein	< 0.02000			< 0.02000		UJ	NA			NA			NA		
Acrylonitrile	< 0.02000			< 0.02000			NA			NA			NA		
Benzene	< 0.00500			< 0.00500			< 0.00600			< 0.00500			< 0.00500		
Bromodichloromethane	0.00100	J	J	0.00100	J	J	< 0.00600			0.00200	J	J	< 0.00500		
Bromoform	< 0.00500			< 0.00500		UJ	< 0.00600			< 0.00500			< 0.00500		
Bromomethane	< 0.01000		UJ	< 0.01000		UJ	< 0.01100		UJ	< 0.01000		UJ	< 0.01000		
Carbon Tetrachloride	< 0.00500			< 0.00500		UJ	< 0.00600			< 0.00500			< 0.00500		
Carbon disulfide	< 0.00500			< 0.00500			< 0.00600			< 0.00500			< 0.00500		
Chlorobenzene	< 0.00500			< 0.00500			< 0.00600			< 0.00500			< 0.00500		
Chloroethane	< 0.01000			< 0.01000			< 0.01100		UJ	< 0.01000			< 0.01000		
Chloroform	0.00500			0.00400	J	J	< 0.00600			0.00500			< 0.00500		
Chloromethane	< 0.01000			< 0.01000			< 0.01100		UJ	< 0.01000			< 0.01000		
Dibromochloromethane	< 0.00500			< 0.00500		UJ	< 0.00600			< 0.00500			< 0.00500		
Dibromomethane	< 0.01000			< 0.01000			NA			NA			NA		
Dichlorodifluoromethane	< 0.20000		R	< 0.20000		R	NA			NA			NA		
Ethyl cyanide	< 0.01000			< 0.01000		UJ	NA			NA			NA		
Ethyl methacrylate	< 0.01000			< 0.01000			NA			NA			NA		
Ethylbenzene	< 0.00500			< 0.00500			< 0.00600			< 0.00500			< 0.00500		
Iodomethane	< 0.01000			< 0.01000			NA			NA			NA		
Isobutyl alcohol	< 0.20000			< 0.20000		UJ	NA			NA			NA		

a = lab qualifiers
b = validation qualifiers

SOLID WASTE LANDFILL
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1888 067727 - TRIP/FIELD BLANK	a	b	1888 067728 - RINSATE	a	b	1889 067740 15.5 - 17.5	a	b	1889 067741 - TRIP/FIELD BLANK	a	b	3037 008125 - RINSATE	a	b
Methacrylonitrile	< 0.01000			< 0.01000			NA			NA			NA		
Methyl methacrylate	< 0.01000			< 0.01000			NA			NA			NA		
Methylene chloride	0.00600	B		0.04500	B	J	0.01300	B		0.00100	BJ	J	< 0.00500		
Styrene	< 0.00500			< 0.00500			< 0.00600			< 0.00500			< 0.00500		
Tetrachloroethene	< 0.00500			< 0.00500			< 0.00600			< 0.00500			< 0.00500		
Toluene	< 0.00500			< 0.00500			< 0.00600			< 0.00500			< 0.00500		
Total xylenes	< 0.00500			< 0.00500			< 0.00600			< 0.00500			< 0.00500		
Trichloroethene	< 0.00500			< 0.00500			< 0.00600			< 0.00500			< 0.00500		
Trichlorofluoromethane	< 0.01000			< 0.01000		UJ	NA			NA			NA		
Vinyl Acetate	< 0.01000			< 0.01000			< 0.01100			< 0.01000		UJ	< 0.01000		
Vinyl chloride	< 0.01000			< 0.01000			< 0.01100			< 0.01000			< 0.01000		
cis-1,3-Dichloropropene	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00500			< 0.00500		
trans-1,3-Dichloropropene	< 0.00500		UJ	< 0.00500		UJ	< 0.00600			< 0.00500			< 0.00500		
trans-1,4-Dichloro-2-butene	< 0.01000			< 0.01000		UJ	NA			NA			NA		

a = lab qualifiers
b = validation qualifiers

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EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING GENERAL CHEMICAL RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

Concentration Qualifiers

B = Reported value was obtained from a reading that was less than the Contract Laboratory Program (CLP) Contract Required Detection Limit (CRQL), but greater than or equal to the Instrument Detection Limit (IDL).

Quality Qualifiers

E = The reported value is estimated because of the presence of interference.

M = Duplicate injection precision not met.

N = Spiked sample recovery not within controls limits.

S = The reported value was determined by the Method of Standard Additions.

W = Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

G = Native analyte > 4 times spike added; therefore acceptance criteria do not apply.

X = Detection limit is higher than normal due to sample matrix interferences.

* = Duplication analysis not within control limits.

+ = Correlation coefficient for the MSA is less than 0.955.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOLID WASTE LANDFILL
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS		1035 008392 - RINSATE a
GENERAL CHEMISTRY		
Ammonia		NA
Chloride	<	1.0000
Fluoride	<	0.5000
Hydrogen ion		NA
Nitrate	<	5.0000
Phenols		0.0100
Phosphorus (black, white,		NA
Phosphate as P		NA
Sulfate	<	1.0000
Total Kjeldahl Nitrogen		NA
Total Organic Carbon		NA
Total Organic Halides		NA
Total Organic Nitrogen		NA
METALS		
Aluminum		NA
Antimony		NA
Arsenic	<	0.0300
Barium		0.0020
Beryllium		NA
Cadmium	<	0.0050
Calcium		NA
Chromium	<	0.0100
Cobalt		NA
Copper		0.0100
Cyanide		NA
Hexavalent Chromium	<	0.0200
Iron		5.4000
Lead	<	0.0300
Magnesium		NA
Manganese		0.0720
Mercury	<	0.0010
Molybdenum	<	0.0100
Nickel	<	0.0200
Potassium		NA
Selenium	<	0.0600
Silicon		NA
Silver	<	0.0050
Sodium		1.2000
Thallium		NA
Vanadium		NA
Zinc		NA

a = lab qualifiers
b = validation qualifiers

- = Sample has not been validated

SOLID WASTE LANDFILL
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS		1038 007952 - RINSATE a		1038 008186 0 - 1.5 RINSATE a
GENERAL CHEMISTRY				
Ammonia		NA		NA
Chloride	<	0.5000		NA
Fluoride	<	0.1000		NA
Hydrogen ion		NA		NA
Nitrate	<	0.0500		NA
Phenols	<	0.0100		NA
Phosphorus (black, white,		NA		NA
Phosphate as P		NA		NA
Sulfate		2.6000		NA
Total Kjeldahl Nitrogen		NA		NA
Total Organic Carbon		NA		NA
Total Organic Halides		NA		NA
Total Organic Nitrogen		NA		NA
METALS				
Aluminum		NA	<	0.0400
Antimony		NA	<	0.0300
Arsenic	<	0.0200	<	0.0020 W
Barium	<	0.0020		0.0540 B
Beryllium		NA	<	0.0010
Cadmium	<	0.0020	<	0.0050
Calcium		0.8000		141.0000
Chromium	<	0.0200	<	0.0100
Cobalt		NA	<	0.0200
Copper	<	0.0100	<	0.0100
Cyanide		NA	<	0.0200
Hexavalent Chromium	<	0.0100		NA
Iron		0.0900		0.0420 B
Lead	<	0.0500	<	0.0140 E
Magnesium		0.0400		66.0000
Manganese		0.0050		0.2620
Mercury	<	0.0002	<	0.0002
Molybdenum	<	0.0200		NA
Nickel	<	0.0200	<	0.0200
Potassium	<	0.2000		1.7200 B
Selenium	<	0.2000	<	0.0030 W
Silicon		NA		NA
Silver	<	0.0100		0.0110
Sodium	<	0.0500		10.4000
Thallium		NA	<	0.0180
Vanadium		NA	<	0.0100
Zinc		NA		0.0340

a = lab qualifiers
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SOLID WASTE LANDFILL
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
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CHEMICAL PARAMETERS	1719 067287 3.0 - 4.5	a	b	1719 067295 15.0 - 16.5	a	b	1719 067300 18.0 - 19.5	a	b	1719 067301 COMPOSITE TCLP	a	b
GENERAL CHEMISTRY												
Ammonia	NA			NA			NA			NA		
Chloride	NA			NA			NA			NA		
Fluoride	NA			NA			NA			NA		
Hydrogen ion	NA			NA			NA			NA		
Nitrate	NA			NA			NA			NA		
Phenols	NA			NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA			NA		
Phosphate as P	NA			NA			NA			NA		
Sulfate	NA			NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA			NA		
Total Organic Carbon	NA			NA			NA			NA		
Total Organic Halides	NA			NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA			NA		
METALS												
Aluminum	1920.0000	*		2530.0000	*		1500.0000	*		NA		
Antimony	4.2000			3.8000			6.7000			NA		
Arsenic	4.4000	N	J	4.9000	N	J	5.3000	N	J	< 0.1000		J
Barium	16.7000			18.2000			20.6000			0.9740		
Beryllium	0.1900	BN	J	0.2000	BN	J	0.1800	BN	J	NA		
Boron	7.2000	N	J	7.4000	N	J	8.1000	N	J	NA		
Cadmium	0.6400			0.4800			0.9800			0.0064	B	
Calcium	18600.0000			19200.0000			26100.0000			NA		
Chromium	6.3000	N	J	7.5000	N	J	6.6000	N	J	0.0821		
Cobalt	2.4000	B		2.9000	B		3.8000			NA		
Copper	4.2000	N*	J	4.8000	N*	J	4.7000	N*	J	NA		
Cyanide	< 0.1100		J	< 0.1300			< 0.1100		J	NA		
Hexavalent Chromium	NA			NA			NA			NA		
Iron	3350.0000	E*	J	4490.0000	E*	J	4130.0000	E*	J	NA		
Lead	14.2000	N*	J	12.0000	N*	J	13.5000	+N*	J	0.0695		R
Magnesium	4240.0000			3320.0000			7330.0000			NA		
Manganese	130.0000	E	J	115.0000	E	J	130.0000	E	J	NA		
Mercury	< 0.1000			< 0.1300			< 0.1100			< 0.0002		
Molybdenum	2.9000			3.6000			3.6000			NA		
Nickel	4.4000			4.9000			6.8000			NA		
Potassium	891.0000	B		938.0000	B		1220.0000			NA		
Selenium	< 0.4200	N	J	< 0.4900	N	J	< 0.4400	N	J	0.1490		J
Silicon	234.0000	*		132.0000	*		127.0000	*		NA		
Silver	3.3000			3.4000			3.8000			0.0726		
Sodium	53.9000	B		30.0000	B		39.5000	B		NA		
Thallium	< 0.4200	W	J	< 0.4900			< 2.2000	E	UJ	NA		
Vanadium	6.7000			8.3000			6.5000			NA		
Zinc	10.3000			50.7000			10.8000			NA		

a = lab qualifiers
b = validation qualifiers

SOLID WASTE LANDFILL
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS		1719 067302 COMPOSITE RCRA-4 a b
GENERAL CHEMISTRY		
Ammonia		NA
Chloride		NA
Fluoride		NA
Hydrogen ion		NA
Nitrate		NA
Phenols		NA
Phosphorus (black, white,		NA
Phosphate as P		NA
Sulfate		NA
Total Kjeldahl Nitrogen		NA
Total Organic Carbon		NA
Total Organic Halides		NA
Total Organic Nitrogen		NA
METALS		
Aluminum		NA
Antimony		NA
Arsenic		NA
Barium		NA
Beryllium		NA
Cadmium		NA
Calcium		NA
Chromium		NA
Cobalt		NA
Copper		NA
Cyanide	<	0.1200
Hexavalent Chromium		NA
Iron		NA
Lead		NA
Magnesium		NA
Manganese		NA
Mercury		NA
Molybdenum		NA
Nickel		NA
Potassium		NA
Selenium		NA
Silicon		NA
Silver		NA
Sodium		NA
Thallium		NA
Vanadium		NA
Zinc		NA

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Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1720 067307 3.0 - 4.5	a	b	1720 067311 7.5 - 9.0	a	b	1720 067312 9.0 - 10.5	a	b	1720 067316 COMPOSITE RCRA-4	b
GENERAL CHEMISTRY											
Ammonia	NA			NA			NA			NA	
Chloride	NA			NA			NA			NA	
Fluoride	NA			NA			NA			NA	
Hydrogen ion	NA			NA			NA			NA	
Nitrate	NA			NA			NA			NA	
Phenols	NA			NA			NA			NA	
Phosphorus (black, white,	NA			NA			NA			NA	
Phosphate as P	NA			NA			NA			NA	
Sulfate	NA			NA			NA			NA	
Total Kjeldahl Nitrogen	NA			NA			NA			NA	
Total Organic Carbon	NA			NA			NA			NA	
Total Organic Halides	NA			NA			NA			NA	
Total Organic Nitrogen	NA			NA			NA			NA	
METALS											
Aluminum	14300.0000			9770.0000			14100.0000			NA	
Antimony	< 7.1000	N	J	16.4000	N	J	11.9000	BN	J	NA	
Arsenic	6.8000			5.9000			15.4000			NA	
Barium	115.0000			65.7000			223.0000			NA	
Beryllium	0.9900	B		0.8400	B		0.9500	B		NA	
Boron	21.2000			32.6000			23.2000			NA	
Cadmium	0.9200	BN	J	3.8000	N	J	0.7100	BN	J	NA	
Calcium	9110.0000			84700.0000			6730.0000			NA	
Chromium	22.4000			25.9000			23.4000			NA	
Cobalt	15.1000			10.9000	B		25.8000			NA	
Copper	24.0000			17.8000			29.0000			NA	
Cyanide	< 0.1200			< 0.1200			< 0.1200			< 0.1200	J
Hexavalent Chromium	NA			NA			NA			NA	
Iron	25800.0000			15500.0000			36400.0000			NA	
Lead	13.8000			13.6000	S		13.2000			NA	
Magnesium	5120.0000			26500.0000			4770.0000			NA	
Manganese	340.0000			502.0000			1690.0000			NA	
Mercury	< 0.1200			< 0.1200			< 0.1200			NA	
Molybdenum	16.0000			14.2000			18.8000			NA	
Nickel	36.6000			20.9000			42.0000			NA	
Potassium	830.0000	B		907.0000	B		867.0000	B		NA	
Selenium	< 0.4800	W	J	< 0.4800			0.5400	B		NA	
Silicon	564.0000	N		567.0000	N	J	494.0000	N	J	NA	
Silver	4.2000		J	14.9000			4.0000			NA	
Sodium	80.5000	B		151.0000	B		81.9000	B		NA	
Thallium	< 0.4800			< 0.4800			< 0.4700			NA	
Tin	NA			< 47.6000			NA			NA	
Vanadium	35.6000			30.4000			37.2000			NA	
Zinc	60.5000			41.6000			63.0000			NA	

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SUBSURFACE MEDIA GENERAL CHEMICAL DATA
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Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS		1720 067318 COMPOSITE TCLP a b
GENERAL CHEMISTRY		
Ammonia		NA
Chloride		NA
Fluoride		NA
Hydrogen ion		NA
Nitrate		NA
Phenols		NA
Phosphorus (black, white,		NA
Phosphate as P		NA
Sulfate		NA
Total Kjeldahl Nitrogen		NA
Total Organic Carbon		NA
Total Organic Halides		NA
Total Organic Nitrogen		NA
METALS		
Aluminum		NA
Antimony		NA
Arsenic	<	0.2500
Barium		1.0700
Beryllium		NA
Cadmium		0.0106 B
Calcium		NA
Chromium		0.0929
Cobalt		NA
Copper		NA
Cyanide		NA
Hexavalent Chromium		NA
Iron		NA
Lead		0.0895
Magnesium		NA
Manganese		NA
Mercury	<	0.0002
Molybdenum		NA
Nickel		NA
Potassium		NA
Selenium		0.1370
Silicon		NA
Silver		0.0814
Sodium		NA
Thallium		NA
Vanadium		NA
Zinc		NA

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
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Results in parts per million (ppm)
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CHEMICAL PARAMETERS	1721 067234 9.0 - 10.5	a	b	1721 067236 12.0 - 13.5 EPTOXICITY	a	b	1721 067237 13.5 - 15.0	a	b	1721 067244 COMPOSITE RCRA-4	a	b	1721 067245 COMPOSITE TCLP	a	b
GENERAL CHEMISTRY															
Ammonia	NA			NA			NA			NA			NA		
Chloride	NA			NA			NA			NA			NA		
Fluoride	NA			NA			NA			NA			NA		
Hydrogen ion	NA			NA			NA			NA			NA		
Nitrate	NA			NA			NA			NA			NA		
Phenols	NA			NA			NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA			NA			NA		
Phosphate as P	NA			NA			NA			NA			NA		
Sulfate	NA			NA			NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA			NA			NA		
Total Organic Carbon	NA			NA			NA			NA			NA		
Total Organic Halides	NA			NA			NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA			NA			NA		
METALS															
Aluminum	10800.0000	*		NA			12500.0000			NA			NA		
Antimony	< 7.7000		J	NA			< 7.7000	N	J	NA			NA		
Arsenic	9.0000	N	J	< 0.0500			13.8000			NA			< 0.1500		
Barium	71.3000			0.8390			126.0000	N*	J	NA			0.9130		
Beryllium	0.9200	BN	J	NA			0.9300	B		NA			NA		
Boron	< 25.6000	N	J	NA			NA			NA			NA		
Cadmium	1.4000			0.0188			< 0.5200			NA			< 0.0060		
Calcium	45800.0000			NA			6330.0000	*	J	NA			NA		
Chromium	20.2000	N	J	0.0613			21.9000	N*	J	NA			0.0810		
Cobalt	9.4000	B		NA			18.8000			NA			NA		
Copper	19.2000	N*	J	NA			28.4000	*		NA			NA		
Cyanide	0.1400	B		NA			< 0.1300			< 0.2160			NA		
Hexavalent Chromium	NA			NA			NA			NA			NA		
Iron	21300.0000	E*	J	NA			33300.0000	*	J	NA			NA		
Lead	14.0000	SN*	J	< 0.0400			16.7000	*		NA			< 0.0400		
Magnesium	15200.0000			NA			5300.0000	*	J	NA			NA		
Manganese	555.0000	E	J	NA			923.0000	*	J	NA			NA		
Mercury	< 0.1200			< 0.0002			< 0.1200	*		NA			< 0.0002		
Molybdenum	11.8000			NA			14.9000	*		NA			NA		
Nickel	19.9000			NA			41.0000	N*	J	NA			NA		
Potassium	1140.0000	B		NA			1170.0000	B		NA			NA		
Selenium	< 0.5200	N	J	0.1050			< 0.5100			NA			< 0.0800		
Silicon	1140.0000	*		NA			NA			NA			NA		
Silver	7.5000			0.0546			< 2.6000		J	NA			0.0768		
Sodium	117.0000	B		NA			83.4000	B		NA			NA		
Thallium	< 0.5200			NA			0.6000	B		NA			NA		
Tin	< 51.1000			NA			NA			NA			NA		
Vanadium	26.6000			NA			33.7000			NA			NA		
Zinc	47.5000			NA			77.8000			NA			NA		

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Results in parts per million (ppm)
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CHEMICAL PARAMETERS	1722 067250 1.5 - 3.0	a	b	1722 067253 6.0 - 7.5 EPTOXICITY	a	b	1722 067256 11.0 - 12.5 EPTOXICITY	a	b	1722 067259 14.0 - 16.5	a	b	1722 067261 COMPOSITE TCLP	a	b
GENERAL CHEMISTRY															
Ammonia	NA			NA			NA			NA			NA		
Chloride	NA			NA			NA			NA			NA		
Fluoride	NA			NA			NA			NA			NA		
Hydrogen ion	NA			NA			NA			NA			NA		
Nitrate	NA			NA			NA			NA			NA		
Phenols	NA			NA			NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA			NA			NA		
Phosphate as P	NA			NA			NA			NA			NA		
Sulfate	NA			NA			NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA			NA			NA		
Total Organic Carbon	NA			NA			NA			NA			NA		
Total Organic Halides	NA			NA			NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA			NA			NA		
METALS															
Aluminum	6400.0000			NA			NA			8420.0000			NA		
Antimony	< 6.6000	N	J	NA			NA			< 7.7000	N	J	NA		
Arsenic	3.3000	S		< 0.2500			< 0.0500			6.1000			< 0.1500		JB
Barium	37.3000	BN*	J	2.0100			0.0849	B		90.2000	N*	J	1.1400		JB
Beryllium	0.5900	B		NA			NA			0.6300	B		NA		
Boron	NA			NA			NA			26.6000	*	J	NA		
Cadmium	2.7000			0.0375			< 0.0020			2.3000			0.0135	BN	R
Calcium	113000.0000	*	J	NA			NA			79500.0000	*	J	NA		
Chromium	22.5000	N*	J	1.2900			0.0102			23.4000	N*	J	0.7310	N	R
Cobalt	7.5000	B	J	NA			NA			12.7000	B		NA		
Copper	18.6000	*		NA			NA			22.2000	*		NA		
Cyanide	0.7900			NA			NA			0.5000	B		NA		
Hexavalent Chromium	NA			NA			NA			NA			NA		
Iron	16000.0000	*	J	NA			NA			22200.0000	*	J	NA		
Lead	147.0000	S*		0.9360			< 0.0400			10.1000	S*		0.4270	N	R
Magnesium	29600.0000	*	J	NA			NA			27900.0000	*	J	NA		
Manganese	375.0000	*	J	NA			NA			826.0000	*	J	NA		
Mercury	< 0.1100	*		< 0.0002			< 0.0002			< 0.1300	*		< 0.0002		JB
Molybdenum	10.2000	*	J	NA			NA			11.2000	*		NA		
Nickel	22.7000	N*	J	NA			NA			30.2000	N*	J	NA		
Potassium	1230.0000			NA			NA			960.0000	B		NA		
Selenium	< 0.4400			0.7410			< 0.0800			< 0.5100			0.3770		JB
Silicon	NA			NA			NA			701.0000	N*	J	NA		
Silver	12.5000		J	0.6910			< 0.0100			10.2000			0.3640		R
Sodium	342.0000	B		NA			NA			126.0000	B		NA		
Thallium	< 0.4400			NA			NA			< 0.5100			NA		
Vanadium	22.2000			NA			NA			26.1000			NA		
Zinc	36.4000			NA			NA			46.9000			NA		

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SUBSURFACE MEDIA GENERAL CHEMICAL DATA
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Results in parts per million (ppm)
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CHEMICAL PARAMETERS	1722 067263 COMPOSITE RCRA-4 a b
GENERAL CHEMISTRY	
Ammonia	NA
Chloride	NA
Fluoride	NA
Hydrogen ion	NA
Nitrate	NA
Phenols	NA
Phosphorus (black, white,	NA
Phosphate as P	NA
Sulfate	NA
Total Kjeldahl Nitrogen	NA
Total Organic Carbon	NA
Total Organic Halides	NA
Total Organic Nitrogen	NA
METALS	
Aluminum	NA
Antimony	NA
Arsenic	NA
Barium	NA
Beryllium	NA
Cadmium	NA
Calcium	NA
Chromium	NA
Cobalt	NA
Copper	NA
Cyanide	< 0.2160
Hexavalent Chromium	NA
Iron	NA
Lead	NA
Magnesium	NA
Manganese	NA
Mercury	NA
Molybdenum	NA
Nickel	NA
Potassium	NA
Selenium	NA
Silicon	NA
Silver	NA
Sodium	NA
Thallium	NA
Vanadium	NA
Zinc	NA

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SOLID WASTE LANDFILL
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Results in parts per million (ppm)
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CHEMICAL PARAMETERS	1808 067394 3.0 - 4.5	a	b	1808 067395 4.5 - 6.0	a	b	1808 067396 7.5 - 9.0	a	b	1808 067401 15.0 - 16.5	a	b
GENERAL CHEMISTRY												
Ammonia	NA			NA			NA			NA		
Chloride	NA			NA			NA			NA		
Fluoride	NA			NA			NA			NA		
Hydrogen ion	NA			NA			NA			NA		
Nitrate	NA			NA			NA			NA		
Phenols	NA			NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA			NA		
Phosphate as P	NA			NA			NA			NA		
Sulfate	NA			NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA			NA		
Total Organic Carbon	NA			20463.0000			NA			NA		
Total Organic Halides	NA			NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA			NA		
METALS												
Aluminum	9850.0000			NA			< 11600.0000			8670.0000		
Antimony	10.6000	BN	J	NA			10.4000	BN	J	20.0000	N	J
Arsenic	5.0000	S		NA			5.3000	S		3.8000		
Barium	78.6000			NA			95.1000			57.2000		
Beryllium	0.7100	B		NA			0.8800	B		0.7500	B	
Boron	22.1000	N	J	NA			< 24.4000	N	J	31.3000	N	J
Cadmium	2.1000			NA			2.4000			4.0000		
Calcium	52700.0000			NA			60600.0000			103000.0000		
Chromium	25.3000			NA			29.8000			29.8000		
Cobalt	11.8000			NA			13.9000			12.9000		
Copper	17.6000			NA			21.3000			20.2000		
Cyanide	< 0.1100			NA			< 0.1200			< 0.1100		
Hexavalent Chromium	NA			NA			NA			NA		
Iron	17000.0000			NA			19100.0000			17300.0000		
Lead	13.3000			NA			9.3000			6.5000	W	J
Magnesium	14300.0000			NA			14900.0000			29400.0000		
Manganese	422.0000	N	J	NA			425.0000	N	J	408.0000	N	J
Mercury	< 0.1000	N	J	NA			< 0.1200	N	J	< 0.1100	N	J
Molybdenum	11.7000			NA			13.7000			14.0000		
Nickel	19.9000			NA			25.8000			27.2000		
Potassium	976.0000	B		NA			1160.0000	B		1670.0000	B	
Selenium	< 0.4400			NA			< 0.5000			< 0.4600		
Silicon	815.0000			NA			806.0000			773.0000		
Silver	11.0000			NA			12.5000			15.6000		
Sodium	109.0000	B		NA			121.0000	B		169.0000	B	
Thallium	< 0.4400	W	J	NA			< 0.5000	W	J	< 0.4600		
Tin	< 44.3000			NA			< 48.7000			< 44.9000		
Vanadium	28.4000			NA			< 32.1000			28.4000		
Zinc	50.4000			NA			51.4000			44.6000		

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Results in parts per million (ppm)
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CHEMICAL PARAMETERS	1808 067405 10.5 - 12	a	b	1808 067406 13.5 - 15	a	b
GENERAL CHEMISTRY						
Ammonia	NA			NA		
Chloride	NA			NA		
Fluoride	NA			NA		
Hydrogen ion	NA			NA		
Nitrate	NA			NA		
Phenols	NA			NA		
Phosphorus (black, white,	NA			NA		
Phosphate as P	NA			NA		
Sulfate	NA			NA		
Total Kjeldahl Nitrogen	NA			NA		
Total Organic Carbon	27071.0000			10912.0000		
Total Organic Halides	NA			NA		
Total Organic Nitrogen	NA			NA		
METALS						
Aluminum	NA			NA		
Antimony	NA			NA		
Arsenic	NA			NA		
Barium	NA			NA		
Beryllium	NA			NA		
Cadmium	NA			NA		
Calcium	NA			NA		
Chromium	NA			NA		
Cobalt	NA			NA		
Copper	NA			NA		
Cyanide	NA			NA		
Hexavalent Chromium	NA			NA		
Iron	NA			NA		
Lead	NA			NA		
Magnesium	NA			NA		
Manganese	NA			NA		
Mercury	NA			NA		
Molybdenum	NA			NA		
Nickel	NA			NA		
Potassium	NA			NA		
Selenium	NA			NA		
Silicon	NA			NA		
Silver	NA			NA		
Sodium	NA			NA		
Thallium	NA			NA		
Vanadium	NA			NA		
Zinc	NA			NA		

a = lab qualifiers
b = validation qualifiers

SOLID WASTE LANDFILL
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1888 067714 0.0 - 1.5	a	b	1888 067717 5.0 - 6.0	a	b	1888 067718 6.0 - 7.5	a	b	1888 067728 - RINSATE	a	b
GENERAL CHEMISTRY												
Ammonia	NA			NA			NA			NA		
Chloride	NA			NA			NA			NA		
Fluoride	NA			NA			NA			NA		
Hydrogen ion	NA			NA			NA			NA		
Nitrate	NA			NA			NA			NA		
Phenols	NA			NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA			NA		
Phosphate as P	NA			NA			NA			NA		
Sulfate	NA			NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA			NA		
Total Organic Carbon	10692.0000			NA			7403.0000		<	1.0000		
Total Organic Halides	NA			NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA			NA		
METALS												
Aluminum	20800.0000	*		25200.0000	*		NA			0.1350	B	
Antimony	22.0000	N*	J	14.8000	N*	J	NA		<	0.0300		J
Arsenic	9.9000			12.5000			NA		<	0.0020		
Barium	160.0000			178.0000			NA			0.0065	B	
Beryllium	1.6000			1.6000			NA		<	0.0020		
Cadmium	6.5000	*		5.6000	*		NA		<	0.0020		
Calcium	141000.0000	*	J	53100.0000	*	J	NA			0.0452	B	
Chromium	51.8000			49.3000			NA		<	0.0100		
Cobalt	23.5000			26.0000			NA		<	0.0100		
Copper	41.5000			40.5000			NA		<	0.0100		
Cyanide	< 0.1100			< 0.1200		J	NA			NA		
Hexavalent Chromium	NA			NA			NA			NA		
Iron	36800.0000			42600.0000			NA			0.0678	B	
Lead	30.6000	S		28.3000	S		NA		<	0.0020		
Magnesium	31500.0000	*		20200.0000	*		NA			0.2570	B	
Manganese	1140.0000	*	J	984.0000	*	J	NA		<	0.0020		
Mercury	< 0.1100			< 0.1200			NA		<	0.0002		J
Molybdenum	26.8000			29.3000			NA		<	0.0100		
Nickel	47.1000			39.3000			NA		<	0.0200		
Potassium	2430.0000			2090.0000			NA			0.1160	B	
Selenium	< 0.6700			< 0.7300			NA		<	0.0030		
Silicon	1970.0000			2620.0000			NA			0.3850	*	
Silver	19.7000	*	J	12.6000	*	J	NA		<	0.0100	N	J
Sodium	309.0000	B		218.0000	B		NA		<	0.1000		
Thallium	< 0.4500			0.8000	B	J	NA		<	0.0020		
Tin	NA			< 47.5000			NA		<	0.2000		
Vanadium	57.3000			68.8000			NA		<	0.0100		
Zinc	92.7000	E	J	108.0000	E	J	NA			0.0112	B	

a = lab qualifiers
b = validation qualifiers

SOLID WASTE LANDFILL
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1889 067740 15.5 - 17.5	a	b
GENERAL CHEMISTRY				
Ammonia		NA		
Chloride		NA		
Fluoride		NA		
Hydrogen ion		NA		
Nitrate		NA		
Phenols		NA		
Phosphorus (black, white,		NA		
Phosphate as P		NA		
Sulfate		NA		
Total Kjeldahl Nitrogen		NA		
Total Organic Carbon		6020.0000		
Total Organic Halides		NA		
Total Organic Nitrogen		NA		
METALS				
Aluminum		748.0000	*	
Antimony		22.6000	N*	J
Arsenic		2.2000	BS	
Barium		47.7000		
Beryllium		0.7300	B	
Cadmium		4.8000	*	J
Calcium		91600.0000	*	J
Chromium		29.5000		
Cobalt		10.7000	B	J
Copper		22.6000		
Cyanide	<	0.1100		
Hexavalent Chromium		NA		
Iron		16700.0000		J
Lead		7.8000	S	
Magnesium		26800.0000	*	J
Manganese		346.0000	*	J
Mercury	<	0.1100		
Molybdenum		13.2000		J
Nickel		26.6000		
Potassium		1220.0000		
Selenium	<	0.6600	W	J
Silicon		818.0000		
Silver		15.0000	*	
Sodium		156.0000	B	
Thallium		12.5000		
Vanadium		25.4000		
Zinc		39.3000	E	J

a = lab qualifiers
b = validation qualifiers

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SOLID WASTE LANDFILL
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		3037 008125 - RINSATE a	b
GENERAL CHEMISTRY			
Ammonia		NA	
Chloride	<	0.5000	
Fluoride	<	0.1000	
Hydrogen ion		NA	
Nitrate	<	0.1000	
Phenols	<	0.0100	
Phosphorus (black, white,		NA	
Phosphate as P		NA	
Sulfate		2.5000	
Total Kjeldahl Nitrogen		NA	
Total Organic Carbon		NA	
Total Organic Halides		NA	
Total Organic Nitrogen		NA	
METALS			
Aluminum		0.1500 B	
Antimony	<	0.0600	
Arsenic	<	0.0050	
Barium	<	0.0020	
Beryllium	<	0.0010	
Cadmium	<	0.0020	
Calcium		0.5000 B	
Chromium	<	0.0200	
Cobalt	<	0.0100	
Copper	<	0.0100	
Cyanide	<	0.0100	
Hexavalent Chromium	<	0.0100	
Iron	<	0.0050	
Lead		0.0134	
Magnesium		0.1000 B	
Manganese	<	0.0010	
Mercury	<	0.0002	
Molybdenum		NA	
Nickel	<	0.0200	
Potassium	<	0.0400	
Selenium	<	0.0020	
Silicon		NA	
Silver	<	0.0050	
Sodium		0.1100 B	JB
Thallium	<	0.0050	
Vanadium		0.0310 B	
Zinc		51.0000	

a = lab qualifiers
b = validation qualifiers

TABLE C-8

HAZARDOUS CHARACTERISTIC DATA FOR
SUBSURFACE MEDIA
RI/FS SAMPLING PLAN
SOLID WASTE LANDFILL

TABLE C-8

HAZARDOUS CHARACTERISTIC DATA FOR SUBSURFACE MEDIA
RI/FS SAMPLING PROGRAM
SOLID WASTE LANDFILL

	1719	1720	1721	1721	1722
Characteristic	67302	67316	67244	67244D	67263
Ignitibility °C	> 110	NA	>110	>110	78
Corrosivity pH	7.5	NA	7.91	7.96	8.8
Reactivity					
Cyanide (mg/kg)	<0.12	<0.12	<0.216	<0.322	<0.216
Sulfide (mg/kg)	NA	NA	12.4	NA	9.5

NA = Not Analyzed
D = Duplicate Analysis

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TABLE C-9

DRAINAGE SEDIMENT ANALYSES
CHARACTERIZATION INVESTIGATION STUDY
SOLID WASTE LANDFILL

NOTES:

- CIS data not applicable to the OU2 waste unit have been shaded.

Thu Dec 17

ON-SITE LABORATORY RADIONUCLIDE RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (feet)	NORTH COORDINATE (feet)	BEGIN DEPTH (feet)	END DEPTH (feet)	RADIONUCLIDE	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
21	FMP-SD-21-002	1380289.84	482268.95	.00	.50	CS-137	<	.10	
	FMP-SD-21-002	1380289.84	482268.95	.00	.50	RA-226	=	1.10	.70
	FMP-SD-21-002	1380289.84	482268.95	.00	.50	RU-106	<	6.10	
	FMP-SD-21-002	1380289.84	482268.95	.00	.50	TH-232	=	1.30	.70
	FMP-SD-21-002	1380289.84	482268.95	.00	.50	U-238	<	11.20	
	FMP-SD-21-003	1380235.84	482269.42	.00	.66	CS-137	<	.30	
	FMP-SD-21-003	1380235.84	482269.42	.00	.66	RA-226	=	.80	.40
	FMP-SD-21-003	1380235.84	482269.42	.00	.66	RU-106	<	4.00	
	FMP-SD-21-003	1380235.84	482269.42	.00	.66	TH-232	=	1.00	.60
	FMP-SD-21-003	1380235.84	482269.42	.00	.66	U-238	<	11.20	
	FMP-SD-21-004	1380127.82	482270.38	.00	.75	CS-137	<	.80	
	FMP-SD-21-004	1380127.82	482270.38	.00	.75	RA-226	=	1.00	.40
	FMP-SD-21-004	1380127.82	482270.38	.00	.75	RU-106	<	4.30	
	FMP-SD-21-004	1380127.82	482270.38	.00	.75	TH-232	=	.90	.40
	FMP-SD-21-004	1380127.82	482270.38	.00	.75	U-238	=	9.60	4.00
	FMP-SD-21-005	1380019.83	482272.34	.00	.75	CS-137	<	.30	
	FMP-SD-21-005	1380019.83	482272.34	.00	.75	RA-226	=	.90	.30
	FMP-SD-21-005	1380019.83	482272.34	.00	.75	RU-106	<	.60	
	FMP-SD-21-005	1380019.83	482272.34	.00	.75	TH-232	=	.60	.30
	FMP-SD-21-005	1380019.83	482272.34	.00	.75	U-238	<	13.50	
	FMP-SD-21-006	1379911.82	482273.29	.00	.50	CS-137	<	.60	
	FMP-SD-21-006	1379911.82	482273.29	.00	.50	RA-226	=	.60	.40
	FMP-SD-21-006	1379911.82	482273.29	.00	.50	RU-106	<	5.10	
	FMP-SD-21-006	1379911.82	482273.29	.00	.50	TH-232	=	.90	.50
	FMP-SD-21-006	1379911.82	482273.29	.00	.50	U-238	<	6.10	
	FMP-SD-21-006D	1379911.82	482273.29	.00	1.00	CS-137	<	.60	
	FMP-SD-21-006D	1379911.82	482273.29	.00	1.00	RA-226	=	.60	.40
	FMP-SD-21-006D	1379911.82	482273.29	.00	1.00	RU-106	<	5.10	
	FMP-SD-21-006D	1379911.82	482273.29	.00	1.00	TH-232	=	.60	.50
	FMP-SD-21-006D	1379911.82	482273.29	.00	1.00	U-238	=	3.10	2.60
	FMP-SD-21-007	1379812.77	482273.00	.00	1.00	CS-137	<	.10	
	FMP-SD-21-007	1379812.77	482273.00	.00	1.00	RA-226	=	.70	.20
	FMP-SD-21-007	1379812.77	482273.00	.00	1.00	RU-106	<	4.30	
	FMP-SD-21-007	1379812.77	482273.00	.00	1.00	TH-232	=	.60	.30
	FMP-SD-21-007	1379812.77	482273.00	.00	1.00	U-238	=	4.20	2.50
	FMP-SD-21-008	1379713.26	482255.72	.00	.75	CS-137	<	.10	
	FMP-SD-21-008	1379713.26	482255.72	.00	.75	RA-226	<	.90	
	FMP-SD-21-008	1379713.26	482255.72	.00	.75	RU-106	<	.60	
	FMP-SD-21-008	1379713.26	482255.72	.00	.75	TH-232	=	.70	.50
	FMP-SD-21-008	1379713.26	482255.72	.00	.75	U-238	=	6.30	2.60
	FMP-SD-21-009	1379613.08	482250.46	.00	.75	CS-137	<	.70	
	FMP-SD-21-009	1379613.08	482250.46	.00	.75	RA-226	=	.80	.30
	FMP-SD-21-009	1379613.08	482250.46	.00	.75	RU-106	<	4.40	

Thu Dec 17

ON-SITE LABORATORY RADIONUCLIDE RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (feet)	NORTH COORDINATE (feet)	BEGIN DEPTH (feet)	END DEPTH (feet)	RADIONUCLIDE	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
21	FMP-SD-21-009	1379613.08	482250.46	.00	.75	TH-232	<	1.80	
	FMP-SD-21-009	1379613.08	482250.46	.00	.75	U-238	=	6.80	3.10
	FMP-SD-21-010	1379471.00	482198.00	.00	.50	CS-137	<	.60	
	FMP-SD-21-010	1379471.00	482198.00	.00	.50	RA-226	=	.40	.20
	FMP-SD-21-010	1379471.00	482198.00	.00	.50	RU-106	<	3.70	
	FMP-SD-21-010	1379471.00	482198.00	.00	.50	TH-232	=	.70	.30
	FMP-SD-21-010	1379471.00	482198.00	.00	.50	U-238	=	3.20	1.80
	FMP-SD-21-011	1379380.00	482176.00	.00	.25	CS-137	<	.60	
	FMP-SD-21-011	1379380.00	482176.00	.00	.25	RA-226	=	.60	.20
	FMP-SD-21-011	1379380.00	482176.00	.00	.25	RU-106	<	4.00	
	FMP-SD-21-011	1379380.00	482176.00	.00	.25	TH-232	=	.50	.40
	FMP-SD-21-011	1379380.00	482176.00	.00	.25	U-238	=	2.90	1.80
	FMP-SD-21-012	1379279.00	482183.00	.00	.50	CS-137	<	.50	
	FMP-SD-21-012	1379279.00	482183.00	.00	.50	RA-226	=	.70	.30
	FMP-SD-21-012	1379279.00	482183.00	.00	.50	RU-106	<	6.10	
	FMP-SD-21-012	1379279.00	482183.00	.00	.50	TH-232	<	2.30	
	FMP-SD-21-012	1379279.00	482183.00	.00	.50	U-238	<	9.00	
	FMP-SD-21-013	1379182.00	482195.00	.00	.50	CS-137	<	.50	
	FMP-SD-21-013	1379182.00	482195.00	.00	.50	RA-226	=	.80	.30
	FMP-SD-21-013	1379182.00	482195.00	.00	.50	RU-106	<	4.50	
	FMP-SD-21-013	1379182.00	482195.00	.00	.50	TH-232	=	1.00	.30
	FMP-SD-21-013	1379182.00	482195.00	.00	.50	U-238	=	5.90	2.80
	FMP-SD-21-014	1379083.00	482217.00	.00	.50	CS-137	<	.90	
	FMP-SD-21-014	1379083.00	482217.00	.00	.50	RA-226	=	1.10	.30
	FMP-SD-21-014	1379083.00	482217.00	.00	.50	RU-106	<	2.90	
	FMP-SD-21-014	1379083.00	482217.00	.00	.50	TH-232	=	.80	.40
	FMP-SD-21-014	1379083.00	482217.00	.00	.50	U-238	=	3.90	2.20
	FMP-SD-21-015	1378989.00	482241.00	.00	.50	CS-137	<	.10	
	FMP-SD-21-015	1378989.00	482241.00	.00	.50	RA-226	=	.70	.30
	FMP-SD-21-015	1378989.00	482241.00	.00	.50	RU-106	<	6.30	
	FMP-SD-21-015	1378989.00	482241.00	.00	.50	TH-232	=	.90	.40
	FMP-SD-21-015	1378989.00	482241.00	.00	.50	U-238	=	3.40	2.80
	FMP-SD-21-016	1378889.00	482264.00	.00	.50	CS-137	<	.50	
	FMP-SD-21-016	1378889.00	482264.00	.00	.50	RA-226	=	1.00	.40
	FMP-SD-21-016	1378889.00	482264.00	.00	.50	RU-106	<	5.50	
	FMP-SD-21-016	1378889.00	482264.00	.00	.50	TH-232	<	.30	
	FMP-SD-21-016	1378889.00	482264.00	.00	.50	U-238	=	3.70	2.30
	FMP-SD-21-016D	1378889.00	482264.00	.00	.50	CS-137	<	.50	
	FMP-SD-21-016D	1378889.00	482264.00	.00	.50	RA-226	=	.90	.20
	FMP-SD-21-016D	1378889.00	482264.00	.00	.50	RU-106	<	2.50	
	FMP-SD-21-016D	1378889.00	482264.00	.00	.50	TH-232	=	.90	.40
	FMP-SD-21-016D	1378889.00	482264.00	.00	.50	U-238	=	2.80	2.20
	FMP-SD-21-017	1378796.00	482231.00	.00	.50	CS-137	<	.60	

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	* RADIONUCLIDE	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
21	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	CS-137	<	.20	
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	NP-237	<	.10	
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	PB-210	=		
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	PU-238	<	.10	
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	PU-239/240	<	.10	
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	RA-226	=	1.68	.65
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	RA-228	=		
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	RU-106	<	2.00	
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	SR-90	<	.30	
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	TC-99	<	.70	
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	TH-228	=	.10	.10
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	TH-230	=	.30	.10
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	TH-232	=	.10	.10
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	U-234	=	2.40	.30
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	U-235	=	.10	.10
	FMP-SD-21-004	1380127.82	482270.38	.00	.80	445.0	U-238	=	5.70	.40
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	CS-137	<	.20	
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	NP-237	<	.10	
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	PB-210	=		
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	PU-238	=	.30	.10
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	PU-239/240	<	.10	
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	RA-226	=	1.31	.49
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	RA-228	=		
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	RU-106	<	2.00	
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	SR-90	<	.30	
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	TC-99	<	.30	
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	TH-228	=	1.20	.30
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	TH-230	=	5.00	.70
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	TH-232	=	1.00	.40
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	U-234	=	12.00	1.00
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	U-235	=	.50	.20
	FMP-SD-21-009	1379613.08	482250.46	.00	.80	436.0	U-238	=	23.00	1.00
	FMP-SD-21-017	1378796.00	482231.00	.00	.50	418.0	CS-137	<	.20	
	FMP-SD-21-017	1378796.00	482231.00	.00	.50	418.0	NP-237	<	.10	
	FMP-SD-21-017	1378796.00	482231.00	.00	.50	418.0	PB-210	=		
	FMP-SD-21-017	1378796.00	482231.00	.00	.50	418.0	PU-238	<	.10	
	FMP-SD-21-017	1378796.00	482231.00	.00	.50	418.0	PU-239/240	<	.10	
	FMP-SD-21-017	1378796.00	482231.00	.00	.50	418.0	RA-226	=	1.36	.51
	FMP-SD-21-017	1378796.00	482231.00	.00	.50	418.0	RA-228	=		
	FMP-SD-21-017	1378796.00	482231.00	.00	.50	418.0	RU-106	<	2.00	
	FMP-SD-21-017	1378796.00	482231.00	.00	.50	418.0	SR-90	<	.40	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

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SURFACE WATER ANALYSES
RI/FS SAMPLING PROGRAM
SOLID WASTE LANDFILL

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOLID WASTE LANDFILL
SURFACE WATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	ASIT-021 001161 02-21-1989				b
Actinium 231		NA			
Cesium 137	<	20.0			R
Lead 210		NA			
Neptunium 237	<	1.0			R
Plutonium 238	<	1.0			R
Plutonium 239/240	<	1.0			R
Polonium 210		NA			
Protactium 234		NA			
Radium 224		NA			
Radium 226	<	1.0			
Radium 228	<	3.0			J
Ruthenium 106	<	150.0			R
Strontium 90	<	5.0			
Technetium 99	<	30.0			J
Thorium 228	<	1.0			
Thorium 230	<	1.0			
Thorium 232	<	1.0			
Total Thorium **		NA			
Uranium 234		6.1	±	0.9	
Uranium 235/236	<	1.0			
Uranium 238		9.7	±	1.4	
Total Uranium **		26.0	±	5.0	J

** Results reported in ug/ℓ

b = validation qualifiers

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EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING HAZARDOUS SUBSTANCE LIST RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

J = Indicates an estimated value. This flag is used when the mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.

C = This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E = This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to pesticides/PCBs analyzed by GC/EC methods.

D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.

F = Estimated value due to a confirmed compound which is off-scale in both columns.

X = A flag that FORMASTER III CLP software automatically inserts to indicate that the data was entered manually.

Z = No estimated value reported, or an elevated CRQL reported because matrix effects interfere with or obscure the compound on one or both columns. In either situation, the compound does not confirm as a positive identification.

* = Values outside of contract laboratory-required QC limits.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOLID WASTE LANDFILL
SURFACE WATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by sample location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	ASIT-021 001161 02-21-1989		a	b
PESTICIDES				
4,4'-DDD	<	0.00010		
4,4'-DDE	<	0.00010		
4,4'-DDT	<	0.00010		
Aldrin	<	0.00005		
Aroclor-1016	<	0.00050		
Aroclor-1221	<	0.00050		
Aroclor-1232	<	0.00050		
Aroclor-1242	<	0.00050		
Aroclor-1248	<	0.00050		
Aroclor-1254	<	0.00100		
Aroclor-1260	<	0.00100		
Dieldrin	<	0.00010		J
Endosulfan II	<	0.00010		
Endosulfan sulfate	<	0.00010		
Endosulfan-I	<	0.00005		
Endrin	<	0.00010		
Endrin ketone	<	0.00010		
Heptachlor	<	0.00005		
Heptachlor epoxide	<	0.00005		
Methoxychlor	<	0.00050		
Toxaphene	<	0.00100		
alpha-BHC	<	0.00005		
alpha-Chlordane	<	0.00050		
beta-BHC	<	0.00005		
delta-BHC	<	0.00005		
gamma-BHC (Lindane)	<	0.00005		J
gamma-Chlordane	<	0.00050		
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<	0.01000		
1,2-Dichlorobenzene	<	0.01000		
1,3-Dichlorobenzene	<	0.01000		
1,4-Dichlorobenzene	<	0.01000		
2,4,5-Trichlorophenol	<	0.05000		
2,4,6-Trichlorophenol	<	0.01000		
2,4-Dichlorophenol	<	0.01000		
2,4-Dimethylphenol	<	0.01000		
2,4-Dinitrophenol	<	0.05000		J

a = lab qualifiers
b = validation qualifiers

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SOLID WASTE LANDFILL
SURFACE WATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by sample location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		ASIT-021 001161 02-21-1989	a	b
2,4-Dinitrotoluene	<	0.01000		
2,6-Dinitrotoluene	<	0.01000		
2-Chloronaphthalene	<	0.01000		
2-Chlorophenol	<	0.01000		
2-Methylnaphthalene	<	0.01000		
2-Methylphenol	<	0.01000		
2-Nitroaniline	<	0.05000		J
2-Nitrophenol	<	0.01000		
3,3'-Dichlorobenzidine	<	0.02000		J
3-Nitroaniline	<	0.05000		R
4,6-Dinitro-2-methylphenol	<	0.05000		
4-Bromophenyl phenyl ether	<	0.01000		
4-Chloro-3-methylphenol	<	0.01000		
4-Chloroaniline	<	0.01000		R
4-Chlorophenylphenyl ether	<	0.01000		J
4-Methylphenol	<	0.01000		
4-Nitroaniline	<	0.05000		
4-Nitrophenol	<	0.05000		J
Acenaphthene	<	0.01000		
Acenaphthylene	<	0.01000		
Anthracene	<	0.01000		
Benzo(a)anthracene	<	0.01000		
Benzo(a)pyrene	<	0.01000		
Benzo(b)fluoranthene	<	0.01000		
Benzo(g,h,i)perylene	<	0.01000		
Benzo(k)fluoranthene	<	0.01000		
Benzoic acid	<	0.05000		J
Benzyl alcohol	<	0.01000		J
Butyl benzyl phthalate	<	0.01000		
Chrysene	<	0.01000		
Di-n-butyl phthalate		0.00300	J	
Di-n-octyl phthalate	<	0.01000		
Dibenzo(a,h)anthracene	<	0.01000		
Dibenzofuran	<	0.01000		
Diethyl phthalate		0.00300	J	
Dimethyl phthalate	<	0.01000		
Fluoranthene	<	0.01000		
Fluorene	<	0.01000		
Hexachlorobenzene	<	0.01000		
Hexachlorobutadiene	<	0.01000		
Hexachlorocyclopentadiene	<	0.01000		
Hexachloroethane	<	0.01000		
Indeno(1,2,3-cd)pyrene	<	0.01000		
Isophorone	<	0.01000		

a = lab qualifiers
b = validation qualifiers

SOLID WASTE LANDFILL
SURFACE WATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by sample location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		ASIT-021 001161 02-21-1989	a	b
N-Nitroso-di-n-propylamine	<	0.01000		
N-Nitrosodiphenylamine	<	0.01000		
Naphthalene	<	0.01000		
Nitrobenzene	<	0.01000		
Pentachlorophenol	<	0.05000		
Phenanthrene	<	0.01000		
Phenol	<	0.01000		
Pyrene	<	0.01000		
bis(2-Chloroethoxy)methane	<	0.01000		
bis(2-Chloroethyl)ether	<	0.01000		
bis(2-Chloroisopropyl) ether	<	0.01000		J
bis(2-Ethylhexyl) phthalat		0.00400	BJ	JB
VOLATILE ORGANICS				
1,1,1-Trichloroethane	<	0.00500		J
1,1,2,2-Tetrachloroethane	<	0.00500		J
1,1,2-Trichloroethane	<	0.00500		J
1,1-Dichloroethane	<	0.00500		
1,1-Dichloroethene	<	0.00500		
1,2-Dichloroethane	<	0.00500		
1,2-Dichloroethylene	<	0.00500		
1,2-Dichloropropane	<	0.00500		J
2-Butanone	<	0.01000		R
2-Hexanone	<	0.01000		J
4-Methyl-2-pentanone	<	0.01000		J
Acetone		0.00200	JB	
Benzene	<	0.00500		R
Bromodichloromethane	<	0.00500		J
Bromoform	<	0.00500		J
Bromomethane	<	0.01000		
Carbon Tetrachloride	<	0.00500		J
Carbon disulfide	<	0.00500		
Chlorobenzene	<	0.00500		R
Chloroethane	<	0.01000		
Chloroform	<	0.00500		
Chloromethane	<	0.01000		
Dibromochloromethane	<	0.00500		J
Ethylbenzene	<	0.00500		R
Methylene chloride	<	0.00500		JB
Styrene	<	0.00500		R
Tetrachlorethene	<	0.00500		J
Toluene	<	0.00500		R

a = lab qualifiers
b = validation qualifiers

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SOLID WASTE LANDFILL
SURFACE WATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by sample location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		ASIT-021 001161 02-21-1989 a	b
Total xylenes	<	0.00500	R
Trichloroethene	<	0.00500	J
Vinyl Acetate	<	0.01000	J
Vinyl chloride	<	0.01000	
cis-1,3-Dichloropropene	<	0.00500	J
trans-1,3-Dichloropropene	<	0.00500	J

a = lab qualifiers
b = validation qualifiers

EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING GENERAL CHEMICAL RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

Concentration Qualifiers

B = Reported value was obtained from a reading that was less than the Contract Laboratory Program (CLP) Contract Required Detection Limit (CRQL), but greater than or equal to the Instrument Detection Limit (IDL).

Quality Qualifiers

E = The reported value is estimated because of the presence of interference.

M = Duplicate injection precision not met.

N = Spiked sample recovery not within controls limits.

S = The reported value was determined by the Method of Standard Additions.

W = Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

G = Native analyte > 4 times spike added; therefore acceptance criteria do not apply.

X = Detection limit is higher than normal due to sample matrix interferences.

* = Duplication analysis not within control limits.

+ = Correlation coefficient for the MSA is less than 0.955.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOLID WASTE LANDFILL
SURFACE WATER GENERAL CHEMICAL RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	ASIT-021 001161 02-21-1989		a	b
GENERAL CHEMISTRY				
Ammonia	<	0.1000		
Chloride		12.0000		
Fluoride		0.1400		
Hydrogen ion		NA		
Nitrate		1.8000		
Phenols	<	0.0100		
Phosphorus (black, white, red,		NA		
Phosphate as P		NA		
Sulfate		36.8000		
Total Kjeldahl Nitrogen		1.0283		
Total Organic Carbon		NA		
Total Organic Halides		0.0189		
Total Organic Nitrogen		1.0300		
Phosphorus		0.2700		
METALS				
Aluminum		0.1610	BE	
Antimony	<	0.0020		
Arsenic	<	0.0020		
Barium		0.0633	B	
Beryllium		0.0015	B	
Cadmium		0.0063		
Calcium		47.0000		
Chromium		0.0175		
Cobalt		0.0136	B	
Copper		0.0156	B	
Cyanide	<	0.0100		
Hexavalent Chromium		NA		
Iron		0.0866	B	
Lead	<	0.0020		
Magnesium		10.7000		
Manganese		0.0651		
Mercury	<	0.0002		
Molybdenum		0.0230		
Nickel		0.0159	B	
Potassium		2.0200	B	
Selenium	<	0.0020	N	
Silicon		NA		
Silver	<	0.0005		
Sodium		4.9600	B	
Thallium	<	0.0040	N	
Vanadium		0.0187	BE	
Zinc		0.0325	E	

a = lab qualifiers
b = validation qualifiers

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TABLE C-11

GROUNDWATER ANALYSES
TEST PIT WATER SAMPLES
ENVIRONMENTAL SURVEY
SOLID WASTE LANDFILL

TABLE C-11

GROUNDWATER ANALYSIS
TEST PIT WATER SAMPLES ENVIRONMENTAL SURVEY
SOLID WASTE LANDFILL

Analyte	10151S3B	10151S4B	10151S5B
Metals (mg/ℓ)			
Arsenic	<0.5	<0.5	NA
Barium	0.18(B)	0.19(B)	NA
Cadmium	<0.02	<0.02	NA
Chromium	0.04	0.05	NA
Lead	<0.3	<0.3	NA
Mercury	NA	0.001	NA
Selenium	<0.5	<0.5	NA
Silver	<0.1	<0.1	NA
Radionuclides (pCi/g)			
Bismuth-214	NA	NA	I
Cesium-137	NA	NA	I
Radium-226	NA	NA	I
Thorium-228	NA	NA	I
Thorium-232	NA	NA	I
Uranium-235	NA	NA	N
Uranium-238	NA	NA	N
Total Uranium (mg/kg)	2230	3270	NA

NA = Not Analyzed.
N = Nuclide not identified by GAMANAL analysis as being in the sample; revalue reports.
I = Nuclide identified by GAMANAL analysis of sample spectrum, but values did not exceed room background at the 95% confidence level; no value reported.
B = Analyte was found in the blank as well as the sample.

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TABLE C-12

GROUNDWATER ANALYSES
RI/FS SAMPLING PROGRAM
SOLID WASTE LANDFILL

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOLID WASTE LANDFILL
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	1035 003245 05-25-1988 -	1035 003560 08-11-1988 -	1035 003736 11-15-1988 -	1035 003931 02-05-1989 -	1035 066826 01-06-1990 -
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	NA
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	1.0	< 1.0	< 1.0	< 1.0	NA
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	NA
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	NA
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	2.0 ± 0.6	< 1.0	< 1.0	< 1.0	NA
Radium 228	5.0 ± 1.6	< 3.0	< 3.0	< 3.0	NA
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	NA
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	NA
Technetium 99	< 30.0	< 30.0	< 30.3	< 30.0	< 1.0
Thorium 228	4.0 ± 0.9	< 1.0	< 1.0	< 1.0	1.9 ± 0.8
Thorium 230	4.6 ± 1.0	< 1.0	< 1.0	< 1.0	2.0 ± 0.8
Thorium 232	2.6 ± 0.7	< 1.0	< 1.0	< 1.0	NA
Total Thorium **	NA	< 3.0	< 4.0	< 3.0	NA
Uranium 234	4.6 ± 0.7	< 1.0	1.2 ± 0.4	< 1.0	1.6 ± 0.6
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	NA
Uranium 238	3.9 ± 0.6	1.0 ± 0.3	1.2 ± 0.4	< 1.0	2.9 ± 0.8
Total Uranium **	17.0 ± 3.0	2.0 ± 1.0	3.0 ± 1.0	3.0 ± 1.0	8.2 ± 0.9

** Results reported in ug/ℓ
b = validation qualifiers

- = Sample has not been validated

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SOLID WASTE LANDFILL
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	1038 003183 05-11-1988	1038 003518 08-22-1988	1038 003762 11-20-1988	1038 003947 02-05-1989	1038 066431 06-18-1989
	-	-	-	-	-
Actinium 231	NA	NA	NA	NA	NA
Cesium-137	< 20.0	< 20.0	< 20.0	< 20.0	NA
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	NA
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	NA
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	NA
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0	NA
Radium 228	< 3.0	< 3.0	< 3.0	< 3.0	NA
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	NA
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	NA
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0	NA
Total Thorium **	NA	< 5.0	< 5.0	< 3.0	NA
Uranium 234	1.7 ± 0.3	1.9 ± 0.4	2.3 ± 0.7	1.5 ± 0.4	3.1 ± 0.7
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	1.4 ± 0.3	1.4 ± 0.3	1.2 ± 0.5	1.5 ± 0.4	2.0 ± 0.5
Total Uranium **	5.0 ± 1.0	4.0 ± 1.0	4.5 ± 0.6	4.0 ± 1.0	5.0 ± 1.0

** Results reported in ug/ℓ
b = validation qualifiers

- = Sample has not been validated

SOLID WASTE LANDFILL
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER		1038 066666 11-21-1989			
Actinium 231		NA			
Cesium 137		NA			
Lead 210		NA			
Neptunium 237		NA			
Plutonium 238		NA			
Plutonium 239/240		NA			
Polonium 210		NA			
Protactium 234		NA			
Radium 224		NA			
Radium 226		NA			
Radium 228		NA			
Ruthenium 106		NA			
Strontium 90		NA			
Technetium 99		<	30.0		
Thorium 228			4.4	±	2.0
Thorium 230		<	1.8		
Thorium 232			3.8	±	1.9
Total Thorium	**		NA		
Uranium 234			6.9	±	1.2
Uranium 235/236		<	1.0		
Uranium 238			5.9	±	1.1
Total Uranium	**		11.0	±	2.0

** Results reported in ug/ℓ
b = validation qualifiers

- = Sample has not been validated

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SOLID WASTE LANDFILL
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	2027 003168 05-09-1988	DUPLICATE 2027 003453 08-10-1988	2027 003454 08-10-1988	2027 003731 12-01-1988	2027 003941 03-08-1989
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	1.6 ± 0.8	1.2 ± 0.4	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	NA	< 4.0	< 5.0	< 11.0	< 4.0
Uranium 234	1.6 ± 0.5	2.5 ± 0.6	2.2 ± 0.5	< 1.0	3.3 ± 0.6
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	2.0 ± 0.6	2.3 ± 0.5	3.1 ± 0.6	< 1.0	2.4 ± 0.5
Total Uranium **	6.0 ± 1.0	6.0 ± 1.0	6.0 ± 1.0	6.0 ± 1.0	7.0 ± 1.0

** Results reported in ug/ℓ
b = validation qualifiers

- = Sample has not been validated

SOLID WASTE LANDFILL
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	2027 066447 06-27-1989	2027 066580 09-10-1989	DUPLICATE 2027 066581 09-10-1989	2027 066708 11-16-1989	DUPLICATE 2027 066742 11-16-1989
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	NA	NA	NA	NA	NA
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	NA	NA	NA	NA	NA
Plutonium 238	NA	NA	NA	NA	NA
Plutonium 239/240	NA	NA	NA	NA	NA
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	NA	NA	NA	NA	NA
Radium 228	NA	NA	NA	NA	NA
Ruthenium 106	NA	NA	NA	NA	NA
Strontium 90	NA	NA	NA	NA	NA
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	NA	NA	NA	NA	NA
Total Thorium **	NA	NA	NA	NA	NA
Uranium 234	18.7 ± 2.3	2.4 ± 0.1	7.9 ± 1.1	6.3 ± 0.9	6.0 ± 0.9
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	15.4 ± 2.0	4.7 ± 0.7	6.3 ± 0.9	5.2 ± 0.8	5.2 ± 0.8
Total Uranium **	46.0 ± 8.0	20.0 ± 3.0	20.0 ± 3.0	13.0 ± 2.0	12.0 ± 3.0

** Results reported in ug/ℓ
b = validation qualifiers

- = Sample has not been validated

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SOLID WASTE LANDFILL
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RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	2037 003248 06-01-1988	DUPLICATE 2037 003249 06-01-1988	2037 003448 08-08-1988	2037 003718 11-18-1988	2037 003917 02-22-1989
	-	-	-	-	-
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	1.3 ± 0.5	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	2.8 ± 0.8	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	NA	NA	< 2.0	< 4.0	< 3.0
Uranium 234	1.7 ± 0.4	1.4 ± 0.3	< 1.0	< 1.0	< 1.0
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	2.0 ± 0.4	2.2 ± 0.4	< 1.0	< 1.0	< 1.0
Total Uranium **	4.0 ± 1.0	4.0 ± 1.0	2.0 ± 1.0	< 1.0	3.0 ± 1.0

** Results reported in ug/ℓ
b = validation qualifiers

- = Sample has not been validated

SOLID WASTE LANDFILL
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER		2037 066461 06-28-1989		2037 066710 11-19-1989		b
Actinium 231		NA		NA		
Cesium 137		NA		NA		
Lead 210		NA		NA		
Neptunium 237		NA		NA		
Plutonium 238		NA		NA		
Plutonium 239/240		NA		NA		
Polonium 210		NA		NA		
Protactium 234		NA		NA		
Radium 224		NA		NA		
Radium 226		NA		NA		
Radium 228		NA		NA		
Ruthenium 106		NA		NA		
Strontium 90		NA		NA		
Technetium 99	<	30.0	<	30.0		R
Thorium 228	<	1.0	<	1.0		R
Thorium 230	<	1.0	<	1.0		R
Thorium 232		NA		NA		
Total Thorium **		NA		NA		
Uranium 234	<	1.0		2.0 ± 0.5		R
Uranium 235		NA	<	1.0		R
Uranium 235/236	<	1.0		NA		
Uranium 238	<	1.0		1.52 ± 0.41		R
Total Uranium **	<	1.0		5.0 ± 1.0		R

** Results reported in ug/ℓ
b = validation qualifiers

- = Sample has not been validated

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Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	2052 003587 09-13-1988	2052 003476 12-16-1988	DUPLICATE 2052 003791 12-16-1988	2052 003892 02-08-1989	2052 066847 01-04-1990
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	NA
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	NA
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	NA
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	NA
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0	NA
Radium 228	5.9 ± 1.5	< 3.0	< 3.0	< 3.0	NA
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	NA
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	NA
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0	NA
Total Thorium **	< 3.0	< 4.0	< 7.0	< 2.0	NA
Uranium 234	< 1.0	< 1.0	< 1.0	< 1.0	2.9 ± 0.5
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	NA
Uranium 238	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Uranium **	< 1.0	< 1.0	< 1.0	< 1.0	10.1 ± 1.1

** Results reported in ug/ℓ
b = validation qualifiers

- = Sample has not been validated

SOLID WASTE LANDFILL
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	3037 003152 05-05-1988 -	3037 003447 08-08-1988 -	3037 003717 11-18-1988 -	3037 003916 02-22-1989 -	3037 066462 06-28-1989 -
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	NA
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	NA
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	NA
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	NA
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0	NA
Radium 228	< 3.0	< 3.0	< 3.0	< 3.0	NA
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	NA
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	NA
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	1.0 ± 0.7	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0	NA
Total Thorium **	NA	< 6.0	< 8.0	< 5.0	NA
Uranium 234	3.7 ± 0.9	1.4 ± 0.4	< 1.0	< 1.0	< 1.0
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	13.0 ± 2.2	< 1.0	< 1.0	< 1.0	< 1.0
Total Uranium **	35.0 ± 6.0	< 1.0	1.0 ± 1.0	2.0 ± 1.0	1.0 ± 1.0

** Results reported in ug/ℓ
b = validation qualifiers

- = Sample has not been validated

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GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER		3037 066712 11-19-1989			b
Actinium 231		NA			
Cesium 137		NA			
Lead 210		NA			
Neptunium 237		NA			
Plutonium 238		NA			
Plutonium 239/240		NA			
Polonium 210		NA			
Protactium 234		NA			
Radium 224		NA			
Radium 226		NA			
Radium 228		NA			
Ruthenium 106		NA			
Strontium 90		NA			
Technetium 99	<	30.0			R
Thorium 228	<	1.0			R
Thorium 230	<	1.0			R
Thorium 232		NA			
Total Thorium **		NA			
Uranium 234		1.0	±	0.3	R
Uranium 235	<	1.0			R
Uranium 235/236		NA			
Uranium 238	<	1.0			R
Total Uranium **		2.0	±	1.0	R

** Results reported in ug/ℓ
b = validation qualifiers

EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING HAZARDOUS SUBSTANCE LIST RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

J = Indicates an estimated value. This flag is used when the mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.

C = This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E = This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to pesticides/PCBs analyzed by GC/EC methods.

D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.

F = Estimated value due to a confirmed compound which is off-scale in both columns.

X = A flag that FORMASTER III CLP software automatically inserts to indicate that the data was entered manually.

Z = No estimated value reported, or an elevated CRQL reported because matrix effects interfere with or obscure the compound on one or both columns. In either situation, the compound does not confirm as a positive identification.

* = Values outside of contract laboratory-required QC limits.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1038 066431 06-18-1989 a -	1038 066495 08-13-1989 a -	2027 003168 05-09-1988 a -	2027 066447 06-27-1989 a -	2027 066599 09-10-1989 a -
HERBICIDE ORGANICS					
2,4,5-T	NA	NA	NA	NA	< 0.00500
2,4,5-TP (Silvex)	NA	NA	NA	NA	< 0.00002
2,4-D	NA	NA	NA	NA	< 0.00005
ORGANOPHOSPOROUS PESTICIDES					
Azinphosmethyl	NA	NA	< 0.00500	NA	NA
Demeton	NA	NA	< 0.00100	NA	NA
Diazinon	NA	NA	< 0.00050	NA	NA
Disulfoton	NA	NA	< 0.00050	NA	< 0.00100
Ethion	NA	NA	< 0.00050	NA	NA
Malathion	NA	NA	< 0.00100	NA	NA
Parathion, ethyl	NA	NA	< 0.00050	NA	< 0.00005
Parathion, methyl	NA	NA	< 0.00100	NA	< 0.00005
Dimethoate	NA	NA	NA	NA	< 0.00100
Famphur	NA	NA	NA	NA	< 0.00100
Phorate	NA	NA	NA	NA	< 0.00100
Sulfotepp	NA	NA	NA	NA	< 0.00100
Thionazin	NA	NA	NA	NA	< 0.00100
PESTICIDES					
4,4'-DDD	NA	NA	< 0.00010	NA	< 0.00010
4,4'-DDE	NA	NA	< 0.00010	NA	< 0.00010
4,4'-DDT	NA	NA	< 0.00010	NA	< 0.00010
Aldrin	NA	NA	< 0.00005	NA	< 0.00005
Aroclor-1016	NA	NA	< 0.00050	NA	< 0.00050
Aroclor-1221	NA	NA	< 0.00050	NA	< 0.00050
Aroclor-1232	NA	NA	< 0.00050	NA	< 0.00050
Aroclor-1242	NA	NA	< 0.00050	NA	< 0.00050
Aroclor-1248	NA	NA	< 0.00050	NA	< 0.00050
Aroclor-1254	NA	NA	< 0.00100	NA	< 0.00100
Aroclor-1260	NA	NA	< 0.00100	NA	< 0.00100
Dieldrin	NA	NA	< 0.00010	NA	< 0.00010
Endosulfan II	NA	NA	< 0.00010	NA	< 0.00010
Endosulfan sulfate	NA	NA	< 0.00010	NA	< 0.00010
Endosulfan-I	NA	NA	< 0.00050	NA	< 0.00005
Endrin	NA	NA	< 0.00005	NA	< 0.00010
			< 0.00010		

a = lab qualifiers

- = Sample has not been validated

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GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1038 066431 06-18-1989 a -	1038 066495 08-13-1989 a -	2027 003168 05-09-1988 a -	2027 066447 06-27-1989 a -	2027 066599 09-10-1989 a -
Endrin ketone	NA	NA	< 0.00050	NA	< 0.00010
Heptachlor	NA	NA	< 0.00005	NA	< 0.00005
Heptachlor epoxide	NA	NA	< 0.00005	NA	< 0.00005
Methoxychlor	NA	NA	< 0.00050	NA	< 0.00050
Toxaphene	NA	NA	< 0.00050	NA	< 0.00100
alpha-BHC	NA	NA	< 0.00005	NA	< 0.00005
alpha-Chlordane	NA	NA	< 0.00100	NA	< 0.00050
beta-BHC	NA	NA	< 0.00005	NA	< 0.00005
delta-BHC	NA	NA	< 0.00005	NA	< 0.00005
gamma-BHC (Lindane)	NA	NA	< 0.00005	NA	< 0.00005
gamma-Chlordane	NA	NA	< 0.00005	NA	< 0.00050
Isodrin	NA	NA	< 0.00050	NA	< 0.00005
Kepone	NA	NA	NA	NA	< 0.00010
SEMI-VOLATILE ORGANICS					
1,2,4-Trichlorobenzene	NA	NA	< 0.01000	NA	< 0.01000
1,2-Dichlorobenzene	NA	NA	< 0.01000	NA	< 0.01000
1,3-Dichlorobenzene	NA	NA	< 0.01000	NA	< 0.01000
1,4-Dichlorobenzene	NA	NA	< 0.01000	NA	< 0.01000
2,4,5-Trichlorophenol	NA	NA	< 0.05000	NA	< 0.05000
2,4,6-Trichlorophenol	NA	NA	< 0.01000	NA	< 0.01000
2,4-Dichlorophenol	NA	NA	< 0.01000	NA	< 0.01000
2,4-Dimethylphenol	NA	NA	< 0.01000	NA	< 0.01000
2,4-Dinitrophenol	NA	NA	< 0.05000	NA	< 0.05000
2,4-Dinitrotoluene	NA	NA	< 0.01000	NA	< 0.01000
2,6-Dinitrotoluene	NA	NA	< 0.01000	NA	< 0.01000
2-Chloronaphthalene	NA	NA	< 0.01000	NA	< 0.01000
2-Chlorophenol	NA	NA	< 0.01000	NA	< 0.01000
2-Methylnaphthalene	NA	NA	< 0.01000	NA	< 0.01000
2-Methylphenol	NA	NA	< 0.01000	NA	< 0.01000
2-Nitroaniline	NA	NA	< 0.05000	NA	< 0.05000
2-Nitrophenol	NA	NA	< 0.01000	NA	< 0.01000
3,3'-Dichlorobenzidine	NA	NA	< 0.02000	NA	< 0.02000
3-Nitroaniline	NA	NA	< 0.05000	NA	< 0.05000
4,6-Dinitro-2-methylphenol	NA	NA	< 0.05000	NA	< 0.05000
4-Bromophenyl phenyl ether	NA	NA	< 0.01000	NA	< 0.01000
4-Chloro-3-methylphenol	NA	NA	< 0.01000	NA	< 0.01000
4-Chloroaniline	NA	NA	< 0.01000	NA	< 0.01000
4-Chlorophenylphenyl ether	NA	NA	< 0.01000	NA	< 0.01000
4-Methylphenol	NA	NA	< 0.01000	NA	< 0.01000
4-Nitroaniline	NA	NA	< 0.05000	NA	< 0.05000
4-Nitrophenol	NA	NA	< 0.05000	NA	< 0.05000

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SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
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CHEMICAL PARAMETERS	1038 066431 06-18-1989 a	1038 066495 08-13-1989 a	2027 003168 05-09-1988 a	2027 066447 06-27-1989 a	2027 066599 09-10-1989 a
Acenaphthene	NA	NA	< 0.01000	NA	< 0.01000
Acenaphthylene	NA	NA	< 0.01000	NA	< 0.01000
Anthracene	NA	NA	< 0.01000	NA	< 0.01000
Benzo(a)anthracene	NA	NA	< 0.01000	NA	< 0.01000
Benzo(a)pyrene	NA	NA	< 0.01000	NA	< 0.01000
Benzo(b)fluoranthene	NA	NA	< 0.01000	NA	< 0.01000
Benzo(g,h,i)perylene	NA	NA	< 0.01000	NA	< 0.01000
Benzo(k)fluoranthene	NA	NA	< 0.01000	NA	< 0.01000
Benzoic acid	NA	NA	< 0.05000	NA	NA
Benzyl alcohol	NA	NA	< 0.01000	NA	< 0.01000
Butyl benzyl phthalate	NA	NA	< 0.01000	NA	< 0.01000
Chrysene	NA	NA	< 0.01000	NA	< 0.01000
Di-n-butyl phthalate	NA	NA	< 0.01000	NA	< 0.01000
Di-n-octyl phthalate	NA	NA	< 0.01000	NA	< 0.01000
Dibenzo(a,h)anthracene	NA	NA	< 0.01000	NA	< 0.01000
Dibenzofuran	NA	NA	< 0.01000	NA	< 0.01000
Diethyl phthalate	NA	NA	< 0.01000	NA	< 0.01000
Dimethyl phthalate	NA	NA	< 0.01000	NA	< 0.01000
Fluoranthene	NA	NA	< 0.01000	NA	< 0.01000
Fluorene	NA	NA	< 0.01000	NA	< 0.01000
Hexachlorobenzene	NA	NA	< 0.01000	NA	< 0.01000
Hexachlorobutadiene	NA	NA	< 0.01000	NA	< 0.01000
Hexachlorocyclopentadiene	NA	NA	< 0.01000	NA	< 0.01000
Hexachloroethane	NA	NA	< 0.01000	NA	< 0.01000
Indeno(1,2,3-cd)pyrene	NA	NA	< 0.01000	NA	< 0.01000
Isophorone	NA	NA	< 0.01000	NA	< 0.01000
N-Nitroso-di-n-propylamine	NA	NA	< 0.01000	NA	< 0.01000
N-Nitrosodiphenylamine	NA	NA	< 0.01000	NA	0.00300 J
Naphthalene	NA	NA	< 0.01000	NA	< 0.01000
Nitrobenzene	NA	NA	< 0.01000	NA	< 0.01000
Pentachlorophenol	NA	NA	< 0.05000	NA	< 0.05000
Phenanthrene	NA	NA	< 0.01000	NA	< 0.01000
Phenol	NA	NA	< 0.01000	NA	< 0.01000
Pyrene	NA	NA	< 0.01000	NA	< 0.01000
bis(2-Chloroethoxy)methane	NA	NA	< 0.01000	NA	< 0.01000
bis(2-Chloroethyl)ether	NA	NA	< 0.01000	NA	< 0.01000
bis(2-Chloroisopropyl) eth	NA	NA	< 0.01000	NA	< 0.01000
bis(2-Ethylhexyl) phthalat	NA	NA	< 0.01000	NA	0.00300 J
1,2,4,5-Tetrachlorobenzene	NA	NA	NA	NA	< 0.01000
1,3,5-Trinitrobenzene	NA	NA	NA	NA	< 0.01000
1,4-Naphthoquinone	NA	NA	NA	NA	< 0.01000
1-Naphthylamine	NA	NA	NA	NA	< 0.12000
2,3,4,6-Tetrachlorophenol	NA	NA	NA	NA	< 0.01000
2,6-Dichlorophenol	NA	NA	NA	NA	< 0.01000

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SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	1038 066431 06-18-1989 - a	1038 066495 08-13-1989 - a	2027 003168 05-09-1988 - a	2027 066447 06-27-1989 - a	2027 066599 09-10-1989 - a
2-Acetylaminofluorene	NA	NA	NA	NA	< 0.01000
2-Naphthylamine	NA	NA	NA	NA	< 0.17000
2-Picoline	NA	NA	NA	NA	< 0.07000
3,3'-Dimethylbenzidine	NA	NA	NA	NA	< 0.08000
3-Methylcholanthrene	NA	NA	NA	NA	< 0.03000
3-Methylphenol	NA	NA	NA	NA	< 0.01000
4-Aminobiphenyl	NA	NA	NA	NA	< 0.05000
4-Nitroquinoline-1-oxide	NA	NA	NA	NA	< 0.01000
5-Nitro-o-toluidine	NA	NA	NA	NA	< 0.02000
7,12-Dimethylbenz(a)anthra	NA	NA	NA	NA	< 0.02000
Acetophenone	NA	NA	NA	NA	< 0.01000
Aniline	NA	NA	NA	NA	< 0.01000
Aramite	NA	NA	NA	NA	< 0.01000
Diallate	NA	NA	NA	NA	< 0.01000
Dinoseb	NA	NA	NA	NA	< 0.02000
Diphenylamine	NA	NA	NA	NA	< 0.01000
Ethyl methanesulfonate	NA	NA	NA	NA	< 0.01000
Hexachlorophene	NA	NA	NA	NA	< 0.50000
Hexachloropropene	NA	NA	NA	NA	< 0.02000
Isosafrole	NA	NA	NA	NA	< 0.01000
Methapyrilene	NA	NA	NA	NA	< 0.04000
Methyl methanesulfonate	NA	NA	NA	NA	< 0.01000
N-Nitrosodi-n-butylamine	NA	NA	NA	NA	< 0.02000
N-Nitrosodiethylamine	NA	NA	NA	NA	< 0.01000
N-Nitrosodimethylamine	NA	NA	NA	NA	< 0.01000
N-Nitrosomethylethylamine	NA	NA	NA	NA	< 0.01000
N-Nitrosomorpholine	NA	NA	NA	NA	< 0.01000
N-Nitrosopiperidine	NA	NA	NA	NA	< 0.01000
N-Nitrosopyrrolidine	NA	NA	NA	NA	< 0.01000
O,O,O-Triethylphosphorothi	NA	NA	NA	NA	< 0.01000
Pentachlorobenzene	NA	NA	NA	NA	< 0.02000
Pentachloroethane	NA	NA	NA	NA	< 0.02000
Pentachloronitrobenzene	NA	NA	NA	NA	< 0.02000
Phenacetin	NA	NA	NA	NA	< 0.01000
Pronamide	NA	NA	NA	NA	< 0.03000
Safrole	NA	NA	NA	NA	< 0.01000
a,a-Dimethylphenethylamine	NA	NA	NA	NA	< 0.01000
o-Toluidine	NA	NA	NA	NA	< 0.01000
p-Dimethylaminoazobenzene	NA	NA	NA	NA	< 0.03000
p-Phenylenediamine	NA	NA	NA	NA	< 0.05000

VOLATILE ORGANICS

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REPORT DATE: 1-MAY-92

SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
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CHEMICAL PARAMETERS	1038 066431 06-18-1989 a	1038 066495 08-13-1989 a	2027 003168 05-09-1988 a	2027 066447 06-27-1989 a	2027 066599 09-10-1989 a
VOLATILE ORGANICS					
1,1-Dichloroethane	< 0.00500	< 0.00500	< 0.00500	< 0.00500	< 0.00500
Acetone	0.00300 BJ	0.00400 BJ	< 0.01000	0.00400 BJ	< 0.01000
Methylene chloride	0.00700 B	0.00300 BJ	< 0.00500	0.01000 B	< 0.00500
Tetrachloroethene	< 0.00500	< 0.00500	< 0.00500	< 0.00500	< 0.00500
Toluene	< 0.00500	0.00200 BJ	< 0.00500	< 0.00500	< 0.00500
Trichloroethene	< 0.00500	< 0.00500	< 0.00500	< 0.00500	< 0.00500
1,1,1-Trichloroethane	NA	NA	< 0.00500	NA	< 0.00500
1,1,2,2-Tetrachloroethane	NA	NA	< 0.00500	NA	< 0.00500
1,1,2-Trichloroethane	NA	NA	< 0.00500	NA	< 0.00500
1,1-Dichloroethene	NA	NA	< 0.00500	NA	< 0.00500
1,2-Dichloroethane	NA	NA	< 0.00500	NA	< 0.00500
1,2-Dichloroethylene	NA	NA	< 0.00500	NA	NA
1,2-Dichloropropane	NA	NA	< 0.00500	NA	< 0.00500
2-Butanone	NA	NA	< 0.01000	NA	< 0.01000
2-Hexanone	NA	NA	< 0.01000	NA	< 0.01000
4-Methyl-2-pentanone	NA	NA	< 0.01000	NA	< 0.01000
Benzene	NA	NA	< 0.00500	NA	< 0.00500
Bromodichloromethane	NA	NA	< 0.00500	NA	< 0.00500
Bromoform	NA	NA	< 0.00500	NA	< 0.00500
Bromomethane	NA	NA	< 0.01000	NA	< 0.01000
Carbon Tetrachloride	NA	NA	< 0.00500	NA	< 0.00500
Carbon disulfide	NA	NA	< 0.00500	NA	0.01000
Chlorobenzene	NA	NA	< 0.00500	NA	< 0.00500
Chloroethane	NA	NA	< 0.01000	NA	< 0.01000
Chloroform	NA	NA	< 0.00500	NA	< 0.00500
Chloromethane	NA	NA	< 0.01000	NA	< 0.01000
Dibromochloromethane	NA	NA	< 0.00500	NA	< 0.00500
Ethylbenzene	NA	NA	< 0.00500	NA	< 0.00500
Styrene	NA	NA	< 0.00500	NA	< 0.00500
Total xylenes	NA	NA	< 0.00500	NA	< 0.00500
Vinyl Acetate	NA	NA	< 0.01000	NA	< 0.01000
Vinyl chloride	NA	NA	< 0.01000	NA	< 0.01000
cis-1,3-Dichloropropene	NA	NA	< 0.00500	NA	< 0.00500
trans-1,3-Dichloropropene	NA	NA	< 0.00500	NA	< 0.00500
1,1,1,2-Tetrachloroethane	NA	NA	NA	NA	< 0.00500
1,2-Dibromo-3-chloropropan	NA	NA	NA	NA	< 0.01000
1,2-Dibromoethane	NA	NA	NA	NA	< 0.00500
1,4-Dioxane	NA	NA	NA	NA	< 1.00000
2-Chloro-1,3-butadiene	NA	NA	NA	NA	< 0.00500
3-Chloropropene	NA	NA	NA	NA	< 0.00500

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SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
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CHEMICAL PARAMETERS	1038 066431 06-18-1989 a -	1038 066495 08-13-1989 a -	2027 003168 05-09-1988 a -	2027 066447 06-27-1989 a -	2027 066599 09-10-1989 a -
Acetonitrile	NA	NA	NA	NA	< 0.20000
Acrolein	NA	NA	NA	NA	< 0.01000
Acrylonitrile	NA	NA	NA	NA	< 0.01000
Dibromomethane	NA	NA	NA	NA	< 0.01000
Dichlorodifluoromethane	NA	NA	NA	NA	< 0.20000
Ethyl cyanide	NA	NA	NA	NA	< 0.10000
Ethyl methacrylate	NA	NA	NA	NA	< 0.01000
Iodomethane	NA	NA	NA	NA	< 0.00500
Isobutyl alcohol	NA	NA	NA	NA	< 3.00000
Methacrylonitrile	NA	NA	NA	NA	< 0.01000
Methyl methacrylate	NA	NA	NA	NA	< 0.01000
Pyridine	NA	NA	NA	NA	< 50.00000
Trichlorofluoromethane	NA	NA	NA	NA	< 0.00500
trans-1,4-Dichloro-2-buten	NA	NA	NA	NA	< 0.02000

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SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	DUPLICATE 2027 066600 09-10-1989 a -	2037 003248 06-01-1988 a -	2037 003249 06-01-1988 a -	2037 066461 06-28-1989 a -	2037 066570 08-25-1989 a -
DIOXINS					
2,3,7,8-TCDD	NA	< 0.0000035	< 0.0000081	NA	NA
2,3,7,8-TCDF	NA	< 0.0000015	< 0.0000060	NA	NA
Heptachlorodibenzofurans	NA	< 0.0000006	< 0.0000012	NA	NA
Heptachlorodibenzo-p-dioxi	NA	< 0.0000007	< 0.0000014	NA	NA
Hexachlorodibenzo-p-dioxin	NA	< 0.0000007	< 0.0000024	NA	NA
Hexachlorodibenzofurans	NA	< 0.0000010	< 0.0000017	NA	NA
Octachlorodibenzo-p-dioxin	NA	< 0.0000018	< 0.0000031	NA	NA
Octachlorodibenzofuran	NA	< 0.0000016	< 0.0000060	NA	NA
Pentachlorodibenzo-p-dioxi	NA	< 0.0000013	< 0.0000009	NA	NA
Pentachlorodibenzofurans	NA	< 0.0000006	< 0.0000018	NA	NA
Tetrachlorodibenzofurans	NA	< 0.0000005	< 0.0000016	NA	NA
Tetrachlorodibenzo-p-dioxi	NA	< 0.0000006	< 0.0000012	NA	NA
HERBICIDE ORGANICS					
2,4,5-T	< 0.00500	NA	NA	NA	< 0.00500
2,4,5-TP (Silvex)	< 0.00002	NA	NA	NA	< 0.00002
2,4-D	< 0.00005	NA	NA	NA	< 0.00005
ORGANOPHOSPOROUS PESTICIDES					
Dimethoate	< 0.00100	NA	NA	NA	NA
Disulfoton	< 0.00100	< 0.00050	< 0.00050	NA	NA
Famphur	< 0.00100	NA	NA	NA	NA
Parathion, ethyl	< 0.00005	< 0.00050	< 0.00050	NA	NA
Parathion, methyl	< 0.00005	< 0.00100	< 0.00100	NA	NA
Phorate	< 0.00100	NA	NA	NA	NA
Sulfotepp	< 0.00100	NA	NA	NA	NA
Thionazin	< 0.00100	NA	NA	NA	NA
Azinphosmethyl	NA	< 0.00500	< 0.00500	NA	NA
Demeton	NA	< 0.00100	< 0.00100	NA	NA
Diazinon	NA	< 0.00050	< 0.00050	NA	NA
Ethion	NA	< 0.00050	< 0.00050	NA	NA
Malathion	NA	< 0.00100	< 0.00100	NA	NA
PESTICIDES					

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SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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PESTICIDES					
4,4'-DDD	< 0.00010	< 0.00010	< 0.00010	NA	< 0.00010
4,4'-DDE	< 0.00010	< 0.00010	< 0.00010	NA	< 0.00010
4,4'-DDT	< 0.00010	< 0.00010	< 0.00010	NA	< 0.00010
Aldrin	< 0.00005	< 0.00005	< 0.00005	NA	< 0.00005
Aroclor-1016	< 0.00050	< 0.00050	< 0.00050	NA	< 0.00050
Aroclor-1221	< 0.00050	< 0.00050	< 0.00050	NA	< 0.00050
Aroclor-1232	< 0.00050	< 0.00050	< 0.00050	NA	< 0.00050
Aroclor-1242	< 0.00050	< 0.00050	< 0.00050	NA	< 0.00050
Aroclor-1248	< 0.00050	< 0.00050	< 0.00050	NA	< 0.00050
Aroclor-1254	< 0.00100	< 0.00100	< 0.00100	NA	< 0.00100
Aroclor-1260	< 0.00100	< 0.00100	< 0.00100	NA	< 0.00100
Dieldrin	< 0.00010	< 0.00005	< 0.00005	NA	< 0.00010
Endosulfan II	< 0.00010	< 0.00010	< 0.00010	NA	< 0.00010
Endosulfan sulfate	< 0.00010	< 0.00010	< 0.00010	NA	< 0.00010
Endosulfan-I	< 0.00005	< 0.00005	< 0.00005	NA	< 0.00005
Endrin	< 0.00010	< 0.00005	< 0.00005	NA	< 0.00010
Endrin ketone	< 0.00010	< 0.00010	< 0.00010	NA	< 0.00010
Heptachlor	< 0.00005	< 0.00005	< 0.00005	NA	< 0.00005
Heptachlor epoxide	< 0.00005	< 0.00005	< 0.00005	NA	< 0.00005
Isodrin	< 0.00005	NA	NA	NA	< 0.00005
Kepone	< 0.00010	NA	NA	NA	< 0.00010
Methoxychlor	< 0.00050	< 0.00050	< 0.00050	NA	< 0.00050
Toxaphene	< 0.00100	< 0.00100	< 0.00100	NA	< 0.00100
alpha-BHC	< 0.00005	< 0.00005	< 0.00005	NA	< 0.00005
alpha-Chlordane	< 0.00050	< 0.00050	< 0.00050	NA	< 0.00050
beta-BHC	< 0.00005	< 0.00005	< 0.00005	NA	< 0.00005
delta-BHC	< 0.00005	< 0.00005	< 0.00005	NA	< 0.00005
gamma-BHC (Lindane)	< 0.00005	< 0.00005	< 0.00005	NA	< 0.00005
gamma-Chlordane	< 0.00050	< 0.00050	< 0.00050	NA	< 0.00050
SEMI-VOLATILE ORGANICS					
1,2,4,5-Tetrachlorobenzene	< 0.01000	NA	NA	NA	< 0.01000
1,2,4-Trichlorobenzene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
1,2-Dichlorobenzene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
1,3,5-Trinitrobenzene	< 0.01000	NA	NA	NA	< 0.01000
1,3-Dichlorobenzene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
1,4-Dichlorobenzene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
1,4-Naphthoquinone	< 0.01000	NA	NA	NA	< 0.01000

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SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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CHEMICAL PARAMETERS	DUPLICATE 2027 066600 09-10-1989 a -	2037 003248 06-01-1988 a -	2037 003249 06-01-1988 a -	2037 066461 06-28-1989 a -	2037 066570 08-25-1989 a -
1-Naphthylamine	< 0.12000	NA	NA	NA	< 0.12000
2,3,4,6-Tetrachlorophenol	< 0.01000	NA	NA	NA	< 0.01000
2,4,5-Trichlorophenol	< 0.05000	< 0.05000	< 0.05000	NA	< 0.05000
2,4,6-Trichlorophenol	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
2,4-Dichlorophenol	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
2,4-Dimethylphenol	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
2,4-Dinitrophenol	< 0.05000	< 0.05000	< 0.05000	NA	< 0.05000
2,4-Dinitrotoluene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
2,6-Dichlorophenol	< 0.01000	NA	NA	NA	< 0.01000
2,6-Dinitrotoluene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
2-Acetylaminofluorene	< 0.01000	NA	NA	NA	< 0.01000
2-Chloronaphthalene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
2-Chlorophenol	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
2-Methylnaphthalene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
2-Methylphenol	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
2-Naphthylamine	< 0.17000	NA	NA	NA	< 0.17000
2-Nitroaniline	< 0.05000	< 0.05000	< 0.05000	NA	< 0.05000
2-Nitrophenol	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
2-Picoline	< 0.07000	NA	NA	NA	< 0.07000
3,3'-Dichlorobenzidine	< 0.02000	< 0.02000	< 0.02000	NA	< 0.02000
3,3'-Dimethylbenzidine	< 0.08000	NA	NA	NA	< 0.08000
3-Methylcholanthrene	< 0.03000	NA	NA	NA	< 0.03000
3-Methylphenol	< 0.01000	NA	NA	NA	< 0.01000
3-Nitroaniline	< 0.05000	< 0.05000	< 0.05000	NA	< 0.05000
4,6-Dinitro-2-methylphenol	< 0.05000	< 0.05000	< 0.05000	NA	< 0.05000
4-Aminobiphenyl	< 0.05000	NA	NA	NA	< 0.05000
4-Bromophenyl phenyl ether	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
4-Chloro-3-methylphenol	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
4-Chloroaniline	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
4-Chlorophenylphenyl ether	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
4-Methylphenol	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
4-Nitroaniline	< 0.05000	< 0.05000	< 0.05000	NA	< 0.05000
4-Nitrophenol	< 0.05000	< 0.05000	< 0.05000	NA	< 0.05000
4-Nitroquinoline-1-oxide	< 0.01000	NA	NA	NA	< 0.01000
5-Nitro-o-toluidine	< 0.02000	NA	NA	NA	< 0.02000
7,12-Dimethylbenz(a)anthra	< 0.02000	NA	NA	NA	< 0.02000
Acenaphthene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Acenaphthylene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Acetophenone	< 0.01000	NA	NA	NA	< 0.01000
Aniline	< 0.01000	NA	NA	NA	< 0.01000
Anthracene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Aramite	< 0.01000	NA	NA	NA	< 0.01000
Benzo(a)anthracene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Benzo(a)pyrene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000

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SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	DUPLICATE 2027 066600 09-10-1989 a -	2037 003248 06-01-1988 a -	2037 003249 06-01-1988 a -	2037 066461 06-28-1989 a -	2037 066570 08-25-1989 a -
Benzo(b)fluoranthene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Benzo(g,h,i)perylene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Benzo(k)fluoranthene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Benzyl alcohol	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Butyl benzyl phthalate	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Chrysene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Di-n-butyl phthalate	< 0.01000	0.00600 BJ	0.00500 BJ	NA	< 0.01000
Di-n-octyl phthalate	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Diallate	< 0.01000	NA	NA	NA	< 0.01000
Dibenzo(a,h)anthracene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Dibenzofuran	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Diethyl phthalate	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Dimethyl phthalate	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Dinoseb	< 0.02000	NA	NA	NA	< 0.02000
Diphenylamine	< 0.01000	NA	NA	NA	< 0.01000
Ethyl methanesulfonate	< 0.01000	NA	NA	NA	< 0.01000
Fluoranthene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Fluorene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Hexachlorobenzene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Hexachlorobutadiene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Hexachlorocyclopentadiene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Hexachloroethane	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Hexachlorophene	< 0.50000	NA	NA	NA	< 0.50000
Hexachloropropene	< 0.02000	NA	NA	NA	< 0.02000
Indeno(1,2,3-cd)pyrene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Isophorone	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Isosafrole	< 0.01000	NA	NA	NA	< 0.01000
Methapyrilene	< 0.04000	NA	NA	NA	< 0.04000
Methyl methanesulfonate	< 0.01000	NA	NA	NA	< 0.01000
N-Nitroso-di-n-propylamine	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
N-Nitrosodi-n-butylamine	< 0.02000	NA	NA	NA	< 0.02000
N-Nitrosodiethylamine	< 0.01000	NA	NA	NA	< 0.01000
N-Nitrosodimethylamine	< 0.01000	NA	NA	NA	< 0.01000
N-Nitrosodiphenylamine	< 0.01000	< 0.05000	< 0.05000	NA	0.00200 BJ
N-Nitrosomethylethylamine	< 0.01000	NA	NA	NA	< 0.01000
N-Nitrosomorpholine	< 0.01000	NA	NA	NA	< 0.01000
N-Nitrosopiperidine	< 0.01000	NA	NA	NA	< 0.01000
N-Nitrosopyrrolidine	< 0.01000	NA	NA	NA	< 0.01000
Naphthalene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Nitrobenzene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
O,O,O-Triethylphosphorothi	< 0.01000	NA	NA	NA	< 0.01000
Pentachlorobenzene	< 0.02000	NA	NA	NA	< 0.02000
Pentachloroethane	< 0.02000	NA	NA	NA	< 0.02000
Pentachloronitrobenzene	< 0.02000	NA	NA	NA	< 0.02000

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REPORT DATE: 1-MAY-92

SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	DUPLICATE 2027 066600 09-10-1989 - a	2037 003248 06-01-1988 - a	2037 003249 06-01-1988 - a	2037 066461 06-28-1989 - a	2037 066570 08-25-1989 - a
Pentachlorophenol	< 0.05000	< 0.05000	< 0.05000	NA	< 0.05000
Phenacetin	< 0.01000	NA	NA	NA	< 0.01000
Phenanthrene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Phenol	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Pronamide	< 0.03000	NA	NA	NA	< 0.03000
Pyrene	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Safrole	< 0.01000	NA	NA	NA	< 0.01000
a,a-Dimethylphenethylamine	< 0.01000	NA	NA	NA	< 0.01000
bis(2-Chloroethoxy)methane	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
bis(2-Chloroethyl)ether	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
bis(2-Chloroisopropyl) eth	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
bis(2-Ethylhexyl) phthalat	< 0.01000	0.00700 J	< 0.01000	NA	0.00400 J
o-Toluidine	< 0.01000	NA	NA	NA	< 0.01000
p-Dimethylaminoazobenzene	< 0.03000	NA	NA	NA	< 0.03000
p-Phenylenediamine	< 0.05000	NA	NA	NA	< 0.05000
Benzoic acid	NA	< 0.05000	< 0.05000	NA	NA
VOLATILE ORGANICS					
1,1,1,2-Tetrachloroethane	< 0.00500	NA	NA	NA	< 0.00500
1,1,1-Trichloroethane	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
1,1,2,2-Tetrachloroethane	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
1,1,2-Trichloroethane	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
1,1-Dichloroethane	< 0.00500	< 0.00500	< 0.00500	< 0.00500	< 0.00500
1,1-Dichloroethene	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
1,2-Dibromo-3-chloropropan	< 0.01000	NA	NA	NA	< 0.01000
1,2-Dibromoethane	< 0.00500	NA	NA	NA	< 0.00500
1,2-Dichloroethane	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
1,2-Dichloropropane	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
1,4-Dioxane	< 1.00000	NA	NA	NA	< 1.00000
2-Butanone	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
2-Chloro-1,3-butadiene	< 0.00500	NA	NA	NA	< 0.00500
2-Hexanone	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
3-Chloropropene	< 0.00500	NA	NA	NA	< 0.00500
4-Methyl-2-pentanone	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Acetone	< 0.01000	< 0.01000	< 0.01000	0.00700 BJ	< 0.01000
Acetonitrile	< 0.20000	NA	NA	NA	< 0.20000
Acrolein	< 0.01000	NA	NA	NA	< 0.01000
Acrylonitrile	< 0.01000	NA	NA	NA	< 0.01000
Benzene	< 0.00500	0.00100 J	< 0.00500	NA	< 0.00500
Bromodichloromethane	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
Bromoform	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
Bromomethane	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000

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SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	DUPLICATE 2027 066600 09-10-1989 a -	2037 003248 06-01-1988 a -	2037 003249 06-01-1988 a -	2037 066461 06-28-1989 a -	2037 066570 08-25-1989 a -
Carbon Tetrachloride	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
Carbon disulfide	0.00100 J	< 0.00500	< 0.00500	NA	0.01100
Chlorobenzene	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
Chloroethane	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Chloroform	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
Chloromethane	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Dibromochloromethane	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
Dibromomethane	< 0.01000	NA	NA	NA	< 0.01000
Dichlorodifluoromethane	< 0.20000	NA	NA	NA	< 0.20000
Ethyl cyanide	< 0.10000	NA	NA	NA	< 0.10000
Ethyl methacrylate	< 0.01000	NA	NA	NA	< 0.01000
Ethylbenzene	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
Iodomethane	< 0.00500	NA	NA	NA	< 0.00500
Isobutyl alcohol	< 3.00000	NA	NA	NA	< 3.00000
Methacrylonitrile	< 0.01000	NA	NA	NA	< 0.01000
Methyl methacrylate	< 0.01000	NA	NA	NA	< 0.01000
Methylene chloride	< 0.00500	< 0.00500	0.00100 BJ	0.00600 B	< 0.00500
Pyridine	< 50.00000	NA	NA	NA	< 50.00000
Styrene	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
Tetrachlorethene	< 0.00500	< 0.00500	< 0.00500	< 0.00500	< 0.00500
Toluene	< 0.00500	< 0.00500	< 0.00500	< 0.00500	< 0.00500
Total xylenes	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
Trichloroethene	< 0.00500	< 0.00500	< 0.00500	< 0.00500	< 0.00500
Trichlorofluoromethane	< 0.00500	NA	NA	NA	< 0.00500
Vinyl Acetate	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
Vinyl chloride	< 0.01000	< 0.01000	< 0.01000	NA	< 0.01000
cis-1,3-Dichloropropene	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
trans-1,3-Dichloropropene	< 0.00500	< 0.00500	< 0.00500	NA	< 0.00500
trans-1,4-Dichloro-2-buten	< 0.02000	NA	NA	NA	< 0.02000
1,2-Dichloroethylene	NA	< 0.00500	< 0.00500	NA	NA

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SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	2052 003587 09-13-1988 a -	3037 066462 06-28-1989 a -	3037 066571 08-25-1989 a -
DIOXINS			
2,3,7,8-TCDD	< 0.0000006	NA	NA
2,3,7,8-TCDF	< 0.0000003	NA	NA
Heptachlorodibenzo-p-dioxi	< 0.0000002	NA	NA
Heptachlorodibenzofurans	< 0.0000003	NA	NA
Hexachlorodibenzo-p-dioxin	< 0.0000010	NA	NA
Hexachlorodibenzofurans	< 0.0000005	NA	NA
Octachlorodibenzo-p-dioxin	< 0.0000014	NA	NA
Octachlorodibenzofuran	< 0.0000010	NA	NA
Pentachlorodibenzofurans	< 0.0000004	NA	NA
Pentachlorodibenzo-p-dioxi	< 0.0000012	NA	NA
Tetrachlorodibenzofurans	< 0.0000007	NA	NA
Tetrachlorodibenzo-p-dioxi	< 0.0000005	NA	NA
HERBICIDE ORGANICS			
2,4,5-T	NA	NA	< 0.00500
2,4,5-TP (Silvex)	NA	NA	< 0.00002
2,4-D	NA	NA	< 0.00005
ORGANOPHOSPOROUS PESTICIDES			
Azinphosmethyl	< 0.00500	NA	NA
Demeton	< 0.00050	NA	NA
Diazinon	< 0.00050	NA	NA
Disulfoton	< 0.00050	NA	NA
Ethion	< 0.00050	NA	NA
Malathion	< 0.00050	NA	NA
Parathion, ethyl	< 0.00050	NA	NA
Parathion, methyl	< 0.00050	NA	NA
PESTICIDES			
4,4'-DDD	< 0.00010	NA	< 0.00010
4,4'-DDE	< 0.00010	NA	< 0.00010
4,4'-DDT	< 0.00010	NA	0.00093 XU
Aldrin	< 0.00005	NA	< 0.00005
Aroclor-1016	< 0.00050	NA	< 0.00050

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SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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Aroclor-1221	< 0.00050	NA	< 0.00050
Aroclor-1232	< 0.00050	NA	< 0.00050
Aroclor-1242	< 0.00050	NA	< 0.00050
Aroclor-1248	< 0.00050	NA	< 0.00050
Aroclor-1254	< 0.00100	NA	< 0.00100
Aroclor-1260	< 0.00100	NA	< 0.00100
Dieldrin	< 0.00010	NA	< 0.00010
Endosulfan II	< 0.00010	NA	< 0.00010
Endosulfan sulfate	< 0.00010	NA	< 0.00010
Endosulfan-I	< 0.00005	NA	< 0.00005
Endrin	< 0.00010	NA	< 0.00010
Endrin ketone	< 0.00010	NA	< 0.00010
Heptachlor	< 0.00005	NA	< 0.00005
Heptachlor epoxide	< 0.00005	NA	< 0.00005
Methoxychlor	< 0.00050	NA	< 0.00050
Toxaphene	< 0.00100	NA	< 0.00100
alpha-BHC	< 0.00005	NA	< 0.00005
alpha-Chlordane	< 0.00050	NA	< 0.00050
beta-BHC	< 0.00005	NA	< 0.00005
delta-BHC	< 0.00005	NA	< 0.00005
gamma-BHC (Lindane)	< 0.00005	NA	< 0.00005
gamma-Chlordane	< 0.00050	NA	< 0.00050
Isodrin	NA	NA	< 0.00005
Kepone	NA	NA	< 0.00010
SEMI-VOLATILE ORGANICS			
1,2,4-Trichlorobenzene	< 0.01000	NA	< 0.01000
1,2-Dichlorobenzene	< 0.01000	NA	< 0.01000
1,3-Dichlorobenzene	< 0.01000	NA	< 0.01000
1,4-Dichlorobenzene	< 0.01000	NA	< 0.01000
2,4,5-Trichlorophenol	< 0.05000	NA	< 0.05000
2,4,6-Trichlorophenol	< 0.01000	NA	< 0.01000
2,4-Dichlorophenol	< 0.01000	NA	< 0.01000
2,4-Dimethylphenol	< 0.01000	NA	< 0.01000
2,4-Dinitrophenol	< 0.05000	NA	< 0.05000
2,4-Dinitrotoluene	< 0.01000	NA	< 0.01000
2,6-Dinitrotoluene	< 0.01000	NA	< 0.01000
2-Chloronaphthalene	< 0.01000	NA	< 0.01000
2-Chlorophenol	< 0.01000	NA	< 0.01000
2-Methylnaphthalene	< 0.01000	NA	< 0.01000
2-Methylphenol	< 0.01000	NA	< 0.01000
2-Nitroaniline	< 0.05000	NA	< 0.05000

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SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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CHEMICAL PARAMETERS	2052 003587 09-13-1988 a	3037 066462 06-28-1989 a	3037 066571 08-25-1989 a
2-Nitrophenol	< 0.01000	NA	< 0.01000
3,3'-Dichlorobenzidine	< 0.02000	NA	< 0.02000
3-Nitroaniline	< 0.05000	NA	< 0.05000
4,6-Dinitro-2-methylphenol	< 0.05000	NA	< 0.05000
4-Bromophenyl phenyl ether	< 0.01000	NA	< 0.01000
4-Chloro-3-methylphenol	< 0.01000	NA	< 0.01000
4-Chloroaniline	< 0.01000	NA	< 0.01000
4-Chlorophenylphenyl ether	< 0.01000	NA	< 0.01000
4-Methylphenol	< 0.01000	NA	< 0.01000
4-Nitroaniline	< 0.05000	NA	< 0.05000
4-Nitrophenol	< 0.05000	NA	< 0.05000
Acenaphthene	< 0.01000	NA	< 0.01000
Acenaphthylene	< 0.01000	NA	< 0.01000
Anthracene	< 0.01000	NA	< 0.01000
Benzo(a)anthracene	< 0.01000	NA	< 0.01000
Benzo(a)pyrene	< 0.01000	NA	< 0.01000
Benzo(b)fluoranthene	< 0.01000	NA	< 0.01000
Benzo(g,h,i)perylene	< 0.01000	NA	< 0.01000
Benzo(k)fluoranthene	< 0.01000	NA	< 0.01000
Benzoic acid	< 0.05000	NA	NA
Benzyl alcohol	< 0.01000	NA	< 0.01000
Butyl benzyl phthalate	< 0.01000	NA	0.00300 J
Chrysene	< 0.01000	NA	< 0.01000
Di-n-butyl phthalate	< 0.01000	NA	< 0.01000
Di-n-octyl phthalate	< 0.01000	NA	< 0.01000
Dibenzo(a,h)anthracene	< 0.01000	NA	< 0.01000
Dibenzofuran	< 0.01000	NA	< 0.01000
Diethyl phthalate	< 0.01000	NA	0.00200 J
Dimethyl phthalate	< 0.01000	NA	< 0.01000
Fluoranthene	< 0.01000	NA	< 0.01000
Fluorene	< 0.01000	NA	< 0.01000
Hexachlorobenzene	< 0.01000	NA	< 0.01000
Hexachlorobutadiene	< 0.01000	NA	< 0.01000
Hexachlorocyclopentadiene	< 0.01000	NA	< 0.01000
Hexachloroethane	< 0.01000	NA	< 0.01000
Indeno(1,2,3-cd)pyrene	< 0.01000	NA	< 0.01000
Isophorone	< 0.01000	NA	< 0.01000
N-Nitroso-di-n-propylamine	< 0.01000	NA	< 0.01000
N-Nitrosodiphenylamine	< 0.01000	NA	0.00300 BJ
Naphthalene	< 0.01000	NA	< 0.01000
Nitrobenzene	< 0.01000	NA	< 0.01000
Pentachlorophenol	< 0.05000	NA	< 0.05000
Phenanthrene	< 0.01000	NA	< 0.01000
Phenol	< 0.01000	NA	0.01700

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SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	2052 003587 09-13-1988		a	-	3037 066462 06-28-1989		a	-	3037 066571 08-25-1989		a	-
Pyrene	<	0.01000			NA				<	0.01000		
bis(2-Chloroethoxy)methane	<	0.01000			NA				<	0.01000		
bis(2-Chloroethyl)ether	<	0.01000			NA				<	0.01000		
bis(2-Chloroisopropyl) eth	<	0.01000			NA				<	0.01000		
bis(2-Ethylhexyl) phthalat	<	0.01000			NA					0.00500	J	
1,2,4,5-Tetrachlorobenzene		NA			NA				<	0.01000		
1,3,5-Trinitrobenzene		NA			NA				<	0.01000		
1,4-Naphthoquinone		NA			NA				<	0.01000		
1-Naphthylamine		NA			NA				<	0.12000		
2,3,4,6-Tetrachlorophenol		NA			NA				<	0.01000		
2,6-Dichlorophenol		NA			NA				<	0.01000		
2-Acetylaminofluorene		NA			NA				<	0.01000		
2-Naphthylamine		NA			NA				<	0.17000		
2-Picoline		NA			NA				<	0.07000		
3,3'-Dimethylbenzidine		NA			NA				<	0.08000		
3-Methylcholanthrene		NA			NA				<	0.03000		
3-Methylphenol		NA			NA				<	0.01000		
4-Aminobiphenyl		NA			NA				<	0.05000		
4-Nitroquinoline-1-oxide		NA			NA				<	0.01000		
5-Nitro-o-toluidine		NA			NA				<	0.02000		
7,12-Dimethylbenz(a)anthra		NA			NA				<	0.02000		
Acetophenone		NA			NA				<	0.01000		
Aniline		NA			NA				<	0.01000		
Aramite		NA			NA				<	0.01000		
Diallate		NA			NA				<	0.01000		
Dinoseb		NA			NA				<	0.02000		
Diphenylamine		NA			NA				<	0.01000		
Ethyl methanesulfonate		NA			NA				<	0.01000		
Hexachlorophene		NA			NA				<	0.50000		
Hexachloropropene		NA			NA				<	0.02000		
Isosafrole		NA			NA				<	0.01000		
Methapyrilene		NA			NA				<	0.04000		
Methyl methanesulfonate		NA			NA				<	0.01000		
N-Nitrosodi-n-butylamine		NA			NA				<	0.02000		
N-Nitrosodiethylamine		NA			NA				<	0.01000		
N-Nitrosodimethylamine		NA			NA				<	0.01000		
N-Nitrosomethylethylamine		NA			NA				<	0.01000		
N-Nitrosomorpholine		NA			NA				<	0.01000		
N-Nitrosopiperidine		NA			NA				<	0.01000		
N-Nitrosopyrrolidine		NA			NA				<	0.01000		
O,O,O-Triethylphosphorothi		NA			NA				<	0.01000		
Pentachlorobenzene		NA			NA				<	0.02000		
Pentachloroethane		NA			NA				<	0.02000		
Pentachloronitrobenzene		NA			NA				<	0.02000		

a = lab qualifiers

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SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	2052 003587 09-13-1988	a	-	3037 066462 06-28-1989	a	-	3037 066571 08-25-1989	a	-
Phenacetin	NA			NA			< 0.01000		
Pronamide	NA			NA			< 0.03000		
Safrole	NA			NA			< 0.01000		
a,a-Dimethylphenethylamine	NA			NA			< 0.01000		
o-Toluidine	NA			NA			< 0.01000		
p-Dimethylaminoazobenzene	NA			NA			< 0.03000		
p-Phenylenediamine	NA			NA			< 0.05000		
VOLATILE ORGANICS									
1,1,1-Trichloroethane	< 0.00500			NA			< 0.00500		
1,1,2,2-Tetrachloroethane	< 0.00500			NA			< 0.00500		
1,1,2-Trichloroethane	< 0.00500			NA			< 0.00500		
1,1-Dichloroethane	< 0.00500			< 0.00500			< 0.00500		
1,1-Dichloroethene	< 0.00500			NA			< 0.00500		
1,2-Dichloroethane	< 0.00500			NA			< 0.00500		
1,2-Dichloroethylene	< 0.00500			NA			NA		
1,2-Dichloropropane	< 0.00500			NA			< 0.00500		
2-Butanone	< 0.01000			NA			< 0.01000		
2-Hexanone	< 0.01000			NA			< 0.01000		
4-Methyl-2-pentanone	< 0.01000			NA			< 0.01000		
Acetone	0.00400	J		0.00700	BJ		< 0.01000		
Benzene	< 0.00500			NA			< 0.00500		
Bromodichloromethane	< 0.00500			NA			< 0.00500		
Bromoform	< 0.00500			NA			< 0.00500		
Bromomethane	< 0.01000			NA			< 0.01000		
Carbon Tetrachloride	< 0.00500			NA			< 0.00500		
Carbon disulfide	< 0.00500			NA			< 0.00500		
Chlorobenzene	< 0.00500			NA			< 0.00500		
Chloroethane	< 0.01000			NA			< 0.01000		
Chloroform	< 0.00500			NA			< 0.00500		
Chloromethane	< 0.01000			NA			< 0.01000		
Dibromochloromethane	< 0.00500			NA			< 0.00500		
Ethylbenzene	< 0.00500			NA			< 0.00500		
Methylene chloride	< 0.00500			0.00700	B		0.00200	JB	
Styrene	< 0.00500			NA			< 0.00500		
Tetrachlorethene	< 0.00500			< 0.00500			< 0.00500		
Toluene	< 0.00500			0.00300	J		< 0.00500		
Total xylenes	< 0.00500			NA			< 0.00500		
Trichloroethene	< 0.00500			0.00300	J		< 0.00500		
Vinyl Acetate	< 0.01000			NA			< 0.01000		
Vinyl chloride	< 0.01000			NA			< 0.01000		
cis-1,3-Dichloropropene	< 0.00500			NA			< 0.00500		

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SOLID WASTE LANDFILL
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	2052 003587 09-13-1988 a -	3037 066462 06-28-1989 a -	3037 066571 08-25-1989 a -
trans-1,3-Dichloropropene	< 0.00500	NA	< 0.00500
1,1,1,2-Tetrachloroethane	NA	NA	< 0.00500
1,2-Dibromo-3-chloropropan	NA	NA	< 0.01000
1,2-Dibromoethane	NA	NA	< 0.00500
1,4-Dioxane	NA	NA	< 1.00000
2-Chloro-1,3-butadiene	NA	NA	< 0.00500
3-Chloropropene	NA	NA	< 0.00500
Acetonitrile	NA	NA	< 0.20000
Acrolein	NA	NA	< 0.01000
Acrylonitrile	NA	NA	< 0.01000
Dibromomethane	NA	NA	< 0.01000
Dichlorodifluoromethane	NA	NA	< 0.20000
Ethyl cyanide	NA	NA	< 0.10000
Ethyl methacrylate	NA	NA	< 0.01000
Iodomethane	NA	NA	< 0.00500
Isobutyl alcohol	NA	NA	< 3.00000
Methacrylonitrile	NA	NA	< 0.01000
Methyl methacrylate	NA	NA	< 0.01000
Pyridine	NA	NA	< 50.00000
Trichlorofluoromethane	NA	NA	< 0.00500
trans-1,4-Dichloro-2-buten	NA	NA	< 0.02000

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EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING GENERAL CHEMICAL RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

Concentration Qualifiers

B = Reported value was obtained from a reading that was less than the Contract Laboratory Program (CLP) Contract Required Detection Limit (CRQL), but greater than or equal to the Instrument Detection Limit (IDL).

Quality Qualifiers

E = The reported value is estimated because of the presence of interference.

M = Duplicate injection precision not met.

N = Spiked sample recovery not within controls limits.

S = The reported value was determined by the Method of Standard Additions.

W = Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

G = Native analyte > 4 times spike added; therefore acceptance criteria do not apply.

X = Detection limit is higher than normal due to sample matrix interferences.

* = Duplication analysis not within control limits.

+ = Correlation coefficient for the MSA is less than 0.955.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOLID WASTE LANDFILL
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1035 003245 05-25-1988 a -	1035 003560 08-11-1988 a -	1035 003736 11-15-1988 a -	1035 003931 02-05-1989 a -
GENERAL CHEMISTRY				
Ammonia	0.3000	< 0.1000	< 0.1000	< 0.1000
Chloride	3.0000	3.0000	10.5000	2.0000
Fluoride	0.6200	0.5100	0.5400	0.3600
Hydrogen ion	NA	NA	NA	NA
Nitrate	0.2000	< 0.1000	0.2960	0.5800
Phenols	0.0100	0.0200	< 0.0100	< 0.0100
Phosphorus (black, white,	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA
Sulfate	45.0000	59.0000	50.3000	598.0000
Total Kjeldahl Nitrogen	NA	NA	0.4200	0.1600
Total Organic Carbon	NA	NA	NA	NA
Total Organic Halides	NA	NA	< 0.0500	< 0.0500
Total Organic Nitrogen	4.6000	0.1000	0.4200	0.1600
METALS				
Aluminum	NA	NA	NA	NA
Antimony	NA	NA	NA	NA
Arsenic	< 0.2000	0.3500	< 0.0020	< 0.0020
Barium	0.1250	0.0900	0.0930	0.0970
Beryllium	NA	NA	NA	NA
Cadmium	< 0.0050	< 0.0020	< 0.0020	0.0070
Calcium	81.7000	83.9000	90.4000	92.0000
Chromium	< 0.0200	< 0.0200	< 0.0200	0.0230
Cobalt	NA	NA	NA	NA
Copper	< 0.0100	< 0.0100	< 0.0100	0.0110
Cyanide	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA
Iron	0.0600	0.0240	0.0090	0.0480
Lead	< 0.0500	< 0.0500	0.0050	< 0.0020
Magnesium	31.7000	29.9000	30.8000	35.5000
Manganese	0.3790	0.0440	0.0280	0.0360
Mercury	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Molybdenum	0.0290	< 0.0200	< 0.0200	< 0.0200
Nickel	< 0.0200	< 0.0200	< 0.0200	0.0200
Potassium	1.9200	0.9580	1.1300	1.2600
Selenium	< 0.2000	< 0.2000	< 0.0020	< 0.0020
Silicon	NA	NA	NA	NA
Silver	< 0.0100	< 0.0100	< 0.0100	< 0.0005
Sodium	8.6100	6.8200	6.8000	8.5100
Thallium	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA
Zinc	NA	NA	NA	NA

a = lab qualifiers

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GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
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CHEMICAL PARAMETERS	1038 003183 05-11-1988 a -	1038 003518 08-22-1988 a -	1038 003762 11-20-1988 a -	1038 003947 02-05-1989 a -	1038 066431 06-18-1989 a -
GENERAL CHEMISTRY					
Ammonia	0.2000	0.2000	0.1600	< 0.1000	NA
Chloride	14.9000	10.0000	2.0000	17.5000	5.8000
Fluoride	0.7600	0.7500	0.6400	0.4600	0.6000
Hydrogen ion	NA	NA	NA	NA	NA
Nitrate	< 0.1000	< 0.1000	< 0.1000	0.1000	< 0.1000
Phenols	0.0200	0.0200	< 0.0100	< 0.0100	NA
Phosphorus (black, white,	NA	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA	NA
Sulfate	200.0000	132.0000	132.0000	153.0000	158.0000
Total Kjeldahl Nitrogen	NA	NA	< 0.1000	0.2230	NA
Total Organic Carbon	NA	NA	NA	NA	1.9600
Total Organic Halides	NA	< 0.0500	< 0.0500	< 0.0500	0.0105
Total Organic Nitrogen	< 0.1000	0.1000	NA	0.2230	NA
Total Phosphorous	< 0.05	NA	NA	NA	NA
METALS					
Aluminum	NA	NA	NA	NA	0.1680
Antimony	NA	NA	NA	NA	NA
Arsenic	< 0.2000	< 0.0020	< 0.0020	< 0.0020	NA
Barium	< 0.0500	0.0450	0.0400	0.0500	0.0431
Beryllium	NA	NA	NA	NA	< 0.0010
Cadmium	0.0128	< 0.0020	< 0.0020	0.0100	NA
Calcium	135.0000	133.0000	126.0000	147.0000	145.0000
Chromium	< 0.0200	< 0.0200	< 0.0200	0.0360	0.0390
Cobalt	NA	NA	NA	NA	< 0.0100
Copper	< 0.0100	< 0.0100	< 0.0100	0.0160	< 0.0100
Cyanide	NA	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA	NA
Iron	0.5300	0.1600	0.3760	0.1400	0.1560
Lead	< 0.0500	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Magnesium	60.9000	60.6000	56.0000	66.3000	65.4000
Manganese	0.2860	0.2040	0.2100	0.2170	NA
Mercury	< 0.0002	< 0.0002	< 0.0002	0.0012	NA
Molybdenum	0.0270	0.0430	0.0360	< 0.0200	NA
Nickel	< 0.0200	< 0.0200	< 0.0200	0.0290	0.0226
Potassium	1.9200	2.4000	1.7300	1.9000	NA
Selenium	< 0.2000	< 0.0020	< 0.0020	< 0.0020	NA
Silicon	NA	NA	NA	NA	NA
Silver	< 0.0100	< 0.0100	< 0.0005	< 0.0005	0.0139
Sodium	8.7000	8.3000	7.1100	8.6600	NA
Thallium	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	0.0279
Zinc	NA	NA	NA	NA	0.0115

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GROUNDWATER GENERAL CHEMICAL DATA
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Results in parts per million (ppm).
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CHEMICAL PARAMETERS		1038 066495 08-13-1989 a -
GENERAL CHEMISTRY		
Ammonia		NA
Chloride		11.0000
Fluoride		0.5000
Hydrogen ion		NA
Nitrate		0.2500
Phenols		NA
Phosphorus (black, white,		NA
Phosphate as P		NA
Sulfate		155.0000
Total Kjeldahl Nitrogen		NA
Total Organic Carbon	<	1.0000
Total Organic Halides		0.0110
Total Organic Nitrogen		NA
METALS		
Aluminum		0.1490
Antimony		NA
Arsenic		NA
Barium		0.0480
Beryllium		0.0010
Cadmium		NA
Calcium		156.0000
Chromium		0.0340
Cobalt	<	0.0100
Copper	<	0.0100
Cyanide		NA
Hexavalent Chromium		NA
Iron		0.2950
Lead		0.0030
Magnesium		66.2000
Manganese		NA
Mercury		NA
Molybdenum		NA
Nickel	<	0.0200
Potassium		NA
Selenium		NA
Silicon		NA
Silver		0.0140
Sodium		NA
Thallium		NA
Vanadium		0.0260
Zinc		0.0160

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GROUNDWATER GENERAL CHEMICAL DATA
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Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
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CHEMICAL PARAMETERS	2027 003168 05-09-1988 a -	2027 003453 08-10-1988 a -	DUPLICATE 2027 003454 08-10-1988 a -	2027 003731 12-01-1988 a -	2027 003941 03-08-1989 a -
GENERAL CHEMISTRY					
Ammonia	0.1000	0.5000	0.5000	0.6430	0.6000
Chloride	79.9000	120.0000	98.0000	75.0000	79.0000
Fluoride	0.3000	1.8000	1.8000	0.1700	0.2000
Hydrogen ion	NA	NA	NA	NA	NA
Nitrate	< 0.1000	0.1100	0.1000	< 0.1000	< 0.0200
Phenols	< 0.0100	< 0.0500	< 0.0500	< 0.0100	0.0340
Phosphorus (black, white,	NA	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA	NA
Sulfate	645.0000	300.0000	310.0000	158.0000	250.0000
Total Kjeldahl Nitrogen	NA	< 15.0000	< 15.0000	5.0000	1.6000
Total Organic Carbon	NA	NA	NA	NA	NA
Total Organic Halides	NA	NA	NA	< 0.0500	< 0.0500
Total Organic Nitrogen	< 0.1000	NA	NA	4.3600	1.0000
METALS					
Aluminum	< 0.0114	NA	NA	NA	NA
Antimony	< 0.0467	NA	NA	NA	NA
Arsenic	< 0.0019	< 0.0100	< 0.0100	< 0.0020	< 0.0030
Barium	0.1050 B	< 0.2000	< 0.2000	0.0590	0.0820
Beryllium	< 0.0024	NA	NA	NA	NA
Cadmium	< 0.0007	< 0.0050	< 0.0050	< 0.0020	< 0.0050
Calcium	274.0000	210.0000	210.0000	106.0000	210.0000
Chromium	< 0.0017	< 0.0100	< 0.0100	< 0.0200	0.0300
Cobalt	< 0.0052	NA	NA	NA	NA
Copper	< 0.0067	< 0.0300	< 0.0300	< 0.0100	< 0.0100
Cyanide	< 0.0100	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA	NA
Iron	8.0600	6.1000	6.0000	3.2800	4.7000
Lead	< 0.0021	< 0.0050	< 0.0050	< 0.0020	< 0.0020
Magnesium	49.8000	44.0000	43.0000	27.3000	44.0000
Manganese	0.4610	0.4900	0.4800	0.6130	0.4800
Mercury	< 0.0002	< 0.0003	< 0.0003	< 0.0002	< 0.0002
Molybdenum	< 0.0333	< 0.0500	< 0.0500	0.0260	0.0100
Nickel	< 0.0123	< 0.0400	< 0.0400	< 0.0200	< 0.0300
Potassium	3.6900 B	< 5.0000	< 5.0000	2.4900	6.4000
Selenium	< 0.0018	< 0.0050	< 0.0050	< 0.0020	< 0.0020
Silicon	NA	NA	NA	NA	NA
Silver	< 0.0043	< 0.0100	< 0.0100	< 0.0005	< 0.0100
Sodium	30.6000	34.0000	33.0000	10.9000	29.0000
Thallium	< 0.0041	NA	NA	NA	NA
Vanadium	< 0.0034	NA	NA	NA	NA
Zinc	0.2280	NA	NA	NA	NA

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SOLID WASTE LANDFILL
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
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CHEMICAL PARAMETERS	2027 066447 06-27-1989 a -	2027 066580 09-10-1989 a -	DUPLICATE 2027 066581 09-10-1989 a -	DUPLICATE 2027 066599 09-10-1989 a -	DUPLICATE 2027 066600 09-10-1989 a -
GENERAL CHEMISTRY					
Ammonia	NA	NA	NA	NA	NA
Chloride	140.0000	77.0000	114.0000	NA	NA
Fluoride	0.1200	0.5000	0.1300	NA	NA
Hydrogen ion	NA	NA	NA	NA	NA
Nitrate	< 0.1000	< 0.1000	< 0.1000	NA	NA
Phenols	NA	NA	NA	NA	NA
Phosphorus (black, white,	NA	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA	NA
Sulfate	569.0000	726.0000	1320.0000	NA	NA
Total Kjeldahl Nitrogen	NA	NA	NA	NA	NA
Total Organic Carbon	2.6840	3.3300	1.9800	NA	NA
Total Organic Halides	< 0.0100	0.0280	< 0.0100	NA	NA
Total Organic Nitrogen	NA	NA	NA	NA	NA
METALS					
Aluminum	0.2065	NA	NA	0.2750	0.2870
Antimony	NA	NA	NA	< 0.0300	< 0.0300
Arsenic	NA	NA	NA	< 0.0020	< 0.0020
Barium	0.0816	NA	NA	0.0537 BE	0.0655 BE
Beryllium	< 0.0010	NA	NA	0.0024 B	0.0024 B
Cadmium	NA	NA	NA	0.0103	0.0193
Calcium	333.0000	NA	NA	449.0000	519.0000
Chromium	0.0527	NA	NA	0.0377	0.0359
Cobalt	< 0.0100	NA	NA	0.0128 B	0.0138 B
Copper	< 0.0100	NA	NA	< 0.0100	< 0.0100
Cyanide	NA	NA	NA	< 0.0050	< 0.0050
Hexavalent Chromium	NA	NA	NA	NA	NA
Iron	5.8040	NA	NA	3.2700	9.6100
Lead	< 0.0020	NA	NA	< 0.0020 W	0.0057
Magnesium	68.2000	NA	NA	72.2000	81.9000
Manganese	NA	NA	NA	1.9400	1.5800
Mercury	NA	NA	NA	< 0.0002 N	< 0.0002 N
Molybdenum	NA	NA	NA	NA	NA
Nickel	0.0257	NA	NA	0.0371 B	0.0373 B
Potassium	NA	NA	NA	4.2000 B	5.5300
Selenium	NA	NA	NA	< 0.0020 WN	< 0.0020 WN
Silicon	NA	NA	NA	NA	NA
Silver	0.0187	NA	NA	< 0.0100	< 0.0100
Sodium	NA	NA	NA	33.4000	35.1000
Thallium	NA	NA	NA	< 0.0010	< 0.0010
Vanadium	0.0437	NA	NA	0.0438 B	0.0479 B
Zinc	0.0801	NA	NA	0.0260 E	0.1080 E

a = lab qualifiers

- = Sample has not been validated

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SOLID WASTE LANDFILL
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	2037 003248 06-01-1988 a -	DUPLICATE 2037 003249 06-01-1988 a -	2037 003448 08-08-1988 a -	2037 003718 11-18-1988 a -	2037 003917 02-22-1989 a -
GENERAL CHEMISTRY					
Ammonia	< 0.4100	< 0.4100	0.1000	0.1700	0.3000
Chloride	25.4000	29.5000	27.0000	22.2000	24.0000
Fluoride	0.5100	0.5100	0.2000	0.2600	0.2000
Hydrogen ion	NA	NA	NA	NA	NA
Nitrate	0.1500	0.1500	< 2.5000	< 0.1000	< 0.0200
Phenols	0.1700	0.1500	< 0.0100	< 0.0100	0.0120
Phosphorus (black, white,	NA	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA	NA
Sulfate	157.0000	165.0000	130.0000	95.2000	140.0000
Total Kjeldahl Nitrogen	< 0.4100	1.0000	NA	0.3900	0.7000
Total Organic Carbon	NA	NA	NA	NA	NA
Total Organic Halides	NA	NA	< 0.0500	< 0.0500	< 0.0100
Total Organic Nitrogen	< 0.4100	1.0000	< 0.1000	0.2200	0.4000
Total Phosphorous	NA	NA	NA	< 0.0200	< 0.0300
METALS					
Aluminum	0.0133 B	< 0.0114	NA	NA	NA
Antimony	< 0.0467	< 0.0467	NA	NA	NA
Arsenic	0.0022 B	< 0.0019	< 0.0100	< 0.0020	< 0.0030
Barium	0.0814 B	0.0825 B	< 0.2000	0.0860	0.0890
Beryllium	< 0.0024	< 0.0024	NA	NA	NA
Cadmium	< 0.0007	< 0.0007	< 0.0050	< 0.0020	< 0.0050
Calcium	124.0000	12.0000	120.0000	132.0000	140.0000
Chromium	< 0.0017	< 0.0017	< 0.0100	< 0.0200	< 0.0300
Cobalt	< 0.0052	< 0.0052	NA	NA	NA
Copper	< 0.0067	< 0.0067	< 0.0300	< 0.0100	< 0.0100
Cyanide	< 0.0200	< 0.0100	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA	NA
Iron	2.7000	2.6300	3.1000	3.1900	3.1000
Lead	< 0.0021	< 0.0021 W	< 0.0050	0.0030	< 0.0020
Magnesium	28.0000	27.7000	29.0000	28.5000	29.0000
Manganese	0.2870	0.2820	0.2200	0.2180	0.2900
Mercury	0.0008	< 0.0003	< 0.0002	< 0.0002	< 0.0002
Molybdenum	< 0.0333	< 0.0333	< 0.0500	< 0.0200	0.0100
Nickel	< 0.0123	< 0.0123	< 0.0400	< 0.0200	< 0.0300
Potassium	2.5800 B	2.7600 B	< 5.0000	2.3700	2.6000 **
Selenium	< 0.0018 W	< 0.0018 W	< 0.0050	< 0.0020	< 0.0050
Silicon	NA	NA	NA	NA	NA
Silver	< 0.0043	< 0.0043	< 0.0100	< 0.0005	< 0.0100
Sodium	14.9000	15.1000	14.0000	11.6000	13.0000
Thallium	< 0.0041 WN	< 0.0041 WN	NA	NA	NA
Vanadium	< 0.0034	< 0.0034	NA	NA	NA
Zinc	0.0996	0.0360	NA	NA	NA

a = lab qualifiers

- = Sample has not been validated

REPORT DATE : 1-MAY-92

SOLID WASTE LANDFILL
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	2037 066461 06-28-1989 a -	2037 066540 08-25-1989 a -	DUPLICATE 2037 066570 08-25-1989 a -
GENERAL CHEMISTRY			
Ammonia	NA	NA	NA
Chloride	24.0000	29.0000	NA
Fluoride	0.2000	0.1700	NA
Hydrogen ion	NA	NA	NA
Nitrate	< 0.1000	< 0.1000	NA
Phenols	NA	NA	NA
Phosphorus (black, white,	NA	NA	NA
Phosphate as P	NA	NA	NA
Sulfate	193.0000	474.0000	NA
Total Kjeldahl Nitrogen	NA	NA	NA
Total Organic Carbon	3.6300	1.4900	NA
Total Organic Halides	< 0.0100	< 0.0100	NA
Total Organic Nitrogen	NA	NA	NA
METALS			
Aluminum	0.1870	NA	0.1900 B
Antimony	NA	NA	< 0.0300
Arsenic	NA	NA	< 0.0020
Barium	0.0950	NA	0.0943 B
Beryllium	< 0.0010	NA	0.0015 B
Cadmium	NA	NA	0.0086
Calcium	145.0000	NA	228.0000
Chromium	0.0404	NA	0.0352
Cobalt	< 0.0100	NA	< 0.0100
Copper	< 0.0100	NA	0.0322
Cyanide	NA	NA	< 0.0050
Hexavalent Chromium	NA	NA	NA
Iron	3.4700	NA	5.5400
Lead	0.0066	NA	0.0051 N
Magnesium	34.3000	NA	42.2000
Manganese	NA	NA	0.3780
Mercury	NA	NA	< 0.0002
Molybdenum	NA	NA	NA
Nickel	< 0.0200	NA	0.0211 B
Potassium	NA	NA	2.8400 B
Selenium	NA	NA	< 0.0020 W
Silicon	NA	NA	NA
Silver	0.0200	NA	0.0145
Sodium	NA	NA	13.9000
Thallium	NA	NA	< 0.0010
Vanadium	0.0270	NA	0.0303 B
Zinc	0.1850	NA	0.0561 E

a = lab qualifiers

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SOLID WASTE LANDFILL
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	2052 003476 12-16-1988 a -	2052 003587 09-13-1988 a -	2052 003791 12-16-1988 a -	2052 003892 02-08-1989 a -
GENERAL CHEMISTRY				
Ammonia	0.5300	0.3200	0.6800	0.3200
Chloride	8.0000	30.0000	12.0000	22.0000
Fluoride	0.3200	0.3200	0.3600	0.2300
Hydrogen ion	NA	NA	NA	NA
Nitrate	< 0.1000	0.1700	< 0.1000	< 0.1000
Phenols	< 0.0100	0.0200	< 0.0100	< 0.0100
Phosphorus (black, white,	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA
Sulfate	120.0000	178.0000	125.0000	153.0000
Total Kjeldahl Nitrogen	1.9400	NA	3.6300	0.6510
Total Organic Carbon	NA	NA	NA	NA
Total Organic Halides	0.0230	< 0.0500	0.0230	0.0180
Total Organic Nitrogen	1.4100	0.4000	2.9500	0.3310
Total Phosphorous	1.8900	NA	6.9900	0.4800
METALS				
Aluminum	NA	< 0.0500	NA	NA
Antimony	NA	0.0005 B	NA	NA
Arsenic	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Barium	0.1560	0.1440	0.1500	0.1380
Beryllium	NA	< 0.0010	NA	NA
Cadmium	< 0.0020	< 0.0020	< 0.0020	0.0070
Calcium	147.0000	129.0000	146.0000	142.0000
Chromium	< 0.0200	< 0.0200	< 0.0200	0.0310
Cobalt	NA	< 0.0100	NA	NA
Copper	< 0.0100	< 0.0100	< 0.0100	0.0120
Cyanide	NA	< 0.0100	NA	NA
Hexavalent Chromium	NA	NA	NA	NA
Iron	4.1900	3.6100	4.2100	3.7700
Lead	< 0.0020	0.0034 B	< 0.0020	< 0.0020
Magnesium	32.6000	27.3000	32.6000	32.9000
Manganese	0.2590	0.2260	0.2700	0.2470
Mercury	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Molybdenum	0.0270	< 0.0200	0.0480	< 0.0200
Nickel	< 0.0200	< 0.0200	< 0.0200	< 0.0200
Potassium	0.9170	1.1200 B	0.9170	1.1600
Selenium	< 0.0020	< 0.0020	< 0.0020	0.0040
Silicon	NA	NA	NA	NA
Silver	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Sodium	15.1000	15.8000	14.8000	14.2000
Thallium	NA	< 0.0010	NA	NA
Vanadium	NA	< 0.0100	NA	NA
Zinc	NA	0.0280	NA	NA

a = lab qualifiers

- = Sample has not been validated

SOLID WASTE LANDFILL
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	3037 003152 05-05-1988 a -	3037 003447 08-08-1988 a -	3037 003717 11-18-1988 a -	3037 003916 02-22-1989 a -	3037 066462 06-28-1989 a -
GENERAL CHEMISTRY					
Ammonia	1.8200	13.0000	18.8000	15.0000	NA
Chloride	4.0000	230.0000	212.0000	200.0000	206.0000
Fluoride	0.3500	0.1000	0.1450	0.1000	0.1000
Hydrogen ion	NA	NA	NA	NA	NA
Nitrate	< 0.1000	< 5.0000	< 0.1000	0.0200	1.3200
Phenols	0.0100	< 0.0100	< 0.0100	< 0.0050	NA
Phosphorus (black, white,	NA	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA	NA
Sulfate	475.0000	440.0000	394.0000	390.0000	467.0000
Total Kjeldahl Nitrogen	3.3900	NA	22.8000	27.0000	NA
Total Organic Carbon	NA	NA	NA	NA	6.4500
Total Organic Halides	NA	< 0.0500	0.2000	0.0270	< 0.0100
Total Organic Nitrogen	< 1.5700	< 0.1000	4.0000	12.0000	NA
Total Phosphorous	0.1000	NA	< 0.0200	0.0100	NA
METALS					
Aluminum	NA	NA	NA	NA	0.2006
Antimony	NA	NA	NA	NA	NA
Arsenic	< 0.2000	< 0.0100	< 0.0020	< 0.0030	NA
Barium	0.0600	< 0.2000	0.0490	0.0450	0.0465
Beryllium	NA	NA	NA	NA	< 0.0010
Cadmium	< 0.0050	< 0.0050	< 0.0020	0.0070	NA
Calcium	254.0000	280.0000	291.0000	280.0000	277.0000
Chromium	< 0.0200	0.0100	< 0.0200	0.0500	0.0572
Cobalt	NA	NA	NA	NA	< 0.0100
Copper	< 0.0100	< 0.0300	< 0.0100	0.0100	< 0.0100
Cyanide	NA	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA	NA
Iron	3.0200	15.0000	16.9000	14.0000	13.0900
Lead	< 0.0500	< 0.0050	0.0020	< 0.0020	0.0022
Magnesium	61.3000	61.0000	67.2000	61.0000	62.9000
Manganese	0.6500	0.6800	0.7220	0.7000	NA
Mercury	< 0.0002	< 0.0002	< 0.0002	< 0.0002	NA
Molybdenum	< 0.0200	< 0.0500	< 0.0200	0.0200	NA
Nickel	0.0400	< 0.0400	< 0.0200	< 0.0300	0.0282
Potassium	15.9000	12.0000	14.5000	13.0000	NA
Selenium	< 0.2000	< 0.0050	< 0.0020	< 0.0050	NA
Silicon	NA	NA	NA	NA	NA
Silver	< 0.0100	< 0.0100	< 0.0005	0.0100	0.0213
Sodium	62.7000	59.0000	51.2000	55.0000	NA
Thallium	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	0.0382
Zinc	NA	NA	NA	NA	0.2670

a = lab qualifiers

- = Sample has not been validated

SOLID WASTE LANDFILL
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	3037 066541 08-25-1989 a -		DUPLICATE 3037 066571 08-25-1988 a -
GENERAL CHEMISTRY			
Ammonia	NA		NA
Chloride	250.0000		NA
Fluoride	0.1000		NA
Hydrogen ion	NA		NA
Nitrate	0.5820		NA
Phenols	NA		NA
Phosphorus (black, white,	NA		NA
Phosphate as P	NA		NA
Sulfate	475.0000		NA
Total Kjeldahl Nitrogen	NA		NA
Total Organic Carbon	2.0100		NA
Total Organic Halides	0.0130		NA
Total Organic Nitrogen	NA		NA
METALS			
Aluminum	NA		0.2240
Antimony	NA	<	0.0300
Arsenic	NA	<	0.0020
Barium	NA		0.0524 B
Beryllium	NA		0.0015 B
Cadmium	NA		0.0095
Calcium	NA		305.0000
Chromium	NA		0.0368
Cobalt	NA	<	0.0100
Copper	NA	<	0.0100
Cyanide	NA	<	0.0050
Hexavalent Chromium	NA		NA
Iron	NA		14.6000
Lead	NA		0.0034 BN
Magnesium	NA		65.7000
Manganese	NA		0.6510
Mercury	NA	<	0.0002
Molybdenum	NA		NA
Nickel	NA		0.0279 B
Potassium	NA		13.0000
Selenium	NA	<	0.0020 W
Silicon	NA		NA
Silver	NA		0.0114
Sodium	NA		57.1000
Thallium	NA	<	0.0010
Vanadium	NA		0.0337 B
Zinc	NA		0.0389 E

a = lab qualifiers

- = Sample has not been validated

TABLE C-13

BIOTA ANALYSES
RI/FS SAMPLING PROGRAM
SOLID WASTE LANDFILL

SOLID WASTE LANDFILL
BIOLOGICAL RADIOLOGICAL RESULTS

Results in picocuries per gram (pCi/g).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	9B Cattail Leaves 000264 10-31-1987	9B Cattail Roots 000266 10-31-1987	9B Small Mammal Organs 000273 11-04-1987	9B Small Mammal Carcasses 000274 11-04-1987
Actinium 231	NA	NA	NA	NA
Cesium 137	< 0.4	< 0.2	< 1.1	< 0.2
Lead 210	NA	NA	NA	NA
Neptunium 237	NA	NA	NA	NA
Plutonium 238	NA	NA	NA	NA
Plutonium 239/240	NA	NA	NA	NA
Polonium 210	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA
Radium 226	NA	NA	NA	NA
Radium 228	NA	NA	NA	NA
Ruthenium 106	NA	NA	NA	NA
Strontium 90	< 1.0	< 0.5	< 2.5	< 0.1
Technetium 99	NA	NA	NA	NA
Thorium 228	NA	NA	NA	NA
Thorium 230	NA	NA	NA	NA
Thorium 232	NA	NA	NA	NA
Total Thorium **	NA	NA	NA	NA
Uranium 234	1.4 ± 0.5	< 0.6	8.3 ± 2.4	< 0.6
Uranium 235/236	< 0.6	< 0.6	1.1 ± 0.8	< 0.6
Uranium 238	1.9 ± 0.5	< 0.6	9.6 ± 2.4	< 0.6
Total Uranium **	NA	NA	NA	NA

* Data validation in progress.

** Results reported in mg/kg

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REPORT DATE : 12-MAY-92

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TABLE C-14

GEOTECHNICAL ANALYSES
CHARACTERIZATION INVESTIGATION STUDY
SOLID WASTE LANDFILL

NOTES:

- CIS data not applicable to the OU2 waste unit have been shaded

GEOTECHNICAL LABORATORY MATERIAL PROPERTY TESTING RESULTS

SAMPLE NO.	DEPTH INTERVAL	SAMPLE LOCATION	USCS CLASSIF.	SPECIFIC GRAVITY	LIQUID LIMIT	PLASTICITY INDEX	NATURAL MOISTURE CONTENT(%)	PERCENT -200 SIEVE (SILT&CLAY)	PERCENT -2 MICRON (CLAY)	MAXIMUM DRY DENSITY(pcf)	OPTIMUM MOISTURE CONTENT(%)	COLOR	CONSISTANCY	SAMPLE AMOUNT(lbs.)
1-48	0.0-12.'	PIT 1	GC	2.62	34	11	17.2	43	14	109.4	17.3	BROWN	CLAYEY	5
2-39		PIT 2	ML	2.59	53	21	31.9	61	22	86.3	17.5		CLAYEY	4
3-52	0.0-20.'	PIT 3	ML	2.54	52	20	55.9	67	10			BROWN	SLUDGE	10
*DUPLICATE							57.0	66	13					
3-90	0.0-20.'	PIT 3	ML		38	5	43.3	68	11	88.3	26.4	GRAY	SLUDGE	5
DUPLICATE				2.65			41.6	66	15					
4-02	0.0-20.'	PIT 4	ML	2.75	NP	NP	27.0	94	6			GRAY	CLAYEY	10
4-37		PIT 4											CLAYEY	10
4-39		PIT 4											CLAYEY	12
4-62	0.0-20.'	PIT 4	ML	3.33	NP	NP	28.6	55	6	120.6	18.2	GRAY	CLAYEY	5
DUPLICATE				3.63										
5-25	10.-29.'	PIT 5	MH	2.43	81	29	189.5	70	2	62.5	50.4	BROWN	CLAYEY	20
6-10	0.0-10.'	PIT 6	ML	2.87	NP	NP	60.4	79	7			GRAY	SLUDGE	8
6-22	0.0-15.'	PIT 6	ML		NP	NP	50.5	68	8	101.2	23.0	GRAY	SLUDGE	10
7-02	0.0-10.'	BURN PIT	SM	2.66	NP	NP	30.1	36	4			GRAY/BROWN	SLUDGE	5
7-04		BURN PIT											SLUDGE	5
7-34	0.0-16.'	BURN PIT	ML		36	2	30.2	57	15			BROWN/BLACK	SLUDGE	6
DUPLICATE					33	3								
7-50		BURN PIT											SLUDGE	4
7-52	0.0-16.'	BURN PIT	SM	2.35	NP	NP	29.2	40	6	81.2	9.5	BLACK	SLUDGE	6
47-06		LIME SLUDGE											SLUDGE	-
47-12	0.0-8.5'	LIME SLUDGE	ML	2.33	NP	NP	134.0	98	7			GRAY/WHITE	SLUDGE	1
48-13	2.-11.2'	LIME SLUDGE	ML		NP	NP	89.6	99	6			WHITE	SLUDGE	10
48-28		LIME SLUDGE								72.8	40.3		SLUDGE	12
48-42	0.0-12.'	LIME SLUDGE	ML	2.49	NP	NP	88.8	94	4			WHITE	SLUDGE	10
49-03	0.0-18.'	LANDFILL	CL	2.57	33	14	13.4	60	22	109.7	18.0	BROWN/GRAY	CLAYEY	5
49-19	0.0-12.'	LANDFILL	CL		40	20	15.1	52	19	100.1	17.7	BROWN/GRAY	CLAYEY	5
49-33		LANDFILL											CLAYEY	5
49-47		LANDFILL								115.8	13.5		CLAYEY	5
49-56		LANDFILL											CLAYEY	5
49-72		LANDFILL		2.58									CLAYEY	5
AVERAGES				2.68	44	14	54.4	67	10	95.3	22.9			

*NOTES/DEFINITIONS OF TERMS

NP = NON.PLASTIC-- THE SOIL EXHIBITS NO CHARACTERISTICS OF PLASTICITY

-200 SIEVE = THE PERCENT OF THE TOTAL SAMPLE BY WEIGHT PASSING A 200 MESH(.074mm) SIEVE THIS SIZE DESIGNATION IS THE BREAK BETWEEN SAND AND (SILT & CLAY)

-2MICRON = THE PECENT OF THE TOTAL SAMPLE BY WEIGHT PASSING A SIEVE WITH A HOLE SIZE OF .0002 mm THIS SIZE IS COMMONLY REFERED TO AS THE BREAK BETWEEN SILT AND CLAY

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TABLE C-15

GEOTECHNICAL ANALYSES
RI/FS SAMPLING PROGRAM
SOLID WASTE LANDFILL

TABLE C-15

GEOTECHNICAL DATA FOR SURFACE MEDIA
RI/FS SAMPLING PROGRAM
SOLID WASTE LANDFILL

Location:	#9	#10	#11
North & East Coordinates	482117.58, 1379737.25	482202.83, 1379694.27	482179.33, 1379622.51
Wet Density (pcf)	114.4	118.6	110.1
Dry Density (pcf)	106.7	107.5	102.7
Moisture Content (%)	7.2	10.3	7.2

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TABLE C-16

BORING LOGS
CHARACTERIZATION INVESTIGATION STUDY
SOLID WASTE LANDFILL

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: SLF, B-01
SITE COORDINATES (ft.):
N 5600 E 3180
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 4-29-87
DATE COMPLETED: 4-29-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Sanitary land fill, boring 1, South east section.
SITE CONDITION Grass covered, flat surface

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID #CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'		17"	17"	U	90	16-26-53-46	79	CL-CH	Yellowish brown (10YR 5/6) CLAY, Trace Silt, some(+) medium to fine Gravel, dry to slightly damp, gravel is angular to rounded, pieces of plastic present, grass roots present.
2'-4'		9"	9"	U	95	28-42-22-36	64	CL-CH	Same as above (0'-2') with one coarse Gravel.
4'-6'		9"	9"	U	750	16-27-100/3		CL-CH	(4'-4'4") Same as above (0'-4'), damp.
					220			SM	(4'4"-4'9") Black (2.5Y 2/0) very fine SAND and Silt, little(-) Clay, Trace medium to fine Gravel, saturated, piece of wood, piece of plastic, oily film on everything.

COMMENTS: Logs for SLF B-01 are in Field Book 440 pg 135-140. CPM taken with Eberline HP-210T. Conversion for HP-210T: 1mRad/hr/1489 CPM

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D drive sample
U - 3" O.D 2.42" I.D tube sample
T - 3" O.D thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: SLF, B-01
SITE COORDINATES (ft.):
N 5600 E 3180
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 4-29-87
DATE COMPLETED: 4-29-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
6'-8'		21"	21"	U		11-27-20-17	47	CL-CH	(6'-6'6") Brown (10YR 5/3) CLAY, trace Silt, trace fine Sand, moist.
								CL-CH	(6'6"-7') Same as above (6'-6'6") with color change to yellowish brown (10YR 5/6), moist.
								CL-CH	(7'-7'9") Grayish brown (10YR 5/2) CLAY, trace Silt, some fine SAND, wet, piece of wood.
8'-10'		0	0	U	—	11-27-20-17	47	—	Piece of wood in end of sample spoon
10'-12'		17"	17"	U	150	17-21-23-24	44	CL-CH	(10'-10'5") Black (2.5Y 2/0) CLAY, trace Silt, moist, wood splinters.
									(10'5"-11'5") Mixture of Grayish brown (10YR 5/2) and Yellowish brown (10YR 5/6) CLAY, trace Silt, dense, moist, trace specks decayed organic material.

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

3838

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: SLF, B-01
SITE COORDINATES (ft.):
N 5600 E 3180
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 4-29-87
DATE COMPLETED: 4-29-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION See page 1

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID #CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
12'-14'		20"	20"	U	100	21-13-21-27	34	CL-CH	(12'-12'4") Black (2.5Y 2/0) CLAY, trace Silt, trace fine Gravel, moist, wood splinters present.
								CL-CH	(12'4"-13'8") Brownish yellow (10YR 6/6) CLAY, trace Silt, dense, mottled areas.
14'-16'		10"	10"	U	125	13-28-36-46	64	CL-CH	Same as above (12'4"-13'8"), damp, small layers (1/16" thick) of white (10YR 8/1) mixed throughout.
16'-18'		24"	24"	U	85	20-50-80-110	130	CL-CH	(16'-17'1") Reddish yellow CLAY, trace fine Gravel, hard, dense, damp.
								CL-CH	(17'1"-18) Grayish brown (10YR 5/2) CLAY, trace fine Gravel, hard dense, damp. Natural.

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

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WESTON

3838

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: SLF, B-2
SITE COORDINATES (ft.):
N S 525 E 3150
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser - Morner
DATE STARTED: 4-29-87
DATE COMPLETED: 7-29-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Sanitary landfill, boring 2, Center section of pit
SITE CONDITION Grass covered, flat surface.

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'		16"	16"	U	180	9-20-17-25	37	CL-CH	Yellowish brown (10YR 5/4) CLAY, trace (+) medium to fine Gravel, trace silt, trace fine Sand, dry to slightly damp.
2'-4'		16"	16"	U	300	16-24-28-28	52	CL-CH	Same as above (0'-2') with little medium to fine Gravel, damp, ½" thick waffer of hard fiberous material (white) present.
4'-6'		17"	17"	U	200	5-7-9-11	16	CL-CH	Light olive brown (2.5Y 5/4) same as above (0'-4'). damp to slightly moist, mottled, dense, gravel is angular to well rounded.

COMMENTS: Logs for SLF, B-02 are in Field Book 440 pg 141 - 144. CPM taken with HP-210T, conversion for HP-210T : 1 mRad/hr / 1469 CPM.

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: SLF-B-2
SITE COORDINATES (ft.):
N 5525 E 3150
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser - Morner
DATE STARTED: 4-29-87
DATE COMPLETED: 4-29-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Same as above
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
6'-8'		13"	13"	U	225	6-10-10-3	20	CL-CH	(6'-6'6") - same as above (0-6).
								CH -	(6'6"-7'1") - Yellowish brown (10YR 5/4) CLAY, damp, white fiberous waffer at 6'7".
8'-10'		22"	22"	U	320	25-30-35-40	65	CH -	(8'-8'2") - Same as above (6'6"-7'1"). (8'2"-8'9") - Dark gray CLAY, hard, dense. (8'9"-9'1") - Dark gray CLAY, with orange oxidation specks throughout.
10'-12'		19"	19"	U	250	10-13-20-22	33	CH -	Same as above (8'9"-9'1").

COMMENTS: Same as above

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

3838

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: SLF, B-03
SITE COORDINATES (ft.):
N S 550 E 3075
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 4-30-87
DATE COMPLETED: 4-30-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Sanitary Landfill, boring 3, West central section
SITE CONDITION Grass covered, flat surface.

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'	X	7"	7"	U	80	9-10-13-17	23	CL-CH	Light olive brown (2.5Y 5/6) CLAY, trace silt, trace medium to fine Sand, little (-) medium to fine Gravel, dry to slightly damp, mottled in places, some grass roots. Fill
2'-4'	X	13"	13"	U	80	7-12-16-15	28	CL-CH	Same as above (0'-2') with color change to olive brown (2.5Y 4/4), Trace fine Gravel, damp. Fill
4'-6'	X	20"	20"	U	T-65 B-100	7-15-25-25	40	CL-CH	Dark yellowish brown (10YR 4/4) same as above (0'-4'). Fill
6'-8'	X	4"	4"	U	T-80 B-2300	13-11-50-90	61	CL-CH	(6'-6'2") Same above (4'-6') Fill (6'2"-6'-4") Black (5Y 2.5/1) fine SAND, and Silt size material, slightly cemented, damp, shiny flakes in black material. Light gray (10YR 7/1) coloring of the same material mixed in spots, layered fiber board present

COMMENTS: Logs for SLF, B-03 are in Field Book 440 pg. 147-152 *CPM taken with HP-210T (Eberline), Conversion for HP210T: 1mRad/hr/1489 CPM. T-Top of sample, B-Bottom of sample. M-Middle of sample

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: SLF, B-03
SITE COORDINATES (ft.):
N S 550 E 3075
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowse - Morner
DATE STARTED: 4-30-87
DATE COMPLETED: 4-30-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID +CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
8'-10'	X	3"	3"	U	385	7-7-30-62	37		Same as above (6'-2"-8'), moist to slightly wet, Black material appears to be roofing material
10-12'	X	4"	4"	U	1150	50-33-85-35	118		Same as above (6'2"-10'), saturated; waffer of black hard layered material (built up roofing material)
12'-14'	X	14"	14"	U	T-240 M-130 B-240	15-34-7-16	41		(12'-12'10") Same as material above (6'2"-12'), hard dense white foam like material is attached to some of the layered fiber board material.
								CH -	(12'10"-13'2") Light olive brown (2.5Y 5/4) CLAY, moist.
14'-16'	X	20"	20"		100	25-40-57-92	97	CH -	Yellowish brown (10YR 5/6) CLAY, trace fine Gravel, dense, fairly hard,

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

3338

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: SLF, B-04
SITE COORDINATES (ft.):
N S 525 E 3250
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 4-30-87
DATE COMPLETED: 4-30-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Sanitary landfill boring 4 Northeast section
SITE CONDITION Grass and bare soil, flat surface, edge of gravel road.

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'	X	11"	11"	U	HP-210T Temperarily none functional	85-100-100/3	200/9	CL	Yellowish brown (10YR 5/4) CLAY and Silt, trace fine Sand, trace medium to fine Gravel, dry to slightly damp. Natural
2'-4'	X	17"	17"	U	200	35-33-30-43	63	SM	(2'-3') Brownish yellow (10YR 6/6) very fine SAND, little (+) Silt, trace fine Gravel, dry, crumbles easily. Natural
								CL-CH	(3'-3'2") Yellowish brown (10YR 5/6) CLAY little(+) Silt, little fine Sand, black sand grains. Natural
								SM	(3'2"-3'5") Same as above (2'-3'). Natural
4'-6'	X	21"	21"	U	220	15-18-15-17	33	SM	Same as above (2'-3') and (3'2"-3'5") with occassional layers of same material at (3'-3'2"), layer < 1/2" thick. Natural
6'-8'	X	16"	16"	U	150	7-15-17-18	32	SM	(6'-7'1") Same as above (4'-6'), damp. Natural
								SM	(7'1"-7'4") Olive gray (5Y 4/2) CLAY and Silt, damp to slightly moist. Natural

COMMENTS: Logs for SLF, B-04 are in Field Book 440 pg 153-154. CPM Taken with Eberline HP-210T conversion for HP-210T: 1mRad/hr/1469 CPM

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

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WESTON

3838

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: SLF, B-05
SITE COORDINATES (ft.):
N 5489 E 3208
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 5-1-87
DATE COMPLETED: 5-1-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Sanitary landfill, boring 5. Northeast section.
SITE CONDITION Partially grass covered, generally flat with small mounds of dirt.

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'	X	12"	12"	U	125	3-6-25-23	31	CL-CH	Yellowish brown (10YR 5/6) CLAY, Trace Silt, Trace medium to fine Gravel, damp, dense.
2'-4'	X	23"	23"	U	T-120 B-80	7-14-20-25	34	CL-CH	Same as above (0'-2') with color change to olive brown (2.5Y 4/4), damp, dense.
4'-6'	X	24"	24"	U	80-90	9-13-13-14	26	CL-CH	Same as above (0'-4'), with strong brown (7.5YR 4/6) and white (10YR 8/1) staining at (4'4"-4'7"), damp to slightly moist.
6'-8'	X	20"	20"	U	1000	3-8-18-25	26	CL-CH	(6'-6'5") Light olive brown (2.5Y 5/6) CLAY Trace Silt, Trace medium to fine Gravel, damp to slightly moist, dense,
								CL-CH	(6'5"-7'8") Olive brown (2.5Y 4/4) CLAY, Trace Silt, Trace fine Gravel, slightly less dense than above, soft at (7'6"-7'8"), damp to moist, black staining.

COMMENTS: Logs for SLF, B-05 are in Field Book 44.1 pg. 2-5, CPM taken with Eberline HP-210T, conversion for HP-210T: 1mRad/hr/1489 CPM. T-Top of sample, B-Bottom of sample.

SAMPLE TYPE
A - Auger cuttings
S - 3" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: SLF, B-05
SITE COORDINATES (ft.):
N 5489 E 3208
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger.
DRILLING CONTR.: Bowser - Morner
DATE STARTED: 5-1-87
DATE COMPLETED: 5-1-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
8'-10'		24"	24"	U	11P-210T Temporarily none functional	7-13-20-25	33	CL-CH	(8'-8'4") Same as above (6'5"-7'8")
								CH-	(8'4"-10') Olive gray CLAY, moist, Speck of oxidation are numerous toward bottom (9'3"-10') causing an overall color change to olive yellow (2.5Y 6/6), decaying organic material present.
10'-12'		24"	24"	U	100	6-12-23-39	35	CH-	Same as above (8'4"-10'), fairly dense toward bottom, worm holes are filled with a gray (7.5YR 5/6) Clay material.
12'-14'		24"	24"	U	60	9-13-17-25	30	CH	(12'-12'4") Same as above (8'4"-12') (12'4"-14") Light Olive brown CLAY, Trace fine Gravel, trace Silt, moist, dense, mottled with an array of gray and olive green colors.

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D thin-walled Shelby tube

WESTON

3838

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: SLF, B-06
SITE COORDINATES (ft.):
N S 450 E 3250
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow Stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-4-87
DATE COMPLETED: 5-4-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Sanitary Landfill, Boring 6 Northeast section
SITE CONDITION Partially grass covered, generally flat with small dirt mounds

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID +CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'	X	13"	13"	U	150	16-16-27-40	43	CL-CH	Yellowish brown (10YR 5/6) CLAY some Silt, Trace fine Sand, Trace medium to fine Gravel, dry to slightly damp. some grass roots present.
2'-4'	X	0	0	U	—	100/2		—	No recovery, wood chips in cuttings.
4'-6'	X	8"	8"	U	55	7-14-12-13	26	CL-CH	Light olive brown (2.5Y 5/4) CLAY Trace Silt, moist, fiberous material mixed in (4'4"-4'8"). white material that resembles fertilizer occurs mixed throughout (4'4"-4'8") (dry lawn fertilizer)
6'-8'	X	20"	20"	U	50	8-12-16-21	28	CL-CH	(6'-6'4") Same as above (4'-6') (6'4"-7'8") Dark brown (7.5YR 4/4) CLAY, Trace Silt, mottled, orange from oxidation mixed throughout, aluminum wire, rubber, piece of metal present, moist, more firm than above.

COMMENTS: Logs for SLF, B-06 are in Field Book 44.1 pg 8-11. CPM taken with Eberline HP-210T, Conversion for HP-210: 1 mRad/hr/1489 CPM T-Top of sample, B-bottom of sample.

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: SLF, B-06
SITE COORDINATES (ft.):
N 5450 E 3250
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 5-4-87
DATE COMPLETED: 5-4-87
FIELD REP.: Vance A. Peers.

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
8'-10'	X	O	O	U	—	25-40-52-57	92	—	—
10-12'	X	19"	19"	U	55	45-68-52-47	120	CL-CH	Yellowish brown (10YR 5/4) CLAY, trace Silt, trace (+) medium to fine Gravel, piece of aluminum wire, (2" x 3") piece of aluminum, mottled, oxidation, small piece of decaying wood, damp.
12'-14'	X	24"	24"	U	50	22-47-46-43	93	CL-CH	Same as above (10'-12'), gravel is angular to rounded, piece of aluminum, isolated areas of mottling, dense, hard.
14'-16'	X	19"	19"	U	75	25-37-47-53	84	CL-CH	Brown (10YR 5/3) CLAY, trace (+) coarse to fine Gravel, damp to slightly moist, slightly softer than above, gravel is subangular to rounded,

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D thin-walled Shelby tube

WESTON

3838

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: SLF B-06
SITE COORDINATES (ft.):
N 3450 E 3250
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-4-87
DATE COMPLETED: 5-4-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
16'-18'		24"	24"	U	T 45 B 75	58-65-68-66	133	CL-CH CH	(16'-17'6") Same as above (14'-16') (17'6"-18') Dark gray (5Y 4/1) CLAY, moist, softer than above, less dense than above.

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D thin-walled Shelby tube

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TABLE C-17

BORING LOGS
RI/FS SAMPLING PROGRAM
SOLID WASTE LANDFILL

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1035	COORDINATES: NORTH 482,290.60 EAST 1,379,710.46	DATE: 03/20/88	
GROUND ELEVATION: 584.15	GWL: Depth N/A Date/Time N/A	DATE STARTED: 03/20/88	
ENGINEER/GEOLOGIST: M SLUSARSKI	Depth N/A Date/Time N/A	DATE COMPLETED: 03/21/88	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	008374 03/20/88 0933	1 3 4	8	MEDIUM STIFF, YELLOW-BROWN (10YR 4/2), CLAY, SOME SILT, ROOTLETS, DRY.	CL	1.0	Hnu= 0 ppm BΓ = 80 cpm
3.0	008375 03/20/88 0935	2 3 4	10	MEDIUM STIFF, YELLOW-BROWN (10YR 4/4), CLAY, SOME SILT, DRY.	CL	1.0	Hnu= 0 ppm BΓ = 80 cpm
4.5	008376 03/20/88 0938	4 6 8	14	STIFF, GREY (10YR 6/1), CLAY, SOME SILT, DRY.	CL	1.5	Hnu= 0 ppm BΓ = 80 cpm
6.0	008377 03/20/88 0941	7 8 9	12	STIFF, GREY (10YR 6/1), CLAY, TRACE MEDIUM GRAVEL, DRY. 5.8'-SOFT, GREY (10YR 6/1), CLAY, SOME SILT, DAMP.	CL CL	2.0 0.5	Hnu= 0 ppm BΓ = 80 cpm
7.5	008378 03/20/88 0945	7 8 9	2	SOFT, GREY (10YR 6/1), CLAY, SOME SILT, DAMP. 7.0'-SOFT, GREY-BROWN (10YR 5/4), CLAY, SOME SILT, DAMP. STIFF, YELLOW-BROWN (10YR 5/3), CLAY, SOME SILT, SOME FINE GRAVEL, DRY.	CL CL CL	0.5 0.5 2.0	Hnu= 0 ppm BΓ = 80 cpm
9.0	008379 03/20/88 1031	6 8 12	18	STIFF, YELLOW-BROWN (10YR 5/3), CLAY, SOME SILT, SOME FINE GRAVEL, DRY.	CL	2.0	Hnu= 0 ppm BΓ = 80 cpm
11.0	008380 03/20/88 1405	N/A	16	PUSHED SHELBY TUBE 9.0-11.0 FT, RECOVERED 1.3 FT.	N/A	N/A	Hnu= 0 ppm BΓ = 80 cpm
12.0	008381 03/20/88 1518	12 20	10	STIFF, YELLOW-BROWN (10YR 5/4), CLAY, SOME SILT AND MEDIUM GRAVEL, DRY.	CL	2.0	Hnu= 0 ppm BΓ = 80 cpm
13.5	008382 03/20/88 1540	12 10 13	12	STIFF, YELLOW-BROWN (10YR 5/4), CLAY, SOME SILT AND FINE GRAVEL, DRY.	CL	1.5	Hnu= 0 ppm BΓ = 80 cpm
15.0	008383 03/20/88 1550	3 5 6	14	SOFT GREY (5Y 5/1), CLAY, SOME SILT AND FINE GRAVEL, DAMP.	CL	0.5	Hnu= 0 ppm BΓ = 80 cpm
16.5	008384 03/20/88 1600	2 5 5	14	SOFT, GREY (5Y 5/1), CLAY, SOME SILT AND FINE GRAVEL, DAMP.	CL	0.5	Hnu= 0 ppm BΓ = 80 cpm
18.0	008385 03/20/88 1608	2 3 4	14	SOFT, GREY (5Y 5/1), CLAY, SOME SILT AND FINE GRAVEL, DAMP.	CL	0.5	Hnu= 0 ppm BΓ = 80 cpm
19.5	008386 03/20/88 1617	3 4 6	14	MEDIUM STIFF, GREY (5Y 5/1), CLAY, SOME SILT AND FINE GRAVEL, DAMP.	CL	1.0	Hnu= 0 ppm BΓ = 80 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1035	COORDINATES: NORTH 482,290.60 EAST 1,379,710.46	DATE: 03/20/88	
GROUND ELEVATION: 584.15	GWL: Depth N/A Date/Time N/A	DATE STARTED: 03/20/88	
ENGINEER/GEOLOGIST: M SLUSARSKI	Depth N/A Date/Time N/A	DATE COMPLETED: 03/21/88	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
21.0	008387	03/21/88 0907	5 5 7	8	SOFT GREY (5Y 5/1), CLAY, SOME MEDIUM-FINE GRAVEL, DAMP. PUSHED SHELBY FROM 19.5-21.5 FT WITH NO RECOVERY. OPTED TO TAKE SPLIT SPOON SAMPLE FROM 19.5-21.0 FT.	CL	0.5	Hnu= 0 ppm BΓ = 80 cpm
22.5	008388	03/21/88 0920	5 13 50+	12	MEDIUM STIFF, GREY (5Y 5/1), CLAY, SOME FINE GRAVEL, DAMP.	CL	1.0	Hnu= 0 ppm BΓ = 80 cpm
24.0	008389	03/21/88 0955	14 50 34	10	STIFF, GREY-GREEN (5Y 5/2), SILTY, CLAY, DRY.	CL	1.5	Hnu= 0 ppm BΓ = 80 cpm
25.5	008390	03/21/88 1051	9 14 23	16	MEDIUM DENSE, GREY (5Y 5/1), WELL GRADED, GRAVEL/SAND MIXTURE, WET. HARD, GREY (5Y 5/1), CLAY, SOME SILT, DRY.	GW CL	N/A >4.0	Hnu= 0 ppm BΓ = 80 cpm
27.0	008391	03/21/88 1117	11 18 20	14	MEDIUM DENSE, GREY (5Y 5/1), WELL GRADED, GRAVEL-SAND MIXTURE, WET. STIFF, GREY (5Y 4/1), CLAY, SOME SILT, DRY.	GW CL	N/A 3.5	Hnu= 0 ppm BΓ = 80 cpm

BOTTOM OF BORING 27.0

NOTES:
SAMPLES COLLECTED AS PER ASTM STANDARD PENETRATION TEST. COLORS IDENTIFIED USING MUNSELL COLOR CHART.
MONITORING WELL INSTALLED.

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1038	COORDINATES: NORTH 482,055.43 EAST 1,379,622.44	DATE: 01/11/88	
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 01/11/88	
ENGINEER/GEOLOGIST: W KEGLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 01/13/88	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	007896 008186 03/02/88 1105		50/4 31 12	12	VERY STIFF, DARK YELLOWISH BROWN (10YR 4/4), SILT AND GRAVEL WITH CLAY, DRY. 008-186 - WATER SAMPLE	ML	3.0	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
3.0	007897 01/11/88 1130		10 13 14	15	VERY STIFF, DARK YELLOWISH BROWN (10YR 4/4), SILT AND GRAVEL WITH CLAY, DRY. 2.5'-STIFF, VERY DARK GREY (5Y 3/1), CLAY, DRY.	ML CL	3.0 1.5	Hnu= 0 ppm α = 0 cpm βΓ = 60-80 cpm
4.5	007898 01/11/88 1305		15 20 26	14	STIFF, VERY DARK GREY (5Y 3/1), CLAY WITH SILT, TRACE SAND, DRY.	CL	2.0	Hnu= 0 ppm α = 0 cpm βΓ = 100-120cpm
6.0	007899 01/11/88 1310		10 12 12	18	STIFF, VERY DARK GREY (5Y 3/1), CLAY WITH SILT, TRACE SAND, DRY. 4.6'-STIFF, YELLOWISH BROWN (10YR 5/6), MOTTLED CLAY, TRACE GRAVEL AND SILT, DRY.	CL CL	2.0 1.5	Hnu= 0 ppm α = 0 cpm βΓ = 80-100 cpm
7.5	007900 01/11/88 1315		9 10 12	16	STIFF, YELLOWISH BROWN (10YR 5/6), MOTTLED CLAY, TRACE GRAVEL AND SILT, DRY.	CL	2.0	Hnu= 0 ppm α = 0 cpm βΓ = 80-100 cpm
9.0	007901 01/12/88 0800		10 13 21	18	VERY STIFF, YELLOWISH BROWN (10YR 5/4), MOTTLED CLAY, TRACE GRAVEL AND SILT, DRY.	CL	3.0	Hnu= 0 ppm α = 0 cpm βΓ = 80-100 cpm
10.5	007902 01/12/88 0815		17 16 21	7	STIFF, YELLOWISH BROWN (2.5Y, 6/4) MOTTLED SILT AND CLAY WITH GRAVEL, SOME SAND, DRY.	ML	2.0	Hnu= 0 ppm α = 0 cpm βΓ = 80-100 cpm
12.0	007903 01/12/88 0850		12 20 26	17	HARD LIGHT YELLOWISH BROWN (2.5YR, 6/4) MOTTLED CLAY AND SILT WITH GRAVEL, SOME SAND, DRY.	CL	4.5	Hnu= 0 ppm α = 0 cpm βΓ = 80-100 cpm
13.5	007904 01/12/88 0910		14 24 26	18	HARD STRONG BROWN (7.5YR 5/6), CLAY AND SILT WITH GRAVEL, SOME SAND, DRY. 13.4'-VERY STIFF, GREY (5Y 5/1), CLAY AND SILT, TRACE GRAVEL, DRY. TIGHT VERTICAL FRACTURE WITH Fe2O3 STAINS.	CL CL	4.5 3.0	Hnu= 0 ppm α = 0 cpm βΓ = 80-100 cpm
15.0	007905 01/12/88 0930		10 20 24	16	VERY STIFF, GREY (5Y 5/1), CLAY AND SILT, TRACE GRAVEL, DRY. TIGHT VERTICAL FRACTURE WITH Fe2O3 STAINS.	CL	3.0	Hnu= 0 ppm α = 0 cpm βΓ = 80-100 cpm
16.5	007906 007907 01/12/88 1048		4 8 14	8	SHELBY TUBE 15.0-15.9 FT. STIFF, DARK GREY (5Y 4/1), CLAY, SOME GRAVEL, TRACE SAND.	CL	1.5	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
18.0	007908 01/12/88 1325		13 8 16	10	VERY STIFF, GREY (5Y 5/1), CLAY, SOME GRAVEL AND SAND, DRY. 17.9'-VERY DENSE, GREY (5Y 5/1), SAND AND SILT, TRACE GRAVEL, DRY.	CL SM	3.0 4.5	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
19.5	007909 01/12/88 1345		22 50/5 50/3	12	VERY DENSE, GREY (5Y 5/1), SAND AND SILT, TRACE GRAVEL, MOIST.	SM	4.5	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1038	COORDINATES: NORTH 482,055.43 EAST 1,379,622.44	DATE: 01/11/88	
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 01/11/88	
ENGINEER/GEOLOGIST: W KEGLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 01/13/88	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
21.0	007945	01/12/88 1415	50/4 50/2	6	VERY DENSE, GREY (5Y 5/1), SAND, SOME SILT, TRACE GRAVEL AND CLAY, MOIST.	SM	4.0	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
22.5	007946	01/12/88 1435	50/3 50/4	7	VERY DENSE, GREY (5Y 5/1), SAND, SOME SILT, TRACE GRAVEL AND CLAY, MOIST.	SM	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
24.0	007947	01/12/88 1451	39 42 50	15	HARD GREY (5Y 5/1), SILT AND SAND, SOME CLAY AND GRAVEL, DRY. 23.8'-VERY STIFF, GREY (5Y 5/1), CLAY AND SILT, SOME SAND AND GRAVEL, DRY.	ML CL	4.5+ 3.5	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
25.5	007948	01/12/88 1536	18 28 29	10	VERY STIFF, GREY (5Y 5/1), CLAY AND SILT, SOME SAND AND GRAVEL DRY.	CL	3.5	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
27.0	007949	01/12/88 1621	10 19 26	13	STIFF, OLIVE (5Y 5/3), CLAY, SOME GRAVEL AND SILT, TRACE WOOD FRAGMENTS, DRY.	CL	2.0	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
28.5	007950 007951	01/13/88 0857	18 22 24	14	SHELBY TUBE. HARD, OLIVE GREY (5Y 5/2), CLAY, SOME SILT, TRACE GRAVEL.	CL	4.5	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm

BOTTOM OF BORING 28.5

NOTES:
SAMPLES TAKEN USING ASTM STANDARD PENETRATION TEST. COLOR IDENTIFIED USING MUNSELL COLOR CHART BACKGROUND LEVELS.
MONITORING WELL INSTALLED.

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1718	COORDINATES: NORTH 482,144.49 EAST 1,379,619.44	DATE: 07/31/91	
GROUND ELEVATION: 587.5	GWL: Depth N/A Date/Time N/A	DATE STARTED: 07/31/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 08/07/91	
DRILLING METHODS: MOBILE 53 AUGER		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67265	07/31/91 1500	14 29 33	14	VERY DENSE, LIGHT YELLOWISH BROWN (10YR 6/4), SILTY CLAY, TRACE GRAVEL & TRACE SAND, NO PLASTICITY, DRY.	CL	N/A	Hnu=0 ppm α =0 cpm Bγ =150 cpm
3.0	67266	07/31/91 1505	14 17 19	18	DENSE, BROWN (10YR 5/3), SILTY CLAY, SOME GRAVEL, TRACE SAND, NO PLASTICITY, DRY.	CL	N/A	Hnu=0 ppm α =0 cpm Bγ =150 cpm
4.5	67267	07/31/91 1510	19 24 23	18	DENSE, BROWN (10YR 5/3), SILTY CLAY, SOME GRAVEL, TRACE SAND, NO PLASTICITY, DRY.	CL	N/A	Hnu=0 ppm α =0 cpm Bγ =150 cpm
6.0	67268	07/31/91 1515	12 19 21	16	MEDIUM DENSE, LIGHT YELLOWISH BROWN (10YR 6/4), SILTY CLAY, SOME GRAVEL, NO PLASTICITY, DRY. 5.0'-VERY STIFF, YELLOWISH BROWN (10YR 5/4), SILTY CLAY, SOME GRAVEL, SOME SAND, MEDIUM PLASTICITY, SLIGHTLY MOIST.	CL CL	N/A N/A	Hnu=0 ppm α =0 cpm Bγ =150 cpm
7.5	67269	07/31/91 1520	9 11 10	16	FIRM, DARK GRAY TO YELLOWISH BROWN (10YR 4/1 TO 10YR 5/8), SILTY CLAY, SOME SAND, SOME GRAVEL, MEDIUM PLASTICITY, MOIST.	CL	0.75	Hnu=0 ppm α =0 cpm Bγ =150 cpm
9.0	67271	07/31/91 1525	6 7 9	18	SOFT, OLIVE (5Y 4/3), CLAY, MEDIUM PLASTICITY, MOIST.	CL	0.25	Hnu=0 ppm α =0 cpm Bγ =150-200 cpm
10.5	67274 67275	08/01/91 0830	6 8 9	17	SOFT, OLIVE (5Y 4/3), CLAY, MEDIUM PLASTICITY, MOIST, PUMICE.	CL	0.5	Hnu=0 ppm α =0 cpm Bγ =150 cpm
12.0	67276	08/01/91 0835	10 9 11	18	SOFT, OLIVE DARK GRAY TO OLIVE (2.5Y 4/1 TO 2.5Y 4/3), CLAY, TRACE SAND, MEDIUM TO HIGH PLASTICITY, VERY MOIST.	CL	0.5	Hnu=0 ppm α =0 cpm Bγ =150 cpm
13.5	67277	08/01/91 0840	11 16 18	18	SOFT, OLIVE DARK GRAY TO OLIVE (2.5Y 4/1 TO 2.5Y 4/3), CLAY, TRACE SAND, MEDIUM TO HIGH PLASTICITY, VERY MOIST. 12.75'-FIRM, DARK YELLOWISH BROWN TO GRAY (10YR 4/6 TO 10YR 5/1), SILTY CLAY, LOW TO MEDIUM PLASTICITY, MOIST.	CL CL	0.5 1.5	Hnu=0 ppm α =0 cpm Bγ =150 cpm
15.0	67278	08/01/91 0845	18 22 50	18	VERY HARD, BROWN MOTTLED (10YR 5/3), SILTY CLAY, SOME GRAVEL, SOME SAND, LOW PLASTICITY, MOIST.	CL	4.5	Hnu=0 ppm α =0 cpm Bγ =150-200 cpm
16.5	67279	08/01/91 0900	43 50 58		VERY HARD, BROWN MOTTLED (10YR 5/3), SILTY CLAY, SOME GRAVEL, SOME SAND, LOW PLASTICITY, MOIST.	CL	4.5	Hnu=0 ppm α =0 cpm Bγ =150-200 cpm

BOTTOM OF BORING 16.5

NOTES:
DRILLING & SAMPLING ENDS AT 16.5 FT. ALL SAMPLES TAKEN ACCORDING TO OU-2 SAMPLING PLAN. LANDFILL ENDS AT APPROX 12.75 FT. 67272-FIELD BLANK, 67273-FIELD BLANK APP IX, 67280-TCLP MET HERB PEST, 67281-SRLP, 67282-IGNITE ETC, 67283-TCLP DRUM, 67284-ARCHIVE COMP. BORING PLUGGED AND ABANDONED.

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PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1719	COORDINATES: NORTH 482,215.57 EAST 1,379,699.18	DATE: 08/07/91	
GROUND ELEVATION: 590.1	GWL: Depth N/A Date/Time N/A	DATE STARTED: 08/07/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 08/10/91	
DRILLING METHODS: MOBILE 53 AUGER		PAGE 1 OF 2	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67285 08/07/91 1430	4 14 19	18	STIFF, BROWN (10YR 4/3), SILTY CLAY, SOME ORGANICS, TRACE COBBLES, LOW PLASTICITY, MOIST. 0.75'-VERY HARD, LIGHT YELLOWISH BROWN (10YR 6/4), SILTY CLAY, TRACE GRAVEL, TRACE COBBLES, DRY.	CL CL	2.0 4.5	Hnu=0 ppm α =0 cpm βΓ =80 cpm
3.0	67286 08/07/91 1435	52 64 4	7	VERY DENSE, BROWN (10YR 4/3), TRACE SAND, SILT, STYROFOAM INSTALLATION, SLIGHTLY MOIST.	ML	N/A	Hnu=<2.0 ppm α =0 cpm βΓ =100-150 cpm
4.5	67287 08/07/91 1440	13 13 15	16	STIFF, DARK GRAY (2.5Y 4/1), SILTY CLAY, TRACE SAND & TRACE GRAVEL, MEDIUM PLASTICITY, MOIST.	CL	2.0	Hnu=0 ppm α =0 cpm βΓ =80-120 cpm
6.0	67288 08/07/91 1445	14 13 11	0	NO RECOVERY.	N/A	N/A	N/A
7.5	67289 08/07/91 1515	13 21 14	18	DENSE, DARK YELLOWISH BROWN (10YR 4/4), SILT, TRACE SAND, TRACE GRAVEL, MOIST. 6.75'-SOFT, DARK GRAY (2.5Y 4/1), CLAY, ORGANICS, TRACE SAND, MEDIUM PLASTICITY, MOIST.	ML CL	N/A 0.5	Hnu=1-5 ppm α =0 cpm βΓ =80-150 cpm
9.0	67290 08/07/91 1520	13 15 19	0	NO RECOVERY.	N/A	N/A	N/A
10.5	67291 08/07/91 1525	13 19 21	0	NO RECOVERY.	N/A	N/A	N/A
12.0	67292 08/07/91 1530	19 15 18	8	SOFT, OLIVE GRAY (2.5Y 4/2), CLAY, TRACE SAND AND TRACE GRAVEL, MEDIUM PLASTICITY, MOIST.	CL	0.5	Hnu=<2 ppm α =0 cpm βΓ =80-150 cpm
13.5	67293 08/08/91 0830	43 13 15	3	MEDIUM DENSE, BROWN (10YR 5/3), SILTY CLAY, SOME GRAVEL, LOW TO MEDIUM PLASTICITY, MOIST TO WET. * UNABLE TO USE PENETROMETER *	CL	N/A	Hnu=<2.0 ppm α =0 cpm βΓ =80-100 cpm
15.0	67294 08/08/91 0840	11 13 24	14	DENSE, BROWN (10YR 5/3), GRAVELLY CLAY, TRACE COBBLES, MEDIUM PLASTICITY, WET, ORGANICS. * UNABLE TO USE PENETROMETER *	CL	N/A	Hnu=0-1 ppm α =0 cpm βΓ =80-100 cpm
16.5	67295 08/08/91 0850	13 44 50/5	14	HARD, BROWN (10YR 5/3), GRAVELLY CLAY, SOME ORGANICS, MEDIUM PLASTICITY, WET. 15.75'-VERY HARD, BROWN TO GRAY (10YR 5/3 TO 10YR 5/1), SILTY CLAY, TRACE GRAVEL, LOW PLASTICITY, MOIST.	CL CL	4.0 4.5	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
18.0	67296 08/08/91 0855	38 47 50/5	14	VERY HARD, BROWN (10YR 5/3), SILTY CLAY, TRACE GRAVEL, LOW PLASTICITY, SLIGHTLY MOIST.	CL	4.5	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1719	COORDINATES: NORTH 482,215.57 EAST 1,379,699.18	DATE: 08/07/91	
GROUND ELEVATION: 590.1	GWL: Depth N/A Date/Time N/A	DATE STARTED: 08/07/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 08/10/91	
DRILLING METHODS: MOBILE 53 AUGER		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
19.5	67300	08/08/91 0900	29 35 48	16	VERY HARD, BROWN (10YR 5/3) MOTTLED, SILTY CLAY, TRACE GRAVEL, LOW PLASTICITY, MOIST.	CL	4.5	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm

BOTTOM OF BORING 19.5

NOTES:
DRILLING & SAMPLING ENDS AT 19.5 FT. ALL SAMPLES TAKEN ACCORDING TO OU-2 WORK PLAN. WET ZONE 12.0-15.75 FT.
LANDFILL ENDS AT 15.75 FT. 67297-SRLP, 67301-TCLP, 67302-IGNITE ETC, 67303-TCLP DRUM, 67304-ARCHIVE.
MONITORING WELL INSTALLED.

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1720	COORDINATES: NORTH 482,215.72 EAST 1,379,783.27	DATE: 08/10/91	
GROUND ELEVATION: 589.6	GWL: Depth N/A Date/Time N/A	DATE STARTED: 08/10/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 08/10/91	
DRILLING METHODS: MOBILE 53 AUGER		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67305	08/10/91	1400	3 7 15		15	MEDIUM DENSE, DARK YELLOWISH BROWN (10YR 4/4), CLAYEY SILT, TRACE SAND, GLASS, PLASTIC, MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =100 cpm
3.0	67306	08/10/91	1405	13 15 15		18	HARD, BROWN (10YR 5/3), SILTY CLAY, TRACE GRAVEL, PLASTIC, WOOD, BRICK, LOW PLASTICITY, SLIGHTLY MOIST.	CL	4.0	Hnu=0 ppm α =0 cpm βΓ =100-150 cpm
4.5	67307	08/10/91	1410	18 13 17		18	FIRM, OLIVE (2.5Y 4/3), SILTY CLAY, TRACE GRAVEL, MEDIUM PLASTICITY, MOIST.	CL	1.5	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
6.0	67308	08/10/91	1415	10 12 12		18	FIRM, OLIVE (2.5Y 4/3), SILTY CLAY, TRACE GRAVEL, MEDIUM PLASTICITY, MOIST.	CL	1.5	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
7.5	67309	08/10/91	1515	19 9 8		16	FIRM, OLIVE (2.5Y 4/3), SILTY CLAY, TRACE GRAVEL, MEDIUM PLASTICITY, MOIST, PLASTIC, PAPER, BRICK.	CL	1.5	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
9.0	67310 67311	08/10/91	1520	7 8 10		18	FIRM, OLIVE GRAY (2.5Y 4/2), CLAY, TRACE GRAVEL, PUMICE, MEDIUM PLASTICITY, MOIST.	CL	0.75	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
10.5	67312 67313	08/10/91	1525	23 20 21		18	HARD, YELLOWISH BROWN TO GRAY (10YR 5/8 TO 10YR 6/1), SILTY CLAY, TRACE GRAVEL, SLIGHTLY MOIST.	CL	4.0	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
12.0	67314	08/10/91	1530	20 21 22		18	HARD, YELLOWISH BROWN TO GRAY (10YR 5/8 TO 10YR 6/1), SILTY CLAY, TRACE GRAVEL, SLIGHTLY MOIST.	CL	4.0	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
13.5	67315	08/10/91	1535	19 17 20		18	HARD, YELLOWISH BROWN TO GRAY (10YR 5/8 TO 10YR 6/1), SILTY CLAY, TRACE GRAVEL, SLIGHTLY MOIST.	CL	4.0	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm

BOTTOM OF BORING 13.5

NOTES:
LANDFILL ENDS APPROX 9.0 FT DEPTH. BORING PLUGGED AND ABANDONED AT 13.5 FT.
ALL SAMPLES TAKEN ACCORDING TO OU-2 WORK PLAN. 67316-IGNITE ETC, 67317-SRLP, 67318-TCLP, 67319-TCLP DRUM.

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PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1721	COORDINATES: NORTH 482,136.40 EAST 1,379,785.34	DATE: 07/26/91	
GROUND ELEVATION: 588.6	GWL: Depth N/A Date/Time N/A	DATE STARTED: 07/26/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 07/28/91	
DRILLING METHODS: AUGER MOBILE 53		PAGE 1 OF 1	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLER	RECOVERY IN CHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67228 07/26/91 1500	17 39 28	18	VERY HARD, BROWN (10YR 5/3), SILTY CLAY, SOME COBBLES, VERY LOW PLASTICITY, DRY.	CL	4.5	Hnu=0 ppm α =2 cpm BΓ =150-200 cpm
3.0	67229 07/26/91 1505	14 21 19	8	HARD, BROWN (10YR 5/3), SILTY CLAY, SOME COBBLES, VERY LOW PLASTICITY, DRY, SLIGHTLY MOIST.	CL	3.0	Hnu=0 ppm α =0 cpm BΓ =100 cpm
4.5	67230 07/26/91 1510	17 14 11	12	HARD, LIGHT OLIVE BROWN (2.5Y 5/4), SILTY CLAY, TRACE GRAVEL, LOW TO MEDIUM PLASTICITY, MOIST.	CL	2.5	Hnu=1-3 ppm α =0 cpm BΓ =100 cpm
6.0	67231 07/26/91 1515	10 9 7	0	NO RECOVERY.	N/A	N/A	N/A
7.5	67232 07/26/91 1600	4 10 12	0	NO RECOVERY.	N/A	N/A	N/A
9.0	67233 07/26/91 1605	14 15 17	5	SOFT, VERY DARK GRAY (5Y 3/1), SILTY CLAY, TRACE SAND, MEDIUM PLASTICITY, MOIST TO WET.	CL	0.5	Hnu=1-3 ppm α =0 cpm BΓ =100 cpm
10.5	67234 07/26/91 1610	10 17 18	16	SOFT, OLIVE GRAY (5Y 4/2), SILTY CLAY, TRACE SAND, MEDIUM PLASTICITY, MOIST. 9.5'-FIRM, VERY DARK GRAY (5Y 3/1), SILTY CLAY, TRACE SAND, MEDIUM PLASTICITY, MOIST.	CL CL	0.25 1.0	Hnu=1-3 ppm α =0 cpm BΓ =100 cpm
12.0	67235 07/26/91 1615	20 22 21	0	NO RECOVERY.	N/A	N/A	N/A
13.5	67236 07/27/91 1030	21 20 24	16	FIRM, OLIVE GRAY (5Y 4/2), SILTY CLAY, MEDIUM PLASTICITY, MOIST. 12.6'-FIRM, YELLOWISH BROWN (10YR 5/6), SILTY CLAY, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST, LOW PLASTICITY.	CL CL	1.5 1.5	Hnu=<1.0 ppm α =0 cpm BΓ =80-100 cpm
15.0	67237 07/27/91 1035	13 10 11	8	FIRM, GRAY TO YELLOWISH BROWN (10YR 5/1 TO 10YR 5/6) MOTTLED, SILTY CLAY, TRACE SAND & GRAVEL, MOIST.	CL	1.0	Hnu=0 ppm α =0 cpm BΓ =80-100 cpm
16.5	67238 07/28/91 1030	3 7 10	10	FIRM, BROWN (10YR 5/3), SILTY CLAY, TRACE SAND, TRACE GRAVEL, MOIST, LOW PLASTICITY.	CL	2.0	Hnu=0 ppm α =0 cpm BΓ =80 cpm

BOTTOM OF BORING 16.5

NOTES:
ALL SAMPLES TAKEN ACCORDING TO THE HSL SAMPLING PLAN & SANITARY LANDFILL SAMPLE ADDENDUM.
LANDFILL ENDS AT 12.5 FT. BORING ENDS AT 16.5 FT. NO WATER ENCOUNTERED. BORING PLUGGED & ABANDONED.
67242-ARCHIVE, 67243-FIELD BLANK, 67244-IGNITE ETC, 67245-TCLP, 67246-SRLP, 67247-TCLP DRUM.

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PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1722	COORDINATES: NORTH 482,114.81 EAST 1,379,739.45	DATE: 07/30/91	
GROUND ELEVATION: 588.4	GWL: Depth N/A Date/Time N/A	DATE STARTED: 07/29/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 07/30/91	
DRILLING METHODS: MOBILE 53 AUGER		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLER	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67249	07/29/91 1700	9 37 46	16	VERY DENSE, BROWNISH YELLOW (10YR 6/4), GRAVELLY CLAY, SOME SAND, VERY LOW PLASTICITY, SOME ORGANIC, VERY DRY.	CL	N/A	Hnu=0 ppm α =0 cpm BΓ =150-200 cpm
3.0	67250	07/29/91 1705	27 23 12	14	STYROFOAM & WOODCHIPS. 1.75'-VERY HARD, DARK YELLOWISH BROWN (10YR 4/4) TO DARK GRAY (10YR 4/1), SILTY CLAY, SOME GRAVEL, LOW PLASTICITY, DAMP.	CL	4.5	Hnu=10-50 ppm α =20 cpm BΓ =8000 cpm
4.5	67251	07/29/91 1710	36 34 29	5	HARD, OLIVE GRAY (5Y 4/2), SILTY CLAY, SOME GRAVEL, LOW PLASTICITY TO MEDIUM PLASTICITY, SLIGHTLY MOIST.	CL	3.75	Hnu=5-10 ppm α =50-100 cpm BΓ =10,000-19,000 cpm
6.0	67252	07/29/91 1715	22 19 43	0	NO RECOVERY.	N/A	N/A	N/A
7.5	67253	07/30/91 1000	50/6	6	DARK OLIVE GRAY (5Y 3/2), MUD, SATURATED. 6.4'-LIMESTONE			Hnu=5-10 ppm α =50-100 cpm BΓ =15,000 cpm
8.0					AUGERING TO 8.0 FT.	N/A	N/A	N/A
9.5	67254	07/30/91 1410	14 28 17	0	NO RECOVERY.	N/A	N/A	N/A
11.0	67255	07/30/91 1420	13 15 18	0	NO RECOVERY, AUGERING TO 11.0.	N/A	N/A	N/A
12.5	67256 67257	07/30/91 1530	6 6 13	14	MEDIUM DENSE, LIGHT YELLOWISH BROWN (10YR 6/4), SILT, SOME COBBLES, DRY. 12.0'-VERY STIFF, YELLOWISH BROWN (10YR 4/6) TO DARK GRAY (10YR 4/2), SILTY CLAY, LOW TO MEDIUM PLASTICITY, MOIST.	ML CL	N/A 2.5	Hnu=0 ppm α =0 cpm BΓ =150 cpm
14.0	67258	07/30/91 1535	10 11 15	16	MEDIUM DENSE, LIGHT YELLOWISH BROWN (10YR 6/4), SILT, SOME COBBLES, TRACE SAND, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =150 cpm
15.5	67259	07/30/91 1540	25 27 28	15	HARD, YELLOWISH BROWN TO GRAY (10YR 4/6 TO 10YR 5/1), SILTY CLAY, TRACE GRAVEL, LOW PLASTICITY, SLIGHTLY MOIST.	CL	4.0	Hnu=0 ppm α =0 cpm BΓ =150 cpm

BOTTOM OF BORING 15.5

NOTES:
DRILLING & SAMPLING ENDS AT 15.5 FT. LANDFILL LINER AT APPROX 11.0 FT DEPTH. BORING PLUGGED AND ABANDONED.
ALL SAMPLES TAKEN ACCORDING TO OU-2 WORK PLAN. 67260, 67261-TCLP METS PEST HERB, 1630, 67262-SRLP 1630, 67263-IGNITE ETC 1630, 67264-TCLP DRUM 1645.
NOT AMPLE RECOVERY TO GET SECOND SAMPLE INTERVAL THUS APP IX SWITCHED TO 1ST INTERVAL.

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PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1808	COORDINATES: NORTH 482,142.91 EAST 1,379,622.56	DATE: 08/27/91	
GROUND ELEVATION: 587.2	GWL: Depth N/A Date/Time N/A	DATE STARTED: 08/27/91	
ENGINEER/GEOLOGIST: G MARSHALL	Depth N/A Date/Time N/A	DATE COMPLETED: 08/27/91	
DRILLING METHODS: SPLIT SPOON (MOBILE 53 AUGER RIG)		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67392	08/27/91 1749	4 4 6		16		DARK GRAYISH BROWN (10YR 4/2), SILTY CLAY, WITH TRACE OF GRAVEL, ORGANICS (GRASS & ROOTS), DRY, NO PLASTICITY.	CL	4.5	Hnu=0 ppm α =0 cpm Bγ =0 cpm
3.0	67393	08/27/91 1758	5 6 8		14		DARK BROWN (10YR 3/3), CLAY, SILTY, SOME SAND & GRAVEL, ROOTS, DRY, NO PLASTICITY.	CL	2.5	Hnu=0 ppm α =0 cpm Bγ =0 cpm
4.5	67394	08/27/91 1815	15 16 16		14		YELLOWISH BROWN (10YR 5/6), CLAY, SILTY, SOME SAND & GRAVEL, DRY, NO PLASTICITY.	CL	>4.5	Hnu=0 ppm α =0 cpm Bγ =0 cpm
6.0	67395	08/27/91 1832	13 12 16		13.5		DARK YELLOWISH BROWN (10YR 4/4) MOTTLED WITH DARK RED 2.5YR 3/6), CLAY, SILTY, WITH SOME SAND & GRAVEL, DRY, NO PLASTICITY.	CL	1.0	Hnu=0 ppm α =0 cpm Bγ =0 cpm
7.5	67404	08/27/91 1900	13 12 8		18		LIGHT OLIVE BROWN (2.5YR 5/4), CLAY, SILTY WITH SOME SAND & GRAVEL, MOIST, MEDIUM PLASTICITY.	CL	1.0	Hnu=0 ppm α =0 cpm Bγ =0 cpm
9.0	67396	08/27/91 1915	5 6 9		18		OLIVE (5Y 4/3), CLAY, TRACE GRAVEL, MOIST, HIGH PLASTICITY.	CL	0.75	Hnu=0 ppm α =0 cpm Bγ =0 cpm
10.5	67397	08/27/91 1930	3 5 5		18		OLIVE GRAY (5Y 4/2), CLAY, SOME SAND & GRAVEL, MOIST, MEDIUM PLASTICITY.	CL	2.0	Hnu=0 ppm α =0 cpm Bγ =0 cpm
12.0	67398 67405	08/27/91 1941	5 6 7		18		OLIVE (5Y 4/4), CLAY, SOME SAND & GRAVEL, MOIST, MEDIUM PLASTICITY.	CL	1.25	Hnu=0 ppm α =0 cpm Bγ =0 cpm
13.5	67399	08/27/91 2011	8 10 15		18		DARK OLIVE GRAY (5Y 3/2), CLAY, SOME SAND & GRAVEL, MOIST, MEDIUM PLASTICITY. 13.0'-GRAY (5Y 5/1) MOTTLED WITH DARK YELLOWISH BROWN (10YR 4/6), CLAY, SOME SAND AND GRAVEL, NO PLASTICITY, MOIST.	CL	1.75	Hnu=0 ppm α =0 cpm Bγ =0 cpm
15.0	67400 67406	08/27/91 2048	9 13 23		18		GRAY (5Y 5/1) MOTTLED WITH DARK YELLOWISH BROWN (10YR 4/6), CLAY, SOME SAND & GRAVEL, MEDIUM PLASTICITY, MOIST. 14.5'-BROWN (10YR 5/3), SILTY CLAY, SOME SAND AND GRAVEL, NO PLASTICITY, MOIST.	CL CL	0.5 >4.5	Hnu=0 ppm α =0 cpm Bγ =0 cpm
16.5	67401	08/27/91 2130	28 41 47		18		BROWN (10YR 5/3), CLAY, SOME SAND AND GRAVEL, LOW PLASTICITY, MOIST.	CL	>4.5	Hnu=0 ppm α =0 cpm Bγ =0 cpm

BOTTOM OF BORING 16.5

NOTES:
EXT HSL. FULL RAD & TOC.
ALL SAMPLES TAKEN ACCORDING TO OU-2 WORK PLAN. TCLP & SRLP COMPOSITE SAMPLE #67402. FIELD BLANK 67403.
BORING PLUGGED AND ABANDONED.

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PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1888	COORDINATES: NORTH 482,124.84 EAST 1,379,761.91	DATE: 02/23/92	
GROUND ELEVATION: 588.5	GWL: Depth N/A Date/Time N/A	DATE STARTED: 02/23/92	
ENGINEER/GEOLOGIST: KEN MARION	Depth N/A Date/Time N/A	DATE COMPLETED: 02/23/92	
DRILLING METHODS: 8" HOLLOW STEM AUGER		PAGE 1 OF 1	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLER	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	67714 02/23/92 1350	8 15 27	14	VERY STIFF, LIGHT OLIVE BROWN (2.5Y 5/4), GRAVELLY CLAY WITH SAND AND ORGANIC MATTER (ROOT STEMS), MEDIUM PLASTICITY, SLIGHTLY MOIST.	CL	4.0	Hnu=0 ppm α =0 cpm βγ =100 cpm
3.0	67715 02/23/92 1355	13 28 47	15	VERY STIFF, LIGHT OLIVE BROWN (2.5Y 5/3), GRAVELLY CLAY WITH SAND, A LITTLE YELLOWISH BROWN (10YR 5/6), WEATHERING, AND TRACE ORGANIC MATTER, MEDIUM PLASTICITY, SLIGHTLY MOIST.	CL	4.0	Hnu=0 ppm α =0 cpm βγ =100 cpm
4.5	67716 02/23/92 1402	13 10 16	12	STIFF, OLIVE (5Y 5/3), GRAVELLY CLAY WITH SAND, MEDIUM PLASTICITY, MOIST.	CL	1.5	Hnu=0 ppm α =0 cpm βγ =100 cpm
6.0	67717 02/23/92 1438	8 5 8	18	MEDIUM STIFF, OLIVE GRAY (5Y 5/2), CLAY, WITH SAND AND GRAVEL, TRACE ORGANIC MATTER, A PIECE OF STRING, MEDIUM PLASTICITY, VERY MOIST.	CL	1.0	Hnu=0 ppm α =0 cpm βγ =400 cpm
7.5	67718 66719 02/23/92 1451	8 13 19	18	VERY STIFF, VERY DARK BROWN (10YR 2/2), CLAY, LOW PLASTICITY, SLIGHTLY MOIST.	CL	3.25	Hnu=0 ppm α =0 cpm βγ =400 cpm
9.0	67720 02/23/92 1540	16 18 21	18	STIFF, BLACK (5Y 2.5/1), CLAY, WITH TRACE SAND AND ORGANIC MATTER, LOW PLASTICITY, SLIGHTLY MOIST.	CL	2.0	Hnu=0 ppm α =0 cpm βγ =100 cpm
10.5	67721 02/23/92 1600	14 15 22	18	VERY STIFF, MOTTLED GRAY (5Y 5/1) AND YELLOWISH BROWN (10YR 5/8) CLAY, HIGH PLASTICITY, MOIST.	CL	2.5	Hnu=0 ppm α =0 cpm βγ =100 cpm
12.0	67722 67723 02/23/92 1630	11 14 18	18	STIFF, MOTTLED GRAY (5Y 5/1) AND YELLOWISH BROWN (10YR 5/8), CLAY, TRACE WOOD FRAGMENTS, PIECE OF STRING, MEDIUM PLASTICITY, MOIST. 11.75'-STIFF, VERY DARK GRAY (5Y 3/1), CLAY, HIGH PLASTICITY, SLIGHTLY MOIST.	CL	1.75	Hnu=0 ppm α =0 cpm βγ =100 cpm
13.5	67724 67725 02/23/92 1720	9 9 11	18	STIFF, LIGHT OLIVE BROWN (2.5Y 5/4) CLAY WITH YELLOWISH BROWN (10YR 5/8) AND OLIVE GRAY (5Y 5/2) MOTTLING, TRACE SAND, HIGH PLASTICITY, MOIST.	CL	2.0	Hnu=0 ppm α =0 cpm βγ =100 cpm
15.0	67726 02/23/92 1730	11 10 17	18	STIFF, LIGHT OLIVE BROWN (2.5Y 5/4) CLAY WITH YELLOWISH BROWN (10YR 5/8) AND OLIVE GRAY (5Y 5/2) MOTTLING AND TRACE SAND, HIGH PLASTICITY, MOIST.	CL	2.0	Hnu=0 ppm α =0 cpm βγ =100 cpm

BOTTOM OF BORING 15.0

NOTES:
SAMPLES COLLECTED PER ASTM STANDARD PENETRATION TEST.
COLORS IDENTIFIED USING MUNSELL COLOR CHART.
FILL/SOIL INTERFACE AT 11.75 FT.
BORING PLUGGED AND ABANDONED.

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PROJECT NUMBER: 602 3.6	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1889	COORDINATES: NORTH 482,121.36 EAST 1,379,765.86	DATE: 02/25/92	
GROUND ELEVATION: 588.3	GWL: Depth N/A Date/Time N/A	DATE STARTED: 02/25/92	
ENGINEER/GEOLOGIST: KEN MARION/C GRUBE	Depth N/A Date/Time N/A	DATE COMPLETED: 02/25/92	
DRILLING METHODS: 8" HOLLOW STEM AUGER		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	67730	02/25/92 1350	5 13 21	15	VERY STIFF, YELLOWISH BROWN (10YR 5/4), SILTY CLAY, SOME SAND & FINE TO COARSE GRAVEL, LOW PLASTICITY, SLIGHTLY MOIST, (TRACE ROOT STEMS).	CL	2.5	Hnu=0 ppm α =0 cpm BΓ =100 cpm
3.0	67731	02/25/92 1357	16 19 18	15	VERY STIFF, YELLOWISH BROWN (10YR 5/6), SILTY CLAY, SOME SAND AND GRAVEL, TRACE ORGANIC MATTER (WOOD & ROOT STEMS) PIECE OF GRAVEL-SIZED BLACK (5Y 2.5/1) ORGANIC MATTER, SLIGHTLY MOIST, LOW PLASTICITY.	CL	3.5	Hnu=0 ppm α =0 cpm BΓ =100 cpm
4.5	67732	02/25/92 1404	10 9 13	10	STIFF, OLIVE BROWN (2.5Y 4/4), SANDY CLAY, SOME FINE TO COARSE GRAVEL, TRACE SILT, ORANGISH WEATHERING, MEDIUM PLASTICITY, MOIST (WOOD).	CL	1.25	Hnu=0 ppm α =0 cpm BΓ =120 cpm
6.0	67733	02/25/92 1430	8 6 11	18	MEDIUM STIFF, OLIVE GRAY (5Y 4/2), GRAVELLY CLAY, SOME SAND, TRACE GRAYISH BROWN MATERIAL, TRACE ORGANICS (ROOTS & WOOD) MEDIUM PLASTICITY, MOIST.	CL	0.75	Hnu=0 ppm α =0 cpm BΓ =100 cpm
7.5	67734	02/25/92 1450	8 11 14	18	SOFT OLIVE (2.5Y 4/3), SILTY CLAY, SOME SAND AND FINE TO COARSE GRAVEL, TRACE GRASS AND ROOTS MEDIUM PLASTICITY, MOIST. 7.0'-VERY STIFF, (5Y 3/1) VERY DARK GRAY SILTY CLAY, TRACE ORGANIC MATTER, LOW PLASTICITY TO MEDIUM PLASTICITY, MOIST.	CL CL	0.5 3.5	Hnu=0 ppm α =0 cpm BΓ =80-100 cpm
9.0	67735	02/25/92 1513	19 22 26	18	VERY STIFF, (5Y 3/1) VERY DARK GRAY SILTY CLAY, TRACE ORGANIC MATTER, MEDIUM PLASTICITY, MOIST. 8.5'-STIFF, OLIVE GRAY (5Y 4/2), SILTY CLAY WITH YELLOWISH BROWN (2.5Y 5/4) MOTTLING, MEDIUM TO HIGH PLASTICITY, MOIST.	CL CL	2.5 2.0	Hnu=0 ppm α =0 cpm BΓ =100 cpm
10.5	67736	02/25/92 1526	16 18 21	18	STIFF, MOTTLED GRAY (5Y 5/1) TO YELLOWISH BROWN (10YR 5/6), VERY SILTY CLAY, TRACE ORGANICS LOW TO NON-PLASTICITY, MOIST.	CL	2.0	Hnu=0 ppm α =0 cpm BΓ =80-100 cpm
12.0	67737	02/25/92 1546	10 15 17	18	STIFF, MOTTLED GRAY (5Y 6/1) TO YELLOWISH BROWN (10YR 5/6), VERY SILTY CLAY, TRACE ORGANICS LOW TO NO PLASTICITY, MOIST.	CL	2.0	Hnu=0 ppm α =0 cpm BΓ =80-100 cpm
13.5	67738	02/25/92 1607	17 15 14	18	VERY STIFF, MOTTLED GRAY (5Y 6/1) TO YELLOWISH BROWN (10YR 5/6) VERY SILTY CLAY, TRACE ORGANICS, LOW TO NO PLASTICITY, MOIST. 13.0'-MEDIUM STIFF, YELLOWISH BROWN (10YR 5/6) TO VERY DARK GRAYISH BROWN (2.5Y 3/2), SILTY CLAY, LOW PLASTICITY, MOIST.	CL CL	2.25 1.0	Hnu=0 ppm α =0 cpm BΓ =100 cpm
15.5	67739	02/25/92 1620	8 14 20 27	24	VERY STIFF, LIGHT OLIVE BROWN ((2.5Y 5/6) AND LIGHT GRAY (5Y 6/1), SILTY CLAY, WITH SAND AND TRACE ORGANIC MATTER, LOW PLASTICITY, MOIST. 14.5'-DENSE, LIGHT OLIVE BROWN (2.5Y 5/4) AND LIGHT GRAY (5Y 6/1), CLAYEY SILT, WITH TRACE SAND AND FINE GRAVEL, MOIST.	CL ML	2.5 N/A	Hnu=0 ppm α =0 cpm BΓ =100 cpm
17.5	67740	02/25/92 1650	32 78 53 68	24	SOFT OLIVE YELLOW (2.5Y 6/6) SILTY CLAY WITH SOME SAND, LOW PLASTICITY, WET. 16.0'-VERY STIFF, OLIVE YELLOW (2.5Y 6/6), SILTY CLAY, WITH SOME SAND AND A COUPLE PIECES OF LIMESTONE COBBLES, LOW PLASTICITY, SLIGHTLY MOIST.	CL CL	0.5 4.0	Hnu=0 ppm α =0 cpm BΓ =100 cpm

BOTTOM OF BORING 17.5

PROJECT NUMBER: 602 3.6	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1889	COORDINATES: NORTH 482,121.36 EAST 1,379,765.86	DATE: 02/25/92	
GROUND ELEVATION: 588.3	GWL: Depth N/A Date/Time N/A	DATE STARTED: 02/25/92	
ENGINEER/GEOLOGIST: KEN MARION/C GRUBE	Depth N/A Date/Time N/A	DATE COMPLETED: 02/25/92	
DRILLING METHODS: 8" HOLLOW STEM AUGER		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS

NOTES:
RAD SCREEN TAL 20.03.02B
SAMPLES COLLECTED PER ASTM STANDARD PENETRATION TEST.
COLORS IDENTIFIED USING MUNSELL COLOR CHART.
FILL/TILL INTERFACE AT 14.5 FT.

FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SWLF

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2027	COORDINATES: NORTH 481,969.29 EAST 1,379,317.37	DATE:	
GROUND ELEVATION: 582.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 12/10/87	
ENGINEER/GEOLOGIST: KEGLEY/OAKLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 12/17/87	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 3	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	007841 12/10/87 1310	4 4 4	14	VERY STIFF, YELLOWISH-BROWN (10YR 5/4), SILT, SOME SAND AND GRAVEL, TRACE CLAY, DRY.	ML	3.5	Hnu= 0 ppm α = 0 cpm βΓ = 120 cpm
3.0	007842 12/10/87 1335	4 7 7	12	VERY STIFF, YELLOWISH BROWN (10YR 5/4), SILT, SOME SAND AND GRAVEL, TRACE CLAY, DRY. 1.7'-HARD, GRAY (2.5Y 5/0), SILT, SOME SAND AND LIMESTONE GRAVEL, TRACE CLAY, DRY. 2.9'-HARD, YELLOWISH-BROWN (10YR 5/4) SILT AND CLAY, SOME GRAVEL, DRY.	ML ML ML	3.5 4.5 4.0	Hnu= 0 ppm α = 0 cpm βΓ = 120 cpm
4.5	007843 12/10/87 1350	8 8 9	15	HARD, YELLOWISH BROWN (10YR 5/4), SILT AND CLAY, SOME GRAVEL, DRY.	ML	4.0	Hnu= 0 ppm α = 0 cpm βΓ = 120 cpm
6.0	007844 12/10/87 1400	14 24 28	15	HARD, YELLOWISH BROWN (10YR 5/4), SILT AND CLAY, SOME GRAVEL, DRY. 5.1'-DENSE, LIGHT GRAY (10YR 7/2) LIMESTONE GRAVEL AND CLAY, DRY.	ML GC	4.5 N/A	Hnu= 0 ppm α = 0 cpm βΓ = 120 cpm
7.5	007845 12/10/87 1410	14 23 26	15	HARD, YELLOWISH BROWN (10YR 5/6) MOTTLED, SILT AND CLAY, SOME GRAVEL AND SAND, DRY.	ML	4.5+	Hnu= 0 ppm α = 0 cpm βΓ = 120 cpm
9.0	007846 12/10/87 1623	4 12 19	14	HARD, YELLOWISH BROWN (10YR 5/6), CLAY AND SILT, SOME SAND, TRACE GRAVEL, VERTICAL FRACTURES WITH IRON STAINING, DRY.	CL	4.5+	Hnu= 0 ppm α = 0 cpm βΓ = 60 cpm
10.5	007847 12/10/87 1644	13 17 22	18	HARD, STRONG BROWN (7.5YR 5/6), SILT, SOME SAND AND CLAY, DRY. VERTICAL FRACTURES WITH IRON STAINING.	ML	4.5+	Hnu= 0 ppm α = 0 cpm βΓ = 60 cpm
12.0	007848 12/10/87 1702	6 12 18	10	HARD, YELLOWISH BROWN (10YR 5/6), SILT, SOME SAND AND CLAY, DRY. VERTICAL FRACTURES WITH IRON STAINING.	ML	4.5	Hnu= 0 ppm α = 0 cpm βΓ = 60 cpm
13.5	007849 12/11/87 0825	12 15 24	18	HARD, LIGHT YELLOWISH BROWN (2.5Y 6/4), SILT, SOME CLAY AND GRAVEL, TRACE SAND, DRY.	ML	3.25	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
15.0	007850 12/11/87 0850	7 12 6	13	VERY STIFF, LIGHT YELLOWISH BROWN, SILTY CLAY, TRACE FINE GRAVEL AND SAND, MOIST.	CL	3.75	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
16.5	007851 12/11/87 0905	5 7 12	15	VERY STIFF, LIGHT YELLOWISH BROWN (2.5YR 6/4), CLAY, SOME SILT, TRACE FINE GRAVEL AND SAND, MOIST. 15.4'-VERY STIFF, GRAY (5Y 5/1), CLAY, TRACE SAND AND SILT, MOIST.	CL CL	3.5 1.5	Hnu= 0 ppm α = 0 cpm βΓ = 70 cpm
18.0	007852 12/11/87 0915	7 15 15	18	VERY STIFF, LIGHT YELLOWISH BROWN (2.5YR 6/4), CLAY, SOME SILT, TRACE GRAVEL AND SAND, MOIST.	CL	3.5	Hnu= 0 ppm α = 2 cpm βΓ = 70 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2027	COORDINATES: NORTH 481,969.29 EAST 1,379,317.37	DATE:	
GROUND ELEVATION: 582.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 12/10/87	
ENGINEER/GEOLOGIST: KEGLEY/OAKLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 12/17/87	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
19.5	007853	12/14/87 0820	3 7 11	5	VERY STIFF, LIGHT YELLOWISH BROWN (2.5Y 6/4), CLAY, SOME SILT, TRACE GRAVEL AND SAND, MOIST. 18.2'-VERY STIFF, OLIVE GRAY (5Y 5/2), CLAY, SOME SILT, TRACE GRAVEL AND SAND, WET.	CL CH	3.5 1.0	Hnu= 0 ppm α = 0 cpm Bγ = 60 cpm
21.0	007854	12/14/87 0840	4 5 8	9	STIFF, OLIVE GRAY (5Y 5/2), CLAY, SOME SILT AND GRAVEL, MOIST.	CH	1.0	Hnu= 0 ppm α = 0 cpm Bγ = 50 cpm
22.5	007855	12/14/87 0850	7 7 7	8	STIFF, OLIVE GRAY (5Y 5/2), CLAY, SOME GRAVEL AND SILT, TRACE SAND, WET. 21.3'-MEDIUM DENSE, OLIVE GRAY (5Y 5/2), SAND, SOME GRAVEL, TRACE CLAY, WET.	CH SW	1.25 N/A	Hnu= 0 ppm α = 0 cpm Bγ = 40 cpm
24.0	007856	12/14/87 0915	7 7 6	7	MEDIUM DENSE, OLIVE GRAY (5Y 5/2), SAND AND GRAVEL, TRACE CLAY, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 40 cpm
25.5	007857	12/14/87 0935	22 14 21	7	DENSE, OLIVE GRAY (5Y 5/2), SAND AND GRAVEL, WET. 25.4'-HARD, LIGHT OLIVE GRAY (5Y 6/2), CLAY, SOME SAND AND GRAVEL, TRACE SILT, DRY.	SW CL	N/A N/A	Hnu= 0 ppm α = 0 cpm Bγ = 50 cpm
27.0	007858	12/14/87 1040	11 31 37	5	HARD, LIGHT OLIVE GRAY (5Y 6/2), CLAY, SOME SAND AND GRAVEL, TRACE SILT, DRY. 25.7'-VERY DENSE, LIGHT OLIVE GRAY (5Y 6/2), CLAYEY GRAVEL, SOME SAND, WET.	CL GC	N/A N/A	Hnu= 0 ppm α = 0 cpm Bγ = 40 cpm
28.5	007859	12/14/87 1100	24 44 27	16	VERY DENSE, LIGHT OLIVE GRAY (5Y 6/2), CLAYEY GRAVEL, SOME SAND, WET. 27.4'-VERY DENSE, LIGHT OLIVE GRAY (5Y 6/2), SAND AND GRAVEL. MOIST. 28.1'-HARD, GREEN (NOT CLOSE TO ANY MUNSELL COLOR) GRAVELLY CLAY, SOME SILT, MOIST.	GC SW CL	N/A N/A 2.0	Hnu= 0 ppm α = 0 cpm Bγ = 60 cpm
30.0	007860	12/14/87 1330	13 16 27	10	HARD, OLIVE GRAY (5Y 5/2), CLAY, SOME GRAVEL AND SAND, TRACE SILT, MOIST.	CL	2.5	Hnu= 0 ppm α = 0 cpm Bγ = 100 cpm
31.5	007861	12/14/87 1350	4 11 15	14	VERY STIFF, OLIVE GRAY (5Y 5/2), CLAY, SOME GRAVEL, TRACE SAND AND SILT, MOIST.	CL	2.5	Hnu= 0 ppm α = 0 cpm Bγ = 60 cpm
33.0	007862	12/14/87 1415	7 11 27	14	HARD, OLIVE GRAY (5Y 5/2), CLAY, TRACE GRAVEL, SAND, AND SILT.	CL	2.75	Hnu=? ppm α = 0 cpm Bγ = 70 cpm
34.5	007863	12/14/87 1530	5 15 17	15	HARD, OLIVE GRAY (5Y 5/2), CLAY, SOME GRAVEL, TRACE SAND AND SILT, MOIST.	CL	2.75	Hnu= 0 ppm α = 0 cpm Bγ = 30 cpm
36.0	007864	12/14/87 1550	5 12 19	18	HARD, OLIVE GRAY (5Y 5/2), CLAY, TRACE GRAVEL, SAND, AND SILT, MOIST.	CL	2.5	Hnu= 0 ppm α = 0 cpm Bγ = 70 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2027	COORDINATES: NORTH 481,969.29 EAST 1,379,317.37	DATE:	
GROUND ELEVATION: 582.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 12/10/87	
ENGINEER/GEOLOGIST: KEGLEY/OAKLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 12/17/87	
DRILLING METHODS: CABLE-TOOL		PAGE 3 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
37.5	007865	12/15/87 0915	7 11 18	3	VERY STIFF, OLIVE GRAY (5Y 5/2), CLAY, TRACE GRAVEL, SAND, AND SILT, MOIST.	CL	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 60 cpm
39.0	007866	12/15/87 0940	7 12 15	14	VERY STIFF, OLIVE GRAY (5Y 5/2), CLAY, SOME GRAVEL, TRACE SAND AND SILT, MOIST.	CL	1.75	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
40.5	007867	12/15/87 1005	8 20 30	6	VERY STIFF, OLIVE GRAY (5Y 5/2), CLAY, SOME GRAVEL, TRACE SAND AND SILT, MOIST.	CL	1.5	Hnu= 0 ppm α = 0 cpm βΓ = 40 cpm
42.0	007868	12/15/87 1105	7 9 13	16	VERY STIFF, OLIVE GRAY (5Y 5/2), CLAY, SOME GRAVEL, TRACE SAND AND SILT, MOIST. 40.7'-VERY STIFF, GRAY (5Y 6/1), SILT, WET.	CL ML	1.5 0.5	Hnu= 0 ppm α = 0 cpm βΓ = 60 cpm
43.5	007869	12/15/87 1335	16 24 40	15	HARD, GRAY (5Y 6/1), SILT, MOIST. 42.2'-HARD, DARK YELLOWISH BROWNISH (10YR 4/4), SILT, MOIST. 42.8'-VERY DENSE, DARK YELLOWISH BROWN (10YR 4/4), SAND AND GRAVEL, DRY.	ML ML SW	N/A N/A N/A	Hnu= 0 ppm α = 0 cpm βΓ = 60 cpm
45.0 46.5	007870	12/15/87 1420	50	5	VERY DENSE, DARK YELLOWISH BROWN (10YR 4/4), GRAVEL AND SAND, MOIST.	GW	N/A	Hnu= 0 ppm
50.0 51.5	007871	12/15/87 1600	48 50	10	VERY DENSE, DARK YELLOWISH BROWN (10YR 4/4), GRAVEL AND SAND, MOIST.	GW	N/A	α = 0 cpm
55.0 56.5	007872	12/16/87 0940	44 50	8	VERY DENSE, YELLOWISH BROWN (10YR 5/4), VERY FINE SAND, DRY.	SP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
60.0 61.5	007873	12/16/87 1335	30 49 32	8	VERY DENSE, YELLOWISH BROWN (10YR 5/4), GRAVEL AND SAND, MOIST 60.7'-VERY DENSE, GRAY (10YR 5/1), SAND, SOME GRAVEL, MOIST.	GW SW	N/A N/A	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
65.0 66.5	007874	12/16/87 1435	25 25 25	10	DENSE, DARK GRAY (10YR 4/1), SAND, SOME GRAVEL, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 70 cpm
70.0 71.5	007875	12/16/87 1550	11 13 15	9	MEDIUM DENSE, DARK GRAY (10YR 4/1), FINE SAND, TRACE GRAVEL, WET.	SP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 50 cpm
75.0 76.5	007876	12/17/87 0935	44 25 24	18	DENSE, DARK GRAY (10YR 4/1), SAND AND GRAVEL, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 60 cpm

BOTTOM OF BORING 76.5

NOTES:
SAMPLES TAKEN ACCORDING TO ASTM STANDARD PENETRATION TESTS. COLORS CLASSIFIED USING MUNSELL COLOR CHARTS.
MONITORING WELL INSTALLED.

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VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2037	COORDINATES: NORTH 482,140.97 EAST 1,379,801.07	DATE: 02/17/88	
GROUND ELEVATION: 588.5	GWL: Depth N/A Date/Time N/A	DATE STARTED: 02/17/88	
ENGINEER/GEOLOGIST: W KEGLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 02/21/88	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
10.0 12.0	008126	02/17/88	N/A		24	SHELBY TUBE: PUSHED SHELBY TUBE 10.0-12.0 FT, RECOVERED 2.0 FT.			
27.0 27.5	008127	02/17/88	N/A		6	SHELBY TUBE: PUSHED SHELBY TUBE 27.0-29.0 FT, RECOVERED 0.5 FT.			

BOTTOM OF BORING 84.0

NOTES: MONITORING WELL INSTALLED.

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PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2052	COORDINATES: NORTH 482,507.16 EAST 1,380,139.73	DATE: 11/01/87	
GROUND ELEVATION: 584.5	GWL: Depth 53.7 Date/Time 11/04/87, 0815	DATE STARTED: 11/01/87	
ENGINEER/GEOLOGIST: W KEGLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 11/03/87	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 3	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	007249	11/01/87	0850	9 13 7		10	HARD, OLIVE BROWN (2.5 4/4), CLAY, DRY.	CL	4.5+	Hnu= 0 ppm α = 60-80 cpm βΓ = 0 cpm
3.0	007250	11/01/87	0915	6 10 8		6	HARD, DARK GRAYISH BROWN (2.5Y 4/2), CLAY, SOME SILT, DRY.	CL	4.5+	Hnu= 0 ppm α = 60-80 cpm βΓ = 0 cpm
4.5	007251	11/01/87	0930	7 6 8		16	VERY STIFF, GRAYISH BROWN (2.5Y 5/2), CLAY, SOME SILT, TRACE SAND, DRY.	CL	3.0	Hnu= 0 ppm α = 0 cpm βΓ = 60-100 cpm
6.0	007252 007253	11/01/87	0950	8 6 8		18	STIFF, YELLOW (2.5 7/6), SILT, SOME CLAY, TRACE SAND, DRY.	ML	1.5	Hnu= 7 ppm α = 0 cpm βΓ = 60-100 cpm
7.5	007254 007255	11/01/87	1015	8 5 6		18	STIFF, YELLOW (2.5 7/6), SILT, SOME CLAY, TRACE SAND, MOIST.	ML	1.5	Hnu= 0 ppm α = 0 cpm βΓ = 60-100 cpm
9.0	007256	11/01/87	1045	8 7 10		18	VERY STIFF, LIGHT OLIVE BROWN (2.5 5/4), SILT, SOME CLAY AND SAND TRACE GRAVEL, MOIST.	ML	2.5	Hnu= 0 ppm α = 0 cpm βΓ = 60-100 cpm
10.5	007257	11/01/87	1330	8 9 14		12	MEDIUM STIFF, GRAYISH BROWN (2.5Y 5/2), CLAY AND SILT, SOME GRAVEL, MOIST.	ML	1.5	Hnu= 0 ppm α = 0 cpm βΓ = 60-100 cpm
12.0	007258	11/01/87	1410	13 9 11		13	VERY STIFF, GRAY (2.5Y 5/0), SILT, SOME SAND AND GRAVEL, DRY.	ML	2.5	Hnu= 0 ppm α = 0 cpm βΓ = 60-100 cpm
13.5	N/A			N/A		N/A	DRILLED THROUGH WITHOUT SAMPLING.	N/A	N/A	N/A
15.0	007260	11/01/87	1420	3 7 12		14	VERY STIFF, GRAY (5Y 5/1), SILT, SOME SAND, TRACE OF GRAVEL, DRY.	ML	2.5	Hnu= 0 ppm α = 0 cpm βΓ = 60-100 cpm
16.5	007261	11/01/87	1530	14 16 19		18	VERY STIFF, GRAY (5Y 5/1), SILT, SOME CLAY, TRACE OF SAND AND GRAVEL, DRY.	ML	3.5	Hnu= 0 ppm α = 0 cpm βΓ = 60-100 cpm
18.0	007262	11/01/87	1545	8 10 12		12	VERY STIFF, GRAY (5Y 5/1), SILT, SOME SAND AND GRAVEL, TRACE CLAY, DRY.	ML	2.5	Hnu= 0 ppm α = 0 cpm βΓ = 60-100 cpm
19.5	007263	11/01/87	1600	7 9 11		9	VERY STIFF, GRAY (5Y 5/1), SILT AND SAND, SOME GRAVEL, DRY.	ML	2.5	Hnu= 0 ppm α = 0 cpm βΓ = 60-120 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2052	COORDINATES: NORTH 482,507.16 EAST 1,380,139.73	DATE: 11/01/87	
GROUND ELEVATION: 584.5	GWL: Depth 53.7 Date/Time 11/04/87, 0815	DATE STARTED: 11/01/87	
ENGINEER/GEOLOGIST: W KEGLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 11/03/87	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
21.0	007264	11/01/87 1630	1 3 2	2	LOOSE, GRAY (5Y 5/1), GRAVEL AND COARSE SAND, TRACE CLAY, WET.	GW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 60-120 cpm
22.5	007265	11/01/87 1725	3 5 8	1	MEDIUM DENSE, GRAY (5Y 5/1), GRAVEL AND COARSE SAND, SOME CLAY, WET.	GC	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 60-120 cpm
24.0	007266	11/01/87 1730	1 9 9	14	VERY STIFF, GRAY (5Y 5/4), SAND AND GRAVEL, SOME CLAY AND SILT, MOIST.	SM	2.5	Hnu= 0 ppm α = 0 cpm βΓ = 60-120 cpm
25.5	007267	11/01/87 1750	7 9 11	18	MEDIUM DENSE, GRAY (2.5Y 5/1), SAND AND SILT WITH SOME GRAVEL AND CLAY.	SM	1.5	Hnu= 0 ppm α = 0 cpm βΓ = 60-120 cpm
27.0	007268	11/02/87 0810	2 3 4	15	LOOSE, GRAY (2.5Y 5/0), SILT AND SAND, SOME GRAVEL AND CLAY, WET.	ML	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 60-120 cpm
28.5	007269	11/02/87 1000	2 3 5	2	LOOSE, GRAY (2.5Y 5/0), GRAVEL AND CLAY, SOME SILT, WET.	GC	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 60-120 cpm
30.0	007270	11/02/87 1325	3 7 13	14	MEDIUM STIFF, LIGHT OLIVE GRAY (5Y 6/2), SILT AND CLAY, SOME GRAVEL, DRY.	ML	0.5	Hnu= 0 ppm α = 0 cpm βΓ = 60-120 cpm
31.5	007271	11/02/87 1345	3 6 13	10	VERY STIFF, OLIVE GRAY (5Y 5/2), CLAY AND SILT, SOME GRAVEL, TRACE OF WOOD FRAGMENTS, DRY.	CL	3.5	Hnu= 0 ppm α = 0 cpm βΓ = 60-120 cpm
33.0	007272	11/02/87 1405	6 11 11	18	VERY STIFF, OLIVE GRAY (5Y 5/2), SILT AND CLAY, SOME GRAVEL, TRACE OF SAND, DRY.	ML	3.0	Hnu= 0 ppm α = 0 cpm βΓ = 60-120 cpm
34.5	007273	11/02/87 1435	16 36 30		STIFF, OLIVE GRAY (5Y 5/2), SILT AND CLAY, SOME GRAVEL AND SAND, DRY. 33.5'-DENSE, LIGHT OLIVE BROWN (2.5Y 5/4), SAND, SOME GRAVEL, DRY.	ML GW	1.0 N/A	Hnu= 0 ppm α = 0 cpm βΓ = 60-120 cpm
35.0 36.5	007274	11/02/87 1625	16 17 22	15	DENSE, STRONG BROWN (7.5YR 4/6), SAND AND GRAVEL, SOME SILT, DRY.	GW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 60-120 cpm
40.0 41.5	007275	11/02/87 1655	21 27 31	13	VERY DENSE, STRONG BROWN (7.5YR 5/6), SAND, TRACE GRAVEL, SILT WET.	SP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 60-120 cpm
45.0 46.5	007276	11/02/87 1700	11 30 42	12	VERY DENSE, STRONG BROWN (7.5YR 5/6), SAND AND GRAVEL, DRY.	GW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 60-120 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2052	COORDINATES: NORTH 482,507.16 EAST 1,380,139.73	DATE: 11/01/87	
GROUND ELEVATION: 584.5	GWL: Depth 53.7 Date/Time 11/04/87, 0815	DATE STARTED: 11/01/87	
ENGINEER/GEOLOGIST: W KEGLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 11/03/87	
DRILLING METHODS: CABLE-TOOL		PAGE 3 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
50.0 51.5	007277	11/03/87 0855	37 47 50	13	VERY DENSE, YELLOW (10YR 7/6), SAND, SOME GRAVEL, TRACE SILT, DRY.	GW	N/A	Hnu= 0 ppm α = 0 cpm BΓ = 60-120 cpm
55.0 56.5	007278	11/03/87 1150	29 23 24	12	DENSE, DARK YELLOWISH BROWN (10YR 4/6), SAND, SOME GRAVEL, WET.	GW	N/A	Hnu= 0 ppm α = 0 cpm BΓ = 60-120 cpm
60.0 61.5	007279	11/03/87 1355	2 9 50/5	15	VERY DENSE, YELLOWISH BROWN (10YR 5/4), SAND AND GRAVEL, TRACE SILT.	GW	N/A	Hnu= 0 ppm α = 0 cpm BΓ = 60-120 cpm
65.0 66.5	007560	11/03/87 1505	3 8 9	7	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), SAND AND GRAVEL, WET.	GW	N/A	Hnu= 0 ppm α = 0 cpm BΓ = 60-120 cpm
70.0 71.5	008628	07/22/88 1030	27 16 23	9	DENSE, GREY (10YR 5/2), GRAVELLY SAND, WELL GRADED, WET.	SW	N/A	Hnu= 0 ppm α = 0-1 cpm BΓ = 20-40 cpm
75.0 76.5	N/A		N/A	N/A	NO SAMPLE RETURN.	N/A	N/A	N/A
80.0 81.5	008629	07/22/88 1430	13 22 22	3	DENSE, GREY (10YR 5/1), COARSE GRAVELLY SAND, WET.	SW	N/A	Hnu= 0 ppm α = 80-10 cpm

BOTTOM OF BORING 81.5

NOTES:
PENN DRILLING, DRILLER TIM HARRIS, ASSISTANT STEVE REBER, RIG 71 SPEED STAR.
WATER USED IN DRILLING, APPROX 600 GALS.
SOIL SAMPLING PER ASTM STANDARD PENETRATION TEST. COLOR DESCRIPTION PER MUNSELL COLOR CHART.
SMALL POCKET OF WATER DETECTED BY DRILLER AT 42 FT.
BLOW SAND ENCOUNTERED AT 54 FT, DROVE CASING TO 60 FT WHICH STOPPED SAND FROM BLOWING UP HOLE.
CRUDE OIL SMELL COMING FROM BORING AT 45.0-46.5 FT INTERVAL.
MONITORING WELL INSTALLLED.

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FERNALD RI/FS

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3037	COORDINATES: NORTH 482,141.43 EAST 1,379,791.96	DATE: 01/19/88	
GROUND ELEVATION: 588.5	GWL: Depth N/A Date/Time N/A	DATE STARTED: 01/19/88	
ENGINEER/GEOLOGIST: W KEGLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 02/03/88	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 4	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	007953 01/19/88 1103	3 17 19	17	HARD BROWN (10YR 5/3), CLAY, SOME GRAVEL AND SILT, DRY.	CL	4.5+	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm
3.0	007954 01/19/88 1105	8 8 13	16	STIFF, BROWN (10YR 5/3), SILT, SOME SAND AND CLAY, TRACE GRAVEL DRY.	ML	2.0	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm
4.5	007955 01/19/88 1300	12 10 9	10	STIFF, LIGHT YELLOWISH BROWN (2.5Y 6/4), SILT AND SAND, SOME GRAVEL, TRACE CLAY, DRY.	ML	1.0	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm
6.0	007956 01/19/88 1314	6 6 6	4	VERY SOFT OLIVE BROWN (2.5Y 4/4), CLAY, SOME SAND AND SILT, TRACE GRAVEL, MOIST.	CL	<0.25	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm
7.5	007957 01/19/88 1321	5 5 10	10	VERY SOFT OLIVE BROWN (2.5Y 4/4), CLAY, SOME SAND AND SILT, TRACE GRAVEL, MOIST. 6.8'-VERY STIFF, VERY DARK GREY (2.5Y 3/0), CLAY, SOME SILT, DRY.	CL CL	<0.25 3.0	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm
9.0	007958 01/20/88 0850	5 7 10	12	STIFF, DARK GREY (5Y 4/1), CLAY, SOME SILT, DRY.	CL	1.5	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm
10.5	007959 01/20/88 0900	3 5 8	15	STIFF, DARK GREY (5Y 4/1), CLAY, SOME SILT, DRY. 9.6'-VERY STIFF, BROWNISH YELLOW (10YR 6/8), MOTTLED CLAY, SOME SILT, DRY.	CL CL	1.5 2.5	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm
12.0	007960 01/20/88 0928	4 5 8	17	VERY STIFF, YELLOWISH BROWN (10YR 5/8), MOTTLED CLAY AND SILT, DRY.	CL	2.5	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm
13.5	007961 01/20/88 0942	5 7 11	16	VERY STIFF, YELLOWISH BROWN (10YR 5/4), CLAY AND SILT, TRACE GRAVEL, DRY.	CL	2.5	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm
15.0	007962 01/20/88 0958	6 12 15	18	VERY STIFF, YELLOWISH BROWN (10YR 5/4), CLAY AND SILT, TRACE GRAVEL, DRY.	CL	2.5	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm
16.5	007963 01/20/88 1007	10 16 24	18	VERY STIFF, STRONG BROWN (7.5YR 5/6), SILT AND CLAY, SOME GRAVEL - TRACE SAND, DRY.	ML	3.5	Hnu= 0 ppm α = 0 cpm BΓ = 80 cpm
18.0	007964 01/20/88 1330	21 33 41	6	HARD, DARK BROWN (10YR 5/3), SILT AND CLAY, SOME GRAVEL, DRY.	ML	4.25	Hnu= 0 ppm α = 0 cpm BΓ = 80 cpm
19.5	007965 01/20/88 1426	15 13 23	12	HARD, DARK BROWN (10YR 5/3), SILT AND CLAY, SOME GRAVEL, DRY. 18.8'-VERY STIFF, DARK GREY SILT, SOME CLAY AND GRAVEL, DRY.	ML ML	4.25 4.0	Hnu= 0 ppm α = 0 cpm BΓ = 80 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3037	COORDINATES: NORTH 482,141.43 EAST 1,379,791.96	DATE: 01/19/88	
GROUND ELEVATION: 588.5	GWL: Depth N/A Date/Time N/A	DATE STARTED: 01/19/88	
ENGINEER/GEOLOGIST: W KEGLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 02/03/88	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 4	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
21.0	007966	01/20/88	1438	4 10 14	16	VERY STIFF, DARK GREY (5Y 5/1), CLAY AND SILT, SOME GRAVEL, DRY.	CL	2.5	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
22.5	007967	01/20/88	1505	6 10 12	13	VERY STIFF, DARK GREY (5Y 4/1), CLAY AND SILT, SOME GRAVEL, DRY.	CL	2.5	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
24.0	007968	01/20/88	1527	4 8 14	14	STIFF, GREY (5Y 5/1), CLAY AND SILT, SOME GRAVEL, DRY.	CL	1.25	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
25.5	007969	01/20/88	1542	6 8 13	18	STIFF, DARK GREY (5Y 4/1), CLAY AND SILT, SOME GRAVEL, DRY.	CL	1.25	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
27.0	007970	01/20/88	1551	4 7 12	12	STIFF, DARK GREY (5Y 5/1), CLAY AND SILT, SOME GRAVEL, TRACE SAND, DRY.	CL	1.5	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
28.5	007971	01/22/88	0920	4 5 11	4	VERY SOFT GREY (5Y 5/1), CLAY AND SILT, SOME GRAVEL, DRY.	CL	<0.25	Hnu= 0 ppm α = 0 cpm βΓ = 120 cpm
30.0	007972	01/22/88	0945	27 50/3	6	VERY DENSE, GREY (5Y 5/1), CLAYEY SAND AND GRAVEL, DRY.	SC	<4.5	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
31.5	007973	01/22/88	1007	14 22 26	12	VERY DENSE, GRAY (5Y 5/1) CLAYEY SAND AND GRAVEL, DRY. 30.3'-HARD, GRAY (5Y 5/1), CLAY, SOME GRAVEL, TRACE SILT, DRY.	SC CL	>4.5 >4.5	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
33.0	007974	01/22/88	1034	20 21 27	15	HARD GREY (5Y 5/1), CLAY, SOME GRAVEL, TRACE SILT, DRY.	CL	3.75	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
34.5	007975	01/22/88	1056	6 13 16	16	VERY STIFF, GREY (5Y 5/1), CLAY, SOME GRAVEL AND SAND, TRACE SILT, DRY.	CL	4.0	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
36.0	007976	01/22/88	1335	11 12 15	15	STIFF, GREY (5Y 5/1), CLAY AND SILT, SOME GRAVEL AND SAND, DRY.	CL	1.75	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
37.5	007977	01/22/88	1445	5 8 13	10	STIFF, GREY (5Y 5/1), SILTY CLAY, SOME GRAVEL AND SAND, DRY.	CL	1.5	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
39.0	007978	01/22/88	1508	5 10 13	3	VERY SOFT GREY (5Y 5/1, GRAVELLY CLAY, SOME SAND AND SILT - MOIST.	CL	<0.25	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
39.5 40.5	007979	01/22/88	1535	1 5 8	12	STIFF, GREY (5Y 5/1), SILTY CLAY, SOME SAND AND GRAVEL, MOIST.	CL	1.25	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3037	COORDINATES: NORTH 482,141.43 EAST 1,379,791.96	DATE: 01/19/88	
GROUND ELEVATION: 588.5	GWL: Depth N/A Date/Time N/A	DATE STARTED: 01/19/88	
ENGINEER/GEOLOGIST: W KEGLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 02/03/88	
DRILLING METHODS: CABLE-TOOL	-	PAGE 3 OF 4	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
42.0	008105 01/22/88 1600	5 28 12	9	STIFF, GREY (5Y 5/1) GRAVELLY CLAY, SOME SAND AND SILT, MOIST.	CL	1.5	Hnu= 0 ppm α = 0 cpm Bγ = 80 cpm
43.5	008106 01/22/88 1625	5 15 23	10	STIFF, GREY (5Y 5/1) GRAVELLY CLAY, SOME SAND AND SILT, MOIST. 42.5'-DENSE, YELLOWISH BROWN (10YR 5/4), SAND, DRY.	CL SP	1.5 N/A	Hnu= 0 ppm α = 0 cpm Bγ = 80 cpm
45.0 46.5	008107 01/22/88 1646	27 40 26	13	VERY DENSE, YELLOWISH BROWN (10YR 5/4), SAND, DRY.	SP	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 80 cpm
50.0 51.5	008108 01/23/88 1010	50/3 50/2	5	VERY DENSE, YELLOWISH BROWN (10YR 5/6), GRAVELLY SAND, DRY.	SW	N/A	Hnu= 0 ppm Bγ = 60 cpm
55.0 56.5	008109 01/23/88 1411	50 50/4	8	VERY DENSE, DARK YELLOWISH BROWN (10YR 3/4), SAND, SOME GRAVEL, MOIST.	SW	N/A	Hnu= 0 ppm Bγ = 80 cpm
60.0 61.5	008110 01/23/88 1530	31 50/5	6	VERY DENSE, YELLOWISH BROWN (10YR 5/4), SAND, SOME GRAVEL, DRY.	SW	N/A	Hnu= 0 ppm Bγ = 60 cpm
65.0 66.5	008111 01/23/88 1710	15 50/5	10	VERY DENSE, GRAYISH BROWN (10YR 5/2), SAND, SOME GRAVEL, MOIST	SW	N/A	Hnu= 0 ppm Bγ = 60 cpm
70.0 71.5	008112 01/24/88 1008	41 40 42	10	VERY DENSE, DARK GREY (10YR 4/1), GRAVELLY SAND, WET.	SW	N/A	Hnu= 0 ppm Bγ = 100 cpm
75.0 76.5	008113 01/24/88 1420	17 27 27	14	VERY DENSE, GREY (10YR 5/1), SAND, TRACE GRAVEL AND SILT, WET.	SP	N/A	Hnu= 0 ppm Bγ = 60 cpm
80.0 81.5	008114 01/24/88 1554	30 27 32	15	VERY DENSE, GREY (10YR 5/1), SAND, SOME GRAVEL, TRACE SILT, DRY.	SP	N/A	Hnu= 0 ppm Bγ = 60 cpm
85.0 86.5	008115 01/24/88 1739	50/4 50/1	12	VERY DENSE, (10YR 5/1), GRAVELLY SAND, TRACE SILT, DRY.	SP	N/A	Hnu= 0 ppm Bγ = 60 cpm
90.0 91.5	008116 01/25/88 1100	6 7 9	5	MEDIUM DENSE, OLIVE GREY (5Y 5/2), SANDY GRAVEL, TRACE SILT - WET.	GW	N/A	Hnu= 0 ppm Bγ = 60 cpm
95.0 96.5	008117 01/25/88 1330	14 19 28	10	DENSE, GREY (10YR 5/1), SAND, SOME GRAVEL, TRACE SILT, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 40 cpm
100.0 101.5	008118 01/25/88 1455	9 13 23	12	DENSE, VERY DARK GREY (10YR 3/1), SAND, TRACE GRAVEL AND SILT - WET.	SP	N/A	Hnu= 0 ppm Bγ = 40 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3037	COORDINATES: NORTH 482,141.43 EAST 1,379,791.96	DATE: 01/19/88	
GROUND ELEVATION: 588.5	GWL: Depth N/A Date/Time N/A	DATE STARTED: 01/19/88	
ENGINEER/GEOLOGIST: W KEGLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 02/03/88	
DRILLING METHODS: CABLE-TOOL		PAGE 4 OF 4	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
105.0 106.5	008119 01/25/88 1610		3 4 10	18	MEDIUM DENSE, VERY DARK GREY (10YR 3/1), SAND, WET. 106.5'-MEDIUM DENSE, VERY DARK GREY (10YR 3/1), GRAVEL, SOME SAND, WET.	SP GW	N/A N/A	Hnu= 0 ppm BΓ = 60 cpm
110.0 111.5	008120 01/26/88 1315		23 26 27	15	VERY DENSE, DARK OLIVE GREY (5Y 5/2), SAND, TRACE GRAVEL AND SILT, WET.	SP	N/A	BΓ = 40 cpm
115.0 116.5	008121 01/27/88 1050		48 48 50/5	10	VERY DENSE, GREY (5Y 5/1), FINE GRAINED SAND, SOME GRAVEL, TRACE SILT, WET.	SP	N/A	Hnu= 0 ppm BΓ = 60 cpm
120.0 121.5	N/A 01/27/88 1418		8 8 15	0	NO RECOVERY (PROBABLY VERY FINE GRAINED SAND AS INDICATED BY BAILER SLURRY).	N/A	N/A	N/A
125.0 126.5	008122 01/27/88 1555		15 50/5	15	VERY DENSE, GREY (5Y 5/1), FINE GRAINED SAND, SOME SILT, WET.	SP	N/A	Hnu= 0 ppm BΓ = 60 cpm
130.0 131.5	02/03/88 0920		3 13 23	0	NO RECOVERY (PROBABLY VERY FINE GRAINED SAND AS INDICATED BY BAILER SLURRY).	N/A	N/A	N/A
135.0 136.5	008123 02/03/88 0920		4 11 20	12	STIFF, DARK GREY (5Y 4/1), CLAY, TRACE SILT, MOIST.	CL	1.0	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm
136.5 138.5	008124 02/03/88 1030			24	SHELBY TUBE PUSHED 136.5-138.5 FT WITH 2.0 FT RECOVERY.			

BOTTOM OF BORING 138.5

NOTES:
SAMPLES COLLECTED PER ASTM STANDARD PENETRATION TEST. COLORS IDENTIFIED USING MUNSELL COLOR CHART.
OIL SMELL COMING FROM BAILER AT 84.0 FT. MONITORING WELL INSTALLED.

TABLE C-18

GROUNDWATER ELEVATIONS
RI/FS SAMPLING PROGRAM
SOLID WASTE LANDFILL

WATER ELEVATION REPORT FOR WELL NUMBER : 1035
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1035

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
482290.60	1379710.46	586.19	586.65		584.80	7.80	578.39	NO	05/10/88	SDG	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	8.73	577.46	NO	06/08/88	RWO	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	10.10	576.09	NO	07/09/88	GS	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	9.24	576.95	NO	08/07/88	DPH	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	9.61	576.58	NO	09/10/88	CAM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	10.28	575.91	NO	10/08/88	LKP	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	9.73	576.46	NO	11/09/88	CAM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	8.57	577.62	NO	12/13/88	CAM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	6.75	579.44	NO	01/10/89	CAM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.55	578.64	NO	02/10/89	CAM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	6.04	580.15	NO	03/11/89	CAM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.44	578.75	NO	04/15/89	CAM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.17	579.02	NO	05/14/89	CAM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.63	578.56	NO	06/14/89	CAM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	8.28	577.91	NO	07/14/89	CAM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	NR	NA	NO	08/16/89	CM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	NR	NA	NO	09/12/89	CM SM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	8.49	577.70	NO	10/11/89	CM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.11	579.08	NO	11/17/89	CM GY	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	9.72	576.47	NO	12/19/89	CM GY MG	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	6.73	579.46	NO	01/22/90	CM GY	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	5.52	580.67	NO	02/16/90	CM DN	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.25	578.94	NO	04/04/90	BB DN	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.55	578.64	NO	04/24/90	BB DN	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.16	579.03	NO	05/19/90	CAM AHW	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	8.00	578.19	NO	06/19/90	CM AW	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.78	578.41	NO	07/24/90	AHW BB	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	8.46	577.73	NO	08/14/90	CM AW	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.64	578.55	NO	09/24/90	CM GY	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	8.06	578.13	NO	10/23/90	CM GY	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.81	578.38	NO	11/17/90	CM GY	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.68	578.97	NO	12/13/90	CM GY	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.23	578.96	NO	01/19/91	CM WB	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.34	578.85	NO	02/22/91	CM WB	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	8.31	577.88	NO	06/04/91	CM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	NR	NA	NO	07/30/91	CM BM	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	NR	NA	NO	08/29/91	CM DS	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	9.02	577.17	NO	09/20/91	CM CJ	ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	9.57	576.62	NO	10/06/91		ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	9.31	576.88	NO	11/02/91		ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	8.20	577.99	NO	12/14/91		ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.58	578.61	NO	02/18/92		ON-SITE
482290.60	1379710.46	586.19	586.65		584.80	7.92	578.27	NO	03/18/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 1037
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1037

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
482151.80	1379796.65	590.82	591.22	588.6		37.50	553.32	NO	03/09/88	DPH	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		38.68	552.14	NO	04/11/88	SDG	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		39.69	551.13	NO	05/10/88	SDG	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.46	550.36	NO	06/08/88	RWO	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.70	550.12	NO	07/09/88	GS	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.84	549.98	NO	08/07/88	DPH	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.93	549.89	NO	09/10/88	CAM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.96	549.86	NO	10/08/88	LKP	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.95	549.87	NO	11/09/88	CAM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.96	549.86	NO	12/13/88	CAM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.95	549.87	NO	01/10/89	CAM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.94	549.88	NO	02/10/89	CAM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.91	549.91	NO	03/11/89	CAM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		NR	NA	NO	04/15/89	CAM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.82	550.00	NO	05/14/89	CAM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.89	549.93	NO	06/14/89	CAM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		NR	NA	NO	07/14/89	CAM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.79	550.03	NO	08/16/89	CM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.79	550.03	NO	09/12/89	CM SM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.79	550.03	NO	10/11/89	CM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		NR	NA	NO	11/17/89	CM GY	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.70	550.12	NO	12/19/89	CM GY MG	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.68	550.14	NO	01/22/90	CM GY	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.69	550.13	NO	02/16/90	CM DN	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		NR	NA	NO	04/04/90	BB DN	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		NR	NA	NO	04/24/90	BB DN	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		40.23	550.59	NO	05/19/90	CAM AHW	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		41.06	549.76	NO	06/19/90	CM AW	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		39.68	551.14	NO	07/24/90	AHW BB	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		39.44	551.38	NO	08/14/90	CM AW	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		38.91	551.91	NO	09/24/90	CM GY	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		39.62	551.20	NO	10/23/90	CM GY	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		38.61	552.21	NO	11/17/90	CM GY	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		37.90	552.92	NO	12/13/90	CM GY	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		37.17	553.65	NO	01/19/91	CM WB	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		36.59	554.23	NO	02/22/91	CM WB	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		35.90	554.92	NO	06/04/91	CM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		NR	NA	NO	07/30/91	CM BM	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		35.99	554.83	NO	08/29/91	CM DS	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		39.36	551.46	NO	09/20/91	CM CJ	ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		35.81	555.01	NO	10/06/91		ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		35.72	555.10	NO	11/02/91		ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		35.50	555.32	NO	12/14/91		ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		35.24	555.58	NO	02/18/92		ON-SITE
482151.80	1379796.65	590.82	591.22	588.6		35.27	555.55	NO	03/18/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 1038
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1038

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
482055.43	1379622.44	584.09	584.61		582.40	15.11	568.98	NO	03/09/88	DPH	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.88	569.21	NO	04/11/88	SDG	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	15.00	569.09	NO	05/10/88	SDG	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.90	569.19	NO	06/08/88	RWO	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	15.15	568.94	NO	07/09/88	GS	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	15.03	569.06	NO	08/07/88	DPH	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	15.29	568.80	NO	09/10/88	CAM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	15.36	568.73	NO	10/08/88	LKP	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	15.27	568.82	NO	11/09/88	CAM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	15.31	568.78	NO	12/13/88	CAM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	15.67	568.42	NO	01/10/89	CAM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	16.82	567.27	NO	02/10/89	CAM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	17.25	566.84	NO	03/11/89	CAM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	15.47	568.62	NO	04/15/89	CAM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	15.41	568.68	NO	05/14/89	CAM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	15.35	568.74	NO	06/14/89	CAM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	15.22	568.87	NO	07/14/89	CAM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	16.27	567.82	NO	08/16/89	CM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.79	569.30	NO	09/12/89	CM SM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.63	569.46	NO	10/11/89	CM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.36	569.73	NO	11/17/89	CM GY	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.55	569.54	NO	12/19/89	CM GY MG	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.18	569.91	NO	01/22/90	CM GY	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	16.59	567.50	NO	02/16/90	CM DN	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.00	570.09	NO	04/04/90	BB DN	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.18	569.91	NO	04/24/90	BB DN	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.23	569.86	NO	05/19/90	CAM AHW	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	30.65	553.44	NO	06/19/90	CM AW	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	13.92	570.17	NO	07/24/90	AHW BB	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.38	569.71	NO	08/14/90	CM AW	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	13.86	570.23	NO	09/24/90	CM GY	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.37	569.72	NO	10/23/90	CM GY	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.30	569.79	NO	11/17/90	CM GY	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	13.88	570.73	NO	12/13/90	CM GY	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	13.56	570.53	NO	01/19/91	CM WB	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.22	569.87	NO	02/22/91	CM WB	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	13.90	570.19	NO	06/04/91	CM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.06	570.03	NO	07/30/91	CM BM	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	13.70	570.39	NO	08/29/91	CM DS	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	13.72	570.37	NO	09/19/91	CM CJ	WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	13.58	570.51	NO	10/06/91		WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	13.99	570.10	NO	11/02/91		WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	13.74	570.35	NO	12/14/91		WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	13.58	570.51	NO	02/18/92		WASTE STOR. AREA
482055.43	1379622.44	584.09	584.61		582.40	14.08	570.01	NO	03/16/92		WASTE STOR. AREA

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WATER ELEVATION REPORT FOR WELL NUMBER : 2027
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 2027

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
481969.29	1379317.37	585.55	585.90	582.7	583.60	66.34	519.21	NO	01/10/88	LKP	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	66.04	519.51	NO	02/11/88	SDG	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	65.46	520.09	NO	03/08/88	DPH	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	64.87	520.68	NO	04/11/88	SDG	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	64.50	521.05	NO	05/10/88	SDG	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	64.48	521.07	NO	06/08/88	DPH	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	65.28	520.27	NO	07/09/88	GS	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	65.52	520.03	NO	08/07/88	DPH	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	66.66	518.89	NO	09/10/88	CAM	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	66.91	518.64	NO	10/08/88	LKP	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	67.60	517.95	NO	11/09/88	CAM	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	67.43	518.12	NO	12/13/88	CAM	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	67.80	517.75	NO	01/10/89	CAM	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	67.20	518.35	NO	02/10/89	CAM	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	66.33	519.22	NO	03/11/89	CAM	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	65.16	520.39	NO	04/15/89	CAM	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	63.68	521.87	NO	05/14/89	CAM	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	62.44	523.11	NO	06/14/89	CAM	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	62.02	523.53	NO	07/14/89	CAM	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	62.55	523.00	NO	08/16/89	CM	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	63.21	522.34	NO	09/12/89	CM SM	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	65.22	520.33	NO	10/11/89	CM DN	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	64.31	521.24	NO	11/17/89	CM GY	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	64.13	521.42	NO	12/19/89	CM GY MG	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	64.44	521.11	NO	01/22/90	CM GY	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	63.98	521.57	NO	02/16/90	CM DN	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	62.63	522.92	NO	04/04/90	BB DN	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	62.50	523.05	NO	04/24/90	BB DN	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	62.05	523.50	NO	05/19/90	CAM AHW	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	61.08	524.47	NO	06/19/90	CM AW	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	61.50	524.05	NO	07/19/90	AHW BB	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	61.68	523.87	NO	08/14/90	CM AW	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	62.36	523.19	NO	09/24/90	CM GY	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	62.54	523.01	NO	10/24/90	CM GY	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	62.50	523.05	NO	11/17/90	CM GY	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	62.52	523.03	NO	12/13/90	CM GY	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	61.19	524.36	NO	01/19/91	CM WB	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	60.78	524.77	NO	02/22/91	CM WB	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	60.57	524.98	NO	06/04/91	CM	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	62.00	523.55	NO	07/30/91	CM BM	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	62.83	522.72	NO	08/29/91	CM DS	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	63.68	521.87	NO	09/19/91	CM CJ	WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	64.16	521.39	NO	10/06/91		WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	64.94	520.61	NO	11/02/91		WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	65.80	519.75	NO	12/14/91		WASTE STOR. AREA
481969.29	1379317.37	585.55	585.90	582.7	583.60	66.98	518.92	NO	03/16/92		WASTE STOR. AREA

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WATER ELEVATION REPORT FOR WELL NUMBER : 2037
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 2037

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
482140.97	1379801.07	590.54	591.08	588.5	589.02	70.78	519.76	NO	03/09/88	DPH	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	NR	NA	NO	04/11/88	SDG	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	69.88	520.66	NO	05/10/88	SDG	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	69.87	520.67	NO	06/08/88	RWO	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	70.60	519.94	NO	07/09/88	GS	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	71.34	519.20	NO	08/07/88	DPH	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	72.12	518.42	NO	09/10/88	CAM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	72.32	518.22	NO	10/08/88	LKP	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	73.05	517.49	NO	11/09/88	CAM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	72.88	517.66	NO	12/13/88	CAM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	73.32	517.22	NO	01/10/89	CAM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	72.70	517.84	NO	02/10/89	CAM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	71.78	518.76	NO	03/11/89	CAM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	70.56	519.98	NO	04/15/89	CAM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	68.95	521.59	NO	05/14/89	CAM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	67.61	522.93	NO	06/14/89	CAM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	67.31	523.23	NO	07/14/89	CAM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	67.80	522.74	NO	08/16/89	CM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	68.53	522.01	NO	09/12/89	CM SM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	68.95	521.59	NO	10/11/89	CM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	69.29	521.25R	NO	10/25/89	WAH	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	69.38	521.16	NO	11/17/89	CM GY	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	69.54	521.00	NO	12/19/89	CM GY MG	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	69.96	520.58	NO	01/22/90	CM GY	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	69.48	521.06	NO	02/16/90	CM DN	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	67.97	522.57	NO	04/04/90	BB DN	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	67.84	522.70	NO	04/24/90	BB DN	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	67.40	523.14	NO	05/19/90	CAM AHW	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	66.42	524.12	NO	06/19/90	CM AW	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	66.90	523.64	NO	07/24/90	AHW BB	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	67.05	523.49	NO	08/14/90	CM AW	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	68.54	522.00	NO	09/24/90	CM GY	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	68.12	522.42	NO	10/23/90	CM GY	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	67.97	522.57	NO	11/17/90	CM GY	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	68.05	522.49	NO	12/13/90	CM GY	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	66.49	524.05	NO	01/19/91	CM WB	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	66.06	524.48	NO	02/22/91	CM WB	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	66.50	524.04	NO	06/04/91	CM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	NR	NA	NO	07/30/91	CM BM	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	68.36	522.18	NO	08/29/91	CM DS	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	69.25	521.29	NO	09/20/91	CM CJ	ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	69.72	520.82	NO	10/06/91		ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	70.57	519.97	NO	11/02/91		ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	71.38	519.16	NO	12/14/91		ON-SITE
482140.97	1379801.07	590.54	591.08	588.5	589.02	71.56	518.98	NO	02/18/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 2052
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 2052

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
482507.16	1380139.73	586.46	587.01	584.5	585.10	NR	NA	NO	01/09/88	LKP	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	NR	NA	NO	01/10/88	LKP	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	67.52	518.94	NO	02/10/88	SDG	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	67.45	519.01	NO	03/09/88	DPH	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	67.45	519.01	NO	04/11/88	SDG	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	NR	NA	NO	05/10/88	SDG	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	67.66	518.80	NO	06/08/88	DPH	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	67.65	518.81	NO	07/08/88	GS	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	67.30	519.16	NO	08/06/88	CAM	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	67.95	518.51	NO	09/09/88	CAM	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	68.31	518.15	NO	10/09/88	CAM	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	69.22	517.24	NO	11/08/88	CAM	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	69.15	517.31	NO	12/12/88	CAM	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	69.68	516.78	NO	01/09/89	CAM	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	68.99	517.47	NO	02/09/89	CAM	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	68.25	518.21	NO	03/10/89	CAM	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	66.75	519.71	NO	04/16/89	CAM	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	64.87	521.59	NO	05/14/89	LKP	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	63.35	523.11	NO	06/15/89	CAM	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	63.00	523.46	NO	07/13/89	CAM	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	63.55	522.91	NO	08/15/89	CM	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	64.43	522.03	NO	09/11/89	CM SM	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	66.20	520.26	NO	10/10/89	CM BH	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	65.45	521.01	NO	11/16/89	RT CM GY	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	65.78	520.68	NO	12/14/89	CAM	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	66.04	520.42	NO	01/21/90	CM MG	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	66.32	520.14	NO	02/16/90	CM DN	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	64.17	522.29	NO	04/01/90	DN BB	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	63.80	522.66	NO	04/23/90	BB DN	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	63.42	523.04	NO	05/17/90	CAM AHW BB	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	62.29	524.17	NO	06/18/90	CM AW	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	62.81	523.65	NO	07/17/90	AHW BB	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	62.84	523.62	NO	08/08/90	CM AW	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	63.45	523.01	NO	09/19/90	CM AW	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	64.25	522.21	NO	10/17/90	CM GY	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	64.26	522.20	NO	10/31/90	CM GY	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	63.97	522.49	NO	11/14/90	CM GY	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	63.93	522.53	NO	11/20/90	CM GY	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	63.75	522.71	NO	12/12/90	CM BB	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	62.99	523.47	NO	01/17/91	CM WB	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	61.78	524.68	NO	02/26/91	CM DN	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	61.61	524.85	NO	03/18/91	CM JL	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	62.03	524.43	NO	06/13/91	CM CT RR	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	63.41	523.05	NO	07/25/91	CM BM RR	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	64.30	522.16	NO	08/22/91	CM DS	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	64.86	521.60	NO	09/07/91	CM DS	ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	65.77	520.69	NO	10/07/91		ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	66.26	520.20	NO	11/05/91		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 2052
REPORT DATE : 10/09/92

TASK NUMBER :

RIFS WELL ID : 2052

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
482507.16	1380139.73	586.46	587.01	584.5	585.10	67.94	519.07	NO	12/05/91		ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	61.52	525.49	NO	02/05/92		ON-SITE
482507.16	1380139.73	586.46	587.01	584.5	585.10	68.69	518.32	NO	03/02/92		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 3037
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 3037

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
482141.43	1379791.96	590.27	590.75	588.5		70.79	519.48	NO	03/09/88	DPH	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		70.11	520.16	NO	04/11/88	SDG	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		69.63	520.64	NO	05/10/88	SDG	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		69.58	520.69	NO	06/08/88	RWO	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		70.35	519.92	NO	07/09/88	GS	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		71.05	519.22	NO	08/07/88	DPH	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		71.83	518.44	NO	09/10/88	CAM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		72.03	518.24	NO	10/08/88	LKP	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		72.76	517.51	NO	11/09/88	CAM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		72.60	517.67	NO	12/13/88	CAM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		73.02	517.25	NO	01/10/89	CAM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		72.40	517.87	NO	02/10/89	CAM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		71.49	518.78	NO	03/11/89	CAM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		70.27	520.00	NO	04/15/89	CAM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		68.67	521.60	NO	05/14/89	CAM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		67.35	522.92	NO	06/14/89	CAM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		67.00	523.27	NO	07/14/89	CAM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		67.51	522.76	NO	08/16/89	CM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		68.24	522.03	NO	09/12/89	CM SM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		68.67	521.60	NO	10/11/89	CM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		69.01	521.26R	NO	10/25/89	WAH	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		69.66	520.61	NO	11/17/89	CM GY	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		69.29	520.98	NO	12/19/89	CM GY MG	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		69.67	520.60	NO	01/22/90	CM GY	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		69.20	521.07	NO	02/16/90	CM DN	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		67.68	522.59	NO	04/04/90	BB DN	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		67.55	522.72	NO	04/24/90	BB DN	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		67.14	523.13	NO	05/19/90	CAM AHW	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		66.14	524.13	NO	06/19/90	CM AW	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		66.61	523.66	NO	07/24/90	AHW BB	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		66.75	523.52	NO	08/14/90	CM AW	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		67.54	522.73	NO	09/24/90	CM GY	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		67.84	522.43	NO	10/23/90	CM GY	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		67.69	522.58	NO	11/17/90	CM GY	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		67.77	522.50	NO	12/13/90	CM GY	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		66.20	524.07	NO	01/19/91	CM WB	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		65.78	524.49	NO	02/22/91	CM WB	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		65.78	524.49	NO	06/04/91	CM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		NR	NA	NO	07/30/91	CM BM	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		68.10	522.17	NO	08/29/91	CM DS	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		68.96	521.31	NO	09/20/91	CM CJ	ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		69.43	520.84	NO	10/06/91		ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		70.22	520.05	NO	11/02/91		ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		71.09	519.18	NO	12/14/91		ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		71.28	518.99	NO	02/18/92		ON-SITE
482141.43	1379791.96	590.27	590.75	588.5		72.20	518.55	NO	03/18/92		ON-SITE

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TABLE C-19

MONITORING WELL INSTALLATION RECORDS
RI/FS SAMPLING PROGRAM
SOLID WASTE LANDFILL

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1035
WELL NUMBER: 1035

FIELD ENG./GEO.: M. SLUSARSKI DATE: 03/21/88
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 482290.60, 1379710.4
DATE OF INSTAL.: 03/21/88

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0.0TO: 27.0
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0.0 TO: 27.0
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 11. Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: SCREW TYPE FLUSH JOINT THREADS

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 3 In.
* LOCKING CAP

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.5 Ft.	586.19
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0.0	9.0	N/A	N/A
Sand	19.0	27.0	N/A	N/A
Gravel	9.0	19.0	N/A	N/A
PERFORATED SECTION	13.0	24.0	N/A	N/A

WELL TIP	26.5	N/A
BOTTOM OF BOREHOLE	27.0	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.: M. SLUSARSKI	DATE: 03/21/88
PROJECT NO. : 602.3.2	CHECKED BY : Not Noted	DATE: N/A
BORING NO. : 1035	N,E COORDINATES: 482290.60, 1379710.4	
WELL NUMBER: 1035	DATE OF INSTAL.: 03/21/88	

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD FOR WELL #1037

09/11/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1037
WELL NUMBER : 1037

FIELD ENG./GEO.:M. SLUSARSKI DATE:02/23/88
CHECKED BY :Not Noted DATE:N/A
N,E COORDINATES:482151.80, 1379796.6
DATE OF INSTAL.:02/23/88

BOREHOLE DRILLING

DRILLING METHOD:Cable Tool
DRILLING FLUID(S) USED:(in Feet)
FLUID:WATER FROM:0 TO:41.5
FLUID:N/A FROM:N/A TO:N/A
NOTES/COMMENTS:

TYPE OF BIT:Flat Head Hammer
IS CASING TEMPORARY?:No
CASING TYPE :MONITORING WELL
CASING DIAM.:4 In. ID
CASING SIZE(S) USED:(in Feet)
SIZE:10 FROM:0 TO:41.5
SIZE:N/A FROM:N/A TO:N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE:Screen
AVG. SIZE OF PERFORATIONS: (N/A)
TOTAL PERFORATED AREA:11. Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL:Stainless Steel
RISER PIPE DIAMETERS:
O.D.:4 3/8 In. I.D.:4 In.
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: SCREW FLUSH JOINT THREADS

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:5 Ft.
PROTECTIVE PIPE O.D.:10 3 In.
* LOCKING CAP AND LOCK

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE		ELEVATION MSL	
TOP OF RISER PIPE	2.0 Ft.		590.82	
GROUND SURFACE	0.0		588.6	
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.			
BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0	21.0	N/A	N/A
Bentonite Pellets	21.0	26.0	N/A	N/A
Sand	26.0	41.5	N/A	N/A
PERFORATED SECTION	28.0	39.0	N/A	N/A
WELL TIP	41.5		N/A	
BOTTOM OF BOREHOLE	41.5		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL? : No

MONITORING WELL INSTALLATION RECORD FOR WELL #1037 (Continued)
09/11/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.:M. SLUSARSKI DATE:02/23/88
PROJECT NO. : 602.3.2 CHECKED BY :Not Noted DATE:N/A
BORING NO. : 1037 N,E COORDINATES:482151.80, 1379796.6
WELL NUMBER : 1037 DATE OF INSTAL.:02/23/88

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD
08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1038
WELL NUMBER: 1038

FIELD ENG./GEO.: W. KEGLEY
CHECKED BY : Not Noted
N,E COORDINATES: 482055.43, 1379622.4
DATE OF INSTAL.: 01/13/88

DATE: 01/13/88
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: H20 FROM: 0 TO: 28.5
FLUID: N/A FROM: N/A TO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING
CASING DIAM.: 4 In.
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0.0 TO: 28.5
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: .010 (In.)
TOTAL PERFORATED AREA: 10 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREADED COUPLE (FLUSH JOINT THREADED)

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 10 In.
* LOCKABLE CAP AND LOCK

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	584.09
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0.0	9.5	N/A	N/A
Bentonite Pellets	9.5	14.2	N/A	N/A
Sand	14.2	28.5	N/A	N/A
PERFORATED SECTION	16.0	26.0	N/A	N/A

WELL TIP	28.5	N/A
BOTTOM OF BOREHOLE	28.5	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : N/A
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : N/A

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: W. KEGLEY DATE: 01/13/88
PROJECT NO. : 602.3.2 CHECKED BY : Not Noted DATE: N/A
BORING NO. : 1038 N,E COORDINATES: 482055.43, 1379622.4
WELL NUMBER: 1038 DATE OF INSTAL.: 01/13/88

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

10/02/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1719
WELL NUMBER: 1719

FIELD ENG./GEO.: J. LEAR
CHECKED BY : JW
N,E COORDINATES: 482215.57, 1379699.1
DATE OF INSTAL.: 08/10/91

DATE: 08/10/91
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: AUGER
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: 10' HOLLOW AUGER
IS CASING TEMPORARY?: No
CASING TYPE : Stainless Steel
CASING DIAM.: 4.0 In. ID
CASING SIZE(S) USED: (Units N/A)
SIZE: NA FROM: NA TO: NA
SIZE: NA FROM: NA TO: NA

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Slots
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 3.0 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4.0 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: 5 Ft.
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREADED, FLUSH JOINED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 10.7 In.
• HINGED WELL CAP, RISER CAP

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	592.28
GROUND SURFACE	0.0	590.1
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	1.0	11.0	589.1	579.1
Sand	11.0	16.25	579.1	573.85
PERFORATED SECTION	12.75	15.75	577.3	572.3
WELL TIP	16.25		573.8	
BOTTOM OF BOREHOLE	19.5		570.6	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
10/02/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: J. LEAR DATE: 08/10/91
PROJECT NO. : 602.3.2 CHECKED BY : JW DATE: N/A
BORING NO. : 1719 N,E COORDINATES: 482215.57, 1379699.1
WELL NUMBER: 1719 DATE OF INSTAL.: 08/10/91

REMARKS -- COMMENT AREA

REMARKS : 1/2 BUCKET OF BENTONITE WAS USED TO SECURE SAND.
COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 2027
WELL NUMBER: 2027

FIELD ENG./GEO.: OAKLEY/KEGLEY DATE: 12/18/87
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 481969.29, 1379317.3
DATE OF INSTAL.: 12/18/87

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 3.0TO: 76.5
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING
CASING DIAM.: 4 In.
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 75
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: .010 (In.)
TOTAL PERFORATED AREA: 15 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREAD AND COUPLE

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 In.
* LOCKING CAP AND LOCK

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	585.55
GROUND SURFACE	0.0	582.7
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	2.0	41.0	N/A	N/A
Sand	41.0	47.0	N/A	N/A
Bentonite Pellets	47.0	56.0	N/A	N/A
Sand	56.0	76.5	N/A	N/A
PERFORATED SECTION	58.4	73.4	N/A	N/A

WELL TIP	N/A	N/A
BOTTOM OF BOREHOLE	76.5	N/A
GWL AFTER INSTALLATION	64.0	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.: OAKLEY/KEGLEY	DATE: 12/18/87
PROJECT NO. : 602.3.2	CHECKED BY : Not Noted	DATE: N/A
BORING NO. : 2027	N,E COORDINATES: 481969.29, 1379317.3	
WELL NUMBER: 2027	DATE OF INSTAL.: 12/18/87	

REMARKS -- COMMENT AREA

REMARKS : CORRECTIONS WERE MADE BY W. KEGLEY AT THE TIME THE FORM WAS COMPLETED. REFER TO VARIANCE #6 IN FIELD ACTIVITY VARIANCES FILE.

COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 2037
WELL NUMBER: 2037

FIELD ENG./GEO.: MARK SLUSARSKI DATE: 02/20/88
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 482140.97, 1379801.0
DATE OF INSTAL.: 02/20/88

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 4.0TO: 84.0
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : SERIES 200 MONITORIN
CASING DIAM.: 4 In.
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 84.0
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: .010 (In.)
TOTAL PERFORATED AREA: 15 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: N/A
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 6-10 Ft.
2ND PIPE SECTION: 1-5 Ft.
3RD PIPE SECTION: 2-2 Ft.
COMMENTS

RISER JOINING METHOD: THREAD AND COUPLE

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 In.
• LOCKABLE CAP

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	590.54
GROUND SURFACE	0.0	588.5
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0.0	57.0	N/A	N/A
Bentonite Pellets	57.0	61.0	N/A	N/A
Sand	61.0	84.0	N/A	N/A
PERFORATED SECTION	65.0	80.0	N/A	N/A
WELL TIP	82.5		N/A	
BOTTOM OF BOREHOLE	84.0		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.: MARK SLUSARSKI	DATE: 02/20/88	
PROJECT NO. : 602.3.2	CHECKED BY : Not Noted	DATE: N/A	
BORING NO. : 2037	N,E COORDINATES: 482140.97, 1379801.0		
WELL NUMBER: 2037	DATE OF INSTAL.: 02/20/88		

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD
08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 2052
WELL NUMBER: 2052

FIELD ENG./GEO.: W. KEGLEY DATE: 11/03/87
CHECKED BY : R. GALBRAITH DATE: 02/06/89
N,E COORDINATES: 482507.16, 1380139.7
DATE OF INSTAL.: 07/23/88

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0 TO: 81.5
FLUID: N/A FROM: N/A TO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITOR WELL
CASING DIAM.: 4 In.
CASING SIZE(S) USED: (Units N/A)
SIZE: FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: .01 (In.)
TOTAL PERFORATED AREA: 15 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: FLUSH JOINT THREADED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 3 In.
• LOCKING UP WITH LOCK

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	586.46
GROUND SURFACE	0.0	584.5
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0	47	N/A	N/A
Bentonite Pellets	47	52	N/A	N/A
Sand	52	77	N/A	N/A
PERFORATED SECTION	60	75	N/A	N/A

WELL TIP	77.0	N/A
BOTTOM OF BOREHOLE	81.5	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: W. KEGLEY DATE: 11/03/87
PROJECT NO. : 602.3.2 CHECKED BY : R. GALBRAITH DATE: 02/06/89
BORING NO. : 2052 N,E COORDINATES: 482507.16, 1380139.7
WELL NUMBER: 2052 DATE OF INSTAL.: 07/23/88

REMARKS -- COMMENT AREA

REMARKS : THIS IS THE FINAL INSTALLATION OF THE DEEPENED WELL 2052. THE ORIGINAL WELL 252 WAS DESTROYED IN THE PROCESS.

COMMENTS:

MONITORING WELL INSTALLATION RECORD
08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 3037
WELL NUMBER: 3037

FIELD ENG./GEO.: W. KEGLEY
CHECKED BY : Not Noted
N,E COORDINATES: 482141.43, 1379791.9
DATE OF INSTAL.: 02/08/88

DATE: 02/04/88
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: H2O FROM: 0.0TO: 138.5
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING
CASING DIAM.: 4 In.
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0.0 TO: 135
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 10 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4.0 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: 2 Ft.
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREAD COUPLE

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 In.
* LOCKABLE CAP

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE		ELEVATION MSL	
TOP OF RISER PIPE	2.5 Ft.		590.27	
GROUND SURFACE	0.0		588.5	
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.			
BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0	117.5	N/A	N/A
Sand	117.5	138.5	N/A	N/A
PERFORATED SECTION	124	134	N/A	N/A
WELL TIP	136.5		N/A	
BOTTOM OF BOREHOLE	138.5		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.: W. KEGLEY	DATE: 02/04/88
PROJECT NO. : 602.3.2	CHECKED BY : Not Noted	DATE: N/A
BORING NO. : 3037	N,E COORDINATES: 482141.43, 1379791.9	
WELL NUMBER: 3037	DATE OF INSTAL.: 02/08/88	

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 2048
WELL NUMBER: 2048

FIELD ENG./GEO.: BILL HERTEL DATE: 12/03/88
CHECKED BY : B. DUNNING DATE: 12/12/88
N,E COORDINATES: 477480.23, 1379866.5
DATE OF INSTAL.: 11/30/88

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0.0TO: 68.0
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4.0 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0.0 TO: 70.0
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.01 (In.)
TOTAL PERFORATED AREA: 15. Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4.0 In.
LENGTH OF 1ST PIPE SECTION: 2.0 Ft.
2ND PIPE SECTION: 10.0 Ft.
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: FLUSH THREAD SCREW TYPE JOINT

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 10 3 In.
* LOCKING CAP

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	573.56
GROUND SURFACE	0.0	571.5
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0.0	39.0	N/A	N/A
Bentonite Pellets	39.0	45.0	N/A	N/A
Sand	45.0	68.0	N/A	N/A
PERFORATED SECTION	50.0	65.0	N/A	N/A
WELL TIP	66.5		N/A	
BOTTOM OF BOREHOLE	68.0		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

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APPENDIX D

APPENDIX D

LIME SLUDGE PONDS DATA TABLES

LIST OF DATA TABLES
LIME SLUDGE PONDS

Table	Title
D-1	Surface Media Analyses: Environmental Survey
D-2	Surface Media Analyses: Characterization Investigation Study
D-3	Subsurface Media Analyses For Radionuclides: Boring Profile Samples: Characterization Investigation Study
D-4	Subsurface Media Analyses: Boring Composite Samples: Characterization Investigation Study
D-5	Subsurface Media Analyses: RI/FS Sampling Program
D-6	Subsurface Media Analyses: RCRA Facility Assessment
D-7	Surface Water Analyses: RI/FS Sampling Program
D-8	Surface Water Analyses: RCRA Facility Assessment
D-9	Groundwater Analyses: RI/FS Sampling Program
D-10	Geotechnical Analyses: Characterization Investigation Study
D-11	Geotechnical Analyses: RI/FS Sampling Program
D-12	Boring Logs: Characterization Investigation Study
D-13	Boring Logs: RI/FS Sampling Program
D-14	Groundwater Elevations: RI/FS Sampling Program
D-15	Monitoring Well Installation Records: RI/FS Sampling Program

TABLE D-1

SURFACE MEDIA ANALYSES
ENVIRONMENTAL SURVEY
LIME SLUDGE PONDS

TABLE D-1

SURFACE MEDIA ANALYSES
ENVIRONMENTAL SURVEY
LIME SLUDGE PONDS

Analyte	616 FEO616SS1B	617 FEO617SS1B	617 FEO617SS2B	618 FEO618SS1B	619 FEO619SS1B
Asbestos	NA	NA	NA	NA	NA
TCLP Metals (mg/L)					
Silver	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic	<0.5	<0.5	<0.5	<0.5	<0.5
Barium	0.36	0.28	0.27	0.29	0.29
Cadmium	<0.02	<0.02	<0.02	<0.02	<0.02
Chromium	0.05	0.04	0.04	0.04	0.03
Mercury	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	<0.3	<0.3	<0.3	<0.3	<0.3
Selenium	<0.5	<0.5	<0.5	<0.5	<0.5

Analyte	616 FEO616SS3B	617 FEO617SS3B		618 FEO618SS3B	619 FEO619SS3B
Volatile Organic Compounds (µg/kg)					
1,1,1-Tricloroethane	<5	14		9	9
1,1,2,2-Tetrachloroethane	<5	<5		<5	<5
1,1,2-Trichloroethane	<5	<5		<5	<5
1,1-Dichloroethane	<5	<5		<5	<5
1,2-Dichloroethane	<5	<5		<5	<5
1,2-Dichloropropane	<5	<5		<5	<5
2-Butanone	<10	<10		<10	<10
2-Chloroethylvinyl Ether	<10	<10		<10	<10
2-Hexanone	<10	<10		<10	<10
4-Methyl-2-pentanone	<10	<10		<10	<10
Acetone	18 B	19 B		21 B	25 B
Benzene	<5	<5		<5	<5
Bromodichloromethane	<5	<5		<5	<5
Bromoform	<5	<5		<5	<5
Bromomethane	<10	<10		<10	<10
Carbon disulfide	<5	<5		<5	<5
Carbon tetrachloride	<5	<5		<5	<5
Chlorobenzene	<5	<5		<5	<5
Chloroethane	<10	<10		<10	<10
Chloroform	7	11		7	8
Chloromethane	<10	<10		<10	<10
Cis-1,3-dichloropropene	<5	<5		<5	<5
Dibromochloromethane	<5	<5		<5	<5
Ethyl benzene	<5	<5		<5	<5
Methylene chloride	8 B	12 B		14 B	22 B
Styrene	<5	<5		<5	<5
Tetrachloroethene	<5	<5		<5	<5
Toluene	3 BJ	3 BJ		3 BJ	3 BJ
Total Xylenes	<5	<5		<5	<5
Trans-1,2-Dichloroethene	<5	<5		<5	<5
Trans-1,3-Dichloropropene	<5	<5		<5	<5

TABLE D-1
(continued)

Analyte	616 FEO616SS3B	617 FEO617SS3B	618 FEO618SS3B	619 FEO619SS3B
Trichloroethene	<5	<5	<5	<5
Vinyl Acetate	<10	<10	<10	<10
Vinyl Chloride	<10	<10	<10	<10
PCBs (mg/kg)				
Aroclor-1242	NA	NA	NA	NA
Aroclor-1248	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA

Analyte	616 FEO617SS2B	617 FEO617SS1B	617 FEO617SS2B	618 FEO619SS2B	619 FEO619SS2B
Radionuclides (pCi/g)					
Bismuth-214	I	0.4±0.09	NA	I	0.27±0.04
Cesium-137	I	0.27±0.04	NA	I	0.21±0.02
Radium-226	I	0.38±0.07	NA	I	0.27±0.03
Thorium-228	I	I	NA	I	I
Thorium-232	I	I	NA	I	I
Total Uranium (mg/kg)	14	19	17	36	28
Uranium-235	N	NA	0.18±0.02	N	0.44±0.02
Uranium-238	N	NA	1.6±0.3	41±6	22±4

NA = Not Analyzed
N = Nuclide not identified by GAMANAL analysis as being present in the sample; no value reported.
I = Nuclide identified by GAMANAL analysis of sample spectrum, but values did not exceed room background at the 95% confidence level; no value reported
B = Analyte was found in the blank as well as the sample
J = Estimated value of compound present but less than the specified detection limit
G = Gamma Spectroscopy Analysis
ND = None detected

TABLE D-2

SURFACE MEDIA ANALYSES
CHARACTERIZATION INVESTIGATION STUDY
LIME SLUDGE PONDS

NOTE:

- CIS data not applicable to the OU2 waste unit have been shaded.

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
23	FMP-SL-23-122	1379298.55	480444.38	.50	1.00	762.6	PB-210	=	36.00	2.00
	FMP-SL-23-122	1379298.55	480444.38	.50	1.00	762.6	PU-238	<	.20	
	FMP-SL-23-122	1379298.55	480444.38	.50	1.00	762.6	PU-239/240	<	.10	
	FMP-SL-23-122	1379298.55	480444.38	.50	1.00	762.6	RA-226	=		
	FMP-SL-23-122	1379298.55	480444.38	.50	1.00	762.6	RA-228	=		
	FMP-SL-23-122	1379298.55	480444.38	.50	1.00	762.6	RU-106	<	4.00	
	FMP-SL-23-122	1379298.55	480444.38	.50	1.00	762.6	SR-90	<	.60	
	FMP-SL-23-122	1379298.55	480444.38	.50	1.00	762.6	TC-99	<	2.00	
	FMP-SL-23-122	1379298.55	480444.38	.50	1.00	762.6	TH-228	=	2.30	.30
	FMP-SL-23-122	1379298.55	480444.38	.50	1.00	762.6	TH-230	=	56.00	2.00
	FMP-SL-23-122	1379298.55	480444.38	.50	1.00	762.6	TH-232	=	2.50	.20
	FMP-SL-23-122	1379298.55	480444.38	.50	1.00	762.6	U-234	=	21.00	1.00
	FMP-SL-23-122	1379298.55	480444.38	.50	1.00	762.6	U-235	=	.80	.10
	FMP-SL-23-122	1379298.55	480444.38	.50	1.00	762.6	U-238	=	22.00	1.00
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	CS-137	=	2.10	1.00
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	NP-237	<	.10	
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	PB-210	=	190.00	10.00
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	PU-238	<	.10	
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	PU-239/240	<	.10	
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	RA-226	=	109.56	3.61
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	RA-228	=		
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	RU-106	<	2.00	
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	SR-90	<	.80	
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	TC-99	<	.50	
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	TH-228	=	1.20	.20
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	TH-230	=	105.00	2.00
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	TH-232	=	1.00	.10
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	U-234	=	19.00	1.00
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	U-235	=	.80	.10
	FMP-SL-23-150	1379388.60	480444.92	.50	1.00	551.6	U-238	=	19.00	1.00
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	CS-137	<	.60	
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	NP-237	<	.10	
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	PB-210	=	44.00	3.00
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	PU-238	<	.10	
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	PU-239/240	<	.10	
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	RA-226	=	21.46	2.24
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	RA-228	=		
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	RU-106	<	5.00	
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	SR-90	<	.40	
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	TC-99	<	1.00	
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	TH-228	=	3.50	.30

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
23	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	TH-230	=	217.00	2.00
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	TH-232	=	3.60	.30
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	U-234	=	55.00	1.00
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	U-235	=	2.20	.20
	FMP-SS-23-005	1379724.04	480419.73	.00	.50	520.1	U-238	=	55.00	1.00
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	CS-137	<	.60	
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	NP-237	<	.10	
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	PB-210	=	30.00	2.00
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	PU-238	<	.10	
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	PU-239/240	<	.10	
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	RA-226	=	29.39	1.93
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	RA-228	=		
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	RU-106	<	3.00	
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	SR-90	<	.50	
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	TC-99	<	.20	
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	TH-228	=	.40	.10
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	TH-230	=	13.00	1.00
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	TH-232	=	.20	.10
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	U-234	=	25.00	1.00
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	U-235	=	1.00	.10
	FMP-SS-23-012	1379558.48	480438.27	.00	.50	598.5	U-238	=	27.00	1.00
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	CS-137	=	2.30	.60
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	NP-237	=	2.70	.50
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	PB-210	=	12.00	1.00
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	PU-238	=	.30	.10
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	PU-239/240	=	.20	.10
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	RA-226	=	9.64	1.30
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	RA-228	=		
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	RU-106	<	2.00	
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	SR-90	<	.70	
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	TC-99	=	91.00	4.00
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	TH-228	=	3.30	.30
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	TH-230	=	21.00	1.00
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	TH-232	=	.50	.10
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	U-234	=	84.00	2.00
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	U-235	=	3.80	.30
	FMP-SS-23-013	1379537.11	480424.85	.00	.50	604.2	U-238	=	83.00	2.00
	FMP-SS-23-029	1379157.22	480434.25	.00	.50	569.4	CS-137	=	1.20	.40
	FMP-SS-23-029	1379157.22	480434.25	.00	.50	569.4	NP-237	<	.10	
	FMP-SS-23-029	1379157.22	480434.25	.00	.50	569.4	PB-210	=	18.00	2.00
	FMP-SS-23-029	1379157.22	480434.25	.00	.50	569.4	PU-238	<	.10	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	* RADIONUCLIDE	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
46	FMP-SS-46-152	1379241.99	481411.29	.00	.50	718.1	SR-90	<	.40	
	FMP-SS-46-152	1379241.99	481411.29	.00	.50	718.1	TC-99	<	.60	
	FMP-SS-46-152	1379241.99	481411.29	.00	.50	718.1	TH-228	=	1.10	.20
	FMP-SS-46-152	1379241.99	481411.29	.00	.50	718.1	TH-230	=	6.30	.40
	FMP-SS-46-152	1379241.99	481411.29	.00	.50	718.1	TH-232	=	1.00	.20
	FMP-SS-46-152	1379241.99	481411.29	.00	.50	718.1	U-234	=	3.10	.20
	FMP-SS-46-152	1379241.99	481411.29	.00	.50	718.1	U-235	=	.20	.10
	FMP-SS-46-152	1379241.99	481411.29	.00	.50	718.1	U-238	=	4.80	.30
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	CS-137	<	.80	
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	NP-237	<	.20	
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	PB-210	=		
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	PU-238	<	.10	
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	PU-239/240	<	.10	
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	RA-226	=	33.38	2.59
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	RA-228	=		
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	RU-106	<	3.00	
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	SR-90	<	.30	
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	TC-99	<	.90	
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	TH-228	=	2.10	.60
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	TH-230	=	9.40	1.20
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	TH-232	=	2.30	.60
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	U-234	=	4.10	.40
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	U-235	=	.20	.10
	FMP-SS-46-175	1379290.60	481359.95	.00	.50	782.0	U-238	=	5.80	.40
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	CS-137	=	.60	.30
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	NP-237	<	.10	
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	PB-210	=		
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	PU-238	<	.20	
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	PU-239/240	<	.10	
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	RA-226	<	2.09	
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	RA-228	=		
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	RU-106	<	2.00	
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	SR-90	<	.30	
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	TC-99	=	5.10	.60
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	TH-228	<	.10	
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	TH-230	=	.50	.10
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	TH-232	<	.10	
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	U-234	=	2.30	.40
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	U-235	=	.20	.10
	FMP-SS-46-186	1379729.49	480947.78	.00	.50	697.0	U-238	=	8.60	.70
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	CS-137	=	.60	.30

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
46	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	NP-237	<	.20	
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	PB-210	=		
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	PU-238	=	.30	.20
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	PU-239/240	<	.10	
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	RA-226	<	.86	
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	RA-228	=		
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	RU-106	<	1.00	
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	SR-90	=	.80	.50
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	TC-99	=	4.00	.30
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	TH-228	=	3.40	.30
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	TH-230	=	31.00	1.00
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	TH-232	=	2.80	.30
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	U-234	=	24.00	1.00
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	U-235	=	1.80	.20
	FMP-SS-46-187	1379624.05	480750.59	.00	.50	762.6	U-238	=	86.00	1.00
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	CS-137	=	2.60	.50
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	NP-237	<	.30	
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	PB-210	=		
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	PU-238	<	.10	
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	PU-239/240	<	.10	
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	RA-226	=	7.00	.95
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	RA-228	=		
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	RU-106	<	2.00	
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	SR-90	<	.30	
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	TC-99	<	4.00	
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	TH-228	=	.80	.50
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	TH-230	=	295.00	9.00
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	TH-232	=	1.00	.60
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	U-234	=	6.10	.40
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	U-235	=	.40	.10
	FMP-SS-46-206	1378423.13	480733.44	.00	.16	486.0	U-238	=	9.30	.50
	FMP-SS-46-214	1378920.21	480619.80	.00	.16	534.0	CS-137	=	1.10	.50
	FMP-SS-46-214	1378920.21	480619.80	.00	.16	534.0	NP-237	<	.10	
	FMP-SS-46-214	1378920.21	480619.80	.00	.16	534.0	PB-210	=		
	FMP-SS-46-214	1378920.21	480619.80	.00	.16	534.0	PU-238	=	.40	.10
	FMP-SS-46-214	1378920.21	480619.80	.00	.16	534.0	PU-239/240	=	.10	.10
	FMP-SS-46-214	1378920.21	480619.80	.00	.16	534.0	RA-226	=	5.25	.83
	FMP-SS-46-214	1378920.21	480619.80	.00	.16	534.0	RA-228	=		
	FMP-SS-46-214	1378920.21	480619.80	.00	.16	534.0	RU-106	<	3.00	
	FMP-SS-46-214	1378920.21	480619.80	.00	.16	534.0	SR-90	<	.80	
	FMP-SS-46-214	1378920.21	480619.80	.00	.16	534.0	TC-99	=	4.80	.80

*RA226 AND RA228,WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
46	FMP-SS-46-519	1379471.52	481574.08	.00	.16	304.0	TH-232	=	.10	.10
	FMP-SS-46-519	1379471.52	481574.08	.00	.16	304.0	U-234	=	49.00	2.00
	FMP-SS-46-519	1379471.52	481574.08	.00	.16	304.0	U-235	=	4.90	.70
	FMP-SS-46-519	1379471.52	481574.08	.00	.16	304.0	U-238	=	302.00	5.00
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	CS-137	<	.90	
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	NP-237	=	4.00	.90
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	PB-210	=		
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	PU-238	=	.10	.10
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	PU-239/240	=	2.00	.40
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	RA-226	=	19.98	1.57
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	RA-228	=		
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	RU-106	<	5.00	
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	SR-90	<	.80	
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	TC-99	=	37.00	1.00
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	TH-228	=	17.00	2.00
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	TH-230	=	442.00	3.00
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	TH-232	=	4.00	3.00
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	U-234	=	180.00	2.00
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	U-235	=	9.00	.40
	FMP-SS-46-526	1379796.09	480420.76	.00	.16	537.0	U-238	=	164.00	2.00
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	CS-137	<	.80	
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	NP-237	<	.20	
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	PB-210	=		
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	PU-238	<	.20	
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	PU-239/240	<	.10	
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	RA-226	=	6.02	1.18
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	RA-228	=		
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	RU-106	<	4.00	
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	SR-90	<	.40	
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	TC-99	<	2.00	
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	TH-228	=	4.40	.50
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	TH-230	=	97.00	2.00
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	TH-232	=	4.90	.50
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	U-234	=	25.00	1.00
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	U-235	=	1.20	.20
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	U-238	=	27.00	1.00
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	CS-137	=	2.00	.90
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	NP-237	<	.10	
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	PB-210	=		
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	PU-238	<	.10	
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	PU-239/240	<	.10	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	* RADIONUCLIDE	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
46	FMP-SL-46-415	1380233.71	482228.47	.50	1.00	514.0	PB-210	=		
	FMP-SL-46-415	1380233.71	482228.47	.50	1.00	514.0	PU-238	<	.30	
	FMP-SL-46-415	1380233.71	482228.47	.50	1.00	514.0	PU-239/240	<	.10	
	FMP-SL-46-415	1380233.71	482228.47	.50	1.00	514.0	RA-226	=	5.20	1.09
	FMP-SL-46-415	1380233.71	482228.47	.50	1.00	514.0	RA-228	=		
	FMP-SL-46-415	1380233.71	482228.47	.50	1.00	514.0	RU-106	<	2.00	
	FMP-SL-46-415	1380233.71	482228.47	.50	1.00	514.0	SR-90	<	.80	
	FMP-SL-46-415	1380233.71	482228.47	.50	1.00	514.0	TC-99	<	4.00	
	FMP-SL-46-415	1380233.71	482228.47	.50	1.00	514.0	TH-228	=	9.10	.40
	FMP-SL-46-415	1380233.71	482228.47	.50	1.00	514.0	TH-230	=	12.00	1.00
	FMP-SL-46-415	1380233.71	482228.47	.50	1.00	514.0	TH-232	=	4.10	.30
	FMP-SL-46-415	1380233.71	482228.47	.50	1.00	514.0	U-234	=	21.00	1.00
	FMP-SL-46-415	1380233.71	482228.47	.50	1.00	514.0	U-235	=	1.20	.20
	FMP-SL-46-415	1380233.71	482228.47	.50	1.00	514.0	U-238	=	85.00	2.00
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	CS-137	<	.30	
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	NP-237	<	.10	
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	PB-210	=		
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	PU-238	<	.10	
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	PU-239/240	<	.10	
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	RA-226	=	5.61	.65
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	RA-228	=		
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	RU-106	<	2.00	
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	SR-90	<	.50	
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	TC-99	=	17.00	2.00
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	TH-228	=	.10	.10
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	TH-230	=	2.30	.20
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	TH-232	<	.10	
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	U-234	=	8.20	.30
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	U-235	=	.40	.10
	FMP-SL-46-527	1379796.09	480420.76	.16	.50	739.0	U-238	=	9.90	.30
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	CS-137	<	.70	
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	NP-237	<	.20	
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	PB-210	=		
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	PU-238	<	.10	
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	PU-239/240	<	.10	
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	RA-226	=	23.31	6.88
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	RA-228	=		
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	RU-106	<	5.00	
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	SR-90	<	.60	
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	TC-99	<	.40	
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	TH-228	=	29.00	3.00

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	* RADIONUCLIDE	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
46	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	RA-226	=	6.33	1.89
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	RA-228	=		
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	RU-106	<	3.00	
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	SR-90	<	.60	
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	TC-99	<	2.00	
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	TH-228	=	6.60	.40
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	TH-230	=	105.00	2.00
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	TH-232	=	7.00	.40
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	U-234	=	29.00	1.00
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	U-235	=	1.10	.20
	FMP-SS-46-532	1379708.44	480398.15	.00	.16	316.6	U-238	=	29.00	1.00
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	CS-137	<	.90	
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	NP-237	<	.10	
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	PB-210	=		
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	PU-238	=	.20	.10
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	PU-239/240	=	.40	.10
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	RA-226	=	6.58	1.43
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	RA-228	=		
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	RU-106	<	4.00	
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	SR-90	<	.40	
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	TC-99	=	16.00	1.00
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	TH-228	=	7.90	.50
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	TH-230	=	19.00	1.00
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	TH-232	=	2.60	.30
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	U-234	=	38.00	1.00
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	U-235	=	1.70	.20
	FMP-SS-46-534	1379590.01	480420.40	.00	.16	317.0	U-238	=	36.00	1.00
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	CS-137	<	.50	
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	NP-237	<	.10	
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	PB-210	=		
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	PU-238	<	.10	
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	PU-239/240	<	.10	
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	RA-226	=	14.96	1.97
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	RA-228	=		
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	RU-106	<	5.00	
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	SR-90	<	.80	
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	TC-99	<	1.00	
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	TH-228	=	1.40	.40
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	TH-230	=	25.00	1.00
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	TH-232	=	2.10	.50
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	U-234	=	22.00	1.00

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
46	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	U-235	=	.70	.10
	FMP-SS-46-542	1379689.80	480411.67	.00	.16	433.0	U-238	=	25.00	1.00
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	CS-137	<	.60	
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	NP-237	<	.20	
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	PB-210	=		
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	PU-238	<	.10	
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	PU-239/240	<	.10	
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	RA-226	=		
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	RA-228	=		
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	RU-106	<	5.00	
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	SR-90	<	.30	
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	TC-99	<	1.00	
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	TH-228	=	14.00	1.00
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	TH-230	=	209.00	3.00
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	TH-232	=	14.00	1.00
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	U-234	=	17.00	1.00
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	U-235	=	.80	.20
	FMP-SS-46-544	1379689.80	480411.67	.16	.50	422.0	U-238	=	20.00	1.00
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	CS-137	<	.50	
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	NP-237	<	.20	
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	PB-210	=		
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	PU-238	<	.10	
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	PU-239/240	<	.10	
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	RA-226	=	29.46	3.12
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	RA-228	=		
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	RU-106	<	5.00	
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	SR-90	<	.60	
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	TC-99	<	2.00	
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	TH-228	=	8.00	.70
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	TH-230	=	219.00	4.00
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	TH-232	=	9.40	.80
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	U-234	=	62.00	1.00
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	U-235	=	2.70	.20
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	329.2	U-238	=	63.00	1.00
	FMP-SS-46-588	1379296.43	481353.78	.00	.16	616.0	CS-137	=	.60	.50
	FMP-SS-46-588	1379296.43	481353.78	.00	.16	616.0	NP-237	<	.10	
	FMP-SS-46-588	1379296.43	481353.78	.00	.16	616.0	PB-210	=		
	FMP-SS-46-588	1379296.43	481353.78	.00	.16	616.0	PU-238	<	.10	
	FMP-SS-46-588	1379296.43	481353.78	.00	.16	616.0	PU-239/240	<	.10	
	FMP-SS-46-588	1379296.43	481353.78	.00	.16	616.0	RA-226	=	9.41	.95
	FMP-SS-46-588	1379296.43	481353.78	.00	.16	616.0	RA-228	=		

*RA226 AND RA228,WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
46	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	TH-230	=	800.00	12.00
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	TH-232	=	29.00	3.00
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	U-234	=	54.00	2.00
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	U-235	=	2.40	.40
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	U-238	=	54.00	2.00
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	CS-137	<	.70	
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	NP-237	<	.30	
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	PB-210	=		
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	PU-238	<	.10	
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	PU-239/240	<	.10	
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	RA-226	=	10.45	1.55
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	RA-228	=		
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	RU-106	<	3.00	
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	SR-90	<	.30	
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	TC-99	<	2.00	
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	TH-228	=	16.00	1.00
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	TH-230	=	251.00	4.00
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	TH-232	=	18.00	1.00
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	U-234	=	22.00	1.00
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	U-235	=	.90	.20
	FMP-SL-46-543	1379689.80	480411.67	.16	.50	480.2	U-238	=	23.00	1.00
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	CS-137	<	.20	
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	NP-237	<	.10	
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	PB-210	=		
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	PU-238	<	.10	
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	PU-239/240	<	.10	
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	RA-226	=	10.55	1.03
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	RA-228	=		
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	RU-106	<	2.00	
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	SR-90	<	.20	
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	TC-99	<	.40	
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	TH-228	<	.10	
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	TH-230	<	.10	
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	TH-232	<	.10	
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	U-234	=	2.10	.30
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	U-235	=	.10	.10
	FMP-SL-46-603	1378946.04	481344.37	.16	.50	594.0	U-238	=	4.50	.40
	FMP-SL-46-605	1378984.38	481356.32	.16	.50	605.0	CS-137	<	.20	
	FMP-SL-46-605	1378984.38	481356.32	.16	.50	605.0	NP-237	<	.40	
	FMP-SL-46-605	1378984.38	481356.32	.16	.50	605.0	PB-210	=		
	FMP-SL-46-605	1378984.38	481356.32	.16	.50	605.0	PU-238	<	.20	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

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TABLE D-3

SUBSURFACE MEDIA ANALYSES FOR RADIONUCLIDES
BORING PROFILE SAMPLES
CHARACTERIZATION INVESTIGATION STUDY
LIME SLUDGE PONDS

NOTE:

- CIS data not applicable to OU2 have been shaded.

Mon Nov 28

Activity Concentrations Of North Lime Sludge Pond Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
47-01	.00	.50	RA-226	=	.70	.50
	.00	.50	TH-232	=	.90	.30
	.00	.50	U-238	=	5.80	2.20
	.50	1.80	RA-226	<	.60	
	.50	1.80	TH-232	<	2.40	
	.50	1.80	U-238	=	2.30	1.90
	1.80	3.50	RA-226	<	1.30	
	1.80	3.50	TH-232	<	.40	
	1.80	3.50	U-238	<	8.30	
47-02	.50	2.20	RA-226	<	.60	
	.50	2.20	TH-232	=	.50	.20
	.50	2.20	U-238	=	1.70	1.10
	2.20	3.80	RA-226	<	.50	
	2.20	3.80	TH-232	<	.40	
	2.20	3.80	U-238	<	4.30	
	3.80	5.50	RA-226	<	.70	
	3.80	5.50	TH-232	<	.30	
	3.80	5.50	U-238	=	2.80	1.60
47-03	2.00	3.60	RA-226	<	1.30	
	2.00	3.60	TH-232	=	.50	.20
	2.00	3.60	U-238	<	6.80	
	3.60	5.30	RA-226	<	.10	
	3.60	5.30	TH-232	<	1.30	
	3.60	5.30	U-238	<	3.80	
	5.30	7.00	RA-226	=	.90	.40
	5.30	7.00	TH-232	<	1.40	
	5.30	7.00	U-238	=	6.90	5.20

27 records selected.

Mon Nov 23

Activity Concentrations Of South Lime Sludge Pond Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
48-01	2.00	3.00	RA-226	<	1.70	
	2.00	3.00	TH-232	=	.60	.20
	2.00	3.00	U-238	=	6.70	2.80
	3.00	4.00	RA-226	<	1.20	
	3.00	4.00	TH-232	<	.50	
	3.00	4.00	U-238	<	7.40	
	4.00	5.00	RA-226	<	1.30	
	4.00	5.00	TH-232	<	.20	
	4.00	5.00	U-238	=	2.80	1.40
	5.00	6.00	RA-226	<	.60	
	5.00	6.00	TH-232	<	.20	
	5.00	6.00	U-238	<	4.20	
	6.00	7.00	RA-226	<	1.40	
	6.00	7.00	TH-232	<	.30	
	6.00	7.00	U-238	=	4.10	1.40
	7.00	8.00	RA-226	<	1.30	
	7.00	8.00	TH-232	<	1.50	
	7.00	8.00	U-238	<	5.60	
48-02	.00	2.00	RA-226	<	.20	
	.00	2.00	TH-232	<	.40	
	.00	2.00	U-238	=	4.00	2.70
	2.00	3.00	RA-226	<	1.60	
	2.00	3.00	TH-232	<	2.60	
	2.00	3.00	U-238	<	4.80	
	3.00	4.00	RA-226	<	.10	
	3.00	4.00	TH-232	<	.30	
	3.00	4.00	U-238	=	2.70	1.20
	4.00	5.00	RA-226	<	.10	
	4.00	5.00	TH-232	<	.30	
	4.00	5.00	U-238	<	11.20	
	5.00	6.00	RA-226	<	2.20	
	5.00	6.00	TH-232	<	.40	
	5.00	6.00	U-238	<	5.50	
	6.00	7.00	RA-226	<	1.50	
	6.00	7.00	TH-232	<	1.50	
	6.00	7.00	U-238	=	2.00	1.60
	7.00	8.00	RA-226	<	1.40	
	7.00	8.00	TH-232	=	.40	.20
	7.00	8.00	U-238	<	12.00	

Mon Nov 23

Activity Concentrations Of South Lime Sludge Pond Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
48-02	8.00	9.00	RA-226	<	.20	
	8.00	9.00	TH-232	<	1.10	
	8.00	9.00	U-238	<	1.80	
48-03	.00	1.00	RA-226	<	.20	
	.00	1.00	TH-232	<	.40	
	.00	1.00	U-238	=	3.20	1.60
	1.00	2.00	RA-226	<	.10	
	1.00	2.00	TH-232	<	.40	
	1.00	2.00	U-238	<	10.10	
	2.00	3.00	RA-226	=	1.10	.50
	2.00	3.00	TH-232	<	.70	
	2.00	3.00	U-238	<	9.80	
	3.00	4.00	RA-226	=	2.00	.80
	3.00	4.00	TH-232	<	.60	
	3.00	4.00	U-238	<	13.40	
	4.00	5.00	RA-226	<	1.00	
	4.00	5.00	TH-232	<	.40	
	4.00	5.00	U-238	<	5.60	
	5.00	6.00	RA-226	<	.70	
	5.00	6.00	TH-232	<	.40	
	5.00	6.00	U-238	=	4.70	3.50
	6.00	7.00	RA-226	<	.50	
	6.00	7.00	TH-232	=	.30	.20
	6.00	7.00	U-238	<	7.20	
	7.00	8.00	RA-226	<	.90	
	7.00	8.00	TH-232	<	.20	
	7.00	8.00	U-238	<	6.90	
	8.00	9.00	RA-226	<	1.00	
	8.00	9.00	TH-232	<	2.30	
	8.00	9.00	U-238	=	4.40	1.30

69 records selected.

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TABLE D-4

SUBSURFACE MEDIA ANALYSES
BORING COMPOSITE SAMPLES
CHARACTERIZATION INVESTIGATION STUDY
LIME SLUDGE PONDS

NOTES:

- Only positive detections are presented for organic and inorganic constituents. Non-detected analytes were not presented in the Characterization Investigation Study.
- Qualifiers given for CIS data are laboratory qualifiers. Validation of CIS data has not been completed.
- CIS data not applicable to the OU2 waste unit have been shaded.

Mon Nov 23

Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
25-02	TH-232	=	.10	.10
	U-234	=	5.70	.30
	U-235	=	.20	.06
	U-238	=	6.80	.20
47-01	CS-137	<	1.00	
	NP-237	<	.03	
	PB-210	=	NOT ANALYZED	
	PU-238	<	.06	
	PU-239/240	<	.05	
	RA-226	<	6.20	
	RA-228	=	NOT ANALYZED	
	RU-106	<	6.00	
	SR-90	=	2.20	.90
	TC-99	<	.30	
	TH-228	=	.20	.20
	TH-230	=	20.00	1.00
	TH-232	=	.20	.20
	U-234	=	2.50	.20
	U-235	=	.10	.10
	U-238	=	7.60	.40
47-02	CS-137	<	2.00	
	NP-237	<	.04	
	PB-210	=	NOT ANALYZED	
	PU-238	<	.09	
	PU-239/240	<	.05	
	RA-226	<	2.00	
	RA-228	=	NOT ANALYZED	
	RU-106	<	6.00	
	SR-90	<	.50	
	TC-99	<	.40	
	TH-228	=	.20	.10
	TH-230	=	5.00	.40
	TH-232	=	.20	.10
	U-234	=	2.50	.20
	U-235	=	.20	.10
	U-238	=	2.40	.20

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations
(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

Mon Nov 23

Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
47-03	CS-137	<	.80	
	NP-237	<	.03	
	PB-210	=	NOT ANALYZED	
	PU-238	<	.05	
	PU-239/240	<	.05	
	RA-226	<	3.90	
	RA-228	=	NOT ANALYZED	
	RU-106	<	5.00	
	SR-90	<	.50	
	TC-99	<	.30	
	TH-228	=	.20	.10
	TH-230	=	.50	.10
	TH-232	=	.20	.10
	U-234	=	2.10	.20
	U-235	=	.10	.10
	U-238	=	2.70	.20
48-01	CS-137	<	.60	
	NP-237	<	.07	
	PB-210	=	NOT ANALYZED	
	PU-238	<	.05	
	PU-239/240	<	.05	
	RA-226	<	2.30	
	RA-228	=	NOT ANALYZED	
	RU-106	<	5.00	
	SR-90	<	.50	
	TC-99	<	.40	
	TH-228	=	.30	.30
	TH-230	=	7.00	1.00
	TH-232	=	.30	.20
	U-234	=	3.10	.80
	U-235	=	.30	.30
	U-238	=	2.20	.70
48-02	CS-137	<	.60	
	NP-237	<	.03	
	PB-210	=	NOT ANALYZED	
	PU-238	<	.05	

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations

(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

Mon Nov 23

Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
48-02	PU-239/240	<	.05	
	RA-226	<	2.50	
	RA-228	=	NOT ANALYZED	
	RU-106	<	5.00	
	SR-90	<	.50	
	TC-99	<	.40	
	TH-228	=	.10	.10
	TH-230	=	1.10	.20
	TH-232	=	.10	.10
	U-234	=	1.80	.30
	U-235	=	.10	.10
	U-238	=	2.80	.30
48-03	CS-137	<	.50	
	NP-237	<	.03	
	PB-210	=	NOT ANALYZED	
	PU-238	<	.05	
	PU-239/240	<	.05	
	RA-226	<	1.10	
	RA-228	=	NOT ANALYZED	
	RU-106	<	5.00	
	SR-90	<	.50	
	TC-99	<	.30	
	TH-228	=	.20	.20
	TH-230	=	.90	.20
	TH-232	=	.20	.10
	U-234	=	2.00	.30
	U-235	=	.10	.10
	U-238	=	2.70	.30
49-01	CS-137	<	.30	
	NP-237	<	.30	
	PB-210	=	NOT ANALYZED	
	PU-238	<	.10	
	PU-239/240	<	.10	
	RA-226	=	1.00	.40
	RA-228	=	NOT ANALYZED	
	RU-106	<	2.00	
	SR-90	<	.70	

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations
(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

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Mon Nov 16

North Lime Sludge Pond Organic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure	Qualifier
47-01	FMP-PS-47-001	8703-948-0010	DI-N-BUTYL PHTHALATE	95.00	UG/KG	*
			ACETONE	130.00	UG/KG	*
			BUTYL BENZYL PHTHALATE	2800.00	UG/KG	
			BIS(2-ETHYLHEXYL)PHTHALATE	180.00	UG/KG	*
			1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	81.00	UG/KG	J
			CARBON DISULFIDE	9.00	UG/KG	J
			UNKNOWN HYDROCARBON	130.00	UG/KG	J
			METHYLENE CHLORIDE	21.00	UG/KG	*
47-02	FMP-PS-47-007	8703-948-0020	1,1-DICHLOROETHANE	3.00	UG/KG	J
			TOLUENE	20.00	UG/KG	*
			TOLUENE	20.00	UG/KG	*
			METHYLENE CHLORIDE	26.00	UG/KG	*
			ACETONE	150.00	UG/KG	*
			BIS(2-ETHYLHEXYL)PHTHALATE	150.00	UG/KG	*
			CARBON DISULFIDE	7.00	UG/KG	J
			ACETONE	150.00	UG/KG	*
			1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	50.00	UG/KG	J
			DI-N-BUTYL PHTHALATE	89.00	UG/KG	*
			METHYLENE CHLORIDE	26.00	UG/KG	*
47-03	FMP-PS-47-013	8703-948-0030	METHYLENE CHLORIDE	21.00	UG/KG	*
			CHLORDANE	1200.00	UG/KG	
			BUTYL BENZYL PHTHALATE	370.00	UG/KG	
			DI-N-BUTYL PHTHALATE	120.00	UG/KG	*
			ACETONE	20.00	UG/KG	J*
			AROCLOR-1248	1200.00	UG/KG	
			BIS(2-ETHYLHEXYL)PHTHALATE	310.00	UG/KG	*
			PHENOL	610.00	UG/KG	
			CARBON DISULFIDE	9.00	UG/KG	J

J = Concentration is below quantification level; * = Common laboratory contaminant

Mon Nov 16

South Lime Sludge Pond Organic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure	Qualifier
48-01	FMP-PS-48-001	8704-077-0020	BIS(2-ETHYLHEXYL)PHTHALATE	310.00	UG/KG	J*
			PHENOL	89.00	UG/KG	J
			2-BUTANONE	1800.00	UG/KG	*
			METHYLENE CHLORIDE	240.00	UG/KG	J*
			BENZOIC ACID(2)	160.00	UG/KG	J
48-02	FMP-PS-48-014	8704-077-0050	DI-N-BUTYL PHTHALATE	73.00	UG/KG	J*
			ACETONE	90.00	UG/KG	J*
			BIS(2-ETHYLHEXYL)PHTHALATE	240.00	UG/KG	J*
			METHYLENE CHLORIDE	110.00	UG/KG	J*
48-03	FMP-PS-48-027	8704-108-0010	DI-N-BUTYL PHTHALATE	47.00	UG/KG	J*
			ACETONE	140.00	UG/KG	J*
			METHYLENE CHLORIDE	190.00	UG/KG	J*
			BIS(2-ETHYLHEXYL)PHTHALATE	230.00	UG/KG	J*

J = Concentration is below quantification level; * = Common laboratory contaminant

Thu Nov 12

North Lime Sludge Pond Inorganic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure
47-01	FMP-PS-47-001	8703-948-0010	ALUMINUM, TOTAL	18600.00	MG/KG
			ARSENIC, TOTAL	6.30	MG/KG
			CALCIUM, TOTAL	262000.00	MG/KG
			CHROMIUM, TOTAL	14.00	MG/KG
			COPPER, TOTAL	15.00	MG/KG
			IRON, TOTAL	14600.00	MG/KG
			MAGNESIUM, TOTAL	19100.00	MG/KG
			MANGANESE, TOTAL	617.00	MG/KG
			MERCURY, TOTAL	.30	MG/KG
			POTASSIUM, TOTAL	1070.00	MG/KG
			SODIUM, TOTAL	1530.00	MG/KG
			ZINC, TOTAL	45.00	MG/KG
		8703-948-0060	SELENIUM, EP LEACHATE	192.00	UG/L
47-02	FMP-PS-47-007	8703-948-0020	ALUMINUM, TOTAL	13300.00	MG/KG
			ARSENIC, TOTAL	12.00	MG/KG
			CALCIUM, TOTAL	260000.00	MG/KG
			CHROMIUM, TOTAL	9.40	MG/KG
			COPPER, TOTAL	20.00	MG/KG
			IRON, TOTAL	8990.00	MG/KG
			MAGNESIUM, TOTAL	19700.00	MG/KG
			MANGANESE, TOTAL	546.00	MG/KG
			MERCURY, TOTAL	.30	MG/KG
			POTASSIUM, TOTAL	695.00	MG/KG
			SODIUM, TOTAL	450.00	MG/KG
			ZINC, TOTAL	38.00	MG/KG
		8703-948-0070	SELENIUM, EP LEACHATE	293.00	UG/L
47-03	FMP-PS-47-013	8703-948-0030	ALUMINUM, TOTAL	9630.00	MG/KG
			ARSENIC, TOTAL	16.00	MG/KG
			CALCIUM, TOTAL	252000.00	MG/KG
			CHROMIUM, TOTAL	22.00	MG/KG
			COPPER, TOTAL	24.00	MG/KG
			IRON, TOTAL	20600.00	MG/KG
			MAGNESIUM, TOTAL	21200.00	MG/KG
			MANGANESE, TOTAL	638.00	MG/KG
			POTASSIUM, TOTAL	1670.00	MG/KG
			SODIUM, TOTAL	304.00	MG/KG

Thu Nov 12

North Lime Sludge Pond Inorganic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure
47-03	FMP-PS-47-013	8703-948-0030	ZINC, TOTAL	75.00	MG/KG
		8703-948-0080	MERCURY, EP LEACHATE	.23	UG/L
			SELENIUM, EP LEACHATE	187.00	UG/L

Thu Nov 12

South Lime Sludge Pond Inorganic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure
48-01	FMP-PS-48-001	8704-077-0020	ALUMINUM, TOTAL	6015.60	MG/KG
			CALCIUM, TOTAL	333762.00	MG/KG
			CHROMIUM, TOTAL	6.86	MG/KG
			COPPER, TOTAL	12.01	MG/KG
			IRON, TOTAL	6936.07	MG/KG
			MAGNESIUM, TOTAL	17678.91	MG/KG
			MANGANESE, TOTAL	717.28	MG/KG
			POTASSIUM, TOTAL	343.20	MG/KG
			ZINC, TOTAL	16.47	MG/KG
		8704-077-0070	BARIUM, EP LEACHATE	1054.00	UG/L
48-02	FMP-PS-48-014	8704-077-0050	ALUMINUM, TOTAL	4348.55	MG/KG
			BARIUM, TOTAL	73.34	MG/KG
			CALCIUM, TOTAL	298311.72	MG/KG
			CHROMIUM, TOTAL	5.97	MG/KG
			IRON, TOTAL	5041.56	MG/KG
			MAGNESIUM, TOTAL	15141.27	MG/KG
			MANGANESE, TOTAL	746.77	MG/KG
			ZINC, TOTAL	16.59	MG/KG
		8704-077-0080	BARIUM, EP LEACHATE	2091.00	UG/L
			CADMIUM, EP LEACHATE	163.00	UG/L
			LEAD, EP LEACHATE	647.00	UG/L
48-03	FMP-PS-48-027	8704-108-0010	ALUMINUM, TOTAL	5148.36	MG/KG
			CALCIUM, TOTAL	302580.00	MG/KG
			CHROMIUM, TOTAL	5.04	MG/KG
			IRON, TOTAL	6177.60	MG/KG
			LEAD, TOTAL	2.14	MG/KG
			MAGNESIUM, TOTAL	17981.64	MG/KG
			MANGANESE, TOTAL	694.80	MG/KG
			POTASSIUM, TOTAL	216.00	MG/KG
			ZINC, TOTAL	14.40	MG/KG

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TABLE D-5

SUBSURFACE MEDIA ANALYSES
RI/FS SAMPLING PROGRAM
LIME SLUDGE PONDS

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

LIME SLUDGE PONDS
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1039 008439 12.0 - 13.5			
Actinium 231		NA		
Cesium 137	<	0.2		
Lead 210		NA		
Neptunium 237	<	0.6		
Plutonium 210		NA		
Plutonium 238	<	0.6		
Plutonium 239/240	<	0.6		
Protactium 234		NA		
Radium 224		NA		
Radium 226		0.9	±	0.1
Radium 228	<	0.5		
Ruthenium 106	<	1.0		
Strontium 90	<	0.5		
Technetium 99	<	0.9		
Thorium 228		0.7	±	0.2
Thorium 230		1.5	±	0.4
Thorium 232		0.9	±	0.3
Total Thorium **		NA		
Uranium 234		0.8	±	0.3
Uranium 235/236	<	0.6		
Uranium 238		0.7	±	0.2
Total Uranium **		NA		

** Results reported in mg/kg or µg/ℓ.

b = validation qualifiers

- = Sample has not been validated

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LIME SLUDGE PONDS
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1041 008448 0 - 1.5				b
Actinium 231		NA			
Cesium 137	<	0.2			J
Lead 210		NA			
Neptunium 237	<	0.6			
Plutonium 210		NA			
Plutonium 238	<	0.6			
Plutonium 239/240	<	0.6			
Protactium 234		NA			
Radium 224		NA			
Radium 226		1.1	±	0.1	J
Radium 228		0.9	±	0.2	J
Ruthenium 106	<	1.0			J
Strontium 90	<	0.5			J
Technetium 99	<	0.9			J
Thorium 228		1.3	±	0.5	J
Thorium 230		3.8	±	0.9	J
Thorium 232		1.5	±	0.5	J
Total Thorium **		NA			
Uranium 234		3.8	±	0.8	
Uranium 235/236	<	0.6			
Uranium 238		5.9	±	1.1	
Total Uranium **		NA			

** Results reported in mg/kg or µg/ℓ.

b = validation qualifiers

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LIME SLUDGE PONDS
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1716 067904 1.5 - 2.0				b
Actinium 231		NA			
Cesium 137	<	0.2			
Lead 210		NA			
Neptunium 237		NA			
Plutonium 210		NA			
Plutonium 238	<	0.6			J
Plutonium 239/240	<	0.6			R
Protactium 234		NA			
Radium 224		NA			
Radium 226	<	0.3			
Radium 228	<	0.5			
Ruthenium 106	<	1.0			
Strontium 90	<	0.5			
Technetium 99	<	0.9			R
Thorium 228		1.04	±	0.30	J
Thorium 230	<	0.6			J
Thorium 232	<	0.6			
Total Thorium **	<	1.0			
Uranium 234		1.57	±	0.40	J
Uranium 235/236	<	0.6			J
Uranium 238		1.33	±	0.36	
Total Uranium **		5.5	±	1.8	

** Results reported in mg/kg or µg/ℓ.

b = validation qualifiers

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LIME SLUDGE PONDS
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1717 067902 1.5 - 2.0				b
Actinium 231		NA			
Cesium 137	<	0.2			
Lead 210		NA			
Neptunium 237		NA			
Plutonium 210		NA			
Plutonium 238	<	0.6			J
Plutonium 239/240	<	0.6			R
Protactium 234		NA			
Radium 224		NA			
Radium 226		0.4	±	0.1	J
Radium 228	<	0.5			
Ruthenium 106	<	1.0			
Strontium 90	<	0.5			
Technetium 99	<	0.9			R
Thorium 228		1.46	±	0.40	J
Thorium 230		1.20	±	0.35	J
Thorium 232	<	0.6			
Total Thorium **	<	1.2			
Uranium 234		0.87	±	0.21	J
Uranium 235/236	<	0.6			J
Uranium 238		0.7	±	0.2	
Total Uranium **		2.1	±	1.1	J

** Results reported in mg/kg or µg/ℓ.

b = validation qualifiers

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LIME SLUDGE PONDS
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	2042 008509 45.0 - 46.5				2042 008869 3.0 - 4.5			
Actinium 231		NA				NA		
Cesium 137	<	0.2			<	0.2		
Lead 210		NA				NA		
Neptunium 237	<	0.6			<	0.6		
Plutonium 210		NA				NA		
Plutonium 238	<	0.6			<	0.6		
Plutonium 239/240	<	0.6			<	0.6		
Protactium 234		NA				NA		
Radium 224		NA				NA		
Radium 226		0.4	±	0.1		1.0	±	0.1
Radium 228	<	0.5				1.2	±	0.1
Ruthenium 106	<	1.0			<	1.0		
Strontium 90	<	0.5				6.0	±	0.8
Technetium 99	<	0.9			<	0.9		
Thorium 228	<	0.6				1.0	±	0.2
Thorium 230		1.3	±	0.2		2.3	±	0.4
Thorium 232	<	0.6				1.3	±	0.3
Total Thorium **		NA				NA		
Uranium 234	<	0.6				0.8	±	0.2
Uranium 235/236	<	0.6			<	0.6		
Uranium 238	<	0.6				0.9	±	0.2
Total Uranium **		NA				NA		

** Results reported in mb/kg or µg/ℓ.

b = validation qualifiers

- = Sample has not been validated

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REPORT DATE : 22-APR-92

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EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING HAZARDOUS SUBSTANCE LIST RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

J = Indicates an estimated value. This flag is used when the mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.

C = This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E = This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to pesticides/PCBs analyzed by GC/EC methods.

D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.

F = Estimated value due to a confirmed compound which is off-scale in both columns.

X = A flag that FORMASTER III CLP software automatically inserts to indicate that the data was entered manually.

Z = No estimated value reported, or an elevated CRQL reported because matrix effects interfere with or obscure the compound on one or both columns. In either situation, the compound does not confirm as a positive identification.

* = Values outside of contract laboratory-required QC limits.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

LIME SLUDGE PONDS
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1716 067904 1.5 - 2.0		1716 067007 1.5 - 2.0 TCLP		1717 067902 1.5 - 2.0		1717 067003 1.5 - 2.0 TCLP	
	a	b	a	b	a	b	a	b
DIOXINS								
1,2,3,4,6,7,8-Heptachlorodib	< 0.00032		NA		< 0.00007		NA	
1,2,3,4,6,7,8-Heptachlorodib	< 0.00026		NA		< 0.00024		NA	
1,2,3,4,7,8,9-Heptachlorodib	< 0.00037		NA		< 0.00034		NA	
1,2,3,4,7,8-Hexachlorodibenz	< 0.00010		NA		< 0.00005		NA	
1,2,3,4,7,8-Hexachlorodibenz	< 0.00010		NA		< 0.00005		NA	
1,2,3,6,7,8-Hexachlorodibenz	< 0.00008		NA		< 0.00004		NA	
1,2,3,6,7,8-Hexachlorodibenz	< 0.00009		NA		< 0.00004		NA	
1,2,3,7,8,9-Hexachlorodibenz	< 0.00008		NA		< 0.00004		NA	
1,2,3,7,8,9-Hexachlorodibenz	< 0.00012		NA		< 0.00006		NA	
1,2,3,7,8-Pentachlorodibenzo	< 0.00024	UJ	NA		< 0.00010	UJ	NA	
1,2,3,7,8-Pentachlorodibenzo	< 0.00030		NA		< 0.00009		NA	
2,3,4,6,7,8-Hexachlorodibenz	< 0.00011		NA		< 0.00005		NA	
2,3,4,7,8-Pentachlorodibenzo	< 0.00033		NA		< 0.00009		NA	
2,3,7,8-TCDD	< 0.00012		NA		< 0.00010		NA	
2,3,7,8-TCDF	< 0.00056		NA		< 0.00011		NA	
Heptachlorodibenzo-p-dioxin	< 0.00032		NA		< 0.00007		NA	
Heptachlorodibenzofuran	< 0.00031		NA		< 0.00029		NA	
Hexachlorodibenzo-p-dioxin	< 0.00008		NA		< 0.00004		NA	
Hexachlorodibenzofuran	< 0.00010		NA		< 0.00005		NA	
Octachlorodibenzo-p-dioxin	< 0.00031	J	NA		< 0.00005		NA	
Octachlorodibenzofuran	< 0.00042		NA		< 0.00004		NA	
Pentachlorodibenzo-p-dioxin	< 0.00024	UJ	NA		< 0.00010	UJ	NA	
Pentachlorodibenzofuran	< 0.00031		NA		< 0.00009		NA	
Tetrachlorodibenzo-p-dioxin	< 0.00006		NA		< 0.00004		NA	
Tetrachlorodibenzofuran	< 0.00004		NA		< 0.00005		NA	

a = lab qualifiers
b = validation qualifiers

LIME SLUDGE PONDS
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1716 067904 1.5 - 2.0	a	b	1716 067007 1.5 - 2.0 TCLP	a	b	1717 067902 1.5 - 2.0	a	b	1717 067003 1.5 - 2.0 TCLP	a	b
HERBICIDE ORGANICS												
2,4,5-T	< 0.09200			NA			< 0.06600			NA		
2,4,5-TP (Silvex)	< 0.08500			< 0.0018			< 0.06100			< 0.0018		
2,4-D	< 0.47000			< 0.0120			< 0.34000			< 0.0120		
ORGANOPHOSPOROUS PESTICIDES												
Dimethoate	< 0.10000			NA			< 0.10000			NA		
Disulfoton	< 0.10000			NA			< 0.10000			NA		
Famphur	< 0.10000			NA			< 0.10000			NA		
Parathion, ethyl	< 0.10000			NA			< 0.10000			NA		
Parathion, methyl	< 0.10000			NA			< 0.10000			NA		
Phorate	< 0.10000			NA			< 0.10000			NA		
Sulfotepp	< 0.10000			NA			< 0.10000			NA		
Sulfotepp	< 1.60000		R	NA			< 1.10000		R	NA		
Thionazin	< 0.10000			NA			< 0.10000			NA		
PESTICIDES												
4,4'-DDD	< 0.03800			NA			< 0.02800			NA		
4,4'-DDE	< 0.03800			NA			< 0.02800			NA		
4,4'-DDT	< 0.03800			NA			< 0.02800			NA		
Aldrin	< 0.01900			NA			< 0.01400			NA		
Aroclor-1016	< 0.19000			NA			< 0.14000			NA		
Aroclor-1221	< 0.19000			NA			< 0.14000			NA		
Aroclor-1232	< 0.19000			NA			< 0.14000			NA		
Aroclor-1242	< 0.19000			NA			< 0.14000			NA		
Aroclor-1248	< 0.19000			NA			< 0.14000			NA		
Aroclor-1254	< 0.38000			NA			< 0.28000			NA		
Aroclor-1260	< 0.38000			NA			< 0.28000			NA		
Dieldrin	< 0.03800			NA			< 0.02800			NA		
Endosulfan II	< 0.03800			NA			< 0.02800			NA		
Endosulfan sulfate	< 0.03800			NA			< 0.02800			NA		
Endosulfan-I	< 0.01900			NA			< 0.01400			NA		
Endrin	< 0.03800			< 0.00010			< 0.02800			< 0.00010		
Endrin ketone	< 0.03800			NA			< 0.02800			NA		
Heptachlor	< 0.01900			< 0.00005			< 0.01400			< 0.00005		
Heptachlor epoxide	< 0.01900			< 0.00005			< 0.01400			< 0.00005		
Isodrin	< 0.01900						< 0.01400					

a = lab qualifiers
b = validation qualifiers

LIME SLUDGE PONDS
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1716 067904 1.5 - 2.0	a	b	1716 067007 1.5 - 2.0 TCLP	a	b	1717 067902 1.5 - 2.0	a	b	1717 067003 1.5 - 2.0 TCLP	a	b
Kepone	< 0.03800			NA			< 0.02800			NA		
Methoxychlor	< 0.19000			< 0.0005			< 0.14000			< 0.0005		
Toxaphene	< 0.38000			< 0.001			< 0.28000			< 0.001		
alpha-BHC	< 0.01900			NA			< 0.01400			NA		
alpha-Chlordane	< 0.19000			< 0.0005			< 0.14000			< 0.0005		
beta-BHC	< 0.01900			NA			< 0.01400			NA		
delta-BHC	< 0.01900			NA			< 0.01400			NA		
gamma-BHC (Lindane)	< 0.01900			< 0.0005			< 0.01400			< 0.00005		
gamma-Chlordane	< 0.19000			< 0.0005			< 0.14000			< 0.0005		
SEMI-VOLATILE ORGANICS												
1,2,4,5-Tetrachlorobenzene	< 1.60000			NA			< 1.10000			NA		
1,2,4-Trichlorobenzene	< 1.60000			NA			< 1.10000			NA		
1,2-Dichlorobenzene	< 1.60000			NA			< 1.10000			NA		
1,3,5-Trinitrobenzene	< 1.60000			NA			< 1.10000			NA		
1,3-Dichlorobenzene	< 1.60000			NA			< 1.10000			NA		
1,4-Dichlorobenzene	< 1.60000			NA			< 1.10000			NA		
1,4-Naphthoquinone	< 1.60000			NA			< 1.10000			NA		
1-Naphthylamine	< 19.00000			NA			< 14.00000			NA		
2,3,4,6-Tetrachlorophenol	< 1.60000	UJ		NA			< 1.10000	UJ		NA		
2,4,5-Trichlorophenol	< 7.70000			NA			< 5.40000			NA		
2,4,6-Trichlorophenol	< 1.60000			NA			< 1.10000			NA		
2,4-Dichlorophenol	< 1.60000			NA			< 1.10000			NA		
2,4-Dimethylphenol	< 1.60000			NA			< 1.10000			NA		
2,4-Dinitrophenol	< 7.70000	UJ		NA			< 5.40000	UJ		NA		
2,4-Dinitrotoluene	< 1.60000			NA			< 1.10000			NA		
2,6-Dichlorophenol	< 1.60000	UJ		NA			< 1.10000	UJ		NA		
2,6-Dinitrotoluene	< 1.60000			NA			< 1.10000			NA		
2-Acetylaminofluorene	< 1.60000			NA			< 1.10000			NA		
2-Chloronaphthalene	< 1.60000			NA			< 1.10000			NA		
2-Chlorophenol	< 1.60000			NA			< 1.10000			NA		
2-Methylnaphthalene	< 1.60000			NA			< 1.10000			NA		
2-Methylphenol	< 1.60000			NA			< 1.10000			NA		
2-Naphthylamine	< 28.00000			NA			< 19.00000			NA		
2-Nitroaniline	< 7.70000			NA			< 5.40000			NA		
2-Nitrophenol	< 1.60000			NA			< 1.10000			NA		
2-Picoline	< 11.00000			NA			< 7.80000			NA		
3,3'-Dichlorobenzidine	< 3.20000	UJ		NA			< 2.20000	UJ		NA		
3,3'-Dimethylbenzidine	< 13.00000			NA			< 9.20000			NA		
3-Methylcholanthrene	< 4.80000			NA			< 3.40000			NA		
3-Methylphenol	< 1.60000			NA			< 1.10000			NA		
3-Nitroaniline	< 7.70000	UJ		NA			< 5.40000	UJ		NA		
1,3-Dinitrobenzene	NA			NA			< 1.10000			NA		

a = lab qualifiers
b = validation qualifiers

LIME SLUDGE PONDS
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1716 067904 1.5 - 2.0			1716 067007 1.5 - 2.0 TCLP			1717 067902 1.5 - 2.0			1717 067003 1.5 - 2.0 TCLP		
			a	b		a	b			a	b	
4,6-Dinitro-2-methylphenol	<	7.70000			NA			<	5.40000			NA
4-Aminobiphenyl	<	8.10000			NA			<	5.70000			NA
4-Bromophenyl phenyl ether	<	1.60000			NA			<	1.10000			NA
4-Chloro-3-methylphenol	<	1.60000			NA			<	1.10000			NA
4-Chloroaniline	<	1.60000			NA			<	1.10000			NA
4-Chlorophenylphenyl ether	<	1.60000			NA			<	1.10000			NA
4-Methylphenol	<	1.60000			NA			<	1.10000			NA
4-Nitroaniline	<	7.70000		UJ	NA			<	5.40000		UJ	NA
4-Nitrophenol	<	7.70000		UJ	NA			<	5.40000		UJ	NA
4-Nitroquinoline-1-oxide	<	1.60000		R	NA			<	1.10000		R	NA
5-Nitro-o-toluidine	<	3.20000			NA			<	2.30000			NA
7,12-Dimethylbenz(a)anthrace	<	3.20000			NA			<	2.30000			NA
Acenaphthene	<	1.60000			NA			<	1.10000			NA
Acenaphthylene	<	1.60000			NA			<	1.10000			NA
Acetophenone	<	1.60000			NA			<	1.10000			NA
Aniline	<	8.20000			NA			<	5.80000			NA
Anthracene	<	1.60000			NA			<	1.10000			NA
Aramite	<	1.60000		UJ	NA			<	1.10000		UJ	NA
Benzo(a)anthracene	<	1.60000			NA			<	1.10000			NA
Benzo(a)pyrene	<	1.60000			NA			<	1.10000			NA
Benzo(b)fluoranthene	<	1.60000			NA			<	1.10000			NA
Benzo(g,h,i)perylene	<	1.60000			NA			<	1.10000			NA
Benzo(k)fluoranthene	<	1.60000			NA			<	1.10000			NA
Benzoic acid	<	7.70000		UJ	NA			<	5.40000		UJ	NA
Benzyl alcohol	<	1.60000		UJ	NA			<	1.10000		UJ	NA
Butyl benzyl phthalate	<	1.60000			NA			<	1.10000			NA
Chrysene	<	1.60000			NA			<	1.10000			NA
Di-n-butyl phthalate	<	1.60000			NA			<	1.10000			NA
Di-n-octyl phthalate	<	1.60000			NA			<	1.10000			NA
Diallate	<	1.60000		UJ	NA			<	1.10000		UJ	NA
Dibenzo(a,h)anthracene	<	1.60000			NA			<	1.10000			NA
Dibenzofuran	<	1.60000			NA			<	1.10000			NA
Diethyl phthalate	<	1.60000			NA			<	1.10000			NA
Dimethyl phthalate	<	1.60000			NA			<	1.10000			NA
Dinoseb	<	3.20000		R	NA			<	2.30000		R	NA
Dinoseb	<	0.03300			NA			<	0.02400			NA
Diphenylamine	<	1.60000			NA			<	1.10000			NA
Ethyl methanesulfonate	<	1.60000			NA			<	1.10000			NA
Fluoranthene	<	1.60000			NA			<	1.10000			NA
Fluorene	<	1.60000			NA			<	1.10000			NA
Hexachlorobenzene	<	1.60000			NA			<	1.10000			NA
Hexachlorobutadiene	<	1.60000			NA			<	1.10000			NA
Hexachlorocyclopentadiene	<	1.60000		UJ	NA			<	1.10000		UJ	NA
Hexachloroethane	<	1.60000			NA			<	1.10000			NA

a = lab qualifiers
b = validation qualifiers

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LIME SLUDGE PONDS
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1716 067904 1.5 - 2.0			1716 067007 1.5 - 2.0 TCLP			1717 067902 1.5 - 2.0			1717 067003 1.5 - 2.0 TCLP		
		a	b		a	b		a	b		a	b
Hexachlorophene	<	8.20000	R		NA		<	5.80000	R		NA	
Hexachloropropene	<	3.20000	R		NA		<	2.30000	R		NA	
Indeno(1,2,3-cd)pyrene	<	1.60000			NA		<	1.10000			NA	
Isophorone	<	1.60000			NA		<	1.10000			NA	
Isosafrole	<	1.60000			NA		<	1.10000			NA	
Methapyrilene	<	6.40000	UJ		NA		<	4.50000	UJ		NA	
Methyl methanesulfonate	<	1.60000			NA		<	1.10000			NA	
N-Nitroso-di-n-propylamine	<	1.60000			NA		<	1.10000			NA	
N-Nitrosodi-n-butylamine	<	3.20000			NA		<	2.30000			NA	
N-Nitrosodiethylamine	<	1.60000			NA		<	1.10000			NA	
N-Nitrosodimethylamine	<	1.60000			NA		<	1.10000			NA	
N-Nitrosodiphenylamine	<	1.60000			NA		<	1.10000			NA	
N-Nitrosomethylethylamine	<	1.60000			NA		<	1.10000			NA	
N-Nitrosomorpholine	<	1.60000			NA		<	1.10000			NA	
N-Nitrosopiperidine	<	1.60000			NA		<	1.10000			NA	
N-Nitrosopyrrolidine	<	1.60000	UJ		NA		<	1.10000	UJ		NA	
Naphthalene	<	1.60000			NA		<	1.10000			NA	
Nitrobenzene	<	1.60000			NA		<	1.10000			NA	
O,O,O-Triethylphosphorothioa	<	0.10000			NA		<	1.10000	R		NA	
O,O,O-Triethylphosphorothioa	<	1.60000	R		NA		<	0.10000			NA	
Pentachlorobenzene	<	3.20000			NA		<	2.30000			NA	
Pentachloroethane	<	3.20000			NA		<	2.30000			NA	
Pentachloronitrobenzene	<	3.20000			NA		<	2.30000			NA	
Pentachlorophenol	<	7.70000			NA		<	5.40000			NA	
Phenacetin	<	1.60000			NA		<	1.10000			NA	
Phenanthrene	<	1.60000			NA		<	1.10000			NA	
Phenol	<	1.60000			NA		<	1.10000			NA	
Pronamide	<	4.80000			NA		<	3.40000			NA	
Pyrene	<	1.60000			NA		<	1.10000			NA	
Safrole	<	1.60000			NA		<	1.10000			NA	
a,a-Dimethylphenethylamine	<	1.60000	R		NA		<	1.10000	R		NA	
bis(2-Chloroethoxy)methane	<	1.60000			NA		<	1.10000			NA	
bis(2-Chloroethyl)ether	<	1.60000			NA		<	1.10000			NA	
bis(2-Chloroisopropyl) ether	<	1.60000			NA		<	1.10000			NA	
bis(2-Ethylhexyl) phthalate	<	1.60000			NA		<	1.10000			NA	
o-Toluidine	<	1.60000			NA		<	1.10000			NA	
p-Dimethylaminoazobenzene	<	4.80000			NA		<	3.40000			NA	
p-Phenylenediamine	<	8.10000	R		NA		<	5.70000	R		NA	
7,12-Dimethylbenz(a)anthrace		NA			NA		<	2.30000			NA	

a = lab qualifiers
b = validation qualifiers

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LIME SLUDGE PONDS
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1716 067904 1.5 - 2.0	a	b	1716 067007 1.5 - 2.0 TCLP	a	b	1717 067902 1.5 - 2.0	a	b	1717 067003 1.5 - 2.0 TCLP	a	b
VOLATILE ORGANICS												
1,1,1,2-Tetrachloroethane	< 0.02300			NA			< 0.01700			NA		
1,1,1-Trichloroethane	< 0.01200			< 0.00500			< 0.00800			NA		
1,1,2,2-Tetrachloroethane	< 0.01200			< 0.00500			< 0.00800			NA		
1,1,2-Trichloroethane	< 0.01200			< 0.00500			< 0.00800			NA		
1,1-Dichloroethane	< 0.01200			< 0.00500			< 0.00800			< 0.00500		
1,1-Dichloroethene	< 0.01200			< 0.00500			< 0.00800			< 0.01100		
1,2,3-Trichloropropane	< 0.02300			NA			< 0.01700			NA		
1,2-Dibromo-3-chloropropane	< 0.02300			NA			< 0.01700			NA		
1,2-Dibromoethane	< 0.02300			NA			< 0.01700			NA		
1,2-Dichloroethane	< 0.01200			< 0.00500			< 0.00800			NA		
1,2-Dichloroethylene	< 0.01200			< 0.00500			< 0.00800			NA		
1,2-Dichloropropane	< 0.01200			< 0.00500			< 0.00800			NA		
1,4-Dioxane	< 0.47000		R	NA			< 0.33000		R	NA		
2-Butanone	< 0.02300			0.00200	J		< 0.01700			< 0.00600	J	
2-Chloro-1,3-butadiene	< 0.02300		UJ	NA			< 0.01700		UJ	NA		
2-Hexanone	< 0.02300			< 0.01000			0.00200	J	J	NA		
3-Chloropropene	< 0.02300		UJ	NA			< 0.01700		UJ	NA		
4-Methyl-2-pentanone	< 0.02300			< 0.01000			< 0.01700			NA		
Acetone	0.02300	J	U	< 0.00100	BJ		0.01700	J	U	NA		
Acetonitrile	< 0.04700		UJ	NA			< 0.03300		UJ	NA		
Acrolein	< 0.04700		UJ	NA			< 0.03300		UJ	NA		
Acrylonitrile	< 0.04700		R	NA			< 0.03300		R	NA		
Benzene	< 0.01200			< 0.00500			< 0.00800			< 0.00500		
Bromodichloromethane	< 0.01200			0.00200	J	J	< 0.00800			NA		
Bromoform	< 0.01200			< 0.00500			< 0.00800			NA		
Bromomethane	< 0.02300			< 0.01000			< 0.01700			NA		
Carbon Tetrachloride	< 0.01200			< 0.00500			< 0.00800			< 0.00500		
Carbon disulfide	< 0.01200			< 0.00500			< 0.00800			NA		
Chlorobenzene	< 0.01200			< 0.00500			< 0.00800			< 0.00500		
Chloroethane	< 0.02300			< 0.01000			< 0.01700			NA		
Chloroform	< 0.01200			< 0.01800			< 0.00800			< 0.00500		
Chloromethane	< 0.02300		UJ	< 0.01000			< 0.01700		UJ	NA		
Dibromochloromethane	< 0.01200			< 0.00500			< 0.00800			NA		
Dibromomethane	< 0.02300			NA			< 0.01700			NA		
Dichlorodifluoromethane	< 0.47000		R	NA			< 0.33000		R	NA		
Ethyl cyanide	< 0.02300			NA			< 0.01700			NA		
Ethyl methacrylate	< 0.02300			NA			< 0.01700			NA		
Ethylbenzene	< 0.01200			< 0.00500			< 0.00800			NA		
Iodomethane	< 0.02300			NA			< 0.01700			NA		
Isobutyl alcohol	< 0.47000			NA			< 0.33000			NA		

a = lab qualifiers
b = validation qualifiers

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LIME SLUDGE PONDS
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1716 067904 1.5 - 2.0	a	b	1716 067007 1.5 - 2.0 TCLP	a	b	1717 067902 1.5 - 2.0	a	b	1717 067003 1.5 - 2.0 TCLP	a	b
Methacrylonitrile	< 0.02300			NA			< 0.01700			NA		
Methyl methacrylate	< 0.02300			NA			< 0.01700			NA		
Methylene chloride	0.01200	BJ	U	< 0.005			0.00800	BJ	U	NA		
Pyridine	< 1.60000			NA			< 1.10000			NA		
Styrene	< 0.01200			< 0.005			< 0.00800			NA		
Tetrachloroethene	< 0.01200			< 0.005			< 0.00800			< 0.00200	J	
Toluene	< 0.01200			0.001	J		< 0.00800			NA		
Total xylenes	< 0.01200			< 0.005			< 0.00800			NA		
Trichloroethene	< 0.01200			< 0.005			< 0.00800			< 0.00500		
Trichlorofluoromethane	< 0.02300			NA			< 0.01700			NA		
Vinyl Acetate	< 0.02300			< 0.01			< 0.01700			NA		
Vinyl chloride	< 0.02300			< 0.01			< 0.01700			< 0.00100		
cis-1,3-Dichloropropene	< 0.01200			< 0.005			< 0.00800			NA		
trans-1,3-Dichloropropene	< 0.01200			< 0.005			< 0.00800			NA		
trans-1,4-Dichloro-2-butene	< 0.02300		UJ	NA			< 0.01700		UJ	NA		

a = lab qualifiers
b = validation qualifiers

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EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING GENERAL CHEMICAL RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

Concentration Qualifiers

B = Reported value was obtained from a reading that was less than the Contract Laboratory Program (CLP) Contract Required Detection Limit (CRQL), but greater than or equal to the Instrument Detection Limit (IDL).

Quality Qualifiers

E = The reported value is estimated because of the presence of interference.

M = Duplicate injection precision not met.

N = Spiked sample recovery not within controls limits.

S = The reported value was determined by the Method of Standard Additions.

W = Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

G = Native analyte > 4 times spike added; therefore acceptance criteria do not apply.

X = Detection limit is higher than normal due to sample matrix interferences.

* = Duplication analysis not within control limits.

+ = Correlation coefficient for the MSA is less than 0.955.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

LIME SLUDGE POND
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1716 067904 1.5 - 2.0	a	b	1716 067007 1.5 - 2.0 TCLP	a	b
GENERAL CHEMISTRY						
Ammonia	NA			NA		
Chloride	NA			NA		
Fluoride	NA			NA		
Hydrogen ion	NA			NA		
Nitrate	NA			NA		
Phenols	NA			NA		
Phosphorus (black, white,	NA			NA		
Phosphate as P	NA			NA		
Sulfate	NA			NA		
Total Kjeldahl Nitrogen	NA			NA		
Total Organic Carbon	NA			NA		
Total Organic Halides	NA			NA		
Total Organic Nitrogen	NA			NA		
METALS						
Aluminum	4580.0000		J	NA		
Antimony	22.1000		J	NA		
Arsenic	4.2000	+	J	0.4990		
Barium	71.1000		J	0.5130		
Beryllium	0.7600	B	J	NA		
Boron	37.0000		J	NA		
Cadmium	4.0000	B	J	0.0438		
Calcium	323000.0000	E	J	NA		
Chromium	28.2000		J	0.1110		
Cobalt	5.1000	B	J	NA		
Copper	20.5000		J	NA		
Cyanide	< 0.2400	N	J	NA		
Hexavalent Chromium	NA			NA		
Iron	3980.0000		J	NA		
Lead	2.0000	SN	J	0.2760		
Magnesium	19600.0000		J	NA		
Manganese	515.0000		J	NA		
Mercury	< 0.1900		J	< 0.0002		
Molybdenum	8.2000		J	NA		
Nickel	11.7000		J	NA		
Potassium	68.7000	B	J	NA		
Selenium	< 0.4600	WN	J	0.4750		
Silicon	5920.0000		J	NA		
Silver	22.0000		J	0.1540		
Sodium	599.0000	B	J	NA		
Thallium	0.5100	BWN	J	NA		
Tin	< 45.7000		J	NA		
Vanadium	17.5000		J	NA		
Zinc	45.7000		J	NA		

a = lab qualifiers
b = validation qualifiers

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LIME SLUDGE PONDS
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1717 067902 1.5 - 2.0	a	b	1717 067003 1.5 - 2.0 TCLP	a	b
GENERAL CHEMISTRY						
Ammonia	NA			NA		
Chloride	NA			NA		
Fluoride	NA			NA		
Hydrogen ion	NA			NA		
Nitrate	NA			NA		
Phenols	NA			NA		
Phosphorus (black, white,	NA			NA		
Phosphate as P	NA			NA		
Sulfate	NA			NA		
Total Kjeldahl Nitrogen	NA			NA		
Total Organic Carbon	NA			NA		
Total Organic Halides	NA			NA		
Total Organic Nitrogen	NA			NA		
METALS						
Aluminum	2700.0000			NA		
Antimony	20.0000			NA		
Arsenic	1.7000	BS		0.3800		
Barium	63.4000			0.6390		
Beryllium	0.6500	B	J	NA		
Boron	28.9000		J	NA		
Cadmium	2.5000	B	J	0.0346		
Calcium	339000.0000	E	J	NA		
Chromium	28.1000		J	0.0918		
Cobalt	3.9000	B	J	NA		
Copper	8.4000		J	NA		
Cyanide	1.7000	N	J	NA		
Hexavalent Chromium	NA			NA		
Iron	3240.0000			NA		
Lead	0.9800	WN	J	0.2040		
Magnesium	13300.0000			NA		
Manganese	499.0000			NA		
Mercury	< 0.1400		J	< 0.0002		
Molybdenum	5.7000		J	NA		
Nickel	9.0000		J	NA		
Potassium	< 22.2000			NA		
Selenium	< 0.4500	WN	J	< 0.4000		
Silicon	3220.0000			NA		
Silver	21.7000		J	0.1450		
Sodium	327.0000	B		NA		
Thallium	< 0.4500	WN	J	NA		
Tin	< 44.5000			NA		
Vanadium	17.1000		J	NA		
Zinc	8.2000		J	NA		

a = lab qualifiers
b = validation qualifiers

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TABLE D-6

SUBSURFACE MEDIA ANALYSES
RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER		
		SP-EF-1-1 0-3 920407-198	SP-EF-2-1 0-3 920407-197	SP-EF-3-1 0-1 920407-199
TCLP Metals (mg/l):				
Arsenic	5.00	<0.06	<0.06	<0.06
Barium	100.00	1.04	0.98	0.73
Cadmium	1.00	<0.02	<0.02	<0.02
Chromium	5.00	<0.24	<0.24	<0.24
Lead	5.00	<0.08	<0.08	<0.08
Mercury	0.20	<0.003	<0.003	<0.003
Selenium	1.00	<0.04	<0.04	<0.04
Silver	5.00	<0.05	<0.05	<0.05
Total Volatiles (mg/kg):				
Acetone		<1.0	<1.0	<1.0
Benzene		<0.21	<0.21	<0.21
2-Butanone		<0.62	<0.62	<0.62
Carbon Disulfide		<0.29	<0.29	<0.29
Carbon Tetrachloride		<0.38	<0.38	<0.38
Chlorobenzene		<0.46	<0.46	<0.46
Chloroethane		NR	NR	NR
Chloromethane		NR	NR	NR
Chlorinated Fluorocarbons		BDL	BDL	BDL
Cyclohexanone		BDL	BDL	BDL
o-Dichlorobenzene		<0.58	<0.58	<0.58
1,1-Dichloroethene		NR	NR	NR
1,2-Dichloroethane		NR	NR	NR
trans-1,2-Dichloroethene		NR	NR	NR
Ethyl Acetate		BDL	BDL	BDL
Ethyl Benzene		<0.21	<0.21	<0.21
Ethyl Ether		BDL	BDL	BDL
Methylene Chloride		<0.25	<0.25	<0.25
4-Methyl-2-Pentanone		<0.42	<0.42	<0.42
2-Nitropropane		BDL	BDL	BDL
Pyridine		BDL	BDL	BDL
Tetrachloroethylene		<1.20	<1.20	<1.20
Toluene		<0.42	<0.42	<0.42
1,1,1-Trichloroethane		<0.50	<0.50	<0.50
1,1,2-Trichloroethane		<0.25	<0.25	<0.25
Trichloroethene		<0.54	<0.54	<0.54
Trichloroflurometh ane		<0.42	<0.42	<0.42
Trichlorotrifluoroethane		<0.42	<0.42	<0.42
Vinyl Chloride		NR	NR	NR
m,p-Xylenes		<0.25	<0.25	<0.25
o-Xylene		<0.17	<0.17	<0.17
Xylenes (Total)		NR	NR	NR

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER		
		SP-EF-1-1 0-3 920407-198	SP-EF-2-1 0-3 920407-197	SP-EF-3-1 0-1 920407-199
TCLP Volatile Organics (mg/l):				
Benzene	0.50	<0.09	<0.09	<0.09
2-Butanone	200.00	<0.25	<0.25	<0.25
Carbon Tetrachloride	0.50	<0.15	<0.15	<0.15
Chlorobenzene	100.00	<0.19	<0.19	<0.19
Chloroform	6.00	<0.12	<0.12	<0.12
1,4-Dichlorobenzene	7.50	<0.35	<0.35	<0.35
1,2-Dichloroethane	0.50	<0.10	<0.10	<0.10
1,1-Dichloroethylene	0.70	<0.12	<0.12	<0.12
Tetrachloroethylene	0.70	<0.19	<0.19	<0.19
Trichloroethylene	0.50	<0.22	<0.22	<0.22
Vinyl Chloride	0.20	<0.15	<0.15	<0.15
TCLP Semi Volatiles (mg/l):				
m,p-Cresol	200.00	<0.04	<0.04	<0.04
o-Cresol	200.00	<0.04	<0.04	<0.04
1,4-Dichlorobenzene	7.50	NR	NR	NR
2,4-Dinitrotoluene	0.13	<0.04	<0.04	<0.04
Hexachlorobenzene	0.13	<0.04	<0.04	<0.04
Hexachloroethane	3.00	<0.04	<0.04	<0.04
Nitrobenzene	2.00	<0.04	<0.04	<0.04
Pentachlorophenol	100.00	<0.04	<0.04	<0.04
Pyridine	5.00	<0.08	<0.08	<0.08
2,4,6-Trichlorophenol	0.50	<0.04	<0.04	<0.04
2,4,5-Trichlorophenol	2.00	<0.04	<0.04	<0.04
TCLP Pesticides (mg/l):				
Chlordane	0.030	<0.004	<0.004	<0.004
Endrin	0.020	<0.0004	<0.0004	<0.0004
Heptachlor	0.008	<0.0004	<0.0004	<0.0004
Heptachlor Epoxide	0.008	<0.0004	<0.0004	<0.0004
Lindane	0.400	<0.0004	<0.0004	<0.0004
Methoxychlor	10.000	<0.0004	<0.0004	<0.0004
Toxaphene	0.500	<0.02	<0.02	<0.02
TCLP Herbicides (mg/l):				
2,4-D	10.00	<0.001	<0.001	<0.001
Silvex	1.00	<0.001	<0.001	<0.001

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER		
		SP-INF-2 0-1 920319-058	SP-INF-2 1-2 920319-059	SP-INF-2 1-2 920319-060
TCLP Metals (mg/l):				
Arsenic	5.00	0.262	0.292	0.251
Barium	100.00	0.771	0.772	0.780
Cadmium	1.00	<0.100	<0.100	<0.100
Chromium	5.00	<0.500	<0.500	<0.500
Lead	5.00	0.207	0.221	0.230
Mercury	0.20	<0.0002	<0.0002	<0.0002
Selenium	1.00	<0.327	<0.327	<0.327
Silver	5.00	<0.050	<0.050	<0.050
Total Volatiles (mg/kg):				
Acetone		<0.0185	<0.0194	<0.0188
Benzene		<0.0092	<0.0097	<0.0094
2-Butanone		<0.0185	<0.0194	<0.0188
Carbon Disulfide		<0.0092	<0.0097	<0.0094
Carbon Tetrachloride		<0.0092	<0.0097	<0.0094
Chlorobenzene		<0.0092	<0.0097	<0.0094
Chloroethane		NR	NR	NR
Chloromethane		NR	NR	NR
Cyclohexanone		<0.295	<0.310	<0.301
o-Dichlorobenzene		NR	NR	NR
1,1-Dichloroethene		NR	NR	NR
1,2-Dichloroethane		NR	NR	NR
trans-1,2-Dichloroethene		NR	NR	NR
Ethyl Acetate		<0.0369	<0.0388	<0.0376
Ethyl Benzene		<0.0092	<0.0097	<0.0094
Ethyl Ether		<0.0092	<0.0097	<0.0094
Methylene Chloride		<0.0092	<0.0097	<0.0094
4-Methyl-2-Pentanone		<0.0185	<0.0194	<0.01888
2-Nitropropane		<0.129	<0.136	<0.132
Pyridine		NR	NR	NR
Tetrachloroethylene		<0.0092	<0.0097	<0.0094
Toluene		<0.0092	<0.0097	<0.0094
Trichloroethene		<0.0092	<0.0097	<0.0094
1,1,1-Trichloroethane		<0.0092	<0.0097	<0.0094
1,1,2-Trichloroethane		<0.0092	<0.0097	<0.0094
Trichlorofluoromethane		<0.0092	<0.0097	<0.0094
Trichlorotrifluoroethane		<0.0092	<0.0097	<0.0094
Vinyl Chloride		NR	NR	NR
m,p-Xylenes		NR	NR	NR
o-Xylene		NR	NR	NR
Xylenes (Total)		<0.0092	<0.0097	<0.0094

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER		
		SP-INF-2 0-1 920319-058	SP-INF-2 1-2 920319-059	SP-INF-2 1-2 920319-060
TCLP Volatile Organics (mg/l):				
Benzene	0.50	<0.025	<0.025	<0.025
2-Butanone	200.00	<0.050	<0.050	<0.050
Carbon Tetrachloride	0.50	<0.025	<0.025	<0.025
Chlorobenzene	100.00	<0.025	<0.025	<0.025
Chloroform	6.00	<0.025	<0.025	<0.025
1,4-Dichlorobenzene	7.50	NR	NR	NR
1,2-Dichloroethane	0.50	<0.025	<0.025	<0.025
1,1-Dichlorethylene	0.70	<0.025	<0.025	<0.025
Tetrachloroethylene	0.70	<0.025	<0.025	<0.025
Trichloroethylene	0.50	<0.025	<0.025	<0.025
Vinyl Chloride	0.20	<0.050	<0.050	<0.050
TCLP Semi Volatiles (mg/l):				
m,p-Cresol	200.00	<0.020	<0.020	<0.020
o-Cresol	200.00	<0.020	<0.020	<0.020
1,4-Dichlorobenzene	7.50	<0.020	<0.020	<0.020
2,4-Dinitrotoluene	0.13	<0.020	<0.020	<0.020
Hexachlorobenzene	0.13	<0.020	<0.020	<0.020
Hexachloroethane	3.00	<0.020	<0.020	<0.020
Hexachloro-1,3-butadiene	0.50	<0.020	<0.020	<0.020
Nitrobenzene	2.00	<0.020	<0.020	<0.020
Pentachlorophenol	100.00	<0.100	<0.100	<0.100
Pyridine	5.00	<0.020	<0.020	<0.020
2,4,5-Trichlorophenol	400.00	<0.020	<0.020	<0.020
2,4,6-Trichlorophenol	2.00	<0.020	<0.020	<0.020
TCLP Pesticides (mg/l):				
Chlordane	0.030	<0.0001	<0.0001	<0.0001
Endrin	0.020	<0.0001	<0.0001	<0.0001
Heptachlor	0.008	<0.00005	<0.00005	<0.00005
Heptachlor Epoxide	0.008	<0.00005	<0.00005	<0.00005
Lindane	0.400	<0.00005	<0.00005	<0.00005
Methoxychlor	10.000	<0.0005	<0.0005	<0.0005
Toxaphene	0.500	<0.001	<0.001	<0.001
TCLP Herbicides (mg/l):				
2,4-D	10.00	<0.001	<0.001	<0.001
Silvex	1.00	<0.0005	<0.0005	<0.0005

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER					
		SP-INF-1 0-1 920319-052	SP-INF-1 1-2 920319-053	SP-INF-1 2-3 920319-054	SP-INF-1 3-4 920319-055	SP-INF-1 4-5 920319-056	SP-INF-1 5-6 920319-057
TCLP Metals (mg/l):							
Arsenic	5.00	<0.200	<0.200	<0.200	<0.200	<0.200	0.358
Barium	100.00	0.749	0.822	0.885	0.922	0.801	0.826
Cadmium	1.00	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Chromium	5.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Lead	5.00	<0.200	<0.200	<0.200	<0.200	<0.200	0.309
Mercury	0.20	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium	1.00	<0.327	<0.327	<0.327	<0.327	<0.327	<0.327
Silver	5.00	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Total Volatiles (mg/kg):							
Acetone		0.675	0.0652	0.277	<0.0204	<0.0198	<0.0211
Benzene		<0.0496	<0.0102	<0.0098	<0.0102	<0.0099	<0.0105
2-Butanone		<0.0992	<0.0204	<0.0196	<0.0204	<0.0198	<0.0211
Carbon Disulfide		<0.0496	<0.0102	<0.0098	<0.0102	<0.0099	<0.0105
Carbon Tetrachloride		<0.0496	<0.0102	<0.0098	<0.0102	<0.0099	<0.0105
Chlorobenzene		<0.0496	<0.0102	<0.0098	<0.0102	<0.0099	<0.0105
Chloroethane		NR	NR	NR	NR	NR	NR
Chloromethane		NR	NR	NR	NR	NR	NR
Chlorinated Fluorocarbons		NR	NR	NR	NR	NR	NR
Cyclohexanone		<1.587	<0.327	<0.314	<0.327	<0.316	<0.338
o-Dichlorobenzene		NR	NR	NR	NR	NR	NR
1,1-Dichloroethene		NR	NR	NR	NR	NR	NR
1,2-Dichloroethane		NR	NR	NR	NR	NR	NR
trans-1,2-Dichloroethene		NR	NR	NR	NR	NR	NR
Ethyl Acetate		<0.198	<0.0409	<0.0392	<0.0408	<0.0395	<0.0422
Ethyl Benzene		<0.0496	<0.0102	<0.0098	<0.0102	<0.0099	<0.0105
Ethyl Ether		<0.0496	<0.0102	<0.0098	<0.0102	<0.0099	<0.0105
Methylene Chloride		<0.0496	<0.0102	<0.0098	<0.0102	<0.0099	<0.0105
4-Methyl-2-Pentanone		<0.0992	<0.0204	<0.0196	<0.0204	<0.0198	<0.0211
2-Nitropropane		<0.694	<0.143	<0.137	<0.143	<0.138	<0.148
Pyridine		NR	NR	NR	NR	NR	NR
Tetrachloroethylene		<0.0496	<0.0102	<0.0098	<0.0102	<0.0099	<0.0105
Toluene		<0.0496	<0.0102	<0.0098	<0.0102	<0.0099	<0.0105
Trichloroethene		<0.0496	<0.0102	<0.0098	<0.0102	<0.0099	<0.0105
1,1,1-Trichloroethane		<0.0496	<0.0102	<0.0098	<0.0102	0.0233	<0.0105
1,1,2-Trichloroethane		<0.0496	<0.0102	<0.0098	<0.0102	<0.0099	<0.0105
Trichlorofluoromethane		<0.0496	<0.0102	<0.0098	<0.0102	<0.0099	<0.0105
Trichlorotrifluoroethane		<0.0496	<0.0102	<0.0098	<0.0102	<0.0099	<0.0105
Vinyl Chloride		NR	NR	NR	NR	NR	NR
m,p-Xylenes		NR	NR	NR	NR	NR	NR
o-Xylene		NR	NR	NR	NR	NR	NR
Xylenes (Total)		<0.0496	<0.0102	<0.0098	<0.0102	<0.0099	<0.0105

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER					
		SP-INF-1 0-1 920319-052	SP-INF-1 1-2 920319-053	SP-INF-1 2-3 920319-054	SP-INF-1 3-4 920319-055	SP-INF-1 4-5 920319-056	SP-INF-1 5-6 920319-057
TCLP Volatile Organics (mg/l):							
Benzene	0.50	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
2-Butanone	200.00	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Carbon Tetrachloride	0.50	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chlorobenzene	100.00	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroform	6.00	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,4-Dichlorobenzene	7.50	NR	NR	NR	NR	NR	NR
1,2-Dichloroethane	0.50	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichlorethylene	0.70	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethylene	0.70	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethylene	0.50	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Vinyl Chloride	0.20	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
TCLP Semi Volatiles (mg/l):							
m,p-Cresol	200.00	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
o-Cresol	200.00	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
1,4-Dichlorobenzene	7.50	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
2,4-Dinitrotoluene	0.13	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Hexachlorobenzene	0.13	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Hexachloroethane	3.00	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Hexachloro-1,3-butadiene	0.50	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrobenzene	2.00	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Pentachlorophenol	100.00	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Pyridine	5.00	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
2,4,5-Trichlorophenol	400.00	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
2,4,6-Trichlorophenol	2.00	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
TCLP Pesticides (mg/l):							
Chlordane	0.030	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Endrin	0.020	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Heptachlor	0.008	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Heptachlor Epoxide	0.008	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lindane	0.400	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Methoxychlor	10.000	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Toxaphene	0.500	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TCLP Herbicides (mg/l):							
2,4-D	10.00	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silvex	1.00	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER		
		SP-11 0-7 920211-237	SP-14 0-10 920211-239	SP-14 0-10 920211-236
TCLP Metals (mg/l):				
Arsenic	5.00	<0.200	<0.200	<0.200
Barium	100.00	0.421	0.453	0.415
Cadmium	1.00	<0.100	<0.100	<0.100
Chromium	5.00	<0.500	<0.500	<0.500
Lead	5.00	0.209	0.245	0.228
Mercury	0.20	<0.0002	<0.0002	<0.0002
Selenium	1.00	<0.557	<0.557	<0.557
Silver	5.00	<0.050	<0.050	<0.050
Total Volatiles (mg/kg):				
Acetone		<0.0222	<0.0217	0.043
Benzene		<0.0111	<0.0109	<0.0118
2-Butanone		<0.0222	<0.0217	<0.0236
Carbon Disulfide		<0.0111	<0.0109	<0.0118
Carbon Tetrachloride		<0.0111	<0.0109	<0.0118
Chlorobenzene		<0.0111	<0.0109	<0.0118
Chloroethane		NR	NR	NR
Chloromethane		NR	NR	NR
Chlorinated Fluorocarbons		NR	NR	NR
Cyclohexanone		<0.3548	<0.3478	<0.378
o-Dichlorobenzene		NR	NR	NR
1,1-Dichloroethene		NR	NR	NR
1,2-Dichloroethane		NR	NR	NR
trans-1,2-Dichloroethene		NR	NR	NR
Ethyl Acetate		<0.0443	<0.0435	<0.0473
Ethyl Benzene		<0.0111	<0.0109	<0.0118
Ethyl Ether		<0.0111	<0.0109	<0.0118
Methylene Chloride		<0.0111	<0.0109	<0.0118
4-Methyl-2-Pentanone		<0.0222	<0.0217	<0.0236
2-Nitropropane		<0.1552	<0.1522	<0.1655
Pyridine		NR	NR	NR
Tetrachloroethylene		<0.0111	<0.0109	<0.0118
Toluene		<0.0111	<0.0109	0.0201
Trichloroethene		<0.0111	<0.0109	<0.0118
1,1,1-Trichloroethane		<0.0111	<0.0109	<0.0118
1,1,2-Trichloroethane		<0.0111	<0.0109	<0.0118
Trichlorofluoromethane		<0.0111	<0.0109	<0.0118
Trichlorotrifluoroethane		<0.0111	<0.0109	<0.0118
Vinyl Chloride		NR	NR	NR
m,p-Xylenes		NR	NR	NR
o-Xylene		NR	NR	NR
Xylenes (Total)		<0.0111	<0.0109	<0.0118

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER		
		SP-11 0-7 920211-237	SP-14 0-10 920211-239	SP-14 0-10 920211-236
TCLP Volatile Organics (mg/l):				
Benzene	0.50	<0.025	<0.025	<0.025
2-Butanone	200.00	<0.050	<0.050	<0.050
Carbon Tetrachloride	0.50	<0.025	<0.025	<0.025
Chlorobenzene	100.00	<0.025	<0.025	<0.025
Chloroform	6.00	<0.025	<0.025	<0.025
1,4-Dichlorobenzene	7.50	NR	NR	NR
1,2-Dichloroethane	0.50	<0.025	<0.025	<0.025
1,1-Dichlorethylene	0.70	<0.025	<0.025	<0.025
Tetrachloroethylene	0.70	<0.025	<0.025	<0.025
Trichloroethylene	0.50	<0.025	<0.025	<0.025
Vinyl Chloride	0.20	<0.050	<0.050	<0.050
TCLP Semi Volatiles (mg/l):				
m,p-Cresol	200.00	<0.020	<0.020	<0.020
o-Cresol	200.00	<0.020	<0.020	<0.020
1,4-Dichlorobenzene	7.50	<0.020	<0.020	<0.020
2,4-Dinitrotoluene	0.13	<0.020	<0.020	<0.020
Hexachlorobenzene	0.13	<0.020	<0.020	<0.020
Hexachloroethane	3.00	<0.020	<0.020	<0.020
Hexachloro-1,3-butadiene	0.50	<0.020	<0.020	<0.020
Nitrobenzene	2.00	<0.020	<0.020	<0.020
Pentachlorophenol	100.00	<0.100	<0.100	<0.100
Pyridine	5.00	<0.020	<0.020	<0.020
2,4,5-Trichlorophenol	400.00	<0.020	<0.020	<0.020
2,4,6-Trichlorophenol	2.00	<0.020	<0.020	<0.020
TCLP Pesticides (mg/l):				
Chlordane	0.030	<0.0001	<0.001	<0.0001
Endrin	0.020	<0.0001	<0.001	<0.0001
Heptachlor	0.008	<0.00005	<0.00005	<0.00005
Heptachlor Epoxide	0.008	<0.00005	<0.00005	<0.00005
Lindane	0.400	<0.00005	<0.00005	<0.00005
Methoxychlor	10.000	<0.005	<0.005	<0.0005
Toxaphene	0.500	<0.001	<0.001	<0.001
TCLP Herbicides (mg/l):				
2,4-D	10.00	<0.001	<0.001	<0.001
Silvex	1.00	<0.0005	<0.0005	<0.0005

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER				
		SP-10-1 0-1 920407-192	SP-10-2 1-2 920407-193	SP-10-2A 1-2 920407-195	SP-10-3 2-3 920407-195	SP-10-4 3-4 920407-196
TCLP Metals (mg/l):						
Arsenic	5.00	<0.06	<0.06	<0.06	<0.06	<0.06
Barium	100.00	0.54	0.48	0.54	<0.20	1.17
Cadmium	1.00	<0.02	<0.02	<0.02	<0.02	<0.02
Chromium	5.00	<0.24	<0.24	<0.24	<0.24	<0.24
Lead	5.00	<0.08	<0.08	<0.08	0.41	<0.08
Mercury	0.20	<0.003	<0.003	<0.003	<0.003	0.004
Selenium	1.00	<0.04	<0.04	<0.04	<0.04	<0.04
Silver	5.00	<0.05	<0.05	<0.05	<0.05	<0.05
Total Volatiles (mg/kg):						
Acetone		<1.0	<1.0	<1.0	<1.0	<1.0
Benzene		<0.21	<0.21	<0.21	<0.21	<0.21
2-Butanone		<0.62	<0.62	<0.62	<0.62	<0.62
Carbon Disulfide		<0.29	<0.29	<0.29	<0.29	<0.29
Carbon Tetrachloride		<0.38	<0.58	<0.38	<0.38	<0.38
Chlorobenzene		<0.46	<0.46	<0.46	<0.46	<0.46
Chloroethane		NR	NR	NR	NR	NR
Chloromethane		NR	NR	NR	NR	NR
Chlorinated Fluorocarbons		BDL	BDL	BDL	BDL	BDL
Cyclohexanone		BDL	BDL	BDL	BDL	BDL
o-Dichlorobenzene		<0.58	<0.58	<0.58	<0.58	<0.58
1,1-Dichloroethene		NR	NR	NR	NR	NR
1,2-Dichloroethane		NR	NR	NR	NR	NR
trans-1,2-Dichloroethene		NR	NR	NR	NR	NR
Ethyl Acetate		BDL	BDL	BDL	BDL	BDL
Ethyl Benzene		<0.21	<0.21	<0.21	<0.21	<0.21
Ethyl Ether		BDL	BDL	BDL	BDL	BDL
Methylene Chloride		<0.25	<0.25	<0.25	<0.25	<0.25
4-Methyl-2-Pentanone		<0.42	<0.42	<0.42	<0.42	<0.42
2-Nitropropane		BDL	BDL	BDL	BDL	BDL
Pyridine		BDL	BDL	BDL	BDL	BDL
Tetrachloroethylene		<1.20	<1.20	<1.20	<1.20	<1.20
Toluene		<0.42	<0.42	<0.42	<0.42	<0.42
Trichloroethene		<0.54	<0.54	<0.54	<0.54	<0.54
1,1,1-Trichloroethane		<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane		<0.25	<0.25	<0.25	<0.25	<0.25
Trichlorofluoromethane		<0.42	<0.42	<0.42	<0.42	<0.42
Trichlorotrifluoroethane		<0.42	<0.42	<0.42	<0.42	<0.42
Vinyl Chloride		NR	NR	NR	NR	NR
m,p-Xylenes		<0.25	<0.25	<0.25	<0.25	<0.25
o-Xylene		<0.17	<0.17	<0.17	<0.17	<0.17
Xylenes (Total)		NR	NR	NR	NR	NR

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER				
		SP-10-1 0-1 920407-192	SP-10-2 1-2 920407-193	SP-10-2A 1-2 920407-194	SP-10-3 2-3 920407-195	SP-10-4 3-4 920407-196
TCLP Volatile Organics (mg/l):						
Benzene	0.50	<0.09	<0.09	<0.09	<0.09	<0.09
2-Butanone	200.00	<0.25	<0.25	<0.25	<0.25	<0.25
Carbon Tetrachloride	0.50	<0.15	<0.15	<0.15	<0.15	<0.15
Chlorobenzene	100.00	<0.19	<0.19	<0.19	<0.19	<0.19
Chloroform	6.00	<0.12	<0.12	<0.12	<0.12	<0.12
1,4-Dichlorobenzene	7.50	<0.35	<0.35	<0.35	<0.35	<0.35
1,2-Dichloroethane	0.50	<0.10	<0.10	<0.10	<0.10	<0.10
1,1-Dichloroethylene	0.70	<0.12	<0.12	<0.12	<0.12	<0.12
Tetrachloroethylene	0.70	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	0.50	<0.22	<0.22	<0.22	<0.22	<0.22
Vinyl Chloride	0.20	<0.15	<0.15	<0.15	<0.15	<0.15
TCLP Semi Volatiles (mg/l):						
m,p-Cresol	200.00	<0.04	<0.04	<0.04	<0.04	<0.04
o-Cresol	200.00	<0.04	<0.04	<0.04	<0.04	<0.04
1,4-Dichlorobenzene	7.50	NR	NR	NR	NR	NR
2,4-Dinitrotoluene	0.13	<0.04	<0.04	<0.04	<0.04	<0.04
Hexachlorobenzene	0.13	<0.04	<0.04	<0.04	<0.04	<0.04
Hexachloroethane	3.00	<0.04	<0.04	<0.04	<0.04	<0.04
Hexachloro-1,3-butadiene	0.50	<0.04	<0.04	<0.04	<0.04	<0.04
Nitrobenzene	2.00	<0.04	<0.04	<0.04	<0.04	<0.04
Pentachlorophenol	100.00	<0.04	<0.04	<0.04	<0.04	<0.04
Pyridine	5.00	<0.08	<0.08	<0.08	<0.08	<0.08
2,4,6-Trichlorophenol	0.50	<0.04	<0.04	<0.04	<0.04	<0.04
2,4,5-Trichlorophenol	2.00	<0.04	<0.04	<0.04	<0.04	<0.04
TCLP Pesticides (mg/l):						
Chlordane	0.030	<0.004	<0.004	<0.004	<0.004	<0.004
Endrin	0.020	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Heptachlor	0.008	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Heptachlor Epoxide	0.008	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Lindane	0.400	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Methoxychlor	10.000	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Toxaphene	0.500	<0.02	<0.02	<0.02	<0.02	<0.02
TCLP Herbicides (mg/l):						
2,4-D	10.00	<0.001	<0.001	<0.001	<0.001	<0.001
Silvex	1.00	<0.001	<0.001	<0.001	<0.001	<0.001

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER				
		SP-4 0-1 920323-093	SP-4 1-2 920323-094	SP-4 2-3 920323-095	SP-4 3-4 920323-096	SP-4 6-7 920323-097
TCLP Metals (mg/l):						
Arsenic	5.00	<0.500	<0.500	<0.500	<0.500	<0.050
Barium	100.00	0.482	0.384	0.554	0.999	0.427
Cadmium	1.00	<0.010	<0.010	<0.010	<0.010	<0.010
Chromium	5.00	<0.025	<0.025	<0.025	<0.025	<0.025
Lead	5.00	<0.100	<0.100	<0.100	<0.100	<0.100
Mercury	0.20	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium	1.00	<0.500	<0.500	<0.500	<0.500	<0.500
Silver	5.00	<0.020	<0.020	<0.020	<0.020	<0.020
Total Volatiles (mg/kg):						
Acetone		0.011 B	0.009 BJ	0.010 B	0.008 B	0.009 BJ
Benzene		<0.005	<0.005	<0.005	<0.005	<0.005
2-Butanone		<0.010	<0.010	<0.010	<0.010	<0.010
Carbon Disulfide		<0.005	<0.005	<0.005	<0.005	<0.005
Carbon Tetrachloride		<0.005	<0.005	<0.005	<0.005	<0.005
Chlorobenzene		<0.005	<0.005	<0.005	<0.005	<0.005
Chloroethane		<0.010	<0.010	<0.010	<0.010	<0.010
Chloromethane		<0.010	<0.010	<0.010	<0.010	<0.010
Chlorinated Fluorocarbons		NR	NR	NR	NR	NR
Cyclohexanone		NR	NR	NR	NR	NR
o-Dichlorobenzene		NR	NR	NR	NR	NR
1,1-Dichloroethene		<0.005	<0.005	<0.005	<0.005	<0.005
1,2-Dichloroethane		<0.005	<0.005	<0.005	<0.005	<0.005
trans-1,2-Dichloroethene		<0.005	<0.005	<0.005	<0.005	<0.005
Ethyl Acetate		NR	NR	NR	NR	NR
Ethyl Benzene		<0.005	<0.005	<0.005	<0.005	<0.005
Ethyl Ether		NR	NR	NR	NR	NR
Methylene Chloride		0.001 BJ	0.011 BJ	0.001 BJ	0.001 BJ	0.001 BJ
Methyl-2-Pentanone		<0.010	<0.010	<0.010	<0.010	<0.010
2-Nitropropane		NR	NR	NR	NR	NR
Pyridine		NR	NR	NR	NR	NR
Tetrachloroethylene		<0.005	<0.005	<0.005	<0.005	<0.005
Toluene		<0.005	<0.010	<0.005	<0.005	<0.005
Trichloroethene		<0.005	<0.005	<0.005	<0.005	<0.005
1,1,1-Trichloroethane		<0.005	<0.005	<0.005	<0.005	<0.005
1,1,2-Trichloroethane		<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroflurometh ane		<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorotrifluoroethane		NR	NR	NR	NR	NR
Vinyl Chloride		<0.010	<0.010	<0.010	<0.010	<0.010
m,p-Xylenes		NR	NR	NR	NR	NR
o-Xylene		NR	NR	NR	NR	NR
Xylenes (Total)		<0.005	<0.005	<0.005	<0.005	<0.005

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER				
		SP-4 0-1 920323-093	SP-4 1-2 920323-094	SP-4 2-3 920323-095	SP-4 3-4 920323-096	SP-4 6-7 920323-097
TCLP Volatile Organics (mg/l):						
Benzene	0.50	<0.050	<0.050	<0.050	<0.050	<0.050
2-Butanone	200.00	<0.100	<0.100	<0.100	<0.100	<0.100
Carbon Tetrachloride	0.50	<0.050	<0.050	<0.050	<0.050	<0.050
Chlorobenzene	100.00	<0.050	<0.050	<0.050	<0.050	<0.050
Chloroform	6.00	<0.050	<0.050	<0.050	<0.050	<0.050
1,4-Dichlorobenzene	7.50	NR	NR	NR	NR	NR
1,2-Dichloroethane	0.50	<0.050	<0.050	<0.050	<0.050	<0.050
1,1-Dichlorethylene	0.70	<0.050	<0.050	<0.050	<0.050	<0.050
Tetrachloroethylene	0.70	<0.050	<0.050	<0.050	<0.050	<0.050
Trichloroethylene	0.50	<0.050	<0.050	<0.050	<0.050	<0.050
Vinyl Chloride	0.20	<0.100	<0.100	<0.100	<0.100	<0.100
TCLP Semi Volatiles (mg/l):						
m,p-Cresol	200.00	<0.04	<0.04	<0.04	<0.04	<0.04
o-Cresol	200.00	<0.04	<0.04	<0.04	<0.04	<0.04
1,4-Dichlorobenzene	7.50	<0.04	<0.04	<0.04	<0.04	<0.04
2,4-Dinitrotoluene	0.13	<0.04	<0.04	<0.04	<0.04	<0.04
Hexachlorobenzene	0.13	<0.04	<0.04	<0.04	<0.04	<0.04
Hexachloroethane	3.00	<0.04	<0.04	<0.04	<0.04	<0.04
Hexachloro-1,3-butadiene	0.50	<0.04	<0.04	<0.04	<0.04	<0.04
Nitrobenzene	2.00	<0.04	<0.04	<0.04	<0.04	<0.04
Pentachlorophenol	100.00	<0.20	<0.20	<0.20	<0.20	<0.20
Pyridine	5.00	<0.40	<0.40	<0.40	<0.40	<0.40
2,4,5-Trichlorophenol	400.00	<0.04	<0.04	<0.04	<0.04	<0.04
2,4,6-Trichlorophenol	2.00	<0.04	<0.04	<0.04	<0.04	<0.04
TCLP Pesticides (mg/l):						
Chlordane	0.030	<0.00070	<0.00070	<0.00070	<0.00070	<0.00070
Endrin	0.020	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Heptachlor	0.008	<0.00015	<0.00015	<0.00015	<0.00015	<0.00015
Heptachlor Epoxide	0.008	<0.00420	<0.00420	<0.00420	<0.00420	<0.00420
Lindane	0.400	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Methoxychlor	10.000	<0.00880	<0.00880	<0.00880	<0.00880	<0.00880
Toxaphene	0.500	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120
TCLP Herbicides (mg/l):						
2,4-D	10.00	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120
Silvex	1.00	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER SP-3-1 0-1 911114-039
TCLP Metals (mg/l):		
Arsenic	5.00	<0.2
Barium	100.00	0.518
Cadmium	1.00	<0.1
Chromium	5.00	<0.5
Lead	5.00	0.266
Mercury	0.20	<0.0002
Selenium	1.00	<0.374
Silver	5.00	<0.050
Total Volatiles (mg/kg):		
Acetone		<0.0186
Benzene		<0.0093
2-Butanone		<0.0186
Carbon Disulfide		<0.0093
Carbon Tetrachloride		<0.0093
Chlorobenzene		<0.0093
Chloroethane		NR
Chloromethane		NR
Chlorinated Fluorocarbons		NR
Cyclohexanone		<0.298
o-Dichlorobenzene		NR
1,1-Dichloroethene		NR
1,2-Dichloroethane		NR
trans-1,2-Dichloroethene		NR
Ethyl Acetate		<0.0372
Ethyl Benzene		<0.0093
Ethyl Ether		<0.0093
Methylene Chloride		<0.0093
Methyl Isobutyl Ketone		<0.0186
2-Nitropropane		<0.130
Pyridine		NR
Tetrachloroethylene		<0.0093
Toluene		<0.0093
Trichloroethene		<0.0093
1,1,1-Trichloroethane		<0.0093
1,1,2-Trichloroethane		<0.0093
Trichlorofluoromethane		<0.0093
Trichlorotrifluoroethane		<0.0093
Vinyl Chloride		NR
m,p-Xylenes		NR
o-Xylene		NR
Xylenes (Total)		<0.0093

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER SP-3-1 0-1 911114-039
TCLP Volatile Organics (mg/l):		
Benzene	0.50	<0.025
2-Butanone	200.00	<0.050
Carbon Tetrachloride	0.50	<0.025
Chlorobenzene	100.00	<0.025
Chloroform	6.00	<0.025
1,4-Dichlorobenzene	7.50	NR
1,2-Dichloroethane	0.50	<0.025
1,1-Dichlorethylene	0.70	<0.025
Tetrachloroethylene	0.70	<0.025
Trichloroethylene	0.50	<0.025
Vinyl Chloride	0.20	<0.050
TCLP Semi Volatiles (mg/l):		
m,p-Cresol	200.00	<0.020
o-Cresol	200.00	<0.020
1,4-Dichlorobenzene	7.50	<0.020
2,4-Dinitrotoluene	0.13	<0.020
Hexachlorobenzene	0.13	<0.020
Hexachloroethane	3.00	<0.020
Hexachloro-1,3-butadiene	0.50	<0.020
Nitrobenzene	2.00	<0.020
Pentachlorophenol	100.00	<0.100
Pyridine	5.00	<0.020
2,4,5-Trichlorophenol	400.00	<0.020
2,4,6-Trichlorophenol	2.00	<0.020
TCLP Pesticides (mg/l):		
Chlordane	0.030	<0.0001
Endrin	0.020	<0.0001
Heptachlor	0.008	<0.00005
Heptachlor Epoxide	0.008	<0.00005
Lindane	0.400	<0.00005
Methoxychlor	10.000	<0.0005
Toxaphene	0.500	<0.001
TCLP Herbicides (mg/l):		
2,4-D	10.00	<0.001
Silvex	1.00	<0.0005

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER				
		SP-3 0-1 920323-088	SP-3 1-2 920323-089	SP-3 2-3 920323-090	SP-3 3-4 920323-091	SP-3 4-5 920323-092
TCLP Metals (mg/l):						
Arsenic	5.00	<0.500	<0.050	<0.050	<0.050	<0.050
Barium	100.00	0.406	0.461	0.484	0.582	0.660
Cadmium	1.00	<0.010	<0.010	<0.010	<0.010	<0.010
Chromium	5.00	<0.025	<0.025	<0.025	<0.025	<0.025
Lead	5.00	<0.100	<0.100	<0.100	<0.100	<0.100
Mercury	0.20	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium	1.00	<0.500	<0.500	<0.500	<0.500	<0.500
Silver	5.00	<0.020	<0.020	<0.020	<0.020	<0.020
Total Volatiles (mg/kg):						
Acetone		0.013 B	0.008 BJ	0.011 B	0.011 B	0.015 B
Benzene		<0.005	<0.005	<0.005	<0.005	<0.005
2-Butanone		<0.010	<0.010	<0.010	<0.010	0.001 J
Carbon Disulfide		<0.005	<0.005	<0.005	<0.005	<0.005
Carbon Tetrachloride		<0.005	<0.005	<0.005	<0.005	<0.005
Chlorobenzene		<0.005	<0.005	<0.005	<0.005	<0.005
Chloroethane		<0.010	<0.010	<0.010	<0.010	<0.010
Chloromethane		<0.010	<0.010	<0.010	<0.010	<0.010
Chlorinated Fluorocarbons		NR	NR	NR	NR	NR
Cyclohexanone		NR	NR	NR	NR	NR
o-Dichlorobenzene		NR	NR	NR	NR	NR
1,1-Dichloroethene		<0.005	<0.005	<0.005	<0.005	<0.005
1,2-Dichloroethane		<0.005	<0.005	<0.005	<0.005	<0.005
trans-1,2-Dichloroethene		<0.005	<0.005	<0.005	<0.005	<0.005
Ethyl Acetate		NR	NR	NR	NR	NR
Ethyl Ether		NR	NR	NR	NR	NR
Ethyl Benzene		<0.005	<0.005	<0.005	<0.005	<0.005
Methylene Chloride		0.001 BJ	0.001 BJ	0.001 BJ	0.001 BJ	0.002 BJ
4-Methyl-2-Pentanone		<0.010	<0.010	<0.010	<0.010	<0.010
2-Nitropropane		NR	NR	NR	NR	NR
Pyridine		NR	NR	NR	NR	NR
Tetrachloroethylene		<0.005	<0.005	<0.005	<0.005	<0.005
Toluene		<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethene		<0.005	<0.005	<0.005	<0.005	<0.005
1,1,1-Trichloroethane		<0.005	<0.005	<0.005	<0.005	<0.005
1,1,2-Trichloroethane		<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroflurometh ane		<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorotrifluoroethane		NR	NR	NR	NR	NR
Vinyl Chloride		<0.010	<0.010	<0.010	<0.010	<0.010
m,p-Xylenes		NR	NR	NR	NR	NR
o-Xylene		NR	NR	NR	NR	NR
Xylenes (Total)		<0.005	<0.005	<0.005	<0.005	<0.005

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER				
		SP-3 0-1 920323-088	SP-3 1-2 920323-089	SP-3 2-3 920323-090	SP-3 3-4 920323-091	SP-3 4-5 920323-092
TCLP Volatile Organics (mg/l):						
Benzene	0.50	<0.050	<0.050	<0.050	<0.050	<0.050
2-Butanone	200.00	<0.100	<0.100	<0.100	<0.100	<0.100
Carbon Tetrachloride	0.50	<0.050	<0.050	<0.050	<0.050	<0.050
Chlorobenzene	100.00	<0.050	<0.050	<0.050	<0.050	<0.050
Chloroform	6.00	<0.050	<0.050	<0.050	<0.050	<0.050
1,4-Dichlorobenzene	7.50	NR	NR	NR	NR	NR
1,2-Dichloroethane	0.50	<0.050	<0.050	<0.050	<0.050	<0.050
1,1-Dichlorethylene	0.70	<0.050	<0.050	<0.050	<0.050	<0.050
Tetrachloroethylene	0.70	<0.050	<0.050	<0.050	<0.050	<0.050
Trichloroethylene	0.50	<0.050	<0.050	<0.050	<0.050	<0.050
Vinyl Chloride	0.20	<0.100	<0.100	<0.100	<0.100	<0.100
TCLP Semi Volatiles (mg/l):						
m,p-Cresol	200.00	<0.04	<0.04	<0.04	<0.04	<0.04
o-Cresol	200.00	<0.04	<0.04	<0.04	<0.04	<0.04
1,4-Dichlorobenzene	7.50	<0.04	<0.04	<0.04	<0.04	<0.04
2,4-Dinitrotoluene	0.13	<0.04	<0.04	<0.04	<0.04	<0.04
Hexachlorobenzene	0.13	<0.04	<0.04	<0.04	<0.04	<0.04
Hexachloroethane	3.00	<0.04	<0.04	<0.04	<0.04	<0.04
Hexachloro-1,3-butadiene	0.50	<0.04	<0.04	<0.04	<0.04	<0.04
Nitrobenzene	2.00	<0.04	<0.04	<0.04	<0.04	<0.04
Pentachlorophenol	100.00	<0.200	<0.200	<0.200	<0.200	<0.200
Pyridine	5.00	<0.400	<0.400	<0.400	<0.400	<0.400
2,4,5-Trichlorophenol	400.00	<0.04	<0.04	<0.04	<0.04	<0.04
2,4,6-Trichlorophenol	2.00	<0.04	<0.04	<0.04	<0.04	<0.04
TCLP Pesticides (mg/l):						
Chlordane	0.030	<0.00070	<0.00070	<0.00070	<0.00070	<0.00070
Endrin	0.020	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Heptachlor	0.008	<0.00015	<0.00015	<0.00015	<0.00015	<0.00015
Heptachlor Epoxide	0.008	<0.00420	<0.00420	<0.00420	<0.00420	<0.00420
Lindane	0.400	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Methoxychlor	10.000	<0.00880	<0.00880	<0.00880	<0.00880	<0.00880
Toxaphene	0.500	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120
TCLP Herbicides (mg/l):						
2,4-D	10.00	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120
Silvex	1.00	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER			
		SP-1 0-1 911122-005	SP-2 2-3 920323-085	SP-2 3-4 920323-086	SP-2 4-5 920323-087
TCLP Metals (mg/l):					
Arsenic	5.00	<0.03	<0.500	<0.500	<0.500
Barium	100.00	0.40	0.409	0.589	0.609
Cadmium	1.00	<0.02	<0.010	<0.010	<0.010
Chromium	5.00	<0.24	<0.025	<0.025	<0.025
Lead	5.00	<0.08	<0.100	<0.100	<0.100
Mercury	0.20	<0.003	<0.0002	<0.0002	<0.0002
Selenium	1.00	<0.02	<0.500	<0.500	<0.500
Silver	5.00	<0.05	<0.020	<0.020	<0.020
Total Volatiles (mg/kg):					
Acetone		<1.0	0.550 B		0.031 B
Benzene		<0.21	0.006 J		<0.005
2-Butanone		<0.63	0.008 BJ		<0.010
Carbon Disulfide		<0.30	<0.025		<0.005
Carbon Tetrachloride		<0.38	<0.025		<0.005
Chlorobenzene		<0.46	<0.025		<0.005
Chloroethane		NR	<0.050		<0.010
Chloromethane		NR	<0.050		<0.010
Chlorinated Fluorocarbons		BDL	NR		NR
Cyclohexanone		BDL	NR		NR
o-Dichlorobenzene		<0.58	NR		NR
1,1-Dichloroethene		NR	<0.025		<0.005
1,2-Dichloroethane		NR	<0.025		<0.005
trans-1,2-Dichloroethene		NR	<0.025		<0.005
Ethyl Acetate		BDL	NR		NR
Ethyl Benzene		<0.21	0.020 J		<0.005
Ethyl Ether		BDL	NR		NR
Methylene Chloride		<0.25	0.011 BJ		0.002 BJ
4-Methyl-2-Pentanone		<0.42	<0.050		<0.010
2-Nitropropane		BDL	NR		NR
Pyridine		BDL	NR		NR
Tetrachloroethylene		<1.2	<0.025		<0.005
Toluene		<0.42	<0.009		<0.005
Trichloroethene		<0.54	<0.025		<0.005
1,1,1-Trichloroethane		<0.50	0.006 J		<0.005
1,1,2-Trichloroethane		<0.25	<0.025		<0.005
Trichloroflurometh ane		<0.042	<0.050		<0.010
Trichlorotrifluoroethane		<0.042	NR		NR
Vinyl Chloride		NR	<0.050		<0.010
m,p-Xylenes		<0.25	NR		NR
o-Xylene		<0.17	NR		NR
Xylenes (Total)		NR	<0.150		<0.005

NR = Analysis not requested on this sample

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER			
		SP-1 0-1 911122-005	SP-2 2-3 920323-085	SP-2 3-4 920323-086	SP-2 4-5 920323-087
TCLP Volatile Organics (mg/l):					
Benzene	0.50	<0.090	<0.050	<0.050	<0.050
2-Butanone	200.00	<0.250	<0.100	42 J	<0.100
Carbon Tetrachloride	0.50	<0.150	<0.050	<0.050	<0.050
Chlorobenzene	100.00	<0.190	<0.050	<0.050	<0.050
Chloroform	6.00	<0.120	<0.050	<0.050	<0.050
1,4-Dichlorobenzene	7.50	<0.350	NR	NR	NR
1,2-Dichloroethane	0.50	<0.100	<0.050	<0.050	<0.050
1,1-Dichlorethylene	0.70	<0.120	<0.050	<0.050	<0.050
Tetrachloroethylene	0.70	<0.500	<0.050	<0.050	<0.050
Trichloroethylene	0.50	<0.220	<0.050	<0.050	<0.050
Vinyl Chloride	0.20	<0.150	<0.100	<0.100	<0.100
TCLP Semi Volatiles (mg/l):					
m,p-Cresol	200.00	<0.04	<0.04	<0.04	<0.04
o-Cresol	200.00	<0.04	<0.04	<0.04	<0.04
1,4-Dichlorobenzene	7.50	NR	<0.04	<0.04	<0.04
2,4-Dinitrotoluene	0.13	<0.04	<0.04	<0.04	<0.04
Hexachlorobenzene	0.13	<0.04	<0.04	<0.04	<0.04
Hexachloroethane	3.00	<0.04	<0.04	<0.04	<0.04
Hexachloro-1,3-butadiene	0.50	<0.04	<0.04	<0.04	<0.04
Nitrobenzene	2.00	<0.04	<0.04	<0.04	<0.04
Pentachlorophenol	100.00	<0.04	<0.200	<0.200	<0.200
Pyridine	5.00	<0.08	<0.400	<0.400	<0.400
2,4,5-Trichlorophenol	400.00	<0.04	<0.04	<0.04	<0.04
2,4,6-Trichlorophenol	2.00	<0.04	<0.04	<0.04	<0.04
TCLP Pesticides (mg/l):					
Chlordane	0.030	<0.004	<0.0007	<0.0007	<0.0007
Endrin	0.020	<0.0004	<0.0003	<0.0003	<0.0003
Heptachlor	0.008	<0.0004	<0.00015	<0.00015	<0.00015
Heptachlor Epoxide	0.008	<0.0004	<0.00420	<0.00420	<0.00420
Lindane	0.400	<0.0004	<0.00020	<0.00020	<0.00020
Methoxychlor	10.000	<0.04	<0.00880	<0.00880	<0.00880
Toxaphene	0.500	<0.02	<0.00120	<0.00120	<0.00120
TCLP Herbicides (mg/l):					
2,4-D	10.00	<0.001	<0.0120	<0.0120	<0.0120
Silvex	1.00	<0.001	<0.0017	<0.0017	<0.0017

NR = Analysis not requested on this sample

TABLE D-7

SURFACE WATER ANALYSES
RI/FS SAMPLING PROGRAM
LIME SLUDGE PONDS

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

LIME SLUDGE PONDS
SURFACE WATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	067500 08-29-1991		b
Actinium 231		NA	
Cesium 137	<	20.0	R
Lead 210		NA	
Neptunium 237	<	1.0	
Plutonium 238	<	1.0	J
Plutonium 239/240	<	1.0	
Polonium 210		NA	
Protactium 234		NA	
Radium 224		NA	
Radium 226	<	1.0	
Radium 228	<	3.0	
Ruthenium 106	<	150.0	R
Strontium 90	<	5.0	
Technetium 99	<	30.0	
Thorium 228	<	1.0	
Thorium 230	<	1.0	J
Thorium 232	<	1.0	J
Total Thorium **	<	4.7	
Uranium 234	<	1.0	J
Uranium 235/236	<	1.0	J
Uranium 238	<	1.0	
Total Uranium **	<	1.0	

** Results reported in ug/ℓ
b = validation qualifiers

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EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING HAZARDOUS SUBSTANCE LIST RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

J = Indicates an estimated value. This flag is used when the mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.

C = This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E = This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to pesticides/PCBs analyzed by GC/EC methods.

D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.

F = Estimated value due to a confirmed compound which is off-scale in both columns.

X = A flag that FORMASTER III CLP software automatically inserts to indicate that the data was entered manually.

Z = No estimated value reported, or an elevated CRQL reported because matrix effects interfere with or obscure the compound on one or both columns. In either situation, the compound does not confirm as a positive identification.

* = Values outside of contract laboratory-required QC limits.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

LIME SLUDGE PONDS
SURFACE WATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by sample location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	067008 05-14-1991		067900 11-06-1991			067901 11-06-1991 TRIP/FIELD BLANK			
		a		a	b			a	b
HERBICIDE ORGANICS									
2,4,5-T		NA	<	0.00200			NA		
2,4,5-TP (Silvex)		NA	<	0.00180			NA		
2,4-D		NA	<	0.01000			NA		
Dinoseb		NA	<	0.00071			NA		
ORGANOPHOSPOROUS PESTICIDES									
Dimethoate		NA	<	0.00300		<	0.00300		
Disulfoton		NA	<	0.00300		<	0.00300		
Famphur		NA	<	0.00300		<	0.00300		
Parathion, ethyl		NA	<	0.00300		<	0.00300		
Parathion, methyl		NA	<	0.00300		<	0.00300		
Phorate		NA	<	0.00300		<	0.00300		
Sulfotepp		NA	<	0.00300	UJ	<	0.01000		R
Sulfotepp		NA	<	0.01000	R	<	0.00300		
Tetraethylpyrophosphate		NA	<	0.00300		<	0.00300		
Thionazin		NA	<	0.00300		<	0.00300		
PESTICIDES									
4,4'-DDD	<	0.00010	<	0.00010		<	0.00010		
4,4'-DDE	<	0.00010	<	0.00010		<	0.00010		
4,4'-DDT	<	0.00010	<	0.00010		<	0.00010		
Aldrin	<	0.00005	<	0.00005		<	0.00005		
Aroclor-1016	<	0.00050	<	0.00050		<	0.00052		
Aroclor-1221	<	0.00050	<	0.00050		<	0.00052		
Aroclor-1232	<	0.00050	<	0.00050		<	0.00052		
Aroclor-1242	<	0.00050	<	0.00050		<	0.00052		
Aroclor-1248	<	0.00050	<	0.00050		<	0.00052		
Aroclor-1254	<	0.00100	<	0.00100		<	0.00100		
Aroclor-1260	<	0.00100	<	0.00100		<	0.00100		
Dieldrin	<	0.00010	<	0.00010		<	0.00010		
Endosulfan II	<	0.00010	<	0.00010		<	0.00010		
Endosulfan sulfate	<	0.00010	<	0.00010		<	0.00010		
Endosulfan-I	<	0.00005	<	0.00005		<	0.00005		
Endrin	<	0.00010	<	0.00010		<	0.00010		
Endrin ketone	<	0.00010	<	0.00010		<	0.00010		
Heptachlor	<	0.00005	<	0.00005		<	0.00005		
Heptachlor epoxide	<	0.00005	<	0.00005		<	0.00005		
Methoxychlor	<	0.00050	<	0.00050		<	0.00052		

a = lab qualifiers
b = validation qualifiers

- = sample has not been validated

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REPORT DATE : 1-MAY-92

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LIME SLUDGE PONDS
SURFACE WATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA
Results in parts per million (ppm).
Data presented by sample location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	067008 05-14-1991		067900 11-06-1991			067901 11-06-1991		
		a		a	b		a	b
Toxaphene	< 0.00100		< 0.00100			< 0.00100		
alpha-BHC	< 0.00005		< 0.00005			< 0.00005		
alpha-Chlordane	< 0.00050		< 0.00050			< 0.00052		
beta-BHC	< 0.00005		< 0.00005			< 0.00005		
delta-BHC	< 0.00005		< 0.00005			< 0.00005		
gamma-BHC (Lindane)	< 0.00005		< 0.00005			< 0.00005		
gamma-Chlordane	< 0.00050		< 0.00050			< 0.00052		
Isodrin	NA		< 0.00005			< 0.00005		
Kepone	NA		< 0.00010			< 0.00010		
SEMI-VOLATILE ORGANICS								
1,2,4-Trichlorobenzene	< 0.01000		< 0.01000			< 0.01000		
1,2-Dichlorobenzene	< 0.01000		< 0.01000			< 0.01000		
1,3-Dichlorobenzene	< 0.01000		< 0.01000			< 0.01000		
1,4-Dichlorobenzene	< 0.01000		< 0.01000			< 0.01000		
2,4,5-Trichlorophenol	< 0.05000		< 0.05000			< 0.05000		
2,4,6-Trichlorophenol	< 0.01000		< 0.01000			< 0.01000		
2,4-Dichlorophenol	< 0.01000		< 0.01000			< 0.01000		
2,4-Dimethylphenol	< 0.01000		< 0.01000			< 0.01000		J
2,4-Dinitrophenol	< 0.05000		< 0.05000		UJ	< 0.05000		UJ
2,4-Dinitrotoluene	< 0.01000		< 0.01000			< 0.01000		
2,6-Dinitrotoluene	< 0.01000		< 0.01000			< 0.01000		
2-Chloronaphthalene	< 0.01000		< 0.01000			< 0.01000		
2-Chlorophenol	< 0.01000		< 0.01000			< 0.01000		
2-Methylnaphthalene	< 0.01000		< 0.01000			< 0.01000		
2-Methylphenol	< 0.01000		< 0.01000			< 0.01000		
2-Nitroaniline	< 0.05000		< 0.05000			< 0.05000		
2-Nitrophenol	< 0.01000		< 0.01000			< 0.01000		
3,3'-Dichlorobenzidine	< 0.02000		< 0.02000			< 0.02000		
3-Nitroaniline	< 0.05000		< 0.05000			< 0.05000		
4,6-Dinitro-2-methylphenol	< 0.05000		< 0.05000			< 0.05000		
4-Bromophenyl phenyl ether	< 0.01000		< 0.01000			< 0.01000		
4-Chloro-3-methylphenol	< 0.01000		< 0.01000			< 0.01000		
4-Chloroaniline	< 0.01000		< 0.01000			< 0.01000		
4-Chlorophenylphenyl ether	< 0.01000		< 0.01000			< 0.01000		
4-Methylphenol	< 0.01000		< 0.01000			< 0.01000		
4-Nitroaniline	< 0.05000		< 0.05000			< 0.05000		
4-Nitrophenol	< 0.05000		< 0.05000			< 0.05000		
Acenaphthene	< 0.01000		< 0.01000			< 0.01000		
Acenaphthylene	< 0.01000		< 0.01000			< 0.01000		
Anthracene	< 0.01000		< 0.01000			< 0.01000		
Benzo(a)anthracene	< 0.01000		< 0.01000			< 0.01000		

a = lab qualifiers
b = validation qualifiers

- = sample has not been validated

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LIME SLUDGE PONDS
SURFACE WATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA
Results in parts per million (ppm).
Data presented by sample location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	067008 05-14-1991		067900 11-06-1991			067901 11-06-1991		
		a		a	b		a	b
Benzo(a)pyrene	< 0.01000		< 0.01000			< 0.01000		
Benzo(b)fluoranthene	< 0.01000		< 0.01000			< 0.01000		
Benzo(g,h,i)perylene	< 0.01000		< 0.01000			< 0.01000		
Benzo(k)fluoranthene	< 0.01000		< 0.01000			< 0.01000		
Benzoic acid	< 0.05000		< 0.05000			< 0.05000		
Benzyl alcohol	< 0.01000		< 0.01000			< 0.01000		
Butyl benzyl phthalate	< 0.01000		< 0.01000			< 0.01000		
Chrysene	< 0.01000		< 0.01000			< 0.01000		
Di-n-butyl phthalate	< 0.01000		< 0.01000			< 0.01000		
Di-n-octyl phthalate	< 0.01000		< 0.01000			< 0.01000		
Dibenzo(a,h)anthracene	< 0.01000		< 0.01000			< 0.01000		
Dibenzofuran	< 0.01000		< 0.01000			< 0.01000		
Diethyl phthalate	< 0.01000		< 0.01000			< 0.01000		
Dimethyl phthalate	< 0.01000		< 0.01000			< 0.01000		
Fluoranthene	< 0.01000		< 0.01000			< 0.01000		
Fluorene	< 0.01000		< 0.01000			< 0.01000		
Hexachlorobenzene	< 0.01000		< 0.01000			< 0.01000		
Hexachlorobutadiene	< 0.01000		< 0.01000			< 0.01000		
Hexachlorocyclopentadiene	< 0.01000		< 0.01000			< 0.01000		
Hexachloroethane	< 0.01000		< 0.01000			< 0.01000		
Indeno(1,2,3-cd)pyrene	< 0.01000		< 0.01000			< 0.01000		
Isophorone	< 0.01000		< 0.01000			< 0.01000		
N-Nitroso-di-n-propylamine	< 0.01000		< 0.01000			< 0.01000		
N-Nitrosodiphenylamine	< 0.01000		< 0.01000			< 0.01000		
Naphthalene	< 0.01000		< 0.01000			< 0.01000		
Nitrobenzene	< 0.01000		< 0.01000			< 0.01000		
Pentachlorophenol	< 0.05000		< 0.05000			< 0.05000		
Phenanthrene	< 0.01000		< 0.01000			< 0.01000		
Phenol	< 0.01000		< 0.01000			< 0.01000		
Pyrene	< 0.01000		< 0.01000			< 0.01000		
bis(2-Chloroethoxy)methane	< 0.01000		< 0.01000			< 0.01000		
bis(2-Chloroethyl)ether	< 0.01000		< 0.01000			< 0.01000		
bis(2-Chloroisopropyl) eth	< 0.01000		< 0.01000			< 0.01000		
bis(2-Ethylhexyl) phthalat	< 0.01000		< 0.01000			< 0.01000		
1,2,4,5-Tetrachlorobenzene	NA		< 0.01000	UJ		< 0.01000	J	
1,3,5-Trinitrobenzene	NA		< 0.01000			< 0.01000		
1,4-Naphthoquinone	NA		< 0.01000	UJ		< 0.01000	J	
1-Naphthylamine	NA		< 0.12000			< 0.12000		
2,3,4,6-Tetrachlorophenol	NA		< 0.01000			< 0.01000		
2,6-Dichlorophenol	NA		< 0.01000			< 0.01000		
2-Acetylaminofluorene	NA		< 0.01000			< 0.01000		
2-Naphthylamine	NA		< 0.17000			< 0.17000		
2-Picoline	NA		< 0.07000			< 0.07000		
3,3'-Dimethylbenzidine	NA		< 0.08000			< 0.08000		
Tributyl phosphate	NA		< 0.01000			< 0.01000		

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LIME SLUDGE PONDS
SURFACE WATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA
Results in parts per million (ppm).
Data presented by sample location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	067008 05-14-1991		a	067900 11-06-1991		a	b	067901 11-06-1991		a	b
3-Methylcholanthrene			NA		<	0.03000	UJ		<	0.03000	J
3-Methylphenol			NA		<	0.01000			<	0.01000	
4-Aminobiphenyl			NA		<	0.05000			<	0.05000	
4-Nitroquinoline-1-oxide			NA		<	0.01000	UJ		<	0.01000	J
5-Nitro-o-toluidine			NA		<	0.02000			<	0.02000	
7,12-Dimethylbenz(a)anthra			NA		<	0.02000			<	0.02000	
Acetophenone			NA		<	0.01000			<	0.01000	
Aniline			NA		<	0.05000			<	0.05000	
Aramite			NA		<	0.01000	UJ		<	0.01000	UJ
Diallate			NA		<	0.01000	UJ		<	0.01000	J
Dinoseb			NA		<	0.02000	R		<	0.02000	J
Dinoseb			NA		<	0.00071				NA	
Diphenylamine			NA		<	0.01000	UJ		<	0.01000	J
Ethyl methanesulfonate			NA		<	0.01000			<	0.01000	
Hexachlorophene			NA		<	0.05000			<	0.05000	
Hexachloropropene			NA		<	0.02000	R		<	0.02000	R
Isosafrole			NA		<	0.01000			<	0.01000	
Methapyrilene			NA		<	0.04000	UJ		<	0.04000	J
Methyl methanesulfonate			NA		<	0.01000			<	0.01000	
N-Nitrosodi-n-butylamine			NA		<	0.02000	J		<	0.02000	J
N-Nitrosodiethylamine			NA		<	0.01000	J		<	0.01000	UJ
N-Nitrosodimethylamine			NA		<	0.01000			<	0.01000	
N-Nitrosomethylethylamine			NA		<	0.01000	UJ		<	0.01000	UJ
N-Nitrosomorpholine			NA		<	0.01000			<	0.01000	UJ
N-Nitrosopiperidine			NA		<	0.01000			<	0.01000	J
N-Nitrosopyrrolidine			NA		<	0.01000	J		<	0.01000	
O,O,O-Triethylphosphorothi			NA		<	0.00300			<	0.00300	
Pentachlorobenzene			NA		<	0.02000	UJ		<	0.02000	UJ
Pentachloroethane			NA		<	0.02000			<	0.02000	
Pentachloronitrobenzene			NA		<	0.02000	UJ		<	0.02000	UJ
Phenacetin			NA		<	0.01000			<	0.01000	
Pronamide			NA		<	0.03000			<	0.03000	
Safrole			NA		<	0.01000			<	0.01000	
a,a-Dimethylphenethylamine			NA		<	0.01000			<	0.01000	J
o-Toluidine			NA		<	0.01000			<	0.01000	
p-Dimethylaminoazobenzene			NA		<	0.03000	J		<	0.03000	UJ
p-Phenylenediamine			NA		<	0.05000			<	0.05000	
VOLATILE ORGANICS											
1,1,1-Trichloroethane	<	0.00500			<	0.00500			<	0.00500	
1,1,2,2-Tetrachloroethane	<	0.00500			<	0.00500			<	0.00500	
1,1,2-Trichloroethane	<	0.00500			<	0.00500			<	0.00500	
1,1-Dichloroethane	<	0.00500			<	0.00500			<	0.00500	

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LIME SLUDGE PONDS
SURFACE WATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA
Results in parts per million (ppm).
Data presented by sample location, sample number, and sample date.
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CHEMICAL PARAMETERS	067008 05-14-1991	a	067900 11-06-1991	a	b	067901 11-06-1991	a	b
1,1-Dichloroethene	< 0.00500		< 0.00500			< 0.00500		
1,2-Dichloroethane	< 0.00500		< 0.00500			< 0.00500		
1,2-Dichloroethylene	< 0.00500		< 0.00500			< 0.00500		
1,2-Dichloropropane	< 0.00500		< 0.00500			< 0.00500		
2-Butanone	< 0.01000		0.01000	BJ	U	< 0.01000		
2-Hexanone	< 0.01000		< 0.01000			< 0.01000		
4-Methyl-2-pentanone	< 0.01000		< 0.01000			< 0.01000		
Acetone	0.00800	BJ	0.01000	B	U	0.01100	B	
Benzene	< 0.00500		< 0.00500		UJ	< 0.00500		UJ
Bromodichloromethane	< 0.00500		< 0.00500			< 0.00500		
Bromoform	< 0.00500		< 0.00500			< 0.00500		
Bromomethane	< 0.01000		< 0.01000			< 0.01000		
Carbon Tetrachloride	< 0.00500		< 0.00500			< 0.00500		
Carbon disulfide	< 0.00500		< 0.00500			< 0.00500		
Chlorobenzene	< 0.00500		< 0.00500		UJ	< 0.00500		UJ
Chloroethane	< 0.01000		< 0.01000			< 0.01000		
Chloroform	< 0.00500		< 0.00500			0.00200	J	
Chloromethane	< 0.01000		< 0.01000		UJ	< 0.01000		UJ
Dibromochloromethane	< 0.00500		< 0.00500			< 0.00500		
Ethylbenzene	< 0.00500		< 0.00500		UJ	< 0.00500		UJ
Methylene chloride	0.00700	B	0.00500	BJ	U	0.00200	BJ	J
Styrene	< 0.00500		< 0.00500		UJ	< 0.00500		UJ
Tetrachlorethene	< 0.00500		< 0.00500			< 0.00500		
Toluene	< 0.00500		< 0.00500		UJ	< 0.00500		UJ
Total xylenes	< 0.00500		< 0.00500		UJ	< 0.00500		UJ
Trichloroethene	< 0.00500		< 0.00500			< 0.00500		
Vinyl Acetate	< 0.01000		< 0.01000			< 0.01000		
Vinyl chloride	< 0.01000		< 0.01000			< 0.01000		
cis-1,3-Dichloropropene	< 0.00500		< 0.00500			< 0.00500		
trans-1,3-Dichloropropene	< 0.00500		< 0.00500			< 0.00500		
1,1,1,2-Tetrachloroethane	NA		< 0.01000			< 0.01000		
1,2,3-Trichloropropane	NA		< 0.01000			< 0.01000		
1,2-Dibromo-3-chloropropan	NA		< 0.01000			< 0.01000		
1,2-Dibromoethane	NA		< 0.01000			< 0.01000		
1,4-Dioxane	NA		< 0.20000		R	< 0.20000		R
2-Chloro-1,3-butadiene	NA		< 0.01000		UJ	< 0.01000		UJ
3-Chloropropene	NA		< 0.01000		UJ	< 0.01000		UJ
Acetonitrile	NA		< 0.02000		UJ	< 0.02000		UJ
Acrolein	NA		< 0.02000		UJ	< 0.02000		UJ
Acrylonitrile	NA		< 0.02000		R	< 0.02000		R
Dibromomethane	NA		< 0.01000			< 0.01000		
Dichlorodifluoromethane	NA		< 0.20000		R	< 0.20000		R
Ethyl cyanide	NA		< 0.01000			< 0.01000		
Ethyl methacrylate	NA		< 0.01000			< 0.01000		

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LIME SLUDGE PONDS
SURFACE WATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA
Results in parts per million (ppm).
Data presented by sample location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	067008 05-14-1991			a	067900 11-06-1991			a	b	067901 11-06-1991			a	b
Iodomethane	NA		<		0.01000					<	0.01000			
Isobutyl alcohol	NA		<		0.20000					<	0.20000			
Methacrylonitrile	NA		<		0.01000					<	0.01000			
Methyl methacrylate	NA		<		0.01000					<	0.01000			
Pyridine	NA		<		0.01000					<	0.01000			
Trichlorofluoromethane	NA		<		0.01000					<	0.01000			
trans-1,4-Dichloro-2-buten	NA		<		0.01000		UJ			<	0.01000		UJ	

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REPORT DATE : 1-MAY-92

EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING GENERAL CHEMICAL RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

Concentration Qualifiers

B = Reported value was obtained from a reading that was less than the Contract Laboratory Program (CLP) Contract Required Detection Limit (CRQL), but greater than or equal to the Instrument Detection Limit (IDL).

Quality Qualifiers

E = The reported value is estimated because of the presence of interference.

M = Duplicate injection precision not met.

N = Spiked sample recovery not within controls limits.

S = The reported value was determined by the Method of Standard Additions.

W = Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

G = Native analyte > 4 times spike added; therefore acceptance criteria do not apply.

X = Detection limit is higher than normal due to sample matrix interferences.

* = Duplication analysis not within control limits.

+ = Correlation coefficient for the MSA is less than 0.955.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

LIME SLUDGE PONDS
SURFACE WATER GENERAL CHEMICAL RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	067008 05-14-1991		a	067900 11-06-1991		a	b	067907 11-07-1991		a	b
GENERAL CHEMISTRY											
Ammonia	<	0.1000			NA				NA		
Chloride		550.0000			NA				NA		
Fluoride		0.2400			NA				NA		
Hydrogen ion		NA			NA				NA		
Nitrate		4.4800			NA				NA		
Phenols	<	0.0100			NA				NA		
Phosphorus (black, white, red,		0.8400			NA				NA		
Phosphate as P		NA			NA				NA		
Sulfate		126.0000			NA				NA		
Total Kjeldahl Nitrogen		NA			NA				NA		
Total Organic Carbon		5.9500			NA				NA		
Total Organic Halides		0.0104			NA				NA		
Total Organic Nitrogen		0.7860			NA				NA		
METALS											
Aluminum		0.0997	B		0.0986	BEN	J		0.0950	B	
Antimony	<	0.0300			0.0369	B	J		0.0333	B	J
Arsenic		0.0036	B	<	0.0020	W			0.0026	B	
Barium		0.0427	B		0.0415	BE	J		0.0330	B	
Beryllium	<	0.0020		<	0.0020			<	0.0020		
Boron		NA			0.2110	EN	J		0.243		
Cadmium		0.0092			0.0067	N	J		0.0074		
Calcium		43.3000			47.9000				43.5000		
Chromium		0.0118	*		0.0156				0.0154		J
Cobalt	<	0.0100		<	0.0100	N	J	<	0.0100		
Copper	<	0.0100		<	0.0100	EN		<	0.0100		
Cyanide	<	0.0002			NA				NA		
Hexavalent Chromium		NA			NA				NA		
Iron		0.0233	B		0.0333	BE	J		0.0232	B	
Lead		0.0020	B	<	0.0020			<	0.0020		
Magnesium		33.5000			47.8000				45.9000		
Manganese		0.0009	B		0.0058	B			0.1140		
Mercury	<	0.00089		<	0.0002		J	<	0.0002		J
Molybdenum		0.0106			0.0141	EN	J		0.0183		
Nickel	<	0.0020		<	0.0200	N	J	<	0.0200		
Potassium		8.5400			13.2000				11.4000		
Selenium	<	0.0020		<	0.0020			<	0.0020		R
Silicon		0.4020			0.7800	E	J		1.0400		
Silver		0.0101			0.0107	N	J		0.0113		J
Sodium		272.0000			199.0000				185.0000		
Thallium	<	0.0020	W	<	0.0020	N		<	0.0020	WN	R
Tin		NA		<	0.2000			<	0.2000		
Vanadium	<	0.0100		<	0.0100	EN		<	0.0100		
Zinc		0.1930		<	0.0050				0.0083	B	

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TABLE D-8

SURFACE WATER ANALYSES
RCRA FACILITY ASSESSMENT
LIME SLUDGE POND

SURFACE WATER ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER		
		SP-4 WATER 911120-087	SP-5 WATER 911120-088	SP-6 WATER 911120-089
TCLP Metals (mg/l):				
Arsenic	5.00	<0.20	<0.20	<0.20
Barium	100.00	<0.20	<0.20	<0.20
Cadmium	1.00	<0.10	<0.10	<0.10
Chromium	5.00	<0.50	<0.50	<0.50
Lead	5.00	<0.20	<0.20	<0.20
Mercury	0.20	<0.0002	<0.0002	<0.0002
Selenium	1.00	<0.557	<0.557	<0.557
Silver	5.00	<0.050	<0.050	<0.050
Total Volatiles Organics (mg/l):				
Acetone		0.0165	<0.010	<0.010
Benzene		<0.005	<0.005	<0.005
2-Butanone		0.0529	0.051	0.496
Carbon Disulfide		<0.005	<0.005	<0.005
Carbon Tetrachloride		<0.005	<0.005	<0.005
Chlorobenzene		<0.005	<0.005	<0.005
Chloroethane		NR	NR	NR
Chloromethane		NR	NR	NR
Cyclohexanone		<0.160	<0.160	<0.160
o-Dichlorobenzene		NR	NR	NR
1,1-Dichloroethene		NR	NR	NR
1,2-Dichloroethane		NR	NR	NR
trans-1,2-Dichloroethene		NR	NR	NR
Ethyl Acetate		<0.020	<0.020	<0.020
Ethyl Benzene		<0.005	<0.005	<0.005
Ethyl Ether		<0.005	<0.005	<0.005
Methylene Chloride		<0.005	<0.005	<0.005
4-Methyl-2-Pentanone		<0.010	<0.010	<0.010
2-Nitropropane		<0.070	<0.070	<0.070
Tetrachloroethylene		<0.005	<0.005	<0.005
Toluene		<0.005	<0.005	<0.005
Trichloroethene		<0.005	<0.005	<0.005
1,1,1-Trichloroethane		<0.005	<0.005	<0.005
1,1,2-Trichloroethane		<0.005	<0.005	<0.005
Trichlorofluoromethane		<0.005	<0.005	<0.005
Trichlorotrifluoroethane		<0.005	<0.005	<0.005
Vinyl Chloride		NR	NR	NR
m,p-Xylenes		NR	NR	NR
o-Xylene		NR	NR	NR
Xylenes (Total)		<0.005	<0.005	<0.005

NR = Analysis not requested on this sample

SURFACE WATER ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

ANALYTE	HAZARDOUS WASTE THRESHOLD	SAMPLE LOCATION, DEPTH (ft), AND NUMBER		
		SP-4 WATER 911120-087	SP-5 WATER 911120-088	SP-6 WATER 911120-089
TCLP Volatile Organics (mg/l):				
Benzene	0.50	<0.025	<0.025	
2-Butanone	200.00	<0.050	<0.050	
Carbon Tetrachloride	0.50	<0.025	<0.025	
Chlorobenzene	100.00	<0.025	<0.025	
Chloroform	6.00	<0.025	<0.025	
1,4-Dichlorobenzene	7.50	NR	NR	
1,2-Dichloroethane	0.50	<0.025	<0.025	
1,1-Dichlorethylene	0.70	<0.025	<0.025	
Tetrachloroethylene	0.70	<0.025	<0.025	
Trichloroethylene	0.50	<0.025	<0.025	
Vinyl Chloride	0.20	<0.050	<0.050	
TCLP Semi Volatiles (mg/l):				
m,p-Cresol	200.00	<0.020	<0.020	<0.020
o-Cresol	200.00	<0.020	<0.020	<0.020
1,4-Dichlorobenzene	7.50	<0.020	<0.020	<0.020
2,4-Dinitrotoluene	0.13	<0.020	<0.020	<0.020
Hexachlorobenzene	0.13	<0.020	<0.020	<0.020
Hexachloroethane	3.00	<0.020	<0.020	<0.020
Hexachloro-1,3-butadiene	0.50	<0.020	<0.020	<0.020
Nitrobenzene	2.00	<0.020	<0.020	<0.020
Pentachlorophenol	100.00	<0.100	<0.100	<0.100
Pyridine	5.00	<0.020	<0.020	<0.020
2,4,5-Trichlorophenol	400.00	<0.020	<0.020	<0.020
2,4,6-Trichlorophenol	2.00	<0.020	<0.020	<0.020
TCLP Pesticides (mg/l):				
Chlordane	0.030	<0.0001	<0.0001	
Endrin	0.020	<0.0001	<0.0001	
Heptachlor	0.008	<0.00005	<0.00005	
Heptachlor Epoxide	0.008	<0.00005	<0.00005	
Lindane	0.400	<0.00005	<0.00005	
Methoxychlor	10.000	<0.0005	<0.0005	
Toxaphene	0.500	<0.001	<0.001	
TCLP Herbicides (mg/l):				
2,4-D	10.00	<0.001	<0.001	
Silvex	1.00	<0.0005	<0.0005	

NR = Analysis not requested on this sample

TABLE D-9

GROUNDWATER ANALYSES
RI/FS SAMPLING PROGRAM
LIME SLUDGE PONDS

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

LIME SLUDGE PONDS
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	1039 003179 05-11-1988	1039 003491 08-10-1988	1039 003733 11-20-1988	1039 003928 02-05-1989
Actinium 231	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	1.4 ± 0.5
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	NA	< 12.0	< 7.0	< 4.0
Uranium 234	< 1.0	< 1.0	< 1.0	1.4 ± 0.5
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	< 1.0	< 1.0	< 1.0	1.8 ± 0.5
Total Uranium **	2.0 ± 1.0	1.0 ± 1.0	1.8 ± 0.3	1.0 ± 1.0

** Results reported in ug/ℓ

- = Sample has not been validated

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LIME SLUDGE PONDS
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	1041 003180 05-11-1988 -	1041 003490 08-10-1988 -	1041 003732 11-17-1988 -	1041 003924 03-01-1989 -
Actinium 231	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	3.8 ± 1.4	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	1.2 ± 0.5	< 1.0	< 1.0	1.1 ± 0.7
Thorium 230	1.6 ± 0.6	< 1.0	< 1.0	1.4 ± 0.7
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	NA	< 10.0	< 2.0	< 8.0
Uranium 234	1.8 ± 0.3	2.1 ± 0.5	1.4 ± 0.4	2.4 ± 0.6
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	2.4 ± 0.4	1.7 ± 0.5	2.1 ± 0.6	2.4 ± 0.6
Total Uranium **	9.0 ± 1.0	6.0 ± 1.0	6.0 ± 1.0	8.0 ± 1.0

** Results reported in ug/ℓ

- = Sample has not been validated

LIME SLUDGE PONDS
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	1042 003182 05-11-1988 -	1042 003416 08-09-1988 -	1042 003723 11-17-1988 -	1042 003922 03-01-1989 -
Actinium 231	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	3.4 ± 1.2	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	NA	< 3.0	< 5.0	< 3.0
Uranium 234	< 1.0	2.5 ± 0.5	3.3 ± 0.7	9.5 ± 1.5
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	< 1.0	2.2 ± 0.5	3.2 ± 0.7	9.7 ± 1.5
Total Uranium **	< 1.0	6.0 ± 1.0	11.0 ± 2.0	30.0 ± 5.0

** Results reported in ug/ℓ

- = Sample has not been validated

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REPORT DATE : 5-MAY-92

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LIME SLUDGE PONDS
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

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RADIOLOGICAL PARAMETER	1134 045426 10-18-1989
Actinium 231	NA
Cesium 137	NA
Lead 210	NA
Neptunium 237	NA
Plutonium 238	NA
Plutonium 239/240	NA
Polonium 210	NA
Protactium 234	NA
Radium 224	NA
Radium 226	NA
Radium 228	NA
Ruthenium 106	NA
Strontium 90	NA
Technetium 99	NA
Thorium 228	NA
Thorium 230	NA
Thorium 232	NA
Total Thorium **	NA
Uranium 234	NA
Uranium 235/236	NA
Uranium 238	NA
Total Uranium **	21.0 ± 3.0

** Results reported in ug/ℓ

- = Sample has not been validated

LIME SLUDGE PONDS
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	1210 045739 10-22-1989
Actinium 231	NA
Cesium 137	NA
Lead 210	NA
Neptunium 237	NA
Plutonium 238	NA
Plutonium 239/240	NA
Polonium 210	NA
Protactium 234	NA
Radium 224	NA
Radium 226	NA
Radium 228	NA
Ruthenium 106	NA
Strontium 90	NA
Technetium 99	NA
Thorium 228	NA
Thorium 230	NA
Thorium 232	NA
Total Thorium **	NA
Uranium 234	NA
Uranium 235/236	NA
Uranium 238	NA
Total Uranium **	8.4 ± 0.9

** Results reported in ug/ℓ

- = Sample has not been validated

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REPORT DATE : 5-MAY-92

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LIME SLUDGE PONDS
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	2042 003150 05-04-1988	2042 003415 08-09-1988	2042 003722 11-17-1988	2042 003921 03-01-1989	DUPLICATE 2042 004036 03-01-1989
	-	-	-	-	-
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	1.6 ± 0.8	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	1.0 ± 0.6	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	NA	< 3.0	< 2.0	< 3.0	< 3.0
Uranium 234	1.4 ± 0.5	1.1 ± 0.3	< 1.0	1.2 ± 0.4	1.2 ± 0.4
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	1.5 ± 0.5	< 1.0	< 1.0	< 1.0	< 1.0
Total Uranium **	4.0 ± 1.0	2.0 ± 1.0	2.0 ± 1.0	3.0 ± 1.0	3.0 ± 1.0

** Results reported in ug/ℓ

- = Sample has not been validated

LIME SLUDGE PONDS
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER		2042 066845 01-05-1990		
Actinium 231		NA		
Cesium 137		NA		
Lead 210		NA		
Neptunium 237		NA		
Plutonium 238		NA		
Plutonium 239/240		NA		
Polonium 210		NA		
Protactium 234		NA		
Radium 224		NA		
Radium 226		NA		
Radium 228		NA		
Ruthenium 106		NA		
Strontium 90		NA		
Technetium 99	<	30.0		
Thorium 228	<	1.0		
Thorium 230		1.2	±	0.9
Thorium 232		NA		
Total Thorium **		NA		
Uranium 234		1.9	±	0.5
Uranium 235/236		NA		
Uranium 238	<	1.0		
Total Uranium **		7.4	±	0.8

** Results reported in ug/ℓ

- = Sample has not been validated

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REPORT DATE : 5-MAY-92

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LIME SLUDGE PONDS
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	4101 003207 05-19-1988 -	DUPLICATE 4101 003208 05-19-1988 -	4101 003409 08-08-1988 -	DUPLICATE 4101 003410 08-08-1988 -	4101 003719 11-18-1988 -
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	1.9 ± 0.5	1.7 ± 0.5	< 1.0
Radium 228	< 3.0	4.5 ± 1.4	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	NA	NA	< 3.0	< 3.0	< 2.0
Uranium 234	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Uranium **	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

** Results reported in ug/ℓ

- = Sample has not been validated

LIME SLUDGE PONDS
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER		4101 003918 03-15-1989		4101 066736 12-07-1989
Actinium 231		NA		NA
Cesium 137	<	20.0		NA
Lead 210		NA		NA
Neptunium 237	<	1.0		NA
Plutonium 238	<	1.0		NA
Plutonium 239/240	<	1.0		NA
Polonium 210		NA		NA
Protactium 234		NA		NA
Radium 224		NA		NA
Radium 226	<	1.0		NA
Radium 228	<	3.0		NA
Ruthenium 106	<	150.0		NA
Strontium 90	<	5.0		NA
Technetium 99	<	33.0	<	30.0
Thorium 228	<	1.0	<	1.0
Thorium 230	<	1.0	<	1.0
Thorium 232	<	1.0		NA
Total Thorium **	<	7.0		NA
Uranium 234	<	1.0	<	1.0
Uranium 235/236	<	1.0	<	1.0
Uranium 238	<	1.0	<	1.0
Total Uranium **	<	0.1	<	1.0

** Results reported in ug/ℓ

- = Sample has not been validated

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REPORT DATE : 5-MAY-92

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LIME SLUDGE PONDS
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	4102 003205 05-19-1988 -	DUPLICATE 4102 003206 05-19-1988 -	4102 003412 08-08-1988 -	DUPLICATE 4102 003413 08-08-1988 -	4102 003720 11-18-1988 -
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	NA	NA	< 3.0	< 4.0	< 3.0
Uranium 234	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Uranium **	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

** Results reported in ug/ℓ

- = Sample has not been validated

LIME SLUDGE PONDS
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER		4102 003919 02-23-1989				4102 066738 12-07-1989	
Actinium 231			NA				NA
Cesium 137		<	20.0				NA
Lead 210			NA				NA
Neptunium 237		<	1.0				NA
Plutonium 238		<	1.0				NA
Plutonium 239/240		<	1.0				NA
Polonium 210			NA				NA
Protactium 234			NA				NA
Radium 224			NA				NA
Radium 226		<	1.0				NA
Radium 228		<	3.0				NA
Ruthenium 106		<	150.0				NA
Strontium 90		<	5.0				NA
Technetium 99		<	30.0			<	30.0
Thorium 228		<	1.0			<	1.0
Thorium 230		<	1.0			<	1.0
Thorium 232		<	1.0				NA
Total Thorium	**	<	3.0				NA
Uranium 234			1.6	±	0.4	<	1.0
Uranium 235/236		<	1.0			<	1.0
Uranium 238			1.0	±	0.3	<	1.0
Total Uranium	**	<	1.0			<	1.0

** Results reported in ug/ℓ

- = Sample has not been validated

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EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING HAZARDOUS SUBSTANCE LIST RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

J = Indicates an estimated value. This flag is used when the mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.

C = This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E = This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to pesticides/PCBs analyzed by GC/EC methods.

D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.

F = Estimated value due to a confirmed compound which is off-scale in both columns.

X = A flag that FORMASTER III CLP software automatically inserts to indicate that the data was entered manually.

Z = No estimated value reported, or an elevated CRQL reported because matrix effects interfere with or obscure the compound on one or both columns. In either situation, the compound does not confirm as a positive identification.

* = Values outside of contract laboratory-required QC limits.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

LIME SLUDGE PONDS
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	2042 003150 05-04-1988 a -	4101 003918 03-15-1989 a -
ORGANOPHOSPOROUS PESTICIDES		
Azinphosmethyl	< 0.00200	NA
Demeton	< 0.00100	NA
Diazinon	< 0.00050	NA
Disulfoton	< 0.00050	NA
Ethion	< 0.00050	NA
Malathion	< 0.00100	NA
Parathion, ethyl	< 0.00050	NA
Parathion, methyl	< 0.00100	NA
PESTICIDES		
4,4'-DDD	NA	< 0.00010
4,4'-DDE	NA	< 0.00010
4,4'-DDT	NA	< 0.00010
Aldrin	NA	< 0.00005
Aroclor-1016	NA	< 0.00050
Aroclor-1221	NA	< 0.00050
Aroclor-1232	NA	< 0.00050
Aroclor-1242	NA	< 0.00050
Aroclor-1248	NA	< 0.00050
Aroclor-1254	NA	< 0.00100
Aroclor-1260	NA	< 0.00100
Dieldrin	NA	< 0.00010
Endosulfan II	NA	< 0.00010
Endosulfan sulfate	NA	< 0.00010
Endosulfan-I	NA	< 0.00005
Endrin	NA	< 0.00010
Endrin ketone	NA	< 0.00010
Heptachlor	NA	< 0.00005
Heptachlor epoxide	NA	< 0.00005
Methoxychlor	NA	< 0.00050
Toxaphene	NA	< 0.00100
alpha-BHC	NA	< 0.00005
alpha-Chlordane	NA	< 0.00050
beta-BHC	NA	< 0.00005
delta-BHC	NA	< 0.00005
gamma-BHC (Lindane)	NA	< 0.00005
gamma-Chlordane	NA	< 0.00050
SEMI-VOLATILE ORGANICS		

a = lab qualifiers

- = Sample has not been validated

LIME SLUDGE PONDS
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		2042 003150 05-04-1988	a	-		4101 003918 03-15-1989	a	-
SEMI-VOLATILE ORGANICS								
1,2,4-Trichlorobenzene	<	0.01000			<	0.01000		
1,2-Dichlorobenzene	<	0.01000			<	0.01000		
1,3-Dichlorobenzene	<	0.01000			<	0.01000		
1,4-Dichlorobenzene	<	0.01000			<	0.01000		
2,4,5-Trichlorophenol	<	0.05000			<	0.05000		
2,4,6-Trichlorophenol	<	0.01000			<	0.01000		
2,4-Dichlorophenol	<	0.01000			<	0.01000		
2,4-Dimethylphenol	<	0.01000			<	0.01000		
2,4-Dinitrophenol	<	0.05000			<	0.05000		
2,4-Dinitrotoluene	<	0.01000			<	0.01000		
2,6-Dinitrotoluene	<	0.01000			<	0.01000		
2-Chloronaphthalene	<	0.01000			<	0.01000		
2-Chlorophenol	<	0.01000			<	0.01000		
2-Methylnaphthalene	<	0.01000			<	0.01000		
2-Methylphenol	<	0.01000			<	0.01000		
2-Nitroaniline	<	0.05000			<	0.05000		
2-Nitrophenol	<	0.01000			<	0.01000		
3,3'-Dichlorobenzidine	<	0.02000			<	0.02000		
3-Nitroaniline	<	0.05000			<	0.05000		
4,6-Dinitro-2-methylphenol	<	0.05000			<	0.05000		
4-Bromophenyl phenyl ether	<	0.01000			<	0.01000		
4-Chloro-3-methylphenol	<	0.01000			<	0.01000		
4-Chloroaniline	<	0.01000			<	0.01000		
4-Chlorophenylphenyl ether	<	0.01000			<	0.01000		
4-Methylphenol	<	0.01000			<	0.01000		
4-Nitroaniline	<	0.05000			<	0.05000		
4-Nitrophenol	<	0.05000			<	0.05000		
Acenaphthene	<	0.01000			<	0.01000		
Acenaphthylene	<	0.01000			<	0.01000		
Anthracene	<	0.01000			<	0.01000		
Benzo(a)anthracene	<	0.01000			<	0.01000		
Benzo(a)pyrene	<	0.01000			<	0.01000		
Benzo(b)fluoranthene	<	0.01000			<	0.01000		
Benzo(g,h,i)perylene	<	0.01000			<	0.01000		
Benzo(k)fluoranthene	<	0.01000			<	0.01000		
Benzoic acid	<	0.05000			<	0.05000		
Benzyl alcohol	<	0.01000			<	0.01000		
Butyl benzyl phthalate	<	0.01000			<	0.01000		
Chrysene	<	0.01000			<	0.01000		
Di-n-butyl phthalate	<	0.01000			<	0.01000		

a - lab qualifiers

- = Sample has not been validated

LIME SLUDGE PONDS
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	2042 003150 05-04-1988			4101 003918 03-15-1989		
			a			a
Di-n-octyl phthalate	<	0.01000		<	0.01000	
Dibenzo(a,h)anthracene	<	0.01000		<	0.01000	
Dibenzofuran	<	0.01000		<	0.01000	
Diethyl phthalate	<	0.01000		<	0.01000	
Dimethyl phthalate	<	0.01000		<	0.01000	
Fluoranthene	<	0.01000		<	0.01000	
Fluorene	<	0.01000		<	0.01000	
Hexachlorobenzene	<	0.01000		<	0.01000	
Hexachlorobutadiene	<	0.01000		<	0.01000	
Hexachlorocyclopentadiene	<	0.01000		<	0.01000	
Hexachloroethane	<	0.01000		<	0.01000	
Indeno(1,2,3-cd)pyrene	<	0.01000		<	0.01000	
Isophorone	<	0.01000		<	0.01000	
N-Nitroso-di-n-propylamine	<	0.01000		<	0.01000	
N-Nitrosodiphenylamine	<	0.01000		<	0.01000	
Naphthalene	<	0.01000		<	0.01000	
Nitrobenzene	<	0.01000		<	0.01000	
Pentachlorophenol	<	0.05000		<	0.05000	
Phenanthrene	<	0.01000		<	0.01000	
Phenol	<	0.01000		<	0.01000	
Pyrene	<	0.01000		<	0.01000	
bis(2-Chloroethoxy)methane	<	0.01000		<	0.01000	
bis(2-Chloroethyl)ether	<	0.01000		<	0.01000	
bis(2-Chloroisopropyl) eth	<	0.01000		<	0.01000	
bis(2-Ethylhexyl) phthalat	<	0.01000		<	0.01000	
VOLATILE ORGANICS						
1,1,1-Trichloroethane	<	0.00500		<	0.00500	
1,1,2,2-Tetrachloroethane	<	0.00500		<	0.00500	
1,1,2-Trichloroethane	<	0.00500		<	0.00500	
1,1-Dichloroethane	<	0.00500		<	0.00500	
1,1-Dichloroethene	<	0.00500		<	0.00500	
1,2-Dichloroethane	<	0.00500		<	0.00500	
1,2-Dichloroethylene	<	0.00500		<	0.00500	
1,2-Dichloropropane	<	0.00500		<	0.00500	
2-Butanone	<	0.01000		<	0.01000	
2-Hexanone	<	0.01000			0.00300	BJ
4-Methyl-2-pentanone	<	0.01000			0.00300	BJ
Acetone		0.00700	J		0.00500	BJ
Benzene	<	0.00500		<	0.00500	
Bromodichloromethane	<	0.00500		<	0.00500	
Bromoform	<	0.00500		<	0.00500	

a = lab qualifiers

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LIME SLUDGE PONDS
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	2042 003150 05-04-1988		- a	4101 003918 03-15-1989		- a
Bromomethane	<	0.01000		<	0.01000	
Carbon Tetrachloride	<	0.00500		<	0.00500	
Carbon disulfide	<	0.00500		<	0.00500	
Chlorobenzene	<	0.00500		<	0.00500	
Chloroethane	<	0.01000		<	0.01000	
Chloroform	<	0.00500		<	0.00500	
Chloromethane	<	0.01000		<	0.01000	
Dibromochloromethane	<	0.00500		<	0.00500	
Ethylbenzene	<	0.00500		<	0.00500	
Methylene chloride		0.00900		<	0.00500	
Styrene	<	0.00500		<	0.00500	
Tetrachlorethene	<	0.00500		<	0.00500	
Toluene	<	0.00500		<	0.00500	
Total xylenes	<	0.00500		<	0.00500	
Trichloroethene	<	0.00500		<	0.00500	
Vinyl Acetate	<	0.01000		<	0.01000	
Vinyl chloride	<	0.01000		<	0.01000	
cis-1,3-Dichloropropene	<	0.00500		<	0.00500	
trans-1,3-Dichloropropene	<	0.00500		<	0.00500	

a = lab qualifiers

- = Sample has not been validated

EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING GENERAL CHEMICAL RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

Concentration Qualifiers

B = Reported value was obtained from a reading that was less than the Contract Laboratory Program (CLP) Contract Required Detection Limit (CRQL), but greater than or equal to the Instrument Detection Limit (IDL).

Quality Qualifiers

E = The reported value is estimated because of the presence of interference.

M = Duplicate injection precision not met.

N = Spiked sample recovery not within controls limits.

S = The reported value was determined by the Method of Standard Additions.

W = Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

G = Native analyte > 4 times spike added; therefore acceptance criteria do not apply.

X = Detection limit is higher than normal due to sample matrix interferences.

* = Duplication analysis not within control limits.

+ = Correlation coefficient for the MSA is less than 0.955.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

LIME SLUDGE PONDS
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1039 003179 05-11-1988 a -	1039 003491 08-10-1988 a -	1039 003733 11-20-1988 a -	1039 003928 02-05-1989 a -
GENERAL CHEMISTRY				
Ammonia	< 0.1000	0.3000	< 0.1000	< 0.1000
Chloride	1095.0000	860.0000	750.0000	700.0000
Fluoride	0.4600	3.5000	0.3500	0.1600
Hydrogen ion	NA	NA	NA	NA
Nitrate	< 0.1000	0.1300	< 0.1000	< 0.1000
Phenols	0.0200	< 0.0500	< 0.0100	0.0110
Phosphorus (black, white,	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA
Sulfate	119.0000	130.0000	144.0000	183.0000
Total Kjeldahl Nitrogen	NA	21.0000	0.3000	0.1030
Total Organic Carbon	NA	NA	NA	NA
Total Organic Halides	NA	NA	< 0.0500	< 0.0500
Total Organic Nitrogen	< 0.1000	NA	0.3000	0.1030
METALS				
Aluminum	NA	NA	NA	NA
Antimony	NA	NA	NA	NA
Arsenic	< 0.2000	< 0.0100	< 0.0020	< 0.0020
Barium	0.4590	0.3000	0.2540	0.1910
Beryllium	NA	NA	NA	NA
Cadmium	< 0.0050	< 0.0050	< 0.0020	0.0100
Calcium	274.0000	240.0000	186.0000	168.0000
Chromium	< 0.0200	< 0.0100	< 0.0200	0.0350
Cobalt	NA	NA	NA	NA
Copper	0.0160	< 0.0300	< 0.0100	0.0160
Cyanide	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA
Iron	0.5600	1.8000	0.1220	0.0970
Lead	< 0.0500	< 0.0050	0.0030	< 0.0020
Magnesium	109.6000	100.0000	71.2000	70.0000
Manganese	0.9860	0.7900	0.6430	0.4810
Mercury	< 0.0002	< 0.0003	< 0.0002	0.0004
Molybdenum	< 0.0200	< 0.0500	< 0.0200	< 0.0200
Nickel	< 0.0200	< 0.0400	< 0.0200	0.0230
Potassium	1.3300	< 5.0000	0.6710	0.7920
Selenium	< 0.2000	< 0.0050	< 0.0020	< 0.0020
Silicon	NA	NA	NA	NA
Silver	0.0100	< 0.0100	< 0.0005	< 0.0005
Sodium	243.9000	350.0000	245.0000	218.0000
Thallium	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA
Zinc	NA	NA	NA	NA

a = lab qualifiers

- = Sample has not been validated

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REPORT DATE : 1-MAY-92

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LIME SLUDGE PONDS
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1041 003180 05-11-1988 a -		1041 003490 08-10-1988 a -		1041 003732 11-17-1988 a -		1041 003924 03-01-1989 a -
GENERAL CHEMISTRY								
Ammonia	<	0.1000	<	0.3000		0.1200		0.2000
Chloride		495.0000		170.0000		259.0000		230.0000
Fluoride		0.4100		1.8000		0.5000		0.3000
Hydrogen ion		NA		NA		NA		NA
Nitrate	<	0.1000		0.1200	<	0.1000	<	0.0200
Phenols		0.0200	<	0.0500		0.0140	<	0.0050
Phosphorus (black, white,		NA		NA		NA		NA
Phosphate as P		NA		NA		NA		NA
Sulfate		113.0000		56.0000		116.0000		76.0000
Total Kjeldahl Nitrogen		NA	<	15.0000		0.8200		0.5000
Total Organic Carbon		NA		NA		NA		NA
Total Organic Halides		NA		NA	<	0.0500		NA
Total Organic Nitrogen	<	0.1000		NA		0.7000		0.3000
METALS								
Aluminum		NA		NA		NA		NA
Antimony		NA		NA		NA		NA
Arsenic	<	0.2000	<	0.0100	<	0.0020	<	0.0030
Barium		0.1130		0.2000		0.1800		0.1400
Beryllium		NA		NA		NA		NA
Cadmium	<	0.0050	<	0.0050	<	0.0020		0.0070
Calcium		172.0000		150.0000		196.0000		180.0000
Chromium	<	0.0200	<	0.0100	<	0.0200		0.0300
Cobalt		NA		NA		NA		NA
Copper		0.0170	<	0.0300	<	0.0100	<	0.0100
Cyanide		NA		NA		NA		NA
Hexavalent Chromium		NA		NA		NA		NA
Iron		0.2100	<	0.1000		0.5720		0.0400
Lead	<	0.0500	<	0.0050		0.0020	<	0.0020
Magnesium		70.5000		61.0000		72.2000		70.0000
Manganese		0.6140		0.3600		0.6700		0.6100
Mercury	<	0.0002	<	0.0003	<	0.0002	<	0.0002
Molybdenum	<	0.0200	<	0.0500		0.0300		0.0200
Nickel	<	0.0200	<	0.0400		0.0260	<	0.0300
Potassium		0.4800	<	5.0000		0.4900		0.5000
Selenium	<	0.0200	<	0.0050	<	0.0020	<	0.0050
Silicon		NA		NA		NA		NA
Silver		0.0600	<	0.0100	<	0.0005	<	0.0100
Sodium		28.8000		26.0000		32.9000		41.0000
Thallium		NA		NA		NA		NA
Vanadium		NA		NA		NA		NA
Zinc		NA		NA		NA		NA

a = lab qualifiers

- = Sample has not been validated

REPORT DATE : 1-MAY-92

LIME SLUDGE PONDS
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1042 003182 05-11-1988 a -	1042 003416 08-09-1988 a -	1042 003723 11-17-1988 a -	1042 003922 03-01-1989 a -
GENERAL CHEMISTRY				
Ammonia	0.5000	< 0.3000	< 0.1000	0.2000
Chloride	59.8000	64.0000	57.5000	37.0000
Fluoride	0.5600	1.4000	0.4800	0.2000
Hydrogen ion	NA	NA	NA	NA
Nitrate	< 0.1000	0.2400	< 0.1000	0.4900
Phenols	0.0200	< 0.0500	0.0140	0.0250
Phosphorus (black, white,	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA
Sulfate	75.0000	80.0000	246.0000	100.0000
Total Kjeldahl Nitrogen	NA	< 15.0000	0.5100	0.3000
Total Organic Carbon	NA	NA	NA	NA
Total Organic Halides	NA	NA	< 0.0500	NA
Total Organic Nitrogen	0.1000	< 15.0000	0.5100	0.1000
METALS				
Aluminum	NA	NA	NA	NA
Antimony	NA	NA	NA	NA
Arsenic	< 0.2000	< 0.0100	< 0.0020	< 0.0030
Barium	0.2840	0.2000	0.2480	0.0870
Beryllium	NA	NA	NA	NA
Cadmium	< 0.0050	< 0.0050	< 0.0020	< 0.0050
Calcium	92.9000	100.0000	109.0000	120.0000
Chromium	< 0.0200	< 0.0100	< 0.0200	0.0200
Cobalt	NA	NA	NA	NA
Copper	< 0.0100	< 0.0300	< 0.0100	< 0.0100
Cyanide	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA
Iron	1.6000	0.3000	0.5670	0.0500
Lead	< 0.0500	< 0.0050	0.0040	< 0.0020
Magnesium	30.1000	36.0000	37.4000	47.0000
Manganese	0.2050	0.1200	0.1040	0.0290
Mercury	< 0.0002	< 0.0003	< 0.0002	< 0.0002
Molybdenum	0.0230	< 0.0500	0.0220	0.0200
Nickel	< 0.0200	< 0.0400	< 0.0200	< 0.0300
Potassium	0.9100	< 5.0000	0.7200	0.6700
Selenium	< 0.2000	< 0.0050	< 0.0020	< 0.0050
Silicon	NA	NA	NA	NA
Silver	< 0.0100	< 0.0100	< 0.0005	< 0.0100
Sodium	25.6000	26.0000	23.8000	14.0000
Thallium	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA
Zinc	NA	NA	NA	NA

a = lab qualifiers

- = Sample has not been validated

402

LIME SLUDGE PONDS
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1134 045427 10-18-1989 a -		1134 045428 01-31-1990 a -
GENERAL CHEMISTRY				
Ammonia		NA		NA
Chloride		NA		NA
Fluoride		NA		NA
Hydrogen ion		NA		NA
Nitrate	<	0.1000	<	0.1000
Phenols		NA		NA
Phosphorus (black, white,		NA		NA
Phosphate as P		NA		NA
Sulfate		NA		NA
Total Kjeldahl Nitrogen		NA		NA
Total Organic Carbon		NA		NA
Total Organic Halides		NA		NA
Total Organic Nitrogen		NA		NA
METALS				
Aluminum		NA		NA
Antimony		NA		NA
Arsenic		NA		NA
Barium		NA		NA
Beryllium		NA		NA
Cadmium		NA		NA
Calcium		NA		NA
Chromium		NA		NA
Cobalt		NA		NA
Copper		NA		NA
Cyanide		NA		NA
Hexavalent Chromium		NA		NA
Iron		NA		NA
Lead		NA		NA
Magnesium		NA		NA
Manganese		NA		NA
Mercury		NA		NA
Molybdenum		NA		NA
Nickel		NA		NA
Potassium		NA		NA
Selenium		NA		NA
Silicon		NA		NA
Silver		NA		NA
Sodium		NA		NA
Thallium		NA		NA
Vanadium		NA		NA
Zinc		NA		NA

a = lab qualifiers

- = Sample has not been validated

LIME SLUDGE PONDS
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analysed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1210 045738 10-22-1989 a -		1210 045740 07-02-1990 a -
GENERAL CHEMISTRY				
Ammonia		NA		NA
Chloride		NA		NA
Fluoride		NA		NA
Hydrogen ion		NA		NA
Nitrate	<	0.1000	<	0.1000
Phenols		NA		NA
Phosphorus (black, white,		NA		NA
Phosphate as P		NA		NA
Sulfate		NA		NA
Total Kjeldahl Nitrogen		NA		NA
Total Organic Carbon		NA		NA
Total Organic Halides		NA		NA
Total Organic Nitrogen		NA		NA
METALS				
Aluminum		NA		NA
Antimony		NA		NA
Arsenic		NA		NA
Barium		NA		NA
Beryllium		NA		NA
Cadmium		NA		NA
Calcium		NA		NA
Chromium		NA		NA
Cobalt		NA		NA
Copper		NA		NA
Cyanide		NA		NA
Hexavalent Chromium		NA		NA
Iron		NA		NA
Lead		NA		NA
Magnesium		NA		NA
Manganese		NA		NA
Mercury		NA		NA
Molybdenum		NA		NA
Nickel		NA		NA
Potassium		NA		NA
Selenium		NA		NA
Silicon		NA		NA
Silver		NA		NA
Sodium		NA		NA
Thallium		NA		NA
Vanadium		NA		NA
Zinc		NA		NA

a = lab qualifiers

- = Sample has not been validated

LIME SLUDGE PONDS
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		2042 003150 05-04-1988 a -		2042 003415 08-09-1988 a -		2042 003722 11-17-1988 a -		2042 003921 03-01-1989 a -		DUPLICATE 2042 004036 03-01-1989 a -
GENERAL CHEMISTRY										
Ammonia	<	0.5000	<	0.3000	<	0.1000		0.3000		0.2000
Chloride		36.7000		18.0000		19.5000		22.0000		21.0000
Fluoride		0.3900		1.2000		0.1400		0.2000		0.2000
Hydrogen ion		NA		NA		NA		NA		NA
Nitrate		0.2000		0.9000		0.4360		0.6700		0.3900
Phenols	<	0.0100	<	0.0500	<	0.0100	<	0.0050		0.0550
Phosphorus (black, white,		NA		NA		NA		NA		NA
Phosphate as P		NA		NA		NA		NA		NA
Sulfate		NA		86.0000		103.0000		100.0000		140.0000
Total Kjeldahl Nitrogen		NA	<	15.0000		0.2600		0.6000		0.5000
Total Organic Carbon		NA		NA		NA		NA		NA
Total Organic Halides		NA		NA	<	0.0500		NA		NA
Total Organic Nitrogen	<	0.5000	<	15.0000		0.2600		0.3000		0.3000
METALS										
Aluminum		0.0700 B		NA		NA		NA		NA
Antimony	<	0.0005		NA		NA		NA		NA
Arsenic	<	0.0020	<	0.0100	<	0.0020	<	0.0030	<	0.0030
Barium		0.0380 B	<	0.2000		0.0430		0.0400		0.0510
Beryllium	<	0.0010		NA		NA		NA		NA
Cadmium	<	0.0020	<	0.0050	<	0.0020	<	0.0050	<	0.0050
Calcium		79.8000		100.0000		106.0000		120.0000		160.0000
Chromium	<	0.0200	<	0.0100	<	0.0200		0.0200		0.0200
Cobalt	<	0.0100		NA		NA		NA		NA
Copper	<	0.0100	<	0.0300	<	0.0100	<	0.0100	<	0.0100
Cyanide	<	0.0100		NA		NA		NA		NA
Hexavalent Chromium		NA		NA		NA		NA		NA
Iron		0.1860		0.2000		0.3210		0.1800		0.4000
Lead	<	0.0020	<	0.0050	<	0.0020	<	0.0020	<	0.0020
Magnesium		21.9100		25.0000		25.5000		26.0000		31.0000
Manganese		0.2330		0.1100		0.1130		0.2300		0.5500
Mercury	<	0.0002	<	0.0003	<	0.0002	<	0.0002	<	0.0002
Molybdenum	<	0.0200	<	0.0500		0.0220		0.0100		0.0100
Nickel	<	0.0200	<	0.0400	<	0.0200	<	0.0300	<	0.0300
Potassium	<	2.8400	<	5.0000		2.3700		2.9000		3.7000
Selenium	<	0.0020	<	0.0050	<	0.0020	<	0.0050	<	0.0050
Silicon		NA		NA		NA		NA		NA
Silver	<	0.0005	<	0.0100	<	0.0005	<	0.0100	<	0.0100
Sodium		10.9100		12.0000		11.5000		12.0000		12.0000
Thallium	<	0.0010		NA		NA		NA		NA
Vanadium		0.0130 B		NA		NA		NA		NA
Zinc		0.0130 B		NA		NA		NA		NA

a = lab qualifiers

- = Sample has not been validated

LIME SLUDGE PONDS
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	4101 003207 05-19-1988 a -	DUPLICATE 4101 003208 05-19-1988 a -	4101 003409 08-08-1988 a -	DUPLICATE 4101 003410 08-08-1988 a -	4101 003719 11-18-1988 a -
GENERAL CHEMISTRY					
Ammonia	3.6000	0.2000	4.8000	3.1000	6.6300
Chloride	38.4000	42.5000	40.0000	35.0000	36.9000
Fluoride	0.4000	0.3800	0.2000	0.1400	0.2450
Hydrogen ion	NA	NA	NA	NA	NA
Nitrate	< 0.1000	0.1000	2.5000 J	2.5000 J	< 0.1000
Phenols	< 0.0100	< 0.0100	< 0.0100	< 0.0100	0.0150
Phosphorus (black, white,	NA	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA	NA
Sulfate	182.0000	137.0000	130.0000	110.0000	97.2000
Total Kjeldahl Nitrogen	NA	NA	NA	NA	6.7900
Total Organic Carbon	NA	NA	NA	NA	NA
Total Organic Halides	NA	NA	NA	NA	< 0.0500
Total Organic Nitrogen	0.4000	3.5000	< 0.1000	1.5000	0.1600
METALS					
Aluminum	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA
Arsenic	< 0.2000	< 0.2000	< 0.0100	< 0.0100	< 0.0020
Barium	0.1650	0.1590	< 0.2000	< 0.2000	0.1510
Beryllium	NA	NA	NA	NA	NA
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0020
Calcium	128.9000	122.9000	130.0000	130.0000	116.0000
Chromium	< 0.0200	< 0.0200	< 0.0100	< 0.0100	< 0.0200
Cobalt	NA	NA	NA	NA	NA
Copper	< 0.0100	< 0.0100	< 0.0300	< 0.0300	< 0.0100
Cyanide	NA	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA	NA
Iron	5.8400	5.6300	< 5.8000	5.8000	4.9400
Lead	< 0.0500	< 0.0500	< 0.0050	< 0.0050	0.0030
Magnesium	35.5000	33.7000	28.0000	29.0000	30.5000
Manganese	0.4710	0.4340	0.4500	0.4500	0.4110
Mercury	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Molybdenum	< 0.0200	0.0280	< 0.0500	< 0.0500	< 0.0200
Nickel	< 0.0200	< 0.0200	< 0.0400	< 0.0400	< 0.0200
Potassium	4.8700	3.8800	< 5.0000	< 5.0000	4.1200
Selenium	< 0.2000	< 0.2000	< 0.0050	< 0.0050	< 0.0020
Silicon	NA	NA	NA	NA	NA
Silver	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0005
Sodium	39.3000	37.1000	38.0000	38.0000	32.7000
Thallium	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA

a = lab qualifiers

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LIME SLUDGE PONDS
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		4101 003918 03-15-1989 a	
GENERAL CHEMISTRY			
Ammonia		5.1300	
Chloride		38.0000	
Fluoride		0.2100	
Hydrogen ion		NA	
Nitrate		0.3800	
Phenols	<	0.0100	
Phosphorus (black, white,		NA	
Phosphate as P		NA	
Sulfate		161.8300	
Total Kjeldahl Nitrogen		3.4800	
Total Organic Carbon		NA	
Total Organic Halides		0.0135	
Total Organic Nitrogen		NA	
METALS			
Aluminum		0.1300	BE
Antimony	<	0.0005	
Arsenic	<	0.0020	
Barium		0.1360	B
Beryllium		0.0008	B
Cadmium		0.0052	
Calcium		113.0000	
Chromium		0.0226	E
Cobalt		0.0045	B
Copper		0.0130	B
Cyanide	<	0.0100	
Hexavalent Chromium		NA	
Iron		4.2300	
Lead		0.0024	B
Magnesium		29.6000	
Manganese		0.3480	
Mercury	<	0.0002	N
Molybdenum		0.0350	
Nickel		0.0162	B
Potassium		3.4400	B
Selenium	<	0.0020	N
Silicon		NA	
Silver	<	0.0016	
Sodium		30.2000	
Thallium	<	0.0020	N
Vanadium		0.0136	BE
Zinc		0.0094	B

a = lab qualifiers

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REPORT DATE : 1-MAY-92

LIME SLUDGE PONDS
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	4102 003205 05-19-1988 a	DUPLICATE 4102 003206 05-19-1988 a	4102 003412 08-08-1988 a	DUPLICATE 4102 003413 08-08-1988 a	4102 003720 11-18-1988 a
GENERAL CHEMISTRY					
Ammonia	0.5000	0.5000	0.4000	0.4000	0.4400
Chloride	32.1000	28.4000	35.0000	42.0000	23.1000
Fluoride	0.3500	0.2900	0.2000	0.2000	0.2600
Hydrogen ion	NA	NA	NA	NA	NA
Nitrate	0.1000	0.2000	2.5000 J	2.5000 J	< 0.1000
Phenols	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100
Phosphorus (black, white,	NA	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA	NA
Sulfate	11.0000	20.0000	108.0000	70.0000	43.0000
Total Kjeldahl Nitrogen	NA	NA	NA	NA	0.5800
Total Organic Carbon	NA	NA	NA	NA	NA
Total Organic Halides	NA	NA	NA	NA	< 0.0500
Total Organic Nitrogen	< 0.1000	< 0.1000	0.1000	0.2000	0.1400
METALS					
Aluminum	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA
Arsenic	< 0.2200	< 0.2000	< 0.0100	< 0.0100	< 0.0020
Barium	0.0670	0.0680	< 0.2000	< 0.2000	0.0690
Beryllium	NA	NA	NA	NA	NA
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0020
Calcium	95.9000	95.3000	100.0000	100.0000	102.0000
Chromium	< 0.0200	< 0.0200	0.0100	< 0.0100	< 0.0200
Cobalt	NA	NA	NA	NA	NA
Copper	< 0.0100	< 0.0100	< 0.0300	< 0.0300	< 0.0100
Cyanide	NA	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA	NA
Iron	3.1900	3.0800	< 3.3000	3.2000	3.2700
Lead	< 0.0500	< 0.0500	< 0.0050	< 0.0050	0.0060
Magnesium	27.2000	26.8000	25.0000	24.0000	27.9000
Manganese	0.3870	0.3900	42.0000	4.0000	0.4210
Mercury	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Molybdenum	< 0.0200	< 0.0200	< 0.0500	< 0.0500	< 0.0200
Nickel	< 0.0200	< 0.0200	< 0.0400	< 0.0400	< 0.0200
Potassium	1.5800	1.6000	< 5.0000	< 5.0000	2.3300
Selenium	< 0.2000	< 0.2000	< 0.0050	< 0.0050	< 0.0020
Silicon	NA	NA	NA	NA	NA
Silver	0.0200	< 0.0100	< 0.0100	< 0.0100	< 0.0005
Sodium	16.8000	16.8000	20.0000	20.0000	19.6000
Thallium	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA

a = lab qualifiers

- = Sample has not been validated

LIME SLUDGE PONDS
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		4102 003919 02-23-1989 a -
GENERAL CHEMISTRY		
Ammonia		0.6000
Chloride		20.0000
Fluoride		0.2000
Hydrogen ion		NA
Nitrate	<	0.0200
Phenols		0.0090
Phosphorus (black, white,		NA
Phosphate as P		NA
Sulfate		18.0000
Total Kjeldahl Nitrogen		0.8000
Total Organic Carbon		NA
Total Organic Halides	<	0.0100
Total Organic Nitrogen		0.2000
METALS		
Aluminum		NA
Antimony		NA
Arsenic		NA
Barium		NA
Beryllium		NA
Cadmium		NA
Calcium		NA
Chromium		NA
Cobalt		NA
Copper		NA
Cyanide		NA
Hexavalent Chromium		NA
Iron		NA
Lead		NA
Magnesium		NA
Manganese		NA
Mercury		NA
Molybdenum		NA
Nickel		NA
Potassium		NA
Selenium		NA
Silicon		NA
Silver		NA
Sodium		NA
Thallium		NA
Vanadium		NA
Zinc		NA

a = lab qualifiers

- = Sample has not been validated

TABLE D-10

GEOTECHNICAL ANALYSES
CHARACTERIZATION INVESTIGATION STUDY
LIME SLUDGE PONDS

NOTE:

- CIS data not applicable to the OU2 waste unit have been shaded.

GEOTECHNICAL LABORATORY MATERIAL PROPERTY TESTING RESULTS

SAMPLE NO.	DEPTH INTERVAL	SAMPLE LOCATION	USCS CLASSIF.	SPECIFIC GRAVITY	LIQUID LIMIT	PLASTICITY INDEX	NATURAL MOISTURE CONTENT(%)	PERCENT -200 SIEVE (SILT&CLAY)	PERCENT -2 MICRON (CLAY)	MAXIMUM DRY DENSITY(pcf)	OPTIMUM MOISTURE CONTENT(%)	COLOR	CONSISTANCY	SAMPLE AMOUNT(lbs.)
1-48	0.0-12.'	PIT 1	GC	2.62	34	11	17.2	43	14	109.4	17.3	BROWN	CLAYEY	5
2-30		PIT 2	MH	2.59	53	21	31.9	61	22	86.3	17.5		CLAYEY	4
3-52	0.0-20.'	PIT 3	MH	2.54	52	20	55.9	67	10			BROWN	SLUDGE	10
REDUE							57.0	66	13					
3-90	0.0-20.'	PIT 3	ML		38	5	43.3	68	11	88.3	26.4	GRAY	SLUDGE	5
REDUE				2.45			41.6	66	15					
4-02	0.0-20.'	PIT 4	ML	2.75	NP	NP	27.0	94	6			GRAY	CLAYEY	10
4-37		PIT 4											CLAYEY	10
4-39		PIT 4											CLAYEY	12
4-42	0.0-20.'	PIT 4	ML	3.33	NP	NP	28.6	95	6	120.6	18.2	GRAY	CLAYEY	5
REDUE				3.45										
5-25	10.-29.'	PIT 5	MH	2.43	81	29	189.5	70	2	62.5	50.4	BROWN	CLAYEY	20
6-10	0.0-10.'	PIT 6	ML	2.67	NP	NP	60.4	79	7			GRAY	SLUDGE	8
6-22	0.0-15.'	PIT 6	ML		NP	NP	50.5	68	8	101.2	23.0	GRAY	SLUDGE	10
7-02	0.0-10.'	BURN PIT	MH	2.46	NP	NP	30.1	36	4			GRAY/BROWN	SLUDGE	5
7-04		BURN PIT											SLUDGE	5
7-34	0.0-16.'	BURN PIT	ML		36	2	30.2	57	15			BROWN/BLACK	SLUDGE	6
REDUE					33	3								
7-50		BURN PIT											SLUDGE	4
7-52	0.0-16.'	BURN PIT	SM	2.35	NP	NP	29.2	40	6	81.2	9.5	BLACK	SLUDGE	6
47-06		LIME SLUDGE											SLUDGE	-
47-12	0.0-5.5'	LIME SLUDGE	ML	2.33	NP	NP	134.0	98	7			GRAY/WHITE	SLUDGE	1
48-13	2.-11.2'	LIME SLUDGE	ML		NP	NP	89.6	99	6			WHITE	SLUDGE	10
48-28		LIME SLUDGE								72.8	40.3		SLUDGE	12
48-42	0.0-12.'	LIME SLUDGE	ML	2.49	NP	NP	88.8	94	4			WHITE	SLUDGE	10
49-03	0.0-18.'	LANDFILL	CL	2.57	33	14	13.4	60	22	109.7	18.0	BROWN/GRAY	CLAYEY	5
49-19	0.0-12.'	LANDFILL	CL		40	20	15.1	52	19	100.1	17.7	BROWN/GRAY	CLAYEY	5
49-33		LANDFILL											CLAYEY	5
49-47		LANDFILL								115.8	13.5		CLAYEY	5
49-56		LANDFILL											CLAYEY	5
49-72		LANDFILL		2.58									CLAYEY	5
AVERAGES				2.68	44	14	54.4	67	10	95.3	22.9			

*NOTES/DEFINITIONS OF TERMS

NP = NON PLASTIC-- THE SOIL EXHIBITS NO CHARACTERISTICS OF PLASTICITY

-200 SIEVE = THE PERCENT OF THE TOTAL SAMPLE BY WEIGHT PASSING A 200 MESH(.074mm) SIEVE THIS SIZE DESIGNATION IS THE BREAK BETWEEN SAND AND (SILT & CLAY)

-2MICRON = THE PECENT OF THE TOTAL SAMPLE BY WEIGHT PASSING A SIEVE WITH A HOLE SIZE OF .0002 mm THIS SIZE IS COMMONLY REFERED TO AS THE BREAK BETWEEN SILT AND CLAY

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TABLE D-11

GEOTECHNICAL ANALYSES
RI/FS SAMPLING PROGRAM
LIME SLUDGE PONDS

TABLE D-11

GEOTECHNICAL DATA FOR SURFACE MEDIA IN THE NORTH AND SOUTH LIME SLUDGE PONDS

Location:	North Pond		South Pond	
	#12	#13	#14	#15
North & East Coordinates	480643.67, 1379757.18	480679.97, 1379755.92	480520.20, 1379731.00	480521.49, 1379661.17
Wet Density (pcf)	83.1	80.8	79.7	81.1
Dry Density (pcf)	46.8	47.7	50.5	44.4
Moisture Content (%)	77.6	69.5	57.8	82.7

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TABLE D-12

BORING LOGS
CHARACTERIZATION INVESTIGATION STUDY
LIME SLUDGE PONDS

2004

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WESTON

BOREHOLE AND TEST PIT SUMMARY *

SITE ID: Lime Sludge Lagoon
LOCATION ID: NW Corner, Borehole 1
LOCATION COORDINATES:
S N 2025
E 3050
GROUND ELEVATION (FT. MSL):

BH-BOREHOLE/~~TP-TEST PIT~~: 1
DRILLER/~~EXCAVATOR~~: Bowser Morner
COMPLETION DATE: 3/12/87
BOREHOLE DIAMETER (IN): 2"
TOTAL DEPTH (FT.): 3.5'
Water Depth: 6.5', Waste Thickness: 3.5'

WELL SUMMARY

WELL OWNER: n/a
INSTALLER:
INSTALLATION DATE:
CASING ELEV. (FT. MSL):
CASING LENGTH (FT.):
CASING DIA. (IN.):
SEAL (END) DEPTH (FT.):

FILTER PACK LENGTH (FT.):
FORMATION OF COMPLETION:
STRATIGRAPHIC ORDER:
OPEN/SCREEN DEPTH (FT.):
OPEN/SCREEN LENGTH (FT.):
OPEN/SCREEN AREA (IN.^{2}/FT.):
*FLOW RELATIONSHIP:

LITHOLOGICAL SUMMARY

By: John N. Dougherty — John Dougherty 4/2/87

SOIL/ROCK PROFILE				STD. PENETRATION TEST			
DEPTH (FT.)	UNIFIED SOIL/ROCK CLASS	STRAT. ORDER	VISUAL DESCRIPTION	SAMPLE ID FMP-PS-42	DEPTH INTERVAL (FT.)	SAMPLE METHOD	N VALUE
0"-6"			Light gray (10YR 7/1)		0-20"	Ring Sampler	
			liquid with some silt or				
			fine gr. sand like particles				
6-42"			Grayish brown (10YR 5/2)		20"-40"	"	
			and v. dr. gray (2.5YR N3)				
			Semi-solid, pudding like				
			consistency				
			Black (2.5YR N2.5)		40"-60"	"	
			silty semi-solid with				
			grease like consistency				
42'-?			Dr. brown (10YR 4/3) silt with clay, rootlet m. grass fragments present. } looks like "clay liner" or original material				

-SAMPLER REFUSAL AT 3.5'

FLOW RELATIONSHIP:
U-Upgradient
D-Downgradient
C-Cross Gradient
O-On Site
N-Not Known

SAMPLE METHODS:
A-Auger Cuttings
S-2" O.D. 1.38" I.D. drive sample
U-3" O.D. 2.42" I.D. tube sample
T-3" O.D. thin-walled Shelby tube
H-6 1/2 Hollow Stem Auger
C-4 1/2 Continous Flight Auger
GB-Gear Bit
NX-NX Rock Coring
NQ-NQ Wireline Rock Coring
B-Undisturbed Block Sample
D-Disturbed Bulk Sample

416

* over for notes.

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= 0005

WESTON 2938

BOREHOLE AND TEST PIT SUMMARY*

SITE ID: Lime Sludge Lagoon
LOCATION ID: Middle, Borehole 2
LOCATION COORDINATES:
S N 2050
E 3100
GROUND ELEVATION (FT. MSL):

BH-BOREHOLE/~~TP-TEST PIT~~: 2
DRILLER/EXCAVATOR: Bowser Morner
COMPLETION DATE: 3/12/87
BOREHOLE DIAMETER (IN): 2"
TOTAL DEPTH (FT.): 5.5' (Waste Thickness)
Water Depth: 4.5'
Sampled from: 0.5' to 5.5'

WELL SUMMARY

WELL OWNER: N/a
INSTALLER:
INSTALLATION DATE:
CASING ELEV. (FT. MSL):
CASING LENGTH (FT.):
CASING DIA. (IN.):
SEAL (END) DEPTH (FT.):

FILTER PACK LENGTH (FT.):
FORMATION OF COMPLETION:
STRATIGRAPHIC ORDER:
OPEN/SCREEN DEPTH (FT.):
OPEN/SCREEN LENGTH (FT.):
OPEN/SCREEN AREA (IN.²/FT.):
*FLOW RELATIONSHIP:

By John N. Dougherty

LITHOLOGICAL SUMMARY

John Dougherty

SOIL/ROCK PROFILE				STD. PENETRATION TEST			
DEPTH (FT.)	UNIFIED SOIL/ROCK CLASS	STRAT. ORDER	VISUAL DESCRIPTION	SAMPLE ID	DEPTH INTERVAL (FT.)	SAMPLE METHOD	N VALUE
6"-26"			lt. gray (10YR 7/1) soupy	FMP-PS-47-07 through 012 See Profile Soil Logbook pp 146-147	0'-20"	Ring Sampler	N/a
			liquid with some silt				
26"-46"			Grayish brown (10YR5/2)		20"-40"	"	"
			semi-solid, pudding consist				
46"-66"			V. dr. gray (2.5YR N3) to		40"-60"	"	"
			black (2.5YR N2.5) semi-				
			solid with a grease like consist				
			Some fragments of lt. brown				
			(10YR 4/3) silt with clay				
			SAMPLER REFUSAL AT 66"				

FLOW RELATIONSHIP:
U-Upgradient
D-Downgradient
C-Cross Gradient
O-On Site
N-Not Known

SAMPLE METHODS:
A-Auger Cuttings
S-2" O.D. 1.38" I.D. drive sample
U-3" O.D. 2.42" I.D. tube sample
T-3" O.D. thin-walled Shelby tube
H-6 1/2 Hollow Stem Auger
C-4 1/2 Continous Flight Auger
GB-Gear Bit
NX-NX Rock Coring
NQ-NQ Wireline Rock Coring
B-Undisturbed Block Sample
D-Disturbed Bulk Sample

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*See note 2 on back of 109 for borehole 1, lime sludge lagoon

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0006

WESTON

3838

BOREHOLE AND TEST PIT SUMMARY*

SITE ID: Lime Sludge Lagoon
LOCATION ID: SE, boring #3, near discharge pipe
LOCATION COORDINATES:
S N 2075
E 3150
GROUND ELEVATION (FT. MSL):

BH-BOREHOLE/~~TP-TEST PIT~~: 3
DRILLER/EXCAVATOR: Bauser Morner
COMPLETION DATE: 3/12/87
BOREHOLE DIAMETER (IN): 2" (nominal)
TOTAL DEPTH (FT.): 7'
WATER DEPTH: 1'
WASTE Thickness: 7' SAMPLED from: 2' to 7'

WELL SUMMARY

WELL OWNER: n/a
INSTALLER:
INSTALLATION DATE:
CASING ELEV. (FT. MSL):
CASING LENGTH (FT.):
CASING DIA. (IN.):
SEAL (END) DEPTH (FT.):

FILTER PACK LENGTH (FT.):
FORMATION OF COMPLETION:
STRATIGRAPHIC ORDER:
OPEN/SCREEN DEPTH (FT.):
OPEN/SCREEN LENGTH (FT.):
OPEN/SCREEN AREA (IN.²/FT.):
*FLOW RELATIONSHIP:

LITHOLOGICAL SUMMARY By: J.N. Dougherty 4/2/87

SOIL/ROCK PROFILE				STD. PENETRATION TEST			
DEPTH (FT.)	UNIFIED SOIL/ROCK CLASS	STRAT. ORDER	VISUAL DESCRIPTION	SAMPLE ID FMP.PS-47	DEPTH INTERVAL (FT.)	SAMPLE METHOD	N VALUE
24"-44"			H. gray (10YR 7/1) semi	FMP-PS-47-0'-1.6' Sample taken from 0'-3' through 0'-1.6'	0"-20"	Ring Sampler	N/a
			solid w/ pudding consistency				
44"-64"			Grayish brown (10YR 5/7)		20"-40"	"	"
			and Very dark gray (2.5YR				
			N3) semi solid with pudding				
			like consistency				
64"-84"			64" to ~76": Very dark		40"-60"	"	"
			gray (2.5YR N3) semi solid				
			with pudding or grease like				
			consistency				
			~76" to 84": Dr. gray				
			(10YR 4/1) Clay. When worked with spoon clay is stiff, slightly moist				

SAMPLER REFUSAL AT 84"

FLOW RELATIONSHIP:
U-Upgradient
D-Downgradient
C-Cross Gradient
O-On Site
N-Not Known

SAMPLE METHODS:
A-Auger Cuttings
S-2" O.D. 1.38" I.D. drive sample
U-3" O.D. 2.42" I.D. tube sample
T-3" O.D. thin-walled Shelby tube
H-6 1/2 Hollow Stem Auger
C-4 1/2 Continous Flight Auger
GB-Gear Bit
NX-NX Rock Coring
NQ-NQ Wireline Rock Coring
B-Undisturbed Block Sample
D-Disturbed Bulk Sample

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* see note 2 on back of log for Lime Sludge Lagoon, borehole 1

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WESTON

3838

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: Dry Lime Sludge Lagoon Boring 1 and 1A

SITE COORDINATES (ft.):
N ~~7025~~ 2150 E ~~3050~~ 3100

GROUND ELEVATION (ft. MSL):
DRILLING METHOD: Hollow Stem Auger
DRILLING CONTR.: Bowser Morner
DATE STARTED:
DATE COMPLETED:
FIELD REP.: John N. Dougherty
Checked by:

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Football field sized area, formerly used a settling basin.
SITE CONDITION Flat covered in ankle high grass.

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	CPM ~~10~~	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0.00		14"	14"	U	100	1-1-1-1	2	CL	4" grayish brown (10YR 5/2) clay with rootlets underlain by 10" of white (10YR 8/2) clay like material (No CGI or HNu deflection)
2.00		20	20	U	130	1-0-1-0	1	OT	white (10YR 8/2) clay like material with a 2" streak of grayish brown (10YR 5/2) clay like material. No CGI or HNu deflection
4.00		24"	24"	U	50	1-1-0-1	1	OT	White (10YR 8/1) clay like solid material, at 4.5' streak of grayish brown (10YR 5/2) material with some rootlets. Occ. 1 to 2" thick layers of greenish gray (5B 7/1) clay like material.
6.00		22"	22"	U	60	1-2-2-1	4	OT	White (10YR 8/2) clay like solid streaked with greenish gray (5BG 7/1) and dark bluish gray (N/4) colors.
8.00		24	24		85	1-1-1-1	2	OT	8'-9'5": lt. gray (5Y 7/1) semi-solid, pudding consistency. streaked with v. pale brown (10YR 8/3) color.
10.00		24"	24"		60	1-6-9-18	15		9'5"-9'9": lt. greenish gray (5GY 7/1), damp clay like material 9'9"-9'11": Black (2.5Y N2/0) damp clay like material 9'11"-10' - v. pale brown (10YR 7/4) damp clay like material
12.00									

COMMENTS: See note book #43.0 pp. 113-115, 122-123
CPM readings taken w/ an Eberline HP-210T. 3/30 B-1 was completed to 8' samples were not sent. Then on 3/31 B-1 was advanced to 12'. B-1A was then completed to 8' to provide sample for analysis. So analytical samples came from B-1 for 8-12' and from B-1A for 0-8'

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

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WESTON

BOREHOLE LOG (SOIL)

Dry Lime Sludge

LOCATION MAP:

SITE ID: FMPC LOCATION ID: Lagoon B-1-B-1A

SITE COORDINATES (ft.):

N _____ E _____

GROUND ELEVATION (ft. MSL): _____

DRILLING METHOD: Hollow Stem Auger

DRILLING CONTR.: Boyer Mocker

DATE STARTED: 3/27/87

DATE COMPLETED: 3/31/87

FIELD REP.: JOHN N. DOUGHERTY

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION _____

SITE CONDITION _____

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
									DESCRIPTION OF 10-12 INTERVAL:
								OT	White (10YR 8/1) semi-solid with clumps of clay like, lt. greenish gray (5G7/1) material grading into v. dr. gray (10YR 3/1) clay like material. At 11'-2"
								CL	changes abruptly to dr. grayish brown (2.5Y 4/2) clay with some silt grading into dr. grayish brown (10YR 4/2) clay with patches of olive brown (2.5Y 4/4), some silt
									BORING TERMINATED AT 12'.

COMMENTS: _____

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

F0020

WESTON

3838

BOREHOLE AND TEST PIT SUMMARY

SITE ID: Dry Lime Sludge Pond
LOCATION ID: Borehole 2
LOCATION COORDINATES:
~~N~~ E 3200
~~E~~ S 2175
GROUND ELEVATION (FT. MSL):

BH-BOREHOLE/TP-TEST PIT: 2
DRILLER/EXCAVATOR: Bowser-Morner
COMPLETION DATE: 3-31-87
BOREHOLE DIAMETER (IN): 2"
TOTAL DEPTH (FT.): 12'

WELL SUMMARY

WELL OWNER: NA
INSTALLER:
INSTALLATION DATE:
CASING ELEV. (FT. MSL):
CASING LENGTH (FT.):
CASING DIA. (IN.):
SEAL (END) DEPTH (FT.):

FILTER PACK LENGTH (FT.):
FORMATION OF COMPLETION:
STRATIGRAPHIC ORDER:
OPEN/SCREEN DEPTH (FT.):
OPEN/SCREEN LENGTH (FT.):
OPEN/SCREEN AREA (IN.^{2}/FT.):
*FLOW RELATIONSHIP:

LITHOLOGICAL SUMMARY

SOIL/ROCK PROFILE				STD. PENETRATION TEST			
DEPTH (FT.)	UNIFIED SOIL/ROCK CLASS	STRAT. ORDER	VISUAL DESCRIPTION	SAMPLE ID	DEPTH INTERVAL (FT.)	SAMPLE METHOD	N VALUE
0'-2'			Grey (7.5 YR 5/6) and yellowish				
			brown (10 YR 5/4) and white				
			(2.5 Y 8/2) Clayey material,				
			abundant rootlets, wet.				
2'-4'			White (2.5 Y 8/2) clay like				
			material, numerous rootlets,				
			horizontal dark layers,				
			brown specks throughout-				
			more abundant at bottom				
			half.				

Vance A. Peers. 4-1-87

FLOW RELATIONSHIP:
U-Upgradient
D-Downgradient
C-Cross Gradient
O-On Site
N-Not Known

SAMPLE METHODS:
A-Auger Cuttings
S-2" O.D. 1.38" I.D. drive sample
U-3" O.D. 2.42" I.D. tube sample
T-3" O.D. thin-walled Shelby tube
H-6 1/2 Hollow Stem Auger
C-4 1/2 Continous Flight Auger
GB-Gear Bit
NX-NX Rock Coring
NQ-NQ Wireline Rock Coring
B-Undisturbed Block Sample
D-Disturbed Bulk Sample

#0026

WESTON

BOREHOLE AND TEST PIT SUMMARY

SITE ID: Dry lime Sludge Pond
LOCATION ID: Borehole 2
LOCATION COORDINATES:
~~N~~ E 3200
~~E~~ S 2175
GROUND ELEVATION (FT. MSL):

BH-BOREHOLE/TP-TEST PIT: 2
DRILLER/EXCAVATOR: Bowser-Morner
COMPLETION DATE: 3-31-87
BOREHOLE DIAMETER (IN): 2"
TOTAL DEPTH (FT.): 12'

WELL SUMMARY

WELL OWNER: NA
INSTALLER:
INSTALLATION DATE:
CASING ELEV. (FT. MSL):
CASING LENGTH (FT.):
CASING DIA. (IN.):
SEAL (END) DEPTH (FT.):

FILTER PACK LENGTH (FT.):
FORMATION OF COMPLETION:
STRATIGRAPHIC ORDER:
OPEN/SCREEN DEPTH (FT.):
OPEN/SCREEN LENGTH (FT.):
OPEN/SCREEN AREA (IN.^{2}/FT.):
*FLOW RELATIONSHIP:

LITHOLOGICAL SUMMARY

SOIL/ROCK PROFILE				STD. PENETRATION TEST			
DEPTH (FT.)	UNIFIED SOIL/ROCK CLASS	STRAT. ORDER	VISUAL DESCRIPTION	SAMPLE ID	DEPTH INTERVAL (FT.)	SAMPLE METHOD	N VALUE
4'-7'1"			White (2.5 Y 8/2) clay like				
			material, horizontal dark				
			layers < 1/8" thick.				
7'1"-8'			Light greenish grey (5G 7/1)				
			clay like material, some				
			dark specks				
8'-9'			White (10YR 8/2) clay like				
			material, dark specks +				
			dark vertical streaks				

FLOW RELATIONSHIP:
U-Upgradient
D-Downgradient
C-Cross Gradient
O-On Site
N-Not Known

SAMPLE METHODS:
A-Auger Cuttings
S-2" O.D. 1.38" I.D. drive sample
U-3" O.D. 2.42" I.D. tube sample
T-3" O.D. thin-walled Shelby tube
H-6 1/2 Hollow Stem Auger
C-4 1/2 Continous Flight Auger
GB-Gear Bit
NX-NX Rock Coring
NQ-NQ Wireline Rock Coring
B-Undisturbed Block Sample
D-Disturbed Bulk Sample

Vance A. Peers 4-1-87

#0027

WESTON 3838

BOREHOLE AND TEST PIT SUMMARY

SITE ID: Dry lime sludge Pond
LOCATION ID: Borehole 2
LOCATION COORDINATES:
~~N~~ E 3200
~~E~~ S 2175
GROUND ELEVATION (FT. MSL):

BH-BOREHOLE/TP-TEST PIT: 2
DRILLER/EXCAVATOR: Bowser - Morner
COMPLETION DATE: 3-31-87
BOREHOLE DIAMETER (IN): 2"
TOTAL DEPTH (FT.): 12'

WELL SUMMARY

WELL OWNER: NA
INSTALLER:
INSTALLATION DATE:
CASING ELEV. (FT. MSL):
CASING LENGTH (FT.):
CASING DIA. (IN.):
SEAL (END) DEPTH (FT.):

FILTER PACK LENGTH (FT.):
FORMATION OF COMPLETION:
STRATIGRAPHIC ORDER:
OPEN/SCREEN DEPTH (FT.):
OPEN/SCREEN LENGTH (FT.):
OPEN/SCREEN AREA (IN.^{2}/FT.):
• FLOW RELATIONSHIP:

LITHOLOGICAL SUMMARY

SOIL/ROCK PROFILE				STD. PENETRATION TEST			
DEPTH (FT.)	UNIFIED SOIL/ROCK CLASS	STRAT. ORDER	VISUAL DESCRIPTION	SAMPLE ID	DEPTH INTERVAL (FT.)	SAMPLE METHOD	N VALUE
9'-10'			White (10YR 8/2) clay like				
			material, with light greenish				
			gray (5G 7/1) clay like				
			material through out				
			(blotches), less (5G 7/1)				
			toward last 3", wet.				
10'-11'6"			White (10YR 8/2) clay like				
			material, dark specks				
			through out, ligh greenish grey				
			(5G 7/1) throughout and forms				

FLOW RELATIONSHIP:
U-Upgradient
D-Downgradient
C-Cross Gradient
O-On Site
N-Not Known

SAMPLE METHODS:
A-Auger Cuttings
S-2" O.D. 1.38" I.D. drive sample
U-3" O.D. 2.42" I.D. tube sample
T-3" O.D. thin-walled Shelby tube
H-6 1/2 Hollow Stem Auger
C-4 1/2 Continous Flight Auger
GB-Gear Bit
NX-NX Rock Coring
NQ-NQ Wireline Rock Coring
B-Undisturbed Block Sample
D-Disturbed Bulk Sample

Vance A. Peers 4-1-87

#0028

WESTON

BOREHOLE AND TEST PIT SUMMARY

SITE ID: Dry Lime Sludge Pond
LOCATION ID: Borehole 2
LOCATION COORDINATES:
N F 3200
E S 2175
GROUND ELEVATION (FT. MSL):

BH-BOREHOLE/TP-TEST PIT: 2
DRILLER/EXCAVATOR: Bowser Morner
COMPLETION DATE: 3-31-87
BOREHOLE DIAMETER (IN): 2"
TOTAL DEPTH (FT.): 12'

WELL SUMMARY

WELL OWNER: NA
INSTALLER:
INSTALLATION DATE:
CASING ELEV. (FT. MSL):
CASING LENGTH (FT.):
CASING DIA. (IN.):
SEAL (END) DEPTH (FT.):

FILTER PACK LENGTH (FT.):
FORMATION OF COMPLETION:
STRATIGRAPHIC ORDER:
OPEN/SCREEN DEPTH (FT.):
OPEN/SCREEN LENGTH (FT.):
OPEN/SCREEN AREA (IN.^{2}/FT.):
*FLOW RELATIONSHIP:

LITHOLOGICAL SUMMARY

SOIL/ROCK PROFILE				STD. PENETRATION TEST			
DEPTH (FT.)	UNIFIED SOIL/ROCK CLASS	STRAT. ORDER	VISUAL DESCRIPTION	SAMPLE ID	DEPTH INTERVAL (FT.)	SAMPLE METHOD	N VALUE
			horizontal layers toward				
			bottom. Wet				
11'6"-12'			Light olive brown CLAY,				
			and Silt, Wet.				

FLOW RELATIONSHIP:
U-Upgradient
D-Downgradient
C-Cross Gradient
O-On Site
N-Not Known

SAMPLE METHODS:
A-Auger Cuttings
S-2" O.D. 1.38" I.D. drive sample
U-3" O.D. 2.42" I.D. tube sample
T-3" O.D. thin-walled Shelby tube
H-6 1/2 Hollow Stem Auger
C-4 1/2 Continous Flight Auger
GB-Gear Bit
NX-NX Rock Coring
NQ-NQ Wireline Rock Coring
B-Undisturbed Block Sample
D-Disturbed Bulk Sample

Vance A. Peers 4-1-87

42-7

WESTON

BOREHOLE LOG (SOIL)

Installation — Site — Location

LOCATION MAP:

SITE ID: FMPC LOCATION ID: DLSL, B-03
SITE COORDINATES (ft.):
N 52225 E 3225
GROUND ELEVATION (ft. MSL): NA
DRILLING METHOD: Hollow Stem Auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 4-1-87
DATE COMPLETED: 4-1-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Dry lime sludge pond, boring #3
SITE CONDITION Open, covered with short grass, soft ground surface

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'		19"	19"	U	61	weight of hammer		ML -	(0-4")-Very pale brown (10 YR 7/3) Clayey SILT, numerous rootlets, damp.
								CL -	(4"-15")- white (10YR 8/1) CLAY size material, brown specks in upper 7", Alternating firm and soft layers, damp to moist, low plasticity.
2'-4'		16.5"	16.5"	U	53	weight of hammer		CL -	white (10 YR 8/1 + 10YR 8/2) CLAY size material, alternating firm and soft layers, horizontal layering present, brown specks - more prevalent in firm layers, wet.
4'-6'		24"	24"	U	50	weight of hammer		CL -	(4'-5'8") Same as above (4"- 3'4.5"), both white (10YR 8/1 + 10YR 8/2) occur throughout as blotches of color (not layers), wet.
								CL -	(5'8"-6) Dark grey (7.5 YR 4/0) and Light greenish grey (5BG 7/1) blotches in Pink (7.5 YR 8/4) CLAY size material.

COMMENTS: Logs for DLSL, B-03 are in Field Book 44.0 pg. 5-10. CPM taken with Eberline HP 210T - conversion for HP-210T: 1mRad/hr / 1489 CPM

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: DLSL, B03
SITE COORDINATES (ft.):
N 52225 E 3225
GROUND ELEVATION (ft. MSL): NA
DRILLING METHOD: Hollow Stem Auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 4-1-87
DATE COMPLETED: 4-1-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
6'-8'		23"	23"	U	60	Weight of hammer		CL	(6'-6'6") White (10YR 8/2) CLAY size material, some rootlets, layers with brown specks, soft, wet, low plasticity.
								CL	(6'6"-6'9.5") Light greenish grey (5G 7/1) CLAY size material, more solid than above, wet, Low plasticity
								CL	(6'9.5"-7'7") White (10YR 8/2) CLAY size material, firm, wet, low plasticity
								CL	(7'7"-7'11") Light greenish grey. (5G 7/1) CLAY size material, blotches of white (10YR 8/2), firm, wet, low plasticity.
8'-10'		24"	24"	U	50	Weight of hammer		CL	(8'-9') white (10YR 8/2) CLAY size material with blotches of very pale brown 10YR 8/4 toward Top, wet, firm.
								CL	(9'-10') Same as (8'-9') color change to Light greenish grey (5G 7/1), 1/8" brown layer at (9'9"). last 2" contains greenish grey (5BG 6/1), wet.

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: DLSL, B03
SITE COORDINATES (ft.):
N 52225 E 3225
GROUND ELEVATION (ft. MSL): NA
DRILLING METHOD: Hollow Stem Augers
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 4-1-87
DATE COMPLETED: 4-1-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
10'-12'		24"	24"	U	80	Weight of hammer		CL –	(10'-10'10") Light green grey (5BG 7/1) with blotches of greenish grey (5BG 6/1) CLAY size material, wet.
								CL-CH	(10'10"-11'2") Olive grey (5Y 5/2) CLAY size material, medium plasticity, not lime sludge.
								SC –	(11'2"-12') Light yellowish brown (2.5Y 6/4) medium to fine SAND, Trace clay, moist to damp, saturated near top, moisture decreases toward bottom, Clay occurs as 1/4" thick seams.

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D 2.42" I.D tube sample
T - 3" O.D thin-walled Shelby tube

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TABLE D-13

BORING LOGS
RI/FS SAMPLING PROGRAM
LIME SLUDGE PONDS

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1039	COORDINATES: NORTH 480,729.12 EAST 1,379,659.05	DATE: 04/09/88	
GROUND ELEVATION: 577.4	GWL: Depth N/A Date/Time N/A	DATE STARTED: 04/08/88	
ENGINEER/GEOLOGIST: M SLUSARSKI	Depth N/A Date/Time N/A	DATE COMPLETED: 04/09/88	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	008431	04/08/88	0921	3 8 10		12		VERY STIFF, BROWN (10YR 3/2), CLAY, ROOTLETS, DRY.	CL	2.5	Hnu= 0 ppm BΓ = 120 cpm
3.0	008432	04/08/88	0924	5 7 8		14		STIFF, GREY/BROWN (10YR 4/1), CLAY, DRY.	CL	2.0	Hnu= 0 ppm BΓ = 120 cpm
4.5	008433	04/08/88	0933	5 9 12		8		VERY STIFF, OLIVE/BROWN (5Y 4/3) MOTTLED, CLAY, DRY.	CL	3.5	Hnu= 0 ppm BΓ = 100 cpm
6.0	008434	04/08/88	0938	11 13 15		10		VERY STIFF, GREY/BROWN (10YR 5/1) MOTTLED, CLAY, DRY.	CL	2.5	Hnu= 0 ppm BΓ = 100 cpm
7.5	008435	04/08/88	0941	15 15 18		12		VERY STIFF, GREY/BROWN (10YR 5/1) MOTTLED, CLAY, DAMP.	CL	2.0	Hnu= 0 ppm BΓ = 100 cpm
9.0	008436	04/08/88	0946	11 14 14		12		STIFF, GREY (2.5Y 6/2), CLAY, DAMP.	CL	1.5	Hnu= 0 ppm BΓ = 100 cpm
11.0	008437	04/08/88	1327	N/A		24		SHELBY TUBE: PUSHED SHELBY TUBE FROM 9.0-11.0 FT; RECOVERED 2.0 FT.	N/A	N/A	Hnu= 0 ppm BΓ = 100 cpm
12.0	008438	04/08/88	1414	4 6		10		MEDIUM STIFF, GREY (5Y 5/1), SILTY CLAY, DAMP.	CL	0.5	Hnu= 0 ppm BΓ = 100 cpm
13.5	008439	04/08/88	1421	4 7 11		14		MEDIUM STIFF, GREY (5Y 5/1), SILTY CLAY, DAMP.	CL	1.0	Hnu= 0 ppm BΓ = 100 cpm
15.0	008440	04/08/88	1426	10 12 19		12		MEDIUM STIFF, GREY (5Y 5/1) SILTY CLAY, DAMP.	CL	1.0	Hnu= 0 ppm BΓ = 100 cpm
16.5	008441	04/08/88	1430	17 20 17		14		MEDIUM STIFF, GREY (5Y 5/1) SILTY CLAY, SOME FINE SAND, DAMP.	CL	1.0	Hnu= 0 ppm BΓ = 80 cpm
18.0	008442	04/08/88	1505	2 5 13		14		MEDIUM STIFF, GREY (5Y 5/1) SILTY CLAY, SOME FINE SAND, DAMP.	CL	1.5	Hnu= 0 ppm BΓ = 80 cpm
19.5	008443	04/08/88	1508	6 12 15		14		MEDIUM DENSE, GREY (5Y 4/1), WELL GRADED, GRAVELLY SAND, WET.	SW	N/A	Hnu= 0 ppm BΓ = 80 cpm
21.0	008444	04/08/88	1511	10 16 18		14		DENSE, GREY (5Y 4/1), WELL GRADED, GRAVELLY SAND, WET.	SW	N/A	Hnu= 0 ppm BΓ = 80 cpm

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GROUND ELEVATION: 577.4	GWL: Depth N/A Date/Time N/A	DATE STARTED: 04/08/88	
ENGINEER/GEOLOGIST: M SLUSARSKI	Depth N/A Date/Time N/A	DATE COMPLETED: 04/09/88	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
22.5	008445	04/08/88 1513	14 20 21	14	DENSE, GREY (5Y 4/1) WELL GRADED, GRAVELLY SAND, WET.	SW	N/A	Hnu= 0 ppm βΓ = 80 cpm
24.0	008446	04/08/88 1651	10 8 14	14	MEDIUM DENSE, GREY (5Y 4/1), CLAYEY GRAVEL, GRAVEL/SAND/CLAY MIXTURE, WET. 23.5'-VERY STIFF, GREY (5Y 4/1), CLAY, SOME FINE GRAVEL AND SILT, DRY.	GC CL	N/A 2.5	Hnu= 0 ppm βΓ = 80 cpm
25.5	008447	04/08/88 1712	7 10 11	8	VERY STIFF, GREY (5Y 4/1), CLAY, SOME FINE GRAVEL AND SILT, DRY.	CL	2.5	Hnu= 0 ppm βΓ = 80 cpm

BOTTOM OF BORING 27.0

NOTES:
SAMPLES COLLECTED PER ASTM STANDARD PENETRATION TEST. COLORS IDENTIFIED USING MUNSELL COLOR CHART.
MONITORING WELL INSTALLED.

FERNALD RI/FS

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1041	COORDINATES: NORTH 480,550.15 EAST 1,379,798.62	DATE: 04/10/88	
GROUND ELEVATION: 581.3	GWL: Depth N/A Date/Time N/A	DATE STARTED: 04/10/88	
ENGINEER/GEOLOGIST: M SLUSARSKI	Depth N/A Date/Time N/A	DATE COMPLETED: 04/11/88	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	008448 04/10/88 1409		2 4 7	12	STIFF, YELLOW-BROWN (10YR 4/3), CLAY, SOME FINE GRAVEL, ROOTLETS, DRY.	CL	2.0	Hnu= 0 ppm BГ = 140 cpm
3.0	008449 04/10/88 1412		3 5 17	12	STIFF, YELLOW-BROWN (10YR 4/3), CLAY, SOME FINE GRAVEL, ROOTLETS, DRY.	CL	2.0	Hnu= 0 ppm BГ = 140 cpm
4.5	008450 04/10/88 1417		18 20 18	18	VERY STIFF, YELLOW-BROWN (5Y 4/4), CLAY, SOME FINE GRAVEL, DRY. 4.0'-STIFF, GREY-BROWN MOTTLED (10YR 3/1), CLAY, SOME FINE GRAVEL, DRY.	CL CL	2.5 2.0	Hnu= 0 ppm BГ = 120 cpm
6.0	008451 04/10/88 1421		24 25 30	18	VERY STIFF, YELLOW-BROWN-GREY MOTTLED (10YR 4/4), CLAY, DRY.	CL	3.0	Hnu= 0 ppm BГ = 120 cpm
7.5	008452 04/10/88 1426		24 26 24	14	STIFF, GREY-YELLOW BROWN MOTTLED (10YR 5/1), CLAY, DRY.	CL	2.0	Hnu= 0 ppm BГ = 120 cpm
9.0	008453 04/10/88 1428		25 28 27	8	STIFF, GREY-YELLOW BROWN MOTTLED (10YR 5/1), CLAY, DRY.	CL	2.0	Hnu= 0 ppm BГ = 120 cpm
11.0	008454 04/11/88 0908		N/A	N/A	PUSHED SHELBY TUBE FROM 9.0-11.0 FT; RECOVERED 0.75 FT.		N/A	Hnu= 0 ppm BГ = 120 cpm
12.0	008455 04/11/88 0937		3 9	12	STIFF, GREY (5Y 5/1), CLAY, SOME SILT, DAMP.	CL	2.0	Hnu= 0 ppm BГ = 120 cpm
13.5	008456 04/11/88 0940		5 6 8	12	STIFF, GREY (5Y 5/1), CLAY, SOME SILT, DAMP.	CL	2.0	Hnu= 0 ppm BГ = 100 cpm
15.0	008457 04/11/88 0944		5 5 7	12	STIFF, GREY (5Y 5/1), CLAY, SOME SILT, DAMP.	CL	2.0	Hnu= 0 ppm BГ = 100 cpm
16.5	008458 04/11/88 0948		3 4 4	12	STIFF, GREY (5Y 5/1), CLAY, SOME SILT, DAMP.	CL	2.0	Hnu= 0 ppm BГ = 100 cpm
18.0	008459 04/11/88 0951		4 4 6	12	STIFF, GREY (5Y 5/1), CLAY, SOME SILT, DAMP.	CL	2.0	Hnu= 0 ppm BГ = 100 cpm
19.5	008460 04/11/88 1100		1 5 6	14	STIFF, GREY (5Y 5/1), CLAY, SOME SILT, DAMP.	CL	2.0	Hnu= 0 ppm BГ = 100 cpm
21.0	008461 04/11/88 1102		3 4 4	18	STIFF, GREY (5Y 5/1), CLAY, SOME SILT, DAMP.	CL	2.0	Hnu= 0 ppm BГ = 100 cpm

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GROUND ELEVATION: 581.3	GWL: Depth N/A Date/Time N/A	DATE STARTED: 04/10/88	
ENGINEER/GEOLOGIST: M SLUSARSKI	Depth N/A Date/Time N/A	DATE COMPLETED: 04/11/88	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS
22.5	008462	04/11/88	1115	2	2 4	18		STIFF, GREY (5Y 5/1), CLAY, SOME SILT, DAMP.	CL	2.0	Hnu= 0 ppm BI = 100 cpm

BOTTOM OF BORING 22.5

NOTES:
SAMPLES COLLECTED PER ASTM STANDARD PENETRATION TEST. COLORS IDENTIFIED USING MUNSELL COLOR CHART.
MONITORING WELL INSTALLED.

FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — LSP

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1134	COORDINATES: NORTH 480,745.16 EAST 1,379,849.31	DATE: 05/03/89	
GROUND ELEVATION: 579.8	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/03/89	
ENGINEER/GEOLOGIST: L SINFIELD	Depth N/A Date/Time N/A	DATE COMPLETED: 05/04/89	
DRILLING METHODS: B-53, HOLLOW STEM AUGER WITH SPLIT SPOON		PAGE 1 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 0.5	15627 05/03/89 1525				HARD, DARK YELLOWISH BROWN (10YR 4/4) LEAN CLAY, ABUNDANT ROOTS , DRY.	CL	4.5	Hnu=0 ppm α =0 cpm Bγ =160-200 cpm
1.0	15628 05/03/89 1525		7 5 6	12	HARD, DARK YELLOWISH BROWN (10YR 4/4) LEAN CLAY, ABUNDANT ROOTS, DRY.	CL	4.5	Hnu=0 ppm α =0 cpm Bγ =160-200 cpm
1.5	15629 05/03/89 N/A				NO RECOVERY, NO SAMPLE TAKEN.	N/A	N/A	N/A
2.0	15630 05/03/89 1530				VERY STIFF, LIGHT BROWNISH GRAY (10YR 6/2) CLAY, MASSIVE, MOTTLED, RARE ROOTS, LEAN WITH SOME SILT, DRY.	CL	2.1 TO 2.5	Hnu=0 ppm α =0 cpm Bγ =120-160 cpm
2.5	15631 05/03/89 N/A		7 5 10	6	NO RECOVERY, NO SAMPLE TAKEN.	N/A	N/A	N/A
3.0	15632 05/03/89 N/A				NO RECOVERY, NO SAMPLE TAKEN.	N/A	N/A	N/A
3.5	15633 05/03/89 N/A				NO RECOVERY, NO SAMPLE TAKEN.	N/A	N/A	N/A
4.0	15634 05/03/89 N/A		7 9 10	5	NO RECOVERY, NO SAMPLE TAKEN.	N/A	N/A	N/A
4.5	15635 05/03/89 1535				VERY STIFF TO HARD, DARK GRAYISH BROWN (10YR 4/2), CLAY, MOTTLED, MASSIVE, MEDIUM PLASTICITY, DRY.	CL	2.6 TO 4.5	Hnu=0 ppm α =0 cpm Bγ =120-140 cpm
5.0	15636 05/03/89 1540				STIFF, DARK GRAYISH BROWN (10YR 4/2) CLAY, MOTTLED, MASSIVE, MEDIUM PLASTICITY, DRY.	CL	1.4 TO 1.6	Hnu=0 ppm α =0 cpm Bγ =140-160 cpm
5.5	15637 05/03/89 N/A		4 7 3	3	NO RECOVERY, NO SAMPLE TAKEN.	N/A	N/A	N/A
6.0	15638 05/03/89 N/A				NO RECOVERY, NO SAMPLE TAKEN.	N/A	N/A	N/A

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1134	COORDINATES: NORTH 480,745.16 EAST 1,379,849.31	DATE: 05/03/89	
GROUND ELEVATION: 579.8	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/03/89	
ENGINEER/GEOLOGIST: L SINFIELD	Depth N/A Date/Time N/A	DATE COMPLETED: 05/04/89	
DRILLING METHODS: B-53, HOLLOW STEM AUGER WITH SPLIT SPOON		PAGE 2 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
6.5	15639	05/03/89 1605			STIFF, DARK YELLOWISH BROWN (10YR 3/4), MEDIUM PLASTICITY, LEAN CLAY, MASSIVE, RARE GRAVEL, DRY.	CL	1.2	Hnu=0 ppm α =0 cpm βΓ =140-180 cpm
7.0	15640	05/03/89 N/A	3 6 7	6	NO RECOVERY, NO SAMPLE TAKEN.	N/A	N/A	N/A
7.5	15641	05/03/89 N/A			NO RECOVERY, NO SAMPLE TAKEN.	N/A	N/A	N/A
8.0	15642	05/03/89 1610			SOFT AT TOP TO HARD AT BASE, MOTTLED GRAY (10YR 6/1) TO BROWNISH YELLOW (10YR 6/6) CLAY, MEDIUM PLASTICITY, MASSIVE, DRY.	CL	>4.5	Hnu=0 ppm α =0 cpm βΓ =180-220 cpm
8.5	15643	05/03/89 1610	5 10 15	15	SOFT AT TOP TO HARD AT BASE, MOTTLED GRAY (10YR 6/1) TO BROWNISH YELLOW (10YR 6/6) CLAY, MEDIUM PLASTICITY, MASSIVE, DRY.	CL	>4.5	Hnu=0 ppm α =0 cpm βΓ =180-220 cpm
9.0	15644	05/03/89 1610			SOFT AT TOP TO HARD AT BASE, MOTTLED GRAY (10YR 6/1) TO BROWNISH YELLOW (10YR 6/6) CLAY, MEDIUM PLASTICITY, MASSIVE, DRY.	CL	>4.5	Hnu=0 ppm α =0 cpm βΓ =180-220 cpm
9.5	15645	05/03/89 1615			VERY STIFF, MOTTLED GRAY (10YR 6/1) TO BROWNISH YELLOW (10YR 6/6) CLAY, MEDIUM PLASTICITY, MASSIVE, DRY.	CL	2.5 TO 3.7	Hnu=0 ppm α =0 cpm βΓ =180-120 cpm
10.0	15646	05/03/89 N/A	10 9 9	6	NO RECOVERY, NO SAMPLE TAKEN.	N/A	N/A	N/A
10.5	15647	05/03/89 N/A			NO RECOVERY, NO SAMPLE TAKEN.	N/A	N/A	N/A
11.0	15648	05/03/89 1640			LOOSE, SAND, BROWNISH YELLOW (10YR 6/6), MASSIVE, FINE SAND, SATURATED.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =160-200 cpm
11.5	50649	05/03/89 1640	4 6 9	18	LOOSE, SAND, BROWNISH YELLOW (10YR 6/6), MASSIVE, FINE SAND, SATURATED.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =160-200 cpm
12.0	50650	05/03/89 1640			LOOSE, SAND, BROWNISH YELLOW (10YR 6/6), MASSIVE, FINE SAND, SATURATED.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =160-200 cpm

FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — LSP

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1134	COORDINATES: NORTH 480,745.16 EAST 1,379,849.31	DATE: 05/03/89	
GROUND ELEVATION: 579.8	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/03/89	
ENGINEER/GEOLOGIST: L SINFIELD	Depth N/A Date/Time N/A	DATE COMPLETED: 05/04/89	
DRILLING METHODS: B-53, HOLLOW STEM AUGER WITH SPLIT SPOON		PAGE 3 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
12.5	55165	05/03/87 1700			LOOSE, SAND, BROWNISH YELLOW (10YR 6/6), MASSIVE, FINE SAND, SATURATED.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =160-200 cpm
13.0	55166	05/03/87 1700	4 6 6	18	LOOSE, SAND, BROWNISH YELLOW (10YR 6/6), MASSIVE, FINE SAND, SATURATED.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =160-200 cpm
13.5	55167	05/03/87 1700			LOOSE, SAND, BROWNISH YELLOW (10YR 6/6), MASSIVE, FINE SAND, SATURATED.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =160-200 cpm
14.0	55168	05/03/87 0930			LOOSE, SAND, BROWNISH YELLOW (10YR 6/6), MASSIVE, FINE SAND, SATURATED.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =160-200 cpm
14.5	55169	05/03/87 0930	5 10 10	18	LOOSE, SAND, BROWNISH YELLOW (10YR 6/6), MASSIVE, FINE SAND, SATURATED.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =160-200 cpm
15.0	55170	05/03/87 0930			LOOSE, SAND, BROWNISH YELLOW (10YR 6/6), MASSIVE, FINE SAND, SATURATED.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =160-200 cpm
15.5	50657	05/04/89 0945			LOOSE, SAND, BROWNISH YELLOW (10YR 6/6), MASSIVE, FINE SAND, SATURATED.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =120-160 cpm
16.0	50658	05/04/89 0945	6 9 10	18	LOOSE, SAND, BROWNISH YELLOW (10YR 6/6), MASSIVE, FINE SAND, SATURATED.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =120-160 cpm
16.5	50659	05/04/89 0945			LOOSE, SAND, BROWNISH YELLOW (10YR 6/6) MASSIVE, FINE SAND, SATURATED. 16.25'-CLAY, GRAY (10YR 4/1), LEAN, MEDIUM PLASTICITY, MASSIVE, DRY.	SM CL	N/A 3.5	Hnu=0 ppm α =0 cpm βΓ =120-160 cpm

BOTTOM OF BORING 16.5

NOTES:
WATER DEVELOPED IN BORING AT 10.25-16.25 FT DURING DRILLING.
MONITORING WELL INSTALLED.

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FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — LSP

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1176	COORDINATES: NORTH 480,705.79 EAST 1,379,852.67	DATE: 05/08/89	
GROUND ELEVATION: 579.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/08/89	
ENGINEER/GEOLOGIST: C GRUBE/L ADAMS	Depth N/A Date/Time N/A	DATE COMPLETED: 05/08/89	
DRILLING METHODS: MOBILE DRILL HSA		PAGE 1 OF 2	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.5	16441 05/08/89 1049	2	6	MEDIUM STIFF, DARK YELLOWISH BROWN (10YR 4/4) CLAY, SOME GRASS AND ROOTS, MEDIUM PLASTICITY, MOIST.	CL	1.75	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
1.0	16442 05/08/89 1049	5	5	MEDIUM STIFF, DARK YELLOWISH BROWN (10YR 4/4) CLAY, SOME GRASS AND ROOTS, MEDIUM PLASTICITY, MOIST.	CL	1.75	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
1.5	16443 05/08/89 1049	7	0	NO RECOVERY.	N/A	N/A	N/A
2.0	16444 05/08/89 1053	5	6	STIFF, YELLOWISH BROWN (10YR 4/6) SILTY CLAY, SOME COARSE SAND, TRACE FINE GRAVEL, MOIST.	CL	1.75	Hnu=0 ppm α =0 cpm βΓ =60-80 cpm
2.5	16445 05/08/89 1053	22	6	VERY STIFF, DARK YELLOWISH BROWN (10YR 4/4) SILTY CLAY, TRACE COARSE SAND, LOW PLASTICITY, MOIST.	CL	3.25	Hnu=0 ppm α =0 cpm βΓ =60-80 cpm
3.0	16446 05/08/89 1053	16	0	NO RECOVERY.	N/A	N/A	N/A
3.5	16447 05/08/89 1100	16	6	VERY STIFF YELLOWISH BROWN (10YR 5/4) SILTY CLAY, TRACE FINE GRAVEL AND SAND, LOW PLASTICITY, MOIST. 3.25'-VERY STIFF, DARK BROWN (10YR 3/3) CLAY, LOW TO MEDIUM PLASTICITY, MOIST.	CL	3.5 3.5	Hnu=0 ppm α =0 cpm βΓ =60-70 cpm
4.0	16448 05/08/89 1100	17	6	VERY STIFF, DARK BROWN (10YR 3/3) CLAY, LOW TO MEDIUM PLASTICITY, MOIST.	CL	2.0	Hnu=0 ppm α =0 cpm βΓ =60-70 cpm
4.5	16449 05/08/89 1100	21	0	NO RECOVERY.	N/A	N/A	N/A
5.0	16450 05/08/89 1310	17	6	STIFF, DARK BROWN (10YR 3/3) CLAY, LOW TO MEDIUM PLASTICITY, MOIST.	CL	1.25	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
5.5	16451 05/08/89 1310	16	6	STIFF, YELLOWISH BROWN (10YR 5/4) SILTY CLAY, TRACE SAND, MEDIUM PLASTICITY, MOIST.	CL	1.75	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
6.0	16452 05/08/89 1310	15	5	STIFF, YELLOWISH BROWN (10YR 5/4) SILTY CLAY, TRACE SAND, MEDIUM PLASTICITY, MOIST.	CL	2.0	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
6.5	16453 05/08/89 1317	12	6	STIFF, YELLOWISH BROWN (10YR 5/4) SILTY CLAY, TRACE SAND, MEDIUM PLASTICITY, VERY MOIST TO WET.	CL	1.0	Hnu=0 ppm α =0 cpm βΓ =50-60 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1176	COORDINATES: NORTH 480,705.79 EAST 1,379,852.67	DATE: 05/08/89	
GROUND ELEVATION: 579.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/08/89	
ENGINEER/GEOLOGIST: C GRUBE/L ADAMS	Depth N/A Date/Time N/A	DATE COMPLETED: 05/08/89	
DRILLING METHODS: MOBILE DRILL HSA		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
7.0	16454	05/08/89	1317	7		4	STIFF, YELLOWISH BROWN (10YR 5/4) SILTY CLAY, TRACE SAND, MEDIUM PLASTICITY, VERY MOIST TO WET.	CL	1.5	Hnu=0 ppm α =0 cpm BΓ =50-60 cpm
7.5	16455	05/08/89	1317	6		0	NO RECOVERY.	N/A	N/A	N/A
8.0	16456	05/08/89	1330	4		6	VERY SOFT, YELLOWISH BROWN (10YR 5/6), SILTY CLAY, TRACE SAND, WET.	CL	0.25	Hnu=0 ppm α =0 cpm BΓ =60-80 cpm
8.5	16457	05/08/89	1330	3		6	SOFT, OLIVE GRAY (5Y 4/2) CLAY, TRACE SAND AND SILT, MEDIUM PLASTICITY, VERY MOIST.	CL	0.25	Hnu=0 ppm α =0 cpm BΓ =60-80 cpm
9.0	16458	05/08/89	1330	4		2	LOOSE, YELLOWISH BROWN (10YR 5/6) SILTY SAND, TRACE GRAVEL (1.0-1.5 IN), MOIST.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =60-80 cpm
9.5	16459	05/08/89	1445	5		6	MEDIUM STIFF, DARK BROWN (10YR 3/3) SILTY CLAY, LOW PLASTICITY, MOIST.	CL	0.75	Hnu=0 ppm α =0 cpm BΓ =60-80 cpm
10.0	16460	05/08/89	1445	3		6	LOOSE, YELLOWISH BROWN (10YR 5/6) SILTY SAND, TRACE FINE GRAVEL, POORLY GRADED, WET.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =60-80 cpm
10.5	16461	05/08/89	1445	4		0	NO RECOVERY.	N/A	N/A	N/A
11.0	16462	05/08/89	1455	12		6	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/6) POORLY GRADED SAND, WET.	SP	N/A	Hnu=0 ppm α =0 cpm BΓ =60-80 cpm
11.5	55164	05/08/89	1455	10		6	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/6) WELL GRADED SAND, WET. 11.25'-MEDIUM DENSE, YELLOWISH BROWN (10YR 5/6) SILT, TRACE SAND, VERY MOIST.	SW ML	N/A N/A	Hnu=0 ppm α =0 cpm BΓ =60-80 cpm
12.0	50660	05/08/89	1455	13		6	STIFF, GRAY (5Y 5/1) SILTY CLAY, TRACE FINE GRAVEL, MOIST.	CL	1.5	Hnu=0 ppm α =0 cpm BΓ =60-80 cpm

BOTTOM OF BORING 12.0

NOTES:
SAMPLES TAKEN FOR WMCO AT INTERVALS 0.0-0.5 FT, 2.0-2.5 FT, 5.0-5.5 FT, 10.0-10.5 FT, 15.0-15.5 FT.
SAMPLING IN ACCORDANCE WITH ASTM STANDARDS, DESCRIPTION OF SOIL COLOR BY MUNSELL COLOR CHART.
WATER BEARING ZONE 7.5-11.5 FT. MONITORING WELL INSTALLED.

FERNALD RI/FS

VISUAL CLASSIFICATION OF SOILS

LSP

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1210	COORDINATES: NORTH 480,485.42 EAST 1,379,844.46	DATE: 05/03/89	
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/03/89	
ENGINEER/GEOLOGIST: TROLLINGER/GRUBE	Depth N/A Date/Time N/A	DATE COMPLETED: 05/03/89	
DRILLING METHODS: MOBILE DRILL 8 IN HSA		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.5	17189	05/03/89	1000	2			VERY STIFF, BROWN (10YR 3/3) SILTY CLAY, TRACE ORGANICS (GRASS, ROOTS), LOW PLASTICITY, MOIST.	CL	2.5	Hnu=0.0-0.2 ppm α =0 cpm βΓ =80 cpm
1.0	17190	05/03/89	1000	6		12	VERY STIFF, BROWN (10YR 3/3), SILTY CLAY, TRACE FINE GRAVEL, LOW PLASTICITY, MOIST.	CL	3.5	Hnu=0.0-0.2 ppm α =0 cpm βΓ =80 cpm
1.5	17191	05/03/89	1000	15			NO RECOVERY.	N/A	N/A	N/A
2.0	17192	05/03/89	1007	7			VERY STIFF, BROWN (10YR 4/4) SILTY CLAY, TRACE FINE GRAVEL, LOW PLASTICITY, MOIST.	CL	4.0	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
2.5	17193	05/03/89	1007	11		12	VERY STIFF, BROWN (10YR 4/4), SILTY CLAY, TRACE SAND AND FINE GRAVEL, LOW PLASTICITY, MOIST.	CL	3.0	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
3.0	17194	05/03/89	1007	15			NO RECOVERY.	N/A	N/A	N/A
3.5	17195	05/03/89	1014	9			VERY STIFF, YELLOWISH BROWN (10YR 5/6), SILTY CLAY, TRACE FINE GRAVEL, LOW PLASTICITY, MOIST.	CL	4.0	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
4.0	17196	05/03/89	1014	18		14	VERY STIFF, YELLOWISH BROWN (10YR 5/6) TO GRAY (10YR 5/1), CLAY, MEDIUM PLASTICITY, MOIST.	CL	3.0	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
4.5	17197	05/03/89	1014	25			VERY STIFF, YELLOWISH BROWN (10YR 5/6) TO GRAY (10YR 5/1), CLAY, MEDIUM PLASTICITY, MOIST (2 IN. RECOV. ON 17197).	CL	2.0	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
5.0	17198	05/03/89	1023	19			STIFF, YELLOWISH BROWN (10YR 5/4), CLAY, MEDIUM PLASTICITY, MOIST.	CL	1.75	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
5.5	17199	05/03/89	1023	23		15	STIFF, YELLOWISH BROWN (10YR 5/4), CLAY, TRACE COARSE SAND, MEDIUM PLASTICITY, MOIST.	CL	1.5	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
6.0	17200	05/03/89	1023	26			STIFF, YELLOWISH BROWN (10YR 5/4), CLAY, TRACE COARSE SAND, MEDIUM PLASTICITY, MOIST. (3 IN RECOV. ON 17200).	CL	1.5	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1210	COORDINATES: NORTH 480,485.42 EAST 1,379,844.46	DATE: 05/03/89	
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/03/89	
ENGINEER/GEOLOGIST: TROLLINGER/GRUBE	Depth N/A Date/Time N/A	DATE COMPLETED: 05/03/89	
DRILLING METHODS: MOBILE DRILL 8 IN HSA		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
6.5	17201	05/03/89 1325	3		VERY STIFF, OLIVE GRAY (5Y 5/2) TO YELLOWISH BROWN (10YR 4/6) SILTY CLAY, LOW TO MEDIUM PLASTICITY, MOIST.	CL	3.25	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
7.0	17202	05/03/89 1325	6	18	VERY STIFF, OLIVE GRAY (5Y 5/2) TO YELLOWISH BROWN (10YR 4/6) SILTY CLAY, LOW TO MEDIUM PLASTICITY, MOIST.	CL	3.0	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
7.5	17203	05/03/89 1325	7		MEDIUM DENSE, YELLOWISH BROWN (10YR 5/6) SILT, WET-SATURATED	ML	N/A	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
8.0	17204	05/03/89 1330	4		DENSE, BROWN (10YR 5/3) CLAYEY SILT, SATURATED.	ML	N/A	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
8.5	17205	05/03/89 1330	14	17	DENSE, YELLOWISH BROWN (10YR 5/6) SILT, WET.	ML	N/A	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
9.0	17206	05/03/89 1330	18		DENSE, YELLOWISH BROWN (10YR 5/6) SILT, WET.	ML	N/A	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
9.5	17207	05/03/89 1335	10		MEDIUM DENSE, YELLOWISH BROWN (10YR 5/6), SILT, WET.	ML	N/A	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
10.0	17208	05/03/89 1335	16	18	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/6), SILT, WET.	ML	N/A	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm
10.5	17209	05/03/89 1335	19		VERY STIFF, YELLOWISH BROWN (10YR 5/6) SILTY CLAY, MOIST.	CL	2.75	Hnu=0.2 ppm α =0 cpm βΓ =80 cpm

BOTTOM OF BORING 10.5

NOTES:
SAMPLES TAKEN FOR WMCO AT INTERVALS 0.0-0.5 FT, 2.0-2.5 FT, 5.0-5.5 FT, 10.0-10.5 FT, 15.0-15.5 FT.
SAMPLING IN ACCORDANCE WITH ASTM STANDARDS, DESCRIPTION OF SOIL COLOR BY MUNSELL COLOR CHART.
WATER BEARING ZONE 8.0-10.0 FT.
MONITORING WELL INSTALLED.

FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — LSP

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS	
BORING NUMBER: 2042	COORDINATES: NORTH 480,394.27 EAST 1,379,542.73	DATE: 04/11/88
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 04/11/88
ENGINEER/GEOLOGIST: M GOLDBERG	Depth N/A Date/Time N/A	DATE COMPLETED: 04/19/88
DRILLING METHODS:		PAGE 1 OF 3

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	008867 04/11/88 0845		2 3 6	14	VERY STIFF, DARK YELLOWISH BROWN (10YR 4/4), CLAY, DRY.	CL	2.5	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
3.0	008868 04/11/88 0850		6 10 9	14	VERY STIFF, DARK BROWN (10YR 3/3), CLAY, DRY.	CL	2.5	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
4.5	008869 04/11/88 0852		10 11 11	18	STIFF, DARK YELLOWISH BROWN (10YR 4/6), CLAY, DRY.	CL	1.0	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
6.0	008870 04/11/88 0855		8 8 8	8	STIFF, DARK YELLOWISH BROWN (10YR 4/6), CLAY, DRY.	CL	1.0	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
7.5	008871 04/11/88 0900		5 6 6	18	STIFF, DARK YELLOWISH BROWN (10YR 4/6), CLAY, DRY. 6.5'-LOOSE, YELLOWISH BROWN (10YR 5/8), SILTY SAND, WET. 7.0'-STIFF, LIGHT GRAY (10YR 7/1), SILTY CLAY, WET.	CL SM CL	1.0 N/A 1.5	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
8.5	008874 04/11/88 1330				SHELBY TUBE PUSHED FROM 7.5-8.5 FT. STIFF, LIGHT GRAY (10YR 7/1), SILTY CLAY, WET. TRACE SAND, WET.	CL	1.0	
9.0	008872 04/11/88 0903		6 6 7	18	STIFF, LIGHT GRAY (10YR 7/1), SILTY CLAY, WET. TRACE SAND, WET.	CL	1.0	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
10.5	008873 04/11/88 0905		6 8 10	18	STIFF, LIGHT GRAY (10YR 7/1), SILTY CLAY, WET. TRACE SAND, WET. 9.5'-STIFF, YELLOWISH BROWN (10YR 5/8), SILTY CLAY, TRACE SAND, WET.	CL CL	1.0 1.0	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
12.0	008490 04/11/88 1355		4 7 6	12	STIFF, LIGHT GRAY (10YR 7/1), SILTY CLAY, WITH SAND, WET.	CL	1.0	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
13.5	008491 04/11/88 1400		9 7 13	14	MEDIUM DENSE, LIGHT GRAY (10YR 7/1), SILTY SAND, WET.	SM	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
15.0	008492 04/11/88 1405		9 11 13	14	MEDIUM DENSE, GRAY (10YR 5/1), SILTY SAND, WET.	SM	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
16.5	008493 04/11/88 1410		11 12 15	18	MEDIUM DENSE, GRAY (10YR 5/1), SILTY SAND, WET.	SM	<1	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
18.0	008494 04/11/88 1415		8 9 9	18	MEDIUM DENSE, GRAY (10YR 5/1), SAND, TRACE SILT, WET.	SP	<1	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2042	COORDINATES: NORTH 480,394.27 EAST 1,379,542.73	DATE: 04/11/88	
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 04/11/88	
ENGINEER/GEOLOGIST: M GOLDBERG	Depth N/A Date/Time N/A	DATE COMPLETED: 04/19/88	
DRILLING METHODS:		PAGE 2 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
19.5	008495	04/11/88 1535	3 3 3	10	STIFF, GRAY (10YR 5/1), CLAY, TRACE SAND, WET.	CL	1.5	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
21.0	008496	04/11/88 1540	10 15 11	8	MEDIUM DENSE, GRAY (10YR 5/1), SAND, WET. HARD, DARK GRAY (5Y 4/1), CLAY, DRY.	SW CL	<1 >4	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
22.0	008497	04/11/88 1630	N/A	12	SHELBY TUBE: PUSHED 1.5 FT, RECOVERED 1.0 FT.	N/A	N/A	
23.5	008498	04/12/88 0830	6 10 12	14	MEDIUM STIFF, DARK GRAY (5Y 4/1), CLAY, DRY.	CL	1.0	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
25.0	008499	04/12/88 0845	3 4 8	18	STIFF, DARK GRAY (5Y 4/1), CLAY, DRY.	CL	2.0	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
26.5	008500	04/12/88 0920	1 2 3	10	STIFF, OLIVE GRAY (5Y 5/2), CLAY, TRACE GRAVEL, DRY.	CL	1.5	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
28.0	008501	04/12/88 0940	10 13 16	14	VERY STIFF, DARK GRAY (5Y 4/1), CLAY, TRACE GRAVEL, DRY.	CL	4.0	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
30.0	008502	04/12/88 0950	10 16 21 24	20	VERY STIFF, DARK GRAY (5Y 4/1), CLAY, TRACE GRAVEL, DRY.	CL	4.0	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
31.5	008503	04/12/88 1020	8 13 50	18	HARD, GRAY (5Y 5/1), CLAY, TRACE GRAVEL, DRY.	CL	>4.0	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
33.0	008504	04/12/88 1030	15 14 21	18	VERY STIFF, GRAY (5Y 5/1), CLAY, TRACE GRAVEL, DRY.	CL	3.0	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
34.5	008505	04/12/88 1050	8 14 15	18	VERY STIFF, GRAY (5Y 5/1), CLAY, TRACE GRAVEL, DRY.	CL	2.5	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
36.0	008506	04/12/88 1320	8 12 14	18	VERY STIFF, GRAY (5Y 5/1), CLAY, TRACE GRAVEL, DRY.	CL	2.0	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
37.5	008507	04/12/88 1340	5 9 20	18	VERY STIFF, GRAY (5Y 5/1), CLAY, TRACE GRAVEL, DRY. 36.5'-VERY STIFF, DARK YELLOWISH BROWN (10YR 4/6), CLAY, TRACE GRAVEL, DRY.	CL CL	2.0 2.5	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm

FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — LSP

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS	
BORING NUMBER: 2042	COORDINATES: NORTH 480,394.27 EAST 1,379,542.73	DATE: 04/11/88
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 04/11/88
ENGINEER/GEOLOGIST: M GOLDBERG	Depth N/A Date/Time N/A	DATE COMPLETED: 04/19/88
DRILLING METHODS:		PAGE 3 OF 3

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
39.0	008508	04/12/88 1400	10 16 50	10	VERY DENSE, YELLOWISH BROWN (10YR 5/8), SAND, DRY.	SW	<1	Hnu= 0 ppm α = 0 cpm βΓ = 90 cpm
45.0 46.5	008509	04/12/88 1610	25 30 50	18	VERY DENSE, YELLOWISH BROWN (10YR 5/8), GRAVEL, DRY. 46.0'-VERY DENSE, YELLOWISH BROWN (10YR 5/8), SAND, DRY.	GW SW	<1 <1	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
50.0 51.5	008510	04/13/88 0910	10 23 29	16	DENSE, YELLOWISH BROWN (10YR 5/8), SAND, DRY.	SW	<1	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
55.0 56.5	008511	04/13/88 1040	6 10 14	14	DENSE, YELLOWISH BROWN (10YR 5/8), SAND, WET.	SW	<1	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
60.0 61.5	008512	04/13/88 1110	12 19 23	18	DENSE, YELLOWISH BROWN (10YR 5/8), GRAVEL, TRACE SAND, WET.	GW	<1	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
65.0 66.5	008513	04/13/88 1430	18 16 19	16	DENSE, YELLOWISH BROWN (10YR 5/8), GRAVEL, WET.	GW	<1	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm

BOTTOM OF BORING 66.5

NOTES:
DRILLING CONTRACTOR: PENNSYLVANIA DRILLING CO., DRILLER: TIM HARRIS, HELPER: CRAIG COULTER. WATER USED - 600 GALLONS.
COLOR VIA MUNCELL COLOR CHART. MONITORING WELL INSTALLED.

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TABLE D-14

GROUNDWATER ELEVATIONS
RI/FS SAMPLING PROGRAM
LIME SLUDGE PONDS

WATER ELEVATION REPORT FOR WELL NUMBER : 1039
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1039

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
480729.12	1379659.05	579.27	579.81	577.4		5.44	573.83	NO	05/10/88	SDG	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.73	573.54	NO	06/08/88	RWO	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		6.10	573.17	NO	07/09/88	GS	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.34	573.93	NO	08/07/88	DPH	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.10	574.17	NO	09/10/88	FXM	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.62	573.65	NO	10/08/88	CAM	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.92	574.35	NO	11/09/88	CAM	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.47	573.80	NO	12/13/88	CAM	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.49	574.78	NO	01/10/89	CAM	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.06	574.21	NO	02/10/89	CAM	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		3.89	575.38	NO	03/11/89	CAM	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.64	574.63	NO	04/15/89	CAM	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.40	574.87	NO	05/14/89	CAM	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		3.84	575.43	NO	06/14/89	CAM	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.21	574.06	NO	07/14/89	CAM	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.67	573.60	NO	08/16/89	CM	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.78	574.49	NO	09/12/89	CM SM	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.33	573.94	NO	10/11/89	CM DN	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.33	574.94	NO	11/17/89	CM GY	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.30	573.97	NO	12/19/89	CM GY MG	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.18	575.09	NO	01/22/90	CM GY	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		3.65	575.62	NO	02/16/90	CM DN	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.44	574.83	NO	04/03/90	BB DN	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.53	574.74	NO	04/24/90	BB DN	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.15	575.12	NO	05/19/90	CAM AHW	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		8.26	571.01	NO	06/21/90	CM AW	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.71	574.56	NO	07/24/90	AHW BB	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.64	573.63	NO	08/14/90	CM AW	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		6.85	572.42	NO	09/24/90	CM GY	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.06	575.21	NO	10/23/90	CM GY	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.78	574.49	NO	11/17/90	CM GY	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.99	574.28	NO	12/13/90	CM GY	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.42	574.85	NO	01/19/91	CM WB	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.30	574.97	NO	02/22/91	CM WB	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.27	574.00	NO	06/05/91	CM CT	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.96	573.31	NO	07/30/91	CM BM	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.50	573.77	NO	08/29/91	CM DS	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		10.33	568.94	NO	09/19/91	CM CJ	WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		5.76	573.51	NO	10/05/91		WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		9.57	569.70	NO	11/02/91		WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.29	574.98	NO	12/14/91		WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.40	574.87	NO	02/18/92		WASTE STOR. AREA
480729.12	1379659.05	579.27	579.81	577.4		4.79	574.48	NO	03/16/92		WASTE STOR. AREA

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WATER ELEVATION REPORT FOR WELL NUMBER : 1041
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1041

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
480550.15	1379798.62	583.13	583.62	581.3		9.50	573.63	NO	05/10/88	SDG	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.94	573.19	NO	06/08/88	RWO	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		10.45	572.68	NO	07/09/88	GS	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.45	573.68	NO	08/07/88	DPH	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.13	574.00	NO	09/10/88	FXM	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.92	573.21	NO	10/08/88	CAM	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		8.70	574.43	NO	11/09/88	CAM	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.64	573.49	NO	12/13/88	CAM	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		7.95	575.18	NO	01/10/89	CAM	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.10	574.03	NO	02/10/89	CAM	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		7.39	575.74	NO	03/11/89	CAM	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		8.55	574.58	NO	04/15/89	CAM	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		8.18	574.95	NO	05/14/89	CAM	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		7.56	575.57	NO	06/14/89	CAM	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.35	573.78	NO	07/14/89	CAM	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.12	574.01	NO	08/16/89	CM	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		8.51	574.62	NO	09/12/89	CM SM	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		10.96	572.17	NO	10/11/89	CM DN	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		NR	NA	NO	11/17/89	CM GY	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.31	573.82	NO	12/19/89	CM GY MG	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		7.48	575.65	NO	01/22/90	CM GY	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		NR	NA	NO	02/16/90	CM DN	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		8.26	574.87	NO	04/04/90	BB DN	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		8.13	575.00	NO	04/24/90	BB DN	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		7.23	575.90	NO	05/19/90	CAM AHW	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		8.89	574.24	NO	06/21/90	CM AW	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		8.58	574.55	NO	07/24/90	AHW BB	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.77	573.36	NO	08/14/90	CM AW	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		8.68	574.45	NO	09/24/90	CM GY	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.30	573.83	NO	10/23/90	CM GY	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		8.63	574.50	NO	11/17/90	CM GY	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		8.50	574.63	NO	12/13/90	CM GY	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		7.90	575.23	NO	01/19/91	CM WB	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		7.69	575.44	NO	02/22/91	CM WB	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		10.22	572.91	NO	07/30/91	CM BM	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.64	573.49	NO	08/29/91	CM DS	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.58	573.55	NO	09/19/91	CM CJ	WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.81	573.32	NO	10/05/91		WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		9.57	573.56	NO	11/02/91		WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		7.25	575.88	NO	12/14/91		WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		7.61	575.52	NO	02/18/92		WASTE STOR. AREA
480550.15	1379798.62	583.13	583.62	581.3		8.22	574.91	NO	03/16/92		WASTE STOR. AREA

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WATER ELEVATION REPORT FOR WELL NUMBER : 1042
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1042

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
480388.77	1379543.23	576.46	577.17		575.40	5.82	570.64	NO	05/10/88	SDG	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	6.10	570.36	NO	06/08/88	RWO	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	6.05	570.41	NO	07/09/88	GS	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	5.45	571.01	NO	08/07/88	DPH	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	5.26	571.20	NO	09/10/88	FXM	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	5.87	570.59	NO	10/08/88	CAM	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	4.50	571.96	NO	11/09/88	CAM	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	5.35	571.11	NO	12/13/88	CAM	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	2.07	574.39	NO	01/10/89	CAM	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	4.43	572.03	NO	02/10/89	CAM	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	1.67	574.79	NO	03/11/89	CAM	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	3.61	572.85	NO	04/15/89	CAM	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	2.77	573.69	NO	05/14/89	CAM	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	2.54	573.92	NO	06/14/89	CAM	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	5.19	571.27	NO	07/14/89	CAM	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	5.88	570.58	NO	08/16/89	CM	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	4.62	571.84	NO	09/12/89	CM SM	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	6.90	569.56	NO	10/11/89	CM DN	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	NR	NA	NO	11/17/89	CM GY	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	5.13	571.33	NO	12/19/89	CM GY MG	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	1.78	574.68	NO	01/22/90	CM GY	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	NR	NA	NO	02/16/90	CM DN	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	3.62	572.84	NO	04/04/90	BB DN	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	3.77	572.69	NO	04/24/90	BB DN	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	1.62	574.84	NO	05/19/90	CAM AHW	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	4.98	571.48	NO	06/21/90	CM AW	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	4.34	572.12	NO	07/24/90	AHW BB	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	5.46	571.00	NO	08/14/90	CM AW	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	4.09	572.37	NO	09/24/90	CM GY	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	NR	NA	NO	10/23/90	CM GY	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	5.62	570.84	NO	11/17/90	CM GY	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	4.22	572.24	NO	12/13/90	CM GY	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	2.98	573.48	NO	01/19/91	CM WB	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	2.21	574.25	NO	02/22/91	CM WB	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	5.96	570.50	NO	07/30/91	CM BM	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	5.63	570.83	NO	08/29/91	CM DS	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	5.53	570.93	NO	09/19/91	CM CJ	WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	5.82	570.64	NO	10/05/91		WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	5.98	570.48	NO	11/02/91		WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	2.90	573.56	NO	12/14/91		WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	3.40	573.06	NO	02/18/92		WASTE STOR. AREA
480388.77	1379543.23	576.46	577.17		575.40	4.40	572.06	NO	03/16/92		WASTE STOR. AREA

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WATER ELEVATION REPORT FOR WELL NUMBER : 1134
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1134

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
480745.16	1379849.31	580.60	580.79	579.8		5.59	575.20	NO	05/14/89	CAM	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.60	575.19R	NO	05/14/89	CAM	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.17	575.62	NO	06/16/89	CAM	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		6.36	574.43	NO	07/15/89	CAM	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.02	575.77	NO	08/24/89	CM	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.82	574.78	NO	09/13/89	CM SM	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.91	574.69	NO	09/23/89	CM SM	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		6.53	574.26	NO	10/10/89	BB LP	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.48	575.12	NO	11/19/89		PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.54	575.25	NO	01/24/90	CM GY	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.22	575.57	NO	02/18/90	CM DN	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.51	575.28	NO	04/18/90	BB DN	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.58	575.21	NO	05/21/90	CAM AHW	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		6.10	574.69	NO	06/27/90	CM AW	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		6.10	574.69	NO	07/26/90	AHW BB	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		6.73	574.06	NO	08/13/90	CM AW	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.39	575.40	NO	09/20/90	CM AW	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		6.03	574.76	NO	10/30/90	CM GY	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.91	574.88	NO	11/19/90	CM GY	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		4.55	576.24	NO	12/19/90	CM GY	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.26	575.53	NO	01/21/91	CM WB	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.48	575.31	NO	02/27/91	CM DN	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		6.74	574.05	NO	06/12/91	CM CT RR	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		6.97	573.82	NO	07/29/91	CM BM	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		6.33	574.46	NO	08/25/91	CM DS	PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		7.25	573.54	NO	10/21/91		PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		6.00	574.79	NO	11/14/91		PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.62	575.17	NO	12/11/91		PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.40	575.39	NO	02/18/92		PRODUCTION AREA
480745.16	1379849.31	580.60	580.79	579.8		5.64	575.15	NO	03/16/92		PRODUCTION AREA

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WATER ELEVATION REPORT FOR WELL NUMBER : 1176
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1176

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
480705.79	1379852.67	581.15	581.51	579.7		6.43	575.08	NO	05/14/89	CAM	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		6.83	574.68	NO	06/16/89	CAM	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	07/15/89	CAM	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	08/24/89	CM	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	09/13/89	CM SM	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	09/23/89	CM SM	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	10/10/89	BB LP	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	11/19/89		PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	01/24/90	CM GY	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	02/18/90	CM DN	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	04/18/90	BB DN	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	05/21/90	CAM AHW	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	06/27/90	CM AW	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	07/26/90	AHW BB	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		7.03	574.48	NO	08/13/90	CM AW	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	09/20/90	CM AW	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	10/30/90	CM GY	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	11/19/90	CM GY	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	12/19/90	CM GY	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	01/21/91	CM WB	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	02/27/91	CM DN	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	06/12/91	CM CT RR	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	07/29/91	CM BM	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		NR	NA	NO	08/25/91	CM DS	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		7.04	574.47	NO	09/12/91	CM CJ	PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		dry	581.51	NO	10/21/91		PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		DRY	581.51	NO	11/14/91		PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		DRY	581.51	NO	12/11/91		PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		DRY	581.51	NO	02/18/92		PRODUCTION AREA
480705.79	1379852.67	581.15	581.51	579.7		DRY	581.51	NO	03/16/92		PRODUCTION AREA

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WATER ELEVATION REPORT FOR WELL NUMBER : 1210
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1210

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
480485.42	1379844.46	581.80	582.21		579.41	7.13	575.08	NO	05/14/89	CAM	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	7.13	575.08R	NO	05/14/89	CAM	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	7.95	574.26	NO	06/16/89	CAM	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	7.94	574.27	NO	07/15/89	CAM	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	6.71	575.50	NO	08/24/89	CM	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	7.44	574.77	NO	09/13/89	CM SM	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	7.85	574.36	NO	09/23/89	CM SM	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	8.44	573.77	NO	10/11/89	BB LP	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	12.08	569.72	NO	11/19/89		PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	6.92	575.29	NO	01/24/90	CM GY	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	6.45	575.76	NO	02/18/90	CM DN	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	6.94	575.27	NO	04/18/90	BB DN	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	7.04	575.17	NO	05/21/90	CAM AHW	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	7.88	574.33	NO	06/27/90	CM AW	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	7.59	574.62	NO	07/26/90	AHW BB	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	8.60	573.61	NO	08/13/90	CM AW	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	7.05	575.16	NO	09/20/90	CM AW	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	7.80	574.41	NO	10/31/90	CM GY	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	7.85	574.36	NO	11/19/90	CM GY	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	5.38	576.83	NO	12/19/90	CM GY	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	7.28	574.93	NO	01/21/91	WB CM	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	7.54	574.67	NO	02/27/91	CM DN	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	8.74	573.47	NO	06/11/91	CM CT	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	9.46	572.75	NO	07/29/91	CM BM	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	8.39	573.82	NO	08/25/91	CM DS	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	8.72	573.49	NO	09/12/91	CM CJ	PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	8.36	573.85	NO	10/21/91		PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	8.92	573.29	NO	11/14/91		PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	6.90	575.31	NO	12/11/91		PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	6.95	575.26	NO	02/18/92		PRODUCTION AREA
480485.42	1379844.46	581.80	582.21		579.41	7.27	574.94	NO	03/12/92		PRODUCTION AREA

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WATER ELEVATION REPORT FOR WELL NUMBER : 2042
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 2042

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
480394.27	1379542.73	577.20	577.58		575.30	56.12	521.08	NO	05/10/88	SDG	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	56.46	520.74	NO	06/08/88	RWO	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	57.25	519.95	NO	07/09/88	GS	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	65.35	511.85	NO	08/07/88	DPH	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	58.65	518.55	NO	09/10/88	FXM	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	58.94	518.26	NO	10/08/88	CAM	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	59.52	517.68	NO	11/09/88	CAM	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	59.40	517.80	NO	12/13/88	CAM	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	59.54	517.66	NO	01/10/89	CAM	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	58.76	518.44	NO	02/10/89	CAM	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	57.88	519.32	NO	03/11/89	CAM	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	56.34	520.86	NO	04/15/89	CAM	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	54.80	522.40	NO	05/14/89	CAM	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	53.52	523.68	NO	06/14/89	CAM	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	53.72	523.48	NO	07/14/89	CAM	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	54.61	522.59	NO	08/16/89	CM	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	55.07	522.13	NO	09/12/89	CM SM	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	55.68	521.52	NO	10/11/89	CM DN	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	NR	NA	NO	11/17/89	CM GY	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	56.12	521.08	NO	12/19/89	CM GY MG	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	56.25	520.95	NO	01/22/90	CM GY	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	NR	NA	NO	02/16/90	CM DN	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	54.13	523.07	NO	04/04/90	BB DN	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	54.00	523.20	NO	04/24/90	BB DN	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	53.42	523.78	NO	05/19/90	CAM AHW	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	52.56	524.64	NO	06/21/90	CM AW	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	53.52	523.68	NO	07/24/90	AHW BB	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	53.59	523.61	NO	08/14/90	CM AW	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	54.44	522.76	NO	09/24/90	CM GY	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	54.90	522.30	NO	10/23/90	CM GY	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	54.36	522.84	NO	11/17/90	CM GY	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	54.29	522.91	NO	12/13/90	CM GY	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	52.65	524.55	NO	01/19/91	CM WB	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	52.35	524.85	NO	02/22/91	CM WB	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	54.11	523.09	NO	07/30/91	CM BM	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	54.98	522.22	NO	08/29/91	CM DS	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	55.73	521.47	NO	09/19/91	CM CJ	WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	56.03	521.17	NO	10/05/91		WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	57.00	520.20	NO	11/02/91		WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	57.80	519.40	NO	12/14/91		WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	57.89	519.31	NO	02/18/92		WASTE STOR. AREA
480394.27	1379542.73	577.20	577.58		575.30	58.52	519.06	NO	03/16/92		WASTE STOR. AREA

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TABLE D-15

MONITORING WELL INSTALLATION RECORDS
RI/FS SAMPLING PROGRAM
LIME SLUDGE PONDS

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1039
WELL NUMBER: 1039

FIELD ENG./GEO.: M. SLUSARSKI DATE: 04/09/88
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 480729.12, 1379659.0
DATE OF INSTAL.: 04/09/88

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0.0TO: 27.0
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0.0 TO: 27.0
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 11. Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: SCREW TYPE FLUSH JOINT THREADED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 10 3 In.
* LOCKING CAP

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.5 Ft.	579.27
GROUND SURFACE	0.0	577.4
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0.0	8.0	N/A	N/A
Sand	8.0	27.0	N/A	N/A
PERFORATED SECTION	13.0	24.0	N/A	N/A
WELL TIP	26.5		N/A	
BOTTOM OF BOREHOLE	27.0		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.:	M. SLUSARSKI	DATE: 04/09/88
PROJECT NO. : 602.3.2	CHECKED BY :	Not Noted	DATE: N/A
BORING NO. : 1039	N,E COORDINATES:	480729.12, 1379659.0	
WELL NUMBER: 1039	DATE OF INSTAL.:	04/09/88	

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1041
WELL NUMBER: 1041

FIELD ENG./GEO.: M. SLUSARSKI DATE: 04/11/88
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 480550.15, 1379798.6
DATE OF INSTAL.: 04/11/88

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0.0TO: 22.5
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0.0 TO: 22.5
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 10 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: SCREW TYPE FLUSH JOINT THREADED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 10 3 In.
* LOCKING CAP

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	3.5 Ft.	583.13
GROUND SURFACE	0.0	581.3
BOTTOM OF PROTECTIVE PIPE	1.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0.0	5.0	N/A	N/A
Sand	5.0	22.5	N/A	N/A
PERFORATED SECTION	10.0	20.0	N/A	N/A
WELL TIP	22.5		N/A	
BOTTOM OF BOREHOLE	22.5		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.:	M. SLUSARSKI	DATE: 04/11/88
PROJECT NO. : 602.3.2	CHECKED BY :	Not Noted	DATE: N/A
BORING NO. : 1041	N,E COORDINATES:	480550.15, 1379798.6	
WELL NUMBER: 1041	DATE OF INSTAL.:	04/11/88	

REMARKS -- COMMENT AREA

REMARKS : • ALL MEASUREMENT WERE MADE FROM THE EXCAVATED GROUND SURFACE WHICH EXISTED DURING THE DRILLING OF THE WELL. AFTER THE WELL WAS CONSTRUCTED, SITE RESTORATION WAS REQUIRED BY WMCO. THE BERM WAS RECONSTRUCTED AT THE LOCATION OF THE WELL. THE GROUND SURFACE IS NOW 1.5 FT. HIGHER THAN THE SURFACE WHI

COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1042
WELL NUMBER: 1042

FIELD ENG./GEO.: M. GOLDBERG DATE: 04/21/88
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 480388.77, 1379543.2
DATE OF INSTAL.: 04/21/88

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 3 TO: 21
FLUID: N/A FROM: N/A TO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING
CASING DIAM.:
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 21
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: .010 (In.)
TOTAL PERFORATED AREA: 10 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREAD AND COUPLE

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 In.
* LOCKABLE CAP

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	576.46
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0	5	N/A	N/A
Gravel	5	21	N/A	N/A
PERFORATED SECTION	9	19	N/A	N/A

WELL TIP	21	N/A
BOTTOM OF BOREHOLE	21	N/A
GWL AFTER INSTALLATION	5.3	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.: M. GOLDBERG	DATE: 04/21/88
PROJECT NO. : 602.3.2	CHECKED BY : Not Noted	DATE: N/A
BORING NO. : 1042	N,E COORDINATES: 480388.77, 1379543.2	
WELL NUMBER: 1042	DATE OF INSTAL.: 04/21/88	

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1134
WELL NUMBER: 1134

FIELD ENG./GEO.: L. SINFIELD DATE: 05/05/89
CHECKED BY : BD DATE: 06/06/89
N,E COORDINATES: 480745.16, 1379849.3
DATE OF INSTAL.: 05/04/89

BOREHOLE DRILLING

DRILLING METHOD: AUGER
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: AUGER BIT
IS CASING TEMPORARY?: No
CASING TYPE : SCHEDULE 40 PVC
CASING DIAM.: 2 In. ID
CASING SIZE(S) USED: (Units N/A)
SIZE: N/A FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Slots
AVG. SIZE OF PERFORATIONS: 0.020 (In.)
TOTAL PERFORATED AREA: 5.8 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: SCHEDULE 40 PVC
RISER PIPE DIAMETERS:
O.D.: 2 5/16 In. I.D.: 2 In.
LENGTH OF 1ST PIPE SECTION: 12.0 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: FLUSH-THREADED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 4 1/ In.
• LOCKING CAP

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	580.60
GROUND SURFACE	0.0	579.8
BOTTOM OF PROTECTIVE PIPE	2.8 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	1.0	7.0	N/A	N/A
Sand	7.0	16.0	N/A	N/A
PERFORATED SECTION	10.0	15.8	N/A	N/A
WELL TIP	16.0		N/A	
BOTTOM OF BOREHOLE	16.5		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.: L. SINFIELD	DATE: 05/05/89
PROJECT NO. : 602.3.2	CHECKED BY : BD	DATE: 06/06/89
BORING NO. : 1134	N,E COORDINATES: 480745.16, 1379849.3	
WELL NUMBER: 1134	DATE OF INSTAL.: 05/04/89	

REMARKS — COMMENT AREA

REMARKS : 1 BAG OF SAND (10 X 20) USED - SAND FROM AQUIFER FLOWED INTO WELL DURING CONSTRUCTION AND FORMED SAND PACK TO 7.0 FT. WATER BEARING ZONE: 10.25 - 16.25 FT.

COMMENTS:

MONITORING WELL INSTALLATION RECORD FOR WELL #1176

09/11/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1176
WELL NUMBER : 1176

FIELD ENG./GEO.:C. GRUBE/L. ADAMS DATE:05/08/89
CHECKED BY :BD DATE:06/06/89
N,E COORDINATES:480705.79, 1379852.6
DATE OF INSTAL.:05/08/89

BOREHOLE DRILLING

DRILLING METHOD:AUGER
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT:8 IN. HOLLOW AUGER
IS CASING TEMPORARY?:No
CASING TYPE :MONITORING PIEZOMETE
CASING DIAM.:2.0 In. ID
CASING SIZE(S) USED:(Units N/A)
SIZE:N/A FROM:N/A TO:N/A
SIZE:N/A FROM:N/A TO:N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE:Slots
AVG. SIZE OF PERFORATIONS:0.020 (In.)
TOTAL PERFORATED AREA:5.0 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL:SCHEDULE 40 PVC
RISER PIPE DIAMETERS:
O.D.:2 5/16 In. I.D.:2.0 In.
LENGTH OF 1ST PIPE SECTION:9.0 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: SCREW TYPE, FLUSH JOINT THREADED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:5.0 Ft.
PROTECTIVE PIPE O.D.:4 3/ In.
* HINGED COVER WITH INSTALLED PA

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE		ELEVATION MSL	
TOP OF RISER PIPE	2.0 Ft.		581.15	
GROUND SURFACE	0.0		579.7	
BOTTOM OF PROTECTIVE PIPE	2.6 Ft.			
BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	0.0	1.0	N/A	N/A
Bentonite Pellets	1.0	4.0	N/A	N/A
Sand	4.0	12.0	N/A	N/A
PERFORATED SECTION	7.0	12.0	N/A	N/A
WELL TIP	12.0		N/A	
BOTTOM OF BOREHOLE	12.0		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL? : No

MONITORING WELL INSTALLATION RECORD FOR WELL #1176 (Continued)
09/11/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1176
WELL NUMBER : 1176

FIELD ENG./GEO.:C. GRUBE/L. ADAMS DATE:05/08/89
CHECKED BY :BD DATE:06/06/89
N,E COORDINATES:480705.79, 1379852.6
DATE OF INSTAL.:05/08/89

REMARKS -- COMMENT AREA

REMARKS : TOP OF WATER BEARING ZONE AT 7.5 FT. BOTTOM OF WATER BEARING ZONE AT 11.5 FT.

COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: C. GRUBE / E. TROLLINGERDATE: 05/03/89
PROJECT NO. : 602.3.2 CHECKED BY : Not Noted DATE: N/A
BORING NO. : 1210 N,E COORDINATES: 480485.42, 1379844.4
WELL NUMBER: 1210 DATE OF INSTAL.: 05/03/89

BOREHOLE DRILLING

DRILLING METHOD: AUGER	TYPE OF BIT: 8 IN. HOLLOW STEM AU
DRILLING FLUID(S) USED: NONE NOTED	IS CASING TEMPORARY?: No
NOTES COMMENTS:	CASING TYPE : MONITORING PIEZOMETE
	CASING DIAM.: 2.0 In. ID
	CASING SIZE(S) USED: (Units N/A)
	SIZE: N/A FROM: N/A TO: N/A
	SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL	RISER PIPE MATERIAL: SCHEDULE 40 PVC
DIAMETER OF PERFORATED SECTION:	RISER PIPE DIAMETERS:
PERFORATION TYPE: Slots	O.D.: 2 5/16 In. I.D.: 2.0 In.
AVG. SIZE OF PERFORATIONS: 0.020 (In.)	LENGTH OF 1ST PIPE SECTION: 7.5 Ft.
TOTAL PERFORATED AREA: 5.0 Ft.	2ND PIPE SECTION: Not Noted
NOTES/COMMENTS:	3RD PIPE SECTION: Not Noted
	COMMENTS
RISER JOINING METHOD: SCREW TYPE, FLUSH JOINT THREADED	

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.	OTHER PROTECTION (* NOTED BELOW)
PROTECTIVE PIPE O.D.: 4 3/ In.	
* HINGED COVER WITH INSTALLED PA	

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE		ELEVATION MSL	
TOP OF RISER PIPE	2.0 Ft.		581.80	
GROUND SURFACE	0.0		N/A	
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.			
BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	0.0	1.0	N/A	N/A
Bentonite Pellets	1.0	2.8	N/A	N/A
Sand	2.8	10.5	N/A	N/A
PERFORATED SECTION	5.5	10.5	N/A	N/A
WELL TIP	10.5		N/A	
BOTTOM OF BOREHOLE	10.5		N/A	
GWL AFTER INSTALLATION	8.0		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: C. GRUBE / E. TROLLINGERDATE: 05/03/89
PROJECT NO. : 602.3.2 CHECKED BY : Not Noted DATE: N/A
BORING NO. : 1210 N,E COORDINATES: 480485.42, 1379844.4
WELL NUMBER: 1210 DATE OF INSTAL.: 05/03/89

REMARKS -- COMMENT AREA

REMARKS : WATER BEARING ZONE ENCOUNTERED FROM 8.0 FT. TO 10.0 FT. AS NOTED ON BORING LOG.

COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 2042
WELL NUMBER: 2042

FIELD ENG./GEO.: M. GOLDBERG DATE: 04/14/88
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 480394.27, 1379542.7
DATE OF INSTAL.: 04/19/88

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 3 TO: 68
FLUID: N/A FROM: N/A TO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING
CASING DIAM.: 4 In.
CASING SIZE(S) USED: (in Feet)
SIZE: FROM: 0 TO: 68
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: .010 (In.)
TOTAL PERFORATED AREA: 15 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREAD AND COUPLE

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 In.
• LOCKABLE CAP

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	577.20
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0	42.9	N/A	N/A
Bentonite Pellets	42.9	46	N/A	N/A
Gravel	46	68	N/A	N/A
PERFORATED SECTION	50	66	N/A	N/A

WELL TIP	68	N/A
BOTTOM OF BOREHOLE	68	N/A
GWL AFTER INSTALLATION	56	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.: M. GOLDBERG	DATE: 04/14/88
PROJECT NO. : 602.3.2	CHECKED BY : Not Noted	DATE: N/A
BORING NO. : 2042	N,E COORDINATES: 480394.27, 1379542.7	
WELL NUMBER: 2042	DATE OF INSTAL.: 04/19/88	

REMARKS — COMMENT AREA

REMARKS : SCREEN INTERVAL IS 16 FT. DUE TO NO 15 FT. SCREENS LEFT, A 10 FT. AND 5 FT. WERE PUT TOGETHER TOTAL LENGTH 16 FT.

COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 4101
WELL NUMBER: 4101

FIELD ENG./GEO.:
CHECKED BY : Not Noted
N,E COORDINATES: 480719.01, 1379873.2
DATE OF INSTAL.:

DATE:
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: N/A
IS CASING TEMPORARY?: N/A
CASING TYPE : Not Noted
CASING DIAM.:
CASING SIZE(S) USED: (Units N/A)
SIZE: FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: N/A
AVG. SIZE OF PERFORATIONS: (N/A)
TOTAL PERFORATED AREA:
NOTES/COMMENTS:

RISER PIPE MATERIAL: N/A
RISER PIPE DIAMETERS:
O.D.: I.D.:
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: Not Noted

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:
PROTECTIVE PIPE O.D.:

OTHER PROTECTION (* NONE NOTED)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	N/A	577.33
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	N/A	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	N/A	N/A	N/A	N/A
PERFORATED SECTION	N/A	N/A	N/A	N/A
WELL TIP	N/A		N/A	
BOTTOM OF BOREHOLE	N/A		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : N/A
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : N/A

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.:		DATE:
PROJECT NO. : 602.3.2	CHECKED BY :	Not Noted	DATE: N/A
BORING NO. : 4101	N,E COORDINATES:	480719.01, 1379873.2	
WELL NUMBER: 4101	DATE OF INSTAL.:		

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 4102
WELL NUMBER: 4102

FIELD ENG./GEO.:
CHECKED BY : Not Noted
N,E COORDINATES: 480319.66, 1379862.3
DATE OF INSTAL.:

DATE:
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: N/A
IS CASING TEMPORARY?: N/A
CASING TYPE : Not Noted
CASING DIAM.:
CASING SIZE(S) USED: (Units N/A)
SIZE: FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: N/A
AVG. SIZE OF PERFORATIONS: (N/A)
TOTAL PERFORATED AREA:
NOTES/COMMENTS:

RISER PIPE MATERIAL: N/A
RISER PIPE DIAMETERS:
O.D.: I.D.:
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: Not Noted

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:
PROTECTIVE PIPE O.D.:

OTHER PROTECTION (* NONE NOTED)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	N/A	577.64
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	N/A	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	N/A	N/A	N/A	N/A
PERFORATED SECTION	N/A	N/A	N/A	N/A

WELL TIP	N/A	N/A
BOTTOM OF BOREHOLE	N/A	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : N/A
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : N/A

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME:	Fernald RI/FS	FIELD ENG./GEO.:	DATE:
PROJECT NO. :	602.3.2	CHECKED BY : Not Noted	DATE: N/A
BORING NO. :	4102	N,E COORDINATES: 480319.66, 1379862.3	
WELL NUMBER:	4102	DATE OF INSTAL.:	

REMARKS -- COMMENT AREA

COMMENTS: _____

APPENDIX E

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APPENDIX E

ACTIVE FLYASH PILE DATA TABLES

LIST OF DATA TABLES
ACTIVE FLYASH PILE

Table	Title
E-1	Surface Media Analyses: Environmental Survey
E-2	Subsurface Media Analyses: Environmental Survey
E-3	Subsurface Media Analyses: RI/FS Sampling Program
E-4	Hazardous Characteristic Data For Subsurface Media: RI/FS Sampling Program
E-5	Drainage Sediment Analyses: RI/FS Sampling Program
E-6	Surface Water Analyses: RI/FS Sampling Program
E-7	Biota Analyses: RI/FS Sampling Program
E-8	Geotechnical Analyses: RI/FS Sampling Program
E-9	Boring Logs: RI/FS Sampling Program

TABLE E-1

SURFACE MEDIA ANALYSES
ENVIRONMENTAL SURVEY
ACTIVE FLYASH PILE

TABLE E-1

SURFACE MEDIA ENVIRONMENTAL SURVEY
ACTIVE FLYASH PILE

Analyte	FEO100WP	FEO101WP	FEO102WP	FEO103WP	FEO104WP	FEO105WP	FEO106WP	FEO107WP
Asbestos	ND	ND	ND	ND	ND	ND	ND	ND
TCLP Metals: (mg/ℓ)								
Silver	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Barium	0.53B	0.50B	0.55B	0.78B	0.25B	0.41B	0.32B	0.32B
Cadmium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chromium	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Mercury	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Selenium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Volatile Organic Compounds (µg/kg)								
1,1,1-Tricloroethane	73	<5	<5	<5	190	<5	<5	<5
1,1,2,2-Tetrachlorethane	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	<5	<5	<5	<5	<5	<5	<5	<5
2-Butanone	<10	<10	<10	<10	<10	<10	<10	29
2-Chloroethylvinyl Ether	<10	<10	<10	<10	<10	<10	<10	<10
2-Hexanone	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl 2-pentanone	<10	<10	<10	<10	<10	<10	<10	<10
Acetone	940QZ5	770QZ5	580QZ5	280QZ5	170QZ5	420QZ5	110Q25	200QZ5
Benzene	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	<5	<5	<5	<5	<5	<5	<5	<5
Bromomethane	<10	<10	<10	<10	<10	<10	<10	<10
Carbon disulfide	<5	<5	<5	<5	<5	<5	<5	<5
Carbon tetrachloride	<5	<5	<5	<5	<5	<5	<5	<5
Chlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5
Chloroethane	<10	<10	<10	<10	<10	<10	<10	<10
Chloroform	<5	<5	<5	<5	7B	7B	<5	6B
Chloroethane	<10	<10	<10	<10	<10	<10	<10	<10
Cis 1,3-dichloropropene	<5	<5	<5	<5	<5	<5	<5	<5
Dibromoiochloromethane	<5	<5	<5	<5	<5	<5	<5	<5
Ethyl benzene	<5	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	1100QZ5	660QZ5	480QZ5	350QZ5	260QZ5	710QZ5	250Q25	240QZ5

TABLE E-1
(continued)

Analyte	FEO100WP	FEO101WP	FEO102WP	FEO103WP	FEO104WP	FEO105WP	FEO106WP	FEO107WP
Styrene	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	<5	<5	<5	<5	<5	<5	<5	<5
Toluene	34	19	<5	<5	89	<5	<5	<5
Total xylenes	<5	<5	<5	<5	<5	<5	<5	<5
Trans 1,2-dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5
Trans 1,3-dichloropropene	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl acetate	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl chloride	<10	<10	<10	<10	<10	<10	<10	<10
PCBs (mg/kg)								
Aroclor-1242	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	NA
Radionuclides (pCi/g)								
Bismuth-214	3.9±0.1	2.5±0.2	4.0±0.4	3.3±0.3	2.7±0.2	3.0±0.2	3.1±0.2	3.3±0.2
Cesium-137	I	I	I	I	I	I	N	I
Radium-226	3.8±0.3G	3.2±0.2G	2.9±0.3G	3.0±0.2G	3.1±0.1G	2.8±0.1G	2.7±0.1G	3.2±0.2G
Thorium-228	2.7±0.1G	2.5±0.3G	2.5±0.4G	2.2±0.4G	2.9±0.2G	2.9±0.2G	2.7±0.2G	2.9±0.3G
Thorium-232	2.7±0.2G	2.1±0.3G	1.0±0.5G	2.0±0.6G	2.2±0.3G	2.3±0.2G	2.9±0.3G	2.7±0.3
Uranium-235	N	N	N	N	N	N	N	N
Uranium-238	N	N	N	N	N	N	N	N
Total Uranium (mg/kg)	9.1	9.6	10.0	9.2	9.7	8.8	13.0	8.9

N = Nuclide not identifield by GAMANAL analysis as being present in the sample; no value reported
I = Nuclide identified by GAMANAL analysis of sample spectrum, but values did not exceed room background at the 95% confidence level; no value reported.
B = Analyte was found in the blank as well as the sample.
G = Gamma Spectroscopy Analysis
ND = None detected
Z-5 = The fly ash sampled exhibited low interval standard recovery due to the retention properties of the matrix. The reported detection limits are for soil samples and should not be used as the minimum attainable limits for fly ash.

TABLE E-2

SUBSURFACE MEDIA ANALYSES
ENVIRONMENTAL SURVEY
ACTIVE FLYASH PILE

TABLE E-2

SUBSURFACE MEDIA ENVIRONMENTAL SURVEY
ACTIVE FLYASH PILE

Analyte	FEO601WP	FEO602WP	FEO603WP
Asbestos	ND	ND	ND
TCLP Metals: (mg/ℓ)			
Silver	<0.1	<0.1	<0.1
Arsenic	<0.5	<0.5	<0.5
Barium	0.50	0.34	0.78
Cadmium	<0.02	<0.02	<0.02
Chromium	<0.03	<0.03	<0.03
Mercury	<0.001	<0.001	<0.001
Lead	<0.3	<0.3	<0.3
Selenium	<0.5	<0.5	<0.5
Volatile Organic Compounds (µg/kg)			
1,1,1-Tricloroethane	140	420	<5
1,1,2,2-Tetrachlorethane	<5	<5	<5
1,1,2-Trichloroethane	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5
1,2-Dichloroethane	<5	<5	<5
1,2-Dichloropropane	<5	<5	<5
2-Butanone	<10	<10	<10
2-Chloroethylvinyl Ether	<10	<10	<10
2-Hexanone	<10	<10	<10
4-Methyl 2-pentanone	<10	<10	<10
Acetone	63	140	37B
Benzene	<5	<5	<5
Bromodichloromethane	<5	<5	<5
Bromoform	<5	<5	<5
Bromomethane	<10	<10	<10
Carbon disulfide	<5	<5	<5
Carbon tetrachloride	<5	<5	<5
Chrolobenzene	<5	<5	<5
Chloroethane	<10	<10	<10
Chloroform	<5	<5	11
Chloroethane	<10	<10	<10
Cis 1,3-dichloropropene	<5	<5	<5
Dibromoiochloromethane	<5	<5	<5
Ethyl benzene	<5	<5	<5
Methylene chloride	160	200	<5

TABLE E-2
(continued)

Analyte	FEO601WP	FEO602WP	FEO603WP
Styrene	<5	<5	<5
Tetrachloroethene	<5	<5	<5
Toluene	<5	<5	<5
Total xylenes	<5	<5	<5
Trans 1,2-dichloroethene	<5	<5	<5
Trans 1,3-dichloropropene	<5	<5	<5
Trichloroethene	<5	<5	<5
Vinyl acetate	<10	<10	<10
Vinyl chloride	<10	<10	<10
PCBs (mg/kg)	NA	NA	NA
Aroclor-1242	NA	NA	NA
Aroclor-1248	NA	NA	NA
Aroclor-1254	NA	NA	NA
Aroclor-1260	NA	NA	NA
Radionuclides (pCi/g)			
Bismuth-214	3.1±0.2	3.5±0.1	2.4±0.1
Cesium-137	I	I	N
Radium-226	2.5±0.1G	3.3±0.1G	2.3±0.1G
Thorium-228	2.9±0.2G	2.8±0.1G	1.1±0.1G
Thorium-232	2.8±0.3G	2.7±0.1G	1.4±0.1G
Uranium-235	N	N	N
Uranium-238	N	I	I
Total Uranium (mg/kg)	17.0	15.0	5.5

NA = Not Analyzed
ND = None Detected
N = Nuclide not identifield by GAMANAL analysis as being present in the sample; no value reported
I = Nuclide identified by GAMANAL analysis of sample spectrum, but values did not exceed room background at the 95% confidence level; no value reported.
B = Analyte was found in the blank as well as the sample.

TABLE E-3

SUBSURFACE MEDIA ANALYSES
RI/FS SAMPLING PROGRAM
ACTIVE FLYASH PILE

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

ACTIVE FLYASH PILE
SUBSURFACE MEDIA RADIOLOGICAL DATA
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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1045 007207 7.5 - 9.0				b	1045 007215 RINSATE				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			R	<	20.0			R
Lead 210		NA					NA			
Neptunium 237	<	0.6			R	<	1.0			R
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			R	<	1.0			R
Plutonium 239/240	<	0.6			R	<	1.0			R
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226	<	0.4			R	<	1.0			
Radium 228	<	0.5			R	<	3.0			J
Ruthenium 106	<	1.2			R	<	150.0			R
Strontium 90		1.2	±	0.3	R	<	5.0			R
Technetium 99	<	2.8			R	<	30.0			R
Thorium 228		1.1	±	0.4	R	<	1.0			R
Thorium 230		1.8	±	0.6	R		1.5	±	0.4	R
Thorium 232		1.2	±	0.4	R		0.9	±	0.4	R
Total Thorium **		NA					NA			
Uranium 234		1.0	±	0.4	R	<	1.1			DJ
Uranium 235/236	<	0.6			R	<	1.1			DJ
Uranium 238		0.9	±	0.3	R	<	1.1			DJ
Total Uranium **		NA				<	5.0			DJ

** Results reported in mg/kg or µg/ℓ.

b = validation qualifiers

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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1048 007217 1.5 - 3.0	b	1048 007220 1.5 - 3.0 DUPLICATE	b	1048 007231 - RINSATE	b
Actinium 231	NA		NA		NA	
Cesium 137	< 0.2	J	< 0.2	J	< 20.0	R
Lead 210	NA		NA		NA	
Neptunium 237	< 0.6	J	< 0.6	J	< 1.0	R
Plutonium 210	NA		NA		NA	
Plutonium 238	< 0.6		< 0.6		< 1.0	R
Plutonium 239/240	< 0.6		< 0.6		< 1.0	R
Protactium 234	NA		NA		NA	
Radium 224	NA		NA		NA	
Radium 226	0.9 ± 0.1	J	0.5 ± 0.1	J	< 1.0	
Radium 228	1.2 ± 0.2	J	0.6 ± 1.0	J	< 3.0	J
Ruthenium 106	< 1.0	J	< 1.0	J	< 150.0	R
Strontium 90	< 0.5	J	< 0.5	J	< 5.0	R
Technetium 99	< 0.9	J	< 0.9	J	< 30.0	R
Thorium 228	1.6 ± 0.5	J	1.2 ± 0.5	J	< 1.0	R
Thorium 230	1.9 ± 0.6	R	2.2 ± 0.7	R	2.0 ± 0.7	R
Thorium 232	0.9 ± 0.4		1.0 ± 0.4		0.7 ± 0.4	R
Total Thorium **	NA		NA		NA	
Uranium 234	1.0 ± 0.3		1.4 ± 0.5		< 1.0	J
Uranium 235/236	< 0.6		< 0.6		< 1.0	J
Uranium 238	2.4 ± 0.6		2.8 ± 0.8		< 1.0	J
Total Uranium **	NA		NA		< 1.0	R

** Results reported in mg/kg or µg/ℓ.

b = validation qualifiers

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SUBSURFACE MEDIA RADIOLOGICAL DATA
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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1723 067166 3.0 - 4.5				b	1723 067172 12.0 - 13.5				b	1723 067182 26.0 - 27.5				b
Actinium 231		NA					NA					NA			
Cesium 137	<	0.2			J	<	0.2			J	<	0.2			J
Lead 210		NA					NA					NA			
Neptunium 237	<	0.6				<	0.6				<	0.6			
Plutonium 210		NA					NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6			R	<	0.6			R	<	0.6			R
Protactium 234		NA					NA					NA			
Radium 224		NA					NA					NA			
Radium 226		4.1	±	0.3	J		4.1	±	0.4	J		0.8	±	0.1	J
Radium 228		3.9	±	0.4	J		2.8	±	0.4	J		0.6	±	0.1	J
Ruthenium 106	<	1.0			J	<	1.0			J	<	1.0			J
Strontium 90		1.0	±	0.3	J		1.1	±	0.3	J		0.7	±	0.2	J
Technetium 99	<	0.9				<	0.9				<	0.9			
Thorium 228		3.5	±	0.6	J		3.0	±	0.5	J		1.8	±	0.5	J
Thorium 230		3.5	±	0.6	J		3.0	±	0.5	J		0.9	±	0.3	J
Thorium 232		2.8	±	0.5	J		1.9	±	0.4	J		0.6	±	0.2	J
Total Thorium **		25.6	±	4.6	J		17.4	±	3.7	J		5.5	±	2.5	J
Uranium 234		4.8	±	0.6	J		4.3	±	0.5	J		1.0	±	0.1	J
Uranium 235/236	<	0.6			J	<	0.6			J	<	0.6			J
Uranium 238		4.9	±	0.63	J		8.0	±	0.9	J		1.0	±	0.2	J
Total Uranium **		11.7	±	3.7	J		31.3	±	6.2	J		2.7	±	1.1	J

** Results reported in ug/kg or µg/ℓ

b = validation qualifiers

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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1724 067192 3.0 - 4.5				b	1724 067200 14.5 - 16.0				b	1724 067217 40.0 - 41.5				b
Actinium 231		NA					NA					NA			
Cesium 137	<	0.2			J	<	0.1			J	<	0.2			J
Lead 210		NA					NA					NA			
Neptunium 237	<	0.6				<	0.6					NA			
Plutonium 210		NA					NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6			R	<	0.6			R	<	0.6			
Protactium 234		NA					NA					NA			
Radium 224		NA					NA					NA			
Radium 226		6.2	±	0.5	J		3.6	±	0.3	J		1.1	±	0.1	J
Radium 228		5.3	±	0.5	J		2.8	±	0.3	J		0.8	±	0.1	J
Ruthenium 106	<	1.0			J	<	1.0			J	<	1.0			J
Strontium 90		1.5	±	0.3	J		1.3	±	0.3	J		3.6	±	0.5	
Technetium 99	<	0.9				<	0.9				<	0.9			
Thorium 228		5.8	±	1.0	J		3.2	±	0.6	J		1.2	±	0.3	J
Thorium 230		6.1	±	1.1	J		3.5	±	0.6	J		1.3	±	0.3	J
Thorium 232		5.1	±	0.9	J		2.4	±	0.5	J		0.5	±	0.2	
Total Thorium **		45.8	±	8.8	J		21.9	±	4.7	J		4.7	±	2.1	
Uranium 234		4.8	±	0.7	J		4.0	±	0.6	J		1.3	±	0.2	J
Uranium 235/236	<	0.6			J	<	0.6			J	<	0.6			J
Uranium 238		5.0	±	0.7	J		5.5	±	0.7	J		2.0	±	0.3	
Total Uranium **		18.4	±	4.3	J		16.4	±	3.6	J		7.2	±	2.4	J

** Results reported in mg/kg or µg/ℓ.

b = validation qualifiers

ACTIVE FLYASH PILE
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
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RADIOLOGICAL PARAMETERS	1726 067146 4.5 - 6.0				b	1726 067148 7.5 - 9.0				b	1726 067153 15.0 - 16.5				b	1726 067154 16.5 - 18.0				b
Actinium 231		NA					NA					NA					NA			
Cesium 137	<	0.2				<	0.2			J	<	0.2				<	0.2			J
Lead 210		1.5	±	0.5			NA					1.6	±	0.6			NA			
Neptunium 237	<	0.6			J		NA				<	0.6			J		NA			
Plutonium 210		NA					NA					NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6				<	0.6				<	0.6			
Protactium 234		NA					NA					NA					NA			
Radium 224		3.4	±	0.3			NA					3.7	±	0.4			NA			
Radium 226		3.0	±	0.2	J		4.5	±	0.4	J		3.8	±	0.3	J		4.5	±	0.4	J
Radium 228		2.9	±	0.3	J		3.6	±	0.4	J		2.8	±	0.3	J		3.5	±	0.4	J
Ruthenium 106	<	1.3			D	<	1.0			J	<	1.2			D	<	1.0			J
Strontium 90	<	0.9			D		1.4	±	0.3		<	0.9			D		1.2	±	0.2	J
Technetium 99	<	0.9				<	0.9				<	0.9				<	0.9			
Thorium 228		2.91	±	0.59	J		3.5	±	0.7	J		2.93	±	0.54	J		4.5	±	1.1	J
Thorium 230		5.92	±	0.99	J		3.7	±	0.7	J		3.80	±	0.65	J		3.6	±	0.9	J
Thorium 232		2.91	±	0.58			2.8	±	0.6			2.37	±	0.46			2.8	±	0.7	
Total Thorium **		26.2	±	5.2			25.3	±	5.4			21.4	±	4.1			25.3	±	7.1	
Uranium 234		17.3	±	2.2	FJ		3.9	±	0.5	J		12.3	±	1.7	J		5.7	±	0.7	J
Uranium 235		0.6	±	0.31	E		NA				<	0.4			E		NA			
Uranium 235/236		4.12	±	0.7	J	<	0.6			J		3.42	±	0.67	J	<	0.6			J
Uranium 238 (gamma)		6.3	±	0.8			3.8	±	0.5			6.6	±	0.8	J		7.9	±	1.0	
Total Uranium **		28.1	±	5.1			18.5	±	5.2	J		27.7	±	5.0	J		28.1	±	5.8	J

** Results reported in mg/kg or µg/ℓ.

b = validation qualifiers

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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1726 067156 19.5 - 21.0				b
Actinium 231		NA			
Cesium 137	<	0.2			J
Lead 210		NA			
Neptunium 237		NA			
Plutonium 210		NA			
Plutonium 238	<	0.6			J
Plutonium 239/240	<	0.6			
Protactium 234		NA			
Radium 224		NA			
Radium 226		1.5	±	0.1	J
Radium 228		1.0	±	0.1	J
Ruthenium 106	<	1.0			J
Strontium 90		1.2	±	0.2	J
Technetium 99	<	0.9			
Thorium 228		2.1	±	0.5	J
Thorium 230		2.0	±	0.5	J
Thorium 232		0.9	±	0.3	
Total Thorium **		8.1	±	3.0	
Uranium 234		0.9	±	0.1	J
Uranium 235		NA			
Uranium 235/236	<	0.6			J
Uranium 238		1.1	±	0.2	
Total Uranium **		3.1	±	1.9	J

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b = validation qualifiers

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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1820 067503 1.5 - 3.0				b	1820 067505 6.0 - 7.5				b	1820 067506 9.5 - 12.0				b
Actinium 231		NA					NA					NA			
Cesium 137	<	0.2			J	<	0.2			J	<	0.2			J
Lead 210		NA					NA					NA			
Neptunium 237		NA					NA					NA			
Plutonium 210		NA					NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6			R	<	0.6			R	<	0.6			R
Protactium 234		NA					NA					NA			
Radium 224		NA					NA					NA			
Radium 226		3.16	±	0.33	J		2.53	±	0.24	J		0.47	±	0.12	J
Radium 228	<	2.70	±	0.37	J		2.23	±	0.31	J		0.74	±	0.52	J
Ruthenium 106	<	1.0			J	<	1.0			J	<	1.0			J
Strontium 90		1.40	±	0.40		<	0.5				<	0.6			D
Technetium 99	<	0.9			R	<	0.9			R	<	0.9			R
Thorium 228		3.18	±	0.69	J		3.44	±	0.86	J		0.81	±	0.22	J
Thorium 230		3.00	±	0.66	J		4.01	±	0.97	J		1.12	±	0.27	J
Thorium 232		1.89	±	0.47			2.82	±	0.74		<	0.6			
Total Thorium **		17.0	±	4.2			25.4	±	6.7			3.38	±	1.26	J
Uranium 234		3.68	±	0.53	J		3.08	±	0.51	J		0.92	±	0.19	J
Uranium 235/236	<	0.6			J	<	0.6			J	<	0.6			
Uranium 238		3.15	±	0.47			7.23	±	0.98			0.97	±	0.20	
Total Uranium **		9.08	±	3.23	J		20.7	±	4.4	J	<	3.9			J

** Results reported in mg/kg or µg/ℓ.

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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	2045 008948 35.0 - 36.5				b
Actinium 231		NA			
Cesium 137	<	0.2			
Lead 210		NA			
Neptunium 237	<	0.6			
Plutonium 210		NA			
Plutonium 238	<	0.6			
Plutonium 239/240	<	0.6			
Protactium 234		NA			
Radium 224		NA			
Radium 226		0.4	±	0.1	
Radium 228	<	0.5			
Ruthenium 106	<	1.0			
Strontium 90		0.5	±	0.2	J
Technetium 99	<	0.9			J
Thorium 228	<	0.6			
Thorium 230		0.7	±	0.3	J
Thorium 232		0.6	±	0.3	J
Total Thorium **		NA			
Uranium 234	<	0.6			J
Uranium 235/236	<	0.6			J
Uranium 238	<	0.6			J
Total Uranium **		2.0	±	2.0	

** Results reported in mg/kg or µg/ℓ.

b = validation qualifiers

ACTIVE FLYASH PILE
SUBSURFACE MEDIA RADIOLOGICAL DATA
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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	2048 020498 65.0 - 66.5				b
Actinium 231		NA			
Cesium 137	<	0.2			
Lead 210		NA			
Neptunium 237	<	0.6			
Plutonium 210		NA			
Plutonium 238	<	0.6			J
Plutonium 239/240	<	0.6			
Protactium 234		NA			
Radium 224		NA			
Radium 226	<	0.3			
Radium 228	<	0.6			
Ruthenium 106	<	1.0			
Strontium 90	<	0.5			J
Technetium 99	<	0.9			J
Thorium 228	<	0.6			J
Thorium 230		0.7	±	0.2	J
Thorium 232	<	0.6			J
Total Thorium **		NA			
Uranium 234	<	0.6			J
Uranium 235/236	<	0.6			J
Uranium 238	<	0.6			J
Total Uranium **		2.0	±	2.0	

** Results reported in mg/kg or µg/ℓ.

b = validation qualifiers

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SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	3045 032609 105.0 - 106.5				b
Actinium 231		NA			
Cesium 137	<	0.2			J
Lead 210		NA			
Neptunium 237	<	0.6			J
Plutonium 210		NA			
Plutonium 238	<	0.6			J
Plutonium 239/240	<	0.6			J
Protactium 234		NA			
Radium 224		NA			
Radium 226		0.6	±	0.05	J
Radium 228		0.5	±	0.06	J
Ruthenium 106	<	1.0			J
Strontium 90	<	0.5			J
Technetium 99	<	1.0			J
Thorium 228		1.2	±	0.2	J
Thorium 230		1.4	±	0.3	J
Thorium 232		1.0	±	0.2	J
Total Thorium **		8.7	±	2.2	J
Uranium 234		0.9	±	0.2	J
Uranium 235/236	<	0.6			J
Uranium 238		0.8	±	0.2	J
Total Uranium **		2.8	±	0.7	J

** Results reported in mg/kg or µg/ℓ.

b = validation qualifiers

EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING HAZARDOUS SUBSTANCE LIST RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

J = Indicates an estimated value. This flag is used when the mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.

C = This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E = This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to pesticides/PCBs analyzed by GC/EC methods.

D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.

F = Estimated value due to a confirmed compound which is off-scale in both columns.

X = A flag that FORMASTER III CLP software automatically inserts to indicate that the data was entered manually.

Z = No estimated value reported, or an elevated CRQL reported because matrix effects interfere with or obscure the compound on one or both columns. In either situation, the compound does not confirm as a positive identification.

* = Values outside of contract laboratory-required QC limits.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1820 067503 1.5 - 3.0 a b	1820 067504 3.0 - 4.5 TCLP a b	1820 067505 6.0 - 7.5 a b	1820 067506 9.5 - 12.0 a b	1820 067507 0.0 - 9.5 TCLP a b
HERBICIDE ORGANICS					
2,4,5-TP (Silvex)	NA	NA	NA	NA	< 0.00180
2,4-D	NA	NA	NA	NA	< 0.01000
PESTICIDES					
4,4'-DDD	< 0.02100	NA	< 0.02000	< 0.02000	NA
4,4'-DDE	< 0.02100	NA	< 0.02000	< 0.02000	NA
4,4'-DDT	< 0.02100	NA	< 0.02000	< 0.02000	NA
Aldrin	< 0.01000	NA	< 0.01000	< 0.01000	NA
Aroclor-1016	< 0.10000	NA	< 0.10000	< 0.10000	NA
Aroclor-1221	< 0.10000	NA	< 0.10000	< 0.10000	NA
Aroclor-1232	< 0.10000	NA	< 0.10000	< 0.10000	NA
Aroclor-1242	< 0.10000	NA	< 0.10000	< 0.10000	NA
Aroclor-1248	< 0.10000	NA	< 0.10000	< 0.10000	NA
Aroclor-1254	< 0.21000	NA	< 0.20000	< 0.20000	NA
Aroclor-1260	< 0.21000	NA	< 0.20000	< 0.20000	NA
Dieldrin	< 0.02100	NA	< 0.02000	< 0.02000	NA
Endosulfan II	< 0.02100	NA	< 0.02000	< 0.02000	NA
Endosulfan sulfate	< 0.02100	NA	< 0.02000	< 0.02000	NA
Endosulfan-I	< 0.01000	NA	< 0.01000	< 0.01000	NA
Endrin	< 0.02100	NA	< 0.02000	< 0.02000	< 0.00010
Endrin ketone	< 0.02100	NA	< 0.02000	< 0.02000	NA
Heptachlor	< 0.01000	NA	< 0.01000	< 0.01000	< 0.00005
Heptachlor epoxide	< 0.01000	NA	< 0.01000	< 0.01000	< 0.00005
Methoxychlor	< 0.10000	NA	< 0.10000	< 0.10000	< 0.00050
Toxaphene	< 0.21000	NA	< 0.20000	< 0.20000	< 0.00100
alpha-BHC	< 0.01000	NA	< 0.01000	< 0.01000	NA
alpha-Chlordane	< 0.10000	NA	< 0.10000	< 0.10000	< 0.00050
beta-BHC	< 0.01000	NA	< 0.01000	< 0.01000	NA
delta-BHC	< 0.01000	NA	< 0.01000	< 0.01000	NA
gamma-BHC (Lindane)	< 0.01000	NA	< 0.01000	< 0.01000	< 0.00005
gamma-Chlordane	< 0.10000	NA	< 0.10000	< 0.10000	< 0.00050
Chlordane	NA	NA	NA	NA	< 0.00050
SEMI-VOLATILE ORGANICS					
1,2,4-Trichlorobenzene	< 0.43000	NA	< 0.42000	< 0.41000	NA
1,2-Dichlorobenzene	< 0.43000	NA	< 0.42000	< 0.41000	NA
1,3-Dichlorobenzene	< 0.43000	NA	< 0.42000	< 0.41000	NA

a = lab qualifiers
b = validation qualifiers

ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1820 067503 1.5 - 3.0	a	b	1820 067504 3.0 - 4.5 TCLP	a	b	1820 067505 6.0 - 7.5	a	b	1820 067506 9.5 - 12.0	a	b	1820 067507 0.0 - 9.5 TCLP	a	b
1,4-Dichlorobenzene	< 0.43000			< 0.02000			< 0.42000			< 0.41000			NA		
2,4,5-Trichlorophenol	< 2.10000			< 0.10000			< 2.00000			< 2.00000			NA		
2,4,6-Trichlorophenol	< 0.43000			< 0.02000			< 0.42000			< 0.41000			NA		
2,4-Dichlorophenol	< 0.43000			NA			< 0.42000			< 0.41000			NA		
2,4-Dimethylphenol	< 0.43000			NA			< 0.42000			< 0.41000			NA		
2,4-Dinitrophenol	< 2.10000			NA			< 2.00000			< 2.00000			NA		
2,4-Dinitrotoluene	< 0.43000			< 0.02000			< 0.42000			< 0.41000			NA		
2,6-Dinitrotoluene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
2-Chloronaphthalene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
2-Chlorophenol	< 0.43000			NA			< 0.42000			< 0.41000			NA		
2-Methylnaphthalene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
2-Methylphenol	< 0.43000			< 0.02000			< 0.42000			< 0.41000			NA		
2-Nitroaniline	< 2.10000			NA			< 2.00000			< 2.00000			NA		
2-Nitrophenol	< 0.43000			NA			< 0.42000			< 0.41000			NA		
3,3'-Dichlorobenzidine	< 0.85000			NA			< 0.84000			< 0.82000			NA		
3-Nitroaniline	< 2.10000		R	NA			< 2.00000		R	< 2.00000		R	NA		
4,6-Dinitro-2-methylphenol	< 2.10000			NA			< 2.00000			< 2.00000			NA		
4-Bromophenyl phenyl ether	< 0.43000			NA			< 0.42000			< 0.41000			NA		
4-Chloro-3-methylphenol	< 0.43000			NA			< 0.42000			< 0.41000			NA		
4-Chloroaniline	< 0.43000		UJ	NA			< 0.42000		UJ	< 0.41000		UJ	NA		
4-Chlorophenylphenyl ether	< 0.43000			NA			< 0.42000			< 0.41000			NA		
4-Methylphenol	< 0.43000			< 0.02000			< 0.42000			< 0.41000			NA		
4-Nitroaniline	< 2.10000			NA			< 2.00000			< 2.00000			NA		
4-Nitrophenol	< 2.10000			NA			< 2.00000			< 2.00000			NA		
Acenaphthene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Acenaphthylene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Anthracene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Benzo(a)anthracene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Benzo(a)pyrene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Benzo(b)fluoranthene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Benzo(g,h,i)perylene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Benzo(k)fluoranthene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Benzoic acid	0.21000	BJ	U	NA			2.00000	BJ	U	< 2.00000			NA		
Benzyl alcohol	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Butyl benzyl phthalate	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Chrysene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Di-n-butyl phthalate	0.04900	J	J	NA			< 0.42000			< 0.41000			NA		
Di-n-octyl phthalate	< 0.43000			NA			3.00000			< 0.41000			NA		
Dibenzo(a,h)anthracene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Dibenzofuran	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Diethyl phthalate	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Dimethyl phthalate	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Fluoranthene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Fluorene	< 0.43000			NA			< 0.42000			< 0.41000			NA		

a = lab qualifiers
b = validation qualifiers

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ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1820 067503 1.5 - 3.0	a	b	1820 067504 3.0 - 4.5 TCLP	a	b	1820 067505 6.0 - 7.5	a	b	1820 067506 9.5 - 12.0	a	b	1820 067507 0.0 - 9.5 TCLP	a	b
Hexachlorobenzene	< 0.43000			< 0.02000			< 0.42000			< 0.41000			NA		
Hexachlorobutadiene	< 0.43000			< 0.02000			< 0.42000			< 0.41000			NA		
Hexachlorocyclopentadiene	< 0.43000		UJ	NA			< 0.42000		UJ	< 0.41000		UJ	NA		
Hexachloroethane	< 0.43000			< 0.02000			< 0.42000			< 0.41000			NA		
Indeno(1,2,3-cd)pyrene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Isophorone	< 0.43000			NA			< 0.42000			< 0.41000			NA		
N-Nitroso-di-n-propylamine	< 0.43000			NA			< 0.42000			< 0.41000			NA		
N-Nitrosodiphenylamine	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Naphthalene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Nitrobenzene	< 0.43000			< 0.02000			< 0.42000			< 0.41000			NA		
Pentachlorophenol	< 2.10000			< 0.10000			< 2.00000			< 2.00000			NA		
Phenanthrene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Phenol	< 0.43000			NA			< 0.42000			< 0.41000			NA		
Pyrene	< 0.43000			NA			< 0.42000			< 0.41000			NA		
bis(2-Chloroethoxy)methane	< 0.43000			NA			< 0.42000			< 0.41000			NA		
bis(2-Chloroethyl)ether	< 0.43000			NA			< 0.42000			< 0.41000			NA		
bis(2-Chloroisopropyl) ether	< 0.43000			NA			< 0.42000			< 0.41000			NA		
bis(2-Ethylhexyl) phthalate	< 0.43000			NA			< 0.42000			< 0.41000			NA		
3-Methylphenol	NA			< 0.02000			NA			NA			NA		
VOLATILE ORGANICS															
1,1,1-Trichloroethane	0.02800		J	NA			0.03200		J	< 0.00600			NA		
1,1,2,2-Tetrachloroethane	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
1,1,2-Trichloroethane	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
1,1-Dichloroethane	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
1,1-Dichloroethene	< 0.00600		R	< 0.00500			< 0.00600		R	< 0.00600			NA		
1,2-Dichloroethane	< 0.00600		R	< 0.00500			< 0.00600		R	< 0.00600			NA		
1,2-Dichloroethylene	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
1,2-Dichloropropane	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
2-Butanone	< 0.01300		R	0.00300	J	J	< 0.01300		R	0.00600	BJ	U	NA		
2-Hexanone	< 0.01300		R	NA			< 0.01300		R	< 0.01200			NA		
4-Methyl-2-pentanone	< 0.01300		R	NA			< 0.01300		R	< 0.01200			NA		
Acetone	0.01300	BJ	R	NA			0.01300	BJ	R	0.01500	B		NA		
Benzene	< 0.00600		R	< 0.00500			< 0.00600		R	< 0.00600			NA		
Bromodichloromethane	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
Bromoform	< 0.00600		R	NA			< 0.00600		R	< 0.00600		UJ	NA		
Bromomethane	< 0.01300		R	NA			< 0.01300		R	< 0.01200		UJ	NA		
Carbon Tetrachloride	< 0.00600		R	< 0.00500			< 0.00600		R	< 0.00600			NA		
Carbon disulfide	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
Chlorobenzene	< 0.00600		R	< 0.00500			< 0.00600		R	< 0.00600			NA		
Chloroethane	< 0.01300		R	NA			< 0.01300		R	< 0.01200			NA		
Chloroform	< 0.00600		R	< 0.00500			< 0.00600		R	< 0.00600			NA		

a = lab qualifiers
b = validation qualifiers

ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1820 067503 1.5 - 3.0	a	b	1820 067504 3.0 - 4.5 TCLP	a	b	1820 067505 6.0 - 7.5	a	b	1820 067506 9.5 - 12.0	a	b	1820 067507 0.0 - 9.5 TCLP	a	b
Chloromethane	< 0.01300		R	NA			< 0.01300		R	< 0.01200			NA		
Dibromochloromethane	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
Ethylbenzene	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
Methylene chloride	0.04100	B	R	NA			0.04400	B	R	0.02200	B		NA		
Styrene	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
Tetrachlorethene	< 0.00600		R	< 0.00500			< 0.00600		R	< 0.00600			NA		
Toluene	0.01300		J	NA			0.02100		J	< 0.00600			NA		
Total xylenes	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
Trichloroethene	< 0.00600		R	< 0.00500			< 0.00600		R	< 0.00600			NA		
Vinyl Acetate	< 0.01300		R	NA			< 0.01300		R	< 0.01200			NA		
Vinyl chloride	< 0.01300		R	< 0.01000			< 0.01300		R	< 0.01200			NA		
cis-1,3-Dichloropropene	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
trans-1,3-Dichloropropene	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
Pyridine	NA			< 0.02000			NA			NA			NA		

a = lab qualifiers
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ACTIVE FLYASH PILE
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RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1820 067508 - FIELD BLANK			1723 067167 4.5 - 6.0			1723 067170 9.0 - 10.5 TCLP			1723 067171 10.5 - 12.0 EP TOXICITY			1723 067173 13.5 - 15.0		
		a	b		a	b		a	b		a	b		a	b
HERBICIDE ORGANICS															
2,4,5-TP (Silvex)	NA			NA			<	0.00180		<	0.00180	J	NA		
2,4-D	NA			NA			<	0.01000		<	0.01000	J	NA		
PESTICIDES															
4,4'-DDD	NA			<	0.02200		NA			NA			<	0.02100	
4,4'-DDE	NA			<	0.02200		NA			NA			<	0.02100	
4,4'-DDT	NA			<	0.02200	UJ	NA			NA			<	0.02100	
Aldrin	NA			<	0.01100		NA			NA			<	0.01000	
Aroclor-1016	NA			<	0.11000		NA			NA			<	0.10000	
Aroclor-1221	NA			<	0.11000		NA			NA			<	0.10000	
Aroclor-1232	NA			<	0.11000		NA			NA			<	0.10000	
Aroclor-1242	NA			<	0.11000		NA			NA			<	0.10000	
Aroclor-1248	NA			<	0.11000		NA			NA			<	0.10000	
Aroclor-1254	NA			<	0.22000		NA			NA			<	0.21000	
Aroclor-1260	NA			<	0.22000		NA			NA			<	0.21000	
Dieldrin	NA			<	0.02200		NA			NA			<	0.02100	
Endosulfan II	NA			<	0.02200		NA			NA			<	0.02100	
Endosulfan sulfate	NA			<	0.02200		NA			NA			<	0.02100	
Endosulfan-I	NA			<	0.01100		NA			NA			<	0.01000	
Endrin	NA			<	0.02200		<	0.00010		<	0.00010	J	<	0.02100	
Endrin ketone	NA			<	0.02200		NA			NA			<	0.02100	
Heptachlor	NA			<	0.01100		<	0.00005		<	0.00005	J	<	0.01000	
Heptachlor epoxide	NA			<	0.01100		<	0.00005		<	0.00005	J	<	0.01000	
Methoxychlor	NA			<	0.11000		<	0.00050		<	0.00050	J	<	0.10000	
Toxaphene	NA			<	0.22000		<	0.00100		<	0.00100	J	<	0.21000	
alpha-BHC	NA			<	0.01100		NA			NA			<	0.01000	
alpha-Chlordane	NA			<	0.11000		<	0.00050		<	0.00050	J	<	0.10000	
beta-BHC	NA			<	0.01100		NA			NA			<	0.01000	
delta-BHC	NA			<	0.01100		NA			NA			<	0.01000	
gamma-BHC (Lindane)	NA			<	0.01100		<	0.00005		<	0.00005	J	<	0.01000	
gamma-Chlordane	NA			<	0.11000		<	0.00050		<	0.00050	J	<	0.10000	
SEMI-VOLATILE ORGANICS															
1,2,4-Trichlorobenzene	NA			<	0.45000		NA			NA			<	0.43000	
1,2-Dichlorobenzene	NA			<	0.45000		NA			NA			<	0.43000	
1,3-Dichlorobenzene	NA			<	0.45000		NA			NA			<	0.43000	

a = lab qualifiers
b = validation qualifiers

ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1820 067508 - FIELD BLANK a	b	1723 067167 4.5 - 6.0 a	b	1723 067170 9.0 - 10.5 TCLP a	b	1723 067171 10.5 - 12.0 EP TOXICITY a	b	1723 067173 13.5 - 15.0 a	b
1,4-Dichlorobenzene	NA		< 0.45000		< 0.02000	R	NA		< 0.43000	
2,4,5-Trichlorophenol	NA		< 2.20000		< 0.10000	R	NA		< 2.10000	
2,4,6-Trichlorophenol	NA		< 0.45000		< 0.02000	R	NA		< 0.43000	
2,4-Dichlorophenol	NA		< 0.45000		NA		NA		< 0.43000	
2,4-Dimethylphenol	NA		< 0.45000		NA		NA		< 0.43000	
2,4-Dinitrophenol	NA		< 2.20000	UJ	NA		NA		< 2.10000	UJ
2,4-Dinitrotoluene	NA		< 0.45000		< 0.02000	R	NA		< 0.43000	
2,6-Dinitrotoluene	NA		< 0.45000		NA		NA		< 0.43000	
2-Chloronaphthalene	NA		< 0.45000		NA		NA		< 0.43000	
2-Chlorophenol	NA		< 0.45000		NA		NA		< 0.43000	
2-Methylnaphthalene	NA		< 0.45000		NA		NA		< 0.43000	
2-Methylphenol	NA		< 0.45000		< 0.02000	R	NA		< 0.43000	
2-Nitroaniline	NA		< 2.20000		NA		NA		< 2.10000	
2-Nitrophenol	NA		< 0.45000		NA		NA		< 0.43000	
3,3'-Dichlorobenzidine	NA		< 0.89000		NA		NA		< 0.87000	
3-Nitroaniline	NA		< 2.20000		NA		NA		< 2.10000	
4,6-Dinitro-2-methylphenol	NA		< 2.20000	UJ	NA		NA		< 2.10000	UJ
4-Bromophenyl phenyl ether	NA		< 0.45000		NA		NA		< 0.43000	
4-Chloro-3-methylphenol	NA		< 0.45000		NA		NA		< 0.43000	
4-Chloroaniline	NA		< 0.45000		NA		NA		< 0.43000	
4-Chlorophenylphenyl ether	NA		< 0.45000		NA		NA		< 0.43000	
4-Methylphenol	NA		< 0.45000		< 0.02000	R	NA		< 0.43000	
4-Nitroaniline	NA		< 2.20000		NA		NA		< 2.10000	
4-Nitrophenol	NA		< 2.20000		NA		NA		< 2.10000	
Acenaphthene	NA		< 0.45000		NA		NA		< 0.43000	
Acenaphthylene	NA		< 0.45000		NA		NA		< 0.43000	
Anthracene	NA		< 0.45000		NA		NA		< 0.43000	
Benzo(a)anthracene	NA		< 0.45000		NA		NA		< 0.43000	
Benzo(a)pyrene	NA		< 0.45000		NA		NA		< 0.43000	
Benzo(b)fluoranthene	NA		< 0.45000		NA		NA		< 0.43000	
Benzo(g,h,i)perylene	NA		< 0.45000		NA		NA		< 0.43000	
Benzo(k)fluoranthene	NA		< 0.45000		NA		NA		< 0.43000	
Benzoic acid	NA		< 2.20000	UJ	NA		NA		< 2.10000	UJ
Benzyl alcohol	NA		< 0.45000		NA		NA		< 0.43000	
Butyl benzyl phthalate	NA		< 0.45000		NA		NA		< 0.43000	
Chrysene	NA		< 0.45000		NA		NA		< 0.43000	
Di-n-butyl phthalate	NA		< 0.45000		NA		NA		< 0.43000	
Di-n-octyl phthalate	NA		< 0.45000		NA		NA		< 0.43000	
Dibenzo(a,h)anthracene	NA		< 0.45000		NA		NA		< 0.43000	
Dibenzofuran	NA		< 0.45000		NA		NA		< 0.43000	
Diethyl phthalate	NA		< 0.45000		NA		NA		< 0.43000	
Dimethyl phthalate	NA		< 0.45000		NA		NA		< 0.43000	
Fluoranthene	NA		< 0.45000		NA		NA		< 0.43000	
Fluorene	NA		< 0.45000		NA		NA		< 0.43000	

a = lab qualifiers
b = validation qualifiers

ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1820 067508 - FIELD BLANK	a	b	1723 067167 4.5 - 6.0	a	b	1723 067170 9.0 - 10.5 TCLP	a	b	1723 067171 10.5 - 12.0 EP TOXICITY	a	b	1723 067173 13.5 - 15.0	a	b
Hexachlorobenzene	NA			< 0.45000			< 0.02000		R	NA			< 0.43000		
Hexachlorobutadiene	NA			< 0.45000			< 0.02000		R	NA			< 0.43000		
Hexachlorocyclopentadiene	NA			< 0.45000			NA			NA			< 0.43000		
Hexachloroethane	NA			< 0.45000			< 0.02000		R	NA			< 0.43000		
Indeno(1,2,3-cd)pyrene	NA			< 0.45000			NA			NA			< 0.43000		
Isophorone	NA			< 0.45000			NA			NA			< 0.43000		
N-Nitroso-di-n-propylamine	NA			< 0.45000			NA			NA			< 0.43000		
N-Nitrosodiphenylamine	NA			< 0.45000			NA			NA			< 0.43000		
Naphthalene	NA			< 0.45000			NA			NA			< 0.43000		
Nitrobenzene	NA			< 0.45000			< 0.02000		R	NA			< 0.43000		
Pentachlorophenol	NA			< 2.20000			< 0.10000		R	NA			< 2.10000		
Phenanthrene	NA			< 0.45000			NA			NA			< 0.43000		
Phenol	NA			< 0.45000			NA			NA			< 0.43000		
Pyrene	NA			< 0.45000			NA			NA			< 0.43000		
bis(2-Chloroethoxy)methane	NA			< 0.45000			NA			NA			< 0.43000		
bis(2-Chloroethyl)ether	NA			< 0.45000			NA			NA			< 0.43000		
bis(2-Chloroisopropyl) ether	NA			< 0.45000			NA			NA			< 0.43000		
bis(2-Ethylhexyl) phthalate	NA			< 0.45000			NA			NA			< 0.43000		
3-Methylphenol	NA			NA			< 0.02000		R	NA			NA		
VOLATILE ORGANICS															
1,1,1-Trichloroethane	< 0.00500			0.08000		J	NA			NA			< 0.00600		R
1,1,2,2-Tetrachloroethane	< 0.00500			< 0.00700		R	NA			NA			< 0.00600		R
1,1,2-Trichloroethane	< 0.00500			< 0.00700		R	NA			NA			< 0.00600		R
1,1-Dichloroethane	< 0.00500			< 0.00700		R	NA			NA			< 0.00600		R
1,1-Dichloroethene	< 0.00500			< 0.00700		R	< 0.02000			NA			< 0.00600		R
1,2-Dichloroethane	< 0.00500			< 0.00700		R	< 0.02000			NA			< 0.00600		R
1,2-Dichloroethylene	< 0.00500			< 0.00700		R	NA			NA			< 0.00600		R
1,2-Dichloropropane	< 0.00500			< 0.00700		R	NA			NA			< 0.00600		R
2-Butanone	< 0.01000			< 0.01400		R	0.01000	J	J	NA			< 0.01300		R
2-Hexanone	< 0.01000		UJ	< 0.01400		R	NA			NA			< 0.01300		R
4-Methyl-2-pentanone	< 0.01000		UJ	< 0.01400		R	NA			NA			< 0.01300		R
Acetone	0.01000	B		0.01400	BJ	R	NA			NA			< 0.01300		R
Benzene	< 0.00500			< 0.00700		R	< 0.02000			NA			< 0.00600		R
Bromodichloromethane	< 0.00500			< 0.00700		R	NA			NA			< 0.00600		R
Bromoform	< 0.00500			< 0.00700		R	NA			NA			< 0.00600		R
Bromomethane	< 0.01000		UJ	< 0.01400		R	NA			NA			< 0.01300		R
Carbon Tetrachloride	< 0.00500			< 0.00700		R	< 0.02000			NA			< 0.00600		R
Carbon disulfide	< 0.00500			< 0.00700		R	NA			NA			0.00700		J
Chlorobenzene	< 0.00500			< 0.00700		R	< 0.02000			NA			< 0.00600		R
Chloroethane	< 0.01000			< 0.01400		R	NA			NA			< 0.01300		R
Chloroform	< 0.00500			< 0.00700		R	< 0.02000			NA			< 0.00600		R

a = lab qualifiers
b = validation qualifiers

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ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1820 067508 - FIELD BLANK	a	b	1723 067167 4.5 - 6.0	a	b	1723 067170 9.0 - 10.5 TCLP	a	b	1723 067171 10.5 - 12.0 EP TOXICITY	a	b	1723 067173 13.5 - 15.0	a	b
Chloromethane	< 0.01000			< 0.01400		R	NA			NA			< 0.01300		R
Dibromochloromethane	< 0.00500			< 0.00700		R	NA			NA			< 0.00600		R
Ethylbenzene	< 0.00500			< 0.00700		R	NA			NA			< 0.00600		R
Methylene chloride	0.00100	BJ	J	0.03700	B	J	NA			NA			0.06500	B	J
Styrene	< 0.00500			< 0.00700		R	NA			NA			< 0.00600		R
Tetrachlorethene	< 0.00500			< 0.00700		R	< 0.02000			NA			< 0.00600		R
Toluene	< 0.00500			< 0.00700		R	NA			NA			< 0.00600		R
Total xylenes	< 0.00500			< 0.00700			NA			NA			< 0.00600		R
Trichloroethene	< 0.00500			< 0.00700		R	< 0.02000			NA			< 0.00600		R
Vinyl Acetate	< 0.01000			< 0.01400		R	NA			NA			< 0.01300		R
Vinyl chloride	< 0.01000			< 0.01400		R	< 0.04000			NA			< 0.01300		R
cis-1,3-Dichloropropene	< 0.00500			< 0.00700		R	NA			NA			< 0.00600		R
trans-1,3-Dichloropropene	< 0.00500			< 0.00700		R	NA			NA			< 0.00600		R
Pyradine	NA			NA			< 0.02000		R	NA			NA		

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REPORT DATE : 25-APR-92

ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1723 067180 - FIELD BLANK	1723 067184 29.0 - 30.5	1723 067186 COMPOSITE TCLP	1724 067193 4.5 - 6.0	1724 067196 9.0 - 10.5 EP TOXICITY
	a b	a b	a b	a b	a b
HERBICIDE ORGANICS					
2,4,5-TP (Silvex)	NA	NA	< 0.00180	NA	< 0.00180
2,4-D	NA	NA	< 0.01000	NA	< 0.01000
PESTICIDES					
4,4'-DDD	NA	< 0.01900	NA	< 0.02000	NA
4,4'-DDE	NA	< 0.01900	NA	< 0.02000	NA
4,4'-DDT	NA	< 0.01900	NA	< 0.02000	NA
Aldrin	NA	< 0.00960	NA	< 0.01000	NA
Aroclor-1016	NA	< 0.09600	NA	< 0.10000	NA
Aroclor-1221	NA	< 0.09600	NA	< 0.10000	NA
Aroclor-1232	NA	< 0.09600	NA	< 0.10000	NA
Aroclor-1242	NA	< 0.09600	NA	< 0.10000	NA
Aroclor-1248	NA	< 0.09600	NA	< 0.10000	NA
Aroclor-1254	NA	< 0.19000	NA	< 0.20000	NA
Aroclor-1260	NA	< 0.19000	NA	< 0.20000	NA
Dieldrin	NA	< 0.01900	NA	< 0.02000	NA
Endosulfan II	NA	< 0.01900	NA	< 0.02000	NA
Endosulfan sulfate	NA	< 0.01900	NA	< 0.02000	NA
Endosulfan-I	NA	< 0.00960	NA	< 0.01000	NA
Endrin	NA	< 0.01900	< 0.00010	< 0.02000	< 0.00010
Endrin ketone	NA	< 0.01900	NA	< 0.02000	NA
Heptachlor	NA	< 0.00960	< 0.00005	< 0.01000	< 0.00005
Heptachlor epoxide	NA	< 0.00960	< 0.00005	< 0.01000	< 0.00005
Methoxychlor	NA	< 0.09600	< 0.00050	< 0.10000	< 0.00050
Toxaphene	NA	< 0.19000	< 0.00100	< 0.20000	< 0.00100
alpha-BHC	NA	< 0.00960	NA	< 0.01000	NA
alpha-Chlordane	NA	< 0.09600	< 0.00050	< 0.10000	< 0.00050
beta-BHC	NA	< 0.00960	NA	< 0.01000	NA
delta-BHC	NA	< 0.00960	NA	< 0.01000	NA
gamma-BHC (Lindane)	NA	< 0.00960	< 0.00005	< 0.01000	< 0.00005
gamma-Chlordane	NA	< 0.09600	< 0.00050	< 0.10000	< 0.00050
SEMI-VOLATILE ORGANICS					
1,2,4-Trichlorobenzene	NA	< 0.39000	NA	< 0.41000	NA
1,2-Dichlorobenzene	NA	< 0.39000	NA	< 0.41000	NA
1,3-Dichlorobenzene	NA	< 0.39000	NA	< 0.41000	NA

a = lab qualifiers
b = validation qualifiers

ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1723 067180 - NA FIELD BLANK	a	b	1723 067184 29.0 - 30.5	a	b	1723 067186 COMPOSITE TCLP	a	b	1724 067193 4.5 - 6.0	a	b	1724 067196 9.0 - 10.5 EP TOXICITY	a	b
1,4-Dichlorobenzene	NA			< 0.39000			< 0.02000	J		< 0.41000			NA		
2,4,5-Trichlorophenol	NA			< 1.90000			< 0.10000	J		< 2.00000			NA		
2,4,6-Trichlorophenol	NA			< 0.39000			< 0.02000			< 0.41000			NA		
2,4-Dichlorophenol	NA			< 0.39000			NA			< 0.41000			NA		
2,4-Dimethylphenol	NA			< 0.39000			NA			< 0.41000			NA		
2,4-Dinitrophenol	NA			< 1.90000		UJ	NA			< 2.00000		UJ	NA		
2,4-Dinitrotoluene	NA			< 0.39000			< 0.02000			< 0.41000			NA		
2,6-Dinitrotoluene	NA			< 0.39000			NA			< 0.41000			NA		
2-Chloronaphthalene	NA			< 0.39000			NA			< 0.41000			NA		
2-Chlorophenol	NA			< 0.39000			NA			< 0.41000			NA		
2-Methylnaphthalene	NA			< 0.39000			NA			0.16000	J	J	NA		
2-Methylphenol	NA			< 0.39000			< 0.02000	J		< 0.41000			NA		
2-Nitroaniline	NA			< 1.90000			NA			< 2.00000			NA		
2-Nitrophenol	NA			< 0.39000			NA			< 0.41000			NA		
3,3'-Dichlorobenzidine	NA			< 0.78000		UJ	NA			< 0.82000		UJ	NA		
3-Nitroaniline	NA			< 1.90000		UJ	NA			< 2.00000		UJ	NA		
4,6-Dinitro-2-methylphenol	NA			< 1.90000		UJ	NA			< 2.00000		UJ	NA		
4-Bromophenyl phenyl ether	NA			< 0.39000			NA			< 0.41000			NA		
4-Chloro-3-methylphenol	NA			< 0.39000			NA			< 0.41000			NA		
4-Chloroaniline	NA			< 0.39000			NA			< 0.41000			NA		
4-Chlorophenylphenyl ether	NA			< 0.39000			NA			< 0.41000			NA		
4-Methylphenol	NA			< 0.39000			< 0.02000	J		< 0.41000			NA		
4-Nitroaniline	NA			< 1.90000			NA			< 2.00000			NA		
4-Nitrophenol	NA			< 1.90000			NA			< 2.00000			NA		
Acenaphthene	NA			< 0.39000			NA			< 0.41000			NA		
Acenaphthylene	NA			< 0.39000			NA			< 0.41000			NA		
Anthracene	NA			< 0.39000			NA			< 0.41000			NA		
Benzo(a)anthracene	NA			< 0.39000			NA			< 0.41000			NA		
Benzo(a)pyrene	NA			< 0.39000			NA			< 0.41000			NA		
Benzo(b)fluoranthene	NA			< 0.39000			NA			< 0.41000			NA		
Benzo(g,h,i)perylene	NA			< 0.39000			NA			< 0.41000			NA		
Benzo(k)fluoranthene	NA			< 0.39000			NA			< 0.41000			NA		
Benzoic acid	NA			< 1.90000		UJ	NA			0.05200	J	J	NA		
Benzyl alcohol	NA			< 0.39000			NA			< 0.41000			NA		
Butyl benzyl phthalate	NA			< 0.39000			NA			< 0.41000			NA		
Chrysene	NA			< 0.39000			NA			< 0.41000			NA		
Di-n-butyl phthalate	NA			< 0.39000			NA			< 0.41000			NA		
Di-n-octyl phthalate	NA			< 0.39000			NA			< 0.41000			NA		
Dibenzo(a,h)anthracene	NA			< 0.39000			NA			< 0.41000			NA		
Dibenzofuran	NA			< 0.39000			NA			< 0.41000			NA		
Diethyl phthalate	NA			< 0.39000			NA			< 0.41000			NA		
Dimethyl phthalate	NA			< 0.39000			NA			< 0.41000			NA		
Fluoranthene	NA			< 0.39000			NA			< 0.41000			NA		
Fluorene	NA			< 0.39000			NA			< 0.41000			NA		

a = lab qualifiers
b = validation qualifiers

ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1723 067180 NA FIELD BLANK	a	b	1723 067184 29.0 - 30.5	a	b	1723 067186 COMPOSITE TCLP	a	b	1724 067193 4.5 - 6.0	a	b	1724 067196 9.0 - 10.5 EP TOXICITY	a	b
Hexachlorobenzene	NA			< 0.39000			< 0.02000	J		< 0.41000			NA		
Hexachlorobutadiene	NA			< 0.39000			< 0.02000	J		< 0.41000			NA		
Hexachlorocyclopentadiene	NA			< 0.39000			NA			< 0.41000			NA		
Hexachloroethane	NA			< 0.39000			< 0.02000	J		< 0.41000			NA		
Indeno(1,2,3-cd)pyrene	NA			< 0.39000			NA			< 0.41000			NA		
Isophorone	NA			< 0.39000			NA			< 0.41000			NA		
N-Nitroso-di-n-propylamine	NA			< 0.39000			NA			< 0.41000			NA		
N-Nitrosodiphenylamine	NA			< 0.39000			NA			< 0.41000			NA		
Naphthalene	NA			< 0.39000			NA			0.08200	J	J	NA		
Nitrobenzene	NA			< 0.39000			< 0.02000	J		< 0.41000			NA		
Pentachlorophenol	NA			< 1.90000			< 0.10000	J		< 2.00000			NA		
Phenanthrene	NA			< 0.39000			NA			0.07200	J	J	NA		
Phenol	NA			< 0.39000			NA			< 0.41000			NA		
Pyrene	NA			< 0.39000			NA			< 0.41000			NA		
bis(2-Chloroethoxy)methane	NA			< 0.39000			NA			< 0.41000			NA		
bis(2-Chloroethyl)ether	NA			< 0.39000			NA			< 0.41000			NA		
bis(2-Chloroisopropyl) ether	NA			< 0.39000			NA			< 0.41000			NA		
bis(2-Ethylhexyl) phthalate	NA			0.04200	J	J	NA			< 0.41000			NA		
3-Methylphenol	NA			NA			< 0.02000	J		NA			NA		
VOLATILE ORGANICS															
1,1,1-Trichloroethane	< 0.00500			0.02500			NA			1.30000	E	J	NA		
1,1,2,2-Tetrachloroethane	< 0.00500			< 0.00600			NA			< 0.00600		R	NA		
1,1,2-Trichloroethane	< 0.00500			< 0.00600			NA			< 0.00600		R	NA		
1,1-Dichloroethane	< 0.00500			< 0.00600			NA			< 0.00600		R	NA		
1,1-Dichloroethene	< 0.00500			0.00200	J		< 0.02000			< 0.00600		R	NA		
1,2-Dichloroethane	< 0.00500			< 0.00600			< 0.02000			< 0.00600		R	NA		
1,2-Dichloroethylene	< 0.00500			< 0.00600			NA			< 0.00600		R	NA		
1,2-Dichloropropane	< 0.00500			< 0.00600			NA			< 0.00600		R	NA		
2-Butanone	< 0.01000	R		< 0.01200			< 0.04000			< 0.01200		R	NA		
2-Hexanone	< 0.01000	UJ		< 0.01200			NA			< 0.01200		R	NA		
4-Methyl-2-pentanone	< 0.01000	UJ		< 0.01200			NA			< 0.01200		R	NA		
Acetone	< 0.01000	UJ		0.01200	BJ	U	NA			0.01900	B	R	NA		
Benzene	< 0.00500			< 0.00600			< 0.02000			< 0.00600		R	NA		
Bromodichloromethane	< 0.00500			< 0.00600			NA			< 0.00600		R	NA		
Bromoform	< 0.00500			< 0.00600			NA			< 0.00600		R	NA		
Bromomethane	< 0.01000	UJ		< 0.01200			NA			< 0.01200		R	NA		
Carbon Tetrachloride	< 0.00500			< 0.00600			< 0.02000			< 0.00600		R	NA		
Carbon disulfide	< 0.00500			< 0.00600			NA			< 0.00600		R	NA		
Chlorobenzene	< 0.00500			< 0.00600			< 0.02000			< 0.00600		R	NA		
Chloroethane	< 0.01000			< 0.01200			NA			< 0.01200		R	NA		
Chloroform	< 0.00500			< 0.00600			< 0.02000			< 0.00600		R	NA		

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ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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CHEMICAL PARAMETERS	1723 067180 NA FIELD BLANK	a	b	1723 067184 29.0 - 30.5	a	b	1723 067186 COMPOSITE TCLP	a	b	1724 067193 4.5 - 6.0	a	b	1724 067196 9.0 - 10.5 EP TOXICITY	a	b
Chloromethane	< 0.01000			< 0.01200			NA			< 0.01200		R	NA		
Dibromochloromethane	< 0.00500			< 0.00600			NA			< 0.00600		R	NA		
Ethylbenzene	< 0.00500			< 0.00600			NA			< 0.00600		R	NA		
Methylene chloride	0.00100	BJ	J	0.01300	B		NA			0.02300	B	R	NA		
Styrene	< 0.00500			< 0.00600			NA			< 0.00600		R	NA		
Tetrachlorethene	< 0.00500			< 0.00600			< 0.02000			< 0.00600		R	NA		
Toluene	< 0.00500			< 0.00600			NA			< 0.00600		R	NA		
Total xylenes	< 0.00500			< 0.00600			NA			< 0.00600		R	NA		
Trichloroethene	< 0.00500			< 0.00600			< 0.02000			< 0.00600		R	NA		
Vinyl Acetate	< 0.01000			< 0.01200			NA			< 0.01200		R	NA		
Vinyl chloride	< 0.01000			< 0.01200			< 0.04000			< 0.01200		R	NA		
cis-1,3-Dichloropropene	< 0.00500		UJ	< 0.00600			NA			< 0.00600		R	NA		
trans-1,3-Dichloropropene	< 0.00500		UJ	< 0.00600			NA			< 0.00600		R	NA		
Pyridine	NA			NA			< 0.02000		J	NA			NA		

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REPORT DATE : 25-APR-92

ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
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CHEMICAL PARAMETERS	1724 067197 10.5 - 12.0 TCLP	a	b	1724 067198 NA FIELD BLANK	a	b	1724 067201 16.0 - 17.5	a	b	1724 067218 41.5 - 43.0	a	b	1724 067224 COMPOSITE TCLP	a	b
HERBICIDE ORGANICS															
2,4,5-TP (Silvex)	< 0.00180			NA			NA			NA			< 0.00180		
2,4-D	< 0.01000			NA			NA			NA			< 0.01000		
PESTICIDES															
Endrin	< 0.00010			NA			< 0.02200			< 0.01900			< 0.00010		JB
Heptachlor	< 0.00005			NA			< 0.01100			< 0.00970			< 0.00005		JB
Heptachlor epoxide	< 0.00005			NA			< 0.01100			< 0.00970			< 0.00005		
Methoxychlor	< 0.00050			NA			< 0.11000			< 0.09700			< 0.00050		
Toxaphene	< 0.00100			NA			< 0.22000			< 0.19000			< 0.00100		
alpha-Chlordane	< 0.00050			NA			< 0.11000			< 0.09700			< 0.00050		
gamma-BHC (Lindane)	< 0.00005			NA			< 0.01100			< 0.00970			< 0.00005		JB
gamma-Chlordane	< 0.00050			NA			< 0.11000			< 0.09700			< 0.00050		
4,4'-DDD	NA			NA			< 0.02200			< 0.01900			NA		
4,4'-DDE	NA			NA			< 0.02200			< 0.01900			NA		
4,4'-DDT	NA			NA			< 0.02200			< 0.01900			NA		
Aldrin	NA			NA			< 0.01100			< 0.00970			NA		
Aroclor-1016	NA			NA			< 0.11000			< 0.09700			NA		
Aroclor-1221	NA			NA			< 0.11000			< 0.09700			NA		
Aroclor-1232	NA			NA			< 0.11000			< 0.09700			NA		
Aroclor-1242	NA			NA			< 0.11000			< 0.09700			NA		
Aroclor-1248	NA			NA			< 0.11000			< 0.09700			NA		
Aroclor-1254	NA			NA			< 0.22000			< 0.19000			NA		
Aroclor-1260	NA			NA			< 0.22000			< 0.19000			NA		
Dieldrin	NA			NA			< 0.02200			< 0.01900			NA		
Endosulfan II	NA			NA			< 0.02200			< 0.01900			NA		
Endosulfan sulfate	NA			NA			< 0.02200			< 0.01900			NA		
Endosulfan-I	NA			NA			< 0.01100			< 0.00970			NA		
Endrin ketone	NA			NA			< 0.02200			< 0.01900			NA		
alpha-BHC	NA			NA			< 0.01100			< 0.00970			NA		
beta-BHC	NA			NA			< 0.01100			< 0.00970			NA		
delta-BHC	NA			NA			< 0.01100			< 0.00970			NA		
SEMI-VOLATILE ORGANICS															
1,4-Dichlorobenzene	< 0.02000		R	NA			< 0.45000			< 0.40000			< 0.02000		J
2,4,5-Trichlorophenol	< 0.10000		R	NA			< 0.20000			< 1.90000			< 0.10000		J
2,4,6-Trichlorophenol	< 0.02000			NA			< 0.45000			< 0.40000			< 0.02000		

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CHEMICAL PARAMETERS	1724 067197 10.5 - 12.0 TCLP	a	b	1724 067198 - FIELD BLANK	a	b	1724 067201 16.0 - 17.5	a	b	1724 067218 41.5 - 43.0	a	b	1724 067224 COMPOSITE TCLP	a	b
2,4-Dinitrotoluene	< 0.02000			NA			< 0.45000			< 0.40000			< 0.02000		
2-Methylphenol	< 0.02000		R	NA			< 0.45000			< 0.40000			< 0.02000		J
3-Methylphenol	< 0.02000			NA			NA			NA			< 0.02000		J
4-Methylphenol	< 0.02000		R	NA			< 0.45000			< 0.40000			< 0.02000		J
Hexachlorobenzene	< 0.02000			NA			< 0.45000			< 0.40000			< 0.02000		J
Hexachlorobutadiene	< 0.02000		R	NA			< 0.45000			< 0.40000			< 0.02000		J
Hexachloroethane	< 0.02000		R	NA			< 0.45000			< 0.40000		UJ	< 0.02000		J
Nitrobenzene	< 0.02000		R	NA			< 0.45000			< 0.40000			< 0.02000		J
Pentachlorophenol	< 0.10000			NA			< 2.20000			< 1.90000			< 0.10000		J
1,2,4-Trichlorobenzene	NA			NA			< 0.45000			< 0.40000			NA		
1,2-Dichlorobenzene	NA			NA			< 0.45000			< 0.40000			NA		
1,3-Dichlorobenzene	NA			NA			< 0.45000			< 0.40000			NA		
2,4-Dichlorophenol	NA			NA			< 0.45000			< 0.40000			NA		
2,4-Dimethylphenol	NA			NA			< 0.45000			< 0.40000			NA		
2,4-Dinitrophenol	NA			NA			< 2.20000		UJ	< 1.90000			NA		
2,6-Dinitrotoluene	NA			NA			< 0.45000			< 0.40000			NA		
2-Chloronaphthalene	NA			NA			< 0.45000			< 0.40000			NA		
2-Chlorophenol	NA			NA			< 0.45000			< 0.40000			NA		
2-Methylnaphthalene	NA			NA			< 0.45000			< 0.40000			NA		
2-Nitroaniline	NA			NA			< 2.20000			< 1.90000			NA		
2-Nitrophenol	NA			NA			< 0.45000			< 0.40000			NA		
3,3'-Dichlorobenzidine	NA			NA			< 0.90000		UJ	< 0.80000		UJ	NA		
3-Nitroaniline	NA			NA			< 2.20000		UJ	< 1.90000		UJ	NA		
4,6-Dinitro-2-methylphenol	NA			NA			< 2.20000		UJ	< 1.90000		UJ	NA		
4-Bromophenyl phenyl ether	NA			NA			< 0.45000			< 0.40000			NA		
4-Chloro-3-methylphenol	NA			NA			< 0.45000			< 0.40000			NA		
4-Chloroaniline	NA			NA			< 0.45000			< 0.40000			NA		
4-Chlorophenylphenyl ether	NA			NA			< 0.45000			< 0.40000			NA		
4-Nitroaniline	NA			NA			< 2.20000			< 1.90000		R	NA		
4-Nitrophenol	NA			NA			< 2.20000			< 1.90000			NA		
Acenaphthene	NA			NA			< 0.45000			< 0.40000			NA		
Acenaphthylene	NA			NA			< 0.45000			< 0.40000			NA		
Anthracene	NA			NA			< 0.45000			< 0.40000			NA		
Benzo(a)anthracene	NA			NA			< 0.45000			< 0.40000			NA		
Benzo(a)pyrene	NA			NA			< 0.45000			< 0.40000			NA		
Benzo(b)fluoranthene	NA			NA			< 0.45000			< 0.40000			NA		
Benzo(g,h,i)perylene	NA			NA			< 0.45000			< 0.40000			NA		
Benzo(k)fluoranthene	NA			NA			< 0.45000			< 0.40000			NA		
Benzoic acid	NA			NA			< 2.20000		UJ	< 1.90000		UJ	NA		
Benzyl alcohol	NA			NA			< 0.45000			< 0.40000			NA		
Butyl benzyl phthalate	NA			NA			< 0.45000			< 0.40000			NA		
Chrysene	NA			NA			< 0.45000			< 0.40000			NA		
Di-n-butyl phthalate	NA			NA			< 0.45000			< 0.40000			NA		
Di-n-octyl phthalate	NA			NA			< 0.45000			< 0.40000			NA		

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Dibenzo(a,h)anthracene	NA			NA			< 0.45000			< 0.40000			NA		
Dibenzofuran	NA			NA			< 0.45000			< 0.40000			NA		
Diethyl phthalate	NA			NA			< 0.45000			< 0.40000			NA		
Dimethyl phthalate	NA			NA			< 0.45000			< 0.40000			NA		
Fluoranthene	NA			NA			< 0.45000			< 0.40000			NA		
Fluorene	NA			NA			< 0.45000			< 0.40000			NA		
Hexachlorocyclopentadiene	NA			NA			< 0.45000			< 0.40000			NA		
Indeno(1,2,3-cd)pyrene	NA			NA			< 0.45000			< 0.40000			NA		
Isophorone	NA			NA			< 0.45000			< 0.40000			NA		
N-Nitroso-di-n-propylamine	NA			NA			< 0.45000			< 0.40000			NA		
N-Nitrosodiphenylamine	NA			NA			< 0.45000			< 0.40000			NA		
Naphthalene	NA			NA			< 0.45000			< 0.40000			NA		
Phenanthrene	NA			NA			< 0.45000			< 0.40000			NA		
Phenol	NA			NA			< 0.45000			< 0.40000			NA		
Pyrene	NA			NA			< 0.45000			< 0.40000			NA		
bis(2-Chloroethoxy)methane	NA			NA			< 0.45000			< 0.40000			NA		
bis(2-Chloroethyl)ether	NA			NA			< 0.45000			< 0.40000			NA		
bis(2-Chloroisopropyl) ether	NA			NA			< 0.45000			< 0.40000		UJ	NA		
bis(2-Ethylhexyl) phthalate	NA			NA			< 0.45000			< 0.40000			NA		
VOLATILE ORGANICS															
1,1-Dichloroethene	< 0.02000			< 0.00500			< 0.00700		UJ	< 0.00600			< 0.02000		
1,2-Dichloroethane	< 0.02000			< 0.00500			< 0.00700		UJ	< 0.00600			< 0.02000		
2-Butanone	0.00700	JB		< 0.01000		R	< 0.01400		R	0.00300	J	J	< 0.04000		
Benzene	< 0.02000			< 0.00500			< 0.00700		R	< 0.00600			< 0.02000		
Carbon Tetrachloride	< 0.02000			< 0.00500			< 0.00700		R	< 0.00600			< 0.02000		
Chlorobenzene	< 0.02000			< 0.00500			< 0.00700		R	< 0.00600			< 0.02000		
Chloroform	< 0.02000			0.00400	J	J	< 0.00700		UJ	< 0.00600			< 0.02000		
Pyridine	< 0.02000			NA			NA			NA			< 0.02000		J
Tetrachlorethene	< 0.02000			< 0.00500			< 0.00700		R	< 0.00600			< 0.02000		
Trichloroethene	< 0.02000			< 0.00500			< 0.00700		R	< 0.00600			< 0.02000		
Vinyl chloride	< 0.04000			< 0.01000			< 0.01400		UJ	< 0.01200			< 0.04000		
1,1,1-Trichloroethane	NA			< 0.00500			0.04000		J	< 0.00600			NA		
1,1,2,2-Tetrachloroethane	NA			< 0.00500			< 0.00700		R	< 0.00600			NA		
1,1,2-Trichloroethane	NA			< 0.00500			< 0.00700		R	< 0.00600			NA		
1,1-Dichloroethane	NA			< 0.00500			< 0.00700		UJ	< 0.00600			NA		
1,2-Dichloroethylene	NA			< 0.00500			< 0.00700		UJ	< 0.00600			NA		
1,2-Dichloropropane	NA			< 0.00500			< 0.00700		R	< 0.00600			NA		
2-Hexanone	NA			< 0.01000			< 0.01400		R	< 0.01200			NA		
4-Methyl-2-pentanone	NA			< 0.01000			0.01100	J	J	< 0.01200			NA		
Acetone	NA			0.00700	BJ	J	0.00900	BJ	UJ	0.01800	B		NA		
Bromodichloromethane	NA			< 0.00500			< 0.00700		R	< 0.00600			NA		

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CHEMICAL PARAMETERS	1724 067197 10.5 - 12.0 TCLP	a	b	1724 067198 - FIELD BLANK	a	b	1724 067201 16.0 - 17.5	a	b	1724 067218 41.5 - 43.0	a	b	1724 067224 COMPOSITE TCLP	a	b
Bromoform	NA			< 0.00500			< 0.00700		R	< 0.00600			NA		
Bromomethane	NA			< 0.01000		UJ	< 0.01400		UJ	< 0.01200			NA		
Carbon disulfide	NA			< 0.00500			< 0.00700		UJ	< 0.00600			NA		
Chloroethane	NA			< 0.01000			< 0.01400		UJ	< 0.01200			NA		
Chloromethane	NA			< 0.01000		UJ	< 0.01400		UJ	< 0.01200			NA		
Dibromochloromethane	NA			< 0.00500			< 0.00700		R	< 0.00600			NA		
Ethylbenzene	NA			< 0.00500			< 0.00700		R	< 0.00600			NA		
Methylene chloride	NA			0.00200	BJ	J	0.03400	B	J	0.00700	B		NA		
Styrene	NA			< 0.00500			< 0.00700		R	< 0.00600			NA		
Toluene	NA			< 0.00500			< 0.00700		R	< 0.00600			NA		
Total xylenes	NA			< 0.00500			< 0.00700		R	< 0.00600			NA		
Vinyl Acetate	NA			< 0.01000			< 0.01400		R	< 0.01200			NA		
cis-1,3-Dichloropropene	NA			< 0.00500			< 0.00700		R	< 0.00600			NA		
trans-1,3-Dichloropropene	NA			< 0.00500			< 0.00700		R	< 0.00600			NA		

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CHEMICAL PARAMETERS	1726 067149 9.0 - 10.5			1726 067150 10.5 - 12.0 TCLP			1726 067155 18.0 - 19.5			1726 067157 COMPOSITE TCLP			1726 067163 - FIELD BLANK		
		a	b		a	b		a	b		a	b		a	b
HERBICIDE ORGANICS															
2,4,5-TP (Silvex)		NA		<	0.00180			NA		<	0.00180			NA	
2,4-D		NA		<	0.01000			NA		<	0.01000			NA	
PESTICIDES															
4,4'-DDD	<	0.02500	UJ		NA		<	0.02000	UJ		NA			NA	
4,4'-DDE	<	0.02500	UJ		NA		<	0.02000	UJ		NA			NA	
4,4'-DDT	<	0.02500	UJ		NA		<	0.02000	UJ		NA			NA	
Aldrin	<	0.01200	UJ		NA		<	0.01000	UJ		NA			NA	
Aroclor-1016	<	0.12000	UJ		NA		<	0.10000	UJ		NA			NA	
Aroclor-1221	<	0.12000	UJ		NA		<	0.10000	UJ		NA			NA	
Aroclor-1232	<	0.12000	UJ		NA		<	0.10000	UJ		NA			NA	
Aroclor-1242	<	0.12000	UJ		NA		<	0.10000	UJ		NA			NA	
Aroclor-1248	<	0.12000	UJ		NA		<	0.10000	UJ		NA			NA	
Aroclor-1254	<	0.25000	UJ		NA		<	0.20000	UJ		NA			NA	
Aroclor-1260	<	0.25000	UJ		NA		<	0.20000	UJ		NA			NA	
Dieldrin	<	0.02500	UJ		NA		<	0.02000	UJ		NA			NA	
Endosulfan II	<	0.02500	UJ		NA		<	0.02000	UJ		NA			NA	
Endosulfan sulfate	<	0.02500	UJ		NA		<	0.02000	UJ		NA			NA	
Endosulfan-I	<	0.01200	UJ		NA		<	0.01000	UJ		NA			NA	
Endrin	<	0.02500	UJ	<	0.00010		<	0.02000	UJ	<	0.00010			NA	
Endrin ketone	<	0.02500	UJ		NA		<	0.02000	UJ		NA			NA	
Heptachlor	<	0.01200	UJ	<	0.00005		<	0.01000	UJ	<	0.00005			NA	
Heptachlor epoxide	<	0.01200	UJ	<	0.00005		<	0.01000	UJ	<	0.00005			NA	
Methoxychlor	<	0.12000	UJ	<	0.00050		<	0.10000	UJ	<	0.00050			NA	
Toxaphene	<	0.25000	UJ	<	0.00100		<	0.20000	UJ	<	0.00100			NA	
alpha-BHC	<	0.01200	UJ		NA		<	0.01000	UJ		NA			NA	
alpha-Chlordane	<	0.12000	UJ	<	0.00050		<	0.10000	UJ	<	0.00050			NA	
beta-BHC	<	0.01200	UJ		NA		<	0.01000	UJ		NA			NA	
delta-BHC	<	0.01200	UJ		NA		<	0.01000	UJ		NA			NA	
gamma-BHC (Lindane)	<	0.01200	UJ	<	0.00005		<	0.01000	UJ	<	0.00005			NA	
gamma-Chlordane	<	0.12000	UJ	<	0.00050		<	0.10000	UJ	<	0.00050			NA	
SEMI-VOLATILE ORGANICS															
1,2,4-Trichlorobenzene	<	0.50000	UJ		NA		<	0.42000	UJ		NA			NA	
1,2-Dichlorobenzene	<	0.50000	UJ		NA		<	0.42000	UJ		NA			NA	
1,3-Dichlorobenzene	<	0.50000	UJ		NA		<	0.42000	UJ		NA			NA	

a = lab qualifiers
b = validation qualifiers

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ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1726 067149 9.0 - 10.5	a	b	1726 067150 10.5 - 12.0 TCLP	a	b	1726 067155 18.0 - 19.5	a	b	1726 067157 COMPOSITE TCLP	a	b	1726 067163 - FIELD BLANK	a	b
1,4-Dichlorobenzene	< 0.50000		UJ	< 0.02000		J	< 0.42000		UJ	< 0.02000		J	NA		
2,4,5-Trichlorophenol	< 2.40000		UJ	< 0.10000		J	< 2.00000		UJ	< 0.10000		J	NA		
2,4,6-Trichlorophenol	< 0.50000		UJ	< 0.02000		J	< 0.42000		UJ	< 0.02000		J	NA		
2,4-Dichlorophenol	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
2,4-Dimethylphenol	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
2,4-Dinitrophenol	< 2.40000		UJ	NA			< 2.00000		UJ	NA			NA		
2,4-Dinitrotoluene	< 0.50000		UJ	< 0.02000		J	< 0.42000		UJ	< 0.02000		J	NA		
2,6-Dinitrotoluene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
2-Chloronaphthalene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
2-Chlorophenol	< 0.50000		UJ	NA			0.04800	J	J	NA			NA		
2-Methylnaphthalene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
2-Methylphenol	< 0.50000		UJ	< 0.02000		J	< 0.42000		UJ	< 0.02000		J	NA		
2-Nitroaniline	< 2.40000		UJ	NA			< 2.00000		UJ	NA			NA		
2-Nitrophenol	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
3,3'-Dichlorobenzidine	< 0.99000		UJ	NA			< 0.84000		UJ	NA			NA		
3-Nitroaniline	< 2.40000		UJ	NA			< 2.00000		UJ	NA			NA		
4,6-Dinitro-2-methylphenol	< 2.40000		UJ	NA			< 2.00000		UJ	NA			NA		
4-Bromophenyl phenyl ether	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
4-Chloro-3-methylphenol	< 0.50000		UJ	NA			0.05800	J	J	NA			NA		
4-Chloroaniline	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
4-Chlorophenylphenyl ether	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
4-Methylphenol	< 0.50000		UJ	< 0.02000		J	< 0.42000		UJ	< 0.02000		J	NA		
4-Nitroaniline	< 2.40000		UJ	NA			< 2.00000		UJ	NA			NA		
4-Nitrophenol	< 2.40000		UJ	NA			0.04800	J	J	NA			NA		
Acenaphthene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Acenaphthylene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Anthracene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Benzo(a)anthracene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Benzo(a)pyrene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Benzo(b)fluoranthene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Benzo(g,h,i)perylene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Benzo(k)fluoranthene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Benzoic acid	< 2.40000		UJ	NA			0.07300	J	J	NA			NA		
Benzyl alcohol	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Butyl benzyl phthalate	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Chrysene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Di-n-butyl phthalate	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Di-n-octyl phthalate	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Dibenzo(a,h)anthracene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Dibenzofuran	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Diethyl phthalate	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Dimethyl phthalate	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Fluoranthene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Fluorene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		

a = lab qualifiers
b = validation qualifiers

ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1726 067149 9.0 - 10.5	a	b	1726 067150 10.5 - 12.0 TCLP	a	b	1726 067155 18.0 - 19.5	a	b	1726 067157 COMPOSITE TCLP	a	b	1726 067163 - FIELD BLANK	a	b
Hexachlorobenzene	< 0.50000		UJ	< 0.02000	J		< 0.42000		UJ	< 0.02000		J	NA		
Hexachlorobutadiene	< 0.50000		UJ	< 0.02000	J		< 0.42000		UJ	< 0.02000		J	NA		
Hexachlorocyclopentadiene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Hexachloroethane	< 0.50000		UJ	< 0.02000	J		< 0.42000		UJ	< 0.02000		J	NA		
Indeno(1,2,3-cd)pyrene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Isophorone	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
N-Nitroso-di-n-propylamine	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
N-Nitrosodiphenylamine	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Naphthalene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
Nitrobenzene	< 0.50000		UJ	< 0.02000	J		< 0.42000		UJ	< 0.02000		J	NA		
Pentachlorophenol	< 2.40000		UJ	< 0.10000	J		< 2.00000		UJ	< 0.10000			NA		
Phenanthrene	< 0.50000		UJ	NA			0.04800	J	J	NA			NA		
Phenol	< 0.50000		UJ	NA			0.05800	J	J	NA			NA		
Pyrene	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
bis(2-Chloroethoxy)methane	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
bis(2-Chloroethyl)ether	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
bis(2-Chloroisopropyl) ether	< 0.50000		UJ	NA			< 0.42000		UJ	NA			NA		
bis(2-Ethylhexyl) phthalate	0.48000	J	J	NA			2.70000		J	NA			NA		
3-Methylphenol	NA			< 0.02000	J		NA			< 0.02000		J	NA		
VOLATILE ORGANICS															
1,1,1-Trichloroethane	0.06900		J	NA			< 0.00600			NA			< 0.00500		
1,1,2,2-Tetrachloroethane	< 0.00700		R	NA			< 0.00600			NA			< 0.00500		
1,1,2-Trichloroethane	< 0.00700		R	NA			< 0.00600			NA			< 0.00500		
1,1-Dichloroethane	< 0.00700		UJ	NA			< 0.00600			NA			< 0.00500		
1,1-Dichloroethene	< 0.00700		UJ	< 0.02000			< 0.00600			< 0.02000			< 0.00500		
1,2-Dichloroethane	< 0.00700		UJ	< 0.02000			< 0.00600			< 0.02000			< 0.00500		
1,2-Dichloroethylene	< 0.00700		UJ	NA			< 0.00600			NA			< 0.00500		
1,2-Dichloropropane	< 0.00700		R	NA			< 0.00600			NA			< 0.00500		
2-Butanone	< 0.01500		UJ	< 0.04000			0.00400	J		0.00900	JB		< 0.01000		UJ
2-Hexanone	< 0.01500		R	NA			< 0.01200			NA			< 0.01000		
4-Methyl-2-pentanone	< 0.01500		R	NA			< 0.01200			NA			< 0.01000		
Acetone	< 0.01500		UJ	NA			0.01700	B	UJ	NA			0.00200	J	J
Benzene	< 0.00700		R	< 0.02000			< 0.00600			< 0.02000			< 0.00500		
Bromodichloromethane	< 0.00700		R	NA			< 0.00600		UJ	NA			0.00200	J	
Bromoform	< 0.00700		R	NA			< 0.00600			NA			< 0.00500		
Bromomethane	< 0.01500		UJ	NA			< 0.01200			NA			< 0.01000		
Carbon Tetrachloride	< 0.00700		R	< 0.02000			< 0.00600			< 0.02000			< 0.00500		UJ
Carbon disulfide	< 0.00700		UJ	NA			< 0.00600			NA			< 0.00500		
Chlorobenzene	< 0.00700		R	< 0.02000			< 0.00600			< 0.02000			< 0.00500		
Chloroethane	< 0.01500		UJ	NA			< 0.01200			NA			< 0.01000		
Chloroform	< 0.00700		UJ	< 0.02000			< 0.00600			< 0.02000			0.01300		

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ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1726 067149 9.0 - 10.5	a	b	1726 067150 10.5 - 12.0 TCLP	a	b	1726 067155 18.0 - 19.5	a	b	1726 067157 COMPOSITE TCLP	a	b	1726 067163 - FIELD BLANK	a	b
Chloromethane	< 0.01500		UJ	NA			< 0.01200			NA			< 0.01000		
Dibromochloromethane	< 0.00700		R	NA			< 0.00600			NA			< 0.00500		
Ethylbenzene	< 0.00700		R	NA			< 0.00600			NA			< 0.00500		
Methylene chloride	0.07300	B	UJ	NA			0.00600	BJ	U	NA			0.00100	BJ	J
Styrene	< 0.00700		R	NA			< 0.00600			NA			< 0.00500		
Tetrachlorethene	< 0.00700		R	< 0.02000			< 0.00600			< 0.02000			< 0.00500		
Toluene	0.01300		J	NA			< 0.00600			NA			< 0.00500		
Total xylenes	< 0.00700		R	NA			< 0.00600			NA			< 0.00500		
Trichloroethene	< 0.00700		R	< 0.02000			< 0.00600			< 0.02000			< 0.00500		
Vinyl Acetate	< 0.01500		R	NA			< 0.01200			NA			< 0.01000		
Vinyl chloride	< 0.01500		UJ	< 0.04000			< 0.01200			< 0.04000			< 0.01000		
cis-1,3-Dichloropropene	< 0.00700		R	NA			< 0.00600			NA			< 0.00500		
trans-1,3-Dichloropropene	< 0.00700		R	NA			< 0.00600			NA			< 0.00500		
Pyridine	NA			< 0.02000		J	NA			< 0.02000			NA		

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ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1846 067706 6.0 - 7.5			1846 067711 13.5 - 15.0			1846 067712 - TRIP/FIELD BLANK			1846 067713 - RINSATE		
		a	b		a	b		a	b		a	b
SEMI-VOLATILE ORGANICS												
1,2,4-Trichlorobenzene	< 0.43000			< 0.42000			NA			< 0.01000		
1,2-Dichlorobenzene	< 0.43000			< 0.42000			NA			< 0.01000		
1,3-Dichlorobenzene	< 0.43000			< 0.42000			NA			< 0.01000		
1,4-Dichlorobenzene	< 0.43000			< 0.42000			NA			< 0.01000		
2,4,5-Trichlorophenol	< 2.10000			< 2.00000			NA			< 0.05000		
2,4,6-Trichlorophenol	< 0.43000			< 0.42000			NA			< 0.01000		
2,4-Dichlorophenol	< 0.43000			< 0.42000			NA			< 0.01000		
2,4-Dimethylphenol	< 0.43000			< 0.42000			NA			< 0.01000		
2,4-Dinitrophenol	< 2.10000		UJ	< 2.00000			NA			< 0.05000		
2,4-Dinitrotoluene	< 0.43000			< 0.42000			NA			< 0.01000		
2,6-Dinitrotoluene	< 0.43000			< 0.42000			NA			< 0.01000		
2-Chloronaphthalene	< 0.43000			< 0.42000			NA			< 0.01000		
2-Chlorophenol	< 0.43000			< 0.42000			NA			< 0.01000		
2-Methylnaphthalene	0.09400	J	J	0.04900	J	J	NA			< 0.01000		
2-Methylphenol	< 0.43000			< 0.42000			NA			< 0.01000		
2-Nitroaniline	< 2.10000			< 2.00000			NA			< 0.05000		
2-Nitrophenol	< 0.43000		UJ	< 0.42000		UJ	NA			< 0.01000		UJ
3,3'-Dichlorobenzidine	< 0.85000		UJ	< 0.84000			NA			< 0.02000		
3-Nitroaniline	< 2.10000			< 2.00000			NA			< 0.05000		
4,6-Dinitro-2-methylphenol	< 2.10000		UJ	< 2.00000			NA			< 0.05000		
4-Bromophenyl phenyl ether	< 0.43000			< 0.42000			NA			< 0.01000		
4-Chloro-3-methylphenol	< 0.43000			< 0.42000			NA			< 0.01000		
4-Chloroaniline	< 0.43000			< 0.42000			NA			< 0.01000		
4-Chlorophenylphenyl ether	< 0.43000			< 0.42000			NA			< 0.01000		
4-Methylphenol	< 0.43000			< 0.42000			NA			< 0.01000		
4-Nitroaniline	< 2.10000			< 2.00000			NA			< 0.05000		
4-Nitrophenol	< 2.10000			< 2.00000		UJ	NA			< 0.05000		UJ
Acenaphthene	< 0.43000			< 0.42000			NA			< 0.01000		
Acenaphthylene	< 0.43000			< 0.42000			NA			< 0.01000		
Anthracene	< 0.43000			< 0.42000			NA			< 0.01000		
Benzo(a)anthracene	< 0.43000			< 0.42000			NA			< 0.01000		
Benzo(a)pyrene	< 0.43000			< 0.42000			NA			< 0.01000		
Benzo(b)fluoranthene	< 0.43000			< 0.42000			NA			< 0.01000		
Benzo(g,h,i)perylene	< 0.43000			< 0.42000			NA			< 0.01000		
Benzo(k)fluoranthene	< 0.43000			< 0.42000			NA			< 0.01000		
Benzoic acid	0.06200	J	J	0.06800	J	J	NA			< 0.05000		
Benzyl alcohol	< 0.43000		UJ	< 0.42000			NA			< 0.01000		
Butyl benzyl phthalate	< 0.43000			< 0.42000			NA			< 0.01000		
Chrysene	< 0.43000			< 0.42000			NA			< 0.01000		
Di-n-butyl phthalate	0.06900	J	J	0.04700	J	J	NA			< 0.01000		

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b = validation qualifiers

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ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1846 067706 6.0 - 7.5	a	b	1846 067711 13.5 - 15.0	a	b	1846 067712 - TRIP/FIELD BLANK	a	b	1846 067713 - RINSATE	a	b
Di-n-octyl phthalate	< 0.43000			< 0.42000			NA			< 0.01000		
Dibenzo(a,h)anthracene	< 0.43000			< 0.42000			NA			< 0.01000		
Dibenzofuran	< 0.43000			< 0.42000			NA			< 0.01000		
Diethyl phthalate	< 0.43000			< 0.42000			NA			< 0.01000		
Dimethyl phthalate	< 0.43000			< 0.42000			NA			< 0.01000		
Fluoranthene	< 0.43000			< 0.42000			NA			< 0.01000		
Fluorene	< 0.43000			< 0.42000			NA			< 0.01000		
Hexachlorobenzene	< 0.43000			< 0.42000			NA			< 0.01000		
Hexachlorobutadiene	< 0.43000			< 0.42000			NA			< 0.01000		
Hexachlorocyclopentadiene	< 0.43000		UJ	< 0.42000			NA			< 0.01000		
Hexachloroethane	< 0.43000			< 0.42000			NA			< 0.01000		
Indeno(1,2,3-cd)pyrene	< 0.43000			< 0.42000			NA			< 0.01000		
Isophorone	< 0.43000			< 0.42000			NA			< 0.01000		
N-Nitroso-di-n-propylamine	< 0.43000		UJ	< 0.42000			NA			< 0.01000		
N-Nitrosodiphenylamine	< 0.43000			< 0.42000			NA			< 0.01000		
Naphthalene	0.05200	J	J	< 0.42000			NA			< 0.01000		
Nitrobenzene	< 0.43000			< 0.42000			NA			< 0.01000		
Pentachlorophenol	< 2.10000			< 2.00000			NA			< 0.05000		
Phenanthrene	< 0.43000			0.04300	J	J	NA			< 0.01000		
Phenol	< 0.43000			< 0.42000			NA			< 0.01000		
Pyrene	< 0.43000			< 0.42000			NA			< 0.01000		
bis(2-Chloroethoxy)methane	< 0.43000			< 0.42000			NA			< 0.01000		
bis(2-Chloroethyl)ether	< 0.43000			< 0.42000			NA			< 0.01000		
bis(2-Chloroisopropyl) ether	< 0.43000			< 0.42000			NA			< 0.01000		
bis(2-Ethylhexyl) phthalate	0.12000	J	J	< 0.42000			NA			< 0.01000		
VOLATILE ORGANICS												
1,1,1-Trichloroethane	0.82000	E	R	0.12000		J	< 0.00500		UJ	< 0.00500		UJ
1,1,2,2-Tetrachloroethane	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
1,1,2-Trichloroethane	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
1,1-Dichloroethane	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
1,1-Dichloroethene	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
1,2-Dichloroethane	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
1,2-Dichloroethylene	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
1,2-Dichloropropane	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
2-Butanone	< 0.01300		R	< 0.01300		R	< 0.01000		UJ	< 0.01000		UJ
2-Hexanone	< 0.01300		R	< 0.01300		R	< 0.01000		UJ	< 0.01000		UJ
4-Methyl-2-pentanone	< 0.01300		R	0.02500		J	< 0.01000			< 0.01000		
Acetone	0.01100	BJ	R	0.00500	BJ	R	< 0.01000		UJ	0.00700	BJ	J
Benzene	0.00200	J	J	< 0.00600		R	< 0.00500			< 0.00500		
Bromodichloromethane	< 0.00600		R	< 0.00600		R	0.00100	J	J	< 0.00500		
Bromoform	< 0.00600		R	< 0.00600		R	< 0.00500		UJ	< 0.00500		UJ

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ACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1846 067706 6.0 - 7.5	a	b	1846 067711 13.5 - 15.0	a	b	1846 067712 - TRIP/FIELD BLANK	a	b	1846 067713 - RINSATE	a	b
Bromomethane	< 0.01300		R	< 0.01300		R	< 0.01000		UJ	< 0.01000		UJ
Carbon Tetrachloride	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
Carbon disulfide	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
Chlorobenzene	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
Chloroethane	< 0.01300		R	< 0.01300		R	< 0.01000			< 0.01000		
Chloroform	< 0.00600		R	< 0.00600		R	0.00500			0.00300	J	J
Chloromethane	< 0.01300		R	< 0.01300		R	< 0.01000			< 0.01000		
Dibromochloromethane	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
Ethylbenzene	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
Methylene chloride	0.01900	B	R	0.02700	B	R	0.00200	BJ	J	< 0.00500		UJ
Styrene	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
Tetrachloroethene	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
Toluene	0.13000		J	0.11000		J	< 0.00500			< 0.00500		
Total xylenes	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
Trichloroethene	< 0.00600		R	< 0.00600		R	< 0.00500			< 0.00500		
Vinyl Acetate	< 0.01300		R	< 0.01300		R	< 0.01000			< 0.01000		
Vinyl chloride	< 0.01300		R	< 0.01300		R	< 0.01000			< 0.01000		
cis-1,3-Dichloropropene	< 0.00600		R	< 0.00600		R	< 0.00500		UJ	< 0.00500		UJ
trans-1,3-Dichloropropene	< 0.00600		R	< 0.00600		R	< 0.00500		UJ	< 0.00500		UJ

a = lab qualifiers
b = validation qualifiers

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EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING GENERAL CHEMICAL RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

Concentration Qualifiers

B = Reported value was obtained from a reading that was less than the Contract Laboratory Program (CLP) Contract Required Detection Limit (CRQL), but greater than or equal to the Instrument Detection Limit (IDL).

Quality Qualifiers

E = The reported value is estimated because of the presence of interference.

M = Duplicate injection precision not met.

N = Spiked sample recovery not within controls limits.

S = The reported value was determined by the Method of Standard Additions.

W = Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

G = Native analyte > 4 times spike added; therefore acceptance criteria do not apply.

X = Detection limit is higher than normal due to sample matrix interferences.

* = Duplication analysis not within control limits.

+ = Correlation coefficient for the MSA is less than 0.955.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

ACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1045 007215 - RINSATE	a	b
GENERAL CHEMISTRY				
Ammonia		NA		
Chloride	<	0.5000		
Fluoride	<	0.1000		
Hydrogen ion		NA		
Nitrate	<	0.1000		
Phenols	<	0.0100		
Phosphorus (black, white,		NA		
Phosphate as P		NA		
Sulfate		3.4000		
Total Kjeldahl Nitrogen		NA		
Total Organic Carbon		NA		
Total Organic Halides		NA		
Total Organic Nitrogen		NA		
METALS				
Aluminum		NA		
Antimony		NA		
Arsenic	<	0.2000		
Barium		0.0140	JB	
Beryllium		NA		
Cadmium		0.0137		
Calcium		NA		
Chromium	<	0.0200		
Cobalt		NA		
Copper		0.1700		
Cyanide		NA		
Hexavalent Chromium	<	0.0100	R	
Iron		0.8430	JB	
Lead	<	0.0500		
Magnesium		NA		
Manganese		1.1500		
Mercury	<	0.0002	R	
Molybdenum	<	0.0200		
Nickel	<	0.0200		
Potassium		NA		
Selenium	<	0.2000		
Silicon		NA		
Silver		0.0510		
Sodium		6.3300	JB	
Thallium		NA		
Vanadium		NA		
Zinc		NA		

a = lab qualifiers
b = validation qualifiers

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ACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1048 007231 - RINSATE	a	b
GENERAL CHEMISTRY				
Ammonia		NA		
Chloride	<	0.5000		
Fluoride	<	0.1000		
Hydrogen ion		NA		
Nitrate	<	0.1000		
Phenols		0.0100		
Phosphorus (black, white,		NA		
Phosphate as P		NA		
Sulfate	<	2.0000		
Total Kjeldahl Nitrogen		NA		
Total Organic Carbon		NA		
Total Organic Halides		NA		
Total Organic Nitrogen		NA		
METALS				
Aluminum		NA		
Antimony		NA		
Arsenic	<	0.2000		
Barium		0.0170		JB
Beryllium		NA		
Cadmium		0.0080		
Calcium		NA		
Chromium	<	0.0200		
Cobalt		NA		
Copper		0.1700		
Cyanide		NA		
Hexavalent Chromium	<	0.0100		R
Iron		0.0080		JB
Lead		0.0800		
Magnesium		NA		
Manganese		1.6700		
Mercury	<	0.0002		R
Molybdenum	<	0.0200		
Nickel	<	0.0200		
Potassium		NA		
Selenium	<	0.2000		
Silicon		NA		
Silver		0.0220		JB
Sodium		4.8900		JB
Thallium		NA		
Vanadium		NA		
Zinc		NA		

a = lab qualifiers
b = Validation qualifiers

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ACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1723 067167 4.5 - 6.0	a	b	1723 067170 9.0 - 10.5 TCLP	a	b	1723 067171 10.5 - 12.0 EP TOXICITY	a	b	1723 067173 13.5 - 15.0	a	b	1723 067184 29.0 - 30.5	a	b
GENERAL CHEMISTRY															
Ammonia	NA			NA			NA			NA			NA		
Chloride	NA			NA			NA			NA			NA		
Fluoride	NA			NA			NA			NA			NA		
Hydrogen ion	NA			NA			NA			NA			NA		
Nitrate	NA			NA			NA			NA			NA		
Phenols	NA			NA			NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA			NA			NA		
Phosphate as P	NA			NA			NA			NA			NA		
Sulfate	NA			NA			NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA			NA			NA		
Total Organic Carbon	NA			NA			NA			NA			NA		
Total Organic Halides	NA			NA			NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA			NA			NA		
METALS															
Aluminum	5840.0000			NA			NA			4900.0000			3660.0000		
Antimony	< 7.7000	N	R	NA			NA			< 7.5000	N	R	31.1000	N	J
Arsenic	51.1000			< 0.2500			< 0.0500			66.1000			8.4000		
Barium	508.0000			0.6740			0.1740	JB		116.0000			31.2000	B	
Beryllium	3.9000			NA			NA			4.6000			0.7500	B	
Cadmium	< 0.5200	N	J	0.0262			0.0024	JB		< 0.5000	N	J	5.2000	N	J
Calcium	3010.0000			NA			NA			2440.0000			155000.0000		
Chromium	11.6000			0.2180			0.0110	JB		12.1000			26.8000		
Cobalt	14.3000			NA			NA			18.8000			9.6000	B	J
Copper	59.4000			NA			NA			66.1000			21.3000		
Cyanide	< 0.1400			NA			NA			0.2600	B		< 0.1200		
Hexavalent Chromium	NA			NA			NA			NA			NA		
Iron	3830.0000			NA			NA			5200.0000			16400.0000		
Lead	42.2000	*		< 0.2000			< 0.0400			46.7000	*		7.9000	S*	
Magnesium	484.0000	B		NA			NA			466.0000	B		35500.0000		
Manganese	45.7000			NA			NA			20.3000			458.0000		
Mercury	< 0.1300		J	NA			< 0.0002			< 0.1200		J	< 0.1200		
Molybdenum	8.6000			NA			NA			12.5000			12.5000		J
Nickel	29.5000			NA			NA			45.7000			25.7000		
Potassium	1230.0000	B		NA			NA			975.0000	B		527.0000	B	
Selenium	5.5000			< 0.4000			< 0.0800			3.4000			< 0.4300		
Silicon	NA			NA			NA			NA			NA		
Silver	< 2.6000		J	0.2050		J	< 0.0100			< 2.5000		J	18.5000		
Sodium	312.0000	B		NA			NA			254.0000	B		247.0000	B	
Thallium	2.1000	B		NA			NA			2.0000	B		< 0.4300		
Vanadium	32.2000			NA			NA			40.3000			22.9000		J
Zinc	78.2000			NA			NA			117.0000			33.1000		

a = lab qualifiers
b = Validation qualifiers

ACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1723 067186 COMPOSITE TCLP a	b	1723 067187 COMPOSITE RCRA-4 a	b
GENERAL CHEMISTRY				
Ammonia	NA		NA	
Chloride	NA		NA	
Fluoride	NA		NA	
Hydrogen ion	NA		NA	
Nitrate	NA		NA	
Phenols	NA		NA	
Phosphorus (black, white,	NA		NA	
Phosphate as P	NA		NA	
Sulfate	NA		NA	
Total Kjeldahl Nitrogen	NA		NA	
Total Organic Carbon	NA		NA	
Total Organic Halides	NA		NA	
Total Organic Nitrogen	NA		NA	
METALS				
Aluminum	NA		NA	
Antimony	NA		NA	
Arsenic	< 0.2500	JB	NA	
Barium	0.5390		NA	
Beryllium	NA		NA	
Cadmium	< 0.0100		NA	
Calcium	NA		NA	
Chromium	0.1890		NA	
Cobalt	NA		NA	
Copper	NA		NA	
Cyanide	NA		< 0.6240	
Hexavalent Chromium	NA		NA	
Iron	NA		NA	
Lead	< 0.2000		NA	
Magnesium	NA		NA	
Manganese	NA		NA	
Mercury	NA		NA	
Molybdenum	NA		NA	
Nickel	NA		NA	
Potassium	NA		NA	
Selenium	< 0.4000	JB	NA	
Silicon	NA		NA	
Silver	0.1810		NA	
Sodium	NA		NA	
Thallium	NA		NA	
Vanadium	NA		NA	
Zinc	NA		NA	

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ACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
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CHEMICAL PARAMETERS	1724 067193 4.5 - 6.0			1724 067196 9.0 - 10.5 EP TOXICITY			1724 067197 10.5 - 12.0 TCLP			1724 067201 16.0 - 17.5			1724 067218 41.5 - 43.0		
		a	b		a	b		a	b		a	b		a	b
GENERAL CHEMISTRY															
Ammonia	NA			NA			NA			NA			NA		
Chloride	NA			NA			NA			NA			NA		
Fluoride	NA			NA			NA			NA			NA		
Hydrogen ion	NA			NA			NA			NA			NA		
Nitrate	NA			NA			NA			NA			NA		
Phenols	NA			NA			NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA			NA			NA		
Phosphate as P	NA			NA			NA			NA			NA		
Sulfate	NA			NA			NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA			NA			NA		
Total Organic Carbon	NA			NA			NA			NA			NA		
Total Organic Halides	NA			NA			NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA			NA			NA		
METALS															
Aluminum	2860.0000			NA			NA			3310.0000			6360.0000		
Antimony	< 7.0000	N	R	NA			NA			< 7.8000	N	R	9.0000	BN	J
Arsenic	19.4000			< 0.0500			0.0857		JB	65.5000			9.1000		
Barium	179.0000			< 0.0700			0.3290			254.0000			63.6000		
Beryllium	2.4000			NA			NA			3.0000			0.7400	B	
Cadmium	< 0.4700	N	J	< 0.0020			0.0065			< 0.5200	N	J	1.3000	N	J
Calcium	2540.0000			NA			NA			3280.0000			26200.0000		
Chromium	7.2000			0.0227		JB	0.0401			11.6000			17.6000		
Cobalt	5.0000	B		NA			NA			12.0000	B		10.2000	B	
Copper	35.6000			NA			NA			57.9000			19.1000		
Cyanide	0.1700	B	J	NA			NA			0.1900	B	J	< 0.1200		
Hexavalent Chromium	NA			NA			NA			NA			NA		
Iron	3190.0000			NA			NA			2710.0000			16700.0000		
Lead	21.7000	*		0.0462		JB	0.0604			61.7000	*		11.3000	S*	
Magnesium	341.0000	B		NA			NA			415.0000	B		9600.0000		
Manganese	34.9000			NA			NA			16.0000			523.0000		
Mercury	< 0.1200			< 0.0002			NA			< 0.1400			< 0.1200		J
Molybdenum	7.9000			NA			NA			10.3000			13.2000		
Nickel	9.8000			NA			NA			23.7000			25.7000		
Potassium	453.0000	B		NA			NA			696.0000	B		1220.0000		
Selenium	1.6000	S		< 0.0800			0.1100		JB	2.1000			2.3000		
Silicon	NA			NA			NA			NA			NA		
Silver	< 2.3000			0.0110		JB	0.0337			< 2.6000			6.6000		
Sodium	149.0000	B		NA			NA			138.0000	B		119.0000	B	
Thallium	0.9600	B		NA			NA			1.9000	B		< 0.4700		
Vanadium	24.9000			NA			NA			40.0000			24.0000		
Zinc	18.9000			NA			NA			74.1000			43.0000		

a = lab qualifiers
b = validation qualifiers

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ACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1724 067223 COMPOSITE RCRA-4	a	b	1724 067223 COMPOSITE TCLP	a	b	1724 067224 COMPOSITE TCLP	a	b
GENERAL CHEMISTRY									
Ammonia	NA			NA			NA		
Chloride	NA			NA			NA		
Fluoride	NA			NA			NA		
Hydrogen ion	NA			NA			NA		
Nitrate	NA			NA			NA		
Phenols	NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA		
Phosphate as P	NA			NA			NA		
Sulfate	NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA		
Total Organic Carbon	NA			NA			NA		
Total Organic Halides	NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA		
METALS									
Aluminum	NA			NA			NA		
Antimony	NA			NA			NA		
Arsenic	NA			< 0.0500	J		0.0790	R	
Barium	NA			0.2760	J		0.3910	R	
Beryllium	NA			NA			NA		
Cadmium	NA			0.0114	J		0.0146	R	
Calcium	NA			NA			NA		
Chromium	NA			0.0394	J		0.0492		
Cobalt	NA			NA			NA		
Copper	NA			NA			NA		
Cyanide	< 0.4840	J		NA			NA		
Hexavalent Chromium	NA			NA			NA		
Iron	NA			NA			NA		
Lead	NA			0.0568	J		0.0991	R	
Magnesium	NA			NA			NA		
Manganese	NA			NA			NA		
Mercury	NA			< 0.0002	J		< 0.0002	R	
Molybdenum	NA			NA			NA		
Nickel	NA			NA			NA		
Potassium	NA			NA			NA		
Selenium	NA			< 0.0800	J		0.1450	R	
Silicon	NA			NA			NA		
Silver	NA			0.0387	J		0.0476	R	
Sodium	NA			NA			NA		
Thallium	NA			NA			NA		
Vanadium	NA			NA			NA		
Zinc	NA			NA			NA		

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ACTIVE FLYASH PILE
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RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1726 067149 9.0 - 10.5	a	b	1726 067150 10.5 - 12.0 TCLP	a	b	1726 067151 12.0 - 13.5 EP TOXICITY	a	b	1726 067155 18.0 - 19.5	a	b	1726 067157 COMPOSITE TCLP	a	b
GENERAL CHEMISTRY															
Ammonia	NA			NA			NA			NA			NA		
Chloride	NA			NA			NA			NA			NA		
Fluoride	NA			NA			NA			NA			NA		
Hydrogen ion	NA			NA			NA			NA			NA		
Nitrate	NA			NA			NA			NA			NA		
Phenols	NA			NA			NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA			NA			NA		
Phosphate as P	NA			NA			NA			NA			NA		
Sulfate	NA			NA			NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA			NA			NA		
Total Organic Carbon	NA			NA			NA			NA			NA		
Total Organic Halides	NA			NA			NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA			NA			NA		
METALS															
Aluminum	4500.0000			NA			NA			17900.0000			NA		
Antimony	< 8.4000 N		R	NA			NA			< 7.0000 N		R	NA		
Arsenic	66.5000			< 0.0500			< 0.0500	J		9.1000			0.0704		
Barium	203.0000			0.3200			0.3320	JB		132.0000			0.5470		
Beryllium	2.8000			NA			NA			1.2000			NA		
Cadmium	< 0.5600 N		J	0.0075			< 0.0020	J		< 0.4700 N		J	0.0124		
Calcium	1790.0000			NA			NA			2250.0000			NA		
Chromium	17.0000			0.0448			0.0123	J		25.8000			0.0542		
Cobalt	11.5000 B			NA			NA			18.2000			NA		
Copper	57.2000			NA			NA			24.0000			NA		
Cyanide	0.6900 B		J	NA			NA			< 0.1200		J	NA		
Hexavalent Chromium	NA			NA			NA			NA			NA		
Iron	5220.0000			NA			NA			31100.0000			NA		
Lead	38.0000 *			< 0.0400			< 0.0400	J		21.4000 *			0.0745		
Magnesium	393.0000 B			NA			NA			4380.0000			NA		
Manganese	27.2000			NA			NA			340.0000			NA		
Mercury	0.1600		J	< 0.0002			< 0.0002			< 0.1200		J	< 0.0002		
Molybdenum	18.8000			NA			NA			17.9000			NA		
Nickel	29.7000			NA			NA			26.5000			NA		
Potassium	934.0000 B			NA			NA			1010.0000 B			NA		
Selenium	10.2000		J	0.0832			< 0.0800	J		< 0.4700 W		J	0.1110		
Silicon	NA			NA			NA			NA			NA		
Silver	< 2.8000		J	0.0408			< 0.0100	J		< 2.3000		J	0.0489		
Sodium	186.0000 B			NA			NA			109.0000 B			NA		
Thallium	1.9000 B			NA			NA			< 0.4700			NA		
Vanadium	35.5000			NA			NA			32.7000			NA		
Zinc	47.7000			NA			NA			65.3000			NA		

a = lab qualifiers
b = validation qualifiers

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ACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1726 067158 COMPOSITE TCLP a	b	1726 067158 COMPOSITE RCRA-4 a	b
GENERAL CHEMISTRY				
Ammonia	NA		NA	
Chloride	NA		NA	
Fluoride	NA		NA	
Hydrogen ion	NA		NA	
Nitrate	NA		NA	
Phenols	NA		NA	
Phosphorus (black, white,	NA		NA	
Phosphate as P	NA		NA	
Sulfate	NA		NA	
Total Kjeldahl Nitrogen	NA		NA	
Total Organic Carbon	NA		NA	
Total Organic Halides	NA		NA	
Total Organic Nitrogen	NA		NA	
METALS				
Aluminum	NA			
Antimony	NA		NA	
Arsenic	0.0761	J	NA	
Barium	0.4440	JB	NA	
Beryllium	NA		NA	
Cadmium	0.0164	J	NA	
Calcium	NA		NA	
Chromium	0.0674	J	NA	
Cobalt	NA		NA	
Copper	NA		NA	
Cyanide	NA		0.6130	
Hexavalent Chromium	NA		NA	
Iron	NA		NA	
Lead	0.1040	J	NA	
Magnesium	NA		NA	
Manganese	NA		NA	
Mercury	< 0.0002		NA	
Molybdenum	NA		NA	
Nickel	NA		NA	
Potassium	NA		NA	
Selenium	0.1430		NA	
Silicon	NA		NA	
Silver	0.0625	J	NA	
Sodium	NA		NA	
Thallium	NA		NA	
Vanadium	NA		NA	
Zinc	NA		NA	

a = lab qualifiers
b = Validation qualifiers

REPORT DATE : 25-APR-92

ACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1820 067503 1.5 - 3.0	a	b	1820 067505 6.0 - 7.5	a	b	1820 067506 9.5 - 12.0	a	b	1820 067507 0.0 - 9.5 TCLP	a	b	1820 067507 0.0 - 9.5 EPTOXICITY	a	b
GENERAL CHEMISTRY															
Ammonia	NA			NA			NA			NA			NA		
Chloride	NA			NA			NA			NA			NA		
Fluoride	NA			NA			NA			NA			NA		
Hydrogen ion	NA			NA			NA			NA			NA		
Nitrate	NA			NA			NA			NA			NA		
Phenols	NA			NA			NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA			NA			NA		
Phosphate as P	NA			NA			NA			NA			NA		
Sulfate	NA			NA			NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA			NA			NA		
Total Organic Carbon	117400.0000			420620.0000			12331.0000			NA			NA		
Total Organic Halides	NA			NA			NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA			NA			NA		
METALS															
Aluminum	3160.0000			1570.0000			2440.0000			NA			NA		
Antimony	< 7.6000	N	R	< 7.5000	N	R	21.7000	N	J	NA			NA		
Arsenic	64.7000	S		51.0000	S		4.6000			< 0.0500			< 0.0500		
Barium	243.0000			56.6000			16.7000	B		0.7770			0.2070		
Beryllium	2.6000			0.6500	B		0.4700	B		NA			NA		
Cadmium	< 0.5100			< 0.5000			5.1000		J	0.0094			0.0028	B	
Calcium	4000.0000			826.0000	B		112000.0000			NA			NA		
Chromium	7.8000			4.4000			17.4000			0.0387			0.0173		
Cobalt	10.9000	B		< 2.5000			6.1000	B	J	NA			NA		
Copper	39.3000			25.7000			14.3000			NA			NA		
Cyanide	0.3500	B		0.2000	B		< 0.1200			NA			NA		
Hexavalent Chromium	NA			NA			NA			NA			NA		
Iron	2260.0000			3970.0000			9840.0000			NA			NA		
Lead	38.3000			19.7000			5.8000	S		< 0.0400			< 0.0400		
Magnesium	565.0000	B		150.0000	B		37200.0000			NA			NA		
Manganese	25.7000	*		8.2000	*		223.0000	*		NA			NA		
Mercury	< 0.1300		J	< 0.1300		J	< 0.1200		J	< 0.0002			< 0.0002		
Molybdenum	6.5000			4.3000			8.7000		J	NA			NA		
Nickel	18.1000			6.2000	B		13.9000			NA			NA		
Potassium	686.0000	B		326.0000	B		242.0000	B		NA			NA		
Selenium	2.3000	N	J	0.8500	BN	J	< 0.3300	WN	J	< 0.0800			< 0.0800		
Silicon	NA			NA			NA			NA			NA		
Silver	< 2.5000		J	< 2.5000		J	11.9000			0.0351			0.0159		
Sodium	119.0000	B		92.7000	B		143.0000	B		NA			NA		
Thallium	1.5000	BN	J	< 0.5000	N	J	< 0.3300	WN	J	NA			NA		
Vanadium	31.6000			15.0000			16.8000			NA			NA		
Zinc	58.8000	*	J	87.3000	*	J	25.3000	*	J	NA			NA		

a = lab qualifiers
b = validation qualifiers

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ACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1846 067706 6.0 - 7.5	a	b	1846 067711 13.5 - 15.0	a	b	1846 067713 - RINSATE	a	b
GENERAL CHEMISTRY									
Ammonia	NA			NA			NA		
Chloride	NA			NA			NA		
Fluoride	NA			NA			NA		
Hydrogen ion	NA			NA			NA		
Nitrate	NA			NA			NA		
Phenols	NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA		
Phosphate as P	NA			NA			NA		
Sulfate	NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA		
Total Organic Carbon	72154.0000			63907.0000			< 1.0000		
Total Organic Halides	NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA		
METALS									
Aluminum	NA			NA			NA		
Antimony	NA			NA			NA		
Arsenic	NA			NA			NA		
Barium	NA			NA			NA		
Beryllium	NA			NA			NA		
Cadmium	NA			NA			NA		
Calcium	NA			NA			NA		
Chromium	NA			NA			NA		
Cobalt	NA			NA			NA		
Copper	NA			NA			NA		
Cyanide	NA			NA			NA		
Hexavalent Chromium	NA			NA			NA		
Iron	NA			NA			NA		
Lead	NA			NA			NA		
Magnesium	NA			NA			NA		
Manganese	NA			NA			NA		
Mercury	NA			NA			NA		
Molybdenum	NA			NA			NA		
Nickel	NA			NA			NA		
Potassium	NA			NA			NA		
Selenium	NA			NA			NA		
Silicon	NA			NA			NA		
Silver	NA			NA			NA		
Sodium	NA			NA			NA		
Thallium	NA			NA			NA		
Vanadium	NA			NA			NA		
Zinc	NA			NA			NA		

a = lab qualifiers
b = validation qualifiers

TABLE E-4

HAZARDOUS CHARACTERISTIC DATA FOR SUBSURFACE MEDIA
RI/FS SAMPLING PROGRAM
ACTIVE FLYASH PILE

TABLE E-4

HAZARDOUS CHARACTERISTIC DATA FOR SUBSURFACE MEDIA
RI/FS SAMPLING PROGRAM
ACTIVE FLYASH PILE

	1723	1724	1726	1726	1820
Characteristic	67187	67223	67158	67158D	67507
Ignitibility (°C)	>110	64	>110	>110	>110
Corrosivity (pH)	7.21	6.74	7.12	7.12	6.89
Reactivity					
Cyanide (mg/kg)	0.624	0.484	0.613	NA	NA
Sulfide (mg/kg)	<0.50	<3.81	2.39	NA	6.12

NA = Not Analyzed
D = Duplicate Analysis

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TABLE E-5

DRAINAGE SEDIMENT ANALYSES
RI/FS SAMPLING PROGRAM
ACTIVE FLYASH PILE

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

ACTIVE FLYASH PILE
SEDIMENT RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	ASIT-004 009044 06-27-1988			-	ASIT-005 009045 06-27-1988			b	ASIT-006 009046 06-27-1988			-	ASIT-007 009047 06-28-1988			-
Actinium 231	NA				NA				NA				NA			
Cesium 137	NA				NA				NA				NA			
Lead 210	NA				NA				NA				NA			
Neptunium 237	NA				NA				NA				NA			
Plutonium 210	NA				NA				NA				NA			
Plutonium 238	NA				NA				NA				NA			
Plutonium 239/240	NA				NA				NA				NA			
Protactium 234	NA				NA				NA				NA			
Radium 224	NA				NA				NA				NA			
Radium 226	1.2	±	0.1		2.9	±	0.3	R	0.6	±	0.1		0.6	±	0.1	
Radium 228	1.1	±	0.1		2.8	±	0.4	R	0.8	±	0.2		0.7	±	0.1	
Ruthenium 106	NA				NA				NA				NA			
Strontium 90	NA				NA				NA				NA			
Technetium 99	NA				NA				NA				NA			
Thorium 228	NA				NA				NA				NA			
Thorium 230	NA				NA				NA				NA			
Thorium 232	NA				NA				NA				NA			
Total Thorium **	NA				NA				NA				NA			
Uranium 234	NA				NA				NA				NA			
Uranium 235/236	NA				NA				NA				NA			
Uranium 238	NA				NA				NA				NA			
Total Uranium **	38.9	±	2.4		51.8	±	8.3	J	22.9	±	4.7		4.5	±	1.2	

** Results reported in mg/kg

b = validation qualifiers

- = Sample has not been validated

REPORT DATE: 29-APR-92

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EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING HAZARDOUS SUBSTANCE LIST RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

J = Indicates an estimated value. This flag is used when the mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.

C = This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E = This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to pesticides/PCBs analyzed by GC/EC methods.

D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.

F = Estimated value due to a confirmed compound which is off-scale in both columns.

X = A flag that FORMASTER III CLP software automatically inserts to indicate that the data was entered manually.

Z = No estimated value reported, or an elevated CRQL reported because matrix effects interfere with or obscure the compound on one or both columns. In either situation, the compound does not confirm as a positive identification.

* = Values outside of contract laboratory-required QC limits.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

ACTIVE FLYASH PILE
SEDIMENT HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well id, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		ASIT-007 009047 06/28/88 a
ORGANO PHOSPHOROUS PESTICIDES		
Azinphosmethyl	<	0.50000
Demeton	<	0.05000
Diazinon	<	0.05000
Dimethoate		NA
Disulfoton	<	0.05000
Ethion	<	0.05000
Famphur		NA
Malathion	<	0.05000
Parathion, ethyl	<	0.05000
Parathion, methyl	<	0.05000
Phorate		NA
Sulfotepp		NA
Tetraethylpyrophosphate		NA
Thionazin		NA
PESTICIDES		
4,4'-DDD	<	0.01900
4,4'-DDE	<	0.01900
4,4'-DDT	<	0.01900
Aldrin	<	0.00970
Aroclor-1016	<	0.09700
Aroclor-1221	<	0.09700
Aroclor-1232	<	0.09700
Aroclor-1242	<	0.09700
Aroclor-1248	<	0.09700
Aroclor-1254	<	0.19000
Aroclor-1260	<	0.19000
Dieldrin	<	0.01900
Endosulfan II	<	0.01900
Endosulfan sulfate	<	0.01900
Endosulfan-I	<	0.00970
Endrin	<	0.01900
Endrin ketone	<	0.01900
Heptachlor	<	0.00970
Heptachlor epoxide	<	0.00970
Methoxychlor	<	0.09700
Toxaphene	<	0.19000
alpha-BHC	<	0.00970
alpha-Chlordane	<	0.09700
beta-BHC	<	0.00970
delta-BHC	<	0.00970
gamma-BHC (Lindane)	<	0.00970
gamma-Chlordane	<	0.09700

a = lab qualifier

r = Sample has not been validated

ACTIVE FLYASH PILE
SEDIMENT HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well id, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	ASIT-007 009047 06/28/88 a	
SEMI-VOLATILE ORGANICS		
1,2,4-Trichlorobenzene	<	0.40000
1,2-Dichlorobenzene	<	0.40000
1,3-Dichlorobenzene	<	0.40000
1,4-Dichlorobenzene	<	0.40000
2,4,5-Trichlorophenol	<	2.00000
2,4,6-Trichlorophenol	<	0.40000
2,4-Dichlorophenol	<	0.40000
2,4-Dimethylphenol	<	0.40000
2,4-Dinitrophenol	<	2.00000
2,4-Dinitrotoluene	<	0.40000
2,6-Dinitrotoluene	<	0.40000
2-Chloronaphthalene	<	0.40000
2-Chlorophenol	<	0.40000
2-Methylnaphthalene	<	0.40000
2-Methylphenol	<	0.40000
2-Nitroaniline	<	2.00000
2-Nitrophenol	<	0.40000
3,3'-Dichlorobenzidine	<	0.81000
3-Nitroaniline	<	2.00000
4,6-Dinitro-2-methylphenol	<	2.00000
4-Bromophenyl phenyl ether	<	0.40000
4-Chloro-3-methylphenol	<	0.40000
4-Chloroaniline	<	0.40000
4-Chlorophenylphenyl ether	<	0.40000
4-Methylphenol	<	0.40000
4-Nitroaniline	<	2.00000
4-Nitrophenol	<	2.00000
Acenaphthene	<	0.40000
Acenaphthylene	<	0.40000
Anthracene	<	0.40000
Benzo(a)anthracene	<	0.40000
Benzo(a)pyrene	<	0.40000
Benzo(b)fluoranthene	<	0.40000
Benzo(g,h,i)perylene	<	0.40000
Benzo(k)fluoranthene	<	0.40000
Benzoic acid	<	2.00000
Benzyl alcohol	<	0.40000
Butyl benzyl phthalate	<	0.40000
Chrysene	<	0.40000
Di-n-butyl phthalate	<	0.40000
Di-n-octyl phthalate	<	0.40000
Dibenzo(a,h)anthracene	<	0.40000
Dibenzofuran	<	0.40000
Diethyl phthalate	<	0.40000

a = lab qualifier

- = Sample has not been validated

REPORT DATE :29-APR-92

ACTIVE FLYASH PILE
SEDIMENT HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS/DATA

Results in parts per million (ppm).
Data presented by well id, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		ASIT-007 009047 06/28/88 a -	
Dimethyl phthalate	<	0.40000	
Fluoranthene	<	0.40000	
Fluorene	<	0.40000	
Hexachlorobenzene	<	0.40000	
Hexachlorobutadiene	<	0.40000	
Hexachlorocyclopentadiene	<	0.40000	
Hexachloroethane	<	0.40000	
Indeno(1,2,3-cd)pyrene	<	0.40000	
Isophorone	<	0.40000	
N-Nitroso-di-n-propylamine	<	0.40000	
N-Nitrosodiphenylamine	<	0.40000	
Naphthalene	<	0.40000	
Nitrobenzene	<	0.40000	
Pentachlorophenol	<	2.00000	
Phenanthrene	<	0.40000	
Phenol	<	0.40000	
Pyrene	<	0.40000	
bis(2-Chloroethoxy)methane	<	0.40000	
bis(2-Chloroethyl)ether	<	0.40000	
bis(2-Chloroisopropyl) eth	<	0.40000	
bis(2-Ethylhexyl) phthalat	<	0.40000	
VOLATILE ORGANICS			
1,1,1-Trichloroethane	<	0.00600	
1,1,2,2-Tetrachloroethane	<	0.00600	
1,1,2-Trichloroethane	<	0.00600	
1,1-Dichloroethane	<	0.00600	
1,1-Dichloroethene	<	0.00600	
1,2-Dichloroethane	<	0.00600	
1,2-Dichloroethylene	<	0.00600	
1,2-Dichloropropane	<	0.00600	
2-Butanone	<	0.01200	
2-Hexanone	<	0.01200	
4-Methyl-2-pentanone	<	0.01200	
Acetone		0.05500	B
Benzene	<	0.00600	
Bromodichloromethane	<	0.00600	
Bromoform	<	0.00600	
Bromomethane	<	0.01200	
Carbon Tetrachloride	<	0.00600	
Carbon disulfide	<	0.00600	
Chlorobenzene	<	0.00600	
Chloroethane	<	0.01200	
Chloroform	<	0.00600	
Chloromethane	<	0.01200	

a = lab qualifiers

\- = Sample has not been validated

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ACTIVE FLYASH PILE
SEDIMENT HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well id, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		ASIT-007 009047 06/28/88 a	
Dibromochloromethane	<	0.00600	
Ethylbenzene	<	0.00600	
Methylene chloride		0.01600	B
Styrene	<	0.00600	
Tetrachlorethene	<	0.00600	
Toluene	<	0.00600	
Total xylenes	<	0.00600	
Trichloroethene	<	0.00600	
Vinyl Acetate	<	0.01200	
Vinyl chloride	<	0.01200	
cis-1,3-Dichloropropene	<	0.00600	
trans-1,3-Dichloropropene	<	0.00600	

a = lab qualifiers

- = Sample has not been validated

EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING GENERAL CHEMICAL RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

Concentration Qualifiers

B = Reported value was obtained from a reading that was less than the Contract Laboratory Program (CLP) Contract Required Detection Limit (CRQL), but greater than or equal to the Instrument Detection Limit (IDL).

Quality Qualifiers

E = The reported value is estimated because of the presence of interference.

M = Duplicate injection precision not met.

N = Spiked sample recovery not within controls limits.

S = The reported value was determined by the Method of Standard Additions.

W = Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

G = Native analyte > 4 times spike added; therefore acceptance criteria do not apply.

X = Detection limit is higher than normal due to sample matrix interferences.

* = Duplication analysis not within control limits.

+ = Correlation coefficient for the MSA is less than 0.955.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

ACTIVE FLYASH PILE
SEDIMENT GENERAL CHEMICAL RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	ASIT-007 009047 06/28/88		a
GENERAL CHEMISTRY			
Ammonia		50.4000	
Chloride		230.0000	
Fluoride		7.5800	
Hydrogen ion		NA	
Nitrate		2.7600	
Phenols	<	0.5000	
Phosphorus (black, white, red,		NA	
Phosphate as P		NA	
Sulfate		697.0000	
Total Kjeldahl Nitrogen		NA	
Total Organic Carbon		NA	
Total Organic Halides		NA	
Total Organic Nitrogen		355.0000	
Total Phosphorus		NA	
METALS			
Aluminum		8830.0000	
Antimony	<	0.1000	
Arsenic		5.4000	BS+
Barium		56.7000	
Beryllium		0.4000	B
Cadmium	<	0.2000	N
Calcium		63200.0000	
Chromium		12.5000	
Cobalt		8.1000	
Copper		16.1000	
Cyanide	<	0.9000	
Hexavalent Chromium		NA	
Iron		19000.0000	
Lead		12.0000	*
Magnesium		21600.0000	
Manganese		399.0000	
Mercury		1.3000	
Molybdenum	<	2.0000	N
Nickel		19.1000	
Potassium		871.0000	B
Selenium	<	0.3000	E
Silicon		NA	
Silver	<	0.1000	N
Sodium		130.0000	

a = lab qualifiers

- = Sample has not been validated

REPORT DATE : 29-APR-92

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TABLE E-6

SURFACE WATER ANALYSES
RI/FS SAMPLING PROGRAM
ACTIVE FLYASH PILE

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

ACTIVE FLYASH PILE
SURFACE WATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	ASIT-004 001128 03-21-1989	b	ASIT-004 001222 11-07-1989	b	DUPLICATE ASIT-004 001223 11-07-1989	b	ASIT-005 001130 03-21-1989	b
Actinium 231	NA		NA		NA		NA	
Cesium 137	NA		< 20.0	R	< 20.0	R	NA	
Lead 210	NA		NA		NA		NA	
Neptunium 237	NA		< 1.0		< 1.0		NA	
Plutonium 238	NA		< 1.0		< 1.0		NA	
Plutonium 239/240	NA		< 1.0		< 1.0		NA	
Polonium 210	NA		NA		NA		NA	
Protactium 234	NA		NA		NA		NA	
Radium 224	NA		NA		NA		NA	
Radium 226	< 1.0	R	< 1.0	R	< 1.0	R	150.0 ± 20.0	
Radium 228	< 3.0	R	< 3.0	R	< 3.0	R	< 3.0	R
Ruthenium 106	NA		< 150.0	R	< 150.0	R	NA	
Strontium 90	NA		< 5.0	R	< 5.0	R	NA	
Technetium 99	NA		< 30.0	R	< 30.0	R	NA	
Thorium 228	NA		< 1.0		< 1.0		NA	
Thorium 230	NA		< 1.0		< 1.0		NA	
Thorium 232	NA		< 1.0		< 1.0		NA	
Total Thorium **	NA		3.9 ± 1.7		< 4.7		NA	
Uranium 234	NA		26.0 ± 3.5		28.9 ± 4.4		58.0 ± 8.0	
Uranium 235/236	NA		1.9 ± 0.5		1.7 ± 0.6		NA	
Uranium 238	NA		43.3 ± 5.6		45.9 ± 6.7		NA	
Total Uranium **	61.0 ± 11.0		107.0 ± 15.0		98.0 ± 14.0		499.0 ± 83.0	MJ

** Results reported in ug/ℓ

b = Validation qualifiers

REPORT DATE : 5-MAY-92

560 122
3338

ACTIVE FLYASH PILE
SURFACE WATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	ASIT-005 001224 11-07-1989	b	DUPLICATE ASIT-005 001225 11-07-1989	b	ASIT-006 001137 03-30-1989	-	ASIT-007 001139 03-30-1989	-
Actinium 231	NA		NA		NA		NA	
Cesium 137	< 20.0	R	< 20.0	R	NA		NA	
Lead 210	NA		NA		NA		NA	
Neptunium 237	< 1.0		4.1 ± 0.7		NA		NA	
Plutonium 238	< 1.0		< 1.0		NA		NA	
Plutonium 239/240	< 1.0		< 1.0		NA		NA	
Polonium 210	NA		NA		NA		NA	
Protactium 234	NA		NA		NA		NA	
Radium 224	NA		NA		NA		NA	
Radium 226	< 1.0	R	< 1.0	R	< 1.0		< 1.0	
Radium 228	< 3.0	R	< 3.0	R	8.0 ± 4.0		< 3.0	
Ruthenium 106	< 150.0	R	< 150.0	R	NA		NA	
Strontium 90	< 5.0	R	< 5.0	R	NA		NA	
Technetium 99	< 30.0	R	< 30.0	R	NA		NA	
Thorium 228	< 1.0		< 1.0		NA		NA	
Thorium 230	< 1.0		< 1.0		NA		NA	
Thorium 232	< 1.0		< 1.0		NA		NA	
Total Thorium **	< 2.3		< 5.3		NA		NA	
Uranium 234	89.0 ± 13.0		99.0 ± 14.0		NA		NA	
Uranium 235/236	5.0 ± 1.3		4.9 ± 1.3		NA		NA	
Uranium 238	102.0 ± 15.0		111.0 ± 16.0	C	NA		NA	
Total Uranium **	274.0 ± 36.0		260.0 ± 35.0		9.0 ± 4.0		24.0 ± 4.0	

** Results reported in ug/ℓ

b = Validation qualifiers

- = Sample has not been validated

EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING GENERAL CHEMICAL RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

Concentration Qualifiers

B = Reported value was obtained from a reading that was less than the Contract Laboratory Program (CLP) Contract Required Detection Limit (CRQL), but greater than or equal to the Instrument Detection Limit (IDL).

Quality Qualifiers

E = The reported value is estimated because of the presence of interference.

M = Duplicate injection precision not met.

N = Spiked sample recovery not within controls limits.

S = The reported value was determined by the Method of Standard Additions.

W = Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

G = Native analyte > 4 times spike added; therefore acceptance criteria do not apply.

X = Detection limit is higher than normal due to sample matrix interferences.

* = Duplication analysis not within control limits.

+ = Correlation coefficient for the MSA is less than 0.955.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

ACTIVE FLYASH PILE
SURFACE WATER GENERAL CHEMICAL RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	ASIT-004 001128 03-21-1989	a	b	ASIT-005 001130 03-21-1989	a	b
GENERAL CHEMISTRY						
Ammonia	0.1880			0.1520		
Chloride	8.0000			15.0000		
Fluoride	0.6800			0.8000		
Hydrogen ion	NA			NA		
Nitrate	0.1200		J	0.4400		J
Phenols	< 0.0100			< 0.0100		
Phosphorus (black, white, red,	NA			NA		
Phosphate as P	NA			NA		
Sulfate	253.0000			327.0000		
Total Kjeldahl Nitrogen	1.9100			2.0300		
Total Organic Carbon	NA			NA		
Total Organic Halides	< 0.0500			< 0.0500		
Total Organic Nitrogen	1.7200			1.8800		
Total Phosphorous	0.8270			1.1000		
METALS						
Aluminum	NA			NA		
Antimony	NA			NA		
Arsenic	0.0067			0.0455		
Barium	0.0426			0.0633		
Beryllium	NA			NA		
Cadmium	< 0.0010			< 0.0010		
Calcium	73.0000			80.8000		
Chromium	0.0155			0.0224		
Cobalt	NA			NA		
Copper	0.0221			0.0161		
Cyanide	NA			NA		
Hexavalent Chromium	NA			NA		
Iron	0.2620			0.0475		
Lead	< 0.0020			0.0362		
Magnesium	155.0000			268.0000		
Manganese	0.1580			0.0023		
Mercury	0.0010			0.0002		
Molybdenum	0.0062			0.0183		
Nickel	0.0149			0.0122		
Potassium	2.4200			2.4200		
Selenium	0.0037		J	0.0291		J
Silicon	NA			NA		
Silver	< 0.0005			< 0.0005		
Sodium	87.8000			69.4000		

a = lab qualifiers

b = validation qualifiers

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TABLE E-7

BIOTA ANALYSES
RI/FS SAMPLING PROGRAM
ACTIVE FLYASH PILE

ACTIVE FLYASH PILE
BIOLOGICAL RADIOLOGICAL RESULTS

Results in picocuries per gramm (pCi/g).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	28 Forb Leaves 000202 10-28-1987	28 Forb Roots 000203 10-28-1987	28 Forb Leaves 000204 10-28-1987	28 Forb Roots 000205 10-28-1987
Actinium 231	NA	NA	NA	NA
Cesium 137	< 0.2	< 0.4	< 0.3	< 0.4
Lead 210	NA	NA	NA	NA
Neptunium 237	NA	NA	NA	NA
Plutonium 238	NA	NA	NA	NA
Plutonium 239/240	NA	NA	NA	NA
Polonium 210	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA
Radium 226	NA	NA	NA	NA
Radium 228	NA	NA	NA	NA
Ruthenium 106	NA	NA	NA	NA
Strontium 90	< 0.5	< 0.5	0.6 ± 0.5	< 0.6
Technetium 99	NA	NA	NA	NA
Thorium 228	NA	NA	NA	NA
Thorium 230	NA	NA	NA	NA
Thorium 232	NA	NA	NA	NA
Total Thorium **	NA	NA	NA	NA
Uranium 234	1.0 ± 0.3	16.1 ± 2.8	1.1 ± 0.4	4.4 ± 1.0
Uranium 235/236	< 0.6	1.6 ± 0.6	< 0.6	< 0.6
Uranium 238	1.2 ± 0.4	17.8 ± 3.1	1.6 ± 0.5	5.7 ± 1.3
Total Uranium **	NA	NA	NA	NA

* Data validation in progress.

** Results reported in mg/kg

ACTIVE FLYASH PILE
BIOLOGICAL RADIOLOGICAL RESULTS
RI/FS DATA*

Results in picocuries per gram (pCi/g).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	28 Small Mammal Carcasses 000333 08-15-1988	28 Small Mammal Muscle 000336 08-15-1988
Actinium 231	NA	NA
Cesium 137	< 2.0	< 0.7
Lead 210	NA	NA
Neptunium 237	NA	NA
Plutonium 238	NA	NA
Plutonium 239/240	NA	NA
Polonium 210	NA	NA
Protactium 234	NA	NA
Radium 224	NA	NA
Radium 226	NA	NA
Radium 228	NA	NA
Ruthenium 106	NA	NA
Strontium 90	< 0.5	< 0.5
Technetium 99	NA	< 0.9
Thorium 228	NA	NA
Thorium 230	NA	NA
Thorium 232	NA	NA
Total Thorium **	NA	NA
Uranium 234	< 0.6	< 0.6
Uranium 235/236	< 0.6	< 0.6
Uranium 238	< 0.6	< 0.6
Total Uranium **	NA	NA

* Data validation in progress.

** Results reported in mg/kg

REPORT DATE : 12-MAY-92

ACTIVE FLYASH PILE
BIOLOGICAL HAZARDOUS SUBSTANCE LIST RESULTS

Results in parts per million (ppm)
Data presented by well location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	28 Grass Leaves 000323 08-09-1988	28 Grass Roots 000324 08-09-1988	28 Small Mammal Carcass 000334 08-15-1988	28 Small Mammal Muscle 000336 08-15-1988
PESTICIDES				
4,4'-DDT	< 0.40000	< 0.40000	< 0.40000	< 0.40000
Aroclor-1016	< 0.80000	< 0.80000	< 0.80000	< 0.80000
Aroclor-1221	< 0.80000	< 0.80000	< 0.80000	< 0.80000
Aroclor-1232	< 0.80000	< 0.80000	< 0.80000	< 0.80000
Aroclor-1242	< 0.80000	< 0.80000	< 0.80000	< 0.80000
Aroclor-1248	< 0.80000	< 0.80000	< 0.80000	< 0.80000
Aroclor-1254	< 0.80000	< 0.80000	< 0.80000	< 0.80000
Aroclor-1260	< 0.80000	< 0.80000	< 0.80000	< 0.80000
SEMI-VOLATILE ORGANICS				
2-Nitrophenol	< 20.00000	< 10.00000	< 10.00000	< 10.00000
4-Nitrophenol	< 100.00000	< 50.00000	< 50.00000	< 50.00000
Anthracene	< 20.00000	< 10.00000	< 10.00000	< 10.00000
Butyl benzyl phthalate	< 20.00000	1.60000 J	< 10.00000	< 10.00000
Chrysene	< 20.00000	< 10.00000	< 10.00000	< 10.00000
Fluoranthene	< 20.00000	< 10.00000	< 10.00000	< 10.00000
Phenanthrene	< 20.00000	< 10.00000	< 10.00000	< 10.00000
Pyrene	< 20.00000	< 10.00000	< 10.00000	< 10.00000

*Data validation in progress

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REPORT DATE :12-MAY-92

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ACTIVE FLYASH PILE
BIOLOGICAL GENERAL CHEMICAL DATA

Results in parts per million (ppm).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	28 Grass Leaves 000323 08-09-1988	28 Carcass Roots 000324 08-09-1988	28 Small Mammal Carcass 000334 08-15-1988	28 Small Mammal Muscle 000336 08-15-1988
GENERAL CHEMISTRY				
Ammonia	NA	NA	NA	NA
Chloride	NA	NA	NA	NA
Fluoride	720.0000	15.0000	710.0000	540.0000
Hydrogen ion	NA	NA	NA	NA
Nitrate	NA	NA	NA	NA
Phenols	NA	NA	NA	NA
Phosphorus (black, white, red,	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA
Sulfate	1100.0000	67.0000	1700.0000	160.0000
Total Kjeldahl Nitrogen	NA	NA	NA	NA
Total Organic Carbon	NA	NA	NA	NA
Total Organic Halides	NA	NA	NA	NA
Total Organic Nitrogen	NA	NA	NA	NA
METALS				
Aluminum	2840.0000	1680.0000	42.0000	< 4.0000
Antimony	NA	NA	NA	NA
Arsenic	7.0000	11.0000	13.0000	8.0000
Barium	12.5000	24.9000	1.0000	< 0.2000
Beryllium	NA	NA	NA	NA
Cadmium	< 0.5000	< 0.5000	< 0.5000	< 0.5000
Calcium	NA	NA	NA	NA
Chromium	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA
Copper	NA	NA	NA	NA
Cyanide	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA
Iron	NA	NA	NA	NA
Lead	< 3.0000	4.0000	< 3.0000	< 3.0000
Magnesium	NA	NA	NA	NA
Manganese	NA	NA	NA	NA
Mercury	15.3000	67.1000	< 0.2000	0.2000
Molybdenum	NA	NA	NA	NA
Nickel	NA	NA	NA	NA
Potassium	NA	NA	NA	NA
Selenium	NA	NA	NA	NA
Silicon	NA	NA	NA	NA
Silver	< 0.5000	< 0.5000	< 0.5000	< 0.5000
Sodium	NA	NA	NA	NA

*Data validation in progress

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REPORT DATE : 12-MAY-92

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TABLE E-8

GEOTECHNICAL ANALYSES
RI/FS SAMPLING PROGRAM
ACTIVE FLYASH PILE

TABLE E-8

GEOTECHNICAL DATA FOR SURFACE MEDIA
RI/FS SAMPLING PROGRAM
ACTIVE FLYASH PILE

Location:	#1	#2	#3
North & East Coordinates	477435.57, 1379863.81	477238.26, 1380093.85	477286.09, 1379956.32
Wet Density (pcf)	74.3	51.7	68.8
Dry Density (pcf)	65.8	49.0	65.5
Moisture Content (%)	13.0	5.5	5.1

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TABLE E-8
(continued)

GEOTECHNICAL DATA FOR SUBSURFACE MEDIA
RI/FS SAMPLING PROGRAM
ACTIVE FLYASH PILE

Analysis	Grain Size (mm)	Sample Number 1724 67199	Sample Number 1724 67220
Moisture Content (%)		24.9	29.8
Specific Gravity		2.2488	2.2316
Percent Passing by Seive Analysis	75	100	100
	19	100	100
	9.5	92.6	99.5
	4.75	87.9	93.3
	2	77.9	84.2
	0.85	64.1	73.5
	0.425	53.5	65.2
	0.25	45.3	58.3
	0.106	32.7	46
	0.075	28.8	41.8
	37.5	100	100
Percent Passing by Hydrometer Analysis	0.0014	0	
	0.0015		0
	0.0035	1.1	3.3
	0.0049	4.4	6.6
	0.0069		9.9
	0.0070	6.6	
	0.0097		14.3
	0.0098	9.8	
	0.0133		19.9
	0.0135	15.3	
	0.0189		26.5
	0.0224	24.1	
	0.0345		33.1
	0.0349	29.5	
	0.0480	35	
	0.0648	40.5	45.3

TABLE E-9

BORING LOGS
RI/FS SAMPLING PROGRAM
ACTIVE FLYASH PILE

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1045	COORDINATES: NORTH 477,134.69 EAST 1,379,751.49	DATE: 10/06/87	
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/06/87	
ENGINEER/GEOLOGIST: D OAKLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 10/09/87	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF *EST	REMARKS
0.0	007201	10/06/87	1700	2 3 2		10	MEDIUM STIFF, VERY DARK GREY (7.5 YR N3), SILT AND SAND SIZED FLYASH, DRY. 1.1'-BLACK, SILT AND SAND SIZED FLY ASH, DRY.	ML ML	0.1* 0.1*	Hnu= 0 ppm α = 0 cpm Bγ = 40-80 cpm
3.0	007202	10/06/87	1710	1 3 7		11	BLACK (7.5YR N2), SILT AND SAND SIZED FLY ASH, DRY. STIFF, BLACK, SILT AND SAND SIZED FLY ASH, DRY. 2.5'-YELLOWISH BROWN (10YR 5/4), CLAY, SOME SILT, TRACE SAND, DRY.	ML ML CL	0.1 0.1 4.5+	Hnu= 0 ppm α = 0 cpm Bγ = 40-80 cpm
4.5	007203	10/06/87	1714	20 16 21		18	HARD, YELLOWISH BROWN (10YR 5/4), CLAY, SOME SILT, TRACE SAND, DRY.	CL	4.5+	Hnu= 0 ppm α = 0 cpm Bγ = 40-80 cpm
6.0	007204	10/06/87	1718	26 31 39		13	HARD, YELLOWISH BROWN (10YR 5/4), CLAY, SOME SILT, TRACE SAND, DRY. 5.5'-STIFF, YELLOWISH BROWN, CLAY, TRACE SILT AND SAND, DRY.	CL CL	4.5+ 4.5	Hnu= 0 ppm α = 0 cpm Bγ = 40-80 cpm
7.5	007205	10/06/87	1720	18 19 21		11	HARD, YELLOWISH BROWN (10YR 5/6), CLAY, TRACE SILT AND SAND, DRY.	CL	3.5	Hnu= 0 ppm α = 0 cpm Bγ = 40-80 cpm
9.0	007207	10/07/87	920	6 13 18		14	STIFF, DARK YELLOWISH BROWN (10YR 4/4), CLAY, TRACE SILT AND SAND, DRY.	CL	3.5	Hnu= 0 ppm α = 0 cpm Bγ = 40-80 cpm
10.5	007208	10/07/87	940	2 4 6		10	SOFT, DARK YELLOWISH BROWN (10YR 4/4), CLAY, SOME SILT, TRACE SAND, DRY.	CL	1.0	Hnu= 0 ppm α = 0 cpm Bγ = 40-80 cpm
12.0	007209 007210	10/07/87	1056	1 2 1		10	VERY SOFT, DARK YELLOWISH BROWN, CLAY AND SAND, DRY. SAND COARSER AT BOTTOM OF SPOON.	CL	0.2*	Hnu= 0 ppm α = 0 cpm Bγ = 40-80 cpm
13.5	007211	10/07/86	1108	7 9 9		3	VERY SOFT, DARK YELLOWISH BROWN, CLAY AND SAND, DRY. SAND COARSER AT BOTTOM OF SPOON. 12.2'-MEDIUM DENSE, YELLOWISH BROWN (10YR 5/6), COARSE SAND AND GRAVEL, SOME CLAY, DRY.	CL SW	0.2* 0.2*	Hnu= 0 ppm α = 0 cpm Bγ = 40-80 cpm
15.0	007212	10/07/86	1120	10 12 10		10	BROWNISH YELLOW (10YR 6/6), COARSE SAND AND GRAVEL, TRACE CLAY.	SW	0.2*	Hnu= 0 ppm α = 0 cpm Bγ = 40-80 cpm
16.5	007213	10/07/86	1150	15 11 8		11	MEDIUM DENSE, BROWNISH YELLOW (10YR 6/6), COARSE SAND AND GRAVEL, DRY.	SW	0.2*	Hnu= 0 ppm α = 0 cpm Bγ = 40-80 cpm
18.0	007214	10/07/86	1200	7 9 4		10	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), COARSE SAND AND GRAVEL.	SW	0.2*	Hnu= 0 ppm α = 0 cpm Bγ = 40-60 cpm

BOTTOM OF BORING 18.0

NOTES:
MONITORING WELL INSTALLED. DRILLING RIG CYCLONE 42; DRILLERS HARRY DYKES JR, JOHN VANDINE

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PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS	
BORING NUMBER: 1048	COORDINATES: NORTH 477,477.45 EAST 1,379,877.15	DATE: 10/13/87
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/13/87
ENGINEER/GEOLOGIST: WILL KEGLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 10/14/87
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	007216 10/13/87 0958	4 17 22	14	HARD, YELLOWISH BROWN (10YR 5/4), SILT, DRY.	ML	4.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
3.0	007217 007220 10/13/87 1545	12 29 50/5	11	HARD, VERY PALE BROWN (10YR 7/3), SILT, TRACE SAND, DRY.	ML	4.5+	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
4.5	007218 10/13/87 1115	27 33 50/5	15	HARD, LIGHT YELLOWISH BROWN (10YR 6/4), SILT, SOME CLAY, TRACE SAND, DRY.	ML	4.5+	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
6.0	007219 10/13/87 1135	50/4	6	HARD, LIGHT YELLOWISH BROWN (10YR 6/4), CLAY, SOME SILT, TRACE SAND, DRY.	CL	4.5+	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
7.5	007221 10/13/87 1750	5 22 27	13	VERY STIFF, BROWNISH YELLOW (10YR 6/6), CLAY, TRACE SILT, DRY. 7.0'-DENSE, BROWN (10YR 5/3), FINE SAND, CLAY, AND SILT, SOME GRAVEL, DRY.	CL GM	2.5 2.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
9.0	007222 10/13/87 1805	15 20 21	17	DENSE, YELLOWISH BROWN (10YR 5/4), FINE SAND AND SILT, DRY.	SM	1.0	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
10.5	007223 007224 10/14/87	6 9 12	13	PUSHED SHELBY TUBE 9.0-9.7 FT. VERY SOFT, YELLOWISH BROWN (10YR 5/4), SILT, SOME SAND, DRY.	ML	0.1	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
12.0	007225 10/14/87 1035	12 9 8	11	MEDIUM DENSE, YELLOWISH BROWN, SAND AND GRAVEL, SOME SILT, MOIST.	GM	0.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
13.5	007226 10/14/87 1055	6 10 14	10	VERY STIFF, GREY (10YR 5/1), SILT, SOME GRAVEL, SOME CLAY, DRY.	ML	3.0	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
15.0	007227 10/14/87 1115	7 16 20	13	VERY STIFF, GREY (10YR 5/1), SILT, SOME GRAVEL, SOME SAND, DRY.	ML	3.0	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
16.5	007228 10/14/87 1138	16 22 30	15	VERY STIFF, (10YR 5/1), SILT, SOME GRAVEL SOME SAND, DRY.	ML	3.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
18.0	007229 10/14/87 1350	7 16 25	11	MEDIUM STIFF, GREY (10YR 5/1), SILT, SOME GRAVEL, DRY. DENSE, BROWNISH YELLOW (10YR 6/8), FINE SAND AND SILT, SOME CLAY.	ML SM	1.0 3.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
19.5	007230 10/14/87 1415	23 36 41	15	VERY DENSE, BROWNISH YELLOW ((10YR 6/6), SAND, SOME GRAVEL, DRY.	GW	2.0	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm

BOTTOM OF BORING 19.5

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1048	COORDINATES: NORTH 477,477.45 EAST 1,379,877.15	DATE: 10/13/87	
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/13/87	
ENGINEER/GEOLOGIST: WILL KEGLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 10/14/87	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY		USCS	SYMBOL	TSF	REMARKS

NOTES:
MONITORING WELL INSTALLED.
RIG: CYCLONE 42 DRILLER: HARRY DYKES ASSISTANT: JOHN VANDINE

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1723	COORDINATES: NORTH 477,243.17 EAST 1,379,955.88	DATE:	
GROUND ELEVATION: 588.8	GWL: Depth N/A Date/Time N/A	DATE STARTED: 07/11/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 07/12/91	
DRILLING METHODS: MOBILE 53 AUGER		PAGE 1 OF 2	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67164 07/11/91 0945	1 5 5	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
3.0	67165 07/11/91 0950	8 14 15	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
4.5	67166 07/11/91 0955	10 11 12	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, TRACE CLAY, SLIGHTLY MOIST. 4.0'-MEDIUM DENSE, BLACK (2.5Y 2/), SILT, SOME GRAVEL, TRACE SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
6.0	67167 07/11/91 1000	10 10 10	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =80-100 cpm βΓ =0 cpm
7.5	67168 07/11/91 1025	8 10 11	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
9.0	67169 07/11/91 1030	11 12 15	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
10.5	67170 07/11/91 1035	15 15 16	18	DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, GRAVEL, SLIGHTLY MOIST. 9.75'-MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
12.0	67171 07/11/91 1040	16 16 13	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
13.5	67172 07/11/91 1330	14 18 22	14	DENSE, BLACK (2.5Y 2/) SILT, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
15.0	67173 07/11/91 1335	11 12 15	16	MEDIUM DENSE, BLACK (2.5Y 2/) SILT, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST, TRACE COBBLES.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
16.5	67174 07/11/91 1340	10 12 14	18	MEDIUM DENSE, BLACK (2.5Y 2/) SILT, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST, TRACE COBBLES.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
18.0	67175 07/11/91 1345	8 5 5	18	LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST, NO COBBLES.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
19.5	67176 07/11/91 1435	3 3 4	18	LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST, NO COBBLES.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1723	COORDINATES: NORTH 477,243.17 EAST 1,379,955.88	DATE:	
GROUND ELEVATION: 588.8	GWL: Depth N/A Date/Time N/A	DATE STARTED: 07/11/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 07/12/91	
DRILLING METHODS: MOBILE 53 AUGER		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS
21.0	67177	07/11/91 1440	2 3 3		18		LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST, NO COBBLES.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
22.5	67178	07/11/91 1445	2 3 3		10		21.0'-NO RECOVERY. 21.5'-LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, MOIST. 22.0'-LOOSE, YELLOWISH BROWN (10YR 4/6), SILTY CLAY, TRACE SAND, LOW PLASTICITY, MOIST.	N/A ML CL	N/A N/A N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
24.5	67179	07/11/91 1450	4 6 9		18		22.5'-NO RECOVERY. 23.0'-MEDIUM DENSE, YELLOWISH BROWN (10YR 4/6), SILTY CLAY, TRACE SAND, LOW PLASTICITY, MOIST. 23.5'-MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, VERY MOIST.	N/A CL ML	N/A N/A N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
24.5 26.0	67181	07/12/91 1000	10 10 15		0		NO RECOVERY.	N/A	N/A	N/A
27.5	67182	07/12/91 1005	15 11 7		18		HARD, DARK YELLOWISH BROWN (10YR 4/6), SILTY CLAY, SOME SAND, LOW PLASTICITY, MOIST.	CL	2.5	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
29.0	67183	07/12/91 1010	3 5 11		0		NO RECOVERY.	N/A	N/A	N/A
30.5	67184	07/12/91 1015	11 17 16		18		HARD, DARK YELLOWISH BROWN (10YR 4/6), SANDY CLAY, TRACE GRAVEL, MEDIUM PLASTICITY, MOIST.	CL	2.75	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm

BOTTOM OF BORING 30.5

NOTES:
DRILLING & SAMPLING ENDS AT 30.5 FT. BORING PLUGGED AND ABANDONED. FLY ASH ENDS AT APPROXIMATELY 26.0 FT.
ALL SAMPLES TAKEN ACCORDING TO OU-2 WORK PLAN: 67185-SRLP, 67186-TCLP, 67187-IGNITE ETC, 67188-ARCHIVE, 67189-TCLP DRUM

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PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS	
BORING NUMBER: 1724	COORDINATES: NORTH 477,239.70 EAST 1,379,830.96	DATE:
GROUND ELEVATION: 586.8	GWL: Depth N/A Date/Time N/A	DATE STARTED: 07/12/91
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 07/16/91
DRILLING METHODS: 53 MOBILE AUGER		PAGE 1 OF 3

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67190	07/13/91 1430	2 4 6	18	LOOSE, BLACK (2.5Y 2/) SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
3.0	67191	07/13/91 1435	6 6 9	18	MEDIUM DENSE, BLACK (2.5Y 2/) SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
4.5	67192	07/13/91 1440	9 7 7	18	MEDIUM DENSE, BLACK TO VERY DARK GRAY (2.5Y 2/ TO 10YR 3/1), SOME SAND, SOME GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
6.0	67193	07/13/91 1445	15 15 13	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
7.5	67194	07/13/91 1520	14 14 13	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
9.0	67195	07/13/91 1525	10 8 10	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
10.5	67196	07/13/91 1530	7 8 8	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
12.0	67197	07/13/91 1535	6 6 6	14	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND & GRAVEL, TRACE BROWN (10YR. 5/3) CLAYEY SILT.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
14.5	67199	07/14/91 0930	NA	30	MEDIUM DENSE, BLACK (2.5Y 2/) SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
16.0	67200	07/14/91 0935	8 5 3	16	LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
17.5	67201	07/14/91 0940	7 4 4	17	LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
19.0	67202	07/14/91 0945	3 3 3	18	LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
20.5	67203	07/14/91 0950	2 4 4	18	LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
22.0	67204	07/15/91 0915	3 3 5	18	LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1724	COORDINATES: NORTH 477,239.70 EAST 1,379,830.96	DATE:	
GROUND ELEVATION: 586.8	GWL: Depth N/A Date/Time N/A	DATE STARTED: 07/12/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 07/16/91	
DRILLING METHODS: 53 MOBILE AUGER		PAGE 2 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLER	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
23.5	67205	07/15/91 0920	4 4 4	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
25.0	67206	07/15/91 0925	3 4 3	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
26.5	67207	07/15/91 0930	5 4 7	18	MEDIUM DENSE, (2.5Y 2/) SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
28.0	67208	07/15/91 1000	6 3 2	18	MEDIUM DENSE, (2.5Y 2/) SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
29.5	67209	07/15/91 1005	5 2 2	18	MEDIUM DENSE, (2.5Y 2/) SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
31.0	67210	07/15/91 1010	3 4 4	16	MEDIUM DENSE, (2.5Y 2/) SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
32.5	67211	07/15/91 1015	2 2 5	16	MEDIUM DENSE, (2.5Y 2/) SILT, TRACE SAND, TRACE GRAVEL, DRY. 31.5'-MEDIUM DENSE, (2.5Y 2/) SILT, TRACE SAND, TRACE GRAVEL, TRACE ORGANICS, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
34.0	67212	07/15/91 1045	10 10 11	16	MEDIUM DENSE, (2.5Y 2/) SILT, TRACE SAND, TRACE GRAVEL, TRACE ORGANICS, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
35.5	67213	07/15/91 1050	6 6 7	16	MEDIUM DENSE, (2.5Y 2/) SILT, TRACE SAND, TRACE GRAVEL, TRACE ORGANICS, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
37.0	67214	07/15/91 1055	4 4 3	14	LOOSE, BLACK (2.5Y 2/) SILT ALTERNATING WITH BROWN (10YR 5/3) CLAYEY SILT, TRACE SAND & GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
38.5	67215	07/15/91 1100	2 2 3	0	NO RECOVERY.	N/A	N/A	N/A
40.0	67216	07/16/91 0900	7 10 8	0	NO RECOVERY.	N/A	N/A	N/A
41.5	67217	07/16/91 0905	5 5 8	10	FIRM, DARK YELLOWISH BROWN (10YR 4/6), SANDY CLAY, TRACE GRAVEL, MEDIUM PLASTICITY, MOIST.	CL	0.75	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm
43.0	67218	07/16/91 0910	9 13 13	14	FIRM, DARK YELLOWISH BROWN (10YR 4/6), SANDY CLAY, TRACE GRAVEL, MEDIUM PLASTICITY, MOIST.	CL	0.75	Hnu=0 ppm α =0 cpm βΓ =80-100 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1724	COORDINATES: NORTH 477,239.70 EAST 1,379,830.96	DATE:	
GROUND ELEVATION: 586.8	GWL: Depth N/A Date/Time N/A	DATE STARTED: 07/12/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 07/16/91	
DRILLING METHODS: 53 MOBILE AUGER		PAGE 3 OF 3	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS
44.5	67219	07/16/91	0915	12	10	13	0	NO RECOVERY.	N/A		N/A	N/A

BOTTOM OF BORING 44.5

NOTES:
DRILLING AND SAMPLING ENDS AT 44.5 FT. BORING PLUGGED AND ABANDONED. FLYASH ENDS AT APPROX 38 FT.
SAMPLES TAKEN ACCORDING TO OU-2 SAMPLING PLAN. #67220-5 GAL GEOTECH BUCKET, #67221-ARCHIVE, #67722-SRLP, #67223-IGNITE ETC, #67224-TCLP, #67225-TCLP DRUM, #67198-FIELD BLANK

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PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1726	COORDINATES: NORTH 477,317.49 EAST 1,380,039.59	DATE: 06/29/91	
GROUND ELEVATION: 591.2	GWL: Depth N/A Date/Time N/A	DATE STARTED: 06/29/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 07/02/91	
DRILLING METHODS: 53 MOBILE AUGER		PAGE 1 OF 2	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67143 06/29/91 1530	1 4 11	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =60-110 cpm
3.0	67144 06/29/91 1535	10 11 11	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =60-110 cpm
4.5	67145 06/29/91 1540	7 7 7	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =60-110 cpm
6.0	67146 06/29/91 1545	11 11 11	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =60-110 cpm
7.5	67147 07/01/91 0845	11 13 13	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, SOME SAND, SOME GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =60-110 cpm
9.0	67148 07/01/91 0850	7 7 7	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, SOME SAND, SOME GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =60-110 cpm
10.5	67149 07/01/91 0855	4 5 9	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =60-110 cpm
12.0	67150 07/01/91 0900	6 6 10	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =60-110 cpm
13.5	67151 07/01/91 0905	20 25 15	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =60-110 cpm
15.0	67152 07/01/91 0910	10 10 10	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =60-110 cpm
16.5	67153 07/01/91 0930	5 5 5	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =60-110 cpm
18.0	67154 07/01/91 0935	2 3 3	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =60-110 cpm
19.5	67155 07/01/91 0940	10 8 15	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, WET. 18.5'-FIRM, YELLOWISH BROWN (10YR 5/8), SILTY CLAY, TRACE ORGANICS, LOW PLASTICITY, MOIST.	ML CL	N/A 1.5	Hnu=0 ppm α =0 cpm Bγ =60-110 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1726	COORDINATES: NORTH 477,317.49 EAST 1,380,039.59	DATE: 06/29/91	
GROUND ELEVATION: 591.2	GWL: Depth N/A Date/Time N/A	DATE STARTED: 06/29/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 07/02/91	
DRILLING METHODS: 53 MOBILE AUGER		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
21.0	67156 07/01/91 0945		14 20 25	18	FIRM, YELLOWISH BROWN (10YR 5/8), SILTY CLAY, TRACE ORGANICS, SOME SAND, LOW PLASTICITY, MOIST.	CL	2.0	Hnu=0 ppm α =0 cpm βΓ =60-110 cpm

BOTTOM OF BORING 21.0

NOTES:
DRILLING AND SAMPLING ENDS AT 21.0 FT. BORING PLUGGED AND ABANDONED. ALL SAMPLES TAKEN ACCORDING TO OU-2 WORK PLAN; 67157-COMP TCLP, 67158-I/C/R/T, 67159-SRLP, 67160-ARCHIVE COMP, 67161-TREATABILITY, 67162-TCLP DC, 67173-FIELD BLANK.

PROJECT NUMBER: 602 3.16	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1820	COORDINATES: NORTH 477,414.33 EAST 1,379,888.20	DATE: 10/16/91	
GROUND ELEVATION: 576.5	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/16/91	
ENGINEER/GEOLOGIST: G MARSHALL	Depth N/A Date/Time N/A	DATE COMPLETED: 10/16/91	
DRILLING METHODS: SPLIT SPOON		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5		10/16/91	5 7 15	16.5	BLACK (2.5YR /), SILT, SOME SAND, SOME GRAVEL, TRACES OF BRICK, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-90 cpm
3.0	067503	10/16/91	15 18 23	18	BLACK (2.5YR /), SILT, SOME SAND, SOME GRAVEL, TRACES OF BRICK, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-90 cpm
4.5	067504	10/16/91	15 25 29	18	BLACK (2.5YR /), SILT, SOME SAND, SOME GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-90 cpm
6.0		10/16/91	19 20 21	16	BLACK (2.5YR /), SILT, SOME SAND, SOME GRAVEL, TRACE OF SHALE, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-90 cpm
7.5	067505	10/16/91	15 14 9	17	BLACK (2.5YR /), SILT, SOME SAND, SOME GRAVEL, TRACE OF BRICK, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-90 cpm
9.0	N/A	10/16/91	7 5 5	10	BLACK (2.5YR /), SANDY SILT, SOME GRAVEL, DRY. 8.3'-NO RECOVERY.	ML N/A	N/A N/A	Hnu=0 ppm α =0 cpm BΓ =50-90 cpm
10.5	067506	10/16/91	26 15 13	13	BLACK (2.5YR /), SANDY SILT, SOME GRAVEL, DRY. 9.5'-LIGHT YELLOWISH BROWN (10YR 6/4), WELL SORTED SAND, TRACE GRAVEL, DRY. 10.1'-NO RECOVERY.	ML CL N/A	N/A N/A N/A	Hnu=0 ppm α =0 cpm BΓ =50-90 cpm
12.0	067506	10/16/91	13 18 19	14	VERY STIFF, LIGHT YELLOWISH BROWN (10YR 6/4), SILTY CLAY, TRACE SAND, LOW PLASTICITY, MOIST. 11.7'-NO RECOVERY.	CL N/A	2.5 N/A	Hnu=0 ppm α =0 cpm BΓ =50-90 cpm
13.5		10/16/91	16 13 23	12	VERY STIFF, LIGHT YELLOWISH BROWN (10YR 6/4), SILTY CLAY, TRACE SAND, LOW PLASTICITY, MOIST. 13.0'-NO RECOVERY.	CL N/A	2.5 N/A	Hnu=0 ppm α =0 cpm BΓ =50-90 cpm

BOTTOM OF BORING 13.5

NOTES:
REDRILL OF BORING 1725. BORING PLUGGED AND ABANDONED. SAMPLE 067506 COMPOSITE OF 9.5-12.0 FT.

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PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1846	COORDINATES: NORTH 477,221.45 EAST 1,379,953.49	DATE: 02/22/92	
GROUND ELEVATION: 590.2	GWL: Depth N/A Date/Time N/A	DATE STARTED: 02/22/92	
ENGINEER/GEOLOGIST: KEN MARION	Depth N/A Date/Time N/A	DATE COMPLETED: 02/22/92	
DRILLING METHODS: 8" HOLLOW STEM AUGER		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	67701	02/22/92 1050	2 4 5	16	LOOSE, BLACK (2.5Y 2/0) SILT (FLYASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =20 cpm
3.0	67702	02/22/92 1058	5 7 7	18	MEDIUM DENSE, BLACK (2.5Y 2/0) SILT (FLYASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =20 cpm
4.5	67703	02/22/92 1110	7 10 9	7	MEDIUM DENSE, BLACK (2.5Y 2/0) SILT (FLYASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =20 cpm
6.0	67704	02/22/92 1253	7 7 6	13	MEDIUM DENSE, BLACK (2.5Y 2/0) SILT (FLYASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =20 cpm
7.5	67705 67706	02/22/92 1302	5 6 7	18	MEDIUM DENSE, BLACK (2.5Y 2/0) SILT (FLYASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), ONE GRAVEL SIZE PIECE OF COAL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =20 cpm
9.0	67707	02/22/92 1325	6 8 8	18	MEDIUM DENSE, BLACK (2.5Y 2/0) SILT (FLYASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =20 cpm
10.5	67708	02/22/92 1425	26 12 8	18	MEDIUM DENSE, BLACK (2.5Y 2/0) SILT (FLYASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =20 cpm
12.0	67709	02/22/92 1435	6 7 12	18	MEDIUM DENSE, BLACK (2.5Y 2/0), SILT (FLYASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =20 cpm
13.5	67710	02/22/92 1440	10 12 17	18	MEDIUM DENSE, BLACK (2.5Y 2/0), SILT (FLYASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =20 cpm
15.0	67711	02/22/92 1445	10 12 8	18	MEDIUM DENSE, BLACK (2.5Y 2/0), SILT (FLYASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), TRACE BRICK FRAGMENTS, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =20 cpm

BOTTOM OF BORING 15.0

NOTES:
BORING PLUGGED AND ABANDONED.
THIS IS A REPLACEMENT BORING FOR BORING 1723.

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PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2045	COORDINATES: NORTH 477,129.91 EAST 1,379,760.54	DATE: 12/05/88	
GROUND ELEVATION: 545.4	GWL: Depth 27.8 Date/Time 12/07/88 @ 0820	DATE STARTED: 12/05/88	
ENGINEER/GEOLOGIST: W A HERTELL	Depth N/A Date/Time N/A	DATE COMPLETED: 12/08/88	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
21.5 23.0	008945 12/05/88 1617		11 15 77	10	VERY DENSE, GREY (10YR 5/1), SILTY SAND WITH GRAVELS, APPROX 20% GRAVEL, DRY.	SW	N/A	Hnu= 0 ppm BΓ = 40-80 cpm
25.0 26.5	008946 12/06/88 0755		29 48 52	12	VERY DENSE, GREY (10YR 3/2) GRADES TO YELLOWISH BROWN (10YR 5/6) SILTY SAND, WITH APPROX 10% GRAVEL.	SW	N/A	Hnu= 0 ppm BΓ = 40-80 cpm
30.0 31.5	008947 12/06/88 1020		38 61 74	12	VERY DENSE, BROWN (2.5Y 5/6), WELL GRADED, GRAVELLY SAND, CLEAN, WITH LESS THAN 10 % GRAVEL M-CGR SAND SUBROUNDED TO ROUNDED.	SW	N/A	Hnu= 0 ppm BΓ = 60-80 cpm
35.0 36.5	008948 12/06/88 1115		16 24 37	12	VERY DENSE, BROWN (10YR 5/6), MEDIUM TO CGR SAND, SUBANGULAR TO ROUNDED, POORLY GRADED, GRAVELLY SAND.	SP	N/A	Hnu= 0 ppm BΓ = 60-80 cpm
40.0 41.5	008949 12/06/88 1450		24 28 46	12	VERY DENSE, GREYISH BROWN (10YR 5/2), FINE GRAVEL AND SAND.	SW	N/A	Hnu= 0 ppm BΓ = 60-80 cpm

BOTTOM OF BORING 45.0

NOTES:
BORING ENDS AT 45.0 FT. SAMPLING ENDS AT 41.5 FT.
SAMPLES COLLECTED PER ASTM STANDARD PENETRATION TEST. COLORS IDENTIFIED USING MUNSELL COLOR CHART.

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PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2048	COORDINATES: NORTH 477,480.23 EAST 1,379,866.55	DATE: 11/20/88	
GROUND ELEVATION: 571.5	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/20/88	
ENGINEER/GEOLOGIST: D HOEKSTRA	Depth N/A Date/Time N/A	DATE COMPLETED: 12/03/88	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
25.0 26.5	020490	11/20/88 1640	15 41 50	8	DENSE, YELLOWISH BROWN (10YR 5/3), POORLY GRADED, FINE SAND, WITH SOME 1/4" GRAVEL, DRY.	SP	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 60 cpm
30.0 31.5	020491	11/21/88 1440	11 17 21	9	DENSE, YELLOWISH BROWN (10YR 5/3), POORLY GRADED, FINE SAND, NO FINES, MAXIMUM SIZE 1/16", DRY TO MOIST.	SP	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 60 cpm
35.0 36.5	020492	11/21/88 1605	26 50/4 50/4	10	VERY DENSE, YELLOWISH BROWN (10YR 5/3), POORLY GRADED, FINE SAND, TRACE COARSE SAND AND FINE GRAVEL, MOIST.	SP	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 50 cpm
40.0 41.5	020493	11/21/88 1630	23 38 41	6	VERY DENSE, YELLOWISH BROWN (10YR 5/3), WELL GRADED, FINE SAND TO 1/4" GRAVEL, DRY TO MOIST.	SW	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 60 cpm
45.0 46.5	020494	11/22/88 0845	16 50 50/3	5	VERY DENSE, YELLOWISH BROWN (10YR 5/3), WELL GRADED, SAND, FINE TO 1/8", MOIST.	SW	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 40 cpm
50.0 51.5	020495	11/22/88 0930	14 25 33	8	VERY DENSE, YELLOWISH BROWN (10YR 4/3), POORLY GRADED, MEDIUM SAND, SOME COARSE SAND AND 1/4" GRAVEL, MOIST.	SP	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 50 cpm
55.0 56.5	020496	11/22/88 1030	27 49 57		VERY DENSE, YELLOWISH BROWN (10YR 4/3), WELL GRADED SAND, FINE TO 1/4" GRAVEL, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 50 cpm
60.0 61.5	020497	11/22/88 1135	12 41 45	11	VERY DENSE, GREY-BROWN (10YR 5/2), MEDIUM TO COARSE SAND, SOME ROUND FINE TO COARSE GRAVEL, TRACE SILT, POORLY SORTED, POORLY GRADED, WET.	SW	N/A	Hnu=0 ppm α =0-5 cpm Bγ =120-140 cpm
65.0 66.5	020498	11/30/88 1123	3 8 15	12	MEDIUM DENSE, GREY BROWN (10YR 5/2), WELL GRADED SAND, WET.	SW	N/A	Hnu=0 ppm α =0-5 cpm Bγ =120-140 cpm

BOTTOM OF BORING 68.0

NOTES:
BORING ENDS AT 68.0 FT. SAMPLING ENDS AT 66.5 FT.
SAMPLES COLLECTED PER ASTM STANDARD PENETRATION TEST. COLORS IDENTIFIED USING MUNSELL COLOR CHART.

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PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS	
BORING NUMBER: 3045	COORDINATES: NORTH 477,139.87 EAST 1,379,742.30	DATE: 05/07/90
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/07/90
ENGINEER/GEOLOGIST: M GARMAN	Depth N/A Date/Time N/A	DATE COMPLETED: 05/17/90
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
45.0 46.5	032597 05/07/90 1050		4 16 23	18	DENSE, DARK GREYISH BROWN (10YR 4/2), WELL GRADED SAND, SOME SILT, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 60 cpm
50.0 51.5	032598 05/07/90 1117		6 6 6	14	MEDIUM DENSE, BROWN (10YR 5/3), WELL GRADED SAND, TRACE SILT, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 80 cpm
55.0 56.5	032599 05/07/90 1340		11 14 15	17	MEDIUM DENSE, BROWN (10YR 4/3), WELL GRADED SAND, SOME SILT, TRACE GRAVEL, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 80 cpm
60.0 61.5	032600 05/07/90 1405		6 15 8	15	MEDIUM DENSE, BROWN (10YR 5/3), WELL GRADED SAND, SOME FINE GRAVEL, TRACE SILT, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 60 cpm
65.0 66.5	032601 05/07/90 1530		24 20 25	18	DENSE, BROWN (10YR 5/3), WELL GRADED SAND, SOME SILT (9 IN TK), WET, GRADING TO (10YR 5/3) FINE SAND WITH SOME SILT, WET (9 IN TK).	SW SP	N/A N/A	Hnu= 0 ppm α = 0 cpm Bγ = 80 cpm
70.0 71.5	032602 05/08/90 0855		5 5 7	12	MEDIUM DENSE, BROWN (10YR 5/3), GRAVELLY SAND, WELL GRADED, TRACE SILT, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 70 cpm
75.0 76.5	032603 05/08/90 1050		26 37 35	18	VERY DENSE, DARK GREYISH BROWN (10YR 4/2), GRAVELLY SAND, WELL GRADED, SOME SILT, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 50 cpm
80.0 81.5	032604 05/08/90 1127		16 16 16	18	DENSE, BROWN (10YR 5/3), WELL GRADED SAND, TRACE SILT, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 80 cpm
85.0 86.5	032605 05/08/90 1447		12 13 13	16	MEDIUM DENSE, DARK GREYISH BROWN (10YR 4/2), WELL GRADED SAND, TRACE GRAVEL, TRACE SILT, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 60 cpm
90.0 91.5	032606 05/08/90 1550		3 4 6	N/A	NO RECOVERY - IN BLOW SAND, 2ND ATTEMPT.	N/A	N/A	N/A
95.0 96.5	032607 05/08/90 1710		31 39 40	18	VERY DENSE, DARK GREY (10YR 4/1), WELL GRADED SAND, SOME SILT, TRACE GRAVEL, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 80 cpm
100.0 101.5	032608 05/09/90 0840		14 17 18	12	DENSE, DARK GREY (5Y 4/1), SILT, GRADING FROM SANDY SILT TO A SILT WITH SOME CLAY AT 101.5 FT, WET.	ML	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 70 cpm
105.0 106.5	032609 05/09/90 1046		14 25 50/4	16	VERY DENSE, DARK GREY (5Y 4/1), SILT, TRACE SAND, TRACE GRAVEL, WET.	ML	N/A	Hnu= 0 ppm α = 0 cpm Bγ = 90 cpm

BOTTOM OF BORING 106.5

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3045	COORDINATES: NORTH 477,139.87 EAST 1,379,742.30	DATE: 05/07/90	
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/07/90	
ENGINEER/GEOLOGIST: M GARMAN	Depth N/A Date/Time N/A	DATE COMPLETED: 05/17/90	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS

NOTES:
SAMPLES COLLECTED PER ASTM STANDARD PENETRATION TEST. COLORS IDENTIFIED USING MUNSELL COLOR CHART.
MONITORING WELL INSTALLED.

APPENDIX
F

APPENDIX F

INACTIVE FLYASH PILE DATA TABLES

LIST OF DATA TABLES
INACTIVE FLYASH PILE

Table	Title
F-1	Surface Media Analyses: Environmental Survey
F-2	Surface Media Analyses: Characterization Investigation Study
F-3	Surface Media Analyses: RI/FS Sampling Program
F-4	Subsurface Media Analyses: Environmental Survey
F-5	Subsurface Media Analyses For Radionuclides: Boring Profile Samples: Characterization Investigation Study
F-6	Subsurface Media Analyses: Boring Composite Samples: Characterization Investigation Study
F-7	Subsurface Media Analyses: RI/FS Sampling Program
F-8	Hazardous Characteristic Data For Subsurface Media: RI/FS Sampling Program
F-9	Drainage Sediment Analyses: Characterization Investigation Study
F-10	Drainage Sediment Analyses: RI/FS Sampling Program
F-11	Surface Water Analyses: RI/FS Sampling Program
F-12	Groundwater Analyses: RI/FS Sampling Program
F-13	Biota Analyses: RI/FS Sampling Program
F-14	Geotechnical Analyses: RI/FS Sampling Program
F-15	Boring Logs: Characterization Investigation Study
F-16	Boring Logs: RI/FS Sampling Program
F-17	Groundwater Elevations: RI/FS Sampling Program
F-18	Monitoring Well Installation Records: RI/FS Sampling Program

TABLE F-1

SURFACE MEDIA ANALYSES
ENVIRONMENTAL SURVEY
INACTIVE FLYASH PILE

TABLE F-1

SURFACE MEDIA ENVIRONMENTAL SURVEY
INACTIVE FLYASH PILE AREA

Analyte	FE0111SS	FE0113SS	FE0114SS
Asbestos	ND	ND	ND
TCLP Metals (mg/ℓ)			
Silver	<0.1	<0.1	<0.1
Arsenic	<0.5	<0.5	<0.5
Barium	0.46 B	0.55 B	0.47 B
Cadmium	<0.02	<0.02	<0.02
Chromium	<0.03	<0.03	<0.03
Mercury	<0.001	<0.001	<0.001
Lead	<0.3	<0.3	<0.3
Selenium	<0.5	<0.5	<0.5
Volatile Organic Compounds (µg/kg)			
1,1,1-Tricloroethane	<5	<5	<5
1,1,2,2-Tetrachloroethane	<5	<5	<5
1,1,2-Trichloroethane	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5
1,2-Dichloroethane	<5	<5	<5
1,2-Dichloropropane	<5	<5	<5
2-Butanone	11 B	8 BJ	10 B
2-Chloroethylvinyl Ether	<10	<10	<10
2-Hexanone	<10	<10	<10
4-Methyl-2-pentanone	<10	<10	<10
Acetone	100 Z5	24 B	21 B
Benzene	<5	<5	<5
Bromodichloromethane	<5	<5	<5
Bromoform	<5	<5	<5
Bromomethane	<10	<10	<10
Carbon disulfide	<5	<5	<5
Carbon tetrachloride	<5	<5	<5
Chlorobenzene	<5	<5	<5
Chloroethane	<10	<10	<10
Chloroform	4 BJ	4 BJ	2 BJ
Chloromethane	<10	<10	<5
Cis-1,3-dichloropropene	<5	<5	<5
Dibromochloromethane	<5	<5	<5
Ethyl benzene	<5	<5	<5
Methylene chloride	100 Z5	42	30 B
Styrene	<5	<5	<5
Tetrachloroethene	<5	<5	<5
Toluene	20	10 B	6 B
Total xylenes	<5	<5	<5

TABLE F-1
(continued)

Analyte	FE0111SS	FE0113SS	FE0114SS
Trans-1,2-dichloroethene	<5	<5	<5
Trans-1,3-dichloropropene	<5	<5	<5
Trichlorothene	<5	<5	<5
Vinyl acetate	<10	<10	<10
Vinyl chloride	<10	<10	<10
PCBs (mg/kg)			
Aroclor-1242	NA	NA	NA
Aroclor-1248	NA	NA	NA
Aroclor-1254	NA	NA	NA
Aroclor-1260	NA	NA	NA
Radionuclides (pCi/g)			
Bismuth-214	1.2±0.04	0.1±0.1	1.0±0.1
Cesium-137	0.07±0.02	0.44±0.04	B
Radium-226	1.2±0.1G	0.89±0.06G	1.0±0.1
Thorium-228	1.0±0.05G	1.2±0.1G	1.0±0.1G
Thorium-232	1.1±0.1G	1.0±0.1G	1.0±0.1G
Uranium-235	0.16±0.01	N	N
Uranium-238	N	N	N
Total Uranium (mg/kg)	4.8	9.7	4.5

NA = Not Analyzed
N = Nuclide not identified by GAMANAL analysis as being present in the sample; no value reported
I = Nuclide identified by GAMANAL analysis of sample spectrum, but values did not exceed room background at the 95% confidence level; no value reported
B = Analyte was found in the blank as well as the sample
J = Estimated value of compound present but less than the specified detection limit
G = Gamma Spectroscopy Analysis
ND = None Detected
Z5 = The samples exhibited low internal standard recovery due to the retention properties of the matrix. The reported detection limits are for soil samples and should not be used as the minimum attainable limits

TABLE F-2

SURFACE MEDIA ANALYSES
CHARACTERIZATION INVESTIGATION STUDY
INACTIVE FLYASH PILE

NOTES:

- CIS data not applicable to OU2 waste unit has been shaded

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	* RADIONUCLIDE	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	RU-106	<	9.00	
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	SR-90	<	.90	
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	TC-99	<	.40	
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	TH-228	=	3.40	.70
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	TH-230	=	123.00	8.00
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	TH-232	=	3.40	.70
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	U-234	=	491.00	10.00
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	U-235	=	20.00	2.00
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	U-238	=	500.00	10.00
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	CS-137	<	.80	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	NP-237	<	.10	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	PB-210	=		
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	PU-238	<	.10	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	PU-239/240	<	.10	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	RA-226	<	8.75	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	RA-228	=		
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	RU-106	<	5.00	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	SR-90	<	.40	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	TC-99	<	.60	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	TH-228	=	2.20	.80
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	TH-230	=	.90	.60
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	TH-232	=	2.40	.80
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	U-234	=	254.00	3.00
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	U-235	=	40.00	1.00
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	U-238	=	216.00	3.00
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	CS-137	<	.50	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	NP-237	<	.10	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	PB-210	=		
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	PU-238	<	.10	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	PU-239/240	<	.10	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	RA-226	<	4.21	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	RA-228	=		
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	RU-106	<	5.00	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	SR-90	<	.80	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	TC-99	<	.50	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	TH-228	=	4.80	.30
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	TH-230	=	1.20	.50
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	TH-232	=	5.30	.80
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	U-234	=	99.00	1.00
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	U-235	=	4.20	.30
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	U-238	=	94.00	1.00

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	* RADIONUCLIDE	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	TH-228	=	.40	.20
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	TH-230	=	44.00	2.00
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	TH-232	=	.40	.20
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	U-234	=	14.00	1.00
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	U-235	=	.60	.10
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	U-238	=	15.00	1.00
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	CS-137	<	.50	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	NP-237	<	.10	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	PB-210	=		
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	PU-238	<	.10	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	PU-239/240	<	.10	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	RA-226	<	5.69	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	RA-228	=		
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	RU-106	<	6.00	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	SR-90	<	.50	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	TC-99	<	.40	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	TH-228	=	129.00	4.00
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	TH-230	=	21.00	2.00
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	TH-232	=	130.00	4.00
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	U-234	=	31.00	1.00
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	U-235	=	1.40	.20
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	U-238	=	29.00	1.00
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	CS-137	<	.20	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	NP-237	<	.10	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	PB-210	=		
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	PU-238	<	.10	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	PU-239/240	<	.10	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	RA-226	<	2.35	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	RA-228	=		
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	RU-106	<	2.00	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	SR-90	<	.80	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	TC-99	<	.40	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	TH-228	=	3.60	.50
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	TH-230	=	1.60	.30
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	TH-232	=	2.90	.50
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	U-234	=	114.00	2.00
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	U-235	=	5.80	.40
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	U-238	=	92.00	2.00
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	CS-137	<	.50	
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	NP-237	<	.10	
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	PB-210	=		

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	PB-210	=		
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	PU-238	<	.10	
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	PU-239/240	<	.10	
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	RA-226	=	1.50	.75
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	RA-228	=		
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	RU-106	<	2.00	
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	SR-90	<	.80	
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	TC-99	<	1.00	
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	TH-228	=	1.90	.20
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	TH-230	=	7.10	.40
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	TH-232	=	2.40	.20
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	U-234	=	117.00	2.00
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	U-235	=	4.90	.30
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	U-238	=	124.00	2.00
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	CS-137	<	.80	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	NP-237	<	.10	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	PB-210	=		
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	PU-238	<	.10	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	PU-239/240	<	.10	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	RA-226	=	48.88	3.06
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	RA-228	=		
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	RU-106	<	4.00	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	SR-90	<	.70	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	TC-99	<	.40	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	TH-228	<	.90	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	TH-230	=	59.00	4.00
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	TH-232	<	.40	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	U-234	=	82.00	1.00
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	U-235	=	1.90	.20
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	U-238	=	40.00	1.00
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	CS-137	<	.40	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	NP-237	<	.10	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	PB-210	=		
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	PU-238	<	.10	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	PU-239/240	<	.10	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	RA-226	=	16.70	2.00
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	RA-228	=		
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	RU-106	<	3.00	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	SR-90	<	.50	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	TC-99	<	.40	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	TH-228	<	.10	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	TH-230	=	.10	.10
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	TH-232	<	.10	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	U-234	=	44.00	1.00
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	U-235	=	1.90	.20
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	U-238	=	42.00	1.00
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	CS-137	<	.90	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	NP-237	<	.10	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	PB-210	=		
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	PU-238	<	.10	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	PU-239/240	=	1.50	.40
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	RA-226	<	29.30	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	RA-228	=		
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	RU-106	<	9.00	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	SR-90	<	.40	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	TC-99	=	594.00	51.00
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	TH-228	<	.10	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	TH-230	=	.50	.10
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	TH-232	<	.10	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	U-234	=	11400.00	100.00
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	U-235	=	2190.00	30.00
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	U-238	=	8600.00	100.00
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	CS-137	<	.30	
25	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	NP-237	<	.10	
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	PB-210	=		
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	PU-238	<	.10	
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	PU-239/240	<	.10	
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	RA-226	=	13.12	.97
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	RA-228	=		
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	RU-106	<	2.00	
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	SR-90	<	.80	
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	TC-99	<	.40	
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	TH-228	=	.40	.20
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	TH-230	=	69.00	2.00
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	TH-232	=	.20	.20
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	U-234	=	12.00	1.00
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	U-235	=	.40	.10
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	U-238	=	14.00	1.00
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	CS-137	<	.20	
	FMP-SL-25-014	1379946.30	476990.37	.50	1.00	856.0	NP-237	<	.10	
	FMP-SL-25-014	1379946.30	476990.37	.50	1.00	856.0	PB-210	=		
	FMP-SL-25-014	1379946.30	476990.37	.50	1.00	856.0	PU-238	<	.20	
	FMP-SL-25-014	1379946.30	476990.37	.50	1.00	856.0				

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

TABLE F-3

SURFACE MEDIA ANALYSES
RI/FS SAMPLING PROGRAM
INACTIVE FLYASH PILE

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

INACTIVE FLYASH PILE
SURFACE MEDIA RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	N 478000 E 1379000 005017 0 - 2				b
Actinium 231		NA			
Cesium 137		0.7	±	0.2	
Lead 210		NA			
Neptunium 237	<	0.6			
Plutonium 210		NA			
Plutonium 238	<	0.6			
Plutonium 239/240	<	0.6			
Protactium 234		NA			
Radium 224		NA			
Radium 226		1.4	±	0.4	
Radium 228	<	1.0			
Ruthenium 106	<	1.5			
Strontium 90	<	0.5			
Technetium 99	<	1.1			
Thorium 228		0.9	±	0.3	
Thorium 230		5.3	±	1.0	
Thorium 232		1.8	±	0.5	
Total Thorium **		NA			
Uranium 234		5.1	±	1.0	
Uranium 235		NA			
Uranium 235/236	<	0.6			
Uranium 238		4.9	±	1.0	
Total Uranium **		NA			

** Results reported in mg/kg or µg/ℓ.

b = validation qualifiers

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TABLE F-4

SUBSURFACE MEDIA ANALYSES
ENVIRONMENTAL SURVEY
INACTIVE FLYASH PILE

TABLE F-4

SUBSURFACE MEDIA ENVIRONMENTAL SURVEY
INACTIVE FLYASH PILE AREA

Analyte	FEO604WP	FEO605WP	FEO607WP	FEO608WP	FEO609WP
Asbestos	ND	ND	ND	ND	ND
TCLP Metals (mg/ℓ)					
Silver	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic	<0.5	<0.5	<0.5	<0.5	<0.5
Barium	0.61	0.73	0.37	1.22	1.15
Cadmium	<0.02	<0.02	<0.02	<0.02	<0.02
Chromium	<0.03	<0.03	<0.03	<0.03	<0.03
Mercury	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	<0.3	<0.3	<0.3	<0.3	<0.3
Selenium	<0.5	<0.5	<0.5	<0.5	<0.5
Volatile Organic Compounds (µg/kg)					
1,1,1-Tricloroethane	<5	<5	<5	100	84
1,1,2,2-Tetrachloroethane	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	<5	<5	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5	<5	<5
1,2-Dichloroethane	<5	<5	<5	<5	<5
1,2-Dichloropropane	<5	<5	<5	<5	<5
2-Butanone	<10	<10	<10	<10	<10
2-Chloroethylvinyl Ether	<10	<10	<10	<10	<10
2-Hexanone	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	<10	<10	<10	<10	<10
Acetone	24 B	<10	50 B	<10	<10
Benzene	<5	<5	<5	<5	<5
Bromodichloromethane	<5	<5	<5	<5	<5
Bromoform	<5	<5	<5	<5	<5
Bromomethane	<10	<10	<10	<10	<10
Carbon disulfide	<5	<5	<5	<5	<5
Carbon tetrachloride	<5	<5	<5	<5	<5
Chlorobenzene	<5	<5	<5	<5	<5
Chloroethane	<10	<10	<10	<10	<10
Chloroform	<5	<5	<5	<5	<5
Chloromethane	<10	<10	<10	<10	<5
Cis-1,3-dichloropropene	<5	<5	<5	<5	<5
Dibromeochloromethane	<5	<5	<5	<5	<5
Ethyl benzene	<5	<5	<5	<5	<5
Methylene chloride	110	52	21 B	28 B	27
Styrene	<5	<5	<5	<5	<5
Tetrachloroethene	<5	<5	<5	<5	<5
Toluene	<5	60	<5	<5	34
Total xylenes	<5	<5	<5	<5	<5

TABLE F-4
(continued)

Analyte	FEO604WP	FEO605WP	FEO607WP	FEO608WP	FEO609WP
Trans-1,2-dichloroethene	<5	<5	<5	<5	<5
Trans-1,3-dichloropropene	<5	<5	<5	<5	<5
Trichlorothene	<5	<5	<5	<5	<5
Vinyl acetate	<10	<10	<10	<10	<10
Vinyl chloride	<10	<10	<10	<10	<10
PCBs (mg/kg)					
Aroclor-1242	NA	NA	NA	NA	NA
Aroclor-1248	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA
Radionuclides (pCi/g)					
Bismuth-214	1.4±0.1	1.9±0.2	2.4±0.2	2.1±0.1	1.6±0.1
Cesium-137	I	I	I	I	I
Radium-226	1.2±0.1G	1.7±0.1G	2.4±0.2G	1.8±0.1G	1.5±0.1G
Thorium-228	1.2±0.1G	2.2±0.2G	2.4±0.2G	2.2±0.1G	2.2±0.1G
Thorium-232	0.94±0.12G	2.2±0.3G	2.4±0.4G	2.1±0.1G	2.2±0.1G
Uranium-235	N	N	N	N	N
Uranium-238	I	N	N	N	I
Total Uranium (mg/kg)	17.0	12.0	9.4	8.4	10.0

ND = None Detected
NA = Not Analyzed
N = Nuclide not identified by GAMANAL analysis as being present in the sample; no value reported
I = Nuclide identified by GAMANAL analysis of sample spectrum, but values did not exceed room background at the 95% confidence level; no value reported
B = Analyte was found in the blank as well as the sample
G = Gamma Spectroscopy Analysis

TABLE F-5

SUBSURFACE MEDIA ANALYSES FOR RADIONUCLIDES
BORING PROFILE SAMPLES
CHARACTERIZATION INVESTIGATION STUDY
INACTIVE FLYASH PILE

NOTES:

- CIS data not applicable to OU2 waste unit has been deleted.

Mon Nov 23

Activity Concentrations Of Upper Fly Ash Area Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
24-09	8.00	9.00	RA-226	=	1.20	.80
	8.00	9.00	TH-232	=	2.60	.70
	8.00	9.00	U-238	=	10.70	4.20
	9.00	10.00	RA-226	=	.90	.50
	9.00	10.00	TH-232	=	.80	.40
	9.00	10.00	U-238	=	6.30	3.70
	10.00	11.00	RA-226	<	1.80	
	10.00	11.00	TH-232	=	.90	.40
	10.00	11.00	U-238	<	7.10	
	11.00	12.00	RA-226	=	.90	.30
	11.00	12.00	TH-232	<	1.60	
	11.00	12.00	U-238	<	10.50	
	12.00	13.00	RA-226	=	.70	.30
	12.00	13.00	TH-232	<	2.50	
	12.00	13.00	U-238	<	8.30	
	13.00	14.00	RA-226	=	.80	.60
	13.00	14.00	TH-232	=	.80	.40
	13.00	14.00	U-238	<	9.00	
24-10	.00	1.00	RA-226	<	1.80	
	.00	1.00	TH-232	=	1.80	.90
	.00	1.00	U-238	=	19.80	5.40
	1.00	2.00	RA-226	=	1.20	.40
	1.00	2.00	TH-232	<	.40	
	1.00	2.00	U-238	=	11.80	4.20
	2.00	3.00	RA-226	=	2.50	.70
	2.00	3.00	TH-232	=	1.60	1.00
	2.00	3.00	U-238	=	20.20	5.00
	3.00	4.00	RA-226	=	2.70	1.00
	3.00	4.00	TH-232	=	2.90	1.30
	3.00	4.00	U-238	=	23.50	7.60
	4.00	5.00	RA-226	=	3.70	.60
	4.00	5.00	TH-232	=	2.70	1.00
	4.00	5.00	U-238	<	7.70	
	5.00	6.00	RA-226	=	2.40	.80
	5.00	6.00	TH-232	=	3.50	.80
	5.00	6.00	U-238	<	16.50	
	6.00	7.00	RA-226	=	2.00	.70
	6.00	7.00	TH-232	=	2.50	.80
	6.00	7.00	U-238	=	18.00	4.30

Mon Nov 23

Activity Concentrations Of Upper Fly Ash Area Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
24-10	7.00	8.00	RA-226	=	3.00	.80
	7.00	8.00	TH-232	<	4.30	
	7.00	8.00	U-238	<	14.70	
	8.00	9.00	RA-226	=	2.80	.80
	8.00	9.00	TH-232	=	2.40	.80
	8.00	9.00	U-238	<	8.30	
	9.00	10.00	RA-226	=	3.00	.80
	9.00	10.00	TH-232	=	1.50	.80
	9.00	10.00	U-238	<	11.00	
	10.00	11.00	RA-226	=	2.90	.60
	10.00	11.00	TH-232	=	2.60	.80
	10.00	11.00	U-238	<	7.70	
	11.00	12.00	RA-226	=	2.10	.60
	11.00	12.00	TH-232	=	1.60	.50
	11.00	12.00	U-238	<	6.90	
	12.00	13.00	RA-226	=	2.10	.60
	12.00	13.00	TH-232	=	3.00	.90
	12.00	13.00	U-238	<	15.60	
	13.00	14.00	RA-226	=	1.50	.50
	13.00	14.00	TH-232	=	1.00	.60
	13.00	14.00	U-238	<	11.50	
	14.00	15.00	RA-226	<	.70	
	14.00	15.00	TH-232	=	.80	.60
	14.00	15.00	U-238	<	5.20	
	15.00	16.00	RA-226	=	2.50	.80
	15.00	16.00	TH-232	=	1.50	.60
	15.00	16.00	U-238	=	135.00	8.00
	16.00	17.00	RA-226	=	2.90	.90
	16.00	17.00	TH-232	=	1.50	.90
	16.00	17.00	U-238	=	40.50	6.50
	17.00	18.00	RA-226	=	4.00	.80
	17.00	18.00	TH-232	<	2.10	
	17.00	18.00	U-238	=	81.60	7.50
	18.00	19.00	RA-226	=	2.60	.60
	18.00	19.00	TH-232	<	1.40	
	18.00	19.00	U-238	=	74.40	6.30
	19.00	20.00	RA-226	=	1.20	.40
	19.00	20.00	TH-232	<	.80	
	19.00	20.00	U-238	=	8.90	4.00
	20.00	21.00	RA-226	=	7.00	.90
	20.00	21.00	TH-232	<	3.00	

Mon Nov 23

Activity Concentrations Of Upper Fly Ash Area Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
24-10	20.00	21.00	U-238	=	139.00	9.00
	21.00	22.00	RA-226	=	7.90	1.10
	21.00	22.00	TH-232	<	3.70	
	21.00	22.00	U-238	=	160.00	11.00
	22.00	24.00	RA-226	=	5.10	1.10
	22.00	24.00	TH-232	=	2.20	1.00
	22.00	24.00	U-238	=	104.00	11.00
	24.00	26.00	RA-226	=	1.40	.70
	24.00	26.00	TH-232	<	.40	
	24.00	26.00	U-238	=	10.00	3.50
24-11	.00	1.00	RA-226	=	1.70	.80
	.00	1.00	TH-232	=	2.20	1.00
	.00	1.00	U-238	<	15.10	
	1.00	2.00	RA-226	=	1.10	.50
	1.00	2.00	TH-232	=	1.30	.60
	1.00	2.00	U-238	=	17.00	3.50
	2.00	3.00	RA-226	=	1.00	.70
	2.00	3.00	TH-232	=	1.50	.80
	2.00	3.00	U-238	=	13.70	4.00
	3.00	4.00	RA-226	<	.80	
	3.00	4.00	TH-232	=	1.50	.80
	3.00	4.00	U-238	=	9.10	3.50
	4.00	5.00	RA-226	<	.90	
	4.00	5.00	TH-232	=	1.30	.80
	4.00	5.00	U-238	<	10.90	
	5.00	6.00	RA-226	=	1.70	.90
	5.00	6.00	TH-232	=	1.00	.60
	5.00	6.00	U-238	=	7.60	4.20
	6.00	7.00	RA-226	=	1.70	.60
	6.00	7.00	TH-232	=	2.20	.70
	6.00	7.00	U-238	=	11.90	5.00
	7.00	8.00	RA-226	=	2.90	.60
	7.00	8.00	TH-232	=	3.10	.60
	7.00	8.00	U-238	<	10.30	
	8.00	9.00	RA-226	=	1.80	1.00
	8.00	9.00	TH-232	=	2.60	.90
	8.00	9.00	U-238	<	10.70	
	9.00	10.00	RA-226	=	2.60	.90
	9.00	10.00	TH-232	=	2.00	1.20

Mon Nov 23

Activity Concentrations Of Upper Fly Ash Area Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
24-11	9.00	10.00	U-238	<	10.20	
	10.00	11.00	RA-226	=	2.10	.70
	10.00	11.00	TH-232	=	2.90	.60
	10.00	11.00	U-238	<	9.30	
	11.00	12.00	RA-226	=	2.00	.60
	11.00	12.00	TH-232	=	2.20	1.50
	11.00	12.00	U-238	<	9.20	
	12.00	13.00	RA-226	=	1.90	.60
	12.00	13.00	TH-232	=	1.80	.70
	12.00	13.00	U-238	<	16.40	
	13.00	14.00	RA-226	=	2.10	.90
	13.00	14.00	TH-232	=	1.90	1.00
	13.00	14.00	U-238	<	9.60	
	14.00	15.00	RA-226	=	2.00	1.40
	14.00	15.00	TH-232	=	2.20	.80
	14.00	15.00	U-238	<	15.00	
	15.00	16.00	RA-226	=	2.60	.80
	15.00	16.00	TH-232	=	2.20	1.40
	15.00	16.00	U-238	<	6.20	
	16.00	17.00	RA-226	=	1.80	.60
	16.00	17.00	TH-232	=	2.90	.90
	16.00	17.00	U-238	<	9.80	
	17.00	18.00	RA-226	=	1.50	.80
	17.00	18.00	TH-232	=	3.30	.90
	17.00	18.00	U-238	<	10.10	
	18.00	19.00	RA-226	<	2.50	
	18.00	19.00	TH-232	=	3.60	.80
	18.00	19.00	U-238	<	9.50	
	19.00	20.00	RA-226	=	2.00	.80
	19.00	20.00	TH-232	=	2.20	.80
	19.00	20.00	U-238	<	8.50	
	20.00	21.00	RA-226	<	2.30	
	20.00	21.00	TH-232	=	3.50	.90
	20.00	21.00	U-238	<	10.80	
	21.00	22.00	RA-226	=	2.30	1.20
	21.00	22.00	TH-232	=	2.90	.80
	21.00	22.00	U-238	<	17.60	
	22.00	23.00	RA-226	=	2.10	.90
	22.00	23.00	TH-232	<	4.70	
	22.00	23.00	U-238	<	11.30	
	23.00	24.00	RA-226	=	1.80	.70

Mon Nov 23

Activity Concentrations Of Upper Fly Ash Area Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
24-11	23.00	24.00	TH-232	=	2.60	.70
	23.00	24.00	U-238	<	13.00	
	24.00	25.00	RA-226	=	1.90	.90
	24.00	25.00	TH-232	=	1.10	.60
	24.00	25.00	U-238	=	14.10	6.90
	25.00	26.00	RA-226	=	1.90	.80
	25.00	26.00	TH-232	=	2.40	1.00
	25.00	26.00	U-238	<	18.70	
	26.00	27.00	RA-226	=	1.30	.60
	26.00	27.00	TH-232	=	1.70	1.10
	26.00	27.00	U-238	=	6.30	4.40
	27.00	28.00	RA-226	=	1.60	.60
	27.00	28.00	TH-232	=	2.40	.80
	27.00	28.00	U-238	=	5.30	2.40
	28.00	29.00	RA-226	=	1.20	.90
	28.00	29.00	TH-232	<	3.70	
	28.00	29.00	U-238	<	12.00	
	29.00	30.00	RA-226	=	1.80	.80
	29.00	30.00	TH-232	=	1.60	1.00
	29.00	30.00	U-238	=	15.90	3.80
	30.00	31.00	RA-226	=	1.40	.80
	30.00	31.00	TH-232	=	1.90	.60
	30.00	31.00	U-238	=	2.60	2.00
	31.00	32.00	RA-226	=	1.00	.30
	31.00	32.00	TH-232	=	1.00	.30
	31.00	32.00	U-238	<	3.50	
	32.00	33.00	RA-226	=	.80	.50
	32.00	33.00	TH-232	=	.80	.30
	32.00	33.00	U-238	<	4.40	
	33.00	34.00	RA-226	=	1.00	.40
	33.00	34.00	TH-232	=	.60	.40
	33.00	34.00	U-238	<	4.30	
24-12	.00	1.00	RA-226	<	.10	
	.00	1.00	TH-232	<	2.30	
	.00	1.00	U-238	<	9.00	
	1.00	2.00	RA-226	=	1.10	.30
	1.00	2.00	TH-232	=	.70	.60
	1.00	2.00	U-238	<	7.60	
	2.00	4.00	RA-226	=	.60	.40

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TABLE F-6

SUBSURFACE MEDIA ANALYSES
BORING COMPOSITE SAMPLES
CHARACTERIZATION INVESTIGATION STUDY
INACTIVE FLYASH PILE

NOTES:

- Only positive detections are presented for organic and inorganic constituents. Non-detected analytes were not presented in the Characterization Investigation Study.
- Qualifiers given for CIS data are laboratory qualifiers. Validation of CIS data has not been conducted.
- CIS data not applicable to OU2 waste unit have been shaded.

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Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
24-07	U-238	=	16.00	1.00
24-08	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	9.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	.70	.50
	RA-228	=	9.00	1.00
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	=	1.30	.20
	TH-230	=	.70	.20
	TH-232	=	1.40	.20
	U-234	=	14.00	1.00
	U-235	=	.80	.10
	U-238	=	17.00	1.00
24-09	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	2.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	.90	.40
	RA-228	=	10.00	1.00
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	=	1.90	.20
	TH-230	=	.50	.10
	TH-232	=	2.10	.20
	U-234	=	15.00	1.00
	U-235	=	.80	.10
	U-238	=	42.00	1.00
24-10	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations
(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

Mon Nov 23

Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
24-10	PB-210	=	5.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	4.10	.70
	RA-228	=	2.00	.70
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	=	2.30	.80
	TH-230	=	11.00	2.00
	TH-232	=	2.60	.80
	U-234	=	48.00	1.00
	U-235	=	2.20	.20
	U-238	=	50.00	1.00
24-11	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	3.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	1.50	.50
	RA-228	=	1.70	.70
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	=	.20	.10
	TH-230	=	.20	.10
	TH-232	=	.10	.10
	U-234	=	3.70	.30
	U-235	=	.20	.10
	U-238	=	6.60	.40
24-12	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	2.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	.60	.30
	RA-228	=	2.00	.60

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations

(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

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Upper Fly Ash Area Organic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure	Qualifier
24-01	FMP-PS-24-001	8705-359-0080	AROCLOR-1242	93.00	UG/KG	J
			AROCLOR-1254	147.00	UG/KG	J
24-02	FMP-PS-24-011	8705-415-0010	METHYLENE CHLORIDE	100.00	UG/KG	J*
			METHYLENE CHLORIDE	110.00	UG/KG	J*
			ACETONE	240.00	UG/KG	J*
			ACETONE	230.00	UG/KG	J*
			ACETONE	250.00	UG/KG	J*
			AROCLOR-1254	510.00	UG/KG	J
24-03	FMP-PS-24-012	8705-415-0030	AROCLOR-1254	39.00	UG/KG	J
24-04	FMP-PS-24-014	8705-415-0040	AROCLOR-1254	670.00	UG/KG	
24-05	FMP-PS-24-043	8705-415-0060	AROCLOR-1254	130.00	UG/KG	J
24-06	FMP-PS-24-017	8705-415-0050	AROCLOR-1254	360.00	UG/KG	
24-07	FMP-PS-24-068	8705-426-0020	AROCLOR-1260	420.00	UG/KG	
			AROCLOR-1242	76.00	UG/KG	J
24-08	FMP-PS-24-066	8705-426-0010	AROCLOR-1254	880.00	UG/KG	
			AROCLOR-1242	1.90	UG/KG	J
24-09	FMP-PS-24-095	8705-426-0030	AROCLOR-1242	42.00	UG/KG	J
			AROCLOR-1260	250.00	UG/KG	
24-10	FMP-PS-24-097	8705-426-0050	AROCLOR-1242	5.70	UG/KG	J
			AROCLOR-1254	290.00	UG/KG	
24-12	FMP-PS-24-167	8705-466-0020	AROCLOR-1260	28.00	UG/KG	J

J = Concentration is below quantification level; * = Common laboratory contaminant

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Upper Fly Ash Area Inorganic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure
24-07	FMP-PS-24-068	8705-426-0020	VANADIUM, TOTAL	29.64	MG/KG
			ZINC, TOTAL	67.01	MG/KG
24-08	FMP-PS-24-066	8705-426-0010	ALUMINUM, TOTAL	14433.12	MG/KG
			ARSENIC, TOTAL	5.05	MG/KG
			BARIUM, TOTAL	70.08	MG/KG
			CADMIUM, TOTAL	4.85	MG/KG
			CALCIUM, TOTAL	113966.13	MG/KG
			CHROMIUM, TOTAL	19.19	MG/KG
			COBALT, TOTAL	12.72	MG/KG
			COPPER, TOTAL	18.96	MG/KG
			IRON, TOTAL	18726.04	MG/KG
			LEAD, TOTAL	32.98	MG/KG
			MAGNESIUM, TOTAL	29953.35	MG/KG
			MANGANESE, TOTAL	564.37	MG/KG
			NICKEL, TOTAL	25.90	MG/KG
			POTASSIUM, TOTAL	1367.80	MG/KG
			SODIUM, TOTAL	138.78	MG/KG
			VANADIUM, TOTAL	31.91	MG/KG
			ZINC, TOTAL	58.98	MG/KG
24-09	FMP-PS-24-095	8705-426-0030	ALUMINUM, TOTAL	7406.99	MG/KG
			ARSENIC, TOTAL	5.62	MG/KG
			CADMIUM, TOTAL	3.68	MG/KG
			CALCIUM, TOTAL	187187.03	MG/KG
			CHROMIUM, TOTAL	14.11	MG/KG
			COPPER, TOTAL	10.02	MG/KG
			IRON, TOTAL	14078.69	MG/KG
			LEAD, TOTAL	15.88	MG/KG
			MAGNESIUM, TOTAL	14674.92	MG/KG
			MANGANESE, TOTAL	441.72	MG/KG
			MERCURY, TOTAL	.15	MG/KG
			NICKEL, TOTAL	10.22	MG/KG
			POTASSIUM, TOTAL	818.00	MG/KG
			VANADIUM, TOTAL	19.42	MG/KG
			ZINC, TOTAL	42.53	MG/KG
24-10	FMP-PS-24-097	8705-426-0050	ALUMINUM, TOTAL	6958.84	MG/KG
			ARSENIC, TOTAL	31.17	MG/KG

Upper Fly Ash Area Inorganic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure
24-10	FMP-PS-24-097	8705-426-0050	BARIUM, TOTAL	205.08	MG/KG
			BERYLLIUM, TOTAL	1.43	MG/KG
			CADMIUM, TOTAL	3.82	MG/KG
			CALCIUM, TOTAL	54215.80	MG/KG
			CHROMIUM, TOTAL	15.79	MG/KG
			COPPER, TOTAL	23.45	MG/KG
			IRON, TOTAL	14807.88	MG/KG
			LEAD, TOTAL	55.95	MG/KG
			MAGNESIUM, TOTAL	8523.86	MG/KG
			MANGANESE, TOTAL	780.11	MG/KG
			MERCURY, TOTAL	.26	MG/KG
			NICKEL, TOTAL	12.20	MG/KG
			POTASSIUM, TOTAL	1076.85	MG/KG
			SODIUM, TOTAL	167.51	MG/KG
			VANADIUM, TOTAL	26.32	MG/KG
			ZINC, TOTAL	46.42	MG/KG
24-11	FMP-PS-24-130	8705-466-0010	ALUMINUM, TOTAL	7557.77	MG/KG
			ARSENIC, TOTAL	10.76	MG/KG
			BARIUM, TOTAL	271.04	MG/KG
			CADMIUM, TOTAL	2.43	MG/KG
			CALCIUM, TOTAL	12069.71	MG/KG
			CHROMIUM, TOTAL	12.44	MG/KG
			COPPER, TOTAL	22.45	MG/KG
			IRON, TOTAL	7281.86	MG/KG
			LEAD, TOTAL	13.78	MG/KG
			MAGNESIUM, TOTAL	3305.51	MG/KG
			MANGANESE, TOTAL	238.04	MG/KG
			MERCURY, TOTAL	.15	MG/KG
			NICKEL, TOTAL	13.25	MG/KG
			SODIUM, TOTAL	189.35	MG/KG
			VANADIUM, TOTAL	29.48	MG/KG
			ZINC, TOTAL	36.24	MG/KG
24-12	FMP-PS-24-167	8705-466-0020	ALUMINUM, TOTAL	8156.77	MG/KG
			ARSENIC, TOTAL	5.91	MG/KG
			BARIUM, TOTAL	78.49	MG/KG
			CADMIUM, TOTAL	3.39	MG/KG
			CALCIUM, TOTAL	74419.80	MG/KG
			CHROMIUM, TOTAL	18.32	MG/KG

TABLE F-7

SUBSURFACE MEDIA ANALYSES
RI/FS SAMPLING PROGRAM
INACTIVE FLYASH PILE

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

INACTIVE FLYASH PILE
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1016 007233 1.5 - 3.0				b	1016 007352 RINSATE				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			J	<	20.0			R
Lead 210		NA					NA			
Neptunium 237	<	0.6			J	<	1.0			R
Plutonium 210		NA					NA			
Plutonium 238	<	0.6				<	1.0			R
Plutonium 239/240	<	0.6				<	1.0			R
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		0.7	±	0.1	J	<	1.0			
Radium 228		0.8	±	0.1	J	<	3.0			J
Ruthenium 106	<	1.0			J	<	150.0			R
Strontium 90	<	0.5			J	<	5.0			R
Technetium 99	<	0.9			J	<	30.0			R
Thorium 228		1.1	±	0.5	J		1.4	±	0.5	R
Thorium 230		0.9	±	0.4	R		1.2	±	0.5	R
Thorium 232		0.6	±	0.3		<	1.0			R
Total Thorium **ϕ		NA					NA			
Uranium 234		10.7	±	2.0		<	1.0			J
Uranium 235		NA					NA			
Uranium 235/236	<	0.6				<	1.0			J
Uranium 238		11.4	±	2.1		<	1.0			J
Total Uranium **ϕ		NA				<	1.0			R

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1047 007301 9.0 - 10.5				1047 007308 BLANK			
Actinium 231		NA				NA		
Cesium 137	<	0.2			<	20.0		
Lead 210		NA				NA		
Neptunium 237	<	0.6			<	1.0		
Plutonium 210		NA				NA		
Plutonium 238	<	0.6			<	1.0		
Plutonium 239/240	<	0.6			<	1.0		
Protactium 234		NA				NA		
Radium 224		NA				NA		
Radium 226		0.7	±	0.1	<	1.0		
Radium 228		0.6	±	0.1	<	3.0		
Ruthenium 106	<	1.0			<	150.0		
Strontium 90	<	0.5			<	5.0		
Technetium 99		1.5	±	0.4	<	30.0		
Thorium 228		0.8	±	0.3		1.0	±	0.5
Thorium 230		1.4	±	0.4		1.4	±	0.6
Thorium 232	<	0.6			<	1.0		
Total Thorium **		NA				NA		
Uranium 234	<	0.6			<	1.0		
Uranium 235		NA				NA		
Uranium 235/236	<	0.6			<	1.0		
Uranium 238		0.7	±	0.3	<	1.0		
Total Uranium **		NA			<	1.0		

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

- = Sample has not been validated

INACTIVE FLYASH PILE
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1708 067095 6.0 - 7.5				b	1708 067101 15.0 - 16.5				b	1708 067111 30.0 - 31.5				b
Actinium 231		NA					NA					NA			
Cesium 137	<	0.2			J	<	0.2			J	<	0.2			J
Lead 210		NA					NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6			R	<	0.6			R	<	0.6			R
Protactium 234		NA					NA					NA			
Radium 224		NA					NA					NA			
Radium 226		3.1	±	0.3	J		2.7	±	0.3	J		1.7	±	0.1	J
Radium 228		3.1	±	0.4	J		2.5	±	0.3	J		1.1	±	0.2	J
Ruthenium 106	<	1.0			J	<	1.0			J	<	1.0			J
Strontium 90		1.2	±	0.3	J		1.3	±	0.2	J	<	0.7			DJ
Technetium 99	<	0.9				<	0.9				<	0.9			
Thorium 228		3.1	±	0.6	J		2.7	±	0.5	J		1.6	±	0.3	J
Thorium 230		3.0	±	0.6	J		2.7	±	0.5	J		2.9	±	0.5	J
Thorium 232		2.4	±	0.5	J		1.8	±	0.4	J		1.2	±	0.2	J
Total Thorium **		21.8	±	4.8	J		16.3	±	3.5	J		10.6	±	2.3	J
Uranium 234		3.7	±	0.5	J		2.9	±	0.4	J		20.6	±	2.7	J
Uranium 235/236	<	0.6			J	<	0.6			J		0.7	±	0.2	J
Uranium 238		3.9	±	0.5	J		3.0	±	0.4	J		21.9	±	2.8	J
Total Uranium **		15.6	±	3.7	J		11.1	±	3.4	J		68.2	±	10.2	J

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

INACTIVE FLYASH PILE
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1709 067062 4.5 - 6.0				b	1709 067072 15 - 16.5				b	1709 067081 28.5 - 30.0				b
Actinium 231		NA					NA					NA			
Cesium 137	<	0.2				<	0.2				<	0.2			
Lead 210		0.8	±	0.5			1.3	±	0.5			1.2	±	0.6	
Neptunium 237	<	0.6			J		0.78	±	0.33	J	<	0.6			J
Plutonium 210		NA					NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6				<	0.6			
Protactium 234		NA					NA					NA			
Radium 224		2.3	±	0.2			3.0	±	0.3			3.0	±	0.3	
Radium 226		2.0	±	0.2	J		2.8	±	0.2	J		2.1	±	0.2	J
Radium 228		1.7	±	0.2	J		2.2	±	0.3	J		2.2	±	0.3	J
Ruthenium 106	<	1.3			D	<	1.3			D	<	1.5			D
Strontium 90	<	0.9			D	<	0.8			D	<	0.9			D
Technetium 99	<	0.9				<	0.9				<	0.9			
Thorium 228		2.08	±	0.48	J		2.78	±	0.69	J		2.51	±	0.54	
Thorium 230		3.74	±	0.73	J		4.50	±	0.96	J		3.07	±	0.62	J
Thorium 232		2.02	±	0.47			2.65	±	0.66			2.21	±	0.49	J
Total Thorium **		18.3	±	4.3			23.9	±	6.0			20.0	±	4.4	
Uranium 234		4.40	±	0.76	J		4.63	±	0.80	J		3.52	±	0.58	J
Uranium 235		1.0	±	0.32	J	<	4.4				<	0.5			J
Uranium 235/236		0.96	±	0.30	J	<	0.6			J	<	0.6			J
Uranium 238		11.0	±	1.5	J		3.4	±	0.7	J		3.4	±	0.7	J
Total Uranium **		67.0	±	8.4	J		14.5	±	4.1			14.4	±	4.3	J

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1710 067028 3.0 - 4.5				b	1710 067043 22.5 - 23.0				b	1710 067046 27.0 - 28.5				b
Actinium 231		NA					NA					NA			
Cesium 137	<	0.2				<	0.2			J	<	0.2			
Lead 210		1.2	±	0.5			2.8	±	0.6	J		16.8	±	2.1	
Neptunium 237	<	0.6			J		NA				<	0.6			J
Plutonium 210		NA					NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J	<	1.0			DJ
Plutonium 239/240	<	0.6				<	0.6				<	1.0			
Protactium 234		NA					NA					NA			
Radium 224		3.0	±	0.3			3.1	±	0.3	J		3.5	±	0.4	
Radium 226		2.3	±	0.2	J		6.4	±	0.4	J		36.0	±	1.9	J
Radium 228		2.5	±	0.3	J		2.9	±	0.3	J		3.1	±	0.4	J
Ruthenium 106	<	1.4			D	<	1.2			DJ	<	1.8			D
Strontium 90	<	0.9			D	<	0.5					1.7	±	0.3	
Technetium 99	<	0.9				<	0.9				<	0.9			
Thorium 228		2.54	±	0.51	J		4.10	±	0.79	J		3.03	±	0.66	J
Thorium 230		3.31	±	0.71	J		12.8	±	2.0	J		54.6	±	7.8	J
Thorium 232		2.47	±	0.58			4.0	±	0.78			3.28	±	0.69	
Total Thorium **		22.2	±	5.2			36.1	±	7.0			29.6	±	6.3	
Uranium 234		11.4	±	1.6	J		51.4	±	5.9	J		187.0	±	25.0	EJ
Uranium 235		0.57	±	0.29	J		2.04	±	0.39	J		12.7	±	1.2	
Uranium 235/236		0.88	±	0.28	J		3.29	±	0.59	J		18.5	±	4.9	J
Uranium 238		9.6	±	1.0	J		33.3	±	2.6	J		180.0	±	13.0	J
Total Uranium **		38.2	±	5.84			120.0	±	14.0	J		660.0	±	67.0	J

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1711 067010 1.5 - 3.0				b	1711 067014 7.5 - 9.0				b	1711 067019 13.5 - 15.0				b
Actinium 231		NA					NA					NA			
Cesium 137	<	0.2				<	0.2				<	0.2			
Lead 210		1.2	±	0.6	J		1.9	±	0.5	J		0.7	±	0.4	
Neptunium 237	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6				<	0.6			
Protactium 234		NA					NA					NA			
Radium 224		2.9	±	0.3			3.2	±	0.3			1.7	±	0.2	
Radium 226		2.7	±	0.2	J		4.1	±	0.3	J		1.5	±	0.1	J
Radium 228		2.2	±	0.3	J		2.7	±	0.3	J		1.3	±	0.2	J
Ruthenium 106	<	1.5				<	1.4			D	<	1.2			D
Strontium 90	<	1.1			D	<	0.9			D	<	0.9			D
Technetium 99	<	0.9				<	0.9				<	0.9			
Thorium 228		0.79	±	0.23	J		3.34	±	0.79	J		1.56	±	0.38	J
Thorium 230		1.41	±	0.33	J		6.09	±	1.21	J		2.14	±	0.47	J
Thorium 232		0.80	±	0.24			3.10	±	0.74			1.10	±	0.32	
Total Thorium **		7.22	±	2.14			28.0	±	6.7			9.89	±	2.75	
Uranium 234		42.0	±	4.8	J		5.93	±	0.85	J		4.95	±	0.72	J
Uranium 235		2.42	±	0.44		<	0.5				<	0.4			
Uranium 235/236		5.34	±	0.82	EJ		0.87	±	0.24	J	<	0.6			J
Uranium 238		34.1	±	2.7	J		6.1	±	0.8	J		3.5	±	0.6	J
Total Uranium **		123.0	±	14.0			18.2	±	4.3	J		18.0	±	4.0	J

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

INACTIVE FLYASH PILE
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
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RADIOLOGICAL PARAMETERS	1791 067121 27.0 - 28.5				b
Actinium 231		NA			
Cesium 137	<	0.2			J
Lead 210		NA			
Neptunium 237	<	0.6			J
Plutonium 210		NA			
Plutonium 238	<	0.6			J
Plutonium 239/240	<	0.6			
Protactium 234		NA			
Radium 224		NA			
Radium 226		1.4	±	0.1	J
Radium 228		1.0	±	0.2	J
Ruthenium 106	<	1.1			DJ
Strontium 90	<	1.0			D
Technetium 99	<	0.9			
Thorium 228		1.1	±	0.2	J
Thorium 230		1.7	±	0.3	J
Thorium 232		0.9	±	0.2	J
Total Thorium **		8.6	±	1.9	J
Uranium 234		NA			
Uranium 235/236		NA			
Uranium 238		NA			
Total Uranium **		873.0	±	124.0	J

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
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RADIOLOGICAL PARAMETERS	1849 067618 28.5 - 30.0				b
Actinium 231		NA			
Cesium 137	<	0.2			J
Lead 210		0.8	±	0.4	J
Neptunium 237		NA			
Plutonium 210		NA			
Plutonium 238	<	0.6			J
Plutonium 239/240	<	0.6			
Protactium 234		NA			
Radium 224		1.0	±	0.1	J
Radium 226		0.9	±	0.1	J
Radium 228		0.7	±	0.2	J
Ruthenium 106	<	1.0			J
Strontium 90		0.77	±	0.46	DJ
Technetium 99	<	0.9			
Thorium 228		1.44	±	0.38	J
Thorium 230		1.69	±	0.43	J
Thorium 232		0.91	±	0.29	
Total Thorium **		8.21	±	2.61	
Uranium 234		1.73	±	0.33	J
Uranium 235	<	3.3			J
Uranium 235/236	<	0.6			J
Uranium 238		1.5	±	0.5	J
Total Uranium **		6.9	±	3.2	J

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

INACTIVE FLYASH PILE
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
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RADIOLOGICAL PARAMETERS	2047 008960 25.0 - 26.5			
Actinium 231		NA		
Cesium 137	<	0.2		
Lead 210		NA		
Neptunium 237	<	0.6		
Plutonium 210		NA		
Plutonium 238	<	0.6		
Plutonium 239/240	<	0.6		
Protactium 234		NA		
Radium 224		NA		
Radium 226		0.4	±	0.1
Radium 228	<	0.5		
Ruthenium 106	<	1.0		
Strontium 90		0.7	±	0.2
Technetium 99	<	0.9		
Thorium 228	<	0.6		
Thorium 230		1.0	±	0.2
Thorium 232	<	0.6		
Total Thorium **		NA		
Uranium 234	<	0.6		
Uranium 235/236	<	0.6		
Uranium 238	<	0.6		
Total Uranium **		2.0	±	2.0

** Results reported in mg/kg or µg/ℓ

- = Sample has not been validated

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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	4016 010441 50.0 - 51.5	b	4016 010449 89.0 - 91.0	-	4016 010450 95.0 - 96.5	b	4016 010454 115.0 - 116.5	b
Actinium 231	NA		NA		NA		NA	
Cesium 137	< 0.2		NA		< 0.2		< 0.2	
Lead 210	NA		NA		NA		NA	
Neptunium 237	< 0.6		NA		< 0.6		< 0.6	
Plutonium 210	NA		NA		NA		NA	
Plutonium 238	< 0.6	J	NA		< 0.6	J	< 0.6	J
Plutonium 239/240	< 0.6		NA		< 0.6		< 0.6	
Protactium 234	NA		NA		NA		NA	
Radium 224	NA		NA		NA		NA	
Radium 226	0.5 ± 0.1		NA		0.9 ± 0.1		< 0.3	
Radium 228	< 0.5		NA		1.2 ± 0.2		< 0.5	
Ruthenium 106	< 1.0		NA		< 1.0		< 1.0	
Strontium 90	< 0.5	J	NA		4.0 ± 0.6	J	0.9 ± 0.2	J
Technetium 99	< 0.9	J	NA		< 0.9	J	< 0.9	J
Thorium 228	< 0.6	J	NA		1.1 ± 0.2	J	< 0.6	J
Thorium 230	< 0.6	J	NA		1.2 ± 0.2	J	< 0.6	J
Thorium 232	< 0.6	J	NA		0.9 ± 0.2	J	< 0.6	J
Total Thorium **	NA		NA		NA		NA	
Uranium 234	< 0.6	J	NA		0.7 ± 0.2	R	< 0.6	J
Uranium 235/236	< 0.6	J	NA		< 0.6	R	< 0.6	J
Uranium 238	< 0.6	J	NA		0.8 ± 0.2	R	< 0.6	J
Total Uranium **	< 2.0	D	14.0 ± 4.2		3.0 ± 2.0		2.0 ± 1.0	

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

- = Sample has not been validated

EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING HAZARDOUS SUBSTANCE LIST RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

J = Indicates an estimated value. This flag is used when the mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.

C = This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E = This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to pesticides/PCBs analyzed by GC/EC methods.

D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.

F = Estimated value due to a confirmed compound which is off-scale in both columns.

X = A flag that FORMASTER III CLP software automatically inserts to indicate that the data was entered manually.

Z = No estimated value reported, or an elevated CRQL reported because matrix effects interfere with or obscure the compound on one or both columns. In either situation, the compound does not confirm as a positive identification.

* = Values outside of contract laboratory-required QC limits.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1708 067096 7.5 - 9.0	a	b	1708 067099 12.0 - 13.5 TCLP	a	b	1708 067102 16.5 - 18.0	a	b	1708 067112 31.5 - 33.0	a	b	1708 067113 - FIELD BLANK	a	b
HERBICIDE ORGANICS															
2,4,5-TP (Silvex)	NA			< 0.00210			NA			NA			NA		
2,4-D	NA			< 0.01100			NA			NA			NA		
PESTICIDES															
4,4'-DDD	< 0.02100			NA			< 0.02300			< 0.02000			NA		
4,4'-DDE	< 0.02100			NA			< 0.02300			< 0.02000			NA		
4,4'-DDT	< 0.02100			NA			< 0.02300			< 0.02000			NA		
Aldrin	< 0.01000			NA			< 0.01100			< 0.01000			NA		
Aroclor-1016	< 0.10000			NA			< 0.11000			< 0.10000			NA		
Aroclor-1221	< 0.10000			NA			< 0.11000			< 0.10000			NA		
Aroclor-1232	< 0.10000			NA			< 0.11000			< 0.10000			NA		
Aroclor-1242	< 0.10000			NA			< 0.11000			< 0.10000			NA		
Aroclor-1248	< 0.10000			NA			< 0.11000			< 0.10000			NA		
Aroclor-1254	< 0.21000			NA			< 0.23000			< 0.20000			NA		
Aroclor-1260	< 0.21000			NA			< 0.23000			< 0.20000			NA		
Dieldrin	< 0.02100			NA			< 0.02300			< 0.02000			NA		
Endosulfan II	< 0.02100			NA			< 0.02300			< 0.02000			NA		
Endosulfan sulfate	< 0.02100			NA			< 0.02300			< 0.02000			NA		
Endosulfan-I	< 0.01000			NA			< 0.01100			< 0.01000			NA		
Endrin	< 0.02100			< 0.00010			< 0.02300			< 0.02000			NA		
Endrin ketone	< 0.02100			NA			< 0.02300			< 0.02000			NA		
Heptachlor	< 0.01000			< 0.00005			< 0.01100			< 0.01000			NA		
Heptachlor epoxide	< 0.01000			< 0.00005			< 0.01100			< 0.01000			NA		
Methoxychlor	< 0.10000			< 0.00050			< 0.11000			< 0.10000			NA		
Toxaphene	< 0.21000			< 0.00100			< 0.23000			< 0.20000			NA		
alpha-BHC	< 0.01000			NA			< 0.01100			< 0.01000			NA		
alpha-Chlordane	< 0.10000			< 0.00050			< 0.11000			< 0.10000			NA		
beta-BHC	< 0.01000			NA			< 0.01100			< 0.01000			NA		
delta-BHC	< 0.01000			NA			< 0.01100			< 0.01000			NA		
gamma-BHC (Lindane)	< 0.01000			< 0.00005			< 0.01100			< 0.01000			NA		
gamma-Chlordane	< 0.10000			< 0.00050			< 0.11000			< 0.10000			NA		
SEMI-VOLATILE ORGANICS															
1,2,4-Trichlorobenzene	< 0.86000	UJ		NA			< 0.93000			< 0.82000			NA		
1,2-Dichlorobenzene	< 0.86000	UJ		NA			< 0.93000			< 0.82000			NA		
1,3-Dichlorobenzene	< 0.86000	UJ		NA			< 0.93000			< 0.82000			NA		

a = lab qualifiers
b = validation qualifiers

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SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1708 067096 7.5 - 9.0	a	b	1708 067099 12.0 - 13.5 TCLP	a	b	1708 067102 16.5 - 18.0	a	b	1708 067112 31.5 - 33.0	a	b	1708 067113 - FIELD BLANK	a	b
1,4-Dichlorobenzene	< 0.86000		UJ	< 0.02000			< 0.93000			< 0.82000			NA		
2,4,5-Trichlorophenol	< 4.20000		UJ	< 0.10000			< 4.50000			< 4.00000			NA		
2,4,6-Trichlorophenol	< 0.86000		UJ	< 0.02000			< 0.93000			< 0.82000			NA		
2,4-Dichlorophenol	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
2,4-Dimethylphenol	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
2,4-Dinitrophenol	< 4.20000		UJ	NA			< 4.50000			< 4.00000		UJ	NA		
2,4-Dinitrotoluene	< 0.86000		UJ	< 0.02000			< 0.93000			< 0.82000			NA		
2,6-Dinitrotoluene	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
2-Chloronaphthalene	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
2-Chlorophenol	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
2-Methylnaphthalene	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
2-Methylphenol	< 0.86000		UJ	< 0.02000			< 0.93000			< 0.82000			NA		
2-Nitroaniline	< 4.20000		UJ	NA			< 4.50000			< 4.00000			NA		
2-Nitrophenol	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
3,3'-Dichlorobenzidine	< 1.70000		UJ	NA			< 1.90000			< 1.60000		UJ	NA		
3-Nitroaniline	< 4.20000		UJ	NA			< 4.50000		UJ	< 4.00000		UJ	NA		
4,6-Dinitro-2-methylphenol	< 4.20000		UJ	NA			< 4.50000			< 4.00000			NA		
4-Bromophenyl phenyl ether	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
4-Chloro-3-methylphenol	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
4-Chloroaniline	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
4-Chlorophenylphenyl ether	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
4-Methylphenol	< 0.86000		UJ	< 0.02000			< 0.93000			< 0.82000			NA		
4-Nitroaniline	< 4.20000		UJ	NA			< 4.50000			< 4.00000		UJ	NA		
4-Nitrophenol	< 4.20000		UJ	NA			< 4.50000			< 4.00000			NA		
Acenaphthene	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Acenaphthylene	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Anthracene	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Benzo(a)anthracene	0.11000	J	J	NA			< 0.93000			< 0.82000			NA		
Benzo(a)pyrene	0.13000	J	J	NA			< 0.93000			< 0.82000			NA		
Benzo(b)fluoranthene	0.36000	J	J	NA			< 0.93000			< 0.82000			NA		
Benzo(g,h,i)perylene	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Benzo(k)fluoranthene	0.26000	J	J	NA			< 0.93000			< 0.82000			NA		
Benzoic acid	< 4.20000		UJ	NA			0.09700	J	J	< 4.00000			NA		
Benzyl alcohol	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Butyl benzyl phthalate	< 0.86000		UJ	NA			< 0.93000		UJ	< 0.82000			NA		
Chrysene	0.15000	J	J	NA			< 0.93000			< 0.82000			NA		
Di-n-butyl phthalate	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Di-n-octyl phthalate	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Dibenzo(a,h)anthracene	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Dibenzofuran	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Diethyl phthalate	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Dimethyl phthalate	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Fluoranthene	0.09400	J	J	NA			< 0.93000			< 0.82000			NA		
Fluorene	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		

a = lab qualifiers
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RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1708 067096 7.5 - 9.0	a	b	1708 067099 12.0 - 13.5 TCLP	a	b	1708 067102 16.5 - 18.0	a	b	1708 067112 31.5 - 33.0	a	b	1708 067113 NA FIELD BLANK	a	b
Hexachlorobenzene	< 0.86000		UJ	< 0.02000			< 0.93000			< 0.82000			NA		
Hexachlorobutadiene	< 0.86000		UJ	< 0.02000			< 0.93000			< 0.82000			NA		
Hexachlorocyclopentadiene	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Hexachloroethane	< 0.86000		UJ	< 0.02000			< 0.93000			< 0.82000			NA		
Indeno(1,2,3-cd)pyrene	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Isophorone	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
N-Nitroso-di-n-propylamine	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
N-Nitrosodiphenylamine	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Naphthalene	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Nitrobenzene	< 0.86000		UJ	< 0.02000			< 0.93000			< 0.82000			NA		
Pentachlorophenol	< 4.20000		UJ	< 0.10000			< 4.50000			< 4.00000			NA		
Phenanthrene	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Phenol	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
Pyrene	0.12000	J	J	NA			< 0.93000			< 0.82000			NA		
bis(2-Chloroethoxy)methane	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
bis(2-Chloroethyl)ether	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
bis(2-Chloroisopropyl) ether	< 0.86000		UJ	NA			< 0.93000			< 0.82000			NA		
bis(2-Ethylhexyl) phthalate	< 0.86000		UJ	NA			< 0.93000		UJ	< 0.82000			NA		
3-Methylphenol	NA			< 0.02000			NA			NA			NA		
VOLATILE ORGANICS															
1,1,1-Trichloroethane	< 0.00600		UJ	NA			0.00400	J	J	< 0.00600			NA		
1,1,2,2-Tetrachloroethane	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
1,1,2-Trichloroethane	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			NA		
1,1-Dichloroethane	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			NA		
1,1-Dichloroethene	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			< 0.00500		
1,2-Dichloroethane	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			< 0.00500		
1,2-Dichloroethylene	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			NA		
1,2-Dichloropropane	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			NA		
2-Butanone	< 0.01300		UJ	NA			< 0.01300		UJ	0.02900	B		< 0.01000		
2-Hexanone	< 0.01300		R	NA			< 0.01300		R	< 0.01200			NA		
4-Methyl-2-pentanone	< 0.01300		R	NA			< 0.01300		R	< 0.01200			NA		
Acetone	< 0.01300		UJ	NA			< 0.01300		UJ	0.19000	B	J	NA		
Benzene	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			< 0.00500		
Bromodichloromethane	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			NA		
Bromoform	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			NA		
Bromomethane	< 0.01300		UJ	NA			< 0.01300		UJ	< 0.01200			NA		
Carbon Tetrachloride	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			< 0.00500		
Carbon disulfide	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			NA		
Chlorobenzene	< 0.00600		R	NA			< 0.00600		R	< 0.00600			< 0.00500		
Chloroethane	< 0.01300		UJ	NA			< 0.01300		UJ	< 0.01200			NA		
Chloroform	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			0.00600		

a = lab qualifiers
b = validation qualifiers

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1708 067096 7.5 - 9.0	a	b	1708 067099 12.0 - 13.5 TCLP	a	b	1708 067102 16.5 - 18.0	a	b	1708 067112 31.5 - 33.0	a	b	1708 067113 - FIELD BLANK	a	b
Chloromethane	< 0.01300		UJ	NA			< 0.01300		UJ	< 0.01200			NA		
Dibromochloromethane	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			NA		
Ethylbenzene	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
Methylene chloride	0.01500	B	UJ	NA			0.00600	BJ	UJ	0.00600	BJ	U	NA		
Styrene	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
Tetrachlorethene	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			< 0.00500		
Toluene	0.00300	J	J	NA			< 0.00600		R	< 0.00600			NA		
Total xylenes	< 0.00600		R	NA			< 0.00600		R	< 0.00600			NA		
Trichloroethene	< 0.00600		J	NA			< 0.00600		J	< 0.00600			< 0.00500		
Vinyl Acetate	< 0.01300		UJ	NA			< 0.01300		UJ	< 0.01200			NA		
Vinyl chloride	< 0.01300		UJ	NA			< 0.01300		UJ	< 0.01200			< 0.01000		
cis-1,3-Dichloropropene	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			NA		
trans-1,3-Dichloropropene	< 0.00600		UJ	NA			< 0.00600		UJ	< 0.00600			NA		
Pyridine	NA			< 0.02000			NA			NA			NA		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	1708 067115 COMPOSITE TCLP	a	b	1709 067064 7.5 - 9.0	a	b	1709 067065 9.0 - 10.5 TCLP	a	b	1709 067068 DI WATER FIELD BLANK	a	b	1709 067069 DI WATER FIELD BLANK	a	b
HERBICIDE ORGANICS															
2,4,5-TP (Silvex)	< 0.00180			NA			< 0.00180			NA			NA		
2,4-D	< 0.01000			NA			< 0.01200			NA			NA		
PESTICIDES															
Endrin	< 0.00010			< 0.02100			< 0.00010			NA			NA		
Heptachlor	< 0.00005			< 0.01100			< 0.00005			NA			NA		
Heptachlor epoxide	< 0.00005			< 0.01100			< 0.00005			NA			NA		
Methoxychlor	< 0.00050			< 0.11000			< 0.00050			NA			NA		
Toxaphene	< 0.00100			< 0.21000			< 0.00100			NA			NA		
alpha-Chlordane	< 0.00050			< 0.11000			< 0.00050			NA			NA		
gamma-BHC (Lindane)	< 0.00005			< 0.01100			< 0.00005			NA			NA		
gamma-Chlordane	< 0.00050			< 0.11000			< 0.00050			NA			NA		
4,4'-DDD	NA			< 0.02100			NA			NA			NA		
4,4'-DDE	NA			< 0.02100			NA			NA			NA		
4,4'-DDT	NA			< 0.02100			NA			NA			NA		
Aldrin	NA			< 0.01100			NA			NA			NA		
Aroclor-1016	NA			< 0.11000			NA			NA			NA		
Aroclor-1221	NA			< 0.11000			NA			NA			NA		
Aroclor-1232	NA			< 0.11000			NA			NA			NA		
Aroclor-1242	NA			< 0.11000			NA			NA			NA		
Aroclor-1248	NA			< 0.11000			NA			NA			NA		
Aroclor-1254	NA			< 0.21000			NA			NA			NA		
Aroclor-1260	NA			< 0.21000			NA			NA			NA		
Dieldrin	NA			< 0.02100			NA			NA			NA		
Endosulfan II	NA			< 0.02100			NA			NA			NA		
Endosulfan sulfate	NA			< 0.02100			NA			NA			NA		
Endosulfan-I	NA			< 0.01100			NA			NA			NA		
Endrin ketone	NA			< 0.02100			NA			NA			NA		
alpha-BHC	NA			< 0.01100			NA			NA			NA		
beta-BHC	NA			< 0.01100			NA			NA			NA		
delta-BHC	NA			< 0.01100			NA			NA			NA		
SEMI-VOLATILE ORGANICS															
1,4-Dichlorobenzene	< 0.02000		R	< 0.44000			< 0.02000			NA			NA		
2,4,5-Trichlorophenol	< 0.10000		R	< 2.10000			< 0.10000			NA			NA		
2,4,6-Trichlorophenol	< 0.02000		R	< 0.44000			< 0.02000			NA			NA		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1708 067115 COMPOSITE TCLP	a	b	1709 067064 7.5 - 9.0	a	b	1709 067065 9.0 - 10.5 TCLP	a	b	1709 067068 DI WATER FIELD BLANK	a	b	1709 067069 DI WATER FIELD BLANK	a	b
2,4-Dinitrotoluene	< 0.02000		R	< 0.44000			< 0.02000			NA			NA		
2-Methylphenol	< 0.02000		R	< 0.44000			< 0.02000			NA			NA		
3-Methylphenol	< 0.02000		R	NA			< 0.02000			NA			NA		
4-Methylphenol	< 0.02000		R	< 0.44000			< 0.02000			NA			NA		
Hexachlorobenzene	< 0.02000		R	< 0.44000			< 0.02000			NA			NA		
Hexachlorobutadiene	< 0.02000		R	< 0.44000			< 0.02000			NA			NA		
Hexachloroethane	< 0.02000		R	< 0.44000			< 0.02000			NA			NA		
Nitrobenzene	< 0.02000		R	< 0.44000			< 0.02000			NA			NA		
Pentachlorophenol	< 0.10000		R	< 2.10000			0.00800	J	J	NA			NA		
1,2,4-Trichlorobenzene	NA			< 0.44000			NA			NA			NA		
1,2-Dichlorobenzene	NA			< 0.44000			NA			NA			NA		
1,3-Dichlorobenzene	NA			< 0.44000			NA			NA			NA		
2,4-Dichlorophenol	NA			< 0.44000			NA			NA			NA		
2,4-Dimethylphenol	NA			< 0.44000			NA			NA			NA		
2,4-Dinitrophenol	NA			< 2.10000		UJ	NA			NA			NA		
2,6-Dinitrotoluene	NA			< 0.44000			NA			NA			NA		
2-Chloronaphthalene	NA			< 0.44000			NA			NA			NA		
2-Chlorophenol	NA			< 0.44000			NA			NA			NA		
2-Methylnaphthalene	NA			< 0.44000			NA			NA			NA		
2-Nitroaniline	NA			< 2.10000			NA			NA			NA		
2-Nitrophenol	NA			< 0.44000			NA			NA			NA		
3,3'-Dichlorobenzidine	NA			< 0.87000		UJ	NA			NA			NA		
3-Nitroaniline	NA			< 2.10000			NA			NA			NA		
4,6-Dinitro-2-methylphenol	NA			< 2.10000		UJ	NA			NA			NA		
4-Bromophenyl phenyl ether	NA			< 0.44000			NA			NA			NA		
4-Chloro-3-methylphenol	NA			< 0.44000			NA			NA			NA		
4-Chloroaniline	NA			< 0.44000			NA			NA			NA		
4-Chlorophenylphenyl ether	NA			< 0.44000			NA			NA			NA		
4-Nitroaniline	NA			< 2.10000		UJ	NA			NA			NA		
4-Nitrophenol	NA			< 2.10000			NA			NA			NA		
Acenaphthene	NA			< 0.44000			NA			NA			NA		
Acenaphthylene	NA			< 0.44000			NA			NA			NA		
Anthracene	NA			< 0.44000			NA			NA			NA		
Benzo(a)anthracene	NA			< 0.44000			NA			NA			NA		
Benzo(a)pyrene	NA			< 0.44000			NA			NA			NA		
Benzo(b)fluoranthene	NA			< 0.44000			NA			NA			NA		
Benzo(g,h,i)perylene	NA			< 0.44000			NA			NA			NA		
Benzo(k)fluoranthene	NA			< 0.44000			NA			NA			NA		
Benzoic acid	NA			< 2.10000		UJ	NA			NA			NA		
Benzyl alcohol	NA			< 0.44000			NA			NA			NA		
Butyl benzyl phthalate	NA			< 0.44000			NA			NA			NA		
Chrysene	NA			< 0.44000			NA			NA			NA		
Di-n-butyl phthalate	NA			< 0.44000			NA			NA			NA		
Di-n-octyl phthalate	NA			< 0.44000			NA			NA			NA		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1708 067115 COMPOSITE TCLP	a	b	1709 067064 7.5 - 9.0	a	b	1709 067065 9.0 - 10.5 TCLP	a	b	1709 067068 DI WATER FIELD BLANK	a	b	1709 067069 DI WATER FIELD BLANK	a	b
Dibenzo(a,h)anthracene	NA			< 0.44000			NA			NA			NA		
Dibenzofuran	NA			< 0.44000			NA			NA			NA		
Diethyl phthalate	NA			< 0.44000			NA			NA			NA		
Dimethyl phthalate	NA			< 0.44000			NA			NA			NA		
Fluoranthene	NA			< 0.44000			NA			NA			NA		
Fluorene	NA			< 0.44000			NA			NA			NA		
Hexachlorocyclopentadiene	NA			< 0.44000			NA			NA			NA		
Indeno(1,2,3-cd)pyrene	NA			< 0.44000			NA			NA			NA		
Isophorone	NA			< 0.44000			NA			NA			NA		
N-Nitroso-di-n-propylamine	NA			< 0.44000			NA			NA			NA		
N-Nitrosodiphenylamine	NA			< 0.44000			NA			NA			NA		
Naphthalene	NA			< 0.44000			NA			NA			NA		
Phenanthrene	NA			< 0.44000			NA			NA			NA		
Phenol	NA			< 0.44000			NA			NA			NA		
Pyrene	NA			< 0.44000			NA			NA			NA		
bis(2-Chloroethoxy)methane	NA			< 0.44000			NA			NA			NA		
bis(2-Chloroethyl)ether	NA			< 0.44000			NA			NA			NA		
bis(2-Chloroisopropyl) ether	NA			< 0.44000			NA			NA			NA		
bis(2-Ethylhexyl) phthalate	NA			< 0.44000			NA			NA			NA		
VOLATILE ORGANICS															
1,1-Dichloroethene	< 0.00500			< 0.00600		UJ	< 0.00500			< 0.00500			< 0.00500		
1,2-Dichloroethane	< 0.00500			< 0.00600		UJ	< 0.00500			< 0.00500		UJ	< 0.00500		UJ
2-Butanone	0.00200	J		< 0.01300		UJ	< 0.01000			< 0.01000		UJ	< 0.01000		UJ
Benzene	< 0.00500			< 0.00600		R	< 0.00500			< 0.00500			< 0.00500		
Carbon Tetrachloride	< 0.00500			< 0.00600		R	< 0.00500			< 0.00500			< 0.00500		
Chlorobenzene	< 0.00500			< 0.00600		R	< 0.00500			< 0.00500			< 0.00500		
Chloroform	< 0.00500			< 0.00600		UJ	< 0.00500			0.00800			0.00800		
Pyridine	< 0.02000		R	NA			< 0.02000			NA			NA		
Tetrachlorethene	< 0.00500			< 0.00600		R	< 0.00500			< 0.00500			< 0.00500		
Trichloroethene	< 0.00500			< 0.00600		R	< 0.00500			< 0.00500			< 0.00500		
Vinyl chloride	< 0.01000			< 0.01300		UJ	< 0.01000			< 0.01000			< 0.01000		
1,1,1-Trichloroethane	NA			0.15000		J	NA			< 0.00500			< 0.00500		
1,1,2,2-Tetrachloroethane	NA			< 0.00600		R	NA			< 0.00500			< 0.00500		
1,1,2-Trichloroethane	NA			< 0.00600		R	NA			< 0.00500			< 0.00500		
1,1-Dichloroethane	NA			< 0.00600		UJ	NA			< 0.00500			< 0.00500		
1,2-Dichloroethylene	NA			< 0.00600		UJ	NA			< 0.00500			< 0.00500		
1,2-Dichloropropane	NA			< 0.00600		R	NA			< 0.00500			< 0.00500		
2-Hexanone	NA			< 0.01300		R	NA			< 0.01000			< 0.01000		
4-Methyl-2-pentanone	NA			< 0.01300		R	NA			< 0.01000			< 0.01000		
Acetone	NA			0.01300	BJ	J	NA			0.00600	BJ	J	0.00500	BJ	J
Bromodichloromethane	NA			< 0.00600		R	NA			0.00200	J	J	0.00200	J	J

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1708 067115 COMPOSITE TCLP	a	b	1709 067064 7.5 - 9.0	a	b	1709 067065 9.0 - 10.5 TCLP	a	b	1709 067068 DI WATER FIELD BLANK	a	b	1709 067069 DI WATER FIELD BLANK	a	b
Bromoform	NA			< 0.00600		R	NA			< 0.00500			< 0.00500		
Bromomethane	NA			< 0.01300		UJ	NA			< 0.01000			< 0.01000		
Carbon disulfide	NA			< 0.00600		UJ	NA			< 0.00500			< 0.00500		
Chloroethane	NA			< 0.01300		UJ	NA			< 0.01000			< 0.01000		
Chloromethane	NA			< 0.01300		UJ	NA			< 0.01000		UJ	< 0.01000		UJ
Dibromochloromethane	NA			< 0.00600		R	NA			< 0.00500			< 0.00500		
Ethylbenzene	NA			< 0.00600		R	NA			< 0.00500			< 0.00500		
Methylene chloride	NA			0.00800	B	J	NA			0.00100	BJ	J	0.00100	BJ	J
Styrene	NA			< 0.00600		R	NA			< 0.00500			< 0.00500		
Toluene	NA			< 0.00600		R	NA			< 0.00500			< 0.00500		
Total xylenes	NA			< 0.00600		R	NA			< 0.00500			< 0.00500		
Vinyl Acetate	NA			< 0.01300		R	NA			< 0.01000			< 0.01000		
cis-1,3-Dichloropropene	NA			< 0.00600		R	NA			< 0.00500			< 0.00500		
trans-1,3-Dichloropropene	NA			< 0.00600		R	NA			< 0.00500			< 0.00500		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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CHEMICAL PARAMETERS	1709 067071 13.5 - 15.0 a b	1710 067029 4.5 - 5.0 a b	1710 067032 9.0 - 10.5 a b	1710 067038 16.5 - 18.0 TCLP a b	1710 067039 16.5 - 18.0 EP TOXICITY a b
HERBICIDE ORGANICS					
2,4,5-TP (Silvex)	NA	NA	NA	< 0.00180	< 0.00180
2,4-D	NA	NA	NA	< 0.01200	< 0.01200
PESTICIDES					
4,4'-DDD	< 0.02000	< 0.02300	< 0.02200	NA	NA
4,4'-DDE	< 0.02000	< 0.02300	< 0.02200	NA	NA
4,4'-DDT	< 0.02000	< 0.02300	< 0.02200	NA	NA
Aldrin	< 0.01000	< 0.01100	< 0.01100	NA	NA
Aroclor-1016	< 0.10000	< 0.11000	< 0.11000	NA	NA
Aroclor-1221	< 0.10000	< 0.11000	< 0.11000	NA	NA
Aroclor-1232	< 0.10000	< 0.11000	< 0.11000	NA	NA
Aroclor-1242	< 0.10000	< 0.11000	< 0.11000	NA	NA
Aroclor-1248	< 0.10000	< 0.11000	< 0.11000	NA	NA
Aroclor-1254	< 0.20000	< 0.23000	< 0.22000	NA	NA
Aroclor-1260	< 0.20000	< 0.23000	< 0.22000	NA	NA
Dieldrin	< 0.02000	< 0.02300	< 0.02200	NA	NA
Endosulfan II	< 0.02000	< 0.02300	< 0.02200	NA	NA
Endosulfan sulfate	< 0.02000	< 0.02300	< 0.02200	NA	NA
Endosulfan-I	< 0.01000	< 0.01100	< 0.01100	NA	NA
Endrin	< 0.02000	< 0.02300	< 0.02200	< 0.00010	< 0.00010
Endrin ketone	< 0.02000	< 0.02300	< 0.02200	NA	NA
Heptachlor	< 0.01000	< 0.01100	< 0.01100	< 0.00005	< 0.00005
Heptachlor epoxide	< 0.01000	< 0.01100	< 0.01100	< 0.00005	< 0.00005
Methoxychlor	< 0.10000	< 0.11000	< 0.11000	< 0.00050	< 0.00050
Toxaphene	< 0.20000	< 0.23000	< 0.22000	< 0.00100	< 0.00100
alpha-BHC	< 0.01000	< 0.01100	< 0.01100	NA	NA
alpha-Chlordane	< 0.10000	< 0.11000	< 0.11000	< 0.00050	< 0.00050
beta-BHC	< 0.01000	< 0.01100	< 0.01100	NA	NA
delta-BHC	< 0.01000	< 0.01100	< 0.01100	NA	NA
gamma-BHC (Lindane)	< 0.01000	< 0.01100	< 0.01100	< 0.00005	< 0.00005
gamma-Chlordane	< 0.10000	< 0.11000	< 0.11000	< 0.00050	< 0.00050
SEMI-VOLATILE ORGANICS					
1,2,4-Trichlorobenzene	< 0.41000	< 0.46000	< 0.45000	NA	NA
1,2-Dichlorobenzene	< 0.41000	< 0.46000	< 0.45000	NA	NA
1,3-Dichlorobenzene	< 0.41000	< 0.46000	< 0.45000	NA	NA

a = lab qualifiers
b = validation qualifiers

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1709 067071 13.5 - 15.0		1710 067029 4.5 - 5.0		1710 067032 9.0 - 10.5		1710 067038 16.5 - 18.0 TCLP		1710 067039 16.5 - 18.0 EP TOXICITY	
	a	b	a	b	a	b	a	b	a	b
1,4-Dichlorobenzene	< 0.41000		< 0.46000		< 0.45000		< 0.02000		NA	
2,4,5-Trichlorophenol	< 2.00000		< 2.20000		< 2.20000	UJ	< 0.10000		NA	
2,4,6-Trichlorophenol	< 0.41000		< 0.46000		< 0.45000	UJ	< 0.02000		NA	
2,4-Dichlorophenol	< 0.41000		< 0.46000		< 0.45000	UJ	NA		NA	
2,4-Dimethylphenol	< 0.41000		< 0.46000		< 0.45000		NA		NA	
2,4-Dinitrophenol	< 2.00000	UJ	< 2.20000	UJ	< 2.20000	UJ	NA		NA	
2,4-Dinitrotoluene	< 0.41000		< 0.46000		< 0.45000		< 0.02000		NA	
2,6-Dinitrotoluene	< 0.41000		< 0.46000		< 0.45000		NA		NA	
2-Chloronaphthalene	< 0.41000		< 0.46000		< 0.45000		NA		NA	
2-Chlorophenol	< 0.41000		< 0.46000		< 0.45000	UJ	NA		NA	
2-Methylnaphthalene	< 0.41000		< 0.46000		< 0.45000		NA		NA	
2-Methylphenol	< 0.41000		< 0.46000		< 0.45000	UJ	< 0.02000		NA	
2-Nitroaniline	< 2.00000		< 2.20000		< 2.20000		NA		NA	
2-Nitrophenol	< 0.41000		< 0.46000		< 0.45000	UJ	NA		NA	
3,3'-Dichlorobenzidine	< 0.83000		< 0.92000		< 0.90000		NA		NA	
3-Nitroaniline	< 2.00000	UJ	< 2.20000	UJ	< 2.20000		NA		NA	
4,6-Dinitro-2-methylphenol	< 2.00000		< 2.20000		< 2.20000	UJ	NA		NA	
4-Bromophenyl phenyl ether	< 0.41000		< 0.46000		< 0.45000		NA		NA	
4-Chloro-3-methylphenol	< 0.41000		< 0.46000		< 0.45000	UJ	NA		NA	
4-Chloroaniline	< 0.41000		< 0.46000		< 0.45000		NA		NA	
4-Chlorophenylphenyl ether	< 0.41000		< 0.46000		< 0.45000		NA		NA	
4-Methylphenol	< 0.41000		< 0.46000		< 0.45000	UJ	< 0.02000		NA	
4-Nitroaniline	< 2.00000		< 2.20000		< 2.20000		NA		NA	
4-Nitrophenol	< 2.00000		< 2.20000		< 2.20000	UJ	NA		NA	
Acenaphthene	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Acenaphthylene	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Anthracene	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Benzo(a)anthracene	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Benzo(a)pyrene	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Benzo(b)fluoranthene	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Benzo(g,h,i)perylene	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Benzo(k)fluoranthene	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Benzoic acid	< 2.00000	UJ	< 2.20000	UJ	< 2.20000		NA		NA	
Benzyl alcohol	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Butyl benzyl phthalate	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Chrysene	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Di-n-butyl phthalate	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Di-n-octyl phthalate	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Dibenzo(a,h)anthracene	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Dibenzofuran	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Diethyl phthalate	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Dimethyl phthalate	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Fluoranthene	< 0.41000		< 0.46000		< 0.45000		NA		NA	
Fluorene	< 0.41000		< 0.46000		< 0.45000		NA		NA	

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b = validation qualifiers

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1709 067071 13.5 - 15.0			1710 067029 4.5 - 5.0			1710 067032 9.0 - 10.5			1710 067038 16.5 - 18.0 TCLP			1710 067039 16.5 - 18.0 EP TOXICITY		
		a	b		a	b		a	b		a	b		a	b
Hexachlorobenzene	< 0.41000			< 0.46000			< 0.45000			< 0.02000			NA		
Hexachlorobutadiene	< 0.41000			< 0.46000			< 0.45000			< 0.02000			NA		
Hexachlorocyclopentadiene	< 0.41000			< 0.46000			< 0.45000			NA			NA		
Hexachloroethane	< 0.41000			< 0.46000			< 0.45000			< 0.02000			NA		
Indeno(1,2,3-cd)pyrene	< 0.41000			< 0.46000			< 0.45000			NA			NA		
Isophorone	< 0.41000			< 0.46000			< 0.45000			NA			NA		
N-Nitroso-di-n-propylamine	< 0.41000			< 0.46000			< 0.45000			NA			NA		
N-Nitrosodiphenylamine	< 0.41000			< 0.46000			< 0.45000			NA			NA		
Naphthalene	< 0.41000			< 0.46000			< 0.45000			NA			NA		
Nitrobenzene	< 0.41000			< 0.46000			< 0.45000			< 0.02000			NA		
Pentachlorophenol	< 2.00000			< 2.20000			< 2.20000		UJ	< 0.10000			NA		
Phenanthrene	< 0.41000			< 0.46000			< 0.45000			NA			NA		
Phenol	< 0.41000			< 0.46000			< 0.45000		UJ	NA			NA		
Pyrene	< 0.41000			< 0.46000			< 0.45000			NA			NA		
bis(2-Chloroethoxy)methane	< 0.41000			< 0.46000			< 0.45000			NA			NA		
bis(2-Chloroethyl)ether	< 0.41000			< 0.46000			< 0.45000			NA			NA		
bis(2-Chloroisopropyl) ether	< 0.41000			< 0.46000			< 0.45000			NA			NA		
bis(2-Ethylhexyl) phthalate	< 0.41000			< 0.46000			< 0.45000			NA			NA		
3-Methylphenol	NA			NA			NA			< 0.02000			NA		
VOLATILE ORGANICS															
1,1,1-Trichloroethane	0.05000		J	< 0.00700		R	0.07400		J	NA			NA		
1,1,2,2-Tetrachloroethane	< 0.00600		R	< 0.00700		R	< 0.00700		R	NA			NA		
1,1,2-Trichloroethane	< 0.00600		R	< 0.00700		R	< 0.00700		R	NA			NA		
1,1-Dichloroethane	< 0.00600		UJ	< 0.00700		UJ	< 0.00700		UJ	NA			NA		
1,1-Dichloroethene	< 0.00600		UJ	< 0.00700		UJ	< 0.00700		UJ	< 0.00500			NA		
1,2-Dichloroethane	< 0.00600		UJ	< 0.00700		UJ	< 0.00700		R	< 0.00500			NA		
1,2-Dichloroethylene	< 0.00600		UJ	< 0.00700		UJ	< 0.00700		UJ	NA			NA		
1,2-Dichloropropane	< 0.00600		R	< 0.00700		R	< 0.00700		R	NA			NA		
2-Butanone	< 0.01300		UJ	< 0.01400		R	< 0.01300		R	< 0.01000			NA		
2-Hexanone	< 0.01300		R	< 0.01400		R	0.00200	BJ	R	NA			NA		
4-Methyl-2-pentanone	< 0.01300		R	0.00200	J	J	< 0.01300		R	NA			NA		
Acetone	0.01000	BJ	J	0.02500		UJ	0.07500		J	NA			NA		
Benzene	< 0.00600		R	< 0.00700		R	< 0.00700		R	< 0.00500			NA		
Bromodichloromethane	< 0.00600		R	< 0.00700		R	< 0.00700		R	NA			NA		
Bromoform	< 0.00600		R	< 0.00700		R	< 0.00700		R	NA			NA		
Bromomethane	< 0.01300		UJ	< 0.01400		UJ	< 0.01300		UJ	NA			NA		
Carbon Tetrachloride	< 0.00600		R	< 0.00700		R	< 0.00700		R	< 0.00500			NA		
Carbon disulfide	< 0.00600		UJ	0.00700	J	UJ	< 0.00700		UJ	NA			NA		
Chlorobenzene	< 0.00600		R	< 0.00700		R	< 0.00700		R	< 0.00500			NA		
Chloroethane	< 0.01300		UJ	< 0.01400		UJ	< 0.01300		UJ	NA			NA		
Chloroform	< 0.00600		UJ	< 0.00700		UJ	< 0.00700		R	< 0.00500			NA		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1709 067071 13.5 - 15.0	a	b	1710 067029 4.5 - 5.0	a	b	1710 067032 9.0 - 10.5	a	b	1710 067038 16.5 - 18.0 TCLP	a	b	1710 067039 16.5 - 18.0 EP TOXICITY	a	b
Chloromethane	< 0.01300		UJ	< 0.01400		UJ	< 0.01300		UJ	NA			NA		
Dibromochloromethane	< 0.00600		R	< 0.00700		R	< 0.00700		R	NA			NA		
Ethylbenzene	< 0.00600		R	< 0.00700		R	< 0.00700		R	NA			NA		
Methylene chloride	0.00600	BJ	UJ	0.02000	B	UJ	0.01000	B	UJ	NA			NA		
Styrene	< 0.00600		R	< 0.00700		R	< 0.00700		R	NA			NA		
Tetrachlorethene	< 0.00600		R	< 0.00700		R	< 0.00700		R	< 0.00500			NA		
Toluene	< 0.00600		R	< 0.00700		R	< 0.00700		R	NA			NA		
Total xylenes	< 0.00600		R	< 0.00700		R	< 0.00700		R	NA			NA		
Trichloroethene	< 0.00600		R	< 0.00700		R	< 0.00700		R	< 0.00500			NA		
Vinyl Acetate	0.00200	J	J	< 0.01400		R	< 0.01300		R	NA			NA		
Vinyl chloride	< 0.01300		UJ	< 0.01400		UJ	< 0.01300		UJ	< 0.01000			NA		
cis-1,3-Dichloropropene	< 0.00600		R	< 0.00700		R	< 0.00700		R	NA			NA		
trans-1,3-Dichloropropene	< 0.00600		R	< 0.00700		R	< 0.00700		R	NA			NA		
Pyridine	NA			NA			NA			< 0.02000			NA		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	1710 067047 28.5 - 30.0	a	b	1710 067051 COMPOSITE TCLP	a	b	1710 067054 - TRIP BLANK	a	b	1710 067055 - FIELD BLANK	a	b
HERBICIDE ORGANICS												
2,4,5-TP (Silvex)	NA			< 0.00180			NA			NA		
2,4-D	NA			< 0.01200			NA			NA		
PESTICIDES												
4,4'-DDD	< 0.01800		R	NA			NA			NA		
4,4'-DDE	< 0.01800		R	NA			NA			NA		
4,4'-DDT	< 0.01800		R	NA			NA			NA		
Aldrin	< 0.00920		R	NA			NA			NA		
Aroclor-1016	< 0.09200		R	NA			NA			NA		
Aroclor-1221	< 0.09200		R	NA			NA			NA		
Aroclor-1232	< 0.09200		R	NA			NA			NA		
Aroclor-1242	< 0.09200		R	NA			NA			NA		
Aroclor-1248	< 0.09200		R	NA			NA			NA		
Aroclor-1254	< 0.18000		R	NA			NA			NA		
Aroclor-1260	0.38000	XF	R	NA			NA			NA		
Dieldrin	< 0.01800		R	NA			NA			NA		
Endosulfan II	< 0.01800		R	NA			NA			NA		
Endosulfan sulfate	< 0.01800		R	NA			NA			NA		
Endosulfan-I	< 0.00920		R	NA			NA			NA		
Endrin	< 0.01800		R	< 0.00010			NA			NA		
Endrin ketone	< 0.01800		R	NA			NA			NA		
Heptachlor	< 0.00920		R	< 0.00005			NA			NA		
Heptachlor epoxide	< 0.00920		R	< 0.00005			NA			NA		
Methoxychlor	< 0.09200		R	< 0.00050			NA			NA		
Toxaphene	< 0.18000		R	< 0.00100			NA			NA		
alpha-BHC	< 0.00920		R	NA			NA			NA		
alpha-Chlordane	< 0.09200		R	< 0.00050			NA			NA		
beta-BHC	< 0.00920		R	NA			NA			NA		
delta-BHC	< 0.00920		R	NA			NA			NA		
gamma-BHC (Lindane)	< 0.00920		R	< 0.00005			NA			NA		
gamma-Chlordane	< 0.09200		R	< 0.00050			NA			NA		
SEMI-VOLATILE ORGANICS												
1,2,4-Trichlorobenzene	< 0.37000			NA			NA			NA		
1,2-Dichlorobenzene	< 0.37000			NA			NA			NA		
1,3-Dichlorobenzene	< 0.37000			NA			NA			NA		

a = lab qualifiers
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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1710 067047 28.5 - 30.0	a	b	1710 067051 COMPOSITE TCLP	a	b	1710 067054 - TRIP BLANK	a	b	1710 067055 - FIELD BLANK	a	b
1,4-Dichlorobenzene	< 0.37000			< 0.02000			NA			NA		
2,4,5-Trichlorophenol	< 1.80000			< 0.10000			NA			NA		
2,4,6-Trichlorophenol	< 0.37000			< 0.02000			NA			NA		
2,4-Dichlorophenol	< 0.37000			NA			NA			NA		
2,4-Dimethylphenol	< 0.37000			NA			NA			NA		
2,4-Dinitrophenol	< 1.80000	UJ		NA			NA			NA		
2,4-Dinitrotoluene	< 0.37000			< 0.02000			NA			NA		
2,6-Dinitrotoluene	< 0.37000			NA			NA			NA		
2-Chloronaphthalene	< 0.37000			NA			NA			NA		
2-Chlorophenol	< 0.37000			NA			NA			NA		
2-Methylnaphthalene	< 0.37000			NA			NA			NA		
2-Methylphenol	< 0.37000			< 0.02000			NA			NA		
2-Nitroaniline	< 1.80000			NA			NA			NA		
2-Nitrophenol	< 0.37000			NA			NA			NA		
3,3'-Dichlorobenzidine	< 0.75000			NA			NA			NA		
3-Nitroaniline	< 1.80000	UJ		NA			NA			NA		
4,6-Dinitro-2-methylphenol	< 1.80000			NA			NA			NA		
4-Bromophenyl phenyl ether	< 0.37000			NA			NA			NA		
4-Chloro-3-methylphenol	< 0.37000			NA			NA			NA		
4-Chloroaniline	< 0.37000			NA			NA			NA		
4-Chlorophenylphenyl ether	< 0.37000			NA			NA			NA		
4-Methylphenol	< 0.37000			< 0.02000			NA			NA		
4-Nitroaniline	< 1.80000			NA			NA			NA		
4-Nitrophenol	< 1.80000			NA			NA			NA		
Acenaphthene	< 0.37000			NA			NA			NA		
Acenaphthylene	< 0.37000			NA			NA			NA		
Anthracene	< 0.37000			NA			NA			NA		
Benzo(a)anthracene	< 0.37000			NA			NA			NA		
Benzo(a)pyrene	< 0.37000			NA			NA			NA		
Benzo(b)fluoranthene	< 0.37000			NA			NA			NA		
Benzo(g,h,i)perylene	< 0.37000			NA			NA			NA		
Benzo(k)fluoranthene	< 0.37000			NA			NA			NA		
Benzoic acid	< 1.80000	UJ		NA			NA			NA		
Benzyl alcohol	< 0.37000			NA			NA			NA		
Butyl benzyl phthalate	< 0.37000			NA			NA			NA		
Chrysene	< 0.37000			NA			NA			NA		
Di-n-butyl phthalate	< 0.37000			NA			NA			NA		
Di-n-octyl phthalate	< 0.37000			NA			NA			NA		
Dibenzo(a,h)anthracene	< 0.37000			NA			NA			NA		
Dibenzofuran	< 0.37000			NA			NA			NA		
Diethyl phthalate	< 0.37000			NA			NA			NA		
Dimethyl phthalate	< 0.37000			NA			NA			NA		
Fluoranthene	< 0.37000			NA			NA			NA		
Fluorene	< 0.37000			NA			NA			NA		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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CHEMICAL PARAMETERS	1710 067047 28.5 - 30.0	a	b	1710 067051 COMPOSITE TCLP	a	b	1710 067054 - TRIP BLANK	a	b	1710 067055 - FIELD BLANK	a	b
Hexachlorobenzene	< 0.37000			< 0.02000			NA			NA		
Hexachlorobutadiene	< 0.37000			< 0.02000			NA			NA		
Hexachlorocyclopentadiene	< 0.37000			NA			NA			NA		
Hexachloroethane	< 0.37000			< 0.02000			NA			NA		
Indeno(1,2,3-cd)pyrene	< 0.37000			NA			NA			NA		
Isophorone	< 0.37000			NA			NA			NA		
N-Nitroso-di-n-propylamine	< 0.37000			NA			NA			NA		
N-Nitrosodiphenylamine	< 0.37000			NA			NA			NA		
Naphthalene	< 0.37000			NA			NA			NA		
Nitrobenzene	< 0.37000			< 0.02000			NA			NA		
Pentachlorophenol	< 1.80000			< 0.10000			NA			NA		
Phenanthrene	< 0.37000			NA			NA			NA		
Phenol	< 0.37000			NA			NA			NA		
Pyrene	< 0.37000			NA			NA			NA		
bis(2-Chloroethoxy)methane	< 0.37000			NA			NA			NA		
bis(2-Chloroethyl)ether	< 0.37000			NA			NA			NA		
bis(2-Chloroisopropyl) ether	< 0.37000			NA			NA			NA		
bis(2-Ethylhexyl) phthalate	0.62000			NA			NA			NA		
3-Methylphenol	NA			< 0.02000			NA			NA		
VOLATILE ORGANICS												
1,1,1-Trichloroethane	< 0.00600			NA			< 0.00500			< 0.00500		
1,1,2,2-Tetrachloroethane	< 0.00600			NA			< 0.00500			< 0.00500		
1,1,2-Trichloroethane	< 0.00600			NA			< 0.00500			< 0.00500		
1,1-Dichloroethane	< 0.00600			NA			< 0.00500			< 0.00500		
1,1-Dichloroethene	< 0.00600			< 0.00500			< 0.00500			< 0.00500		
1,2-Dichloroethane	< 0.00600			< 0.00500			< 0.00500			< 0.00500		
1,2-Dichloroethylene	< 0.00600			NA			< 0.00500			< 0.00500		
1,2-Dichloropropane	< 0.00600			NA			< 0.00500			< 0.00500		
2-Butanone	< 0.01100			0.00400	J	J	< 0.01000	R		< 0.01000	R	
2-Hexanone	< 0.01100			NA			< 0.01000			< 0.01000		
4-Methyl-2-pentanone	0.00100	J	J	NA			< 0.01000			< 0.01000		
Acetone	0.03500		R	NA			< 0.01000	R		< 0.01000	R	
Benzene	< 0.00600			< 0.00500			< 0.00500	UJ		< 0.00500	UJ	
Bromodichloromethane	< 0.00600			NA			< 0.00500			< 0.00500		
Bromoform	< 0.00600			NA			< 0.00500			< 0.00500		
Bromomethane	< 0.01100		UJ	NA			< 0.01000	UJ		< 0.01000	UJ	
Carbon Tetrachloride	< 0.00600			< 0.00500			< 0.00500			< 0.00500		
Carbon disulfide	0.00600	J	UJ	NA			< 0.00500	UJ		< 0.00500	UJ	
Chlorobenzene	< 0.00600			< 0.00500			< 0.00500	UJ		< 0.00500	UJ	
Chloroethane	< 0.01100			NA			< 0.01000			< 0.01000		
Chloroform	< 0.00600			< 0.00500			0.00500			0.00500		

a = lab qualifiers
b = validation qualifiers

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1710 067047 28.5 - 30.0	a	b	1710 067051 COMPOSITE TCLP	a	b	1710 067054 - TRIP BLANK	a	b	1710 067055 - FIELD BLANK	a	b
Chloromethane	< 0.01100		UJ	NA			< 0.01000		UJ	< 0.01000		UJ
Dibromochloromethane	< 0.00600			NA			< 0.00500			< 0.00500		
Ethylbenzene	< 0.00600			NA			< 0.00500		UJ	< 0.00500		UJ
Methylene chloride	0.01200	B	UJ	NA			0.00100	BJ	J	0.00300	BJ	J
Styrene	< 0.00600			NA			< 0.00500		UJ	< 0.00500		UJ
Tetrachlorethene	< 0.00600			< 0.00500			< 0.00500			< 0.00500		
Toluene	< 0.00600			NA			< 0.00500		UJ	< 0.00500		UJ
Total xylenes	< 0.00600			NA			< 0.00500		UJ	< 0.00500		UJ
Trichloroethene	0.00600	J		< 0.00500			0.00200	J		< 0.00500		
Vinyl Acetate	< 0.01100			NA			< 0.01000			< 0.01000		
Vinyl chloride	< 0.01100			< 0.01000			< 0.01000			< 0.01000		
cis-1,3-Dichloropropene	< 0.00600			NA			< 0.00500			< 0.00500		
trans-1,3-Dichloropropene	< 0.00600			NA			< 0.00500			< 0.00500		
Pyridine	NA			< 0.02000			NA			NA		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1711 067012 4.5 - 6.0 a b	1711 067015 9.0 - 10.5 a b	1711 067016 10.5 - 12.0 TCLP a b	1711 067017 10.5 - 12.0 EP TOXICITY a b
HERBICIDE ORGANICS				
2,4,5-TP (Silvex)	NA	NA	< 0.00180	< 0.00360
2,4-D	NA	NA	< 0.01200	< 0.02400
PESTICIDES				
4,4'-DDD	< 0.02100	< 0.02300	NA	NA
4,4'-DDE	< 0.02100	< 0.02300	NA	NA
4,4'-DDT	< 0.02100	< 0.02300	NA	NA
Aldrin	< 0.01100	< 0.01200	NA	NA
Aroclor-1016	< 0.11000	< 0.12000	NA	NA
Aroclor-1221	< 0.11000	< 0.12000	NA	NA
Aroclor-1232	< 0.11000	< 0.12000	NA	NA
Aroclor-1242	< 0.11000	< 0.12000	NA	NA
Aroclor-1248	< 0.11000	< 0.12000	NA	NA
Aroclor-1254	< 0.21000	< 0.23000	NA	NA
Aroclor-1260	< 0.21000	< 0.23000	NA	NA
Dieldrin	< 0.02100	< 0.02300	NA	NA
Endosulfan II	< 0.02100	< 0.02300	NA	NA
Endosulfan sulfate	< 0.02100	< 0.02300	NA	NA
Endosulfan-I	< 0.01100	< 0.01200	NA	NA
Endrin	< 0.02100	< 0.02300	< 0.00010	< 0.00010
Endrin ketone	< 0.02100	< 0.02300	NA	NA
Heptachlor	< 0.01100	< 0.01200	< 0.00005	< 0.00005
Heptachlor epoxide	< 0.01100	< 0.01200	< 0.00005	< 0.00005
Methoxychlor	< 0.11000	< 0.12000	< 0.00050	< 0.00050
Toxaphene	< 0.21000	< 0.23000	< 0.00100	< 0.00100
alpha-BHC	< 0.01100	< 0.01200	NA	NA
alpha-Chlordane	< 0.11000	< 0.12000	< 0.00050	< 0.00050
beta-BHC	< 0.01100	< 0.01200	NA	NA
delta-BHC	< 0.01100	< 0.01200	NA	NA
gamma-BHC (Lindane)	< 0.01100	< 0.01200	< 0.00005	< 0.00005
gamma-Chlordane	< 0.11000	< 0.12000	< 0.00050	< 0.00050
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	< 0.43000	< 0.48000	NA	NA
1,2-Dichlorobenzene	< 0.43000	< 0.48000	NA	NA
1,3-Dichlorobenzene	< 0.43000	< 0.48000	NA	NA

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b = validation qualifiers

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1711 067012 4.5 - 6.0	a	b	1711 067015 9.0 - 10.5	a	b	1711 067016 10.5 - 12.0 TCLP	a	b	1711 067017 10.5 - 12.0 EP TOXICITY	a	b
1,4-Dichlorobenzene	< 0.43000			< 0.48000			< 0.02000			NA		
2,4,5-Trichlorophenol	< 2.10000			< 2.30000			< 0.10000			NA		
2,4,6-Trichlorophenol	< 0.43000			< 0.48000			< 0.02000			NA		
2,4-Dichlorophenol	< 0.43000			< 0.48000			NA			NA		
2,4-Dimethylphenol	< 0.43000			< 0.48000			NA			NA		
2,4-Dinitrophenol	< 2.10000		UJ	< 2.30000		UJ	NA			NA		
2,4-Dinitrotoluene	< 0.43000			< 0.48000			< 0.02000			NA		
2,6-Dinitrotoluene	< 0.43000			< 0.48000			NA			NA		
2-Chloronaphthalene	< 0.43000			< 0.48000			NA			NA		
2-Chlorophenol	< 0.43000			< 0.48000			NA			NA		
2-Methylnaphthalene	< 0.43000			< 0.48000			NA			NA		
2-Methylphenol	< 0.43000			< 0.48000			< 0.02000			NA		
2-Nitroaniline	< 2.10000			< 2.30000			NA			NA		
2-Nitrophenol	< 0.43000			< 0.48000			NA			NA		
3,3'-Dichlorobenzidine	< 0.87000			< 0.95000			NA			NA		
3-Nitroaniline	< 2.10000			< 2.30000			NA			NA		
4,6-Dinitro-2-methylphenol	< 2.10000		UJ	< 2.30000		UJ	NA			NA		
4-Bromophenyl phenyl ether	< 0.43000			< 0.48000			NA			NA		
4-Chloro-3-methylphenol	< 0.43000			< 0.48000			NA			NA		
4-Chloroaniline	< 0.43000			< 0.48000			NA			NA		
4-Chlorophenylphenyl ether	< 0.43000			< 0.48000			NA			NA		
4-Methylphenol	< 0.43000			< 0.48000			< 0.02000			NA		
4-Nitroaniline	< 2.10000			< 2.30000			NA			NA		
4-Nitrophenol	< 2.10000			< 2.30000			NA			NA		
Acenaphthene	< 0.43000			< 0.48000			NA			NA		
Acenaphthylene	< 0.43000			< 0.48000			NA			NA		
Anthracene	< 0.43000			< 0.48000			NA			NA		
Benzo(a)anthracene	< 0.43000			< 0.48000			NA			NA		
Benzo(a)pyrene	< 0.43000			< 0.48000			NA			NA		
Benzo(b)fluoranthene	< 0.43000			< 0.48000			NA			NA		
Benzo(g,h,i)perylene	< 0.43000			< 0.48000			NA			NA		
Benzo(k)fluoranthene	< 0.43000			< 0.48000			NA			NA		
Benzoic acid	< 2.10000		UJ	< 2.30000		UJ	NA			NA		
Benzyl alcohol	< 0.43000			< 0.48000			NA			NA		
Butyl benzyl phthalate	< 0.43000			< 0.48000			NA			NA		
Chrysene	< 0.43000			< 0.48000			NA			NA		
Di-n-butyl phthalate	< 0.43000			< 0.48000			NA			NA		
Di-n-octyl phthalate	< 0.43000			< 0.48000			NA			NA		
Dibenzo(a,h)anthracene	< 0.43000			< 0.48000			NA			NA		
Dibenzofuran	< 0.43000			< 0.48000			NA			NA		
Diethyl phthalate	< 0.43000			< 0.48000			NA			NA		
Dimethyl phthalate	< 0.43000			< 0.48000			NA			NA		
Fluoranthene	< 0.43000			< 0.48000			NA			NA		
Fluorene	< 0.43000			< 0.48000			NA			NA		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1711 067012 4.5 - 6.0	a	b	1711 067015 9.0 - 10.5	a	b	1711 067016 10.5 - 12.0 TCLP	a	b	1711 067017 10.5 - 12.0 EP TOXICITY	a	b
Hexachlorobenzene	< 0.43000			< 0.48000			< 0.02000			NA		
Hexachlorobutadiene	< 0.43000			< 0.48000			< 0.02000			NA		
Hexachlorocyclopentadiene	< 0.43000			< 0.48000			NA			NA		
Hexachloroethane	< 0.43000			< 0.48000			< 0.02000			NA		
Indeno(1,2,3-cd)pyrene	< 0.43000			< 0.48000			NA			NA		
Isophorone	< 0.43000			< 0.48000			NA			NA		
N-Nitroso-di-n-propylamine	< 0.43000			< 0.48000			NA			NA		
N-Nitrosodiphenylamine	< 0.43000			< 0.48000			NA			NA		
Naphthalene	< 0.43000			< 0.48000			NA			NA		
Nitrobenzene	< 0.43000			< 0.48000			< 0.02000			NA		
Pentachlorophenol	< 2.10000			< 2.30000			< 0.10000			NA		
Phenanthrene	< 0.43000			< 0.48000			NA			NA		
Phenol	0.43000	BJ		0.48000	BJ	U	NA			NA		
Pyrene	< 0.43000			< 0.48000			NA			NA		
bis(2-Chloroethoxy)methane	< 0.43000			< 0.48000			NA			NA		
bis(2-Chloroethyl)ether	< 0.43000		U	< 0.48000			NA			NA		
bis(2-Chloroisopropyl) ether	< 0.43000			< 0.48000			NA			NA		
bis(2-Ethylhexyl) phthalate	< 0.43000			< 0.48000			NA			NA		
3-Methylphenol	NA			NA			< 0.02000			NA		
VOLATILE ORGANICS												
1,1,1-Trichloroethane	0.05100		J	0.03500		J	NA			NA		
1,1,2,2-Tetrachloroethane	< 0.00600		R	< 0.00700		R	NA			NA		
1,1,2-Trichloroethane	< 0.00600		R	< 0.00700		R	NA			NA		
1,1-Dichloroethane	< 0.00600		UJ	< 0.00700		UJ	NA			NA		
1,1-Dichloroethene	< 0.00600		UJ	< 0.00700		UJ	< 0.00500			NA		
1,2-Dichloroethane	< 0.00600		UJ	< 0.00700		UJ	< 0.00500			NA		
1,2-Dichloroethylene	< 0.00600		UJ	< 0.00700		UJ	NA			NA		
1,2-Dichloropropane	< 0.00600		R	< 0.00700		R	NA			NA		
2-Butanone	< 0.01300		UJ	< 0.01400		UJ	< 0.01000			NA		
2-Hexanone	< 0.01300		R	< 0.01400		UJ	NA			NA		
4-Methyl-2-pentanone	< 0.01300		R	< 0.01400		R	NA			NA		
Acetone	0.01300	BJ	UJ	0.01900	B	UJ	NA			NA		
Benzene	< 0.00600		R	< 0.00700		R	< 0.00500			NA		
Bromodichloromethane	< 0.00600		R	< 0.00700		R	NA			NA		
Bromoform	< 0.00600		R	< 0.00700		R	NA			NA		
Bromomethane	< 0.01300		UJ	< 0.01400		UJ	NA			NA		
Carbon Tetrachloride	< 0.00600		R	< 0.00700		R	< 0.00500			NA		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1711 067012 4.5 - 6.0	a	b	1711 067015 9.0 - 10.5	a	b	1711 067016 10.5 - 12.0 TCLP	a	b	1711 067017 10.5 - 12.0 EP TOXICITY	a	b
Carbon disulfide	< 0.00600		UJ	< 0.02000		J	NA			NA		
Chlorobenzene	< 0.00600		R	< 0.00700		R	< 0.00500			NA		
Chloroethane	< 0.01300		UJ	< 0.01400		UJ	NA			NA		
Chloroform	< 0.00600		UJ	< 0.00700		UJ	< 0.00500			NA		
Chloromethane	< 0.01300		UJ	< 0.01400		UJ	NA			NA		
Dibromochloromethane	< 0.00600		R	< 0.00700		R	NA			NA		
Ethylbenzene	< 0.00600		R	< 0.00700		R	NA			NA		
Methylene chloride	0.00600	BJ	UJ	0.02500	B	UJ	NA			NA		
Styrene	< 0.00600		R	< 0.00700		R	NA			NA		
Tetrachlorethene	< 0.00600		R	< 0.00700		R	< 0.00500			NA		
Toluene	< 0.00600		R	0.00300	J	J	NA			NA		
Total xylenes	< 0.00600		R	< 0.00700		R	NA			NA		
Trichloroethene	< 0.00600		R	< 0.00700		R	< 0.00500			NA		
Vinyl Acetate	< 0.01300		R	< 0.01400		R	NA			NA		
Vinyl chloride	< 0.01300		UJ	< 0.01400		UJ	< 0.01000			NA		
cis-1,3-Dichloropropene	< 0.00600		R	< 0.00700		R	NA			NA		
trans-1,3-Dichloropropene	< 0.00600		R	< 0.00700		R	NA			NA		
Pyridine	NA			NA			< 0.02000			NA		

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INACTIVE FLYASH PILE
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RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	1711 067020 18.0 - 19.5	a	b	1711 067021 COMPOSITE TCLP	a	b	1711 067023 - FIELD BLANK	a	b	1711 067024 - FIELD BLANK	a	b	1791 067122 28.5 - 30.0	a	b
HERBICIDE ORGANICS															
2,4,5-TP (Silvex)	NA			< 0.00180			NA			NA			NA		
2,4-D	NA			< 0.01200			NA			NA			NA		
PESTICIDES															
4,4'-DDD	< 0.02200			NA			NA			NA			< 0.02000		
4,4'-DDE	< 0.02200			NA			NA			NA			< 0.02000		
4,4'-DDT	< 0.02200			NA			NA			NA			< 0.02000		
Aldrin	< 0.01100			NA			NA			NA			< 0.00990		
Aroclor-1016	< 0.11000			NA			NA			NA			< 0.09900		
Aroclor-1221	< 0.11000			NA			NA			NA			< 0.09900		
Aroclor-1232	< 0.11000			NA			NA			NA			< 0.09900		
Aroclor-1242	< 0.11000			NA			NA			NA			< 0.09900		
Aroclor-1248	< 0.11000			NA			NA			NA			< 0.09900		
Aroclor-1254	0.21000	JX	J	NA			NA			NA			< 0.20000		
Aroclor-1260	< 0.22000			NA			NA			NA			< 0.20000		
Dieldrin	< 0.02200			NA			NA			NA			< 0.02000		
Endosulfan II	< 0.02200			NA			NA			NA			< 0.02000		
Endosulfan sulfate	< 0.02200			NA			NA			NA			< 0.02000		
Endosulfan-I	< 0.01100			NA			NA			NA			< 0.00990		
Endrin	< 0.02200			< 0.00010			NA			NA			< 0.02000		
Endrin ketone	< 0.02200			NA			NA			NA			< 0.02000		
Heptachlor	< 0.01100			< 0.00005			NA			NA			< 0.00990		
Heptachlor epoxide	< 0.01100			< 0.00005			NA			NA			< 0.00990		
Methoxychlor	< 0.11000			< 0.00050			NA			NA			< 0.09900		
Toxaphene	< 0.22000			< 0.00100			NA			NA			< 0.20000		
alpha-BHC	< 0.01100			NA			NA			NA			< 0.00990		
alpha-Chlordane	< 0.11000			< 0.00050			NA			NA			< 0.09900		
beta-BHC	< 0.01100			NA			NA			NA			< 0.00990		
delta-BHC	< 0.01100			NA			NA			NA			< 0.00990		
gamma-BHC (Lindane)	< 0.01100			< 0.00005			NA			NA			< 0.00990		
gamma-Chlordane	< 0.11000			< 0.00050			NA			NA			< 0.09900		
SEMI-VOLATILE ORGANICS															
1,2,4-Trichlorobenzene	< 0.46000			NA			NA			NA			< 0.82000		
1,2-Dichlorobenzene	< 0.46000			NA			NA			NA			< 0.82000		
1,3-Dichlorobenzene	< 0.46000			NA			NA			NA			< 0.82000		

a = lab qualifiers
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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1711 067020 18.0 - 19.5	a	b	1711 067021 COMPOSITE TCLP	a	b	1711 067023 - FIELD BLANK	a	b	1711 067024 - FIELD BLANK	a	b	1791 067122 28.5 - 30.0	a	b
1,4-Dichlorobenzene	< 0.46000			< 0.02000			NA			NA			< 0.82000		
2,4,5-Trichlorophenol	< 2.20000			< 0.10000			NA			NA			< 4.00000		
2,4,6-Trichlorophenol	< 0.46000			< 0.02000			NA			NA			< 0.82000		
2,4-Dichlorophenol	< 0.46000		UJ	NA			NA			NA			< 0.82000		
2,4-Dimethylphenol	< 0.46000			NA			NA			NA			< 0.82000		
2,4-Dinitrophenol	< 2.20000			NA			NA			NA			< 4.00000		UJ
2,4-Dinitrotoluene	< 0.46000			< 0.02000			NA			NA			< 0.82000		
2,6-Dinitrotoluene	< 0.46000			NA			NA			NA			< 0.82000		
2-Chloronaphthalene	< 0.46000			NA			NA			NA			< 0.82000		
2-Chlorophenol	< 0.46000			NA			NA			NA			< 0.82000		
2-Methylnaphthalene	< 0.46000			NA			NA			NA			< 0.82000		
2-Methylphenol	< 0.46000			< 0.02000			NA			NA			< 0.82000		
2-Nitroaniline	< 2.20000			NA			NA			NA			< 4.00000		
2-Nitrophenol	< 0.46000			NA			NA			NA			< 0.82000		
3,3'-Dichlorobenzidine	< 0.93000			NA			NA			NA			< 1.60000		
3-Nitroaniline	< 2.20000			NA			NA			NA			< 4.00000		UJ
4,6-Dinitro-2-methylphenol	< 2.20000		UJ	NA			NA			NA			< 4.00000		
4-Bromophenyl phenyl ether	< 0.46000			NA			NA			NA			< 0.82000		
4-Chloro-3-methylphenol	< 0.46000			NA			NA			NA			< 0.82000		
4-Chloroaniline	< 0.46000			NA			NA			NA			< 0.82000		
4-Chlorophenylphenyl ether	< 0.46000			NA			NA			NA			< 0.82000		
4-Methylphenol	< 0.46000			< 0.02000			NA			NA			< 0.82000		
4-Nitroaniline	< 2.20000			NA			NA			NA			< 4.00000		
4-Nitrophenol	< 2.20000			NA			NA			NA			< 4.00000		
Acenaphthene	< 0.46000			NA			NA			NA			< 0.82000		
Acenaphthylene	< 0.46000			NA			NA			NA			< 0.82000		
Anthracene	< 0.46000			NA			NA			NA			< 0.82000		
Benzo(a)anthracene	< 0.46000			NA			NA			NA			< 0.82000		
Benzo(a)pyrene	< 0.46000			NA			NA			NA			< 0.82000		
Benzo(b)fluoranthene	< 0.46000			NA			NA			NA			< 0.82000		
Benzo(g,h,i)perylene	< 0.46000			NA			NA			NA			< 0.82000		
Benzo(k)fluoranthene	< 0.46000			NA			NA			NA			< 0.82000		
Benzoic acid	0.15000	J	J	NA			NA			NA			< 4.00000		
Benzyl alcohol	< 0.46000			NA			NA			NA			< 0.82000		
Butyl benzyl phthalate	< 0.46000			NA			NA			NA			< 0.82000		
Chrysene	< 0.46000			NA			NA			NA			< 0.82000		
Di-n-butyl phthalate	< 0.46000			NA			NA			NA			< 0.82000		
Di-n-octyl phthalate	< 0.46000			NA			NA			NA			< 0.82000		
Dibenzo(a,h)anthracene	< 0.46000			NA			NA			NA			< 0.82000		
Dibenzofuran	< 0.46000			NA			NA			NA			< 0.82000		
Diethyl phthalate	< 0.46000			NA			NA			NA			< 0.82000		
Dimethyl phthalate	< 0.46000			NA			NA			NA			< 0.82000		
Fluoranthene	< 0.46000			NA			NA			NA			< 0.82000		
Fluorene	< 0.46000			NA			NA			NA			< 0.82000		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1711 067020 18.0 - 19.5	a	b	1711 067021 COMPOSITE TCLP	a	b	1711 067023 - FIELD BLANK	a	b	1711 067024 - FIELD BLANK	a	b	1791 067122 28.5 - 30.0	a	b
Hexachlorobenzene	< 0.46000			< 0.02000			NA			NA			< 0.82000		
Hexachlorobutadiene	< 0.46000			< 0.02000			NA			NA			< 0.82000		
Hexachlorocyclopentadiene	< 0.46000			NA			NA			NA			< 0.82000		
Hexachloroethane	< 0.46000			< 0.02000			NA			NA			< 0.82000		
Indeno(1,2,3-cd)pyrene	< 0.46000			NA			NA			NA			< 0.82000		
Isophorone	< 0.46000			NA			NA			NA			< 0.82000		
N-Nitroso-di-n-propylamine	< 0.46000			NA			NA			NA			< 0.82000		
N-Nitrosodiphenylamine	< 0.46000			NA			NA			NA			< 0.82000		
Naphthalene	< 0.46000			NA			NA			NA			< 0.82000		
Nitrobenzene	< 0.46000			< 0.02000			NA			NA			< 0.82000		
Pentachlorophenol	< 2.20000			< 0.10000			NA			NA			< 4.00000		
Phenanthrene	< 0.46000			NA			NA			NA			< 0.82000		
Phenol	0.46000	BJ	U	NA			NA			NA			< 0.82000		
Pyrene	< 0.46000			NA			NA			NA			< 0.82000		
bis(2-Chloroethoxy)methane	< 0.46000			NA			NA			NA			< 0.82000		
bis(2-Chloroethyl)ether	< 0.46000			NA			NA			NA			< 0.82000		
bis(2-Chloroisopropyl) ether	< 0.46000			NA			NA			NA			< 0.82000		UJ
bis(2-Ethylhexyl) phthalate	< 0.46000			NA			NA			NA			< 0.82000		
3-Methylphenol	NA			< 0.02000			NA			NA			NA		
VOLATILE ORGANICS															
1,1,1-Trichloroethane	< 0.00700			NA			NA			NA			< 0.00600		
1,1,2,2-Tetrachloroethane	< 0.00700			NA			NA			NA			< 0.00600		
1,1,2-Trichloroethane	< 0.00700			NA			NA			NA			< 0.00600		
1,1-Dichloroethane	< 0.00700			NA			NA			NA			< 0.00600		
1,1-Dichloroethene	< 0.00700			< 0.00500			< 0.00500			< 0.00500			< 0.00600		
1,2-Dichloroethane	< 0.00700			< 0.00500			< 0.00500			< 0.00500			< 0.00600		
1,2-Dichloroethylene	< 0.00700			NA			NA			NA			< 0.00600		
1,2-Dichloropropane	< 0.00700			NA			NA			NA			< 0.00600		
2-Butanone	0.01500	B		< 0.01000			< 0.01000			< 0.01000			0.01200	BJ	U
2-Hexanone	0.00300	J	J	NA			NA			NA			< 0.01200		
4-Methyl-2-pentanone	< 0.01400			NA			NA			NA			< 0.01200		
Acetone	0.06800	B	J	NA			NA			NA			0.06100	B	U
Benzene	< 0.00700			< 0.00500			< 0.00500			< 0.00500			< 0.00600		
Bromodichloromethane	< 0.00700			NA			NA			NA			< 0.00600		
Bromoform	< 0.00700			NA			NA			NA			< 0.00600		UJ
Bromomethane	< 0.01400			NA			NA			NA			< 0.01200		
Carbon Tetrachloride	< 0.00700			< 0.00500			< 0.00500			< 0.00500			< 0.00600		
Carbon disulfide	< 0.00700			NA			NA			NA			< 0.00600		
Chlorobenzene	< 0.00700			< 0.00500			< 0.00500			< 0.00500			< 0.00600		
Chloroethane	< 0.01400			NA			NA			NA			< 0.01200		
Chloroform	< 0.00700			< 0.00500			0.02000			0.01900			< 0.00600		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1711 067020 18.0 - 19.5	a	b	1711 067021 COMPOSITE TCLP	a	b	1711 067023 - FIELD BLANK	a	b	1711 067024 - FIELD BLANK	a	b	1791 067122 28.5 - 30.0	a	b
Chloromethane	< 0.01400		UJ	NA			NA			NA			< 0.01200		
Dibromochloromethane	< 0.00700			NA			NA			NA			< 0.00600		
Ethylbenzene	< 0.00700			NA			NA			NA			< 0.00600		
Methylene chloride	0.00800	B		NA			NA			NA			0.00600	BJ	U
Styrene	< 0.00700			NA			NA			NA			< 0.00600		
Tetrachlorethene	< 0.00700			< 0.00500			< 0.00500			< 0.00500			< 0.00600		
Toluene	< 0.00700			NA			NA			NA			< 0.00600		
Total xylenes	< 0.00700			NA			NA			NA			< 0.00600		
Trichloroethene	< 0.00700			< 0.00500			< 0.00500			< 0.00500			< 0.00600		
Vinyl Acetate	< 0.01400			NA			NA			NA			< 0.01200		
Vinyl chloride	< 0.01400			< 0.01000			< 0.01000			< 0.01000			< 0.01200		
cis-1,3-Dichloropropene	< 0.00700			NA			NA			NA			< 0.00600		
trans-1,3-Dichloropropene	< 0.00700			NA			NA			NA			< 0.00600		
Pyridine	NA			< 0.02000			NA			NA			NA		

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REPORT DATE : 25-APR-92

INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	1791 067124 COMPOSITE TCLP	a	b	1791 067125 COMPOSITE TCLP	a	b	1791 067127 - FIELD BLANK	a	b	1849 067604 6.0 - 7.5	a	b	1849 067609 13.5 - 15.0	a	b
HERBICIDE ORGANICS															
2,4,5-TP (Silvex)	< 0.00180			NA			NA			NA			NA		
2,4-D	< 0.01000			NA			NA			NA			NA		
PESTICIDES															
Endrin	< 0.00010			NA			NA			NA			NA		
Heptachlor	< 0.00005			NA			NA			NA			NA		
Heptachlor epoxide	< 0.00005			NA			NA			NA			NA		
Methoxychlor	< 0.00050			NA			NA			NA			NA		
Toxaphene	< 0.00100			NA			NA			NA			NA		
alpha-Chlordane	< 0.00050			NA			NA			NA			NA		
gamma-BHC (Lindane)	< 0.00005			NA			NA			NA			NA		
gamma-Chlordane	< 0.00050			NA			NA			NA			NA		
SEMI-VOLATILE ORGANICS															
1,4-Dichlorobenzene	< 0.02000		R	NA			NA			< 0.46000			< 0.42000		
2,4,5-Trichlorophenol	< 0.10000		R	NA			NA			< 2.20000			< 2.00000		
2,4,6-Trichlorophenol	< 0.02000		R	NA			NA			< 0.46000			< 0.42000		
2,4-Dinitrotoluene	< 0.02000		R	NA			NA			< 0.46000			< 0.42000		
2-Methylphenol	< 0.02000		R	NA			NA			< 0.46000			< 0.42000		
3-Methylphenol	< 0.02000		R	NA			NA			NA			NA		
4-Methylphenol	< 0.02000		R	NA			NA			< 0.46000			< 0.42000		
Hexachlorobenzene	< 0.02000		R	NA			NA			< 0.46000			< 0.42000		
Hexachlorobutadiene	< 0.02000		R	NA			NA			< 0.46000			< 0.42000		
Hexachloroethane	< 0.02000		R	NA			NA			< 0.46000			< 0.42000		
Nitrobenzene	< 0.02000		R	NA			NA			< 0.46000			< 0.42000		
Pentachlorophenol	< 0.10000		R	NA			NA			< 2.20000			< 2.00000		
1,2,4-Trichlorobenzene	NA			NA			NA			< 0.46000			< 0.42000		
1,2-Dichlorobenzene	NA			NA			NA			< 0.46000			< 0.42000		
1,3-Dichlorobenzene	NA			NA			NA			< 0.46000			< 0.42000		
2,4-Dichlorophenol	NA			NA			NA			< 0.46000			< 0.42000		
2,4-Dimethylphenol	NA			NA			NA			< 0.46000			< 0.42000		
2,4-Dinitrophenol	NA			NA			NA			< 2.20000		UJ	< 2.00000		UJ
2,6-Dinitrotoluene	NA			NA			NA			< 0.46000			< 0.42000		
2-Chloronaphthalene	NA			NA			NA			< 0.46000			< 0.42000		
2-Chlorophenol	NA			NA			NA			< 0.46000			< 0.42000		
2-Methylnaphthalene	NA			NA			NA			0.05000	J	J	0.07900	J	J

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1791 067124 COMPOSITE TCLP			1791 067125 COMPOSITE TCLP			1791 067127 - FIELD BLANK			1849 067604 6.0 - 7.5			1849 067609 13.5 - 15.0		
		a	b		a	b		a	b		a	b		a	b
2-Nitroaniline	NA			NA			NA			< 2.20000			< 2.00000		
2-Nitrophenol	NA			NA			NA			< 0.46000	UJ		< 0.42000	UJ	
3,3'-Dichlorobenzidine	NA			NA			NA			< 0.93000	UJ		< 0.83000	UJ	
3-Nitroaniline	NA			NA			NA			< 2.20000			< 2.00000		
4,6-Dinitro-2-methylphenol	NA			NA			NA			< 2.20000	UJ		< 2.00000	UJ	
4-Bromophenyl phenyl ether	NA			NA			NA			< 0.46000			< 0.42000		
4-Chloro-3-methylphenol	NA			NA			NA			< 0.46000			< 0.42000		
4-Chloroaniline	NA			NA			NA			< 0.46000			< 0.42000		
4-Chlorophenylphenyl ether	NA			NA			NA			< 0.46000			< 0.42000		
4-Nitroaniline	NA			NA			NA			< 2.20000			< 2.00000		
4-Nitrophenol	NA			NA			NA			< 2.20000	UJ		< 2.00000		
Acenaphthene	NA			NA			NA			< 0.46000			< 0.42000		
Acenaphthylene	NA			NA			NA			< 0.46000			< 0.42000		
Anthracene	NA			NA			NA			< 0.46000			< 0.42000		
Benzo(a)anthracene	NA			NA			NA			< 0.46000			< 0.42000		
Benzo(a)pyrene	NA			NA			NA			< 0.46000			< 0.42000		
Benzo(b)fluoranthene	NA			NA			NA			< 0.46000			< 0.42000		
Benzo(g,h,i)perylene	NA			NA			NA			< 0.46000			< 0.42000		
Benzo(k)fluoranthene	NA			NA			NA			< 0.46000	UJ		< 0.42000		
Benzoic acid	NA			NA			NA			< 2.20000			< 2.00000	UJ	
Benzyl alcohol	NA			NA			NA			< 0.46000			< 0.42000	UJ	
Butyl benzyl phthalate	NA			NA			NA			< 0.46000	UJ		< 0.42000		
Chrysene	NA			NA			NA			< 0.46000			< 0.42000		
Di-n-butyl phthalate	NA			NA			NA			< 0.46000			0.04600	J	J
Di-n-octyl phthalate	NA			NA			NA			< 0.46000			< 0.42000		
Dibenzo(a,h)anthracene	NA			NA			NA			< 0.46000			< 0.42000		
Dibenzofuran	NA			NA			NA			< 0.46000			< 0.42000		
Diethyl phthalate	NA			NA			NA			< 0.46000			< 0.42000		
Dimethyl phthalate	NA			NA			NA			< 0.46000			< 0.42000		
Fluoranthene	NA			NA			NA			< 0.46000			< 0.42000		
Fluorene	NA			NA			NA			< 0.46000			< 0.42000		
Hexachlorocyclopentadiene	NA			NA			NA			< 0.46000	UJ		< 0.42000	UJ	
Indeno(1,2,3-cd)pyrene	NA			NA			NA			< 0.46000			< 0.42000		
Isophorone	NA			NA			NA			< 0.46000			< 0.42000		
N-Nitroso-di-n-propylamine	NA			NA			NA			< 0.46000			< 0.42000	UJ	
N-Nitrosodiphenylamine	NA			NA			NA			< 0.46000			< 0.42000		
Naphthalene	NA			NA			NA			< 0.46000			0.05300	J	J
Phenanthrene	NA			NA			NA			< 0.46000			< 0.42000		
Phenol	NA			NA			NA			< 0.46000			< 0.42000		
Pyrene	NA			NA			NA			< 0.46000			< 0.42000		
bis(2-Chloroethoxy)methane	NA			NA			NA			< 0.46000			< 0.42000		
bis(2-Chloroethyl)ether	NA			NA			NA			< 0.46000			< 0.42000		
bis(2-Chloroisopropyl) ether	NA			NA			NA			< 0.46000			< 0.42000		
bis(2-Ethylhexyl) phthalate	NA			NA			NA			< 0.46000	UJ		< 0.42000		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1791 067124 COMPOSITE TCLP	a	b	1791 067125 COMPOSITE	a	b	1791 067127 - FIELD BLANK	a	b	1849 067604 6.0 - 7.5	a	b	1849 067609 13.5 - 15.0	a	b
VOLATILE ORGANICS															
1,1-Dichloroethene	< 0.00500			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
1,2-Dichloroethane	< 0.00500			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
2-Butanone	< 0.01000			< 0.01000			< 0.01000			< 0.01400		UJ	< 0.01200		R
Benzene	< 0.00500			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
Carbon Tetrachloride	< 0.00500			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
Chlorobenzene	< 0.00500			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
Chloroform	< 0.00500			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
Pyridine	< 0.02000		R	NA			NA			NA			NA		
Tetrachloroethene	< 0.00500			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
Trichloroethene	< 0.00500			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
Vinyl chloride	< 0.01000			< 0.01000			< 0.01000			< 0.01400		UJ	< 0.01200		R
1,1,1-Trichloroethane	NA			< 0.00500			< 0.00500			0.01800		J	0.70000	E	R
1,1,2,2-Tetrachloroethane	NA			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
1,1,2-Trichloroethane	NA			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
1,1-Dichloroethane	NA			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
1,2-Dichloroethylene	NA			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
1,2-Dichloropropane	NA			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
2-Hexanone	NA			< 0.01000			< 0.01000			0.01400	B	UJ	0.02600	B	R
4-Methyl-2-pentanone	NA			< 0.01000			< 0.01000			0.00700	J	UJ	< 0.01200		R
Acetone	NA			0.00900	BJ		0.00900	BJ		0.03300	B	UJ	0.00300	BJ	R
Bromodichloromethane	NA			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
Bromoform	NA			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
Bromomethane	NA			< 0.01000			< 0.01000			< 0.01400		UJ	< 0.01200		R
Carbon disulfide	NA			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
Chloroethane	NA			< 0.01000			< 0.01000			< 0.01400		UJ	< 0.01200		R
Chloromethane	NA			< 0.01000			< 0.01000			< 0.01400		UJ	< 0.01200		R
Dibromochloromethane	NA			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
Ethylbenzene	NA			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
Methylene chloride	NA			0.01000	B		0.01000	B		0.08900	B	UJ	0.00700	B	R
Styrene	NA			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
Toluene	NA			< 0.00500			< 0.00500			0.02000		J	0.01300		J
Total xylenes	NA			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
Vinyl Acetate	NA			< 0.01000			< 0.01000			< 0.01400		UJ	< 0.01200		R
cis-1,3-Dichloropropene	NA			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R
trans-1,3-Dichloropropene	NA			< 0.00500			< 0.00500			< 0.00700		UJ	< 0.00600		R

a = lab qualifiers
b = validation qualifiers

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

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CHEMICAL PARAMETERS	1849 067621 - TRIP/FIELD BLANK			1849 067622 - RINSATE			1850 067627 6.0 - 7.5			1850 067632 13.5 - 15.0			1850 067637 - TRIP/FIELD BLANK		
		a	b		a	b		a	b		a	b		a	b
SEMI-VOLATILE ORGANICS															
1,2,4-Trichlorobenzene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
1,2-Dichlorobenzene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
1,3-Dichlorobenzene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
1,4-Dichlorobenzene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
2,4,5-Trichlorophenol	NA			< 0.05000			< 2.00000			< 1.90000			NA		
2,4,6-Trichlorophenol	NA			< 0.01000			< 0.41000			< 0.40000			NA		
2,4-Dichlorophenol	NA			< 0.01000			< 0.41000			< 0.40000			NA		
2,4-Dimethylphenol	NA			< 0.01000			< 0.41000			< 0.40000			NA		
2,4-Dinitrophenol	NA			< 0.05000			< 2.00000			< 1.90000			NA		
2,4-Dinitrotoluene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
2,6-Dinitrotoluene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
2-Chloronaphthalene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
2-Chlorophenol	NA			< 0.01000			< 0.41000			< 0.40000			NA		
2-Methylnaphthalene	NA			< 0.01000			0.08900	J	J	0.06600	J	J	NA		
2-Methylphenol	NA			< 0.01000			< 0.41000			< 0.40000			NA		
2-Nitroaniline	NA			< 0.05000			< 2.00000			< 1.90000			NA		
2-Nitrophenol	NA			< 0.01000		UJ	< 0.41000		UJ	< 0.40000		UJ	NA		
3,3'-Dichlorobenzidine	NA			< 0.02000			< 0.81000			< 0.80000			NA		
3-Nitroaniline	NA			< 0.05000			< 2.00000			< 1.90000			NA		
4,6-Dinitro-2-methylphenol	NA			< 0.05000			< 2.00000			< 1.90000			NA		
4-Bromophenyl phenyl ether	NA			< 0.01000			< 0.41000			< 0.40000			NA		
4-Chloro-3-methylphenol	NA			< 0.01000			< 0.41000			< 0.40000			NA		
4-Chloroaniline	NA			< 0.01000			< 0.41000			< 0.40000			NA		
4-Chlorophenylphenyl ether	NA			< 0.01000			< 0.41000			< 0.40000		J	NA		
4-Methylphenol	NA			< 0.01000			< 0.41000			< 0.40000			NA		
4-Nitroaniline	NA			< 0.05000			< 2.00000			< 1.90000			NA		
4-Nitrophenol	NA			< 0.05000		UJ	< 2.00000		UJ	< 1.90000		UJ	NA		
Acenaphthene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Acenaphthylene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Anthracene	NA			< 0.01000			0.04900	J	J	< 0.40000			NA		
Benzo(a)anthracene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Benzo(a)pyrene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Benzo(b)fluoranthene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Benzo(g,h,i)perylene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Benzo(k)fluoranthene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Benzoic acid	NA			< 0.05000			< 2.00000			< 1.90000			NA		
Benzyl alcohol	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Butyl benzyl phthalate	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Chrysene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Di-n-butyl phthalate	NA			< 0.01000			< 0.41000			< 0.40000			NA		

a = lab qualifiers
b = validation qualifiers

INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1849 067621 - TRIP/FIELD BLANK	a	b	1849 067622 - RINSATE	a	b	1850 067627 6.0 - 7.5	a	b	1850 067632 13.5 - 15.0	a	b	1850 067637 - TRIP/FIELD BLANK	a	b
Di-n-octyl phthalate	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Dibenzo(a,h)anthracene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Dibenzofuran	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Diethyl phthalate	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Dimethyl phthalate	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Fluoranthene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Fluorene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Hexachlorobenzene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Hexachlorobutadiene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Hexachlorocyclopentadiene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Hexachloroethane	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Indeno(1,2,3-cd)pyrene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Isophorone	NA			< 0.01000			< 0.41000			< 0.40000			NA		
N-Nitroso-di-n-propylamine	NA			< 0.01000			< 0.41000			< 0.40000			NA		
N-Nitrosodiphenylamine	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Naphthalene	NA			< 0.01000			0.05300	J	J	< 0.40000			NA		
Nitrobenzene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Pentachlorophenol	NA			< 0.05000			< 2.00000			< 1.90000			NA		
Phenanthrene	NA			< 0.01000			0.04900	J	J	0.04100	J	J	NA		
Phenol	NA			< 0.01000			< 0.41000			< 0.40000			NA		
Pyrene	NA			< 0.01000			< 0.41000			< 0.40000			NA		
bis(2-Chloroethoxy)methane	NA			< 0.01000			< 0.41000			< 0.40000			NA		
bis(2-Chloroethyl)ether	NA			< 0.01000			< 0.41000			< 0.40000			NA		
bis(2-Chloroisopropyl) ether	NA			< 0.01000			< 0.41000			< 0.40000			NA		
bis(2-Ethylhexyl) phthalate	NA			< 0.01000			< 0.41000			< 0.40000			NA		
VOLATILE ORGANICS															
1,1,1-Trichloroethane	< 0.00500		UJ	< 0.00500		UJ	0.06900		R	0.03700		J	< 0.00500		UJ
1,1,2,2-Tetrachloroethane	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
1,1,2-Trichloroethane	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
1,1-Dichloroethane	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
1,1-Dichloroethene	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
1,2-Dichloroethane	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
1,2-Dichloroethylene	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
1,2-Dichloropropane	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
2-Butanone	< 0.01000		UJ	< 0.01000		UJ	< 0.01200		R	< 0.01200		R	< 0.01000		
2-Hexanone	< 0.01000		UJ	< 0.01000		UJ	< 0.01200		R	< 0.01200		R	< 0.01000		UJ
4-Methyl-2-pentanone	< 0.01000			< 0.01000			< 0.01200		R	< 0.01200		R	< 0.01000		UJ
Acetone	0.00400	BJ	J	0.00300	BJ	J	0.00200	BJ	R	0.00600	BJ	J	0.00200	BJ	J
Benzene	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
Bromodichloromethane	0.00100	J		< 0.00500			< 0.00600		R	< 0.00600		R	0.00100	J	J
Bromoform	< 0.00500		UJ	< 0.00500		UJ	< 0.00600		R	< 0.00600		R	< 0.00500		UJ

a = lab qualifiers
b = validation qualifiers

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1849 067621 - TRIP/FIELD BLANK	a	b	1849 067622 - RINSATE	a	b	1850 067627 6.0 - 7.5	a	b	1850 067632 13.5 - 15.0	a	b	1850 067637 - TRIP/FIELD BLANK	a	b
Bromomethane	< 0.01000		UJ	< 0.01000			< 0.01200		R	< 0.01200		R	< 0.01000		UJ
Carbon Tetrachloride	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
Carbon disulfide	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
Chlorobenzene	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
Chloroethane	< 0.01000			< 0.01000			< 0.01200		R	< 0.01200		R	< 0.01000		
Chloroform	0.00400	J		0.00200	J	J	< 0.00600		R	< 0.00600		R	0.00500		
Chloromethane	< 0.01000			< 0.01000			< 0.01200		R	< 0.01200		R	< 0.01000		
Dibromochloromethane	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
Ethylbenzene	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
Methylene chloride	0.00200	BJ	J	0.00200	BJ	J	0.01900	B	R	0.01400	B	R	< 0.00500		UJ
Styrene	< 0.00500			< 0.00500			0.00200	J	J	< 0.00600		R	< 0.00500		
Tetrachlorethene	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
Toluene	< 0.00500			0.00200	J	J	0.03800		J	0.11000		J	< 0.00500		
Total xylenes	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
Trichloroethene	< 0.00500			< 0.00500			< 0.00600		R	< 0.00600		R	< 0.00500		
Vinyl Acetate	< 0.01000			< 0.01000			< 0.01200		R	< 0.01200		R	< 0.01000		
Vinyl chloride	< 0.01000			< 0.01000			< 0.01200		R	< 0.01200		R	< 0.01000		
cis-1,3-Dichloropropene	< 0.00500		UJ	< 0.00500		UJ	< 0.00600		R	< 0.00600		R	< 0.00500		UJ
trans-1,3-Dichloropropene	< 0.00500		UJ	< 0.00500		UJ	< 0.00600		R	< 0.00600		R	< 0.00500		UJ

a = lab qualifiers
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EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING GENERAL CHEMICAL RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

Concentration Qualifiers

B = Reported value was obtained from a reading that was less than the Contract Laboratory Program (CLP) Contract Required Detection Limit (CRQL), but greater than or equal to the Instrument Detection Limit (IDL).

Quality Qualifiers

E = The reported value is estimated because of the presence of interference.

M = Duplicate injection precision not met.

N = Spiked sample recovery not within controls limits.

S = The reported value was determined by the Method of Standard Additions.

W = Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

G = Native analyte > 4 times spike added; therefore acceptance criteria do not apply.

X = Detection limit is higher than normal due to sample matrix interferences.

* = Duplication analysis not within control limits.

+ = Correlation coefficient for the MSA is less than 0.955.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

INACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1016 007352 RINSATE	a	b
GENERAL CHEMISTRY				
Ammonia		NA		
Chloride		1.0000		
Fluoride	<	0.1000		
Hydrogen ion		NA		
Nitrate	<	0.1000		
Phenols		0.0100		
Phosphorus (black, white,		NA		
Phosphate as P		NA		
Sulfate		2.1000		
Total Kjeldahl Nitrogen		NA		
Total Organic Carbon		NA		
Total Organic Halides		NA		
Total Organic Nitrogen		NA		
Total Phosphorus		NA		
METALS				
Aluminum		NA		
Antimony		NA		
Arsenic	<	0.2000		
Barium		0.0120		JB
Beryllium		NA		
Cadmium		0.0027		
Calcium		NA		
Chromium	<	0.0200		
Cobalt		NA		
Copper		0.1200		
Cyanide		NA		
Hexavalent Chromium	<	0.0100		R
Iron	<	0.0050		
Lead	<	0.0500		
Magnesium		NA		
Manganese		0.0350		
Mercury	<	0.0002		R
Molybdenum	<	0.0200		
Nickel	<	0.0200		
Potassium		NA		
Selenium	<	0.2000		
Silicon		NA		
Silver	<	0.0100		
Sodium		2.7500		JB
Thallium		NA		
Vanadium		NA		
Zinc		NA		

a = lab qualifiers
b = validation qualifiers

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1047 007308 RINSATE -
GENERAL CHEMISTRY		
Ammonia		NA
Chloride	<	0.5000
Fluoride	<	0.1000
Hydrogen ion		NA
Nitrate	<	0.1000
Phenols		0.0100
Phosphorus (black, white,		NA
Phosphate as P		NA
Sulfate		2.7000
Total Kjeldahl Nitrogen		NA
Total Organic Carbon		NA
Total Organic Halides		NA
Total Organic Nitrogen		NA
Total Phosphorus		NA
METALS		
Aluminum		NA
Antimony		NA
Arsenic	<	0.2000
Barium		0.0160
Beryllium		NA
Cadmium		0.0039
Calcium		NA
Chromium	<	0.0200
Cobalt		NA
Copper		0.1900
Cyanide		NA
Hexavalent Chromium	<	0.0100
Iron		0.0500
Lead		0.0600
Magnesium		NA
Manganese		1.8300
Mercury	<	0.0002
Molybdenum	<	0.0200
Nickel	<	0.0200
Potassium		NA
Selenium	<	0.2000
Silicon		NA
Silver	<	0.0100
Sodium		5.0800
Thallium		NA
Vanadium		NA
Zinc		NA

- = Sample has not been validated

INACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1708 067096 7.5 - 9.0	a	b	1708 067099 12.0 - 13.5 TCLP	a	b	1708 067102 16.5 - 18.0	a	b	1708 067112 31.5 - 33.0	a	b	1708 067115 COMPOSITE TCLP	a	b
GENERAL CHEMISTRY															
Ammonia	NA			NA			NA			NA			NA		
Chloride	NA			NA			NA			NA			NA		
Fluoride	NA			NA			NA			NA			NA		
Hydrogen ion	NA			NA			NA			NA			NA		
Nitrate	NA			NA			NA			NA			NA		
Phenols	NA			NA			NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA			NA			NA		
Phosphate as P	NA			NA			NA			NA			NA		
Sulfate	NA			NA			NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA			NA			NA		
Total Organic Carbon	NA			NA			NA			NA			NA		
Total Organic Halides	NA			NA			NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA			NA			NA		
Total Phosphorus	NA			NA			NA			NA			NA		
METALS															
Aluminum	6350.0000			NA			7250.0000			9550.0000			NA		
Antimony	< 7.7000 N		J	NA			< 8.4000 N		J	< 7.4000 N		J	NA		
Arsenic	7.1000 N		J	0.0751		J	7.4000 SN		J	1.7000 BWN		J	0.0994		
Barium	315.0000			1.9070			294.0000			112.0000			1.2790		J
Beryllium	1.8000			NA			2.0000			0.6000 B			NA		
Cadmium	0.8600 B			0.0115		J	1.3000 B			< 0.5000			0.0071		J
Calcium	22700.0000 *		J	NA			36800.0000 *		J	2930.0000 *		J	NA		
Chromium	15.9000 *			0.0687			19.6000 *			13.6000 *			0.0879		
Cobalt	7.0000 B			NA			8.0000 B			9.9000 B			NA		
Copper	27.9000			NA			29.5000			14.6000			NA		
Cyanide	0.5900 B		J	NA			1.2000		J	< 0.1200		R	NA		
Hexavalent Chromium	NA			NA			NA			NA			NA		
Iron	5510.0000 *			NA			7490.0000 *			16300.0000 *			NA		
Lead	11.0000 N		J	0.0987			67.1000 N		J	11.3000 N		J	0.0826		
Magnesium	5370.0000			NA			10100.0000			2060.0000			NA		
Manganese	282.0000 N*		J	NA			330.0000 N*		J	736.0000 N*		J	NA		
Mercury	< 0.1300		R	< 0.0002			< 0.1300		R	< 0.1200		R	< 0.0002		
Molybdenum	8.9000			NA			9.4000			9.2000			NA		
Nickel	16.0000			NA			18.0000			16.0000			NA		
Potassium	961.0000 B			NA			1070.0000 B			1430.0000			NA		
Selenium	2.8000 N			0.1820			2.9000 N			< 0.5000 N		J	0.1870		
Silicon	NA			NA			NA			NA			NA		
Silver	5.9000			0.0527			8.3000			< 2.5000		J	0.0750		
Sodium	225.0000 B			NA			237.0000 B		U	71.9000 B		U	NA		
Thallium	< 0.5100			NA			< 0.5600			< 0.5000			NA		
Vanadium	28.7000			NA			27.7000			17.8000			NA		
Zinc	15.1000			NA			21.5000			47.0000			NA		

a = lab qualifiers
b = validation qualifiers

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1708 067118 COMPOSITE TCLP	a	b	1708 067118 COMPOSITE RCRA-4	a	b
GENERAL CHEMISTRY						
Ammonia	NA			NA		
Chloride	NA			NA		
Fluoride	NA			NA		
Hydrogen ion	NA			NA		
Nitrate	NA			NA		
Phenols	NA			NA		
Phosphorus (black, white,	NA			NA		
Phosphate as P	NA			NA		
Sulfate	NA			NA		
Total Kjeldahl Nitrogen	NA			NA		
Total Organic Carbon	NA			NA		
Total Organic Halides	NA			NA		
Total Organic Nitrogen	NA			NA		
Total Phosphorus	NA			NA		
METALS						
Aluminum	NA			NA		
Antimony	NA			NA		
Arsenic	< 0.0500		JB	NA		
Barium	0.1560		JB	NA		
Beryllium	NA			NA		
Cadmium	0.0137		JB	NA		
Calcium	NA			NA		
Chromium	0.0838		JB	NA		
Cobalt	NA			NA		
Copper	NA			NA		
Cyanide	NA			0.1230		
Hexavalent Chromium	NA			NA		
Iron	NA			NA		
Lead	0.0980		JB	NA		
Magnesium	NA			NA		
Manganese	NA			NA		
Mercury	< 0.0002			NA		
Molybdenum	NA			NA		
Nickel	NA			NA		
Potassium	NA			NA		
Selenium	0.1120		JB	NA		
Silicon	NA			NA		
Silver	0.0729		JB	NA		
Sodium	NA			NA		
Thallium	NA			NA		
Vanadium	NA			NA		
Zinc	NA			NA		

a = lab qualifiers
b = validation qualifiers

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1709 067064 7.5 - 9.0	a	b	1709 067065 9.0 - 10.5 TCLP	a	b	1709 067071 13.5 - 15.0	a	b	1709 067078 24 - 25.5 RCRA-4	a
GENERAL CHEMISTRY											
Ammonia	NA			NA			NA			NA	
Chloride	NA			NA			NA			NA	
Fluoride	NA			NA			NA			NA	
Hydrogen ion	NA			NA			NA			NA	
Nitrate	NA			NA			NA			NA	
Phenols	NA			NA			NA			NA	
Phosphorus (black, white,	NA			NA			NA			NA	
Phosphate as P	NA			NA			NA			NA	
Sulfate	NA			NA			NA			NA	
Total Kjeldahl Nitrogen	NA			NA			NA			NA	
Total Organic Carbon	NA			NA			NA			NA	
Total Organic Halides	NA			NA			NA			NA	
Total Organic Nitrogen	NA			NA			NA			NA	
Total Phosphorus	NA			NA			NA			NA	
METALS											
Aluminum	4240.0000			NA			4400.0000			NA	
Antimony	< 7.8000 N		R	NA			< 7.4000 N		R	NA	
Arsenic	16.3000			0.0806			74.8000			NA	
Barium	286.0000			1.6090			252.0000			NA	
Beryllium	3.9000			NA			4.3000			NA	
Cadmium	< 0.5200			< 0.0020			< 0.4900			NA	
Calcium	2790.0000			NA			2800.0000			NA	
Chromium	5.6000		J	< 0.0100			5.1000		J	NA	
Cobalt	5.5000	B		NA			6.3000	B		NA	
Copper	28.5000			NA			28.8000			NA	
Cyanide	0.2700	B		NA			0.2300	B		21.0000	
Hexavalent Chromium	NA			NA			NA			NA	
Iron	4610.0000			NA			5230.0000			NA	
Lead	6.7000	SN	J	< 0.0400			9.0000	SN	J	NA	
Magnesium	383.0000	B		NA			439.0000	B		NA	
Manganese	24.0000	*	J	NA			22.7000	*	J	NA	
Mercury	< 0.1300		J	< 0.0002			< 0.1200		J	NA	
Molybdenum	3.5000			NA			4.9000			NA	
Nickel	10.8000			NA			12.0000			NA	
Potassium	523.0000	B		NA			616.0000	B		NA	
Selenium	0.7400	B		0.0903			4.1000			NA	
Silicon	NA			NA			NA			NA	
Silver	< 2.6000		J	< 0.0100			< 2.5000		J	NA	
Sodium	158.0000	B		NA			179.0000	B		NA	
Thallium	< 0.5200	WN	J	NA			0.8000	BN	J	NA	
Vanadium	34.9000			NA			30.0000			NA	
Zinc	9.4000			NA			52.4000			NA	

a = lab qualifiers
b = validation qualifiers
- = Sample has not been validated

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1710 067029 4.5 - 5.0	a	b	1710 067032 9.0 - 10.5	a	b	1710 067038 16.5 - 18.0 TCLP	a	b	1710 067039 16.5 - 18.0 EP TOXICITY	a	b	1710 067047 28.5 - 30.0	a	b
GENERAL CHEMISTRY															
Ammonia	NA			NA			NA			NA			NA		
Chloride	NA			NA			NA			NA			NA		
Fluoride	NA			NA			NA			NA			NA		
Hydrogen ion	NA			NA			NA			NA			NA		
Nitrate	NA			NA			NA			NA			NA		
Phenols	NA			NA			NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA			NA			NA		
Phosphate as P	NA			NA			NA			NA			NA		
Sulfate	NA			NA			NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA			NA			NA		
Total Organic Carbon	NA			NA			NA			NA			NA		
Total Organic Halides	NA			NA			NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA			NA			NA		
Total Phosphorus	NA			NA			NA			NA			NA		
METALS															
Aluminum	6470.0000			5210.0000			NA			NA			2130.0000		
Antimony	< 8.4000 N		R	< 8.0000 N		R	NA			NA			15.0000 N		J
Arsenic	31.7000			20.7000			0.1040	JB		< 0.0500			3.0000		
Barium	637.0000			892.0000			1.8580	JB		0.3340			13.1000 B		
Beryllium	6.7000			2.4000			NA			NA			0.5600 B		
Cadmium	0.7800 B			1.0000 B			0.0024	JB		< 0.0020			4.1000		
Calcium	5880.0000			6700.0000			NA			NA			123000.0000		
Chromium	7.3000			5.8000			< 0.0100			< 0.0100			5.6000		
Cobalt	11.2000 B			12.1000 B			NA			NA			5.2000 B		
Copper	34.4000			26.6000			NA			NA			21.3000		
Cyanide	0.6900 B			0.6200 B			NA			NA			0.4200 B		
Hexavalent Chromium	NA			NA			NA			NA			NA		
Iron	12100.0000			20100.0000			NA			NA			7170.0000		
Lead	13.1000 N		J	11.7000 N		J	< 0.0400			< 0.0400			6.4000 SN		J
Magnesium	978.0000 B		J	809.0000 B		J	NA			NA			25100.0000		J
Manganese	106.0000 *			411.0000 *			NA			NA			319.0000 *		
Mercury	< 0.1400		J	< 0.1200		J	< 0.0002			< 0.0002			< 0.1100		J
Molybdenum	4.3000			3.4000			NA			NA			3.6000		
Nickel	19.6000			19.5000			NA			NA			17.5000		
Potassium	1030.0000 B			821.0000 B			NA			NA			473.0000 B		
Selenium	1.4000			3.1000 +		J	0.1320	JB		< 0.0800			< 0.4500 W		J
Silicon	NA			NA			NA			NA			NA		
Silver	< 2.8000		J	< 2.7000		J	< 0.0100			< 0.0100			4.3000		J
Sodium	294.0000 B			271.0000 B			NA			NA			211.0000 B		
Thallium	< 0.5600 N		J	< 0.5400 WN		J	NA			NA			< 0.4500 WN		UJ
Vanadium	28.3000			22.6000			NA			NA			10.7000 B		
Zinc	14.5000			12.2000			NA			NA			25.8000		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
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CHEMICAL PARAMETERS	1710 067051 COMPOSITE TCLP	a	b
GENERAL CHEMISTRY			
Ammonia	NA		
Chloride	NA		
Fluoride	NA		
Hydrogen ion	NA		
Nitrate	NA		
Phenols	NA		
Phosphorus (black, white,	NA		
Phosphate as P	NA		
Sulfate	NA		
Total Kjeldahl Nitrogen	NA		
Total Organic Carbon	NA		
Total Organic Halides	NA		
Total Organic Nitrogen	NA		
Total Phosphorus	NA		
METALS			
Aluminum	NA		
Antimony	NA		
Arsenic	0.1440	JB	
Barium	1.4440	JB	
Beryllium	NA		
Cadmium	0.0043	JB	
Calcium	NA		
Chromium	< 0.0200		
Cobalt	NA		
Copper	NA		
Cyanide	NA		
Hexavalent Chromium	NA		
Iron	NA		
Lead	< 0.0800		
Magnesium	NA		
Manganese	NA		
Mercury	< 0.0002		
Molybdenum	NA		
Nickel	NA		
Potassium	NA		
Selenium	< 0.1600		
Silicon	NA		
Silver	0.0379	JB	
Sodium	NA		
Thallium	NA		
Vanadium	NA		
Zinc	NA		

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SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1711 067012 4.5 - 6.0	a	b	1711 067015 9.0 - 10.5	a	b	1711 067016 10.5 - 12.0 TCLP	a	b	1711 067017 10.5 - 12.0 EP TOXICITY	a	b	1711 067020 18.0 - 19.5	a	b
GENERAL CHEMISTRY															
Ammonia	NA			NA			NA			NA			NA		
Chloride	NA			NA			NA			NA			NA		
Fluoride	NA			NA			NA			NA			NA		
Hydrogen ion	NA			NA			NA			NA			NA		
Nitrate	NA			NA			NA			NA			NA		
Phenols	NA			NA			NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA			NA			NA		
Phosphate as P	NA			NA			NA			NA			NA		
Sulfate	NA			NA			NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA			NA			NA		
Total Organic Carbon	NA			NA			NA			NA			NA		
Total Organic Halides	NA			NA			NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA			NA			NA		
Total Phosphorus	NA			NA			NA			NA			NA		
METALS															
Aluminum	3690.0000			4970.0000			NA			NA			8840.0000		
Antimony	8.8000	BN	J	10.4000	BN	J	NA			NA			16.3000	BN	J
Arsenic	28.0000	N	J	35.4000	N	J	< 0.0500			< 0.0500			6.9000	N	J
Barium	360.0000			373.0000			0.5920	JB		0.3280			89.6000		
Beryllium	3.0000			2.5000			NA			NA			0.7700	B	
Cadmium	0.6900	B		0.6600	B		< 0.0020			< 0.0020			2.0000		
Calcium	3430.0000	*	J	2510.0000	*	J	NA			NA			9090.0000	*	J
Chromium	6.5000			8.4000			< 0.0100			< 0.0100			19.1000		
Cobalt	5.7000	B		5.7000	B		NA			NA			10.5000	B	
Copper	19.7000			24.1000			NA			NA			44.9000		
Cyanide	0.6000	B		0.5300	B		NA			NA			0.1800	B	
Hexavalent Chromium	NA			NA			NA			NA			NA		
Iron	8930.0000			6390.0000			NA			NA			15900.0000		
Lead	7.0000			10.7000			0.0410	JB		< 0.0400			57.0000		
Magnesium	377.0000	B*		404.0000	B*		NA			NA			3930.0000	*	
Manganese	102.0000			41.8000			NA			NA			261.0000		
Mercury	< 0.1200			0.1800			< 0.0002			< 0.0002			0.4400		
Molybdenum	3.2000	*		4.0000	*		NA			NA			3.3000	*	
Nickel	11.0000			9.7000	B		NA			NA			18.3000		
Potassium	456.0000	B		704.0000	B		NA			NA			966.0000	B	
Selenium	1.6000	+	J	2.7000	S		0.0800			< 0.0800			0.7300	BW	J
Silicon	NA			NA			NA			NA			NA		
Silver	< 2.6000		J	< 2.9000		J	< 0.0100			< 0.0100			4.4000		
Sodium	108.0000	B		157.0000	B		NA			NA			100.0000	B	
Thallium	1.0000	B		1.0000	B		NA			NA			< 0.5500		
Vanadium	24.3000			33.5000			NA			NA			21.7000		
Zinc	10.5000			12.0000			NA			NA			102.0000		

a = lab qualifiers
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INACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS		1711 067021 COMPOSITE TCLP	a	b
GENERAL CHEMISTRY				
Ammonia		NA		
Chloride		NA		
Fluoride		NA		
Hydrogen ion		NA		
Nitrate		NA		
Phenols		NA		
Phosphorus (black, white,		NA		
Phosphate as P		NA		
Sulfate		NA		
Total Kjeldahl Nitrogen		NA		
Total Organic Carbon		NA		
Total Organic Halides		NA		
Total Organic Nitrogen		NA		
Total Phosphorus		NA		
METALS				
Aluminum		NA		
Antimony		NA		
Arsenic		0.4480		JB
Barium		0.2860		JB
Beryllium		NA		
Cadmium	<	0.0020		
Calcium		NA		
Chromium	<	0.0100		
Cobalt		NA		
Copper		NA		
Cyanide		NA		
Hexavalent Chromium		NA		
Iron		NA		
Lead		0.0490		JB
Magnesium		NA		
Manganese		NA		
Mercury		0.0006		
Molybdenum		NA		
Nickel		NA		
Potassium		NA		
Selenium		0.1050		JB
Silicon		NA		
Silver	<	0.0100		
Sodium		NA		
Thallium		NA		
Vanadium		NA		
Zinc		NA		

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INACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1791 067122 28.5 - 30.0	a	b	1791 067124 COMPOSITE TCLP	a	b	1791 067125 COMPOSITE TCLP	a	b	1791 067125 COMPOSITE RCRA-4	a	b
GENERAL CHEMISTRY												
Ammonia	NA			NA			NA			NA		
Chloride	NA			NA			NA			NA		
Fluoride	NA			NA			NA			NA		
Hydrogen ion	NA			NA			NA			NA		
Nitrate	NA			NA			NA			NA		
Phenols	NA			NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA			NA		
Phosphate as P	NA			NA			NA			NA		
Sulfate	NA			NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA			NA		
Total Organic Carbon	NA			NA			NA			NA		
Total Organic Halides	NA			NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA			NA		
Total Phosphorus	NA			NA			NA			NA		
METALS												
Aluminum	7210.0000			NA			NA			NA		
Antimony	< 6.5000	N	J	NA			NA			NA		
Arsenic	3.6000	N	J	< 0.2500			< 0.0500			NA		
Barium	83.9000			2.1520			1.4010					
Beryllium	0.5400	B		NA			NA			NA		
Cadmium	0.6500	B		0.0174		J	0.01790			NA		
Calcium	7810.0000	*		NA			NA			NA		
Chromium	13.1000	*		0.0807			0.08170			NA		
Cobalt	9.4000	B		NA			NA			NA		
Copper	12.1000			NA			NA			NA		
Cyanide	NA			NA			NA			0.3950		
Hexavalent Chromium	NA			NA			NA			NA		
Iron	13500.0000	*		NA			NA			NA		
Lead	10.4000	N	J	0.1000			0.1140			NA		
Magnesium	4800.0000			NA			NA			NA		
Manganese	602.0000	N*	J	NA			NA			NA		
Mercury	< 0.1100		J	0.0002			< 0.00020			NA		
Molybdenum	8.1000			< 0.0002			NA			NA		
Nickel	14.8000			NA			NA			NA		
Potassium	1030.0000	B		NA			NA			NA		
Selenium	< 0.4900	N		0.2360			0.128			NA		
Silicon	NA			NA			NA			NA		
Silver	2.8000		J	0.0732		J	0.07130			NA		
Sodium	91.7000	B		NA			NA			NA		
Thallium	< 0.4900			NA			NA			NA		
Vanadium	16.7000			NA			NA			NA		
Zinc	36.7000			NA			NA			NA		

a = lab qualifiers
b = validation qualifiers

INACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1849 067604 6.0 - 7.5 a b	1849 067609 13.5 - 15.0 a b	1849 067618 28.5 - 30.0 a b	1849 067622 RINSATE a b
GENERAL CHEMISTRY				
Ammonia	NA	NA	NA	NA
Chloride	NA	NA	NA	NA
Fluoride	NA	NA	NA	NA
Hydrogen ion	NA	NA	NA	NA
Nitrate	NA	NA	NA	NA
Phenols	NA	NA	NA	NA
Phosphorus (black, white,	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA
Sulfate	NA	NA	NA	NA
Total Kjeldahl Nitrogen	NA	NA	NA	NA
Total Organic Carbon	192011.0000	186725.0000	11500.0000	< 1.0000
Total Organic Halides	NA	NA	NA	NA
Total Organic Nitrogen	NA	NA	NA	NA
Total Phosphorus	NA	NA	NA	NA
METALS				
Aluminum	NA	NA	NA	NA
Antimony	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA
Barium	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA
Calcium	NA	NA	NA	NA
Chromium	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA
Copper	NA	NA	NA	NA
Cyanide	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA
Iron	NA	NA	NA	NA
Lead	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA
Manganese	NA	NA	NA	NA
Mercury	NA	NA	NA	NA
Molybdenum	NA	NA	NA	NA
Nickel	NA	NA	NA	NA
Potassium	NA	NA	NA	NA
Selenium	NA	NA	NA	NA
Silicon	NA	NA	NA	NA
Silver	NA	NA	NA	NA
Sodium	NA	NA	NA	NA
Thallium	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA
Zinc	NA	NA	NA	NA

a = lab qualifiers
b = validation qualifiers

INACTIVE FLYASH PILE
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
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CHEMICAL PARAMETERS	1850 067627 6.0 - 7.5 a b	1850 067632 13.5 - 15.0 a b	1850 067633 15.0 - 16.5 a b
GENERAL CHEMISTRY			
Ammonia	NA	NA	NA
Chloride	NA	NA	NA
Fluoride	NA	NA	NA
Hydrogen ion	NA	NA	NA
Nitrate	NA	NA	NA
Phenols	NA	NA	NA
Phosphorus (black, white,	NA	NA	NA
Phosphate as P	NA	NA	NA
Sulfate	NA	NA	NA
Total Kjeldahl Nitrogen	NA	NA	NA
Total Organic Carbon	173349.0000	56753.0000	7840.0000
Total Organic Halides	NA	NA	NA
Total Organic Nitrogen	NA	NA	NA
Total Phosphorus	NA	NA	NA
METALS			
Aluminum	NA	NA	NA
Antimony	NA	NA	NA
Arsenic	NA	NA	NA
Barium	NA	NA	NA
Beryllium	NA	NA	NA
Cadmium	NA	NA	NA
Calcium	NA	NA	NA
Chromium	NA	NA	NA
Cobalt	NA	NA	NA
Copper	NA	NA	NA
Cyanide	NA	NA	NA
Hexavalent Chromium	NA	NA	NA
Iron	NA	NA	NA
Lead	NA	NA	NA
Magnesium	NA	NA	NA
Manganese	NA	NA	NA
Mercury	NA	NA	NA
Molybdenum	NA	NA	NA
Nickel	NA	NA	NA
Potassium	NA	NA	NA
Selenium	NA	NA	NA
Silicon	NA	NA	NA
Silver	NA	NA	NA
Sodium	NA	NA	NA
Thallium	NA	NA	NA
Vanadium	NA	NA	NA
Zinc	NA	NA	NA

a = lab qualifiers
b = validation qualifiers

REPORT DATE : 25-APR-92

TABLE F-8

HAZARDOUS CHARACTERISTIC DATA FOR SUBSURFACE MEDIA
RI/FS SAMPLING PROGRAM
INACTIVE FLYASH PILE

TABLE F-8

HAZARDOUS CHARACTERISTIC DATA FOR SUBSURFACE MEDIA
RI/FS SAMPLING PROGRAM
INACTIVE FLYASH PILE

	1708		1709	1791
Characteristic	67118	67118D	67078	67125
Ignitibility °C	>110	>110	NA	>110
Corrosivity pH	7.27	7.27	NA	7.39
Reactivity				
Cyanide (mg/kg)	0.123	NA	21.0	0.395
Sulfide (mg/kg)	<12	NA	NA	<13.95

NA = Not Analyzed
D = Duplicate Analysis

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TABLE F-9

DRAINAGE SEDIMENT ANALYSES
CHARACTERIZATION INVESTIGATION STUDY
INACTIVE FLYASH PILE

NOTES:

- CIS data not applicable to OU2 waste unit has been shaded

Thu Dec 17

ON-SITE LABORATORY RADIONUCLIDE RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (feet)	NORTH COORDINATE (feet)	BEGIN DEPTH (feet)	END DEPTH (feet)	RADIONUCLIDE	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
53	FMP-SD-53-001	1378833.00	478016.00	.00	.50	CS-137	=	.50	.20
	FMP-SD-53-001	1378833.00	478016.00	.00	.50	RA-226	=	1.40	.50
	FMP-SD-53-001	1378833.00	478016.00	.00	.50	RU-106	<	10.70	
	FMP-SD-53-001	1378833.00	478016.00	.00	.50	TH-232	=	1.10	.60
	FMP-SD-53-001	1378833.00	478016.00	.00	.50	U-238	=	8.90	3.40
	FMP-SD-53-002	1378831.00	478014.00	.00	.50	CS-137	<	1.40	
	FMP-SD-53-002	1378831.00	478014.00	.00	.50	RA-226	=	.80	.30
	FMP-SD-53-002	1378831.00	478014.00	.00	.50	RU-106	<	8.60	
	FMP-SD-53-002	1378831.00	478014.00	.00	.50	TH-232	<	.50	
	FMP-SD-53-002	1378831.00	478014.00	.00	.50	U-238	=	4.00	3.10

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TABLE F-10

DRAINAGE SEDIMENT ANALYSES
RI/FS SAMPLING PROGRAM
INACTIVE FLYASH PILE

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

INACTIVE FLYASH PILE
SEDIMENT RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per gram (pCi/g).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	ASIT-008 009048 06-27-1988			-	ASIT-009 009049 06-27-1988			-
Actinium 231	NA				NA			
Cesium 137	NA				NA			
Lead 210	NA				NA			
Neptunium 237	NA				NA			
Plutonium 210	NA				NA			
Plutonium 238	NA				NA			
Plutonium 239/240	NA				NA			
Protactium 234	NA				NA			
Radium 224	NA				NA			
Radium 226	0.9	±	0.1		0.7	±	0.1	
Radium 228	0.9	±	0.1		0.7	±	0.1	
Ruthenium 106	NA				NA			
Strontium 90	NA				NA			
Technetium 99	NA				NA			
Thorium 228	NA				NA			
Thorium 230	NA				NA			
Thorium 232	NA				NA			
Total Thorium **	NA				NA			
Uranium 234	NA				NA			
Uranium 235/236	NA				NA			
Uranium 238	NA				NA			
Total Uranium **	13.9	±	1.8		5.4	±	1.1	

** Results reported in mg/kg

- = Sample has not been validated

REPORT DATE : 29-APR-92

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TABLE F-11

SURFACE WATER ANALYSES
RI/FS SAMPLING PROGRAM
INACTIVE FLYASH PILE

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

INACTIVE FLYASH PILE
SURFACE WATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	ASIT-009 001175 03-30-1989			
Actinium 231		NA		
Cesium 137		NA		
Lead 210		NA		
Neptunium 237		NA		
Plutonium 238		NA		
Plutonium 239/240		NA		
Polonium 210		NA		
Protactium 234		NA		
Radium 224		NA		
Radium 226	<	1.0		
Radium 228	<	3.0		
Ruthenium 106		NA		
Strontium 90		NA		
Technetium 99		NA		
Thorium 228		NA		
Thorium 230		NA		
Thorium 232		NA		
Total Thorium **		NA		
Uranium 234		NA		
Uranium 235/236		NA		
Uranium 238		NA		
Total Uranium **		40.0	±	6.0

** Results reported in ug/ℓ

- = Sample has not been validated

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REPORT DATE : 1-MAY-92

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EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING GENERAL CHEMICAL RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

Concentration Qualifiers

B = Reported value was obtained from a reading that was less than the Contract Laboratory Program (CLP) Contract Required Detection Limit (CRQL), but greater than or equal to the Instrument Detection Limit (IDL).

Quality Qualifiers

E = The reported value is estimated because of the presence of interference.

M = Duplicate injection precision not met.

N = Spiked sample recovery not within controls limits.

S = The reported value was determined by the Method of Standard Additions.

W = Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

G = Native analyte > 4 times spike added; therefore acceptance criteria do not apply.

X = Detection limit is higher than normal due to sample matrix interferences.

* = Duplication analysis not within control limits.

+ = Correlation coefficient for the MSA is less than 0.955.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

INACTIVE FLYASH PILE
SURFACE WATER GENERAL CHEMICAL RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		ASIT-009 001175 03-30-1989
GENERAL CHEMISTRY		
Ammonia		0.1626
Chloride		3.5000
Fluoride		0.3000
Hydrogen ion		NA
Nitrate		0.1400
Phenols	<	0.0100
Phosphorus (black, white, red,		NA
Phosphate as P		NA
Sulfate		171.0000
Total Kjeldahl Nitrogen		1.0900
Total Organic Carbon		NA
Total Organic Halides		0.0154
Total Organic Nitrogen		0.9270
Total Phosphorus		NA
METALS		
Aluminum		NA
Antimony		NA
Arsenic	<	0.0020
Barium		0.0267
Beryllium		NA
Cadmium		0.0016
Calcium		38.3000
Chromium	<	0.0020
Cobalt		NA
Copper		0.0081
Cyanide		NA
Hexavalent Chromium		NA
Iron		0.2840
Lead		0.0083
Magnesium		10.1000
Manganese		0.0462
Mercury		0.0008
Molybdenum	<	0.0030
Nickel		0.0080
Potassium		2.3300
Selenium	<	0.0020
Silicon		NA
Silver	<	0.0005
Sodium		1.9900

- = Sample has not been validated

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TABLE F-12

GROUNDWATER ANALYSES
RI/FS SAMPLING PROGRAM
INACTIVE FLYASH PILE

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

INACTIVE FLYASH PILE
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	1016 003062 03-28-1988		1016 003906 02-26-1989		1016 066819 12-13-1989		b
Actinium 231		NA		NA		NA	
Cesium 137	<	20.0	<	20.0		NA	
Lead 210		NA		NA		NA	
Neptunium 237	<	1.0	<	1.0		NA	
Plutonium 238	<	1.0	<	1.0		NA	
Plutonium 239/240	<	1.0	<	1.0		NA	
Polonium 210		NA		NA		NA	
Protactium 234		NA		NA		NA	
Radium 224		NA		NA		NA	
Radium 226	<	1.0	<	1.0		NA	
Radium 228	<	3.0	<	3.0		NA	
Ruthenium 106	<	150.0	<	150.0		NA	
Strontium 90	<	5.0	<	5.0		NA	
Technetium 99	<	30.0	<	30.0	<	1.0	J
Thorium 228	<	1.0	<	1.0	<	1.0	J
Thorium 230	<	1.0	<	1.0		1.2 ± 0.7	J
Thorium 232	<	1.0	<	1.0		NA	
Total Thorium **		NA	<	3.0		NA	
Uranium 234	<	1.0		2.5 ± 0.6	<	1.0	
Uranium 235		NA		NA	<	1.0	J
Uranium 235/236	<	1.0	<	1.0		NA	
Uranium 238	<	1.0		2.6 ± 0.6	<	1.0	
Total Uranium **	<	1.0		9.0 ± 2.0		2.0 ± 0.2	J

** Results reported in ug/ℓ

b = validation qualifier

- = Sample has not been validated

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INACTIVE FLYASH PILE
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	1047 003102 04-20-1988 -	1047 003369 07-24-1988 -	1047 003648 10-23-1988 -	1047 003855 01-22-1989 -	1047 066830 12-12-1989 -
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	NA
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	NA
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	NA
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	NA
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0	NA
Radium 228	< 3.0	< 3.0	< 3.0	< 3.4	NA
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	NA
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	NA
Technetium 99	< 30.0	< 30.0	< 43.7	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	1.1 ± 0.4	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	1.0 ± 0.4	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	1.1 ± 0.4	< 1.0	NA
Total Thorium **	NA	5.0 ± 3.0	10.0 ± 4.0	< 3.0	NA
Uranium 234	3.7 ± 0.9	7.4 ± 1.1	7.3 ± 1.2	3.7 ± 0.6	4.0 ± 0.8
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	NA
Uranium 238	2.5 ± 0.7	3.2 ± 0.6	3.6 ± 0.7	2.1 ± 0.4	< 1.0
Total Uranium **	6.0 ± 1.0	9.0 ± 2.0	NA	6.0 ± 1.0	10.3 ± 1.1

** Results reported in ug/ℓ

- = Sample has not been validated

INACTIVE FLYASH PILE
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	2016 003063 03-28-1988 -	2016 003434 08-03-1988 -	2016 003685 11-04-1988 -	2016 003883 02-07-1989 -	2016 004152 07-26-1989 -
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0	< 3.2	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	NA	< 2.0	< 2.0	< 3.0	< 2.0
Uranium 234	7.7 ± 1.5	5.3 ± 0.8	4.6 ± 0.7	6.6 ± 0.9	5.1 ± 0.8
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	6.2 ± 1.3	6.4 ± 0.9	5.6 ± 0.9	8.0 ± 1.1	5.8 ± 0.9
Total Uranium **	21.0 ± 3.0	18.0 ± 3.0	17.0 ± 3.0	22.0 ± 4.0	17.0 ± 3.0

** Results reported in ug/ℓ

- = Sample has not been validated

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INACTIVE FLYASH PILE
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

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RADIOLOGICAL PARAMETER		2016 004213 03-04-1990		
Actinium 231		NA		
Cesium 137	<	20.0		
Lead 210		NA		
Neptunium 237	<	1.0		
Plutonium 238	<	1.0		
Plutonium 239/240	<	1.0		
Polonium 210		NA		
Protactium 234		NA		
Radium 224		NA		
Radium 226	<	1.0		
Radium 228	<	3.0		
Ruthenium 106	<	150.0		
Strontium 90	<	5.0		
Technetium 99	<	30.0		
Thorium 228	<	1.0		
Thorium 230	<	1.0		
Thorium 232	<	1.0		
Total Thorium **	<	1.9		
Uranium 234		4.3	±	0.7
Uranium 235/236	<	1.0		
Uranium 238		5.0	±	0.8
Total Uranium **		29.4	±	4.0

** Results reported in ug/ℓ

- = Sample has not been validated

INACTIVE FLYASH PILE
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	2047 003998 01-22-1989	2047 004093 05-02-1989	2047 004160 07-28-1989	2047 004220 04-03-1990
	-	-	-	-
Actinium 231	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.2	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	1.1 ± 0.3
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	< 4.0	< 5.0	< 4.0	< 1.9
Uranium 234	5.1 ± 0.9	3.2 ± 0.7	3.7 ± 0.7	4.7 ± 0.8
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	4.5 ± 0.9	3.4 ± 0.7	3.8 ± 0.8	4.7 ± 0.8
Total Uranium **	15.0 ± 3.0	10.0 ± 2.0	9.0 ± 1.0	13.8 ± 1.4

** Results reported in ug/ℓ

- = Sample has not been validated

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INACTIVE FLYASH PILE
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	3016 003082 04-08-1988	3016 003435 08-03-1988	3016 003686 11-04-1988	3016 003882 02-07-1989	3016 004241 03-04-1990
	-	-	-	-	-
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0	< 3.1	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	1.4 ± 0.7	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	NA	< 3.0	< 2.0	< 3.0	< 1.4
Uranium 234	5.3 ± 0.9	3.3 ± 0.6	3.3 ± 0.6	3.3 ± 0.7	3.0 ± 0.5
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	4.4 ± 0.8	3.5 ± 0.6	3.2 ± 0.6	2.9 ± 0.6	2.8 ± 0.5
Total Uranium **	11.0 ± 2.0	9.0 ± 2.0	8.0 ± 1.0	7.0 ± 1.0	13.4 ± 1.4

** Results reported in ug/ℓ

- = Sample has not been validated

INACTIVE FLYASH PILE
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	4016 003996 01-20-1989	4016 004090 05-01-1989	4016 066867 12-12-1989	b
Actinium 231	NA	NA	NA	
Cesium 137	< 20.0	< 20.0	NA	
Lead 210	NA	NA	NA	
Neptunium 237	< 1.0	< 1.0	NA	
Plutonium 238	< 1.0	< 1.0	NA	
Plutonium 239/240	< 1.0	< 1.0	NA	
Polonium 210	NA	NA	NA	
Protactium 234	NA	NA	NA	
Radium 224	NA	NA	NA	
Radium 226	< 1.0	< 1.0	NA	
Radium 228	< 3.0	< 3.0	NA	
Ruthenium 106	< 150.0	< 150.0	NA	
Strontium 90	< 5.0	< 5.0	NA	
Technetium 99	< 30.0	< 30.0	< 30.0	J
Thorium 228	< 1.0	< 1.0	< 1.0	J
Thorium 230	< 1.0	< 1.0	1.4 ± 0.4	J
Thorium 232	< 1.0	< 1.0	NA	
Total Thorium **	< 9.0	< 2.0	NA	
Uranium 234	< 1.0	< 1.0	< 1.0	
Uranium 235/236	< 1.0	< 1.0	NA	
Uranium 238	< 1.0	< 1.0	< 1.0	
Total Uranium **	< 1.0	< 1.0	< 1.0	J

** Results reported in ug/ℓ

b = validation qualifiers

- = Sample has not been validated

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EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING HAZARDOUS SUBSTANCE LIST RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

J = Indicates an estimated value. This flag is used when the mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.

C = This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E = This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to pesticides/PCBs analyzed by GC/EC methods.

D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.

F = Estimated value due to a confirmed compound which is off-scale in both columns.

X = A flag that FORMASTER III CLP software automatically inserts to indicate that the data was entered manually.

Z = No estimated value reported, or an elevated CRQL reported because matrix effects interfere with or obscure the compound on one or both columns. In either situation, the compound does not confirm as a positive identification.

* = Values outside of contract laboratory-required QC limits.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

INACTIVE FLYASH PILE
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1016 003062 03-28-1988 a -	1016 004060 03-29-1989 a -	2016 003063 03-28-1988 a -	2016 003551 02-07-1989 a -
ORGANOPHOSPOROUS PESTICIDES				
Azinphosmethyl	NA	< 0.00050	NA	< 0.00250
Demeton	NA	< 0.00040	NA	< 0.00025
Diazinon	NA	< 0.00020	NA	< 0.00025
Disulfoton	NA	< 0.00020	NA	< 0.00025
Ethion	NA	< 0.00020	NA	< 0.00025
Malathion	NA	< 0.00020	NA	< 0.00025
Parathion, ethyl	NA	< 0.00020	NA	< 0.00025
Parathion, methyl	NA	< 0.00020	NA	< 0.00025
PESTICIDES				
4,4'-DDD	< 0.00010	NA	< 0.00010	NA
4,4'-DDE	< 0.00010	NA	< 0.00010	NA
4,4'-DDT	< 0.00010	NA	< 0.00010	NA
Aldrin	< 0.00005	NA	< 0.00005	NA
Aroclor-1016	< 0.00050	NA	< 0.00050	NA
Aroclor-1221	< 0.00050	NA	< 0.00050	NA
Aroclor-1232	< 0.00050	NA	< 0.00050	NA
Aroclor-1242	< 0.00050	NA	< 0.00050	NA
Aroclor-1248	< 0.00050	NA	< 0.00050	NA
Aroclor-1254	< 0.00100	NA	< 0.00100	NA
Aroclor-1260	< 0.00100	NA	< 0.00100	NA
Dieldrin	< 0.00010	NA	< 0.00010	NA
Endosulfan II	< 0.00010	NA	< 0.00010	NA
Endosulfan sulfate	< 0.00010	NA	< 0.00010	NA
Endosulfan-I	< 0.00005	NA	< 0.00005	NA
Endrin	< 0.00010	NA	< 0.00010	NA
Endrin ketone	< 0.00010	NA	< 0.00010	NA
Heptachlor	< 0.00005	NA	< 0.00005	NA
Heptachlor epoxide	< 0.00005	NA	< 0.00005	NA
Methoxychlor	< 0.00050	NA	< 0.00050	NA
Toxaphene	< 0.00100	NA	< 0.00100	NA
alpha-BHC	< 0.00005	NA	< 0.00005	NA
alpha-Chlordane	< 0.00050	NA	< 0.00050	NA
beta-BHC	< 0.00005	NA	< 0.00005	NA
delta-BHC	< 0.00005	NA	< 0.00005	NA
gamma-BHC (Lindane)	< 0.00005	NA	< 0.00005	NA
gamma-Chlordane	< 0.00050	NA	< 0.00050	NA
SEMI-VOLATILE ORGANICS				

a = lab qualifiers

- = Sample has not been validated

INACTIVE FLYASH PILE
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1016 003062 03-28-1988 a	1016 004060 03-29-1989 a	2016 003063 03-28-1988 a	2016 003551 02-07-1989 a
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	< 0.01000	NA	< 0.01000	NA
1,2-Dichlorobenzene	< 0.01000	NA	< 0.01000	NA
1,3-Dichlorobenzene	< 0.01000	NA	< 0.01000	NA
1,4-Dichlorobenzene	< 0.01000	NA	< 0.01000	NA
2,4,5-Trichlorophenol	< 0.05000	NA	< 0.05000	NA
2,4,6-Trichlorophenol	< 0.01000	NA	< 0.01000	NA
2,4-Dichlorophenol	< 0.01000	NA	< 0.01000	NA
2,4-Dimethylphenol	< 0.01000	NA	< 0.01000	NA
2,4-Dinitrophenol	< 0.05000	NA	< 0.05000	NA
2,4-Dinitrotoluene	< 0.01000	NA	< 0.01000	NA
2,6-Dinitrotoluene	< 0.01000	NA	< 0.01000	NA
2-Chloronaphthalene	< 0.01000	NA	< 0.01000	NA
2-Chlorophenol	< 0.01000	NA	< 0.01000	NA
2-Methylnaphthalene	< 0.01000	NA	< 0.01000	NA
2-Methylphenol	< 0.01000	NA	< 0.01000	NA
2-Nitroaniline	< 0.05000	NA	< 0.05000	NA
2-Nitrophenol	< 0.01000	NA	< 0.01000	NA
3,3'-Dichlorobenzidine	< 0.02000	NA	< 0.02000	NA
3-Nitroaniline	< 0.05000	NA	< 0.05000	NA
4,6-Dinitro-2-methylphenol	< 0.05000	NA	< 0.05000	NA
4-Bromophenyl phenyl ether	< 0.01000	NA	< 0.01000	NA
4-Chloro-3-methylphenol	< 0.01000	NA	< 0.01000	NA
4-Chloroaniline	< 0.01000	NA	< 0.01000	NA
4-Chlorophenylphenyl ether	< 0.01000	NA	< 0.01000	NA
4-Methylphenol	< 0.01000	NA	< 0.01000	NA
4-Nitroaniline	< 0.05000	NA	< 0.05000	NA
4-Nitrophenol	< 0.05000	NA	< 0.05000	NA
Acenaphthene	< 0.01000	NA	< 0.01000	NA
Acenaphthylene	< 0.01000	NA	< 0.01000	NA
Anthracene	< 0.01000	NA	< 0.01000	NA
Benzo(a)anthracene	< 0.01000	NA	< 0.01000	NA
Benzo(a)pyrene	< 0.01000	NA	< 0.01000	NA
Benzo(b)fluoranthene	< 0.01000	NA	< 0.01000	NA
Benzo(g,h,i)perylene	< 0.01000	NA	< 0.01000	NA
Benzo(k)fluoranthene	< 0.01000	NA	< 0.01000	NA
Benzoic acid	< 0.05000	NA	< 0.05000	NA
Benzyl alcohol	< 0.01000	NA	< 0.01000	NA
Butyl benzyl phthalate	< 0.01000	NA	< 0.01000	NA
Chrysene	< 0.01000	NA	< 0.01000	NA
Di-n-butyl phthalate	< 0.01000	NA	< 0.01000	NA

a = lab qualifiers

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INACTIVE FLYASH PILE
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1016 003062 03-28-1988 a -	1016 004060 03-29-1989 a -	2016 003063 03-28-1988 a -	2016 003551 02-07-1989 a -
Di-n-octyl phthalate	< 0.01000	NA	< 0.01000	NA
Dibenzo(a,h)anthracene	< 0.01000	NA	< 0.01000	NA
Dibenzofuran	< 0.01000	NA	< 0.01000	NA
Diethyl phthalate	< 0.01000	NA	< 0.01000	NA
Dimethyl phthalate	< 0.01000	NA	< 0.01000	NA
Fluoranthene	< 0.01000	NA	< 0.01000	NA
Fluorene	< 0.01000	NA	< 0.01000	NA
Hexachlorobenzene	< 0.01000	NA	< 0.01000	NA
Hexachlorobutadiene	< 0.01000	NA	< 0.01000	NA
Hexachlorocyclopentadiene	< 0.01000	NA	< 0.01000	NA
Hexachloroethane	< 0.01000	NA	< 0.01000	NA
Indeno(1,2,3-cd)pyrene	< 0.01000	NA	< 0.01000	NA
Isophorone	< 0.01000	NA	< 0.01000	NA
N-Nitroso-di-n-propylamine	< 0.01000	NA	< 0.01000	NA
N-Nitrosodiphenylamine	< 0.01000	NA	< 0.01000	NA
Naphthalene	< 0.01000	NA	< 0.01000	NA
Nitrobenzene	< 0.01000	NA	< 0.01000	NA
Pentachlorophenol	< 0.05000	NA	< 0.05000	NA
Phenanthrene	< 0.01000	NA	< 0.01000	NA
Phenol	< 0.01000	NA	< 0.01000	NA
Pyrene	< 0.01000	NA	< 0.01000	NA
bis(2-Chloroethoxy)methane	< 0.01000	NA	< 0.01000	NA
bis(2-Chloroethyl)ether	< 0.01000	NA	< 0.01000	NA
bis(2-Chloroisopropyl) eth	< 0.01000	NA	< 0.01000	NA
bis(2-Ethylhexyl) phthalat	< 0.01000	NA	0.00400 J	NA
VOLATILE ORGANICS				
1,1,1-Trichloroethane	0.00200 J	NA	< 0.00500	NA
1,1,2,2-Tetrachloroethane	< 0.00500	NA	< 0.00500	NA
1,1,2-Trichloroethane	< 0.00500	NA	< 0.00500	NA
1,1-Dichloroethane	< 0.00500	NA	< 0.00500	NA
1,1-Dichloroethene	< 0.00500	NA	< 0.00500	NA
1,2-Dichloroethane	< 0.00500	NA	< 0.00500	NA
1,2-Dichloroethylene	< 0.00500	NA	< 0.00500	NA
1,2-Dichloropropane	< 0.00500	NA	< 0.00500	NA
2-Butanone	< 0.01000	NA	< 0.01000	NA
2-Hexanone	< 0.01000	NA	< 0.01000	NA
4-Methyl-2-pentanone	< 0.01000	NA	< 0.01000	NA
Acetone	< 0.01000	NA	< 0.01000	NA
Benzene	< 0.00500	NA	< 0.00500	NA
Bromodichloromethane	< 0.00500	NA	< 0.00500	NA
Bromoform	< 0.00500	NA	< 0.00500	NA

a = lab qualifiers

- = Sample has not been validated

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INACTIVE FLYASH PILE
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1016 003062 03-28-1988 a -	1016 004060 03-29-1989 a -	2016 003063 03-28-1988 a -	2016 003551 02-07-1989 a -
Bromomethane	< 0.01000	NA	< 0.01000	NA
Carbon Tetrachloride	< 0.00500	NA	< 0.00500	NA
Carbon disulfide	< 0.00500	NA	< 0.00500	NA
Chlorobenzene	< 0.00500	NA	< 0.00500	NA
Chloroethane	< 0.01000	NA	< 0.01000	NA
Chloroform	< 0.00500	NA	< 0.00500	NA
Chloromethane	< 0.01000	NA	< 0.01000	NA
Dibromochloromethane	< 0.00500	NA	< 0.00500	NA
Ethylbenzene	< 0.00500	NA	< 0.00500	NA
Methylene chloride	< 0.00500	NA	< 0.00500	NA
Styrene	< 0.00500	NA	< 0.00500	NA
Tetrachlorethene	< 0.00500	NA	< 0.00500	NA
Toluene	< 0.00500	NA	< 0.00500	NA
Total xylenes	< 0.00500	NA	< 0.00500	NA
Trichloroethene	< 0.00500	NA	< 0.00500	NA
Vinyl Acetate	< 0.01000	NA	< 0.01000	NA
Vinyl chloride	< 0.01000	NA	< 0.01000	NA
cis-1,3-Dichloropropene	< 0.00500	NA	< 0.00500	NA
trans-1,3-Dichloropropene	< 0.00500	NA	< 0.00500	NA

a = lab qualifiers

- = Sample has not been validated

REPORT DATE: 1-MAY-92

EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING GENERAL CHEMICAL RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

Concentration Qualifiers

B = Reported value was obtained from a reading that was less than the Contract Laboratory Program (CLP) Contract Required Detection Limit (CRQL), but greater than or equal to the Instrument Detection Limit (IDL).

Quality Qualifiers

E = The reported value is estimated because of the presence of interference.

M = Duplicate injection precision not met.

N = Spiked sample recovery not within controls limits.

S = The reported value was determined by the Method of Standard Additions.

W = Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

G = Native analyte > 4 times spike added; therefore acceptance criteria do not apply.

X = Detection limit is higher than normal due to sample matrix interferences.

* = Duplication analysis not within control limits.

+ = Correlation coefficient for the MSA is less than 0.955.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

INACTIVE FLYASH PILE
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1016 003062 03-28-1988 a _		1016 003906 02-26-1989 a _
GENERAL CHEMISTRY				
Ammonia	<	0.1000		0.3000
Chloride		6.8000		5.7000
Fluoride		0.9000		0.1000
Hydrogen ion		NA		NA
Nitrate	<	5.0000		1.8000
Phenols	<	0.0100		0.0050
Phosphorus (black, white)		NA		NA
Phosphate as P	<	0.3000		NA
Sulfate		28.0000		26.0000
Total Kjeldahl Nitrogen		NA		1.2000
Total Organic Carbon		NA		NA
Total Organic Halides		NA		0.0700
Total Organic Nitrogen		0.2000		0.9000
Total Phosphorus		NA		NA
METALS				
Aluminum	<	0.0400		NA
Antimony	<	0.0300		NA
Arsenic	<	0.0300	<	0.0030
Barium		0.0630		0.0590
Beryllium	<	0.0010		NA
Cadmium	<	0.0050	<	0.0050
Calcium		198.0000		180.0000
Chromium	<	0.0100		0.0300
Cobalt	<	0.0200		NA
Copper		0.0100	<	0.0100
Cyanide	<	0.0100		NA
Hexavalent Chromium	<	0.0200		NA
Iron		2.5000		0.0900
Lead	<	0.0300	<	0.0020
Magnesium		37.9000		31.0000
Manganese		0.0340	<	0.0050
Mercury	<	0.0010		0.0003
Molybdenum	<	0.0100	<	0.0100
Nickel	<	0.0200	<	0.0300
Potassium		2.0000		1.5000
Selenium	<	0.0100		0.0050
Silicon		NA		NA
Silver	<	0.0050	<	0.0100
Sodium		4.5000		5.4000
Thallium	<	0.0030 W		NA
Vanadium	<	0.0100		NA
Zinc		0.0270		NA

a = lab qualifiers
_ = Sample has not been validated

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INACTIVE FLYASH PILE
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1047 003102 04-20-1988 a _		1047 003855 01-22-1989 a _
GENERAL CHEMISTRY				
Ammonia		0.1000	<	0.1000
Chloride	<	0.5000		1.5000
Fluoride		0.5500		0.8000
Hydrogen ion		NA		NA
Nitrate		0.1600	<	0.0500
Phenols		0.0200	<	0.0100
Phosphorus (black, white)		NA		NA
Phosphate as P		NA		NA
Sulfate		128.0000		180.0000
Total Kjeldahl Nitrogen		NA		0.2000
Total Organic Carbon		NA		NA
Total Organic Halides		NA	<	0.0100
Total Organic Nitrogen		0.3000		0.2000
Total Phosphorus	<	0.0500		NA
Total Phosphorus		NA		NA
METALS				
Aluminum		NA		NA
Antimony		NA		NA
Arsenic	<	0.2000	<	0.0020
Barium		0.0480		0.0540
Beryllium		NA		NA
Cadmium	<	0.0050		0.0090
Calcium		103.0000		111.0000
Chromium	<	0.0200		0.0240
Cobalt		NA		NA
Copper	<	0.0100		0.0110
Cyanide		NA		NA
Hexavalent Chromium		NA		NA
Iron		0.0660		0.1250
Lead	<	0.0500	<	0.0020
Magnesium		50.8000		53.8000
Manganese		0.0350		0.0190
Mercury	<	0.0002	<	0.0002
Molybdenum	<	0.0200	<	0.0200
Nickel	<	0.0200		0.0250
Potassium		2.7300		2.3400
Selenium	<	0.2000	<	0.0020
Silicon		NA		NA
Silver		0.0120	<	0.0005
Sodium		22.3000		29.2000
Thallium		NA		NA
Vanadium		NA		NA
Zinc		NA		NA

a = lab qualifiers

_ = Sample has not been validated

INACTIVE FLYASH PILE
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	2016 003063 03-28-1988 a -	2016 003434 08-03-1988 a -	2016 003685 11-04-1988 a -	2016 003883 02-07-1989 a -	2016 004152 07-26-1989 a -
GENERAL CHEMISTRY					
Ammonia	< 0.1000	< 0.1000	< 0.1000	< 0.1000	< 0.1000
Chloride	23.0000	23.0000	21.5000	16.5000	21.2000
Fluoride	< 0.5000	0.7700	0.1600	0.2100	0.2200
Hydrogen ion	NA	NA	NA	NA	NA
Nitrate	< 5.0000	5.3000	2.4400	2.2400	2.6500
Phenols	< 0.0100	< 0.0500	< 0.0100	< 0.0100	< 0.0100
Phosphorus (black, white)	NA	NA	NA	NA	NA
Phosphate as P	0.2800	NA	NA	NA	NA
Sulfate	59.0000	56.0000	146.0000	51.2000	51.7000
Total Kjeldahl Nitrogen	NA	NA	0.6000	0.1810	0.4590
Total Organic Carbon	NA	NA	NA	NA	3.7100
Total Organic Halides	NA	NA	< 0.0500	< 0.0500	< 0.0100
Total Organic Nitrogen	0.3000	< 0.1000	0.6000	0.1810	0.6230
Total Phosphorus	NA	0.0300	0.0340	NA	NA
METALS					
Aluminum	< 0.0400	NA	NA	NA	0.3740
Antimony	< 0.0300	NA	NA	NA	NA
Arsenic	< 0.0300	< 0.0100	< 0.0020	< 0.0020	< 0.0020
Barium	0.0420	< 0.2000	0.0300	0.0460	0.0410
Beryllium	< 0.0010	NA	NA	NA	NA
Cadmium	< 0.0050	< 0.0050	< 0.0020	0.0050	0.0030
Calcium	77.9000	92.0000	82.7000	96.3000	86.6000
Chromium	< 0.0100	< 0.0100	< 0.0200	0.0260	0.0310
Cobalt	< 0.0200	NA	NA	NA	NA
Copper	0.0200	< 0.0300	0.0150	0.0110	0.0110
Cyanide	< 0.0100	NA	NA	NA	NA
Hexavalent Chromium	< 0.0200	NA	NA	NA	NA
Iron	0.2600	< 0.1000	0.0200	0.0850	0.1920
Lead	< 0.0300	< 0.0050	0.0040	0.0020	0.0030
Magnesium	21.5000	24.0000	20.5000	25.9000	22.0000
Manganese	0.0240	< 0.0200	0.0020	0.0060	0.0120
Mercury	< 0.0010	< 0.0002	< 0.0002	0.0005	0.0002
Molybdenum	< 0.0100	< 0.0500	< 0.0200	< 0.0200	< 0.0100
Nickel	< 0.0200	< 0.0400	< 0.0200	< 0.0200	< 0.0200
Potassium	2.0000	< 5.0000	2.6200	2.4900	2.2800
Selenium	< 0.0100	< 0.0050	< 0.0020	< 0.0020	< 0.0020
Silicon	NA	NA	NA	NA	3.5500
Silver	< 0.0050	< 0.0100	< 0.0100	< 0.0005	< 0.0100
Sodium	13.8000	12.0000	12.2000	10.8000	11.2000
Thallium	< 0.0040 W	NA	NA	NA	NA
Vanadium	< 0.0100	NA	NA	NA	0.0130
Zinc	0.0340	NA	NA	NA	NA

a = lab qualifiers

- = sample has not been validated

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INACTIVE FLYASH PILE
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		2016 004213 03-04-1990 a	
GENERAL CHEMISTRY			
Ammonia	<	0.1000	
Chloride		12.0000	
Fluoride		0.2000	
Hydrogen ion		NA	
Nitrate		2.5200	
Phenols	<	0.0100	
Phosphorus (black, white)		0.0600	
Phosphate as P		NA	
Sulfate		58.5000	
Total Kjeldahl Nitrogen	<	0.1000	
Total Organic Carbon		1.6500	
Total Organic Halides	<	0.0100	
Total Organic Nitrogen	<	0.1000	
Total Phosphorus		NA	
METALS			
Aluminum		0.2790	
Antimony		NA	
Arsenic	<	0.0020	
Barium		0.0440	B
Beryllium		NA	
Cadmium		0.0030	B
Calcium		88.2000	
Chromium		0.1270	
Cobalt		NA	
Copper		0.0230	B
Cyanide		NA	
Hexavalent Chromium		NA	
Iron		0.1430	
Lead		0.0020	B
Magnesium		23.4000	
Manganese		0.0140	B
Mercury	<	0.0020	
Molybdenum	<	0.1000	
Nickel	<	0.0200	
Potassium		2.3600	
Selenium	<	0.0020	
Silicon		3.1400	
Silver	<	0.0100	
Sodium		11.7000	
Thallium		NA	
Vanadium		0.0150	B
Zinc		NA	

a = lab qualifiers

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REPORT DATE : 1-MAY-92

INACTIVE FLYASH PILE
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		2047 003998 01-22-1989 a -		2047 004093 05-02-1989 a -		2047 004160 07-28-1989 a -		2047 004220 04-03-1990 a -
GENERAL CHEMISTRY								
Ammonia	<	0.1000	<	0.1000	<	0.1000	<	0.1000
Chloride		30.0000		25.5000		23.5000		11.3000
Fluoride		0.2000		0.1650		0.2100		0.2200
Hydrogen ion		NA		NA		NA		NA
Nitrate		1.6000		2.3200		2.0900		2.5900
Phenols	<	0.0100		0.0546	<	0.0100		0.0210
Phosphorus (black, white)		NA		0.7580		0.1990		0.0900
Phosphate as P		NA		NA		NA		NA
Sulfate		68.0000		64.3000		56.9000		72.2000
Total Kjeldahl Nitrogen	<	0.1000		0.4110		0.1600		NA
Total Organic Carbon		NA	<	1.0000		1.8100		0.4590
Total Organic Halides	<	0.0100		0.0333	<	0.0100	<	0.0100
Total Organic Nitrogen	<	0.1000		0.4110		0.1600	<	0.1000
Total Phosphorus		NA		NA		NA		NA
METALS								
Aluminum		NA		0.1150		0.1130		0.1320
Antimony		NA		NA		NA		NA
Arsenic	<	0.0020	<	0.0020	<	0.0020	<	0.0020
Barium		0.0420		0.0469		0.0480		0.0414
Beryllium		NA		NA		NA		NA
Cadmium		0.0040		0.0039		0.0050		0.0051
Calcium		86.0000		89.6000		99.0000		87.0000
Chromium		0.0220		0.0138		0.0330		0.0269
Cobalt		NA		NA		NA		NA
Copper		0.0130		0.0102	<	0.0100	<	0.0100
Cyanide		NA		NA		NA		NA
Hexavalent Chromium		NA		NA		NA		NA
Iron		0.0610		0.0528		0.0310		1.6000
Lead	<	0.0020	<	0.0020		0.0050		0.0060
Magnesium		24.5000		27.0000		28.5000		26.0000
Manganese		0.0150		0.0116		0.0100		0.0107
Mercury	<	0.0002	<	0.2000	<	0.0002	<	0.0002
Molybdenum	<	0.0200	<	0.0100	<	0.0100	<	0.0100
Nickel	<	0.0200	<	0.0200	<	0.0200	<	0.0200
Potassium		2.5300		2.2000		2.0500		2.5400
Selenium	<	0.0020	<	0.0020	<	0.0020	<	0.0020
Silicon		NA		3.7900		4.0100		3.8000
Silver	<	0.0005	<	0.0005	<	0.0100		0.0102
Sodium		10.5000		10.3100		11.1000		17.1000
Thallium		NA		NA		NA		NA
Vanadium		NA		0.0123		0.0140		0.0164
Zinc		NA		NA		NA		NA

a = lab qualifiers

- = Sample has not been validated

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INACTIVE FLYASH PILE
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	3016 003082 04-08-1988 a -	3016 003435 08-03-1988 a -	3016 003686 11-04-1988 a -	3016 003882 02-07-1989 a -	3016 004241 03-04-1990 a -
GENERAL CHEMISTRY					
Ammonia	< 0.1000	< 0.1000	< 0.1000	< 0.1000	< 0.1000
Chloride	20.4000	24.0000	25.6000	24.5000	8.8000
Fluoride	0.2700	0.7400	0.1500	0.1800	0.1800
Hydrogen ion	NA	NA	NA	NA	NA
Nitrate	0.0900	4.9000	3.0500	2.6200	2.7900
Phenols	< 0.0100	< 0.0500	< 0.0100	< 0.0100	< 0.0100
Phosphorus (black, white)	NA	NA	NA	NA	0.0400
Phosphate as P	NA	NA	NA	NA	NA
Sulfate	56.0000	56.0000	174.0000	59.8000	51.2000
Total Kjeldahl Nitrogen	NA	NA	0.1400	0.2020	< 0.1000
Total Organic Carbon	NA	NA	NA	NA	1.3600
Total Organic Halides	NA	NA	< 0.0500	< 0.0500	< 0.0100
Total Organic Nitrogen	0.2100	< 0.1000	0.1400	0.2020	< 0.1000
Total Phosphorus	< 0.0500	0.0300	< 0.0200	NA	NA
METALS					
Aluminum	NA	NA	NA	NA	0.0810 B
Antimony	NA	NA	NA	NA	NA
Arsenic	< 0.2000	< 0.0100	< 0.0020	< 0.0020	< 0.0020
Barium	0.0490	< 0.2000	0.0400	0.0410	0.0370 B
Beryllium	NA	NA	NA	NA	NA
Cadmium	< 0.0020	< 0.0050	< 0.0020	0.0040	< 0.0020
Calcium	80.9000	86.0000	82.9000	84.5000	80.1000
Chromium	< 0.0200	< 0.0100	< 0.0200	0.0230	0.0230
Cobalt	NA	NA	NA	NA	NA
Copper	< 0.0100	< 0.0300	< 0.0100	0.0120	< 0.0100
Cyanide	NA	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA	NA
Iron	0.0250	< 0.1000	0.1000	0.0440	0.1250
Lead	0.0500	< 0.0050	0.0030	0.0060	< 0.0020
Magnesium	20.4400	20.0000	21.4000	22.1000	20.7000
Manganese	0.0190	< 0.0200	0.0500	0.0070	0.0190
Mercury	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0020
Molybdenum	< 0.0200	< 0.0500	< 0.0200	< 0.0200	< 0.1000
Nickel	< 0.0200	< 0.0400	< 0.0200	< 0.0200	< 0.0200
Potassium	2.8800	< 5.0000	2.5300	2.1900	2.1700
Selenium	< 0.2000	< 0.0050	0.0020	< 0.0020	< 0.0020
Silicon	NA	NA	NA	NA	3.0400
Silver	< 0.0100	< 0.0100	< 0.0100	< 0.0005	< 0.0100
Sodium	13.0700	12.0000	11.3000	10.5000	11.6000
Thallium	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	0.0140 B
Zinc	NA	NA	NA	NA	NA

a = lab qualifiers

- = Sample has not been validted

INACTIVE FLYASH PILE
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		4016 003996 01-20-1989 a -		4016 004090 05-01-1989 a -
GENERAL CHEMISTRY				
Ammonia		0.2100	<	0.1000
Chloride		6.5000		13.0000
Fluoride		0.1100		0.1800
Hydrogen ion		NA		NA
Nitrate	<	0.1000	<	0.1000
Phenols		0.0110	<	0.0100
Phosphorus (black, white)		NA		NA
Phosphate as P		NA		NA
Sulfate		97.5000		110.0000
Total Kjeldahl Nitrogen		0.5200		0.1720
Total Organic Carbon		NA		NA
Total Organic Halides		0.0200	<	0.0100
Total Organic Nitrogen		0.3100		0.1720
Total Phosphorus		NA		NA
METALS				
Aluminum		NA		NA
Antimony		NA		NA
Arsenic		0.0020	<	0.0020
Barium		0.0390		0.0382
Beryllium		NA		NA
Cadmium		0.0050		0.0040
Calcium		109.0000		102.0000
Chromium		0.0240		0.0148
Cobalt		NA		NA
Copper		0.0120	<	0.0100
Cyanide		NA		NA
Hexavalent Chromium		NA		NA
Iron		1.5600		1.2400
Lead		0.0020		0.0038
Magnesium		27.8000		26.1000
Manganese		1.0200		0.8580
Mercury	<	0.0002	<	0.0002
Molybdenum	<	0.0200	<	0.0100
Nickel	<	0.0200	<	0.0200
Potassium		1.2800		1.2000
Selenium	<	0.0020	<	0.0020
Silicon		NA		NA
Silver	<	0.0005	<	0.0005
Sodium		4.4800		5.7600
Thallium		NA		NA
Vanadium		NA		NA
Zinc		NA		NA

a = lab qualifiers

- = Sample has not been validated

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TABLE F-13

BIOTA ANALYSES
RI/FS SAMPLING PROGRAM
INACTIVE FLYASH PILE

INACTIVE FLYASH PILE
BIOLOGICAL RADIOLOGICAL RESULTS
RI/FS DATA*
Results in picocuries per gram (pCi/g).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	22 Forb Leaves 000208 10-28-1987	22 Forb Roots 000209 10-28-1987
Actinium 231	NA	NA
Cesium 137	< 0.3	< 0.3
Lead 210	NA	NA
Neptunium 237	NA	NA
Plutonium 238	NA	NA
Plutonium 239/240	NA	NA
Polonium 210	NA	NA
Protactium 234	NA	NA
Radium 224	NA	NA
Radium 226	NA	NA
Radium 228	NA	NA
Ruthenium 106	NA	NA
Strontium 90	< 0.5	< 0.5
Technetium 99	NA	NA
Thorium 228	NA	NA
Thorium 230	NA	NA
Thorium 232	NA	NA
Total Thorium **	NA	NA
Uranium 234	< 0.6	0.8 ± 0.2
Uranium 235/236	< 0.6	< 0.6
Uranium 238	< 0.6	1.5 ± 0.3
Total Uranium **	NA	NA

* Data validation in progress.

** Results reported in mg/kg

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TABLE F-14

GEOTECHNICAL ANALYSES
RI/FS SAMPLING PROGRAM
INACTIVE FLYASH PILE

TABLE F-14

GEOTECHNICAL DATA FOR SURFACE MEDIA RI/FS SAMPLING PROGRAM IN THE INACTIVE FLYASH PILE

Location:	#4	#5
North & East Coordinates	477650.90, 1379126.68	478050.53, 1378942.15
Wet Density (pcf)	56.3	53.7
Dry Density (pcf)	52.9	47.4
Moisture Content (%)	6.5	13.3

TABLE F-14
(continued)

GEOTECHNICAL DATA FOR SUBSURFACE MEDIA
RI/FS SAMPLING PROGRAM
IN THE INACTIVE FLYASH PILE

Analysis	Grain Size (mm)	Sample Number 67097	67098	67119
Moisture Content (%)		22.1	32.7	30.3
Specific Gravity		2.3119	2.2553	2.339
Percent Passing by Seive Analysis	75	100	100	100
	19	100	100	100
	9.5	92.3	95	98.3
	4.75	84.5	89.6	94.2
	2	74.7	82	84.8
	0.85	63.7	73	72.9
	0.425	53.4	63.5	62.6
	0.25	44.6	54.6	53.8
	0.106	31.8	38.6	40.5
	0.075	27.8	33.7	36.2
	37.5	100	100	100
Percent Passing by Hydrometer Analysis	0.0014	2.2		
	0.0015		0	0
	0.0034	4.3		
	0.0035		0	2.2
	0.0048	6.5		
	0.0050		3.3	4.3
	0.0067	9.7		
	0.0069		6.5	7.5
	0.0094	12.9		
	0.0097		9.8	
	0.0098			10.8
	0.0130	18.3		
	0.0136		13.1	15.1
	0.0216	25.9		
	0.0224			24.8
	0.0225		22.9	
	0.0336	31.3		
	0.0346		30.6	
	0.0349			30.2
	0.0462	36.7	37.1	
	0.0473			
	0.0480			35.5
	0.0634	42		
	0.0648		42.6	40.9

TABLE F-15

BORING LOGS
CHARACTERIZATION INVESTIGATION STUDY
INACTIVE FLYASH PILE

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-10
SITE COORDINATES (ft.):
N S 4590 E 2517
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-15-87
DATE COMPLETED: 5-15-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Upper fly ash area boring 10
SITE CONDITION On a slight slope (<10%), grass covered, tree canopy overhead.

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'		19"	19"	U	100	15-16-30-31	46	CL-CH	(0'-6") Dark grayish brown (10YR 4/2) CLAY, trace Silt, damp, mottled, (grass, roots, humus near top.).
								ML-SM	(6"-1'7") Very dark gray (2.5Y 3/0) SILT, some(+) coarse medium(+) To fine (+) Sand, some fine Gravel, damp. Most fine gravel size grains have a reddish tint in bright light. (Fly ash) Trace(+) amount of gravel and Sand is white
2'-4'		20"	20"	U	90	5-14-14-30	28	ML-SM	Same as above (6"-1'7").
4'-6'		22"	22"	U	85	10-11-14-18	25	ML-SM	Same as above (6"-4')
6'-8'		23"	23"	U	55	10-8-8-5	16	ML-SM	Same as above (6"-6'), damp, soft, loose. Strong brown (7.5YR 4/6) staining occurs throughout sample in isolated areas as blotches.

COMMENTS: Logs for UFA, B-10 are Field Book 44.1 pg 80-87. CPM Taken with Eberline HP-210T. HP-210T conversion: 1mRad/hr/1489 CPM

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: EMPC LOCATION ID: UFA, B-10
SITE COORDINATES (ft.):
N 54590 E 2517
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem augers
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-15-87
DATE COMPLETED: 5-15-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION See page 1

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	* ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
8'-10'	X	24"	24"	U	50	8-8-8-7	16	ML-SM	Same as above (6"-8') with strong brown (7.5YR 4/6) staining throughout sample as blotched.
10'-12'	X	24"	24"	U	50	8-9-9-8	18	ML-SM	Same as above (6"-10'), slightly more compact than above, still soft, crumbles easily.
12'-14'	X	19"	19"	U	70	4-6-8-12	14	ML-SM	Same as above (6"-12') moist on top - wet near bottom, slightly more white fine gravel and medium to fine sand.
14'-16'	X	23"	23"	U	60	14-15-23-41	38	ML-SM	(14'-14'3") Same as above (6"-14') wet, slightly cemented.
								CH.	(14'3"-15'11") Olive gray (5Y 4/2) CLAY, trace (-) fine Gravel (white in color), moist to slightly wet, soft, decaying tree roots.

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COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

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WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-10
SITE COORDINATES (ft.):
N S 4590 E 2517
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-15-87
DATE COMPLETED: 5-15-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
16-18'		17½"	17½"	U	CLAY-300 Fly ash-150	8-7-7-11	14	ML-SM CH.	Alternating layer of the above mentioned olive gray clay and the above mentioned fly ash, moist to slightly wet, piece of brown glass in sample.
18'-20'		21"	21"	U	300	4-4-8-10	12	ML-SM CH	(18'-18'10") Same as above 16'-16' alternating layers of clay and fly ash, slightly wet. (18'10"-19'9") Olive gray (5Y 4/2) CLAY, slightly wet, abundant decaying roots and pieces of wood, one piece of wood has a nail in it.
20'-22'		15'	15'	U	100	5-6-8-7	14	CH	Dark olive gray (5Y 3/2) CLAY, trace Silt, moist to slightly wet, high plasticity, piece of clear glass, abundant decaying organic material.

COMMENTS: See page 1 T- Top of sample
B- Bottom of sample.

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-10
SITE COORDINATES (ft.):
N S 4590 E 2517
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-15-87
DATE COMPLETED: 5-15-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
22'-24'	X	6"	6"	U	250	8-12-12/6	132	CH	Same as above (20'-22'), soft, saturated, trace organic material.
24'-26'	X	18"	18"	U	50	45-85-110/1	195/7	CH	(24'-24'3") Same as above (20'-24').
								CH	(24'3"-25'3") Dark gray (5Y 4/1) CLAY, damp, hard, trace medium to fine Gravel.
								CH	(25'3"-25'6") Same as above above CLAY at (24'3"-25'3"), lighter color, looks undisturbed.
26'-28'	X	2"	2"	U	45	45-85-100/0	185/6	SC.	Dark gray (5Y 4/1) coarse to fine SAND, some Clay, trace coarse to fine Gravel, wet, large gravel stuck in end of sample spoon.

741

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA-B-11
SITE COORDINATES (ft.):
N S 5000 E 2800
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-18-87
DATE COMPLETED: 5-18-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Upper fly ash area, boring 11
SITE CONDITION Small fly ash mounds, no ground cover.

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'		13"	13"	U	50	1-3-6-8	9	ML-SM	(0"-7") Very dark gray (2.5Y 3/0) SILT, some coarse to fine (+) Sand, little (-) fine Gravel, damp, loose. Fly-ash
					75			CL-SC	(7"-13") Brown 10YR 5/3 CLAY, little coarse to fine Sand, trace medium to fine Gravel, damp.
2'-4'		16½"	16½"	U	60	6-8-7-8	15	CL	Brown 10YR 5/3 CLAY, little fine Sand, trace medium to fine Gravel, damp, trace white staining.
4'-6'		23"	23"	U	65	10-21-28-33	49	CL	(4'-4'1½") Same as above (2'-4')
								ML-SM	(4'1½"-4'3") Same as above (0"-7")
								CL	(4'3"-4'5") Same as above (2'-4')
								ML-SM	(4'5"-5'11") Very dark gray (2.5Y 3/0) SILT, some coarse to fine (+) Sand, trace (-) fine Gravel.

— Continued on next page —

COMMENTS: Logs for UFA, B-11 are in Field Book 44.1 pg 90-97.

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: VFA, B-11
SITE COORDINATES (ft.):
N 55000 E 2800
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-18-87
DATE COMPLETED: 5-18-87
FIELD REP.: Vance A. Peers.

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
4'-6'						Continued from page 1		ML-SM	(4'5"-5'11")(continued) more dense than fly ash above, damp, trace white staining throughout.
6'-8'		20½"	20½"	U	75	16-19-17-15	36	ML-SM	Same as above (4'5"-5'11"), ½" clay layer at 6'8".
8'-10'		20½"	20½"	U	50	6-6-4-4	10	ML-SM	Same as above (4'5"-8'), last 5" has no Gravel and is predominately finer grained, less white staining.
10'-12'		24"	24"	U	55	3-3-3-3	6	ML-SM	Same as above (4'5"-10'), Trace (-) white staining, Trace (-) fine Gravel.
12'-14'		24"	24"	U	50	2-2-2-2	4	ML-SM	Same as above (10'-12'), slightly damp.
14'-16'		24"	24"	U	50	3-3-3-3	6	ML-SM	Same as above (10'-14'), slightly damp.

743

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-11
SITE COORDINATES (ft.):
N S 5000 E 2800
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 5-18-87
DATE COMPLETED: 5-18-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID #CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
16'-18'	X	24"	24"	U	55	2-4-6-5	10	ML-SM	Same as above (10'-16') slightly more dense, crumbles easily in hand, slightly damp.
18'-20'	X	24"	24"	U	65	2-2-3-3	5	ML-SM	Same as above, (10'-18') slightly damp.
20'-22'	X	24"	24"	U	HP-210 Temporarily none functional	2-2-4-4	6	ML-SM	Same as above (10'-20'), slightly more dense than above, slightly damp.
22'-24'	X	24"	24"	U	50	2-3-3-4	6	ML-SM	Same as above (10'-22'), slightly damp.
24'-26'	X	24"	24"	U	50	3-2-3-4	5	ML-SM	Same as above (10'-24') slightly damp.
26-28	X	24"	24"	U	50			ML-SM	Same as above (10'-26'), thin flakes of grout like material with orange staining on one side occur in trace amounts.

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-11
SITE COORDINATES (ft.):
N 55000 E 2800
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser - Morner
DATE STARTED: 5-18-87
DATE COMPLETED: 5-18-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
28'-30'		24"	24"	U	50	4-4-3-6	7	ML-SM	Same as above (10'-28'), damp, increase in thin grout like flakes with orange staining on one side.
30'-32'		24"	24"	U	50	5-6-11-18	17	ML-SM	(30'-31'2") Same as above (28'-30'), moist.
								CH -	(31'2"- 32') Dark gray 5Y 4/1 CLAY, moist, areas of oxidation.
32-34		22"	22"	U	50	10-16-24-28	40	CL-CH	Very dark grayish brown CLAY, trace (-) fine Sand, little Silt, slightly moist, crumbles in hand easily, looks undisturbed.

745

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-12
SITE COORDINATES (ft.):
N S 4925 E 2875
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser - Morner
DATE STARTED: 5-19-87
DATE COMPLETED: 5-19-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Upper fly ash area, boring 12.
SITE CONDITION No vegitation, bare soil, flat surface.

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	* ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'		17"	17"	U	100	7-12-9-11	21	CL-CH	(0'-1'2") Brown (10YR 4/3) CLAY, little Silt, trace medium to fine(+) Gravel, damp.
								ML-SM	(1'2"-1'5") Very dark gray (2.5Y 3/0) Silt, some coarse to fine(+) Sand, trace(-) very fine Gravel, (Fly ash), moist.
2'-4'		10"	10"	U	50	7-12-10-11	22	ML-SM	(2'-2'3") Same as above (1'2"-1'5") fly ash with above (0'-1'2") Clay mixed in, moist.
								CL-CH	(2'3"-2'10") Brown (10YR 4/3) CLAY, little
								CL-CH	Silt, trace medium to fine Gravel, damp. Gravel is angular to well rounded.
4'-6'		6"	6"	U	60	9-13-17-20	30	CL-CH	Same as above 2'3"-2'10" with areas of mottling, large porous gravel light color stuck in end of sample spoon, trace fly ash.

COMMENTS: Logs for UFA, B-12 are in Field Book 44.1 pg 100-103. CPM taken with Eberline HP-210T. HP210T conversion: 1mRad/hr/1489 CPM.

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-12
SITE COORDINATES (ft.):
N 54925 E 2875
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 5-19-87
DATE COMPLETED: 5-19-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
6'-8'	X	14"	14"	U	75	17-42-26-13	70	CL-CH	Same as above (2'3"-6'), trace fly ash.
8'-10'	X	2"	2"	U	50	37-29-21-21	50	CL-CH	Same as above (2'3"-8'), piece of concrete, no fly ash.
10'-12'	X	12"	12"	U	55	12-31-49-42	80	CL-CH	Very dark grayish brown (10YR 3/2) grading to yellowish brown (10YR 5/4) near bottom. Material is CLAY, trace Silt, little (-) medium to fine Gravel. Dark red area (1" in dia.) at 11', piece of concrete present, porous light colored rock near top.
12'-14'	X	10"	10"	U	50	14-18-35-37	53	CL-CH	Yellowish brown (10YR 5/4) CLAY, trace Silt, little (-) medium to fine Gravel, moist, dense, looks undisturbed.
14'-16'	X	0	0	U	—	15-18-24-29	42	—	

747

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 3" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: VFA, B-12
SITE COORDINATES (ft.):
N S 4925 E 2875
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow Stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-19-87
DATE COMPLETED: 5-19-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
16'-18'	X	16"	16"	U	30	54-35-100/5	135/11	CH	Yellowish brown 10YR 5/4 CLAY, trace Silt, trace fine Gravel, very dense, hard, damp, mottled.

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sampler
U - 3" O.D. 2.42" I.D. tube sampler
T - 3" O.D. thin-walled Shelby tube

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TABLE F-16

BORING LOGS
RI/FS SAMPLING PROGRAM
INACTIVE FLYASH PILE

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1016	COORDINATES: NORTH 477,617.13 EAST 1,379,149.06	DATE: 10/15/87	
GROUND ELEVATION: N/A	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/15/87	
ENGINEER/GEOLOGIST: WILL KEGLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 10/16/87	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	007232	10/15/87 1445	2 2 5		16	MEDIUM STIFF, BLACK (2.5Y 2/), SILT, SOME SAND, FLYASH, DRY.	ML	0.1	Hnu=0 ppm α =0 cpm βΓ =40-80 cpm
3.0	007233	10/15/87 1500	4 4 3		14	LOOSE, DARK YELLOWISH BROWN (10YR 4/4), SILTY SAND, DRY.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =40-80 cpm
4.5	007234	10/15/87 1510	4 5 4		13	LOOSE, BROWNISH YELLOW (10YR 6/8), SAND, SOME SILT, TRACE CLAY, DRY.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =40-80 cpm
6.0	007235	10/15/87 1520	5 7 12		14	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/6), GRAVELLY SAND, TRACE SILT, DRY.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =40-80 cpm
7.5	007236	10/15/87 1525	15 24 16		14	DENSE, YELLOWISH BROWN (10YR 5/6), GRAVELLY SAND, DRY.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =160 cpm
9.0	007237	10/15/87 1530	13 85 42		17	VERY DENSE, LIGHT YELLOWISH BROWN (10YR 6/4), GRAVELLY SAND, TRACE CLAY, DRY.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =40-80 cpm
10.5	007223 007238	10/15/87 1700	15 23 24		12	DENSE, DARK YELLOWISH BROWN (10YR 4/4), GRAVELLY SAND, DRY.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =40-80 cpm
12.0	007239	10/15/87 1720	15 16 18		10	DENSE, REDDISH YELLOW (7.5YR 7/6), GRAVELLY SAND, DRY.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =40-80 cpm
13.5	007240	10/15/87 1735	9 12 26		8	DENSE, REDDISH YELLOW (7.5YR 6/6), GRAVELLY SAND, DRY.	SW	0.1	Hnu=0 ppm α =0 cpm βΓ =40-80 cpm
15.0	007241	10/15/87 1750	8 10 13		10	MEDIUM DENSE, LIGHT BROWN (7.5YR 6/4), SAND, DRY.	SP	0.1	Hnu=0 ppm α =0 cpm βΓ =40-80 cpm
16.5	007242	10/16/87 0925	2 6 10		12	MEDIUM DENSE, DARK YELLOWISH BROWN (10YR 4/4), SAND, TRACE GRAVEL, WET.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =40-80 cpm
18.0	007243	10/16/87 1015	4 13 14		14	MEDIUM DENSE, STRONG BROWN (7.5YR 5/6), SAND, TRACE GRAVEL, WET.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =40-80 cpm
19.5	007244	10/16/87 1040	3 4 7		17	MEDIUM DENSE, DARK YELLOWISH BROWN (10YR 4/4), SAND, WET.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =40-80 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1016	COORDINATES: NORTH 477,617.13 EAST 1,379,149.06	DATE: 10/15/87	
GROUND ELEVATION: N/A	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/15/87	
ENGINEER/GEOLOGIST: WILL KEGLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 10/16/87	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
21.0	007350	10/16/87 1100	2 7 13	18	MEDIUM DENSE, DARK YELLOWISH BROWN (10YR 4/4), SAND, TRACE GRAVEL, WET.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =40-80 cpm
22.5	007351	10/16/87	4 9 10	18	MEDIUM DENSE, DARK YELLOWISH BROWN (10YR 4/4), SAND, TRACE GRAVEL, WET.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =40-80 cpm

BOTTOM OF BORING 22.5

NOTES:
MONITORING WELL INSTALLED.

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1047	COORDINATES: NORTH 478,258.44 EAST 1,379,062.43	DATE: 10/15/87	
GROUND ELEVATION: 568.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/15/87	
ENGINEER/GEOLOGIST: LOWELL WILLE	Depth N/A Date/Time N/A	DATE COMPLETED: 10/17/87	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	007295	10/15/87 1730	3 5 10	13	SOFT, BLACK (7.5YR 3/6), ORGANIC RICH SILT, SOME SAND AND CLAY, MOIST. 0.5'-STIFF, BROWN (10YR 5/5) SILTY CLAY, TRACE SAND, DRY. 1.0'-HARD, BROWN (10YR 5/6) CLAY, SOME SILT, TRACE FINE SAND, DRY.	OL ML CL	0.5 2.0 <5	α = 5 cpm Bγ = 5 cpm
3.0	007296	10/15/87 1735	6 13 20	12	HARD, BROWN (10YR 5/6) MOTTLED GRAY CLAY, SOME SILT, DRY.	CL	<5	Bγ = 5 cpm
4.5	007297	10/15/87 1740	8 16 21	11	HARD, BROWN (10YR 4/8) MOTTLED GRAY CLAY, SOME SILT, TRACE SAND AND GRAVEL, DRY. 4.0'-HARD, GRAY (7.5YR) SILTY CLAY, TRACE GRAVEL, SOME SAND, DRY.	CL CL	<5 <5	Bγ = 5 cpm
6.0	007298	10/15/87 1745	23 27 31	16	HARD, BROWN (10YR 7/4) MOTTLED GRAY CLAY, TRACE SAND AND GRAVEL, SOME SILT, DRY.	CL	<5	Bγ = 5 cpm
7.5	007299	10/16/87 1045	6 11 14	13	HARD, BROWN (10YR 6/4) CLAY, SOME SILT AND FINE SAND, TRACE MEDIUM TO COARSE SAND, DRY.	CL	4.0	Bγ = 5 cpm
9.0	007300	10/16/87 1050	15 18 21	12	HARD, BROWN (10YR 6/4) GRAVELLY CLAY, SOME SILT AND SAND, TRACE PEBBLES, DRY.	CL	N/A	Bγ = 5 cpm
10.5	007301	10/16/87 1130	2 4 5	11	SOFT, GRAY (7.5YR 5/0) SANDY CLAY, SOME SILT AND GRAVEL, TRACE PEBBLES, DRY.	CL	0.5	Bγ = 5 cpm
12.0	007302	10/16/87 1140	8 10 13	14	SOFT, GRAY (7.5YR 5/0) CLAY, SOME SAND AND SILT, TRACE FINE GRAVEL, MOIST.	CL	0.5	Bγ = 5 cpm
14.0	007303	10/16/87 1530	N/A	14	HARD, GRAY (7.5YR 6/0), SANDY CLAY, SOME SILT AND GRAVEL, TRACE PEBBLES, DRY.	CL	<5	Bγ = 5 cpm
15.5	007304	10/16/87 1610	5 15 37	14	STIFF, GRAY (7.5YR 6/0) SANDY CLAY, SOME SILT AND GRAVEL, TRACE PEBBLES, DRY. 14.5'-STIFF, GRAY (7.5YR 5/1) SANDY CLAY, SOME SILT, GRAVEL, AND PEBBLES, DRY.	CL	<5	Bγ = 5 cpm
17.0	007305	10/16/87 1640	24 50+	12	HARD, GRAY (7.5YR) SANDY CLAY, SOME SILT, GRAVEL, TRACE PEBBLES, DRY.	CL	<5	Bγ = 0 cpm
18.5	007306	10/16/87 1720	11 41 48	16	HARD, GRAY (7.5YR 5/1) SANDY CLAY, SOME SILT AND GRAVEL, TRACE PEBBLES, DRY. 17.5'-DENSE, BROWN (10YR 5/6) FINE SAND, SOME SILT, CLAY AND MEDIUM SAND, DRY. 18.0'-DENSE, BROWN (10YR 7/8) SAND, SOME GRAVEL, SILT, AND CLAY, DRY.	CL SW SP	<5 N/A N/A	Bγ = 0 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1047	COORDINATES: NORTH 478,258.44 EAST 1,379,062.43	DATE: 10/15/87	
GROUND ELEVATION: 568.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/15/87	
ENGINEER/GEOLOGIST: LOWELL WILLE	Depth N/A Date/Time N/A	DATE COMPLETED: 10/17/87	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS
20.0	007307	10/16/87	1745	14	40	50	18	DENSE, BROWN (10YR 7/8) SAND, SOME GRAVEL, SILT AND CLAY, TRACE PEBBLES, DRY.	SP		N/A	BT = 0 cpm

BOTTOM OF BORING 20.0

NOTES:
BASE OF TILL AT 18.0 FT. MONITORING WELL INSTALLED.

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1708	COORDINATES: NORTH 477,710.64 EAST 1,379,166.88	DATE: 06/14/91	
GROUND ELEVATION: 570.9	GWL: Depth N/A Date/Time N/A	DATE STARTED: 06/14/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 06/17/91	
DRILLING METHODS: AUGER MOBILE 53		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67091 06/14/91 1500		25 27 19	18	VERY HARD, BLACK (2.5Y 2/), ASPHALT, TRACE GRAVEL, DRY. 0.25'-VERY HARD, BROWN TO YELLOWISH BROWN (10YR 5/3 TO 10YR 4/6), SILTY CLAY, SOME GRAVEL, LOW PLASTICITY, DRY.	N/A CL	N/A >4.0	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
3.0	67092 06/14/91 1505		14 14 14	18	VERY HARD, BROWN TO YELLOWISH BROWN (10YR 5/3 TO 10YR 4/6), SILTY CLAY, SOME GRAVEL, LOW PLASTICITY, DRY. 1.75'-DENSE, VERY DARK GRAY (2.5Y 3/), SILT, TRACE SAND AND GRAVEL, DRY.	CL ML	>4.0 N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
4.5	67093 06/14/91 1510		14 14 18	18	DENSE, VERY DARK GRAY (2.5Y 3/), SILT, TRACE SAND & GRAVEL, DRY. 4.0'-DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST.	ML ML	N/A N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
6.0	67094 06/14/91 1515		6 6 5	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST. 5.25'-MEDIUM DENSE, VERY DARK GRAY (2.5Y 3/), SILT, SOME SAND, SOME GRAVEL, DRY.	ML ML	N/A N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
7.5	67095 06/14/91 1550		2 2 2	10	VERY LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND AND GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
8.0	67096 06/14/91 1555		2 2 2	16	VERY LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND AND GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
10.5	67097 06/15/91 0955		N/A	18	VERY LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND AND GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
12.0	67098 06/15/91 1000		N/A	16	VERY LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND AND GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
13.5	67099 06/16/91 0900		3 3 3	13	VERY LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND AND GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
15.0	67100 06/16/91 0905		3 3 4	18	VERY LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND AND GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
16.5	67101 06/16/91 0910		3 3 4	18	VERY LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND AND GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
18.0	67102 06/16/91 0915		5 2 3	18	VERY LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND AND GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
19.5	67103 06/16/91 1015		5 5 5	0	NO RECOVERY.	N/A	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1708	COORDINATES: NORTH 477,710.64 EAST 1,379,166.88	DATE: 06/14/91	
GROUND ELEVATION: 570.9	GWL: Depth N/A Date/Time N/A	DATE STARTED: 06/14/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 06/17/91	
DRILLING METHODS: AUGER MOBILE 53		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
21.0	67104	06/16/91 1020	5 3 4	18	LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, SLIGHTLY MOIST, WOOD CHIP 2" LONG.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
22.5	67105	06/16/91 1025	2 2 3	18	LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, SL. MOIST. 21.5'-LOOSE, BLACK (2.5Y 2/), SANDY SILT, TRACE GRAVEL, SLIGHTLY MOIST. 22.0'-LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, MOIST.	ML ML ML	N/A N/A N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
24.0	67106	06/16/91 1030	3 3 3	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME GRAVEL, TRACE SAND, SLIGHTLY MOIST. 23.8'-LOOSE, BLACK (2.5Y 2/) TO YELLOWISH BROWN (10YR 5/4), SANDY, SILT, TRACE GRAVEL, SLIGHTLY MOIST.	ML ML	N/A N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
25.5	67107	06/16/91 1330	5 5 4	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME POORLY SORTED SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
27.0	67108	06/16/91 1335	3 3 2	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME POORLY SORTED SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
28.5	67109	06/16/91 1340	2 2 4	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME POORLY SORTED SAND, SLIGHTLY MOIST. 28.2'-LOOSE, DARK GRAYISH BROWN (10YR 4/), POORLY SORTED SAND, TRACE GRAVEL, SLIGHTLY MOIST.	ML SP	N/A N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
30.0	67110	06/16/91 1345	8 8 6	16	MEDIUM DENSE, DARK GRAYISH BROWN (10YR 4/), POORLY SORTED SAND, TRACE GRAVEL, SLIGHTLY MOIST. 29.0'-MEDIUM DENSE, VERY DARK GRAY (2.5Y 3/) SANDY, SILT, MOIST. 29.5'-MEDIUM DENSE, OLIVE BROWN (2.5Y 4/), SILT, SOME SAND, SOME CLAY, SLIGHT PLASTICITY, MOIST.	SP ML ML	N/A N/A N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
31.5	67111	06/16/91 1415	8 11 13	18	MEDIUM DENSE, BLACK (5Y/25/1), SILT, SOME LIGHT OLIVE BROWN (2.5Y 5/6), SAND (FINE) MOIST. 31.0-MEDIUM DENSE, DARK OLIVE GRAY (5Y 3/2) TO BLACK (5Y 2.5/2), SILT, TRACE SAND, MOIST.	ML ML	N/A N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
33.0	67112	06/16/91 1420	8 14 20	18	DENSE, DARK OLIVE GRAY (5Y 3/2), SILT, SOME CLAY, LOW PLASTICITY, MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm

BOTTOM OF BORING 33.0

NOTES:
SAMPLES CLASSIFIED ACCORDING TO MUNSEL COLOR CHART.
DRILLING AND SAMPLING CEASES AT 33.0 FT. BORING PLUGGED AND ABANDONED. SAMPLES TAKEN ACCORDING TO OU-2 WORK PLAN, 67113-FIELD TRIP, 67114-DRUM TCLP, 67115-COMP TCLP, 67116-SRLP, 67117-COMP ARCHIVE, 67118-IGNITE CORRO. TOX REACT, 67119-SHELBY TUBE, 67120-TREATABILITY.

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1709	COORDINATES: NORTH 477,814.23 EAST 1,378,969.43	DATE: 06/04/91	
GROUND ELEVATION: 571.0	GWL: Depth N/A Date/Time N/A	DATE STARTED: 06/04/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 06/12/91	
DRILLING METHODS: AUGER		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67059	06/04/91 1515	4 10 15	14	MEDIUM DENSE, DARK BROWN (10YR 3/3), CLAYEY, SILT, TRACE SAND, SOME ORGANICS, SL. MOIST. 0.5'-MEDIUM DENSE, YELLOWISH BROWN (10YR 5/3), CLAYEY SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML ML	N/A N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
3.0	67060	06/04/91 1525	14 15 18	0	NO RECOVERY.	N/A	N/A	N/A
4.5	67061	06/04/91 1525	13 16 18	12	VERY STIFF, YELLOWISH BROWN (10YR 5/8) TO DARK BROWN (10YR 3/3), SILTY, CLAY, SOME GRAVEL, TRACE SAND, LOW PLASTICITY, DRY. *ONE BRICK COBBLE RECOVERED.	CL	3.5	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
6.0	67062	06/04/91 1535	14 25 17	4	DENSE, BLACK (2.5Y 2/), SILT, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =110 cpm
7.5	67063	06/06/91 0900	3 13 7	8	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
9.0	67064	06/06/91 0905	7 7 7	18	MEDIUM DENSE, VERY DARK GRAY (10YR 3/), SILT, SOME GRAVEL, DRY. 8.25'-MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE GRAVEL, DRY.	ML ML	N/A N/A	Hnu=0 ppm α =0 cpm Bγ =80-100 cpm
10.5	67066	06/06/91 0910	4 6 6	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
12.0	67067	06/06/91 1000	1 2 3	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILT, TRACE GRAVEL, TRACE SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
13.5	67070	06/06/91 1005	2 3 3	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME GRAVEL IGNETS (SLAG?), TRACE SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
15.0	67071	06/06/91 1010	2 3 3	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME GRAVEL IGNETS (SLAG?), TRACE SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
16.5	67072	06/06/91 1015	4 3 5	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME GRAVEL IGNETS (SLAG?), TRACE SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
18.0	67073	06/06/91 1100	1 2 2	18	VERY LOOSE, BLACK (2.5Y 2/), SILT, SOME GRAVEL IGNETS (SLAG?), TRACE SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
19.5	67074	06/06/91 1105	2 3 4	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME GRAVEL IGNETS (SLAG?), TRACE SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1709	COORDINATES: NORTH 477,814.23 EAST 1,378,969.43	DATE: 06/04/91	
GROUND ELEVATION: 571.0	GWL: Depth N/A Date/Time N/A	DATE STARTED: 06/04/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 06/12/91	
DRILLING METHODS: AUGER		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
21.0	67075	06/06/91 1105	2 3 3	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME GRAVEL IGNETS, TRACE SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
22.5	67076	06/06/91 1110	3 3 3	18	LOOSE, BLACK (2.5Y 2/), SILT, TRACE GRAVEL, TRACE SAND, IGNETS (SLAG?), TRACE SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
24.0	67077	06/11/91 1330	2 3 4	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME GRAVEL IGNETS (SLAG?), TRACE SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
25.5	67078	06/11/91 1340	2 2 4	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME GRAVEL IGNETS (SLAG?), SOME SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
27.0	67079	06/11/91 1345	3 3 3	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME GRAVEL IGNETS (SLAG?), TRACE SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
28.5	67080	06/11/91 1350	3 4 3	16	LOOSE, BLACK (2.5Y 2/), SILT, SOME GRAVEL IGNETS (SLAG?), TRACE SAND, SLIGHTLY MOIST. 27.4'-LOOSE, VERY DARK GRAY (2.5Y 3/), SILT, SOME SAND, TRACE GRAVEL, MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
30.0	67081	06/11/91 1500	1 2 2	14	VERY LOOSE, VERY DARK GRAY (2.5Y 3/), SILT, SOME SAND, TRACE GRAVEL, MOIST TO VERY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =50-100 cpm
31.5	67082	06/11/91 1505	1 5 7	18	LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND, TRACE GRAVEL, VERY MOIST. 30.5 STIFF, DARK GRAYISH BROWN (2.5Y 4/2), CLAYEY SILT, VERY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =100-150 cpm
33.0	67083	06/11/91 1510	8 12 19	18	STIFF, DARK GRAYISH BROWN (2.5Y 4/2), CLAYEY SILT, VERY MOIST.	ML	1.5	Hnu=0 ppm α =0 cpm BΓ =80-120 cpm

BOTTOM OF BORING 33.0

NOTES:
SAMPLING ENDS AT 33.0 FT. BORING PLUGGED AND ABANDONED. SAMPLES TAKEN ACCORDING TO OU-2 WORK PLAN.

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1710	COORDINATES: NORTH 477,931.49 EAST 1,378,993.33	DATE: 05/31/91	
GROUND ELEVATION: 577.4	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/31/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 06/04/91	
DRILLING METHODS: AUGER, MOBILE 53		PAGE 1 OF 2	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67026 05/31/91 1330	4 10 12	18	MEDIUM DENSE, DARK BROWN (10YR 3/3), CLAYEY, SILT, SOME ORGANICS, SOME GRAVEL, LOW PLASTICITY, SLIGHTLY MOIST. 0.75'-MEDIUM DENSE, BROWN (10YR 4/3), CLAYEY, SILT, TRACE GRAVEL, SLIGHTLY MOIST.	ML ML	N/A N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
3.0	67027 05/31/91 1340	8 9 10	18	MEDIUM DENSE, BLACK (2.5Y 2/), SANDY, SILT, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
4.5	67028 05/31/91 1350	7 10 10	18	MEDIUM DENSE, BLACK (2.5Y 2/), SANDY, SILT, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
6.0	67029 05/31/91 1400	7 8 8	18	MEDIUM DENSE, BLACK (2.5Y 2/), SANDY, SILT, TRACE GRAVEL, DRY. 5.5'-MEDIUM DENSE, VERY DARK GRAY (2.5Y 3/1) SANDY, SILT, TRACE GRAVEL, DRY.	ML ML	N/A N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
7.5	67030 05/31/91 1435	1 3 3	12	LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
9.0	67031 05/31/91 1440	2 3 3	16	LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
10.5	67032 05/31/91 1445	2 2 2	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
12.0	67033 05/31/91 1450	2 3 3	0	NO RECOVERY.	N/A	N/A	N/A
13.5	67034 05/31/91 1530	1 1 2	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
15.0	67035 05/31/91 1535	1 2 2	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
16.5	67036 05/31/91 1540	1 1 2	6	LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
18.0	67038 67039 06/01/91 0900	2 3 3	18	LOOSE, BLACK (2.5Y 2/), SILT, TRACE SAND, DRY. 16.9'-LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, DRY.	ML ML	N/A N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm
19.5	67040 06/01/91 0905	4 4 5	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1710	COORDINATES: NORTH 477,931.49 EAST 1,378,993.33	DATE: 05/31/91	
GROUND ELEVATION: 577.4	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/31/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 06/04/91	
DRILLING METHODS: AUGER, MOBILE 53		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS
21.0	67041	06/01/91 0915	4 18 50/3		8		VERY DENSE, BLACK (2.5Y 2/), SILT, TRACE SAND, SOME GRAVEL IGNETS (SLAG?), DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =50-100 cpm
22.5	67042	06/01/91 0950	38 42 27		0		NO RECOVERY.	N/A	N/A	N/A
24.0	67043	06/01/91 1000	45/5		6		VERY DENSE, BLACK (2.5Y 2/), SILT, SOME YELLOWISH RED (5YR 5/6), STONE IGNETS (SLAG?), TRACE SAND, DRY. 23.0'-INPENETRABLE STRUCK, ATTEMPT TO AUGER THRU.	ML	N/A	Hnu=0 ppm α =0-2 cpm βΓ =200-400 cpm
25.5	67044	06/01/91 1320	40 18 32		3		DENSE, BLACK (2.5Y 2/), SILT, CONCRETE RUBBLE, COBBLES, TRACE SAND, TRACE GRAVELS, DRY.	ML	N/A	Hnu=0-4 ppm α =0 cpm βΓ =100-150 cpm
27.0	67045	06/01/91 1345	32 30 18		8		DENSE, BLACK (2.5Y 2/), SILT, SOME ORGANICS, SOME CONCRETE, GRAVEL, TRACE SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=2 ppm α =0 cpm βΓ =100-400 cpm
28.5	67046	06/01/91 1410	33 25 14		16		DENSE, DARK OLIVE GRAY (5Y 3/2) ANGULAR GRAVELY, SAND, TRACE SILT, WET. 27.5'-DENSE, YELLOWISH BROWN (10YR 5/4) CLAYEY SILT, SOME GRAVEL & COBBLES, MOIST.	GW ML	N/A N/A	Hnu=0 ppm α =0-2 cpm βΓ =100-800 cpm
30.0	67047	06/01/91 1515	20 25 28		14		SOFT, DARK OLIVE GRAY (5Y 3/2), CLAY, TRACE SILT, MEDIUM PLASTICITY, MOIST. VERY DENSE, YELLOWISH BROWN (10YR 5/8), WELL SORTED, COARSE SAND, TRACE GRAVEL, DRY.	CL SP	0.6 N/A	Hnu=<1.0 ppm α =0 cpm βΓ =40-180 cpm
31.5	67048 67049	06/01/91 1530	20 30 32		18		VERY DENSE, YELLOWISH BROWN (10YR 5/8), WELL SORTED, COARSE SAND, TRACE GRAVEL, DRY.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =50-180 cpm

BOTTOM OF BORING 31.5

NOTES:
ALL SOILS CLASSIFIED ACCORDING TO MUNSEL COLOR CHART.
BORING PLUGGED AND ABANDONED. SAMPLES TAKEN ACCORDING TO OU-2 WORK PLAN. 67051-TCLP COMP, 67050-SRLP COMP, 67052-FULL RAD, 667053-FULL RAD, 67056-IG CORR TOX, 67057-ARCHIVE.

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1711	COORDINATES: NORTH 478,126.51 EAST 1,378,968.82	DATE: 05/23/91	
GROUND ELEVATION: 576.47	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/23/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 05/30/91	
DRILLING METHODS: AUGER MOBILE 53		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67009	05/23/91 0943	2 13 13	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILTY, ASH, SOME GRAVEL IGNETS (SLAG?), DRY. 0.75'-VERY STIFF, DARK GRAYISH BROWN (2.5Y 4/2), CLAYEY, SILT, TRACE GRAVEL, DRY.	ML ML	N/A 2.5	Hnu=0 ppm α =0 cpm βΓ =70-100 cpm
3.0	67010	05/23/91 0948	9 12 11	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILTY, SAND, SOME FINE GRAVEL, DRY.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =70-100 cpm
4.5	67011	05/23/91 0953	10 13 9	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILTY, SAND, SOME FINE GRAVEL, DRY.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =70-100 cpm
6.0	67012	05/29/91 1053	6 8 9	18	MEDIUM DENSE, BLACK (2.5Y 2/), SILTY, SAND, SOME FINE GRAVEL, DRY.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =70-100 cpm
7.5	67013	05/29/91 1115	5 4 3	16	LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =70-100 cpm
9.0	67014	05/29/91 1120	4 5 5	18	LOOSE, BLACK (2.5Y 2/), SILTY, SAND, TRACE FINE GRAVEL, DRY, 8.5'-LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, DRY.	SM ML	N/A N/A	Hnu=0 ppm α =0 cpm βΓ =70-100 cpm
10.5	67015	05/29/91 1250	3 4 4	18	LOOSE, BLACK (2.5Y 2/), SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =70-100 cpm
12.0	67016 67017	05/29/91 1305	4 4 4	18	LOOSE, BLACK (2.5Y 2/) SANDY, SILT, SOME FINE GRAVEL, SLIGHTLY MOIST TO DRY.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =70-100 cpm
13.5	67018	05/29/91 1335	2 3 3	18	LOOSE, BLACK (2.5Y 2/), SANDY, SILT, SOME FINE GRAVEL, SLIGHTLY MOIST TO DRY. 12.75'-LOOSE, BLACK (2.5Y 2/), SILTY, SAND, SOME FINE GRAVEL, MOIST TO WET.	ML SM	N/A N/A	Hnu=0 ppm α =0 cpm βΓ =70-100 cpm
15.0	67019	05/29/91 1340	2 2 3	4	LOOSE, LIGHT OLIVE BROWN (2.5Y 5/2), CLAYEY, SILT, TRACE SAND, WET.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =70-100 cpm
18.0	N/A		N/A	N/A	VOID - NO RECOVERY	N/A	N/A	N/A
19.5	67020	05/29/91 1345	0 2 3	18	SOFT, DARK GRAYISH BROWN (2.5Y 5/2), CLAY, TRACE MEDIUM GRAVEL, MEDIUM TO HIGH PLASTICITY, WET.	CL	0.25	Hnu=0 ppm α =0 cpm βΓ =200-300 cpm

BOTTOM OF BORING 19.5

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1711	COORDINATES: NORTH 478,126.51 EAST 1,378,968.82	DATE: 05/23/91	
GROUND ELEVATION: 576.47	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/23/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 05/30/91	
DRILLING METHODS: AUGER MOBILE 53		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS

NOTES:
END OF BORING AT 19.5 FT. WELL SET AT 15.5 FT.
ALL SAMPLES CLASSIFIED USING MUNSEL COLOR CHART. SAMPLES TAKEN ACCORDING TO OU-2 WORK PLAN. 67021-COMPOSITE TCLP, 67022-COMPOSITE IG TOX, LEVEL 1, 67023-COMPOSITE TRIP BLANK, 67024-COMPOSITE FIELD BLANK, 67025-DRUM CUTS TCLP.

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1791	COORDINATES: NORTH 477,812.99 EAST 1,378,970.18	DATE: 06/25/91	
GROUND ELEVATION: 571.1	GWL: Depth N/A Date/Time N/A	DATE STARTED: 06/25/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 06/26/91	
DRILLING METHODS: AUGER MOBILE 53		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS
27.0 28.5	67121	06/25/91 1400	8 16 19	18		STIFF, DARK GRAYISH BROWN (2.5Y 4/2), CLAYEY, SILT, VERY MOIST.	ML	1.5	Hnu=0 ppm α =0 cpm Bγ =150-200 cpm
30.0	67122	06/25/91 1410	13 12 17	18		STIFF, DARK GRAYISH BROWN (2.5Y 4/2), CLAYEY, SILT, VERY MOIST.	ML	1.5	Hnu=0 ppm α =0 cpm Bγ =50-100 cpm

BOTTOM OF BORING 30.0

NOTES:
BORING PLUGGED AND ABANDONED.
CROSS-REFERENCE BORING #1709 FOR CLASSIFICATION OF SOILS UP TO 27.0 FT.
ALL REMARKS/BACKGROUND FOR SPOONS ARE WITHIN 50-100 CPM BETA, 0 CPM ALPHA, 0 PPM HNU UP TO 27.0 FT. COMPOSITE SAMPLES ARE TAKEN FROM 0.0-30.0 FT; 67123-SRLP, 67124-TCLP, 67125-IGNITE ETC, 67126-ARCHIVE, 67127-FIELD BLANK, 67128-TCLP DC, 67142-TREATABILITY.

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PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1849	COORDINATES: NORTH 477,806.91 EAST 1,378,975.19	DATE: 02/22/92	
GROUND ELEVATION: 571.1	GWL: Depth N/A Date/Time N/A	DATE STARTED: 02/22/92	
ENGINEER/GEOLOGIST: D O'BRIEN	Depth N/A Date/Time N/A	DATE COMPLETED: 02/22/92	
DRILLING METHODS: HOLLOW STEM AUGER		PAGE 1 OF 2	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	67601 02/22/92 0900	3 4 8	12	MEDIUM STIFF, BROWN (10YR 5/3), SILTY CLAY WITH SAND, NO PLASTICITY, SLIGHTLY MOIST.	CL	0.75	Hnu=0 ppm α =10 cpm βΓ =40 cpm
3.0	67602 02/22/92 0915	10 13 22	15	HARD, YELLOWISH BROWN (10YR 5/4), SILTY CLAY, NO PLASTICITY, SLIGHTLY MOIST.	CL	>4.0	Hnu=3 ppm α =0 cpm βΓ =80 cpm
4.5	67603 02/22/92 0945	10 14 9	9	STIFF, YELLOWISH BROWN (10YR 5/4), SILTY CLAY WITH LARGE COBBLES, NO PLASTICITY, SLIGHTLY MOIST.	CL	1.5	Hnu=0 ppm α =10 cpm βΓ =60 cpm
6.0	N/A	N/A	N/A	NO RECOVERY, ROCK IN SPOON.	N/A	N/A	N/A
7.5	67604 02/22/92 1010	13 10 5	12	MEDIUM DENSE, BLACK, SILT, SOME GRAVEL, DRY. (POSSIBLE FLY ASH)	ML	N/A	Hnu=0 ppm βΓ =60 cpm
9.0	67605 02/22/92 1030	6 5 4	15	LOOSE, BLACK, SILT (POSSIBLE FLYASH), DRY.	ML	N/A	Hnu=0 ppm βΓ =50 cpm
10.5	67606 02/22/92 1035	4 4 3	15	LOOSE, BLACK, SILT (POSSIBLE FLYASH), DRY.	ML	N/A	Hnu=0 ppm βΓ =40 cpm
12.0	67607 02/22/92 1040	3 3 3	12	LOOSE, BLACK, SILT (POSSIBLE FLYASH), DRY.	ML	N/A	Hnu=0 ppm βΓ =40 cpm
13.5	67608 02/22/92 1045	5 3 2	13	LOOSE, BLACK, SILT (POSSIBLE FLYASH), DRY.	ML	N/A	Hnu=0 ppm βΓ =40 cpm
15.0	67609 02/22/92 1050	2 2 2	18	LOOSE, BLACK, SILT (POSSIBLE FLYASH), DRY.	ML	N/A	Hnu=0 ppm βΓ =40 cpm
16.5	67610 02/22/92 1055	3 5 2	18	LOOSE, BLACK, SILT (POSSIBLE FLYASH), DRY.	ML	N/A	Hnu=0 ppm βΓ =50 cpm
18.0	67611 02/22/92 1100	2 2 2	18	LOOSE, BLACK, SILT (POSSIBLE FLYASH), DRY.	ML	N/A	Hnu=0 ppm βΓ =40 cpm
19.5	67612 02/22/92 1105	2 2 2	18	LOOSE, BLACK, SILT (POSSIBLE FLYASH), DRY.	ML	N/A	Hnu=0 ppm βΓ =40 cpm
21.0	67613 02/22/92 1110	2 3 2	18	LOOSE, BLACK, SILT (POSSIBLE FLYASH), DRY.	ML	N/A	Hnu=0 ppm βΓ =50 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1849	COORDINATES: NORTH 477,806.91 EAST 1,378,975.19	DATE: 02/22/92	
GROUND ELEVATION: 571.1	GWL: Depth N/A Date/Time N/A	DATE STARTED: 02/22/92	
ENGINEER/GEOLOGIST: D O'BRIEN	Depth N/A Date/Time N/A	DATE COMPLETED: 02/22/92	
DRILLING METHODS: HOLLOW STEM AUGER		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY IN CHES		USCS SYMBOL	TSF	REMARKS
22.5	67614	02/22/92 1310	3 3 3	18	LOOSE, BLACK, SILT (POSSIBLE FLYASH), DRY.	ML	N/A	Hnu=0 ppm BΓ =40 cpm
24.0	67615	02/22/92 1315	2 2 3	18	LOOSE, BLACK, SILT (POSSIBLE FLYASH), DRY.	ML	N/A	Hnu=0 ppm BΓ =60 cpm
25.5	67638	02/22/92 1320	3 3 4	18	LOOSE, BLACK, SILT (POSSIBLE FLYASH), DRY.	ML	N/A	Hnu=0 ppm BΓ =60 cpm
27.0	67616	02/22/92 1325	2 2 3	18	LOOSE, BLACK, SILT (POSSIBLE FLYASH), DRY.	ML	N/A	Hnu=0 ppm BΓ =40 cpm
28.5	67617	02/22/92 1330	2 2 3	18	LOOSE, BLACK, SILT (POSSIBLE FLYASH), DRY.	ML	N/A	Hnu=0 ppm BΓ =60 cpm
30.0	67618	02/22/92 1335	5 7 9	18	MEDIUM STIFF, GRAYISH BROWN (2.5Y 5/2), SILTY CLAY WITH SMALL AMOUNT SAND, NO PLASTICITY, MOIST.	CL	0.75	Hnu=0 ppm BΓ =60 cpm
31.5	67619	02/22/92 1340	10 9 10	18	STIFF, GRAYISH BROWN (2.5Y 5/2), SILTY CLAY, NO PLASTICITY, MOIST.	CL	1.0	Hnu=0 ppm BΓ =80 cpm
33.0	67620	02/22/92 1345	12 7 9	18	STIFF, OLIVE BROWN (2.5 4/3), SILTY CLAY WITH GRAVEL, NO PLASTICITY, MOIST.	CL	1.0	Hnu=0 ppm BΓ =60 cpm

BOTTOM OF BORING 33.0

NOTES:
END OF BORING 33 FT.

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1850	COORDINATES: NORTH 478,126.20 EAST 1,378,962.62	DATE: 02/23/92	
GROUND ELEVATION: 576.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 02/23/92	
ENGINEER/GEOLOGIST: D O'BRIEN	Depth N/A Date/Time N/A	DATE COMPLETED: 02/23/92	
DRILLING METHODS: HOLLOW STEM AUGER		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY INCHES		USCS	SYMBOL	TSF	REMARKS
1.5	67623	02/23/92 0855	5 8 9		12	VERY STIFF (10YR 6/6) BROWISH YELLOW SILTY CLAY, NO PLASTICITY, SLIGHTLY MOIST. 1.0'-LOOSE, BLACK, SILT, DRY (FLYASH).	CL ML		3.5 N/A	Hnu=0 ppm BΓ =60 cpm
3.0	67624	02/23/92 0900	6 6 6		18	MEDIUM DENSE, BLACK, SILT, DRY (FLY ASH).	ML		N/A	Hnu=0 ppm BΓ =50 cpm
4.5	67625	02/23/92 0905	6 6 8		15	MEDIUM DENSE, BLACK, SILT, DRY (FLY ASH).	ML		N/A	Hnu=0 ppm BΓ =40 cpm
6.0	67626	02/23/92 0910	9 8 10		15	MEDIUM DENSE, BLACK, SILT, DRY (FLY ASH).	ML		N/A	Hnu=0 ppm BΓ =60 cpm
7.5	67627	02/23/92 0915	7 7 9		18	MEDIUM DENSE, BLACK, SILT, DRY (FLY ASH).	ML		N/A	Hnu=0 ppm BΓ =60 cpm
9.0	67628	02/23/92 0920	4 6 8		15	MEDIUM DENSE, BLACK, SILT, DRY (FLY ASH).	ML		N/A	Hnu=0 ppm BΓ =40 cpm
10.5	67629	02/23/92 0922	6 7 10		18	MEDIUM DENSE, BLACK, SILT, DRY (FLY ASH).	ML		N/A	Hnu=0 ppm BΓ =50 cpm
12.0	67630	02/23/92 0925	8 9 8		18	MEDIUM DENSE, BLACK, SILT, DRY (FLY ASH).	ML		N/A	Hnu=0 ppm BΓ =50 cpm
13.5	67631	02/23/92 0930	8 8 8		18	MEDIUM DENSE, BLACK, SILT, DRY (FLY ASH).	ML		N/A	Hnu=0 ppm BΓ =60 cpm
15.0	67632	02/23/92 0935	7 9 11		18	MEDIUM DENSE, BLACK, SILT, DRY (FLY ASH).	ML		N/A	Hnu=0 ppm BΓ =60 cpm
16.5	67633	02/23/92 0940	9 7 9		7	VERY STIFF, LIGHT OLIVE GRAY (5Y 6/2), SILTY CLAY, LOW PLASTICITY, SLIGHTLY MOIST.	CL		2.75	Hnu=0 ppm BΓ =50 cpm
18.0	67634	02/23/92 0945	4 6 8		15	VERY STIFF, LIGHT OLIVE GRAY (5Y 6/2), SILTY CLAY, LOW PLASTICITY, SLIGHTLY MOIST.	CL		2.75	Hnu=0 ppm BΓ =60 cpm
19.5	67635	02/23/92 0950	6 7 11		15	MEDIUM STIFF, LIGHT OLIVE GRAY (5Y 6/2), SILTY CLAY, LOW PLASTICITY, SLIGHTLY MOIST.	CL		0.75	Hnu=0 ppm BΓ =60 cpm

BOTTOM OF BORING 19.5

NOTES: BORING PLUGGED AND ABANDONED.

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PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS	
BORING NUMBER: 2047	COORDINATES: NORTH 478,263.85 EAST 1,379,054.18	DATE: 12/20/88
GROUND ELEVATION:	GWL: Depth 51.75 FT Date/Time 12/22/88 @ 0815	DATE STARTED: 12/20/88
ENGINEER/GEOLOGIST: W A HERTEL	Depth 50.4 FT Date/Time 01/03/89 @ 0835	DATE COMPLETED: 01/05/89
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 1

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
20.0 21.5	008959 12/20/88 1520		16 28 32	10	VERY DENSE, BROWN (10YR 4/3), WELL GRADED, GRAVELLY SAND, APPROX 10% GRAVEL, DRY.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =60-80 cpm
25.0 26.5	008960 12/20/88 1540		9 13 24	10	DENSE, YELLOWISH BROWN (10YR 5/4), POORLY GRADED, SAND, NO GRAVEL, DRY.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
30.0 31.5	008961 12/20/88 1635		11 29 50	15	VERY DENSE, BROWN (10YR 5/3), POORLY GRADED, SAND, DRY, TOP 12 IN. NO GRAVEL TO WELL GRADED, SAND AND GRAVEL, DRY, BOTTOM 3 IN.	SP SW	N/A N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
35.0 36.5	008962 12/21/88 1025		50+	6	VERY DENSE, BROWN (10YR 5/3), WELL GRADED, SAND AND GRAVEL, DRY.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
40.0 41.5	008963 12/21/88 1050		18 13 50+	10	VERY DENSE, LIGHT GRAY (10YR 7/2), WELL GRADED, SAND AND GRAVEL, DRY.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
45.0 46.5	008964 12/21/88 1145		20 50+	6	VERY DENSE, GRAYISH BROWN (10YR 5/2), POORLY GRADED, SAND, LESS THAN 5% GRAVEL, DAMP.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =60-80 cpm
50.0 51.5	008965 12/21/88 1455		14 24 27	14	VERY DENSE, BROWN (10YR 5/3), POORLY GRADED, SAND, LESS THAN 5% GRAVEL.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
55.0 56.5	008966 12/21/88 1535		18 34 34	16	VERY DENSE, YELLOWISH BROWN (10YR 5/4), TOP 12 IN. IS WELL GRADED SAND AND GRAVEL. BOTTOM 4 IN. IS POORLY GRADED FINE SAND.	SW SP	N/A N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
60.0 61.5	008967 12/21/88 1600		5 6 7	15	MEDIUM DENSE, BROWN (10YR 5/3), POORLY GRADED, SAND, LESS THAN 5% GRAVEL.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm

BOTTOM OF BORING 64.0

NOTES:
SAMPLES COLLECTED AT 5.0 FT INTERVALS STARTING AT 20.0 FT. SAMPLES COLLECTED USING ASTM STANDARD PENETRATION TEST. COLORS IDENTIFIED USING MUNSELL COLOR CHART. MONITORING WELL INSTALLED.

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PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 4016	COORDINATES: NORTH 477,618.74 EAST 1,379,138.31	DATE: 12/16/88	
GROUND ELEVATION: 539.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 12/16/88	
ENGINEER/GEOLOGIST: M SLUSARSKI	Depth N/A Date/Time N/A	DATE COMPLETED: 01/10/89	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 3	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
25.0 26.5	010436 12/17/88 1038	5 5 7	12	MEDIUM DENSE, GREY-BROWN (10YR 4/2), WELL GRADED, GRAVELLY SAND, TRACE MEDIUM GRAVEL (0.25-0.5 IN), WET.	SW	N/A	Hnu=0 ppm α =0 cpm Bγ =40-60 cpm
30.0 31.5	010437 12/17/88 1145	7 7 8	18	MEDIUM DENSE, GREY-BROWN (10YR 4/2), WELL GRADED, GRAVELLY SAND, SOME FINE GRAVEL (0.25 IN), WET.	SW	N/A	Hnu=0 ppm α =0-2 cpm Bγ =40-60 cpm
35.0 36.5	010438 12/17/88 1325	19 24 25	14	DENSE, YELLOW-BROWN (10YR 5/3), WELL GRADED, GRAVEL/SAND MIXTURE, TRACE COARSE GRAVEL (1.0-1.5 IN), WET.	GW	N/A	Hnu=0 ppm α =0-2 cpm Bγ =40-60 cpm
40.0 41.5	010439 12/17/88 1350	3 4 8	12	LOOSE, GREY-BROWN (10YR 4/2), WELL GRADED, GRAVELLY SAND, GRAVEL (0.25- 0.5 IN), WET.	SW	N/A	Hnu=0 ppm α =0-2 cpm Bγ =40-60 cpm
45.0 46.5	010440 12/17/88 1530	20 25 35	14	VERY DENSE, GREY-BROWN (10YR 4/2), POORLY GRADED, SAND, SOME FINE GRAVEL (LESS THAN 0.25 IN), WET.	SP	N/A	Hnu=0 ppm α =0-2 cpm Bγ =40-60 cpm
50.0 51.5	010441 12/18/88 0900	19 17 15	14	DENSE, GREY-BROWN (10YR 4/2), WELL GRADED, GRAVELLY, SAND, SOME MEDIUM GRAVEL (0.25-0.5 IN), WET. 51.3'-MEDIUM DENSE, GREY-BROWN (10YR 4/2), WELL GRADED, GRAVEL (0.25-1.0 IN), SOME SAND, WET.	SW GW	N/A N/A	Hnu=0 ppm α =0-2 cpm Bγ =40-60 cpm
55.0 56.5	010442 12/19/88 1025	8 27 33	12	VERY DENSE, PALE BROWN (10YR 6/3), WELL GRADED, GRAVELLY SAND, WET.	SW	N/A	Hnu=0 ppm α =0-2 cpm Bγ =40-60 cpm
60.0 61.5	010443 12/19/88 1100	5 3 4	15	LOOSE, YELLOW-BROWN (10YR 5/4), POORLY GRADED, SAND, SOME GRAVEL, WET.	SP	N/A	Hnu=0 ppm α =0-1 cpm Bγ =40-60 cpm
65.0 66.5	010444 12/19/88 1330	9 3 8	17	MEDIUM DENSE, BROWN (10YR 5/3), POORLY GRADED, SAND, LESS THAN 5.0% GRAVEL, WET.	SP	N/A	Hnu=0 ppm α =0-1 cpm Bγ =40-60 cpm
70.0 71.5	010445 12/19/88 1350	3 3 4	5	LOOSE, GREY-BROWN (10YR 5/2), POORLY GRADED, SAND, LESS THAN 5.0% GRAVEL, WET.	SP	N/A	Hnu=0 ppm α =0-1 cpm Bγ =40-60 cpm
75.0 76.5	010446 12/19/88 1510	14 23 21	15	DENSE, YELLOW-BROWN (10YR 5/6), POORLY GRADED, SAND, LESS THAN 10% GRAVEL, WET.	SP	N/A	Hnu=0 ppm α =0-1 cpm Bγ =40-60 cpm
80.0 81.5	010447 12/19/88 1530	3 4 8	10	MEDIUM DENSE, GREY-BROWN (10YR 5/2), POORLY GRADED, SAND, LESS THAN 1.0% GRAVEL, WET.	SP	N/A	Hnu=0 ppm α =0 cpm Bγ =40-60 cpm
85.0 86.5	010448 12/19/88 1700	30 33 30	12	VERY DENSE, DARK GREY-BROWN (10YR 4/2), POORLY GRADED, SAND, LESS THAN 5.0% GRAVEL, WET.	SP	N/A	Hnu=0 ppm α =0 cpm Bγ =40-80 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 4016	COORDINATES: NORTH 477,618.74 EAST 1,379,138.31	DATE: 12/16/88	
GROUND ELEVATION: 539.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 12/16/88	
ENGINEER/GEOLOGIST: M SLUSARSKI	Depth N/A Date/Time N/A	DATE COMPLETED: 01/10/89	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
89.0 91.0	010449	12/20/88 1010	N/A	18	SHELBY TUBE: PUSHED SHELBY TUBE 89.0-91.5 FT, RECOVERED 1.5 FT; TOP OF "BLUE CLAY" AT 89.0 FT.			
95.0 96.5	010450	12/20/88 1340	6 14 17	15	STIFF, DARK GREY (10YR 4/1), INORGANIC CLAY, MEDIUM PLASTICITY, DAMP.	CL	1.25	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
100.0 101.5	010451	12/20/88 1500	29 39 39	14	VERY DENSE, OLIVE GREY (5Y 4/1), WELL GRADED, GRAVEL/SAND MIXTURE, GRAVEL (0.25-1.5 IN), WET. BASE OF "BLUE CLAY" AT 100.0 FT.	GW	N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
105.0 106.5	010452	12/20/88 1620	50+/.4	1	VERY DENSE, DARK GREY (10YR 4/1), WELL GRADED, GRAVELLY SAND, SOME GRAVEL (0.25-1.5 IN), WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
110.0 111.5	010453	12/20/88 1700	20 12 11	6	MEDIUM DENSE, DARK GREY (10YR 4/1), WELL GRADED, GRAVEL/SAND MIXTURE, GRAVEL (0.25-1.5 IN), WET.	GW	N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
115.0 116.5	010454	12/21/88 0915	19 21 24	12	DENSE, OLIVE GREY (5Y 4/2), POORLY GRADED, FINE SAND, WET.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
120.0 121.5	010455	12/21/88 0940	10 14 17	10	MEDIUM DENSE, OLIVE GRAY (5Y 4/2), POORLY GRADED, FINE SAND, WET.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
125.0 126.5	N/A		N/A	N/A	NO RECOVERY AFTER SEVERAL ATTEMPTS. SAMPLE #10456 NOT USED OR ASSIGNED.	N/A	N/A	N/A
130.0 131.5	010457	12/21/88 1520	5 10 12	16	MEDIUM DENSE, OLIVE-GRAY (5Y 4/2), POORLY GRADED, FINE SAND, WET. 131.0'-MEDIUM DENSE, OLIVE-GRAY (5Y 4/2), WELL GRADED, SAND, TRACE MEDIUM GRAVEL, (0.25-0.5 IN), WET.	SP SW	N/A N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
135.0 136.5	010458	12/21/88 1650	21 44 33	18	VERY DENSE, OLIVE GRAY (5Y 4/2), POORLY GRADED, SAND, SOME FINE GRAVEL (0.25 IN), WET.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
140.0 141.5	010459	01/03/89 0910	4 6 8	12	MEDIUM DENSE, OLIVE GRAY (5Y 4/2), WELL GRADED, SAND, TRACE OF COARSE GRAVEL (1.0-2.0 IN.), WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
145.0 146.5	010460	01/03/89 1350	18 35 34	14	VERY DENSE, OLIVE-BROWN (2.5Y 4/4), POORLY GRADED, SAND, TRACE FINE GRAVEL (LESS THAN 0.25 IN), WET.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm
150.0 151.5	010461	01/03/89 1440	5 10 10	12	MEDIUM DENSE, OLIVE-BROWN (2.5Y 4/4), POORLY GRADED, SAND, TRACE FINE GRAVEL (LESS THAN 0.25 IN), WET.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =40-60 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 4016	COORDINATES: NORTH 477,618.74 EAST 1,379,138.31	DATE: 12/16/88	
GROUND ELEVATION: 539.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 12/16/88	
ENGINEER/GEOLOGIST: M SLUSARSKI	Depth N/A Date/Time N/A	DATE COMPLETED: 01/10/89	
DRILLING METHODS: CABLE-TOOL		PAGE 3 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
155.0 156.5	010462 01/03/89 1650		6 7 10	14	MEDIUM DENSE, OLIVE-BROWN (2.5Y 4/4), POORLY GRADED, SAND, TRACE MEDIUM GRAVEL (0.25-0.5 IN), WET.	SP	N/A	Hnu=0 ppm α =0 cpm BΓ =40-60 cpm
160.0 161.5	010463 01/04/89 1325		18 27 34	12	VERY DENSE, BROWN (2.5Y 5/2), POORLY GRADED, SAND, TRACE MEDIUM GRAVEL (0.25-0.5 IN), WET. 161.2'-VERY STIFF, OLIVE-GRAY (5Y 4/1), GRAVELLY CLAY, SOME SAND, WET.	SP CL	N/A 2.5	Hnu=0 ppm α =0 cpm BΓ =40-60 cpm

BOTTOM OF BORING 163.2

NOTES:
BORING ENDS AT BEDROCK AT 163.2 FT; SAMPLING ENDS AT 161.5 FT. MONITORING WELL INSTALLED.
SAMPLES COLLECTED AS PER ASTM STANDARD PENETRATION TEST. COLORS IDENTIFIED USING MUNSELL COLOR CHART.

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TABLE F-17

GROUNDWATER ELEVATIONS
RI/FS SAMPLING PROGRAM
INACTIVE FLYASH PILE

WATER ELEVATION REPORT FOR WELL NUMBER : 1016
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1016

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477617.13	1379149.06	541.85	542.40		540.70	22.23	519.62	NO	01/09/88	LKP	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	21.12	520.73	NO	02/10/88	SDG	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	20.16	521.69	NO	03/09/88	DPH	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	19.50	522.35	NO	04/12/88	RMG	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	20.41	521.44	NO	05/10/88	SDG	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	21.24	520.61	NO	06/08/88	RWO	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	21.89	519.96	NO	07/08/88	GS	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	22.40	519.45	NO	08/06/88	CAM	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	22.68	519.17	NO	09/09/88		ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	22.87	518.98	NO	10/09/88	LKP	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	23.83	518.02	NO	11/08/88	CAM	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	NR	NA	NO	12/12/88	CAM	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	23.68	518.17	NO	01/09/89	CAM	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	22.27	519.58	NO	02/09/89	CAM	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	20.72	521.13	NO	03/10/89	CAM	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	18.62	523.23	NO	04/16/89	CAM	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	17.70	524.15	NO	05/13/89	LKP	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	17.35	524.50	NO	06/15/89	CAM	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	18.60	523.25	NO	07/13/89	CAM	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	18.51	523.34	NO	08/15/89	CM	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	19.87	521.98	NO	09/11/89	CM SM	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	20.37	521.48	NO	10/10/89	CM BH	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	20.49	521.36	NO	11/17/89	CM GY	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	21.08	520.77	NO	12/13/89	CAM	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	20.29	521.56	NO	01/21/90	CM MG	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	18.82	523.03	NO	02/14/90	CM DN	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	18.33	523.52R	NO	02/17/90	CM DN	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	17.67	524.18	NO	03/31/90	DN BB	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	17.75	524.10R	NO	04/09/90	BB DN	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	17.33	524.52	NO	04/21/90	BB DN	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	17.28	524.57R	NO	04/24/90	BB DN	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	16.11	525.74	NO	05/17/90	CM AHW	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	16.48	525.37	NO	06/16/90	CM AW	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	17.39	524.46	NO	07/16/90	AHW BB	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	NR	NA	NO	08/07/90	CM AW	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	NR	NA	NO	09/18/90	CM AW	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	18.34	523.51	NO	10/18/90	CM GY	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	18.12	523.73	NO	11/14/90	CM GY	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	17.91	523.94	NO	12/12/90	CM BB	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	16.49	525.36	NO	01/16/91	CM WB	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	16.65	525.20R	NO	01/24/91	CM WB	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	16.28	525.57	NO	02/19/91	CM WB	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	16.28	525.57	NO	03/18/91	CM JL	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	16.76	525.09	NO	05/31/91	CM CT	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	17.87	523.98	NO	07/25/91	CM BM RR	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	19.52	522.33	NO	08/21/91	CM DS	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	19.90	521.95	NO	09/06/91	CM DS	ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	20.78	521.07	NO	10/09/91		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 1016
REPORT DATE : 10/08/92

TASK NUMBER :

RIFS WELL ID : 1016

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477617.13	1379149.06	541.85	542.40		540.70	21.41	520.44	NO	11/05/91		ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	22.08	519.77	NO	12/10/91		ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	21.60	520.25	NO	02/03/92		ON-SITE
477617.13	1379149.06	541.85	542.40		540.70	21.76	520.09	NO	03/02/92		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 1047
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1047

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
478258.44	1379062.43	571.07	571.49	568.7	569.10	13.18	557.89	NO	01/09/88	LKP	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	8.54	562.53	NO	02/10/88	SDG	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	5.13	565.94	NO	03/09/88	DPH	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	15.14	555.93	NO	04/11/88	SDG	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	9.40	561.67	NO	05/10/88	SDG	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	9.56	561.51	NO	06/08/88	DPH	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	11.54	559.53	NO	07/08/88	GS	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	16.70	554.37	NO	08/06/88	CAM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	16.23	554.84R	NO	08/10/88	SDG	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	14.92	556.15	NO	09/09/88	FXM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	15.02	556.05	NO	10/09/88	LKP	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	17.21	553.86	NO	11/08/88	CAM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	14.88	556.19	NO	12/12/88	CAM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	12.97	558.10	NO	01/09/89	CAM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	9.92	561.15	NO	02/09/89	CAM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	5.02	566.05	NO	03/10/89	CAM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	11.98	559.09	NO	04/16/89	CAM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	5.15	565.92	NO	05/13/89	LKP	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	5.61	565.46	NO	06/15/89	CAM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	8.50	562.57	NO	07/14/89	CAM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	10.54	560.53	NO	08/15/89	CM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	11.09	559.98	NO	09/11/89	CM SM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	12.86	558.21	NO	10/10/89	CM BH	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	11.22	559.85	NO	11/17/89	CM GY	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	17.47	553.60	NO	12/15/89	CAM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	7.94	563.13	NO	01/21/90	CM MG	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	5.30	565.77	NO	02/14/90	CM DN	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	10.75	560.32	NO	03/31/90	DN BB	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	10.64	560.43	NO	04/22/90	BB DN	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	3.67	567.40	NO	05/18/90	CAM AHW BB	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	6.91	564.16	NO	06/18/90	CM AW	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	7.56	563.51	NO	07/17/90	AHW BB	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	8.81	562.26	NO	08/08/90	CM AW	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	10.92	560.15	NO	09/18/90	CM AW	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	15.78	555.29	NO	10/19/90	CM GY	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	8.46	562.61	NO	11/15/90	CM GY	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	6.49	565.00	NO	12/14/90	CM GY	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	4.25	566.82	NO	01/16/91	CM WB	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	5.06	566.01	NO	02/26/91	CM DN	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	4.02	567.05	NO	03/19/91	CM JL	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	7.34	563.73	NO	05/31/91	CM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	11.28	559.79	NO	07/25/91	CM RR BM	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	12.60	558.47	NO	08/22/91	CM DS	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	13.04	558.03	NO	09/05/91	CM DS	ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	14.17	556.90	NO	10/15/91		ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	14.58	556.49	NO	11/05/91		ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	14.67	556.40	NO	12/10/91		ON-SITE
478258.44	1379062.43	571.07	571.49	568.7	569.10	10.97	560.10	NO	02/03/92		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 1047
REPORT DATE : 10/08/92

TASK NUMBER :

RIFS WELL ID : 1047

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
478258.44	1379062.43	571.07	571.49	568.7	569.10	8.46	562.61	NO	03/02/92		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 1711
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1711

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
478126.51	1378968.82	578.58	578.97	576.47	576.81	16.24	562.34	NO	07/25/91	CM RR BM	WASTE STOR. AREA
478126.51	1378968.82	578.58	578.97	576.47	576.81	16.22	562.36	NO	08/22/91	CM DS	WASTE STOR. AREA
478126.51	1378968.82	578.58	578.97	576.47	576.81	16.22	562.36	NO	09/06/91	CM DS	WASTE STOR. AREA
478126.51	1378968.82	578.58	578.97	576.47	576.81	16.25	562.33	NO	10/15/91		WASTE STOR. AREA
478126.51	1378968.82	578.58	578.97	576.47	576.81	16.21	562.37	NO	11/05/91		WASTE STOR. AREA
478126.51	1378968.82	578.58	578.97	576.47	576.81	16.22	562.36	NO	12/10/91		WASTE STOR. AREA
478126.51	1378968.82	578.58	578.97	576.47	576.81	16.25	562.33	NO	02/25/92		WASTE STOR. AREA
478126.51	1378968.82	578.58	578.97	576.47	576.81	16.23	562.35	NO	03/24/92		WASTE STOR. AREA

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WATER ELEVATION REPORT FOR WELL NUMBER : 2016
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 2016

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477615.38	1379157.77	541.30	542.39		540.60	22.69	519.70	YES	01/09/88	LKP	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	21.56	520.83	YES	02/10/88	SDG	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	20.60	521.79	YES	03/09/88	DPH	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	20.04	522.35	YES	04/12/88	RMG	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	20.95	521.44	YES	05/10/88	SDG	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	21.78	520.61	YES	06/08/88	RWO	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	22.44	519.95	YES	07/09/88	DH	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	22.95	519.44	YES	08/06/88	CAM	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	23.50	518.89	YES	09/09/88		ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	23.98	518.41	YES	10/09/88	LKP	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	24.33	518.06	YES	11/08/88	CAM	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	24.50	517.89	YES	12/12/88	CAM	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	23.26	519.13	YES	01/09/89	CAM	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	22.82	519.57	YES	02/09/89	CAM	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	21.27	521.12	YES	03/10/89	CAM	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	19.16	523.23	YES	04/16/89	CAM	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	18.25	524.14	YES	05/13/89	LKP	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	17.90	524.49	YES	06/15/89	CAM	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	19.11	523.28	YES	07/13/89	CAM	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	19.99	522.40	YES	08/15/89	CM	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	20.39	522.00	YES	09/11/89	CM SM	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	22.45	519.94	YES	10/10/89	CM BH	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	20.95	521.44	YES	11/17/89	CM GY	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	21.53	520.86	YES	12/15/89	CAM	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	20.82	521.57	YES	01/21/90	CM MG	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	19.36	523.03	YES	02/14/90	CM DN	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	18.89	523.50R	YES	02/17/90	CM DN	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	18.20	524.19	YES	03/31/90	DN BB	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	18.29	524.10R	YES	04/09/90	BB DN	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	17.92	524.47	YES	04/21/90	BB DN	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	17.81	524.58R	YES	04/24/90	BB DN	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	16.62	525.77	YES	05/17/90	CM AHW	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	17.02	525.37	YES	06/16/90	CM AW	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	17.91	524.48	YES	07/16/90	AHW BB	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	18.96	523.43	YES	08/07/90	CM AW	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	19.69	522.70	YES	09/18/90	CM AW	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	18.85	523.54	YES	10/18/90	CM GY	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	18.64	523.75	YES	11/14/90	CM GY	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	18.45	523.94	YES	12/12/90	CM BB	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	17.02	525.37	YES	01/16/91	CM WB	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	17.18	525.21R	YES	01/24/91	CM WB	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	16.80	525.59	YES	02/19/91	CM WB	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	16.79	525.60	YES	03/18/91	CM JL	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	17.26	525.13	YES	05/31/91	CM CT	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	19.39	523.00	YES	07/25/91	CM BM RR	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	20.06	522.33	YES	08/21/91	CM DS	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	20.42	521.97	YES	09/06/91	CM DS	ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	21.30	521.09	YES	10/09/91		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 2016
REPORT DATE : 10/09/92

TASK NUMBER :

RIFS WELL ID : 2016

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477615.38	1379157.77	541.30	542.39		540.60	21.95	520.44	YES	11/05/91		ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	22.57	519.82	YES	12/10/91		ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	22.13	520.26	YES	02/03/92		ON-SITE
477615.38	1379157.77	541.30	542.39		540.60	22.30	520.09	YES	03/02/92		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 2047
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 2047

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
478263.85	1379054.18	570.03	570.51		568.95	51.35	518.68	NO	01/09/89	CAM	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	50.54	519.49	NO	02/09/89	CAM	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	49.35	520.68	NO	03/10/89	CAM	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	47.23	522.80	NO	04/16/89	CAM	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	46.18	523.85	NO	05/13/89	LKP	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	45.62	524.41	NO	06/15/89	CAM	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	46.77	523.26	NO	07/14/89	CAM	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	47.61	522.42	NO	08/15/89	CM	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	48.03	522.00	NO	09/11/89	CM SM	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	48.57	521.46	NO	10/10/89	CM BH	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	48.84	521.19	NO	11/17/89	CM GY	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	49.13	520.90	NO	12/15/89	CAM	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	48.57	521.46	NO	01/21/90	CM MG	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	47.21	522.82	NO	02/14/90	CM DN	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	46.10	523.93	NO	03/31/90	DN BB	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	45.72	524.31	NO	04/22/90	BB DN	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	44.72	525.31	NO	05/18/90	CAM AHW BB	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	44.72	525.31	NO	06/18/90	CM AW	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	43.57	526.46	NO	07/17/90	AHW BB	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	46.47	523.56	NO	08/08/90	CM AW	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	47.21	522.82	NO	09/18/90	CM AW	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	46.58	523.45	NO	10/19/90	CM GY	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	46.33	523.70	NO	11/15/90	CM GY	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	46.29	524.22	NO	12/14/90	CM GY	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	44.89	525.14	NO	01/16/91	CM WB	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	44.50	525.53	NO	02/26/91	CM DN	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	44.52	525.51	NO	03/19/91	CM JL	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	44.79	525.24	NO	05/31/91	CM	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	46.91	523.12	NO	07/25/91	CM RR BM	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	47.62	522.41	NO	08/22/91	CM DS	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	48.04	521.99	NO	09/05/91	CM DS	ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	49.03	521.00	NO	10/15/91		ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	49.57	520.46	NO	11/05/91		ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	50.74	519.77	NO	12/10/91		ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	50.38	520.13	NO	02/03/92		ON-SITE
478263.85	1379054.18	570.03	570.51		568.95	50.42	520.09	NO	03/02/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 3016
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 3016

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477613.84	1379163.66	541.98	542.25		540.60	22.58	519.67	YES	01/09/88	LKP	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	21.47	520.78	YES	02/10/88	SDG	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	20.50	521.75	YES	03/09/88	DPH	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	19.92	522.33	YES	04/12/88	RMG	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	20.82	521.43	YES	05/10/88	SDG	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	21.64	520.61	YES	06/08/88	RWO	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	22.30	519.95	YES	07/09/88	DH	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	22.80	519.45	YES	08/06/88	CAM	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	23.40	518.85	YES	09/09/88		ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	23.85	518.40	YES	10/09/88	LKP	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	24.22	518.03	YES	11/08/88	CAM	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	24.35	517.90	YES	12/12/88	CAM	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	23.13	519.12	YES	01/09/89	CAM	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	22.70	519.55	YES	02/09/89	CAM	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	21.16	521.09	YES	03/10/89	CAM	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	19.16	523.09	YES	04/16/89	CAM	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	18.12	524.13	YES	05/13/89	LKP	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	16.78	525.47	YES	06/15/89	CAM	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	19.01	523.24	YES	07/13/89	CAM	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	19.83	522.42	YES	08/15/89	CM	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	20.27	521.98	YES	09/11/89	CM SM	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	22.32	519.93	YES	10/10/89	CM BH	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	20.82	521.43	YES	11/17/89	CM GY	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	21.40	520.85	YES	12/15/89	CAM	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	20.70	521.55	YES	01/21/90	CM MG	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	19.26	522.99	YES	02/14/90	CM DN	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	18.80	523.45R	YES	02/17/90	CM DN	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	18.10	524.15	YES	03/31/90	DN BB	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	18.18	524.07R	YES	04/09/90	BB DN	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	17.82	524.43	YES	04/21/90	BB DN	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	17.70	524.55R	YES	04/24/90	BB DN	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	16.53	525.72	YES	05/17/90	CM AHW	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	16.91	525.34	YES	06/16/90	CM AW	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	NR	NA	YES	07/16/90	AHW BB	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	18.93	523.32	YES	08/07/90	CM AW	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	19.55	522.70	YES	09/18/90	CM AW	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	18.74	523.51	YES	10/18/90	CM GY	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	18.54	523.71	YES	11/14/90	CM GY	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	18.32	523.93	YES	12/12/90	CM BB GY	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	16.89	525.36	YES	01/16/91	CM WB	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	17.05	525.20R	YES	01/24/91	CM WB	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	16.68	525.57	YES	02/19/91	CM WB	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	16.69	525.56	YES	03/18/91	CM JL	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	17.18	525.07	YES	05/31/91	CM CT	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	19.20	523.05	YES	07/25/91	CM BM RR	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	19.92	522.33	YES	08/21/91	CM DS	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	20.29	521.96	YES	09/06/91	CM DS	ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	21.22	521.03	YES	10/09/91		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 3016
REPORT DATE : 10/09/92

TASK NUMBER :

RIFS WELL ID : 3016

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477613.84	1379163.66	541.98	542.25		540.60	21.82	520.43	YES	11/05/91		ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	22.44	519.81	YES	12/10/91		ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	22.01	520.24	YES	02/03/92		ON-SITE
477613.84	1379163.66	541.98	542.25		540.60	22.18	520.07	YES	03/02/92		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 4016
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 4016

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477618.74	1379138.31	541.70	542.25	539.7		NR	NA	NO	01/09/89	CAM	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		22.57	519.13	NO	02/09/89	CAM	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		21.25	520.45	NO	03/10/89	CAM	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		19.33	522.37	NO	04/16/89	CAM	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		18.28	523.42	NO	05/13/89	LKP	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		17.66	524.04	NO	06/15/89	CAM	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		18.52	523.18	NO	07/13/89	CAM	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		19.32	522.38	NO	08/15/89	CM	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		19.79	521.91	NO	09/11/89	CM SM	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		21.80	519.90	NO	10/10/89	CM BH	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		20.43	521.27	NO	11/17/89	CM GY	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		21.03	520.67	NO	12/15/89	CAM	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		20.53	521.17	NO	01/21/90	CM MG	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		19.43	522.27	NO	02/14/90	CM DN	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		19.08	522.62R	NO	02/17/90	CM DN	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		18.22	523.48	NO	03/31/90	DN BB	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		18.23	523.47R	NO	04/09/90	BB DN	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		17.96	523.74	NO	04/21/90	BB DN	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		17.85	523.85R	NO	04/24/90	BB DN	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		17.00	524.70	NO	05/17/90	CM AHW	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		16.92	524.78	NO	06/16/90	CM AW	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		17.60	524.10	NO	07/16/90	AHW BB	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		18.36	523.34	NO	08/07/90	CM AW	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		19.08	522.62	NO	09/18/90	CM AW	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		18.60	523.10	NO	10/18/90	CM GY	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		18.41	523.29	NO	11/14/90	CM GY	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		18.22	523.48	NO	12/12/90	CM BB GY	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		16.72	524.98	NO	01/16/91	CM WB	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		16.88	524.82R	NO	01/24/91	CM WB	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		16.57	525.13	NO	02/19/91	CM WB	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		16.56	525.14	NO	03/18/91	CM JL	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		16.94	524.76	NO	05/31/91	CM CT	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		17.79	523.91	NO	07/25/91	CM BM RR	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		19.44	522.26	NO	08/21/91	CM DS	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		19.83	521.87	NO	09/06/91	CM DS	ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		20.66	521.04	NO	10/09/91		ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		21.29	520.41	NO	11/05/91		ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		21.95	519.75	NO	12/10/91		ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		21.79	519.91	NO	02/03/92		ON-SITE
477618.74	1379138.31	541.70	542.25	539.7		21.99	519.71	NO	03/02/92		ON-SITE

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MONITORING WELL INSTALLATION RECORDS
RI/FS SAMPLING PROGRAM
INACTIVE FLYASH PILE

MONITORING WELL INSTALLATION RECORD
08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1016
WELL NUMBER: 1016

FIELD ENG./GEO.: DAN OAKLEY
CHECKED BY : Not Noted
N,E COORDINATES: 477617.13, 1379149.0
DATE OF INSTAL.: 10/16/87

DATE: 10/16/87
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 5 TO: 15
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 22
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: .010 (In.)
TOTAL PERFORATED AREA: 10 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREAD AND COUPLE (FLUSH JOINT THREAD)

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 In.
* LOCKING CAP AND LOCK

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE		ELEVATION MSL	
TOP OF RISER PIPE	1.8 Ft.		541.85	
GROUND SURFACE	0.0		N/A	
BOTTOM OF PROTECTIVE PIPE	-2.5 Ft.			
BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	2.0	8.0	N/A	N/A
Sand	8.0	22.5	N/A	N/A
PERFORATED SECTION	10.2	20.2	N/A	N/A
WELL TIP	22.5		N/A	
BOTTOM OF BOREHOLE	22.5		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: DAN OAKLEY DATE: 10/16/87
PROJECT NO. : 602.3.2 CHECKED BY : Not Noted DATE: N/A
BORING NO. : 1016 N,E COORDINATES: 477617.13, 1379149.0
WELL NUMBER: 1016 DATE OF INSTAL.: 10/16/87

REMARKS -- COMMENT AREA

REMARKS : WHITE OUT CORRECTIONS WERE MADE BY DAN OAKLEY AT THE TIME THE FORM WAS COMPLETED.

COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1047
WELL NUMBER: 1047

FIELD ENG./GEO.: LOWELL WILLE DATE: 10/17/87
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 478258.44, 1379062.4
DATE OF INSTAL.: 10/17/87

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0 TO: 20
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 20
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 10 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 5 Ft.
2ND PIPE SECTION: 2 Ft.
3RD PIPE SECTION: 2 Ft.
COMMENTS

RISER JOINING METHOD: SCREW (FLUSH JOINT THREAD)

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 In.
* LOCKING TOP AND LOCK

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	571.07
GROUND SURFACE	0.0	568.7
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0	5	N/A	N/A
Sand	5	17.4	N/A	N/A
Bentonite Pellets	17.4	20.0	N/A	N/A
PERFORATED SECTION	7	17	N/A	N/A

WELL TIP	17.4	N/A
BOTTOM OF BOREHOLE	20	N/A
GWL AFTER INSTALLATION	DRY	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: LOWELL WILLE DATE: 10/17/87
PROJECT NO. : 602.3.2 CHECKED BY : Not Noted DATE: N/A
BORING NO. : 1047 N,E COORDINATES: 478258.44, 1379062.4
WELL NUMBER: 1047 DATE OF INSTAL.: 10/17/87

REMARKS -- COMMENT AREA

REMARKS : DRY WELL
COMMENTS:

MONITORING WELL INSTALLATION RECORD

10/02/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1711
WELL NUMBER: 1711

FIELD ENG./GEO.: J. LEAR DATE: 05/31/91
CHECKED BY : E. TROLLINGER DATE: 08/19/91
N,E COORDINATES: 478126.51, 1378968.8
DATE OF INSTAL.: 05/30/91

BOREHOLE DRILLING

DRILLING METHOD: AUGER
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: HOLLOW STEM AUGER
IS CASING TEMPORARY?: No
CASING TYPE : Stainless Steel
CASING DIAM.: 4.0 In. ID
CASING SIZE(S) USED: (Units N/A)
SIZE: NA FROM: NA TO: NA
SIZE: NA FROM: NA TO: NA

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Slots
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 2.0 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4.0 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: 2 Ft.
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: FLUSH JOINT THREADED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 10.7 In.
* HINGED, LOCKED WELL COVER, WEL

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	1.8 Ft.	578.58
GROUND SURFACE	0.0	576.4
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	1.5	10.5	574.97	565.97
Bentonite Pellets	10.5	11.0	565.97	565.47
Sand	11.0	15.5	565.47	560.97
Gravel	NA	NA	NA	NA
PERFORATED SECTION	13.0	15.0	563.4	561.4

WELL TIP	15.5	560.9
BOTTOM OF BOREHOLE	15.5	560.9
GWL AFTER INSTALLATION	NA	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
10/02/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: J. LEAR DATE: 05/31/91
PROJECT NO. : 602.3.2 CHECKED BY : E. TROLLINGER DATE: 08/19/91
BORING NO. : 1711 N,E COORDINATES: 478126.51, 1378968.8
WELL NUMBER: 1711 DATE OF INSTAL.: 05/30/91

REMARKS -- COMMENT AREA

REMARKS : SAMPLES WERE TAKEN TO 19.5 FT. SLURRY GROUT WAS USED TO FILL THE SECTION BETWEEN 15.5 - 19.5 FT. AS PER GEOCHEM STANDARDS.

COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 2016
WELL NUMBER: 2016

FIELD ENG./GEO.: DATE:
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 477615.38, 1379157.7
DATE OF INSTAL.:

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: N/A
IS CASING TEMPORARY?: N/A
CASING TYPE : Not Noted
CASING DIAM.:
CASING SIZE(S) USED: (Units N/A)
SIZE: FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: N/A
AVG. SIZE OF PERFORATIONS: (N/A)
TOTAL PERFORATED AREA:
NOTES/COMMENTS:

RISER PIPE MATERIAL: N/A
RISER PIPE DIAMETERS:
O.D.: I.D.:
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: Not Noted

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:
PROTECTIVE PIPE O.D.:

OTHER PROTECTION (* NONE NOTED)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE		ELEVATION MSL	
TOP OF RISER PIPE	N/A		541.30	
GROUND SURFACE	0.0		N/A	
BOTTOM OF PROTECTIVE PIPE	N/A			
BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	N/A	N/A	N/A	N/A
PERFORATED SECTION	N/A	N/A	N/A	N/A
WELL TIP	N/A		N/A	
BOTTOM OF BOREHOLE	N/A		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : N/A
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : N/A

MONITORING WELL INSTALLATION RECORD (Continued)

08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.:		DATE:
PROJECT NO. : 602.3.2	CHECKED BY :	Not Noted	DATE: N/A
BORING NO. : 2016	N,E COORDINATES:	477615.38, 1379157.7	
WELL NUMBER: 2016	DATE OF INSTAL.:		

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: W. HERTEL, K. HEMLEINDATE: 01/05/89
PROJECT NO. : 602.3.2 CHECKED BY : W. HERTEL DATE: 02/09/89
BORING NO. : 2047 N,E COORDINATES: 478263.85, 1379054.1
WELL NUMBER: 2047 DATE OF INSTAL.: 01/03/89

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool	TYPE OF BIT: Flat Head Hammer
DRILLING FLUID(S) USED: (in Feet)	IS CASING TEMPORARY?: No
FLUID: WATER FROM: 0.0TO: 64.0	CASING TYPE : MONITORING WELL
FLUID: N/A FROM: N/ATO: N/A	CASING DIAM.: 4.0 In. ID
NOTES/COMMENTS:	CASING SIZE(S) USED: (in Feet)
	SIZE: 10 FROM: 0.0 TO: 65.0
	SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL	RISER PIPE MATERIAL: Stainless Steel
DIAMETER OF PERFORATED SECTION:	RISER PIPE DIAMETERS:
PERFORATION TYPE: Slots	O.D.: 4 3/8 In. I.D.: 4.0 In.
AVG. SIZE OF PERFORATIONS: 0.01 (In.)	LENGTH OF 1ST PIPE SECTION: 10.0 Ft.
TOTAL PERFORATED AREA: 15. Ft.	2ND PIPE SECTION: 5.0 Ft.
NOTES/COMMENTS:	3RD PIPE SECTION: 2.0 Ft.
	COMMENTS

RISER JOINING METHOD: SCREW TYPE, THREADED FLUSH JOINTS

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.	OTHER PROTECTION (* NOTED BELOW)
PROTECTIVE PIPE O.D.: 10.5 In.	
* LOCKING COVER WITH PADLOCK	

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE		ELEVATION MSL	
TOP OF RISER PIPE	2.0 Ft.		570.03	
GROUND SURFACE	0.0		N/A	
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.			
BOREHOLE FILL MATERIALS	**TOP**	**BOTTOM**	**TOP**	**BOTTOM**
Grout/Slurry	0.0	35.0	N/A	N/A
Bentonite Pellets	35.0	39.9	N/A	N/A
Sand	39.9	64.0	N/A	N/A
PERFORATED SECTION	45.3	60.3	N/A	N/A
WELL TIP	62.0		N/A	
BOTTOM OF BOREHOLE	64.0		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: W. HERTEL, K. HEMLEINDATE: 01/05/89
PROJECT NO. : 602.3.2 CHECKED BY : W. HERTEL DATE: 02/09/89
BORING NO. : 2047 N,E COORDINATES: 478263.85, 1379054.1
WELL NUMBER: 2047 DATE OF INSTAL.: 01/03/89

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 3016
WELL NUMBER: 3016

FIELD ENG./GEO.:
CHECKED BY : Not Noted
N,E COORDINATES: 477613.84, 1379163.6
DATE OF INSTAL.:

DATE:
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: N/A
IS CASING TEMPORARY?: N/A
CASING TYPE : Not Noted
CASING DIAM.:
CASING SIZE(S) USED: (Units N/A)
SIZE: FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: N/A
AVG. SIZE OF PERFORATIONS: (N/A)
TOTAL PERFORATED AREA:
NOTES/COMMENTS:

RISER PIPE MATERIAL: N/A
RISER PIPE DIAMETERS:
O.D.: I.D.:
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: Not Noted

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:
PROTECTIVE PIPE O.D.:

OTHER PROTECTION (* NONE NOTED)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	N/A	541.98
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	N/A	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	N/A	N/A	N/A	N/A
PERFORATED SECTION	N/A	N/A	N/A	N/A

WELL TIP	N/A	N/A
BOTTOM OF BOREHOLE	N/A	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : N/A
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : N/A

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.:		DATE:
PROJECT NO. : 602.3.2	CHECKED BY :	Not Noted	DATE: N/A
BORING NO. : 3016	N,E COORDINATES:	477613.84, 1379163.6	
WELL NUMBER: 3016	DATE OF INSTAL.:		

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 4016
WELL NUMBER: 4016

FIELD ENG./GEO.: M. SLUSARSKI DATE: 01/11/89
CHECKED BY : W. A. HERTEL DATE: 03/03/89
N,E COORDINATES: 477618.74, 1379138.3
DATE OF INSTAL.: 01/05/89

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0.0TO: 163.0
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4.0 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0.0 TO: 160.0
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Slots
AVG. SIZE OF PERFORATIONS: .010 (In.)
TOTAL PERFORATED AREA: 10. Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4.0 In.
LENGTH OF 1ST PIPE SECTION: 1.7 Ft.
2ND PIPE SECTION: 5.0 Ft.
3RD PIPE SECTION: 10.0 Ft.
COMMENTS

RISER JOINING METHOD: SCREW TYPE FLUSH JOINT THREADED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 10 3 In.
* LOCKING CAP

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	541.70
GROUND SURFACE	0.0	539.7
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0.0	137.0	N/A	N/A
Sand	137.0	153.0	N/A	N/A
Gravel	153.0	155.0	N/A	N/A
PERFORATED SECTION	143.0	153.3	N/A	N/A

WELL TIP	154.7	N/A
BOTTOM OF BOREHOLE	163.2	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: M. SLUSARSKI DATE: 01/11/89
PROJECT NO. : 602.3.2 CHECKED BY : W. A. HERTEL DATE: 03/03/89
BORING NO. : 4016 N,E COORDINATES: 477618.74, 1379138.3
WELL NUMBER: 4016 DATE OF INSTAL.: 01/05/89

REMARKS — COMMENT AREA

REMARKS : OPEN HOLE INTERVAL FROM 163.0 FT. TO 155.0 FT. WAS ALLOWED TO COLLAPSE ON ITSELF. TWO (2) BUCKETS OF BENTONITE PELLETS WERE POURED AROUND THE PROTECTIVE CASING TO SERVE AS PACKING AND SEALING MATERIAL AT THE SURFACE.

COMMENTS: _____

APPENDIX C

APPENDIX G

SOUTH FIELD

LIST OF DATA TABLES
SOUTH FIELD

Table	Title
G-1	Surface Media Analyses: Environmental Survey
G-2	Surface Media Analyses: Characterization Investigation Study
G-3	Surface Media Analyses: RI/FS Sampling Program
G-4	Subsurface Media Analyses: Test Pit Samples: Environmental Survey
G-5	Subsurface Media Analyses for Radionuclides: Boring Profile Samples: Characterization Investigation Study
G-6	Subsurface Media Analyses: Boring Composite Samples: Characterization Investigation Study
G-7	Subsurface Media Analyses: RI/FS Sampling Program
G-8	Hazardous Characteristic Data for Subsurface Media: RI/FS Sampling Program
G-9	Groundwater Analyses: RI/FS Sampling Program
G-10	Biota Analyses: RI/FS Sampling Program
G-11	Geotechnical Analyses: RI/FS Sampling Program
G-12	Boring Logs: Characterization Investigation Study
G-13	Boring Logs: RI/FS Sampling Program
G-14	Groundwater Elevations: RI/FS Sampling Program
G-15	Monitoring Well Installation Records: RI/FS Sampling Program

TABLE G-1

SURFACE MEDIA ANALYSES
ENVIRONMENTAL SURVEY
SOUTH FIELD

TABLE G-1

SURFACE MEDIA ANALYSES
ENVIRONMENTAL SURVEY
SOUTH FIELD

Analyte	FE0108SS	FE0109SS	FE0110SS	FE0112SS	FE0115SS
Asbestos	ND	ND	ND	ND	ND
TCLP Metals (mg/ℓ)					
Silver	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic	<0.1	<0.5	<0.1	<0.5	<0.1
Barium	0.58 B	0.42 B	0.49 B	0.45 B	0.55 B
Cadmium	<0.02	<0.02	<0.02	<0.02	<0.02
Chromium	<0.03	<0.03	<0.03	<0.03	<0.03
Mercury	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	<0.3	<0.3	<0.3	<0.3	<0.3
Selenium	<0.5	<0.5	<0.5	<0.5	<0.5
Volatile Organic Compounds (µg/kg)					
1,1,1-Trichloroethane	<0.005	<5	<0.005	<5	<0.005
1,1,2,2-Tetrachloroethane	<0.005	<5	<0.005	<5	<0.005
1,1,2-Trichloroethane	<0.005	<5	<0.005	<5	<0.005
1,1-Dichloroethane	<0.005	<5	<0.005	<5	<0.005
1,2-Dichloroethane	<0.005	<5	<0.005	<5	<0.005
1,2-Dichloroprophane	<0.005	<5	<0.005	<5	<0.005
2-butanone	0.003 BJ	<10	0.035	10 B	0.004 BJ
2-Chloroethylvinyl ether	<0.01	<10	<0.01	<10	<0.01
2-Hexanone	<0.01	<10	<0.01	<10	<0.01
4-Methyl-2-pentanone	<0.01	<10	<0.01	<10	<0.01
Acetone	0.007 BJ	<10	0.180 Z5	120 Z5	0.016 B
Benzene	<0.005	<5	<0.005	<5	<0.005
Bromodichloromethane	<0.005	<5	<0.005	<5	<0.005
Bromoform	<0.005	<5	<0.005	<5	<0.005
Bromomethane	<10	<10	<10	<10	<10
Carbon disulfide	<0.005	<5	<0.005	<5	<0.005
Carbon tetrachloride	<0.005	<5	<0.005	<5	<0.005
Chlorobenzene	<5	<5	<5	<5	<5
Chloroethane	<10	<10	<10	<10	<10
Chloroform	<5	<5	10	4 BJ	3 BJ
Chloromethane	<10	<10	<10	<10	<10
Cis-1,3-dichloropropene	<5	<5	<5	<5	<5
Dibromochloromethane	<5	<5	<5	<5	<5
Ethyl benzene	<5	<5	<5	<5	<5
Methylene chloride	32	18 B	280 Z5	84 Z5	51
Styrene	<5	<5	<5	<5	<5
Tetrachloroethene	<5	<5	<5	<5	<5
Toluene	7 B	4 BJ	26	13 BJ	4 BJ
Total xylenes	<5	<5	<5	<5	<5
Trans-1,2-dichloroethene	<5	<5	<5	<5	<5
Trans-1,3-dichloropropene	<5	<5	<5	<5	<5

TABLE G-1
(continued)

Analyte	FE0108SS	FE0109SS	FE0110SS	FE0112SS	FEO115SS
Trichloroethene	<5	<5	<5	<5	<5
Vinyl acetate	<10	<10	<10	<10	<10
Vinyl chloride	<10	<10	<10	<10	<10
PCBs (mg/kg)					
Aroclor-1242	NA	NA	NA	NA	NA
Aroclor-1248	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA
Radionuclides (pCi/g)					
Bismuth-214	1.2±0.1	0.75±0.11	3.0±0.1	0.87±0.05	0.92±0.08
Cesium-137	0.74±0.07	0.46±0.07	I	0.08±0.02	0.24±0.03
Radium-226	1.2±0.1G	0.77±0.08G	3.0±0.2G	0.87±0.10G	0.85±0.06G
Thorium-228	1.5±0.2G	1.3±0.2G	2.6±0.1G	0.92±0.05G	1.1±0.1G
Thorium-232	1.3±0.2G	1.2±0.2G	2.7±0.1G	0.84±0.06G	1.1±0.1G
Uranium-235	N	N	N	0.3±0.02	0.79±0.03
Uranium-238	53±8	37±8	N	7.8±2.3	29±6
Total Uranium (mg/kg)	8.8	57.0	7.4	16.0	58

ND = None Detected
Z5 = The samples exhibited low internal standard recovery due to the retention properties of the matrix. The reported detection limits are for soil samples and should not be used as the minimum attainable limits
G = Gamma Spectroscopy Analysis
N = Nuclide not identified by GAMANAL analysis as being present in the sample; no value reported
I = Nuclide identified by GAMANAL analysis of sample spectrum, but values did not exceed room background at the 95% confidence level; no value reported
B = Analyte was found in the blank as well as the sample
J = Estimated value of compound present but less than the specified detection limit
NA = Not analyzed

TABLE G-2

SURFACE MEDIA ANALYSES
CHARACTERIZATION INVESTIGATION STUDY
SOUTH FIELD

NOTES:

- CIS data not applicable to the OU2 waste unit have been shaded

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
23	FMP-SS-23-170	1378962.84	480459.58	.00	.50	624.5	U-238	=	146.00	2.00
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	CS-137	<	.50	
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	NP-237	<	.50	
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	PB-210	=	78.00	3.00
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	PU-238	<	.10	
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	PU-239/240	<	.10	
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	RA-226	=	29.87	1.79
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	RA-228	=		
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	RU-106	<	4.00	
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	SR-90	<	.70	
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	TC-99	<	.30	
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	TH-228	=	1.20	.20
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	TH-230	=	121.00	1.00
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	TH-232	=	1.30	.20
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	U-234	=	11.00	1.00
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	U-235	=	.60	.10
	FMP-SS-23-176	1379388.87	480454.92	.00	.50	617.0	U-238	=	12.00	1.00
24	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	CS-137	<	.90	
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	NP-237	<	.10	
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	PB-210	=		
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	PU-238	<	.10	
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	PU-239/240	<	.10	
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	RA-226	=	149.52	3.43
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	RA-228	=		
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	RU-106	<	7.00	
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	SR-90	<	.60	
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	TC-99	<	.40	
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	TH-228	=	3.30	1.30
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	TH-230	=	1070.00	30.00
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	TH-232	=	4.90	1.90
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	U-234	=	79.00	1.00
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	U-235	=	3.60	.30
	FMP-SL-24-049	1379633.30	477214.02	.50	1.00	781.1	U-238	=	82.00	1.00
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	CS-137	<	.50	
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	NP-237	<	.10	
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	PB-210	=		
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	PU-238	<	.10	
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	PU-239/240	<	.10	
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	RA-226	=	38.56	1.78
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	RA-228	=		
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	RU-106	<	3.00	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

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RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	SR-90	<	.60	
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	TC-99	<	.40	
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	TH-228	=	3.00	.70
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	TH-230	=	2330.00	20.00
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	TH-232	=	4.50	.70
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	U-234	=	28.00	1.00
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	U-235	=	1.20	.20
	FMP-SL-24-052	1379622.57	477224.31	.50	1.00	799.1	U-238	=	29.00	1.00
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	CS-137	<	.60	
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	NP-237	<	.10	
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	PB-210	=		
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	PU-238	<	.10	
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	PU-239/240	<	.10	
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	RA-226	=	63.02	2.19
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	RA-228	=		
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	RU-106	<	5.00	
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	SR-90	<	.40	
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	TC-99	<	.40	
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	TH-228	=	.50	.20
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	TH-230	=	21.00	1.00
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	TH-232	=	.50	.20
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	U-234	=	4.20	.40
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	U-235	=	.20	.10
	FMP-SL-24-094	1379815.98	477894.27	.16	.50	674.0	U-238	=	5.40	.40
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	CS-137	<	.70	
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	NP-237	<	.10	
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	PB-210	=		
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	PU-238	<	.20	
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	PU-239/240	<	.10	
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	RA-226	=	132.57	3.57
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	RA-228	=		
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	RU-106	<	4.00	
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	SR-90	<	.60	
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	TC-99	<	.40	
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	TH-228	=	.40	.20
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	TH-230	=	14.00	1.00
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	TH-232	=	.10	.10
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	U-234	=	30.00	1.00
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	U-235	=	1.80	.20
	FMP-SL-24-113	1379406.92	478080.54	.16	.50	618.0	U-238	=	25.00	1.00
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	CS-137	<	.90	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	NP-237	<	.10	
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	PB-210	=		
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	PU-238	<	.10	
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	PU-239/240	<	.10	
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	RA-226	=	70.61	2.70
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	RA-228	=		
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	RU-106	<	7.00	
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	SR-90	<	.90	
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	TC-99	<	.40	
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	TH-228	=	.20	.10
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	TH-230	=	13.00	1.00
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	TH-232	=	.20	.10
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	U-234	=	14.00	1.00
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	U-235	=	.70	.10
	FMP-SL-24-116	1379324.06	478013.78	.16	.50	639.0	U-238	=	14.00	1.00
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	CS-137	<	.30	
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	NP-237	<	.10	
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	PB-210	=		
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	PU-238	<	.30	
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	PU-239/240	<	.10	
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	RA-226	=	69.62	2.77
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	RA-228	=		
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	RU-106	<	3.00	
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	SR-90	<	.80	
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	TC-99	<	.40	
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	TH-228	<	.20	
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	TH-230	=	.90	.30
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	TH-232	<	.10	
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	U-234	=	46.00	1.00
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	U-235	=	2.00	.20
	FMP-SL-24-117	1379324.06	478013.78	.50	1.00	682.0	U-238	=	58.00	1.00
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	CS-137	<	.80	
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	NP-237	<	.10	
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	PB-210	=		
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	PU-238	<	.10	
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	PU-239/240	<	.10	
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	RA-226	=	4.47	1.67
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	RA-228	=		
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	RU-106	<	5.00	
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	SR-90	<	.30	
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	TC-99	<	.40	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	TH-228	=	.40	.20
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	TH-230	=	44.00	2.00
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	TH-232	=	.40	.20
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	U-234	=	14.00	1.00
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	U-235	=	.60	.10
	FMP-SL-24-121	1379305.59	478033.29	.16	.50	561.2	U-238	=	15.00	1.00
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	CS-137	<	.50	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	NP-237	<	.10	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	PB-210	=		
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	PU-238	<	.10	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	PU-239/240	<	.10	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	RA-226	<	5.69	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	RA-228	=		
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	RU-106	<	6.00	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	SR-90	<	.50	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	TC-99	<	.40	
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	TH-228	=	129.00	4.00
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	TH-230	=	21.00	2.00
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	TH-232	=	130.00	4.00
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	U-234	=	31.00	1.00
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	U-235	=	1.40	.20
	FMP-SL-24-179	1379207.52	477885.92	1.00	1.50	711.0	U-238	=	29.00	1.00
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	CS-137	<	.20	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	NP-237	<	.10	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	PB-210	=		
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	PU-238	<	.10	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	PU-239/240	<	.10	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	RA-226	<	2.35	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	RA-228	=		
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	RU-106	<	2.00	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	SR-90	<	.80	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	TC-99	<	.40	
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	TH-228	=	3.60	.50
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	TH-230	=	1.60	.30
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	TH-232	=	2.90	.50
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	U-234	=	114.00	2.00
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	U-235	=	5.80	.40
	FMP-SL-24-188	1379114.23	477876.47	1.00	1.50	720.0	U-238	=	92.00	2.00
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	CS-137	<	.50	
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	NP-237	<	.10	
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	PB-210	=		

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	PU-238	<	.20	
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	PU-239/240	<	.10	
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	RA-226	=	353.60	4.65
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	RA-228	=		
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	RU-106	<	5.00	
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	SR-90	<	.60	
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	TC-99	<	.60	
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	TH-228	=	.20	.10
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	TH-230	=	3.60	.30
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	TH-232	=	.10	.10
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	U-234	=	19.00	1.00
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	U-235	=	1.10	.20
	FMP-SL-24-192	1379584.30	477945.63	.16	.50	835.0	U-238	=	18.00	1.00
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	CS-137	<	.50	
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	NP-237	<	.10	
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	PB-210	=		
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	PU-238	<	.10	
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	PU-239/240	<	.10	
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	RA-226	=	15.43	1.11
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	RA-228	=		
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	RU-106	<	2.00	
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	SR-90	<	1.00	
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	TC-99	<	.40	
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	TH-228	=	.40	.10
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	TH-230	=	7.00	.30
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	TH-232	=	.40	.10
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	U-234	=	98.00	2.00
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	U-235	=	3.80	.50
	FMP-SL-24-197	1379623.62	477993.57	.16	.50	736.9	U-238	=	102.00	2.00
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	CS-137	<	.40	
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	NP-237	<	.10	
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	PB-210	=		
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	PU-238	<	.10	
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	PU-239/240	<	.10	
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	RA-226	=	73.92	2.66
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	RA-228	=		
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	RU-106	<	3.00	
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	SR-90	<	.40	
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	TC-99	<	.40	
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	TH-228	<	.10	
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	TH-230	=	2.90	.30

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	TH-232	=	.10	.10
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	U-234	=	6.30	.40
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	U-235	=	.30	.10
	FMP-SL-24-199	1379566.60	477957.12	.16	.50	720.0	U-238	=	5.90	.40
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	CS-137	<	.80	
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	NP-237	<	.20	
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	PB-210	=		
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	PU-238	<	.10	
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	PU-239/240	<	.10	
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	RA-226	=	69.04	2.85
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	RA-228	=		
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	RU-106	<	4.00	
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	SR-90	<	.60	
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	TC-99	<	3.00	
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	TH-228	=	1.70	.50
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	TH-230	=	18.00	1.00
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	TH-232	=	1.50	.50
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	U-234	=	9.00	.50
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	U-235	=	.30	.10
	FMP-SL-24-206	1379341.69	477963.28	.16	.50	550.0	U-238	=	9.50	.50
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	CS-137	<	.40	
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	NP-237	<	.10	
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	PB-210	=		
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	PU-238	<	.20	
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	PU-239/240	<	.10	
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	RA-226	=	25.26	2.14
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	RA-228	=		
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	RU-106	<	2.00	
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	SR-90	<	.60	
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	TC-99	<	.40	
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	TH-228	=	8.00	.50
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	TH-230	=	27.00	1.00
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	TH-232	=	10.00	1.00
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	U-234	=	74.00	2.00
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	U-235	=	3.20	.50
	FMP-SL-24-236	1379423.53	477993.05	.16	.40	654.0	U-238	=	69.00	2.00
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	CS-137	<	.60	
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	NP-237	<	.10	
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	PB-210	=		
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	PU-238	<	.10	
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	PU-239/240	<	.10	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	* RADIONUCLIDE	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	RA-226	=	55.48	2.17
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	RA-228	=		
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	RU-106	<	4.00	
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	SR-90	<	.40	
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	TC-99	<	.40	
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	TH-228	=	.30	.20
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	TH-230	=	9.70	.70
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	TH-232	=	.20	.10
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	U-234	=	8.30	.50
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	U-235	=	.40	.10
	FMP-SL-24-255	1379484.63	477959.36	.50	1.00	667.7	U-238	=	8.50	.50
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	CS-137	<	.70	
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	NP-237	<	.10	
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	PB-210	=		
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	PU-238	<	.10	
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	PU-239/240	<	.10	
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	RA-226	=	91.38	3.00
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	RA-228	=		
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	RU-106	<	4.00	
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	SR-90	<	.30	
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	TC-99	<	.40	
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	TH-228	=	.30	.10
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	TH-230	=	12.00	1.00
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	TH-232	=	.20	.10
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	U-234	=	49.00	1.00
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	U-235	=	2.40	.20
	FMP-SL-24-262	1379531.82	478002.09	.50	1.00	675.0	U-238	=	57.00	1.00
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	CS-137	=	.60	.40
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	NP-237	<	.10	
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	PB-210	=		
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	PU-238	<	.10	
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	PU-239/240	<	.10	
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	RA-226	=	35.57	1.83
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	RA-228	=		
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	RU-106	<	3.00	
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	SR-90	<	.40	
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	TC-99	<	.40	
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	TH-228	=	.30	.10
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	TH-230	=	164.00	1.00
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	TH-232	=	.50	.10
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	U-234	=	15.00	1.00

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	U-235	=	.60	.10
	FMP-SS-24-046	1379633.30	477214.02	.00	.16	617.0	U-238	=	16.00	1.00
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	CS-137	<	.80	
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	NP-237	<	.10	
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	PB-210	=		
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	PU-238	<	.10	
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	PU-239/240	<	.10	
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	RA-226	<	18.67	
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	RA-228	=		
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	RU-106	<	5.00	
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	SR-90	<	.20	
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	TC-99	<	.70	
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	TH-228	=	.50	.10
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	TH-230	=	14.00	1.00
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	TH-232	=	.20	.10
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	U-234	=	2850.00	40.00
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	U-235	=	356.00	14.00
	FMP-SS-24-081	1379491.11	477538.03	.00	.16	652.5	U-238	=	2940.00	40.00
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	CS-137	<	.70	
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	NP-237	<	.10	
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	PB-210	=		
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	PU-238	<	.10	
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	PU-239/240	<	.10	
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	RA-226	=	184.19	4.11
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	RA-228	=		
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	RU-106	<	6.00	
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	SR-90	<	.70	
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	TC-99	<	.50	
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	TH-228	=	.30	.10
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	TH-230	=	9.30	.40
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	TH-232	=	.20	.10
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	U-234	=	7.20	.40
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	U-235	=	.30	.10
	FMP-SS-24-123	1379640.73	477924.08	.00	.16	607.0	U-238	=	7.50	.40
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	CS-137	<	1.00	
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	NP-237	<	.10	
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	PB-210	=		
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	PU-238	<	.10	
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	PU-239/240	<	.10	
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	RA-226	=	279.65	5.23
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	RA-228	=		

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	* RADIONUCLIDE	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	RU-106	<	9.00	
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	SR-90	<	.90	
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	TC-99	<	.40	
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	TH-228	=	3.40	.70
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	TH-230	=	123.00	3.00
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	TH-232	=	3.40	.70
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	U-234	=	491.00	10.00
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	U-235	=	20.00	2.00
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	U-238	=	500.00	10.00
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	CS-137	<	.80	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	NP-237	<	.10	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	PB-210	=		
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	PU-238	<	.10	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	PU-239/240	<	.10	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	RA-226	<	8.75	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	RA-228	=		
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	RU-106	<	5.00	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	SR-90	<	.40	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	TC-99	<	.60	
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	TH-228	=	2.20	.80
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	TH-230	=	.90	.60
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	TH-232	=	2.40	.80
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	U-234	=	254.00	3.00
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	U-235	=	40.00	1.00
	FMP-SS-24-137	1378954.35	477992.88	.00	.16	379.0	U-238	=	216.00	3.00
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	CS-137	<	.50	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	NP-237	<	.10	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	PB-210	=		
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	PU-238	<	.10	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	PU-239/240	<	.10	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	RA-226	<	4.21	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	RA-228	=		
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	RU-106	<	5.00	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	SR-90	<	.80	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	TC-99	<	.50	
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	TH-228	=	4.80	.30
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	TH-230	=	1.20	.50
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	TH-232	=	5.30	.80
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	U-234	=	99.00	1.00
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	U-235	=	4.20	.30
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	U-238	=	94.00	1.00

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

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Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	CS-137	<	.60	
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	NP-237	<	.10	
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	PB-210	=		
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	PU-238	<	.10	
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	PU-239/240	<	.10	
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	RA-226	=	49.53	2.16
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	RA-228	=		
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	RU-106	<	3.00	
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	SR-90	<	.30	
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	TC-99	<	.70	
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	TH-228	<	.10	
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	TH-230	=	2.30	.30
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	TH-232	<	.10	
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	U-234	=	8.50	.40
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	U-235	=	.40	.10
	FMP-SS-24-151	1379697.91	477966.53	.00	.16	606.0	U-238	=	9.20	.40
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	CS-137	<	.40	
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	NP-237	<	.10	
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	PB-210	=		
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	PU-238	<	.10	
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	PU-239/240	<	.10	
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	RA-226	<	5.41	
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	RA-228	=		
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	RU-106	<	3.00	
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	SR-90	<	.40	
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	TC-99	<	.60	
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	TH-228	=	34.00	2.00
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	TH-230	=	11.00	1.00
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	TH-232	=	37.00	2.00
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	U-234	=	12.00	1.00
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	U-235	=	.70	.10
	FMP-SS-24-183	1379212.77	477821.75	.00	.16	556.0	U-238	=	11.00	1.00
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	CS-137	<	.70	
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	NP-237	<	.10	
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	PB-210	=		
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	PU-238	<	.10	
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	PU-239/240	<	.10	
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	RA-226	=	48.39	2.25
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	RA-228	=		
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	RU-106	<	3.00	
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	SR-90	<	.40	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	TC-99	<	.40	
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	TH-228	=	.10	.10
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	TH-230	=	.20	.10
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	TH-232	<	.10	
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	U-234	=	4.60	.30
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	U-235	=	.20	.10
	FMP-SS-24-189	1379509.12	478049.73	.00	.16	570.0	U-238	=	6.60	.40
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	CS-137	<	.50	
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	NP-237	<	.10	
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	PB-210	=		
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	PU-238	<	.10	
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	PU-239/240	<	.10	
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	RA-226	=	33.99	2.00
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	RA-228	=		
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	RU-106	<	3.00	
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	SR-90	<	.50	
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	TC-99	<	.40	
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	TH-228	=	.30	.10
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	TH-230	=	11.00	1.00
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	TH-232	=	.30	.10
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	U-234	=	105.00	2.00
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	U-235	=	4.40	.30
	FMP-SS-24-196	1379623.62	477993.57	.00	.16	606.4	U-238	=	108.00	2.00
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	CS-137	=	.30	.20
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	NP-237	<	.10	
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	PB-210	=		
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	PU-238	<	.10	
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	PU-239/240	<	.10	
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	RA-226	=	.71	.36
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	RA-228	=		
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	RU-106	<	1.00	
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	SR-90	<	.50	
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	TC-99	<	3.00	
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	TH-228	=	1.50	.40
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	TH-230	=	32.00	2.00
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	TH-232	=	1.30	.40
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	U-234	=	115.00	2.00
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	U-235	=	5.50	.40
	FMP-SS-24-212	1379226.18	478092.48	.16	.50	723.0	U-238	=	129.00	2.00
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	CS-137	<	.20	
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	NP-237	<	.10	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	PB-210	=		
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	PU-238	<	.10	
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	PU-239/240	<	.10	
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	RA-226	=	1.50	.75
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	RA-228	=		
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	RU-106	<	2.00	
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	SR-90	<	.80	
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	TC-99	<	1.00	
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	TH-228	=	1.90	.20
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	TH-230	=	7.10	.40
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	TH-232	=	2.40	.20
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	U-234	=	117.00	2.00
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	U-235	=	4.90	.30
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	U-238	=	124.00	2.00
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	CS-137	<	.80	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	NP-237	<	.10	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	PB-210	=		
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	PU-238	<	.10	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	PU-239/240	<	.10	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	RA-226	=	48.88	3.06
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	RA-228	=		
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	RU-106	<	4.00	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	SR-90	<	.70	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	TC-99	<	.40	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	TH-228	<	.90	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	TH-230	=	59.00	4.00
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	TH-232	<	.40	
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	U-234	=	82.00	1.00
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	U-235	=	1.90	.20
	FMP-SS-24-224	1378998.33	478210.76	.00	.16	329.0	U-238	=	40.00	1.00
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	CS-137	<	.40	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	NP-237	<	.10	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	PB-210	=		
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	PU-238	<	.10	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	PU-239/240	<	.10	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	RA-226	=	16.70	2.00
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	RA-228	=		
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	RU-106	<	3.00	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	SR-90	<	.50	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	TC-99	<	.40	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	TH-228	<	.10	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

Mon Dec 21

RADIOCHEMISTRY RESULTS

SITE ID	SAMPLE ID	EAST COORDINATE (FEET)	NORTH COORDINATE (FEET)	BEGIN DEPTH (feet)	END DEPTH (feet)	DRY WEIGHT (g)	RADIONUCLIDE *	VQ	ACTIVITY CONCENTRATION (pCi/g)	UNCERTAINTY VALUE (pCi/g)
24	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	TH-230	=	.10	.10
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	TH-232	<	.10	
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	U-234	=	44.00	1.00
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	U-235	=	1.90	.20
	FMP-SS-24-235	1379423.53	477993.05	.00	.16	604.0	U-238	=	42.00	1.00
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	CS-137	<	.90	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	NP-237	<	.10	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	PB-210	=		
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	PU-238	<	.10	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	PU-239/240	=	1.50	.40
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	RA-226	<	29.30	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	RA-228	=		
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	RU-106	<	9.00	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	SR-90	<	.40	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	TC-99	=	594.00	51.00
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	TH-228	<	.10	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	TH-230	=	.50	.10
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	TH-232	<	.10	
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	U-234	=	11400.00	100.00
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	U-235	=	2190.00	30.00
	FMP-SS-24-241	1378925.42	478068.70	.00	.50	426.0	U-238	=	8600.00	100.00
25	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	CS-137	<	.30	
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	NP-237	<	.10	
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	PB-210	=		
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	PU-238	<	.10	
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	PU-239/240	<	.10	
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	RA-226	=	13.12	.97
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	RA-228	=		
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	RU-106	<	2.00	
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	SR-90	<	.80	
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	TC-99	<	.40	
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	TH-228	=	.40	.20
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	TH-230	=	69.00	2.00
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	TH-232	=	.20	.20
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	U-234	=	12.00	1.00
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	U-235	=	.40	.10
	FMP-SL-25-013	1379946.30	476990.37	.16	.50	832.0	U-238	=	14.00	1.00
	FMP-SL-25-014	1379946.30	476990.37	.50	1.00	856.0	CS-137	<	.20	
	FMP-SL-25-014	1379946.30	476990.37	.50	1.00	856.0	NP-237	<	.10	
	FMP-SL-25-014	1379946.30	476990.37	.50	1.00	856.0	PB-210	=		
	FMP-SL-25-014	1379946.30	476990.37	.50	1.00	856.0	PU-238	<	.20	

*RA226 AND RA228, WHEN REPORTED, WERE MEASURED BY GAMMA SPECTROMETRY AND REPORTED ON A DRY WEIGHT BASIS

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TABLE G-3

SURFACE MEDIA ANALYSES
RI/FS SAMPLING PROGRAM
SOUTH FIELD

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOUTH FIELD
SURFACE MEDIA RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per gram (pCi/g).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	N 478000 E 1380000 005001 0 - 2				b
Actinium 231		NA			
Cesium 137		0.3	±	0.2	
Lead 210		NA			
Neptunium 237	<	0.6			
Plutonium 210		NA			
Plutonium 238	<	0.6			
Plutonium 239/240	<	0.6			
Protactium 234		NA			
Radium 224		NA			
Radium 226		1.2	±	0.2	
Radium 228	<	1.0			
Ruthenium 106	<	1.4			
Strontium 90	<	0.5			
Technetium 99	<	1.0			
Thorium 228		0.9	±	0.3	
Thorium 230		1.5	±	0.4	
Thorium 232		1.7	±	0.5	
Total Thorium **		NA			
Uranium 234		2.6	±	0.6	
Uranium 235/236	<	0.6			
Uranium 238		2.7	±	0.6	
Total Uranium **		NA			

** Results reported in mg/kg

b = validation qualifiers

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TABLE G-4

SUBSURFACE MEDIA ANALYSES
TEST PIT SAMPLES
ENVIRONMENTAL SURVEY
SOUTH FIELD

TABLE G-4

SUBSURFACE MEDIA ANALYSES
ENVIRONMENTAL SURVEY
SOUTH FIELD

Analyte	Test Pit 14		Test Pit 15			Test Pit 16		Test Pit 17	
	1011IS1B	1011IS2B	1012IS1B	1012IS2B	1012IS3B	1013IS1B	1013IS2B	1014IS1B	1014IS2B
TCLP Metals (mg/ℓ)									
Silver	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1
Arsenic	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<0.5	<0.5	<0.5
Barium	0.53B	0.60B	0.25B	0.65B	NA	0.70B	0.43B	0.54B	0.49B
Cadmium	<0.02	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02
Chromium	<0.03	<0.03	<0.03	<0.03	NA	0.05	<0.03	<0.03	<0.03
Mercury	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001
Lead	<0.3	<0.3	<0.3	<0.3	NA	<0.3	<0.3	<0.3	<0.3
Selenium	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<0.5	<0.5	<0.5
Radionuclides									
Bismuth-214	3.2±0.1	1.0±0.1	1.1±0.1	1.2±0.1	NA	1.1±0.1	1.4±0.1	1.7±0.1	1.5±0.1
Cesium-137	I	I	I	I	NA	I	I	I	I
Radium-226	3.6±0.2G	0.94±0.1G	1.1±0.1G	1.3±0.1G	NA	1.1±0.1G	1.4±0.1G	1.7±0.1G	1.4±0.1G
Thorium-228	1.1±0.1G	1.0±0.2G	1.6±0.1G	2.4±0.1G	NA	1.2±0.1G	1.4±0.1G	1.1±0.1G	0.91±0.05G
Thorium-232	1.2±0.3G	1.4±0.2G	1.5±0.1G	2.5±0.2G	NA	0.84±0.05G	1.3±0.1G	1.3±0.1G	0.9±0.06G
Total Uranium (mg/kg)	71.0	2.1	15.0	56.0	NA	85.0	2.9	14.0	12.0
Uranium-235	0.83±0.02	0.14±0.02	0.16±0.01	0.30	NA	0.63±0.01	0.07±0.01	0.19±0.01	0.15±0.01
Uranium-238	46±5	N	N	20±4	NA	49±3	N	12±3	9±2
Volatile Organic Compounds (µg/kg)									
1,1,1-Trichloroethane	NA	NA	NA	NA	<5	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	<5	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	<5	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	<5	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	<5	NA	NA	NA	NA
1,2-Dichloroethene	NA	NA	NA	NA	<5	NA	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA	NA	<5	NA	NA	NA	NA

TABLE G-4
(continued)

Analyte	Test Pit 14		Test Pit 15			Test Pit 16		Test Pit 17	
	1011IS1B	1011IS2B	1012IS1B	1012IS2B	1012IS3B	1013IS1B	1013IS2C	1014IS1B	1014IS2B
Volatile Organic Compounds (µg/kg)									
2-Butanone	NA	NA	NA	NA	4 BJ	NA	NA	NA	NA
2-Chloroethylvinyl Ether	NA	NA	NA	NA	<10	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	<10	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	<10	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	22	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	<5	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	<5	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	<5	NA	NA	NA	NA
Bromomethane	NA	NA	NA	NA	<10	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	<5	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	<5	NA	NA	NA	NA
Chlorobenzene	NA	NA	NA	NA	<5	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	6 B	NA	NA	NA	NA
Chloromethane	NA	NA	NA	NA	<10	NA	NA	NA	NA
Cis-1,3-dichloropropane	NA	NA	NA	NA	<5	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	<5	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	<5	NA	NA	NA	NA
Methylene Chloride	NA	NA	NA	NA	12 B	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	<5	NA	NA	NA	NA
Tetrachloroethene	NA	NA	NA	NA	<5	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	2 BJ	NA	NA	NA	NA
Total xylenes	NA	NA	NA	NA	<5	NA	NA	NA	NA
Trans-1,2-dichloroethene	NA	NA	NA	NA	<5	NA	NA	NA	NA
Trans-1,3-dichloropropene	NA	NA	NA	NA	<5	NA	NA	NA	NA
Trichloroethene	NA	NA	NA	NA	<5	NA	NA	NA	NA
Vinyl acetate	NA	NA	NA	NA	<10	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	<10	NA	NA	NA	NA

NA = Not Analyzed
J = Estimated value of compound present but less than the specified detection limit
B = Analyte was found in the blank as well as the sample
I = Nuclide identified by GAMANAL analysis of sample spectrum, but values did not exceed room background at the 95% confidence level; no value reported
G = Gamma Spectroscopy Analysis

TABLE G-5

SUBSURFACE MEDIA ANALYSES FOR RADIONUCLIDES
BORING PROFILE SAMPLES
CHARACTERIZATION INVESTIGATION STUDY
SOUTH FIELD

Mon Nov 23

Activity Concentrations Of Upper Fly Ash Area Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
24-01	.00	2.00	RA-226	=	31.50	1.80
	.00	2.00	TH-232	=	3.40	2.80
	.00	2.00	U-238	<	58.20	
	2.00	3.00	RA-226	=	2.70	.70
	2.00	3.00	TH-232	<	.50	
	2.00	3.00	U-238	=	9.90	6.50
	3.00	4.00	RA-226	=	.70	.50
	3.00	4.00	TH-232	=	1.00	.40
	3.00	4.00	U-238	<	14.60	
	4.00	6.00	RA-226	=	1.90	.80
	4.00	6.00	TH-232	=	1.90	.80
	4.00	6.00	U-238	=	16.20	4.80
	6.00	7.00	RA-226	=	1.40	.70
	6.00	7.00	TH-232	<	2.20	
	6.00	7.00	U-238	<	9.10	
	7.00	8.00	RA-226	=	1.00	.60
	7.00	8.00	TH-232	=	.90	.40
	7.00	8.00	U-238	<	7.30	
24-02	.00	2.00	RA-226	<	3.70	
	.00	2.00	TH-232	=	7.60	1.10
	.00	2.00	U-238	<	27.50	
	2.00	4.00	RA-226	=	.60	.30
	2.00	4.00	TH-232	=	1.40	.60
	2.00	4.00	U-238	<	7.60	
	4.00	6.00	RA-226	=	1.00	.80
	4.00	6.00	TH-232	=	1.90	.70
	4.00	6.00	U-238	<	16.20	
	6.00	8.00	RA-226	=	.60	.50
	6.00	8.00	TH-232	=	1.30	.50
	6.00	8.00	U-238	<	11.30	
	10.00	11.00	RA-226	=	.50	.40
	10.00	11.00	TH-232	=	.60	.50
	10.00	11.00	U-238	<	9.80	
	11.00	12.00	RA-226	=	.80	.50
	11.00	12.00	TH-232	<	.30	
	11.00	12.00	U-238	<	12.10	
	12.00	13.00	RA-226	=	.80	.60
	12.00	13.00	TH-232	=	.80	.50
	12.00	13.00	U-238	=	3.70	2.60

Mon Nov 23

Activity Concentrations Of Upper Fly Ash Area Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
24-02	13.00	14.00	RA-226	=	1.00	.30
	13.00	14.00	TH-232	=	1.00	.40
	13.00	14.00	U-238	<	8.70	
	14.00	16.00	RA-226	=	1.00	.60
	14.00	16.00	TH-232	=	1.70	.60
	14.00	16.00	U-238	<	11.20	
	16.00	17.00	RA-226	<	1.20	
	16.00	17.00	TH-232	=	.50	.30
	16.00	17.00	U-238	=	2.70	1.00
	17.00	18.00	RA-226	=	.50	.30
	17.00	18.00	TH-232	<	.30	
	17.00	18.00	U-238	<	7.90	
	18.00	19.00	RA-226	=	.50	.30
	18.00	19.00	TH-232	=	.50	.40
	18.00	19.00	U-238	<	9.40	
	19.00	20.00	RA-226	<	1.20	
	19.00	20.00	TH-232	=	.90	.40
	19.00	20.00	U-238	<	11.10	
24-03	.00	2.00	RA-226	=	.70	.30
	.00	2.00	TH-232	=	1.00	.40
	.00	2.00	U-238	=	17.80	4.70
	2.00	3.00	RA-226	<	1.00	
	2.00	3.00	TH-232	=	1.00	.50
	2.00	3.00	U-238	=	14.30	3.90
	3.00	4.00	RA-226	=	.80	.50
	3.00	4.00	TH-232	<	5.00	
	3.00	4.00	U-238	=	7.80	3.10
	4.00	5.00	RA-226	=	.60	.40
	4.00	5.00	TH-232	<	3.10	
	4.00	5.00	U-238	=	6.20	2.40
	5.00	6.00	RA-226	<	1.10	
	5.00	6.00	TH-232	=	.60	.40
	5.00	6.00	U-238	=	5.00	3.10
	6.00	7.00	RA-226	=	.80	.60
	6.00	7.00	TH-232	=	1.20	.50
	6.00	7.00	U-238	<	13.50	
	7.00	8.00	RA-226	=	1.20	.30
	7.00	8.00	TH-232	<	.80	
	7.00	8.00	U-238	=	8.80	1.50

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Activity Concentrations Of Upper Fly Ash Area Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
24-03	8.00	9.00	RA-226	<	.70	
	8.00	9.00	TH-232	=	.70	.60
	8.00	9.00	U-238	<	13.00	
	9.00	10.00	RA-226	=	.80	.40
	9.00	10.00	TH-232	=	.80	.50
	9.00	10.00	U-238	<	10.60	
24-04	.00	1.00	RA-226	=	4.80	1.00
	.00	1.00	TH-232	<	5.90	
	.00	1.00	U-238	<	29.00	
	1.00	2.00	RA-226	=	.90	.60
	1.00	2.00	TH-232	=	1.40	.70
	1.00	2.00	U-238	=	11.10	5.60
	2.00	3.00	RA-226	=	1.10	.90
	2.00	3.00	TH-232	=	.90	.50
	2.00	3.00	U-238	=	9.80	3.60
	3.00	4.00	RA-226	=	1.10	.50
	3.00	4.00	TH-232	=	1.00	.60
	3.00	4.00	U-238	<	8.70	
24-05	.00	1.00	RA-226	=	46.00	1.10
	.00	1.00	TH-232	<	7.30	
	.00	1.00	U-238	<	32.80	
	1.00	2.00	RA-226	=	34.00	2.10
	1.00	2.00	TH-232	<	7.30	
	1.00	2.00	U-238	<	46.20	
	2.00	3.00	RA-226	=	1.20	.80
	2.00	3.00	TH-232	=	1.10	.50
	2.00	3.00	U-238	=	9.30	3.60
	3.00	4.00	RA-226	<	1.20	
	3.00	4.00	TH-232	<	.40	
	3.00	4.00	U-238	<	16.00	
	4.00	5.00	RA-226	=	1.70	.90
	4.00	5.00	TH-232	<	.60	
	4.00	5.00	U-238	<	9.30	
	5.00	6.00	RA-226	=	.80	.50
	5.00	6.00	TH-232	<	.40	
	5.00	6.00	U-238	<	7.00	
	6.00	7.00	RA-226	=	1.20	.50

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Activity Concentrations Of Upper Fly Ash Area Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
24-05	6.00	7.00	TH-232	<	.50	
	6.00	7.00	U-238	<	14.70	
	7.00	8.00	RA-226	=	1.00	.40
	7.00	8.00	TH-232	<	3.80	
	7.00	8.00	U-238	<	14.20	
24-06	.00	1.00	RA-226	=	5.60	.80
	.00	1.00	TH-232	<	4.60	
	.00	1.00	U-238	<	32.90	
	1.00	2.00	RA-226	=	1.70	.40
	1.00	2.00	TH-232	=	2.10	.50
	1.00	2.00	U-238	<	18.30	
	2.00	3.00	RA-226	=	.60	.40
	2.00	3.00	TH-232	<	.80	
	2.00	3.00	U-238	<	15.40	
	3.00	4.00	RA-226	=	1.10	.50
	3.00	4.00	TH-232	=	1.00	.70
	3.00	4.00	U-238	<	13.10	
	4.00	5.00	RA-226	=	.60	.30
	4.00	5.00	TH-232	=	.50	.30
	4.00	5.00	U-238	<	5.00	
	5.00	6.00	RA-226	<	.30	
	5.00	6.00	TH-232	<	4.70	
	5.00	6.00	U-238	<	12.70	
	6.00	8.00	RA-226	=	.60	.30
	6.00	8.00	TH-232	=	.80	.30
	6.00	8.00	U-238	<	8.10	
24-07	.00	1.00	RA-226	=	4.50	1.60
	.00	1.00	TH-232	=	25.20	1.70
	.00	1.00	U-238	=	38.60	9.70
	1.00	2.00	RA-226	=	1.30	.40
	1.00	2.00	TH-232	=	1.90	.60
	1.00	2.00	U-238	=	12.30	3.70
	2.00	3.00	RA-226	=	.80	.40
	2.00	3.00	TH-232	=	1.50	.60
	2.00	3.00	U-238	=	15.20	3.70
	3.00	4.00	RA-226	<	1.30	
	3.00	4.00	TH-232	=	1.00	.50

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Activity Concentrations Of Upper Fly Ash Area Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
24-07	3.00	4.00	U-238	=	5.50	2.50
	4.00	5.00	RA-226	=	1.00	.60
	4.00	5.00	TH-232	=	1.00	.60
	4.00	5.00	U-238	<	6.80	
	5.00	6.00	RA-226	<	1.90	
	5.00	6.00	TH-232	<	1.50	
	5.00	6.00	U-238	<	10.00	
	6.00	8.00	RA-226	<	.80	
	6.00	8.00	TH-232	<	.30	
	6.00	8.00	U-238	<	12.30	
24-08	.00	1.30	RA-226	<	2.10	
	.00	1.30	TH-232	=	36.50	2.20
	.00	1.30	U-238	=	30.00	10.10
	4.00	5.00	RA-226	<	.10	
	4.00	5.00	TH-232	=	1.20	.40
	4.00	5.00	U-238	<	11.50	
	5.00	6.00	RA-226	=	.60	.40
	5.00	6.00	TH-232	=	.80	.30
	5.00	6.00	U-238	<	5.30	
	6.00	8.00	RA-226	=	.50	.40
	6.00	8.00	TH-232	=	1.10	.30
	6.00	8.00	U-238	<	8.00	
24-09	.00	1.00	RA-226	<	5.50	
	.00	1.00	TH-232	=	78.10	2.90
	.00	1.00	U-238	<	39.30	
	1.00	2.00	RA-226	<	5.10	
	1.00	2.00	TH-232	=	101.00	2.90
	1.00	2.00	U-238	<	41.40	
	2.00	4.00	RA-226	=	2.60	.90
	2.00	4.00	TH-232	=	4.20	.60
	2.00	4.00	U-238	=	12.30	3.60
	4.00	6.00	RA-226	=	1.90	.60
	4.00	6.00	TH-232	=	3.90	.80
	4.00	6.00	U-238	<	27.40	
	6.00	8.00	RA-226	=	1.70	.60
	6.00	8.00	TH-232	=	6.70	1.30
	6.00	8.00	U-238	=	22.10	7.20

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Activity Concentrations Of Upper Fly Ash Area Profile Samples

Borehole	Begin Depth (feet)	End Depth (feet)	Radionuclide	Vq	Activity Concentration (pCi/g)	Uncertainty Value (pCi/g)
24-12	2.00	4.00	TH-232	=	.60	.30
	2.00	4.00	U-238	<	9.30	
	4.00	6.00	RA-226	=	.90	.30
	4.00	6.00	TH-232	=	1.10	.50
	4.00	6.00	U-238	=	5.30	2.80
	6.00	7.00	RA-226	=	.70	.40
	6.00	7.00	TH-232	=	.90	.40
	6.00	7.00	U-238	=	13.20	3.10
	7.00	8.00	RA-226	=	1.40	1.00
	7.00	8.00	TH-232	=	2.00	.60
	7.00	8.00	U-238	=	22.00	4.20
	8.00	10.00	RA-226	=	1.20	.90
	8.00	10.00	TH-232	=	1.00	.60
	8.00	10.00	U-238	=	5.90	3.90
	10.00	12.00	RA-226	=	1.00	.50
	10.00	12.00	TH-232	=	4.30	.60
	10.00	12.00	U-238	=	12.80	5.60
	12.00	14.00	RA-226	=	.60	.50
	12.00	14.00	TH-232	=	1.50	.60
	12.00	14.00	U-238	=	6.30	3.90
	16.00	17.00	RA-226	<	1.70	
	16.00	17.00	TH-232	<	.30	
	16.00	17.00	U-238	<	5.40	
	17.00	18.00	RA-226	<	.80	
	17.00	18.00	TH-232	=	.70	.40
	17.00	18.00	U-238	<	4.20	

414 records selected.

TABLE G-6

SUBSURFACE MEDIA ANALYSES
BORING COMPOSITE SAMPLES
CHARACTERIZATION INVESTIGATION STUDY
SOUTH FIELD

NOTES:

- Only positive detections are presented for organic and inorganic constituents. Non-detected analytes were not presented in the Characterization Investigation Study.
- Qualifiers given for CIS data are laboratory qualifiers. Validation of CIS data has not been completed.
- CIS data not applicable to the OU2 waste unit have been shaded.

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Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
24-01	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	28.00	2.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	9.00	1.00
	RA-228	=	1.60	.80
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	=	.10	.10
	TH-230	=	9.60	.50
	TH-232	<	.10	
	U-234	=	9.10	.40
	U-235	=	.40	.10
	U-238	=	19.00	1.00
24-02	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	3.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	1.20	.40
	RA-228	=	.90	.60
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	=	.20	.10
	TH-230	=	.30	.10
	TH-232	=	.20	.10
	U-234	=	2.00	.20
	U-235	=	.09	.07
	U-238	=	4.90	.40
24-03	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	2.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations

(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

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Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
24-03	RA-226	=	.80	.30
	RA-228	=	.60	.40
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	<	.10	
	TH-230	=	.10	.10
	TH-232	<	.10	
	U-234	=	8.20	.40
	U-235	=	.50	.10
	U-238	=	24.00	1.00
24-04	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	4.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	2.10	.50
	RA-228	=	2.20	.70
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	=	.30	.20
	TH-230	=	.50	.20
	TH-232	<	.10	
	U-234	=	5.80	.30
	U-235	=	.30	.10
	U-238	=	9.20	.40
24-05	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	26.00	2.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	17.00	1.00
	RA-228	<	1.00	
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations

(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

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Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
24-05	TH-228	=	.80	.30
	TH-230	=	10.00	1.00
	TH-232	=	.50	.20
	U-234	=	3.80	.30
	U-235	=	.20	.05
	U-238	=	5.10	.30
24-06	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	4.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	5.00	1.00
	RA-228	=	1.00	.60
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	<	.10	
	TH-230	=	.50	.10
	TH-232	<	.10	
	U-234	=	2.60	.20
	U-235	=	.10	.04
	U-238	=	3.10	.20
24-07	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	2.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	.70	.50
	RA-228	=	3.00	1.00
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	=	.70	.20
	TH-230	=	1.10	.30
	TH-232	=	.60	.20
	U-234	=	15.00	1.00
	U-235	=	.60	.10

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations

(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

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Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
24-07	U-238	=	16.00	1.00
24-08	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	3.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	.70	.50
	RA-228	=	9.00	1.00
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	=	1.30	.20
	TH-230	=	.70	.20
	TH-232	=	1.40	.20
	U-234	=	14.00	1.00
	U-235	=	.80	.10
	U-238	=	17.00	1.00
24-09	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	2.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	.90	.40
	RA-228	=	10.00	1.00
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	=	1.90	.20
	TH-230	=	.50	.10
	TH-232	=	2.10	.20
	U-234	=	15.00	1.00
	U-235	=	.80	.10
	U-238	=	42.00	1.00
24-10	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations

(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

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Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
24-10	PB-210	=	5.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	4.10	.70
	RA-228	=	2.00	.70
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	=	2.30	.80
	TH-230	=	11.00	2.00
	TH-232	=	2.60	.80
	U-234	=	48.00	1.00
	U-235	=	2.20	.20
	U-238	=	50.00	1.00
24-11	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	3.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	1.50	.50
	RA-228	=	1.70	.70
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	=	.20	.10
	TH-230	=	.20	.10
	TH-232	=	.10	.10
	U-234	=	3.70	.30
	U-235	=	.20	.10
	U-238	=	6.60	.40
24-12	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	2.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	.60	.30
	RA-228	=	2.00	.60

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations

(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

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Radiochemical Analysis of Composite Samples of Waste Pit Borings

Borehole Number (a)	Radionuclide (b)	VQ	Activity Concentration (pCi/g,dry)	Uncertainty (pCi/g,dry)
24-12	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	<	.20	
	TH-230	<	.10	
	TH-232	<	.10	
	U-234	=	6.70	.40
	U-235	=	.20	.10
	U-238	=	9.00	.40
25-01	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	=	4.00	1.00
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	2.40	.50
	RA-228	=	1.70	.40
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	<	.10	
	TH-230	=	5.30	.40
	TH-232	<	.10	
	U-234	=	4.50	.30
	U-235	=	.10	.06
	U-238	=	5.10	.30
25-02	CS-137	=	NOT ANALYZED	
	NP-237	=	NOT ANALYZED	
	PB-210	<	1.00	
	PU-238	=	NOT ANALYZED	
	PU-239/240	=	NOT ANALYZED	
	RA-226	=	.40	.10
	RA-228	=	.90	.40
	RU-106	=	NOT ANALYZED	
	SR-90	=	NOT ANALYZED	
	TC-99	=	NOT ANALYZED	
	TH-228	<	.10	
	TH-230	=	.70	.10

(a) Refer to Table 2-1 in Subsection 2.1.2 for boring numbers and grid locations

(b) RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis

Mon Nov 16

Upper Fly Ash Area Organic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure	Qualifier
24-01	FMP-PS-24-001	8705-359-0080	AROCLOR-1242	93.00	UG/KG	J
			AROCLOR-1254	147.00	UG/KG	J
24-02	FMP-PS-24-011	8705-415-0010	METHYLENE CHLORIDE	100.00	UG/KG	J*
			METHYLENE CHLORIDE	110.00	UG/KG	J*
			ACETONE	240.00	UG/KG	J*
			ACETONE	230.00	UG/KG	J*
			ACETONE	250.00	UG/KG	J*
			AROCLOR-1254	510.00	UG/KG	J
24-03	FMP-PS-24-012	8705-415-0030	AROCLOR-1254	39.00	UG/KG	J
24-04	FMP-PS-24-014	8705-415-0040	AROCLOR-1254	670.00	UG/KG	
24-05	FMP-PS-24-043	8705-415-0060	AROCLOR-1254	130.00	UG/KG	J
24-06	FMP-PS-24-017	8705-415-0050	AROCLOR-1254	360.00	UG/KG	
24-07	FMP-PS-24-068	8705-426-0020	AROCLOR-1260	420.00	UG/KG	
			AROCLOR-1242	76.00	UG/KG	J
24-08	FMP-PS-24-066	8705-426-0010	AROCLOR-1254	880.00	UG/KG	
			AROCLOR-1242	1.90	UG/KG	J
24-09	FMP-PS-24-095	8705-426-0030	AROCLOR-1242	42.00	UG/KG	J
			AROCLOR-1260	250.00	UG/KG	
24-10	FMP-PS-24-097	8705-426-0050	AROCLOR-1242	5.70	UG/KG	J
			AROCLOR-1254	290.00	UG/KG	
24-12	FMP-PS-24-167	8705-466-0020	AROCLOR-1260	28.00	UG/KG	J

J = Concentration is below quantification level; * = Common laboratory contaminant

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Mon Nov 16

Upper Fly Ash Area Inorganic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure
24-01	FMP-PS-24-001	8705-359-0080	ALUMINUM, TOTAL	8987.91	MG/KG
			ARSENIC, TOTAL	6.00	MG/KG
			BARIUM, TOTAL	87.88	MG/KG
			CADMIUM, TOTAL	2.85	MG/KG
			CALCIUM, TOTAL	32619.92	MG/KG
			CHROMIUM, TOTAL	13.66	MG/KG
			COBALT, TOTAL	27.73	MG/KG
			COPPER, TOTAL	23.24	MG/KG
			IRON, TOTAL	16055.08	MG/KG
			LEAD, TOTAL	11.04	MG/KG
			MAGNESIUM, TOTAL	15926.62	MG/KG
			MANGANESE, TOTAL	838.02	MG/KG
			MERCURY, TOTAL	1.22	MG/KG
			NICKEL, TOTAL	48.32	MG/KG
			POTASSIUM, TOTAL	632.09	MG/KG
			VANADIUM, TOTAL	15.08	MG/KG
			ZINC, TOTAL	48.52	MG/KG
24-02	FMP-PS-24-011	8705-415-0010	ALUMINUM, TOTAL	13062.21	MG/KG
			ARSENIC, TOTAL	4.10	MG/KG
			BARIUM, TOTAL	118.92	MG/KG
			CADMIUM, TOTAL	4.21	MG/KG
			CALCIUM, TOTAL	79882.49	MG/KG
			CHROMIUM, TOTAL	18.38	MG/KG
			COBALT, TOTAL	9.76	MG/KG
			COPPER, TOTAL	12.83	MG/KG
			IRON, TOTAL	21618.43	MG/KG
			LEAD, TOTAL	16.04	MG/KG
			MAGNESIUM, TOTAL	16823.27	MG/KG
			MANGANESE, TOTAL	892.57	MG/KG
			NICKEL, TOTAL	28.15	MG/KG
			POTASSIUM, TOTAL	1436.25	MG/KG
			VANADIUM, TOTAL	20.10	MG/KG
			ZINC, TOTAL	49.02	MG/KG
24-03	FMP-PS-24-012	8705-415-0030	ALUMINUM, TOTAL	9621.36	MG/KG
			ARSENIC, TOTAL	3.70	MG/KG
			BARIUM, TOTAL	54.74	MG/KG
			CADMIUM, TOTAL	2.89	MG/KG
			CALCIUM, TOTAL	43109.15	MG/KG

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Upper Fly Ash Area Inorganic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure
24-03	FMP-PS-24-012	8705-415-0030	CHROMIUM, TOTAL	13.63	MG/KG
			COPPER, TOTAL	10.74	MG/KG
			IRON, TOTAL	16897.81	MG/KG
			LEAD, TOTAL	15.35	MG/KG
			MAGNESIUM, TOTAL	18728.29	MG/KG
			MANGANESE, TOTAL	328.90	MG/KG
			MERCURY, TOTAL	.43	MG/KG
			NICKEL, TOTAL	21.89	MG/KG
			POTASSIUM, TOTAL	640.46	MG/KG
			VANADIUM, TOTAL	19.21	MG/KG
			ZINC, TOTAL	43.17	MG/KG
24-04	FMP-PS-24-014	8705-415-0040	ALUMINUM, TOTAL	6673.40	MG/KG
			ARSENIC, TOTAL	4.43	MG/KG
			BARIUM, TOTAL	51.07	MG/KG
			CADMIUM, TOTAL	2.12	MG/KG
			CALCIUM, TOTAL	61643.90	MG/KG
			CHROMIUM, TOTAL	9.36	MG/KG
			COPPER, TOTAL	9.57	MG/KG
			IRON, TOTAL	12797.79	MG/KG
			LEAD, TOTAL	15.98	MG/KG
			MAGNESIUM, TOTAL	30281.44	MG/KG
			MANGANESE, TOTAL	461.77	MG/KG
			MERCURY, TOTAL	.37	MG/KG
			NICKEL, TOTAL	13.19	MG/KG
			POTASSIUM, TOTAL	510.72	MG/KG
			VANADIUM, TOTAL	16.17	MG/KG
			ZINC, TOTAL	34.26	MG/KG
24-05	FMP-PS-24-043	8705-415-0060	ALUMINUM, TOTAL	10429.87	MG/KG
			ARSENIC, TOTAL	4.89	MG/KG
			BARIUM, TOTAL	48.37	MG/KG
			CADMIUM, TOTAL	3.07	MG/KG
			CALCIUM, TOTAL	3622.16	MG/KG
			CHROMIUM, TOTAL	14.75	MG/KG
			COPPER, TOTAL	11.27	MG/KG
			IRON, TOTAL	16397.12	MG/KG
			LEAD, TOTAL	11.22	MG/KG
			MAGNESIUM, TOTAL	2828.85	MG/KG
			MANGANESE, TOTAL	319.16	MG/KG

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Upper Fly Ash Area Inorganic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure
24-05	FMP-PS-24-043	8705-415-0060	MERCURY, TOTAL	.12	MG/KG
			NICKEL, TOTAL	20.08	MG/KG
			POTASSIUM, TOTAL	348.48	MG/KG
			VANADIUM, TOTAL	16.60	MG/KG
			ZINC, TOTAL	39.76	MG/KG
24-06	FMP-PS-24-017	8705-415-0050	ALUMINUM, TOTAL	8593.72	MG/KG
			ARSENIC, TOTAL	4.68	MG/KG
			BARIUM, TOTAL	90.88	MG/KG
			CADMIUM, TOTAL	3.26	MG/KG
			CALCIUM, TOTAL	32687.53	MG/KG
			CHROMIUM, TOTAL	12.43	MG/KG
			COBALT, TOTAL	14.67	MG/KG
			COPPER, TOTAL	18.74	MG/KG
			IRON, TOTAL	19422.99	MG/KG
			LEAD, TOTAL	10.35	MG/KG
			MAGNESIUM, TOTAL	19094.89	MG/KG
			MANGANESE, TOTAL	1165.66	MG/KG
			MERCURY, TOTAL	.13	MG/KG
			NICKEL, TOTAL	35.86	MG/KG
			POTASSIUM, TOTAL	468.71	MG/KG
			VANADIUM, TOTAL	18.74	MG/KG
			ZINC, TOTAL	44.22	MG/KG
24-07	FMP-PS-24-068	8705-426-0020	ALUMINUM, TOTAL	14636.47	MG/KG
			ARSENIC, TOTAL	7.06	MG/KG
			BARIUM, TOTAL	72.81	MG/KG
			BERYLLIUM, TOTAL	1.50	MG/KG
			CADMIUM, TOTAL	5.15	MG/KG
			CALCIUM, TOTAL	60526.34	MG/KG
			CHROMIUM, TOTAL	21.69	MG/KG
			COBALT, TOTAL	11.81	MG/KG
			COPPER, TOTAL	19.11	MG/KG
			IRON, TOTAL	23842.80	MG/KG
			LEAD, TOTAL	27.75	MG/KG
			MAGNESIUM, TOTAL	18361.10	MG/KG
			MANGANESE, TOTAL	687.36	MG/KG
			MERCURY, TOTAL	.13	MG/KG
			NICKEL, TOTAL	16.53	MG/KG
			POTASSIUM, TOTAL	1503.60	MG/KG

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Upper Fly Ash Area Inorganic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure
24-07	FMP-PS-24-068	8705-426-0020	VANADIUM, TOTAL	29.64	MG/KG
			ZINC, TOTAL	67.01	MG/KG
24-08	FMP-PS-24-066	8705-426-0010	ALUMINUM, TOTAL	14433.12	MG/KG
			ARSENIC, TOTAL	5.05	MG/KG
			BARIUM, TOTAL	70.08	MG/KG
			CADMIUM, TOTAL	4.85	MG/KG
			CALCIUM, TOTAL	113966.13	MG/KG
			CHROMIUM, TOTAL	19.19	MG/KG
			COBALT, TOTAL	12.72	MG/KG
			COPPER, TOTAL	18.96	MG/KG
			IRON, TOTAL	18726.04	MG/KG
			LEAD, TOTAL	32.98	MG/KG
			MAGNESIUM, TOTAL	29953.35	MG/KG
			MANGANESE, TOTAL	564.37	MG/KG
			NICKEL, TOTAL	25.90	MG/KG
			POTASSIUM, TOTAL	1387.80	MG/KG
			SODIUM, TOTAL	138.78	MG/KG
			VANADIUM, TOTAL	31.91	MG/KG
			ZINC, TOTAL	58.98	MG/KG
24-09	FMP-PS-24-095	8705-426-0030	ALUMINUM, TOTAL	7406.99	MG/KG
			ARSENIC, TOTAL	5.62	MG/KG
			CADMIUM, TOTAL	3.68	MG/KG
			CALCIUM, TOTAL	187187.03	MG/KG
			CHROMIUM, TOTAL	14.11	MG/KG
			COPPER, TOTAL	10.02	MG/KG
			IRON, TOTAL	14073.69	MG/KG
			LEAD, TOTAL	15.88	MG/KG
			MAGNESIUM, TOTAL	14674.92	MG/KG
			MANGANESE, TOTAL	441.72	MG/KG
			MERCURY, TOTAL	.15	MG/KG
			NICKEL, TOTAL	10.22	MG/KG
			POTASSIUM, TOTAL	818.00	MG/KG
			VANADIUM, TOTAL	19.42	MG/KG
			ZINC, TOTAL	42.53	MG/KG
24-10	FMP-PS-24-097	8705-426-0050	ALUMINUM, TOTAL	6958.84	MG/KG
			ARSENIC, TOTAL	31.17	MG/KG

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Upper Fly Ash Area Inorganic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure
24-10	FMP-PS-24-097	8705-426-0050	BARIUM, TOTAL	205.08	MG/KG
			BERYLLIUM, TOTAL	1.43	MG/KG
			CADMIUM, TOTAL	3.82	MG/KG
			CALCIUM, TOTAL	54215.80	MG/KG
			CHROMIUM, TOTAL	15.79	MG/KG
			COPPER, TOTAL	23.45	MG/KG
			IRON, TOTAL	14807.88	MG/KG
			LEAD, TOTAL	55.95	MG/KG
			MAGNESIUM, TOTAL	8523.86	MG/KG
			MANGANESE, TOTAL	780.11	MG/KG
			MERCURY, TOTAL	.26	MG/KG
			NICKEL, TOTAL	12.20	MG/KG
			POTASSIUM, TOTAL	1076.85	MG/KG
			SODIUM, TOTAL	167.51	MG/KG
			VANADIUM, TOTAL	26.32	MG/KG
			ZINC, TOTAL	46.42	MG/KG
24-11	FMP-PS-24-130	8705-466-0010	ALUMINUM, TOTAL	7557.77	MG/KG
			ARSENIC, TOTAL	10.76	MG/KG
			BARIUM, TOTAL	271.04	MG/KG
			CADMIUM, TOTAL	2.43	MG/KG
			CALCIUM, TOTAL	12069.71	MG/KG
			CHROMIUM, TOTAL	12.44	MG/KG
			COPPER, TOTAL	22.45	MG/KG
			IRON, TOTAL	7281.86	MG/KG
			LEAD, TOTAL	13.78	MG/KG
			MAGNESIUM, TOTAL	3305.51	MG/KG
			MANGANESE, TOTAL	238.04	MG/KG
			MERCURY, TOTAL	.15	MG/KG
			NICKEL, TOTAL	13.25	MG/KG
			SODIUM, TOTAL	189.35	MG/KG
			VANADIUM, TOTAL	29.48	MG/KG
			ZINC, TOTAL	36.24	MG/KG
24-12	FMP-PS-24-167	8705-466-0020	ALUMINUM, TOTAL	8156.77	MG/KG
			ARSENIC, TOTAL	5.91	MG/KG
			BARIUM, TOTAL	78.49	MG/KG
			CADMIUM, TOTAL	3.39	MG/KG
			CALCIUM, TOTAL	74419.80	MG/KG
			CHROMIUM, TOTAL	18.32	MG/KG

Upper Fly Ash Area Inorganic Data Summary

Borehole Number	Sample Id	Batch Number	Parameter	Concentration	Unit Of Measure
24-12	FMP-PS-24-167	8705-466-0020	COPPER, TOTAL	11.76	MG/KG
			IRON, TOTAL	18828.88	MG/KG
			LEAD, TOTAL	16.67	MG/KG
			MAGNESIUM, TOTAL	19299.38	MG/KG
			MANGANESE, TOTAL	832.41	MG/KG
			MERCURY, TOTAL	.14	MG/KG
			NICKEL, TOTAL	14.02	MG/KG
			POTASSIUM, TOTAL	1017.90	MG/KG
			SODIUM, TOTAL	135.72	MG/KG
			VANADIUM, TOTAL	25.56	MG/KG
			ZINC, TOTAL	49.31	MG/KG

TABLE G-7

SUBSURFACE MEDIA ANALYSES
RI/FS SAMPLING PROGRAM
SOUTH FIELD

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument

RADIOLOGICAL PARAMETERS	1046 008014 0.0 - 1.5			b	1046 008024 15.0 - 16.5			b	1046 008025 15.0 - 16.5			b	1046 008034 RINSATE			b
Actinium 231		NA				NA				NA				NA		
Cesium 137	<	0.2		J	<	0.2		J	<	0.2		J	<	20.0		R
Lead 210		NA				NA				NA				NA		
Neptunium 237	<	0.6		J	<	0.6		J	<	0.6		J	<	1.0		R
Plutonium 210		NA				NA				NA				NA		
Plutonium 238	<	0.6		R	<	0.6		R	<	0.6		R	<	1.0		R
Plutonium 239/240	<	0.6		R	<	0.6		R	<	0.6		R	<	1.0		R
Protactium 234		NA				NA				NA				NA		
Radium 224		NA				NA				NA				NA		
Radium 226		1.3	± 0.3	J	<	0.3		J		0.6	± 0.2	J	<	1.0		R
Radium 228		1.3	± 0.6	J		0.5	± 0.1	J	<	0.5		J	<	3.0		R
Ruthenium 106	<	1.0		J	<	1.0		J	<	1.0		J	<	150.0		R
Strontium 90	<	0.5		J	<	0.5		J	<	0.5		J	<	5.0		R
Technetium 99	<	2.8		DJ	<	2.4		DJ	<	3.3		DJ	<	30.0		R
Thorium 228		1.1	± 0.4	J	<	0.5		J	<	0.6		J	<	1.0		J
Thorium 230		1.3	± 0.5	J		1.0	± 0.4	J		0.8	± 0.3	J	<	1.0		J
Thorium 232		0.8	± 0.4	J	<	0.6		J	<	0.6		J	<	1.0		J
Total Thorium **		NA				NA				NA				NA		
Uranium 234		1.7	± 0.5			0.6	± 0.2		<	0.6				1.2	± 0.4	J
Uranium 235/236	<	0.6			<	0.6			<	0.6			<	1.0		J
Uranium 238		2.1	± 0.5			0.7	± 0.3		<	0.6			<	1.0		J
Total Uranium **		NA				NA				NA				2.0	± 1.0	R

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

REPORT DATE : 22-APR-92

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SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1455 055900 3.0 -				b	1455 055901 3.75 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			J	<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6				<	0.6			
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		5.9	±	0.4	J		1.3	±	0.1	J
Radium 228		1.3	±	0.1	J		1.6	±	0.2	J
Ruthenium 106	<	1.0			J	<	1.0			J
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			R	<	0.9			J
Thorium 228		1.5	±	0.2	J		1.4	±	0.2	J
Thorium 230		10.3	±	1.3	J		2.1	±	0.3	J
Thorium 232		1.3	±	0.2			1.2	±	0.2	
Total Thorium **		11.6	±	2.2			10.7	±	2.2	
Uranium 234		12.6	±	1.8			2.4	±	0.4	
Uranium 235/236		0.7	±	0.2		<	0.6			
Uranium 238		14.6	±	2.0			3.1	±	0.5	
Total Uranium **		42.6	±	6.9	J		10.3	±	2.9	J

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1456 055902 3.75 -				b	1456 055903 4.25 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			J	<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6				<	0.6			
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240		1.2	±	0.7		<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		0.9	±	0.1	J		1.2	±	0.1	J
Radium 228		0.9	±	0.1	J		1.3	±	0.2	J
Ruthenium 106	<	1.0			J	<	1.0			J
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			R	<	0.9			R
Thorium 228		1.1	±	0.2	J		1.3	±	0.2	J
Thorium 230		1.4	±	0.3	J		1.8	±	0.3	J
Thorium 232		1.0	±	0.2			1.0	±	0.2	
Total Thorium **		9.3	±	2.4			9.4	±	2.1	
Uranium 234		9.4	±	1.3			22.1	±	2.8	
Uranium 235/236		0.7	±	0.2			1.1	±	0.2	
Uranium 238		10.6	±	1.4			22.6	±	2.8	
Total Uranium **		27.7	±	4.9	J		74.4	±	8.7	R

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

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SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1457 055904 3.75 -				b	1457 055905 4.25 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			J	<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6				<	0.6			
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		15.7	±	1.2	J		1.4	±	0.1	J
Radium 228		2.5	±	0.3	J		1.6	±	0.3	J
Ruthenium 106	<	1.0			J	<	1.0			J
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			R	<	0.9			R
Thorium 228		2.6	±	0.6	J		1.3	±	0.2	J
Thorium 230		57.3	±	9.5	J		2.2	±	0.3	J
Thorium 232		3.4	±	0.8			1.3	±	0.2	
Total Thorium **		31.0	±	7.4			11.6	±	2.5	
Uranium 234		26.4	±	3.7			4.1	±	0.6	
Uranium 235/236		1.7	±	0.4		<	0.6			
Uranium 238		28.1	±	3.9			4.4	±	0.6	
Total Uranium **		71.4	±	11.0	J		11.9	±	3.2	J

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
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RADIOLOGICAL PARAMETERS	1458 055913 4.0 -				b	1458 055914 4.5 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			J	<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		1.5	±	0.1	J		1.4	±	0.1	J
Radium 228	<	0.5			R		2.0	±	0.2	J
Ruthenium 106	<	1.0			J	<	1.0			J
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			R	<	0.9			R
Thorium 228		1.8	±	0.3	J		2.1	±	0.3	J
Thorium 230		3.2	±	0.5	J		4.4	±	0.6	J
Thorium 232		1.7	±	0.3			1.9	±	0.3	
Total Thorium **		15.7	±	2.9			16.9	±	3.2	
Uranium 234		24.2	±	3.1			22.4	±	2.8	
Uranium 235/236		1.6	±	0.3			1.2	±	0.2	
Uranium 238		23.7	±	3.0			23.6	±	2.9	
Total Uranium **		76.1	±	12.0	J		59.8	±	9.2	J

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
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RADIOLOGICAL PARAMETERS	1459 055915 5.0 -				b	1459 055916 6.0 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			J	<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		1.6	±	0.1	J		1.3	±	0.1	J
Radium 228		1.4	±	0.2	J		1.3	±	0.2	J
Ruthenium 106	<	1.0			J	<	1.0			J
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			R	<	0.9			R
Thorium 228		1.5	±	0.3	J		1.6	±	0.3	J
Thorium 230		1.6	±	0.3	J		2.2	±	0.4	J
Thorium 232		1.3	±	0.3			1.3	±	0.3	
Total Thorium **		11.8	±	3.0			12.0	±	2.7	
Uranium 234		78.3	±	11.0			57.2	±	7.8	
Uranium 235/236		4.1	±	0.8			2.7	±	0.5	
Uranium 238		82.7	±	12.0			60.8	±	8.3	
Total Uranium **		228.0	±	35.0	J		189.0	±	20.0	J

** Results reported in mg/kg or µg/ℓ

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SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
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RADIOLOGICAL PARAMETERS	1460 055917 3.5 -				b	1460 055918 4.25 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			J	<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		1.1	±	0.1	J		1.1	±	0.1	J
Radium 228		0.9	±	0.2	J		0.9	±	0.1	J
Ruthenium 106	<	1.0			J	<	1.0			J
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			R	<	0.9			R
Thorium 228		1.3	±	0.2	J		1.3	±	0.2	J
Thorium 230		1.7	±	0.3	J		3.2	±	0.5	J
Thorium 232		1.0	±	0.2			1.1	±	0.2	
Total Thorium **		8.6	±	2.1			10.1	±	2.1	
Uranium 234		119.0	±	14.0			75.7	±	10.0	
Uranium 235/236		20.6	±	2.7	E		3.8	±	0.7	
Uranium 238		131.0	±	16.0			78.8	±	11.0	
Total Uranium **		394.0	±	60.0	J		230.0	±	35.0	J

** Results reported in mg/kg or µg/ℓ

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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
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RADIOLOGICAL PARAMETERS	1461 055926 4.0 -				b	1461 055927 5.0 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			J	<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6			R	<	0.6			R
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		1.2	±	0.1	J		1.6	±	0.1	J
Radium 228		1.1	±	0.1	J		1.4	±	0.2	J
Ruthenium 106	<	1.0			J	<	1.0			J
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			R	<	0.9			R
Thorium 228		1.3	±	0.2	J		1.7	±	0.3	J
Thorium 230		4.1	±	0.6	J		2.1	±	0.4	J
Thorium 232		1.0	±	0.2	M		1.4	±	0.3	M
Total Thorium **		9.5	±	1.9			12.6	±	2.7	
Uranium 234		4.7	±	0.6			1.5	±	0.3	
Uranium 235/236	<	0.6			J	<	0.6			J
Uranium 238		5.6	±	0.7			1.4	±	0.3	
Total Uranium **		19.1	±	3.7	J		5.2	±	2.3	J

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SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
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RADIOLOGICAL PARAMETERS	1462 055928 4.0 -				b	1462 055929 5.0 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			J	<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6			R	<	0.6			R
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		1.3	±	0.1	J		1.4	±	0.1	J
Radium 228		0.8	±	0.1	J		1.4	±	0.2	J
Ruthenium 106	<	1.0			J	<	1.0			J
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			R	<	0.9			R
Thorium 228		1.0	±	0.2	J		1.3	±	0.2	J
Thorium 230		3.3	±	0.5	J		2.1	±	0.3	J
Thorium 232		1.0	±	0.2	M		1.3	±	0.2	M
Total Thorium **		9.4	±	2.0			11.5	±	2.6	
Uranium 234		5.0	±	0.7			4.7	±	0.7	
Uranium 235/236	<	0.6			J	<	0.6			J
Uranium 238		6.2	±	0.9			4.7	±	0.7	
Total Uranium **		19.4	±	3.7	J		14.8	±	2.9	J

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
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RADIOLOGICAL PARAMETERS	1463 055930 3.5 -				b	1463 055931 4.5 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2				<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6			R	<	0.6			R
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		0.9	±	0.1			1.5	±	0.1	J
Radium 228		0.7	±	0.1			1.3	±	0.3	J
Ruthenium 106	<	1.0				<	1.0			J
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			R	<	0.9			R
Thorium 228		5.3	±	0.9	J		1.2	±	0.3	J
Thorium 230		4.4	±	0.7	J		2.0	±	0.4	J
Thorium 232		0.7	±	0.2	M		1.2	±	0.2	M
Total Thorium **		6.6	±	2.1			10.4	±	2.6	
Uranium 234		19.7	±	3.2	F		1.1	±	0.2	
Uranium 235/236		2.5	±	0.6	J	<	0.6			J
Uranium 238		61.4	±	9.2			1.5	±	0.2	J
Total Uranium **		121.0	±	13.0			5.5	±	2.3	

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SUBSURFACE MEDIA RADIOLOGICAL DATA
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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
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RADIOLOGICAL PARAMETERS	1464 055939 3.75 -				b	1464 055940 4.5 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			R	<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		1.2	±	0.1	R		1.4	±	0.1	J
Radium 228		0.9	±	0.1	R		1.3	±	0.2	J
Ruthenium 106	<	1.0			R	<	1.0			J
Strontium 90	<	0.5			R	<	0.5			R
Technetium 99	<	0.9			R	<	0.9			R
Thorium 228		1.0	±	0.2	J		1.5	±	0.2	J
Thorium 230		1.5	±	0.2	J		1.8	±	0.3	J
Thorium 232		0.8	±	0.1			1.2	±	0.2	
Total Thorium **		7.5	±	1.6			11.1	±	2.3	
Uranium 234		1.1	±	0.2			2.0	±	0.3	
Uranium 235/236	<	0.6			J	<	0.6			J
Uranium 238		1.4	±	0.2			1.8	±	0.2	
Total Uranium **		10.8	±	2.1	R		5.0	±	2.4	J

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
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RADIOLOGICAL PARAMETERS	1465 055941 3.5 -				b	1465 055942 4.5 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			R	<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		1.1	±	0.1	R		1.3	±	0.1	J
Radium 228		0.8	±	0.1	R		1.3	±	0.2	J
Ruthenium 106	<	1.0			R	<	1.0			J
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			R	<	0.9			R
Thorium 228		1.1	±	0.2	J		1.2	±	0.3	J
Thorium 230		1.3	±	0.2	J		1.4	±	0.3	J
Thorium 232		1.0	±	0.2			0.9	±	0.2	
Total Thorium **		8.8	±	2.0			7.7	±	2.4	
Uranium 234		1.7	±	0.3			3.3	±	0.4	
Uranium 235/236		0.8	±	0.1	J	<	0.6			J
Uranium 238		1.1	±	0.2			3.5	±	0.5	
Total Uranium **		7.3	±	1.9	R		4.3	±	2.7	J

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RADIOLOGICAL PARAMETERS	1466 055943 3.0 -				b	1466 055944 4.5 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			R	<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6				<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		0.8	±	0.1	R		1.6	±	0.1	J
Radium 228	<	0.5			R		1.5	±	0.2	J
Ruthenium 106	<	1.0			J	<	1.0			J
Strontium 90	<	0.5					0.92	±	0.24	
Technetium 99	<	0.9			R	<	0.9			R
Thorium 228		0.8	±	0.2	J		1.4	±	0.3	J
Thorium 230		1.3	±	0.3	J		1.4	±	0.3	J
Thorium 232		0.8	±	0.2			1.1	±	0.3	
Total Thorium **		7.6	±	2.5			10.3	±	2.7	
Uranium 234		1.1	±	0.2			4.7	±	0.6	
Uranium 235/236	<	0.6			J	<	0.6			J
Uranium 238		1.3	±	0.2			5.4	±	0.7	
Total Uranium **		10.6	±	2.1	J		4.7	±	2.7	J

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
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RADIOLOGICAL PARAMETERS	1467 055952 2.5 -				b	1467 055953 3.5 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2				<	0.2			
Lead 210		NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6			J	<	0.6			J
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226	<	0.3					1.6	±	0.1	
Radium 228		1.0	±	0.2			1.4	±	0.2	
Ruthenium 106	<	1.0				<	1.0			
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			R	<	0.9			R
Thorium 228		1.0	±	0.2	J		1.1	±	0.2	J
Thorium 230		1.7	±	0.3	J		2.0	±	0.4	J
Thorium 232		0.7	±	0.1	J		1.2	±	0.2	J
Total Thorium **		6.3	±	1.5	J		10.6	±	2.6	J
Uranium 234		3.8	±	0.6	MJ		1.0	±	0.2	MJ
Uranium 235/236	<	0.6			J	<	0.6			J
Uranium 238		4.1	±	0.6	MJ		1.3	±	0.3	MJ
Total Uranium **		11.4	±	3.2			8.6	±	2.5	

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RADIOLOGICAL PARAMETERS	1468 055954 2.5 -				b	1468 055955 3.5 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			J	<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6			J	<	0.6			J
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		0.9	±	0.1	J		1.6	±	0.1	J
Radium 228		0.9	±	0.1	J	<	0.5			J
Ruthenium 106	<	1.0			J	<	1.0			J
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			R	<	0.9			R
Thorium 228		0.9	±	0.2	J		1.2	±	0.2	J
Thorium 230		1.6	±	0.3	J		1.8	±	0.3	J
Thorium 232		0.8	±	0.1	J		1.1	±	0.2	J
Total Thorium **		7.0	±	1.7	J		10.2	±	2.3	J
Uranium 234		3.4	±	0.5	MJ		1.3	±	0.2	MJ
Uranium 235/236	<	0.6			J	<	0.6			J
Uranium 238		3.6	±	0.5	MJ		1.3	±	0.2	MJ
Total Uranium **		12.3	±	2.7	J	<	4.5			J

** Results reported in mg/kg or µg/ℓ

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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
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RADIOLOGICAL PARAMETERS	1469 055956 2.5 -				b	1469 055957 3.5 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			J	<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			J	<	0.6			J
Plutonium 239/240	<	0.6			J	<	0.6			J
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226	<	0.9			DJ		1.3	±	0.1	J
Radium 228	<	0.7			DJ		1.4	±	0.2	J
Ruthenium 106	<	1.0			J	<	1.0			J
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			R	<	0.9			R
Thorium 228		0.9	±	0.2	J		1.0	±	0.2	J
Thorium 230		1.2	±	0.2	J		1.2	±	0.3	J
Thorium 232	<	0.6			J		0.9	±	0.2	J
Total Thorium **		4.9	±	1.4	J		8.0	±	2.4	J
Uranium 234		2.6	±	0.4	MJ		1.1	±	0.2	MJ
Uranium 235/236	<	0.6			J	<	0.6			J
Uranium 238		3.2	±	0.4	MJ		1.4	±	0.2	MJ
Total Uranium **		10.9	±	2.6	J		5.0	±	2.5	J

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
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Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
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RADIOLOGICAL PARAMETERS	1470 055966 3.0 -				b	1470 055967 4.0 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2				<	0.2			
Lead 210		NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA			
Plutonium 238	<	0.6				<	0.6			
Plutonium 239/240	<	0.6				<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		1.2	±	0.1		<	0.3			
Radium 228		0.9	±	0.1			1.0	±	0.2	
Ruthenium 106	<	1.0				<	1.0			
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			J	<	0.9			J
Thorium 228		1.1	±	0.2			1.0	±	0.2	
Thorium 230		1.9	±	0.3			1.6	±	0.3	
Thorium 232		1.1	±	0.2			0.9	±	0.2	
Total Thorium **		9.7	±	2.0			8.1	±	1.9	
Uranium 234		3.8	±	0.6			1.5	±	0.3	
Uranium 235/236	<	0.6				<	0.6			
Uranium 238		4.0	±	0.6			1.6	±	0.3	
Total Uranium **		11.6	±	2.8			5.1	±	2.5	

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SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
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the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	1471 055968 4.0 -				b	1471 055969 5.5 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2				<	0.2			
Lead 210		NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA			
Plutonium 238	<	0.6				<	0.6			
Plutonium 239/240	<	0.6				<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		1.2	±	0.1		<	0.3			
Radium 228		1.0	±	0.1			1.1	±	0.1	
Ruthenium 106	<	1.0				<	1.0			
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			J	<	0.9			J
Thorium 228		0.9	±	0.2			1.2	±	0.2	
Thorium 230		1.2	±	0.3			1.9	±	0.3	
Thorium 232		0.9	±	0.2			1.0	±	0.2	
Total Thorium **		7.7	±	2.1			9.1	±	2.1	
Uranium 234		1.5	±	0.2			1.0	±	0.2	
Uranium 235/236	<	0.6				<	0.6			
Uranium 238		2.1	±	0.3			1.4	±	0.2	
Total Uranium **		6.9	±	2.2			5.2	±	2.4	

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SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
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RADIOLOGICAL PARAMETERS	1472 055970 4.0 -				b	1472 055971 5.0 -				b
Actinium 231		NA					NA			
Cesium 137	<	0.2				<	0.2			
Lead 210		NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA			
Plutonium 238	<	0.6				<	0.6			
Plutonium 239/240	<	0.6				<	0.6			
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		1.3	±	0.1			1.1	±	0.1	
Radium 228		1.0	±	0.2			1.1	±	0.2	
Ruthenium 106	<	1.0				<	1.0			
Strontium 90	<	0.5				<	0.5			
Technetium 99	<	0.9			J	<	0.9			J
Thorium 228		1.0	±	0.2			1.1	±	0.2	
Thorium 230		2.9	±	0.4			1.6	±	0.3	
Thorium 232		0.9	±	0.2			1.0	±	0.2	
Total Thorium **		8.1	±	1.8			9.5	±	2.0	
Uranium 234		3.5	±	0.5			2.1	±	0.3	
Uranium 235/236	<	0.6				<	0.6			
Uranium 238		3.6	±	0.5			2.1	±	0.3	
Total Uranium **		10.2	±	2.7			9.9	±	2.5	

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SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
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RADIOLOGICAL PARAMETERS	1516 055371 0.0 - 0.5				1516 055373 1.0 - 1.5				1516 055375 2.0 - 2.5				1516 055377 3.0 - 3.5			
Actinium 231		NA				NA				NA				NA		
Cesium 137		0.2	±	0.1	<	0.2			<	0.2			<	0.2		
Lead 210		NA				NA				NA				NA		
Neptunium 237	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 210		NA				NA				NA				NA		
Plutonium 238		0.8	±	0.3	<	0.6			<	0.6			<	0.6		
Plutonium 239/240	<	0.6			<	0.6			<	0.6			<	0.6		
Protactium 234		NA				NA				NA				NA		
Radium 224		NA				NA				NA				NA		
Radium 226		1.4	±	0.1	<	0.3			<	0.3				0.5	±	0.1
Radium 228		0.9	±	0.2	<	0.5			<	0.5			<	0.5		
Ruthenium 106	<	1.0			<	1.0			<	1.0			<	1.0		
Strontium 90	<	0.5			<	0.5			<	0.5				1.2	±	0.2
Technetium 99	<	0.9			<	0.9			<	0.9			<	0.9		
Thorium 228		1.0	±	0.2	<	0.6				0.7	±	0.1	<	0.6		
Thorium 230		5.6	±	0.8		3.1	±	0.4		0.8	±	0.1		0.8	±	0.1
Thorium 232		1.1	±	0.2	<	0.6			<	0.6			<	0.6		
Total Thorium **		10.0	±	2.1		3.0	±	0.9		2.3	±	0.8		3.0	±	1.0
Uranium 234		4.6	±	0.6		2.6	±	0.4		1.3	±	0.2		1.2	±	0.2
Uranium 235/236	<	0.6			<	0.6			<	0.6			<	0.6		
Uranium 238		7.0	±	0.9		2.7	±	0.4		1.4	±	0.2		1.7	±	0.2
Total Uranium **		26.4	±	5.0		12.9	±	2.8		8.1	±	1.9		3.4	±	1.5

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SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
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RADIOLOGICAL PARAMETERS	1516 055379 4.0 - 4.5				1516 055383 6.0 - 6.5				1516 055387 8.0 - 8.5				1516 055389 9.0 - 9.5			
				-				-				-				-
Actinium 231		NA				NA				NA				NA		
Cesium 137	<	0.2			<	0.2			<	0.2			<	0.2		
Lead 210		NA				NA				NA				NA		
Neptunium 237	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 210		NA				NA				NA				NA		
Plutonium 238	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 239/240	<	0.6			<	0.6			<	0.6			<	0.6		
Protactium 234		NA				NA				NA				NA		
Radium 224		NA				NA				NA				NA		
Radium 226		0.6	±	0.1		0.9	±	0.1		0.5	±	0.1		0.6	±	0.1
Radium 228	<	0.5			<	0.5			<	0.5			<	0.5		
Ruthenium 106	<	1.0			<	1.0			<	1.0			<	1.0		
Strontium 90	<	0.5			<	0.5			<	0.5			<	0.5		
Technetium 99	<	0.9			<	0.9			<	0.9			<	0.9		
Thorium 228	<	0.6			<	0.6			<	0.6			<	0.6		
Thorium 230		1.0	±	0.2		1.4	±	0.2		0.7	±	0.1		0.7	±	0.1
Thorium 232	<	0.6			<	0.6			<	0.6			<	0.6		
Total Thorium **		1.8	±	0.7		3.2	±	1.0		1.3	±	0.9	<	0.9		
Uranium 234		1.7	±	0.2		2.3	±	0.3		1.5	±	0.2		1.5	±	0.2
Uranium 235/236	<	0.6			<	0.6			<	0.6			<	0.6		
Uranium 238		1.9	±	0.3		2.8	±	0.4		1.5	±	0.2		1.9	±	0.3
Total Uranium **		6.9	±	1.6		9.4	±	1.9		7.9	±	1.7		6.6	±	1.9

** Results reported in mg/kg or µg/ℓ

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SUBSURFACE MEDIA RADIOLOGICAL DATA
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RADIOLOGICAL PARAMETERS	1516 055391 10. - 10.5	1516 055393 11. - 11.5	1516 055395 12.0 - 12.5	1516 055399 14.0 - 14.5
Actinium 231	NA	NA	NA	NA
Cesium 137	< 0.2	< 0.2	< 0.2	< 0.2
Lead 210	NA	NA	NA	NA
Neptunium 237	< 0.6	< 0.6	< 0.6	< 0.6
Plutonium 210	NA	NA	NA	NA
Plutonium 238	< 0.6	< 0.6	< 0.6	< 0.6
Plutonium 239/240	< 0.6	< 0.6	< 0.6	< 0.6
Protactium 234	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA
Radium 226	0.5 ± 0.1	0.4 ± 0.1	< 0.3	0.5 ± 0.1
Radium 228	< 0.5	< 0.5	< 0.5	< 0.5
Ruthenium 106	< 1.0	< 1.0	< 1.0	< 1.0
Strontium 90	< 0.5	< 0.5	< 0.5	< 0.5
Technetium 99	< 0.9	< 0.9	< 0.9	< 0.9
Thorium 228	< 0.6	< 0.6	< 0.6	0.7 ± 0.2
Thorium 230	0.8 ± 0.2	< 0.6	1.0 ± 0.2	1.2 ± 0.3
Thorium 232	< 0.6	< 0.6	< 0.6	< 0.6
Total Thorium **	2.5 ± 1.2	1.9 ± 0.8	4.7 ± 1.3	4.4 ± 1.8
Uranium 234	1.5 ± 0.2	1.6 ± 0.2	1.8 ± 0.3	2.3 ± 0.3
Uranium 235/236	< 0.6	< 0.6	< 0.6	< 0.6
Uranium 238	1.5 ± 0.2	1.8 ± 0.3	2.0 ± 0.3	2.6 ± 0.3
Total Uranium **	9.4 ± 2.1	5.5 ± 0.9	9.0 ± 1.9	6.7 ± 1.9

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RADIOLOGICAL PARAMETERS	1516 055401 15. - 15.5				1516 055405 17. - 17.5				1516 055407 18. - 18.5				1516 055409 19. - 19.5			
Actinium 231		NA				NA				NA				NA		
Cesium 137	<	0.2			<	0.2			<	0.2			<	0.2		
Lead 210		NA				NA				NA				NA		
Neptunium 237	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 210		NA				NA				NA				NA		
Plutonium 238	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 239/240	<	0.6			<	0.6			<	0.6			<	0.6		
Protactium 234		NA				NA				NA				NA		
Radium 224		NA				NA				NA				NA		
Radium 226	<	0.3				0.5	±	0.1		0.6	±	0.1	<	0.3		
Radium 228	<	0.5			<	0.5			<	0.5			<	0.5		
Ruthenium 106	<	1.0			<	1.0			<	1.0			<	1.0		
Strontium 90	<	0.5			<	0.5			<	0.5			<	0.5		
Technetium 99	<	0.9			<	0.9			<	0.9			<	0.9		
Thorium 228		0.7	±	0.2	<	0.6			<	0.6			<	0.6		
Thorium 230		1.6	±	0.3		0.8	±	0.1		0.7	±	0.1		0.9	±	0.2
Thorium 232	<	0.6			<	0.6			<	0.6			<	0.6		
Total Thorium **		4.8	±	1.5		1.7	±	0.8		1.8	±	0.8		1.9	±	0.8
Uranium 234		1.6	±	0.2		1.0	±	0.1		2.3	±	0.4	<	0.6		
Uranium 235/236	<	0.6			<	0.6			<	0.6			<	0.6		
Uranium 238		1.8	±	0.3		0.8	±	0.1		2.7	±	0.4	<	0.6		
Total Uranium **		8.6	±	1.9		2.6	±	1.3		6.3	±	1.6		6.8	±	1.7

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RADIOLOGICAL PARAMETERS	1517 055413 0.0 - 0.5				1517 055416 1.5 - 2.0				1517 055419 3.0 - 3.5				1517 055422 4.5 - 5.0			
Actinium 231		NA				NA				NA				NA		
Cesium 137	<	0.2			<	0.2			<	0.2			<	0.2		
Lead 210		NA				NA				NA				NA		
Neptunium 237	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 210		NA				NA				NA				NA		
Plutonium 238	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 239/240	<	0.6			<	0.6			<	0.6			<	0.6		
Protactium 234		NA				NA				NA				NA		
Radium 224		NA				NA				NA				NA		
Radium 226	<	0.3				0.7	±	0.1		1.8	±	0.2	<	0.3		
Radium 228	<	0.5				0.6	±	0.1	<	0.8			<	0.5		
Ruthenium 106	<	1.0			<	1.0			<	1.1			<	1.0		
Strontium 90	<	0.5				0.7	±	0.2	<	0.5			<	0.5		
Technetium 99	<	0.9			<	0.9			<	0.9			<	0.9		
Thorium 228	<	0.6			<	0.6			<	0.6			<	0.6		
Thorium 230		1.1	±	0.2		0.8	±	0.2		0.9	±	0.2		0.7	±	0.2
Thorium 232	<	0.6			<	0.6			<	0.6			<	0.6		
Total Thorium **		4.1	±	1.2		4.7	±	1.5		2.2	±	0.9	<	1.4		
Uranium 234		1.1	±	0.2		1.0	±	0.2	<	0.6			<	0.6		
Uranium 235/236	<	0.6			<	0.6			<	0.6			<	0.6		
Uranium 238		1.5	±	0.2		0.8	±	0.1	<	0.6			<	0.6		
Total Uranium **		3.0	±	1.8		5.8	±	1.6		5.9	±	1.6		5.1	±	1.3

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RADIOLOGICAL PARAMETERS	1517 055425 6.0 - 6.5				1517 055427 7.0 - 7.5				1517 055429 8.0 - 8.5				1517 055431 9.0 - 9.5			
Actinium 231		NA				NA				NA				NA		
Cesium 137	<	0.2			<	0.2			<	0.2			<	0.2		
Lead 210		NA				NA				NA				NA		
Neptunium 237	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 210		NA				NA				NA				NA		
Plutonium 238	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 239/240	<	0.6			<	0.6			<	0.6			<	0.6		
Protactium 234		NA				NA				NA				NA		
Radium 224		NA				NA				NA				NA		
Radium 226		0.4	±	0.1		0.5	±	0.1		3.9	±	0.5		0.6	±	0.1
Radium 228	<	0.5			<	0.5			<	0.5			<	0.5		
Ruthenium 106	<	1.0			<	1.0			<	1.0			<	1.0		
Strontium 90	<	0.5			<	0.5			<	0.5			<	0.5		
Technetium 99	<	0.9			<	0.9			<	0.9			<	0.9		
Thorium 228	<	0.6			<	0.6			<	0.6			<	0.6		
Thorium 230		0.7	±	0.1		0.6	±	0.1		0.9	±	0.2		0.7	±	0.1
Thorium 232	<	0.6			<	0.6			<	0.6			<	0.6		
Total Thorium **		2.0	±	0.8		1.6	±	1.0		1.5	±	0.7		2.7	±	1.0
Uranium 234	<	0.6			<	0.6				1.4	±	0.2	<	0.6		
Uranium 235/236	<	0.6			<	0.6			<	0.6			<	0.6		
Uranium 238		0.6	±	0.1		0.6	±	0.1	<	0.6				0.6	±	0.1
Total Uranium **		1.8	±	0.4		1.8	±	0.4		1.2	±	0.3		1.9	±	1.5

** Results reported in mg/kg or µg/ℓ

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RADIOLOGICAL PARAMETERS	1517 055433 10. - 10.5				1517 055437 12. - 12.5				1517 055440 13. - 14.0				1517 055443 15. - 15.5			
				-				-				-				-
Actinium 231		NA				NA				NA				NA		
Cesium 137	<	0.2			<	0.2			<	0.2			<	0.2		
Lead 210		NA				NA				NA				NA		
Neptunium 237	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 210		NA				NA				NA				NA		
Plutonium 238	<	0.6				1.0	±	0.2	<	0.6			<	0.6		
Plutonium 239/240	<	0.6			<	0.6			<	0.6			<	0.6		
Protactium 234		NA				NA				NA				NA		
Radium 224		NA				NA				NA				NA		
Radium 226		0.5	±	0.1		0.5	±	0.1		0.4	±	0.1		0.4	±	0.1
Radium 228	<	0.5			<	0.5			<	0.5			<	0.5		
Ruthenium 106	<	1.0			<	1.0			<	1.0			<	1.0		
Strontium 90	<	0.5			<	0.5			<	0.5			<	0.5		
Technetium 99	<	0.9			<	0.9			<	0.9			<	0.9		
Thorium 228	<	0.6			<	0.6			<	0.6			<	0.6		
Thorium 230	<	0.6				2.0	±	0.4	<	0.6			<	0.6		
Thorium 232	<	0.6			<	0.6			<	0.6			<	0.6		
Total Thorium **		1.6	±	1.0		1.8	±	1.1		1.7	±	0.8		1.5	±	0.9
Uranium 234		0.8	±	0.1	<	0.6			<	0.6			<	0.6		
Uranium 235/236	<	0.6			<	0.6			<	0.6			<	0.6		
Uranium 238	<	0.6			<	0.6			<	0.6			<	0.6		
Total Uranium **		1.5	±	0.4		5.9	±	1.6		1.4	±	0.4		1.8	±	0.5

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SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
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RADIOLOGICAL PARAMETERS	1517 055446 16. - 17.0				1517 055449 18. - 18.5				1517 055451 19. - 19.5			
Actinium 231		NA				NA				NA		
Cesium 137	<	0.2			<	0.2			<	0.2		
Lead 210		NA				NA				NA		
Neptunium 237	<	0.6			<	0.6			<	0.6		
Plutonium 210		NA				NA				NA		
Plutonium 238	<	0.6			<	0.6			<	0.6		
Plutonium 239/240	<	0.6			<	0.6			<	0.6		
Protactium 234		NA				NA				NA		
Radium 224		NA				NA				NA		
Radium 226		0.5	±	0.1		0.5	±	0.1		0.6	±	0.1
Radium 228	<	0.5			<	0.5			<	0.5		
Ruthenium 106	<	1.0			<	1.0			<	1.0		
Strontium 90	<	0.5			<	0.5			<	0.5		
Technetium 99	<	0.9			<	0.9			<	0.9		
Thorium 228		1.9	±	0.3	<	0.6			<	0.6		
Thorium 230	<	0.6				0.9	±	0.2		1.0	±	0.1
Thorium 232	<	0.6			<	0.6			<	0.6		
Total Thorium **		1.0	±	0.7		2.0	±	0.9		2.3	±	0.8
Uranium 234	<	0.6			<	0.6			<	0.6		
Uranium 235/236	<	0.6			<	0.6			<	0.6		
Uranium 238		0.6	±	0.1	<	0.6			<	0.6		
Total Uranium **		5.3	±	1.4		1.5	±	0.4		5.6	±	1.5

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RADIOLOGICAL PARAMETERS	1518 055454 0.0 - 0.5				1518 055456 1.0 - 1.5				1518 055458 2.0 - 2.5				1518 055460 3.0 - 3.5			
Actinium 231		NA				NA				NA				NA		
Cesium 137	<	0.2			<	0.2			<	0.2			<	0.2		
Lead 210		NA				NA				NA				NA		
Neptunium 237	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 210		NA				NA				NA				NA		
Plutonium 238	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 239/240	<	0.6			<	0.6			<	0.6			<	0.6		
Protactium 234		NA				NA				NA				NA		
Radium 224		NA				NA				NA				NA		
Radium 226	<	0.3				0.7	±	0.1		0.5	±	0.1	<	0.3		
Radium 228	<	0.5			<	0.6			<	0.5			<	0.5		
Ruthenium 106	<	1.0			<	1.1			<	1.0			<	1.0		
Strontium 90	<	0.5			<	0.5			<	0.5			<	0.7		
Technetium 99	<	0.9			<	0.9			<	0.9			<	0.9		
Thorium 228		1.2	±	0.2	<	0.6			<	0.6			<	0.6		
Thorium 230		1.6	±	0.3		0.7	±	0.1		0.8	±	0.2		0.6	±	0.1
Thorium 232		0.6	±	0.1	<	0.6			<	0.6			<	0.6		
Total Thorium **		5.7	±	1.7		1.7	±	0.8		2.1	±	1.1		1.8	±	0.8
Uranium 234		1.2	±	0.2	<	0.6			<	0.6			<	1.2		
Uranium 235/236	<	0.6			<	0.6			<	0.6			<	1.2		
Uranium 238		1.2	±	0.2	<	0.6			<	0.6			<	1.2		
Total Uranium **		6.2	±	1.8		1.5	±	0.4		4.2	±	1.3		5.7	±	1.5

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SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
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RADIOLOGICAL PARAMETERS	1518 055462 4.0 - 4.5				1518 055464 5.0 - 5.5				1518 055466 6.0 - 6.5				1518 055468 7.0 - 7.5			
Actinium 231		NA				NA				NA				NA		
Cesium 137	<	0.2			<	0.2			<	0.2			<	0.2		
Lead 210		NA				NA				NA				NA		
Neptunium 237	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 210		NA				NA				NA				NA		
Plutonium 238	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 239/240	<	0.6			<	0.6			<	0.6			<	0.6		
Protactium 234		NA				NA				NA				NA		
Radium 224		NA				NA				NA				NA		
Radium 226		0.5	±	0.1		0.7	±	0.1		0.8	±	0.1	<	0.3		
Radium 228	<	0.5			<	0.5			<	0.5			<	0.5		
Ruthenium 106	<	1.0			<	1.0			<	1.0			<	1.0		
Strontium 90	<	0.5			<	0.5			<	0.6			<	0.5		
Technetium 99	<	0.9			<	0.9			<	0.9			<	0.9		
Thorium 228	<	0.6			<	0.6				0.7	±	0.1		0.6	±	0.1
Thorium 230		0.8	±	0.1		1.1	±	0.2		1.2	±	0.2		1.2	±	0.2
Thorium 232	<	0.6			<	0.6				0.6	±	0.1	<	0.6		
Total Thorium **		2.1	±	0.9		2.8	±	1.3		5.6	±	1.6		3.4	±	1.1
Uranium 234	<	0.6				0.7	±	0.1		0.6	±	0.1		0.6	±	0.1
Uranium 235/236	<	0.6			<	0.6			<	0.6			<	0.6		
Uranium 238	<	0.6				0.9	±	0.1		0.9	±	0.1		0.6	±	0.1
Total Uranium **		1.8	±	0.4		5.4	±	1.7		7.6	±	2.1		6.0	±	1.7

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RADIOLOGICAL PARAMETERS	1518 055470 8.0 - 8.5				1518 055472 9.0 - 9.5				1518 055474 10.0 - 10.5				1518 055476 11.0 - 11.5			
Actinium 231		NA				NA				NA				NA		
Cesium 137	<	0.2			<	0.2			<	0.2			<	0.2		
Lead 210		NA				NA				NA				NA		
Neptunium 237	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 210		NA				NA				NA				NA		
Plutonium 238	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 239/240	<	0.6			<	0.6			<	0.6			<	0.6		
Protactium 234		NA				NA				NA				NA		
Radium 224		NA				NA				NA				NA		
Radium 226		0.6	±	0.1		0.5	±	0.1		0.4	±	0.6	<	0.3		
Radium 228	<	0.5			<	0.5			<	0.5			<	0.5		
Ruthenium 106	<	1.0			<	1.0			<	1.0			<	1.0		
Strontium 90	<	0.5			<	0.5			<	0.5			<	0.5		
Technetium 99	<	0.9			<	0.9			<	0.9			<	0.9		
Thorium 228	<	0.6				1.5	±	0.3	<	0.6				5.9	±	0.9
Thorium 230		0.9	±	0.1		0.7	±	0.1		0.9	±	0.2		3.0	±	0.5
Thorium 232	<	0.6			<	0.6			<	0.6				5.6	±	0.9
Total Thorium **		3.5	±	1.0		2.8	±	1.2		2.6	±	1.1		50.5	±	8.4
Uranium 234	<	0.6			<	0.6				0.7	±	0.2		0.6	±	0.2
Uranium 235/236	<	0.6			<	0.6			<	0.6				0.9	±	0.2
Uranium 238		0.6	±	0.1	<	0.6				0.7	±	0.2		0.9	±	0.2
Total Uranium **		5.6	±	1.5		1.6	±	0.4	<	1.8				5.3	±	1.4

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SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

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RADIOLOGICAL PARAMETERS	1518 055478 12.0 - 12.5				1518 055481 13.5 - 14.0				1518 055483 14.5 - 15.0				1518 055485 15.5 - 16.0			
Actinium 231		NA				NA				NA				NA		
Cesium 137	<	0.2			<	0.2			<	0.2			<	0.2		
Lead 210		NA				NA				NA				NA		
Neptunium 237	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 210		NA				NA				NA				NA		
Plutonium 238	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 239/240	<	0.6			<	0.6			<	0.6			<	0.6		
Protactium 234		NA				NA				NA				NA		
Radium 224		NA				NA				NA				NA		
Radium 226		0.5	±	0.1		0.5	±	0.1	<	0.5			<	0.3		
Radium 228	<	0.5			<	0.5			<	1.2			<	0.5		
Ruthenium 106	<	1.0			<	1.0			<	2.1			<	1.0		
Strontium 90	<	0.5			<	0.5			<	0.5			<	0.5		
Technetium 99	<	0.9			<	0.9			<	0.9			<	0.9		
Thorium 228	<	0.6			<	0.6			<	0.6			<	0.6		
Thorium 230		1.1	±	0.3	<	0.6				1.0	±	0.2		1.1	±	0.2
Thorium 232	<	0.6			<	0.6			<	0.6			<	0.6		
Total Thorium **	<	2.4				1.3	±	0.8	<	1.7				2.6	±	1.1
Uranium 234		0.8	±	0.2		0.9	±	0.1		1.1	±	0.2		2.9	±	0.5
Uranium 235/236	<	0.6			<	0.6				0.8	±	0.2	<	0.6		
Uranium 238		0.7	±	0.2		0.8	±	0.1		0.7	±	0.2	<	0.6		
Total Uranium **	<	2.8				4.6	±	1.3	<	12.0				4.3	±	1.4

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RADIOLOGICAL PARAMETERS	1518 055487 16.5 - 17.0				1518 055489 17.5 - 18.0				1518 055491 18.5 - 19.0				1518 055493 19.5 - 20.0			
Actinium 231		NA				NA				NA				NA		
Cesium 137	<	0.2			<	0.2			<	0.2			<	0.2		
Lead 210		NA				NA				NA				NA		
Neptunium 237	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 210		NA				NA				NA				NA		
Plutonium 238	<	0.6			<	0.6			<	0.6			<	0.6		
Plutonium 239/240	<	0.6			<	0.6			<	0.6			<	0.6		
Protactium 234		NA				NA				NA				NA		
Radium 224		NA				NA				NA				NA		
Radium 226		0.5	±	0.1		0.6	±	0.1		0.4	±	0.1		0.6	±	0.1
Radium 228	<	0.5			<	0.5			<	0.5			<	0.5		
Ruthenium 106	<	1.0			<	1.0			<	1.0			<	1.0		
Strontium 90	<	0.5			<	0.5			<	0.5			<	0.5		
Technetium 99	<	0.9			<	0.9			<	0.9			<	0.9		
Thorium 228	<	0.6				0.7	±	0.2		0.7	±	0.2	<	0.6		
Thorium 230		1.0	±	0.3		0.9	±	0.2		0.9	±	0.2		1.1	±	0.3
Thorium 232	<	0.6			<	0.6			<	0.6			<	0.6		
Total Thorium **	<	1.7				4.0	±	1.8		4.0	±	1.8		2.6	±	1.4
Uranium 234		2.0	±	0.8	<	0.6			<	0.6				0.8	±	0.3
Uranium 235/236	<	0.6			<	0.6			<	0.6			<	0.6		
Uranium 238		0.6	±	0.2		0.7	±	0.1		0.7	±	0.1	<	0.6		
Total Uranium **	<	2.4				5.5	±	1.5		1.7	±	1.1		5.8	±	1.6

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RI/FS DATA

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RADIOLOGICAL PARAMETERS	2046 008950 30.0 - 31.5				b	2046 008956 61.0 - 62.5			-
Actinium 231		NA				NA			
Cesium 137	<	0.2				NA			
Lead 210		NA				NA			
Neptunium 237	<	0.6				NA			
Plutonium 210		NA				NA			
Plutonium 238	<	0.6			J	NA			
Plutonium 239/240	<	0.6				NA			
Protactium 234		NA				NA			
Radium 224		NA				NA			
Radium 226		0.5	±	0.1		NA			
Radium 228	<	0.5				NA			
Ruthenium 106	<	1.0				NA			
Strontium 90		0.7	±	0.2	J	NA			
Technetium 99	<	0.9			J	NA			
Thorium 228	<	0.6			J	NA			
Thorium 230		0.9	±	0.2	J	NA			
Thorium 232	<	0.6			J	NA			
Total Thorium **		NA				NA			
Uranium 234	<	0.6			J	NA			
Uranium 235/236	<	0.6			J	NA			
Uranium 238	<	0.6			J	NA			
Total Uranium **	<	3.0			D	16.0	±	3.7	

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SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
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RADIOLOGICAL PARAMETERS	2385 032622 4.5 - 6.0				b	2385 032639 45.0 - 46.5				b
Actinium 231		NA					NA			
Cesium 137	<	0.2			J	<	0.2			J
Lead 210		NA					NA			
Neptunium 237	<	0.6			J	<	0.6			J
Plutonium 210		NA					NA			
Plutonium 238	<	0.6			R	<	0.6			R
Plutonium 239/240	<	0.6			J	<	0.6			J
Protactium 234		NA					NA			
Radium 224		NA					NA			
Radium 226		0.9	±	0.1	J		0.6	±	0.1	J
Radium 228		0.7	±	0.2	J	<	0.5			J
Ruthenium 106	<	1.0			J	<	1.0			J
Strontium 90		1.3	±	0.2	J	<	0.5			J
Technetium 99	<	0.9			MJ	<	0.9			MJ
Thorium 228		0.7	±	0.2	R	<	0.6			R
Thorium 230		0.7	±	0.2	R	<	0.6			R
Thorium 232		0.7	±	0.2	J	<	0.6			J
Total Thorium **		5.9	±	1.9	J	<	1.1			J
Uranium 234		1.0	±	0.3	R	<	0.6			R
Uranium 235/236	<	0.6			R	<	0.6			R
Uranium 238		0.7	±	0.2	J	<	0.6			J
Total Uranium **		2.8	±	0.8	R		4.6	±	1.7	J

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RADIOLOGICAL PARAMETERS	3046 032709 100.0 - 101.5				b	3046 032717 -				b
Actinium 231		NA				NA				
Cesium 137	<	0.2			J	NA				
Lead 210		NA				NA				
Neptunium 237	<	0.6			R	NA				
Plutonium 210		NA				NA				
Plutonium 238	<	0.6			J	NA				
Plutonium 239/240	<	0.6			J	NA				
Protactium 234		NA				NA				
Radium 224		NA				NA				
Radium 226		0.5	±	0.1	J	NA				
Radium 228	<	0.5			J	NA				
Ruthenium 106	<	1.0			J	NA				
Strontium 90	<	0.5			J	NA				
Technetium 99	<	1.1			DJ	NA				
Thorium 228		0.7	±	0.1	R	NA				
Thorium 230		1.0	±	0.1	R	NA				
Thorium 232	<	0.6			J	NA				
Total Thorium **		3.9	±	1.0	J	NA				
Uranium 234		4.3	±	0.6	R	NA				
Uranium 235/236	<	0.6			R	NA				
Uranium 238		4.2	±	0.5	J	NA				
Total Uranium **		12.7	±	1.8	J	1.05	±	1.1		J

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

890

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REPORT DATE : 22-APR-92

SOUTH FIELD
SUBSURFACE MEDIA RADIOLOGICAL DATA
RI/FS DATA

Results in picocuries per gram (pCi/g) or picocuries per liter (pCi/ℓ).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	3385 032725 80.0 - 81.5				b
Actinium 231		NA			
Cesium 137	<	0.2			J
Lead 210		NA			
Neptunium 237	<	0.6			
Plutonium 210		NA			
Plutonium 238	<	0.6			R
Plutonium 239/240	<	0.6			J
Protactium 234		NA			
Radium 224		NA			
Radium 226		1.7	±	0.3	R
Radium 228	<	1.0			DJ
Ruthenium 106	<	1.0			J
Strontium 90	<	0.5			J
Technetium 99	<	0.9			R
Thorium 228	<	0.6			R
Thorium 230		0.6	±	0.1	R
Thorium 232	<	0.6			J
Total Thorium **		4.2	±	1.3	J
Uranium 234		0.7	±	0.1	J
Uranium 235/236	<	0.6			R
Uranium 238		1.0	±	0.2	J
Total Uranium **		5.8	±	1.1	J

** Results reported in mg/kg or µg/ℓ

b = validation qualifiers

EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING HAZARDOUS SUBSTANCE LIST RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

J = Indicates an estimated value. This flag is used when the mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.

C = This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E = This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to pesticides/PCBs analyzed by GC/EC methods.

D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.

F = Estimated value due to a confirmed compound which is off-scale in both columns.

X = A flag that FORMASTER III CLP software automatically inserts to indicate that the data was entered manually.

Z = No estimated value reported, or an elevated CRQL reported because matrix effects interfere with or obscure the compound on one or both columns. In either situation, the compound does not confirm as a positive identification.

* = Values outside of contract laboratory-required QC limits.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1456 055906 - 3.75	a	b	1459 055919 - 5.0	a	b	1462 055932 - 4.0	a	b	1465 055945 - 3.5	a	b	1468 055959 - 2.5	a	b
ORGANOPHOSPOROUS PESTICIDES															
Dimethoate	< 0.05700			< 0.05700			< 0.05900			NA			< 0.06000		
Disulfoton	< 0.05700			< 0.05700			< 0.05900			NA			< 0.06000		
Famphur	< 0.11400			< 0.11500			< 0.11800			NA			< 0.12000		
Parathion, ethyl	< 0.05700			< 0.05700			< 0.05900			NA			< 0.06000		
Parathion, methyl	< 0.05700			< 0.05700			< 0.05900			NA			< 0.06000		
Phorate	< 0.05700			< 0.05700			< 0.05900			NA			< 0.06000		
Sulfotepp	< 0.05700			< 0.05700			< 0.05900			NA			< 0.06000		
Thionazin	< 0.05700			< 0.05700			< 0.05900			NA			< 0.06000		
PESTICIDES															
4,4'-DDD	< 0.01800		UJ	< 0.08600		UJ	< 0.09200		R	< 0.01900		UJ	< 0.18000		
4,4'-DDE	< 0.01800		UJ	< 0.08600		UJ	< 0.09200		R	< 0.01900		UJ	< 0.18000		
4,4'-DDT	< 0.01800		UJ	< 0.08600		UJ	< 0.09200		R	< 0.01900		UJ	< 0.18000		
Aldrin	< 0.00900		UJ	< 0.04300		UJ	< 0.04600		R	< 0.00970		UJ	< 0.09200		
Aroclor-1016	< 0.09000		UJ	< 0.43000		UJ	< 0.46000		R	< 0.09700		UJ	< 0.92000		
Aroclor-1221	< 0.09000		UJ	< 0.43000		UJ	< 0.46000		R	< 0.09700		UJ	< 0.92000		
Aroclor-1232	< 0.09000		UJ	< 0.43000		UJ	< 0.46000		R	< 0.09700		UJ	< 0.92000		
Aroclor-1242	< 0.09000		UJ	< 0.43000		UJ	< 0.46000		R	< 0.09700		UJ	< 0.92000		
Aroclor-1248	< 0.09000		UJ	< 0.43000		UJ	< 0.46000		R	< 0.09700		UJ	< 0.92000		
Aroclor-1254	0.13000	J	J	1.10000	X	J	0.69000	B	J	< 0.19000		UJ	0.71000	J	J
Aroclor-1260	0.15000	J	J	< 0.86000		UJ	< 0.92000		R	< 0.19000		UJ	< 1.80000		
Dieldrin	< 0.01800		UJ	< 0.08600		UJ	< 0.09200		R	< 0.01900		UJ	< 0.18000		
Endosulfan II	< 0.01800		UJ	< 0.08600		UJ	< 0.09200		R	< 0.01900		UJ	< 0.18000		
Endosulfan sulfate	< 0.01800		UJ	< 0.08600		UJ	< 0.09200		R	< 0.01900		UJ	< 0.18000		
Endosulfan-I	< 0.00900		UJ	< 0.04300		UJ	< 0.04600		R	< 0.00970		UJ	< 0.09200		
Endrin	< 0.01800		UJ	< 0.08600		UJ	< 0.09200		R	< 0.01900		UJ	< 0.18000		
Endrin ketone	< 0.01800		UJ	< 0.08600		UJ	< 0.09200		R	< 0.01900		UJ	< 0.18000		
Heptachlor	< 0.00900		UJ	< 0.04300		UJ	< 0.04600		R	< 0.00970		UJ	< 0.09200		
Heptachlor epoxide	< 0.00900		UJ	< 0.04300		UJ	< 0.04600		R	< 0.00970		UJ	< 0.09200		
Methoxychlor	< 0.09000		UJ	< 0.43000		UJ	< 0.46000		R	< 0.09700		UJ	< 0.92000		
Toxaphene	< 0.18000		UJ	< 0.86000		UJ	< 0.92000		R	< 0.19000		UJ	< 1.80000		
alpha-BHC	< 0.00900		UJ	< 0.04300		UJ	< 0.04600		R	< 0.00970		UJ	< 0.09200		
alpha-Chlordane	< 0.09000		UJ	< 0.43000		UJ	< 0.46000		R	< 0.09700		UJ	< 0.92000		
beta-BHC	< 0.00900		UJ	< 0.04300		UJ	< 0.04600		R	< 0.00970		UJ	< 0.09200		
delta-BHC	< 0.00900		UJ	< 0.04300		UJ	< 0.04600		R	< 0.00970		UJ	< 0.09200		
gamma-BHC (Lindane)	< 0.00900		UJ	< 0.04300		UJ	< 0.04600		R	< 0.00970		UJ	< 0.09200		
gamma-Chlordane	< 0.09000		UJ	< 0.43000		UJ	< 0.46000		R	< 0.09700		UJ	< 0.92000		
SEMI-VOLATILE ORGANICS															

a = lab qualifiers
b = validation qualifiers

REPORT DATE : 26-APR-92

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
I/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1456 055906 - 3.75	a	b	1459 055919 - 5.0	a	b	1462 055932 - 4.0	a	b	1465 055945 - 3.5	a	b	1468 055959 - 2.5	a	b
SEMI-VOLATILE ORGANICS															
1,2,4-Trichlorobenzene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
1,2-Dichlorobenzene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
1,3-Dichlorobenzene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
1,4-Dichlorobenzene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
2,4,5-Trichlorophenol	< 1.80000			< 1.70000			< 1.80000			< 1.90000			< 1.80000		
2,4,6-Trichlorophenol	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
2,4-Dichlorophenol	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
2,4-Dimethylphenol	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
2,4-Dinitrophenol	< 1.80000			< 1.70000		UJ	< 1.80000			< 1.90000			< 1.80000		
2,4-Dinitrotoluene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
2,6-Dinitrotoluene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
2-Chloronaphthalene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
2-Chlorophenol	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
2-Methylnaphthalene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
2-Methylphenol	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
2-Nitroaniline	< 1.80000			< 1.70000			< 1.80000			< 1.90000			< 1.80000		
2-Nitrophenol	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
3,3'-Dichlorobenzidine	< 0.74000		UJ	< 0.71000		UJ	< 0.75000		UJ	< 0.80000		UJ	< 0.76000		UJ
3-Nitroaniline	< 1.80000			< 1.70000			< 1.80000			< 1.90000			< 1.80000		
4,6-Dinitro-2-methylphenol	< 1.80000			< 1.70000			< 1.80000			< 1.90000			< 1.80000		
4-Bromophenyl phenyl ether	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
4-Chloro-3-methylphenol	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
4-Chloroaniline	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
4-Chlorophenylphenyl ether	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
4-Methylphenol	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
4-Nitroaniline	< 1.80000		UJ	< 1.70000		UJ	< 1.80000		UJ	< 1.90000		UJ	< 1.80000		UJ
4-Nitrophenol	< 1.80000			< 1.70000			< 1.80000			< 1.90000			< 1.80000		
Acenaphthene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Acenaphthylene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Anthracene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Benzo(a)anthracene	< 0.37000			0.17000	J	J	0.13000	J	J	< 0.40000			< 0.38000		
Benzo(a)pyrene	< 0.37000			0.23000	J	J	< 0.38000			< 0.40000			< 0.38000		
Benzo(b)fluoranthene	< 0.37000			0.29000	J	J	0.14000	J	J	< 0.40000			< 0.38000		
Benzo(g,h,i)perylene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Benzo(k)fluoranthene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Benzoic acid	< 1.80000			< 1.70000			< 1.80000			< 1.90000			< 1.80000		
Benzyl alcohol	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Butyl benzyl phthalate	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Chrysene	< 0.37000			0.17000	J	J	0.15000	J	J	< 0.40000			< 0.38000		
Di-n-butyl phthalate	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		

a = lab qualifiers
b = validation qualifiers

REPORT DATE : 26-APR-92

SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1456 055906 - 3.75	a	b	1459 055919 - 5.0	a	b	1462 055932 - 4.0	a	b	1465 055945 - 3.5	a	b	1468 055959 - 2.5	a	b
Di-n-octyl phthalate	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Dibenzo(a,h)anthracene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Dibenzofuran	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Diethyl phthalate	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Dimethyl phthalate	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Fluoranthene	0.03900	J		0.30000	J	J	0.30000	J	J	< 0.40000			< 0.38000		
Fluorene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Hexachlorobenzene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Hexachlorobutadiene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Hexachlorocyclopentadiene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Hexachloroethane	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Indeno(1,2,3-cd)pyrene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Isophorone	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
N-Nitroso-di-n-propylamine	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
N-Nitrosodiphenylamine	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Naphthalene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Nitrobenzene	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Pentachlorophenol	< 1.80000			< 1.70000			< 1.80000			< 1.90000			< 1.80000		
Phenanthrene	< 0.37000			0.11000	J	J	0.24000	J	J	< 0.40000			< 0.38000		
Phenol	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
Pyrene	0.04300	J	J	0.27000	J	J	0.40000			0.04400	J	J	< 0.38000		
bis(2-Chloroethoxy)methane	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
bis(2-Chloroethyl)ether	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
bis(2-Chloroisopropyl) ether	< 0.37000			< 0.36000			< 0.38000			< 0.40000			< 0.38000		
bis(2-Ethylhexyl) phthalate	< 0.37000			< 0.36000			< 0.38000			< 0.40000			0.04000	J	J
VOLATILE ORGANICS															
1,1,1-Trichloroethane	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600		UJ	< 0.00600		
1,1,2,2-Tetrachloroethane	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600		UJ	< 0.00600		
1,1,2-Trichloroethane	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600			< 0.00600		
1,1-Dichloroethane	< 0.00600			< 0.00500		UJ	< 0.00600			< 0.00600			< 0.00600		
1,1-Dichloroethene	< 0.00600			< 0.00500		UJ	< 0.00600			< 0.00600			< 0.00600		
1,2-Dichloroethane	< 0.01100			< 0.00500		UJ	< 0.00600			< 0.00600			< 0.00600		
1,2-Dichloroethylene	< 0.00600			< 0.00500		UJ	< 0.00600		UJ	< 0.00600		UJ	< 0.00600		UJ
1,2-Dichloropropane	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600			< 0.00600		
2-Butanone	< 0.01100			< 0.01100		UJ	0.01200	BJ	UJ	0.01200	BJ	UJ	0.00600	BJ	UJ
2-Hexanone	< 0.01100		UJ	< 0.01100		UJ	< 0.01200		UJ	< 0.01200		UJ	< 0.01200		
4-Methyl-2-pentanone	< 0.01100		UJ	< 0.01100		UJ	< 0.01200		UJ	< 0.01200		UJ	< 0.01200		
Acetone	0.01100	BJ	R	0.01100	BJ	R	0.01200	BJ	UJ	0.01000	BJ	UJ	0.00600	BJ	U
Benzene	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600			< 0.00600		
Bromodichloromethane	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600		UJ	< 0.00600		
Bromoform	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600		UJ	< 0.00600		

a = lab qualifiers
b = validation qualifiers

SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1456 055906 - 3.75	a	b	1459 055919 - 5.0	a	b	1462 055932 - 4.0	a	b	1465 055945 - 3.5	a	b	1468 055959 - 2.5	a	b
Bromomethane	< 0.01100		UJ	< 0.01100		UJ	< 0.01200		UJ	< 0.01200		R	< 0.01200		UJ
Carbon Tetrachloride	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600			< 0.00600		
Carbon disulfide	< 0.00600			< 0.00500		UJ	< 0.00600			< 0.00600			< 0.00600		
Chlorobenzene	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600			< 0.00600		
Chloroethane	< 0.01100			< 0.01100		UJ	< 0.01200			< 0.01200		UJ	< 0.01200		
Chloroform	0.00300	J	J	< 0.00500		UJ	0.00700			< 0.00600			< 0.00600		
Chloromethane	< 0.01100			< 0.01100		UJ	< 0.01200		UJ	< 0.01200			< 0.01200		
Dibromochloromethane	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600			< 0.00600		
Ethylbenzene	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600			< 0.00600		
Methylene chloride	0.02100	B		0.01800	B	UJ	0.00600	B		0.00600	BJ	UJ	0.00200	J	J
Styrene	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600			< 0.00600		
Tetrachloroethene	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600			< 0.00600		
Toluene	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600			< 0.00600		
Total xylenes	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600			< 0.00600		
Trichloroethene	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600			< 0.00600		
Vinyl Acetate	< 0.01100		UJ	< 0.01100		UJ	< 0.01200		UJ	< 0.01200		UJ	< 0.01200		
Vinyl chloride	< 0.01100			< 0.01100		UJ	< 0.01200			< 0.01200			< 0.01200		
cis-1,3-Dichloropropene	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600			< 0.00600		
trans-1,3-Dichloropropene	< 0.00600		UJ	< 0.00500		UJ	< 0.00600		UJ	< 0.00600		UJ	< 0.00600		

a = lab qualifiers
b = validation qualifiers

REPORT DATE : 26-APR-92

SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1471 055972 - 4.0 a b	1516 055411 - TCLP a	1712 061319 1.5 - 2.0 TCLP a b	1713 061324 1.5 - 2.0 TCLP a b	1714 061329 1.5 - 2.0 TCLP a b
HERBICIDE ORGANICS					
2,4,5-TP (Silvex)	NA	< 0.00200	< 0.00180	< 0.00180	< 0.00180
2,4-D	NA	< 0.01200	< 0.01200	< 0.01200	< 0.01200
ORGANOPHOSPOROUS PESTICIDES					
Dimethoate	< 0.05800	NA	NA	NA	NA
Disulfoton	< 0.05800	NA	NA	NA	NA
Famphur	< 0.11700	NA	NA	NA	NA
Parathion, ethyl	< 0.05800	NA	NA	NA	NA
Parathion, methyl	< 0.05800	NA	NA	NA	NA
Phorate	< 0.05800	NA	NA	NA	NA
Sulfotepp	< 0.05800	NA	NA	NA	NA
Thionazin	< 0.05800	NA	NA	NA	NA
PESTICIDES					
Endrin	< 0.01800	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Heptachlor	< 0.00920	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Heptachlor epoxide	< 0.00920	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Methoxychlor	< 0.09200	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Toxaphene	< 0.18000	< 0.00100	< 0.00100	< 0.00100	< 0.00100
gamma-BHC (Lindane)	< 0.00920	< 0.00005	< 0.00005	< 0.00005	< 0.00005
alpha-Chlordane	< 0.09200	NA	< 0.00050	< 0.00050	< 0.00050
gamma-Chlordane	< 0.09200	NA	< 0.00050	< 0.00050	< 0.00050
4,4'-DDD	< 0.01800	NA	NA	NA	NA
4,4'-DDE	< 0.01800	NA	NA	NA	NA
4,4'-DDT	< 0.01800	NA	NA	NA	NA
Aldrin	< 0.00920	NA	NA	NA	NA
Aroclor-1016	< 0.09200	NA	NA	NA	NA
Aroclor-1221	< 0.09200	NA	NA	NA	NA
Aroclor-1232	< 0.09200	NA	NA	NA	NA
Aroclor-1242	< 0.09200	NA	NA	NA	NA
Aroclor-1248	< 0.09200	NA	NA	NA	NA
Aroclor-1254	< 0.18000	NA	NA	NA	NA
Aroclor-1260	< 0.18000	NA	NA	NA	NA
Dieldrin	< 0.01800	NA	NA	NA	NA
Endosulfan II	< 0.01800	NA	NA	NA	NA
Endosulfan sulfate	< 0.01800	NA	NA	NA	NA
Endosulfan-I	< 0.00920	NA	NA	NA	NA
Endrin ketone	< 0.01800	NA	NA	NA	NA
alpha-BHC	< 0.00920	NA	NA	NA	NA
beta-BHC	< 0.00920	NA	NA	NA	NA
delta-BHC	< 0.00920	NA	NA	NA	NA

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REPORT DATE : 26-APR-92

SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1471 055972 - 4.0			1516 055411 - TCLP			1712 061319 1.5 - 2.0 TCLP			1713 061324 1.5 - 2.0 TCLP			1714 061329 1.5 - 2.0 TCLP		
		a	b		a	-		a	b		a	b		a	b
SEMI-VOLATILE ORGANICS															
1,4-Dichlorobenzene	< 0.38000			< 0.01000			< 0.02000			< 0.02000			< 0.02000		
2,4,5-Trichlorophenol	< 1.90000			< 0.05000			< 0.10000			< 0.10000			< 0.10000		
2,4,6-Trichlorophenol	< 0.38000			< 0.01000			< 0.02000			< 0.02000			< 0.02000		
2,4-Dinitrotoluene	< 0.38000			< 0.01000			< 0.02000			< 0.02000			< 0.02000		
2-Methylphenol	< 0.38000			< 0.01000			< 0.02000			< 0.02000			< 0.02000		
3-Methylphenol	NA			< 0.01000			< 0.02000			< 0.02000			< 0.02000		
4-Methylphenol	< 0.38000			< 0.01000			< 0.02000			< 0.02000			< 0.02000		
Hexachlorobenzene	< 0.38000			< 0.01000			< 0.02000			< 0.02000			< 0.02000		
Hexachlorobutadiene	< 0.38000			< 0.01000			< 0.02000			< 0.02000			< 0.02000		
Hexachloroethane	< 0.38000			< 0.01000			< 0.02000			< 0.02000			< 0.02000		
Nitrobenzene	< 0.38000			< 0.01000			< 0.02000			< 0.02000			< 0.02000		
Pentachlorophenol	< 1.90000			< 0.05000			0.02000	J		0.01600	J		0.01300	J	
1,2,4-Trichlorobenzene	< 0.38000			NA			NA			NA			NA		
1,2-Dichlorobenzene	< 0.38000			NA			NA			NA			NA		
1,3-Dichlorobenzene	< 0.38000			NA			NA			NA			NA		
2,4-Dichlorophenol	< 0.38000			NA			NA			NA			NA		
2,4-Dimethylphenol	< 0.38000			NA			NA			NA			NA		
2,4-Dinitrophenol	< 1.90000			NA			NA			NA			NA		
2,6-Dinitrotoluene	< 0.38000			NA			NA			NA			NA		
2-Chloronaphthalene	< 0.38000			NA			NA			NA			NA		
2-Chlorophenol	< 0.38000			NA			NA			NA			NA		
2-Methylnaphthalene	< 0.38000			NA			NA			NA			NA		
2-Nitroaniline	< 1.90000			NA			NA			NA			NA		
2-Nitrophenol	< 0.38000			NA			NA			NA			NA		
3,3'-Dichlorobenzidine	< 0.77000			NA			NA			NA			NA		
3-Nitroaniline	< 1.90000			NA			NA			NA			NA		
4,6-Dinitro-2-methylphenol	< 1.90000			NO			NA			NA			NA		
4-Bromophenyl phenyl ether	< 0.38000			NA			NA			NA			NA		
4-Chloro-3-methylphenol	< 0.38000			NA			NA			NA			NA		
4-Chloroaniline	< 0.38000			NA			NA			NA			NA		
4-Chlorophenylphenyl ether	< 0.38000			NA			NA			NA			NA		
4-Nitroaniline	< 1.90000			NA			NA			NA			NA		
4-Nitrophenol	< 1.90000			NA			NA			NA			NA		
Acenaphthene	< 0.38000			NA			NA			NA			NA		
Acenaphthylene	< 0.38000			NA			NA			NA			NA		
Anthracene	< 0.38000			NA			NA			NA			NA		
Benzo(a)anthracene	< 0.38000			NA			NA			NA			NA		
Benzo(a)pyrene	< 0.38000			NA			NA			NA			NA		
Benzo(b)fluoranthene	< 0.38000			NA			NA			NA			NA		
Benzo(g,h,i)perylene	< 0.38000			NA			NA			NA			NA		
Benzo(k)fluoranthene	< 0.38000			NA			NA			NA			NA		
Benzoic acid	< 1.90000			NA			NA			NA			NA		
Benzyl alcohol	< 0.38000			NA			NA			NA			NA		
Butyl benzyl phthalate	< 0.38000			NA			NA			NA			NA		

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REPORT DATE : 26-APR-92

SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1471 055972 - 4.0			1516 055411 - TCLP		1712 061319 1.5 - 2.0 TCLP		1713 061324 1.5 - 2.0 TCLP		1714 061329 1.5 - 2.0 TCLP	
		a	b	a	-	a	b	a	b	a	b
Chrysene	< 0.38000			NA		NA		NA		NA	
Di-n-butyl phthalate	< 0.38000			NA		NA		NA		NA	
Di-n-octyl phthalate	< 0.38000			NA		NA		NA		NA	
Dibenzo(a,h)anthracene	< 0.38000			NA		NA		NA		NA	
Dibenzofuran	< 0.38000			NA		NA		NA		NA	
Diethyl phthalate	< 0.38000			NA		NA		NA		NA	
Dimethyl phthalate	< 0.38000			NA		NA		NA		NA	
Fluoranthene	< 0.38000			NA		NA		NA		NA	
Fluorene	< 0.38000			NA		NA		NA		NA	
Hexacholorocyclopentadiene	< 0.38000			NA		NA		NA		NA	
Indeno(1,2,3-cd)pyrene	< 0.38000			NA		NA		NA		NA	
Isophorone	< 0.38000			NA		NA		NA		NA	
N-Nitroso-di-n-propylamine	< 0.38000			NA		NA		NA		NA	
N-Nitrosodiphenylamine	< 0.38000			NA		NA		NA		NA	
Naphthalene	< 0.38000			NA		NA		NA		NA	
Phenanthrene	< 0.38000			NA		NA		NA		NA	
Phenol	< 0.38000			NA		NA		NA		NA	
Pyrene	< 0.38000			NA		NA		NA		NA	
bis(2-Chloroethoxy)methane	< 0.38000			NA		NA		NA		NA	
bis(2-Chloroethyl)ether	< 0.38000			NA		NA		NA		NA	
bis(2-Chloroisopropyl) ether	< 0.38000			NA		NA		NA		NA	
bis(2-Ethylhexyl) phthalate	< 0.38000			NA		NA		NA		NA	
VOLATILE ORGANICS											
1,1,1-Trichloroethane	< 0.00600			NA		NA		NA		NA	
1,1,2,2-Tetrachloroethane	< 0.00600			NA		NA		NA		NA	
1,1,2-Trichloroethane	< 0.00600			NA		NA		NA		NA	
1,1-Dichloroethane	< 0.00600			NA		NA		NA		NA	
1,2-Dichloroethylene	< 0.00600		UJ	NA		NA		NA		NA	
1,2-Dichloropropane	< 0.00600			NA		NA		NA		NA	
2-Hexanone	< 0.01200			NA		NA		NA		NA	
4-Methyl-2-pentanone	< 0.01200			NA		NA		NA		NA	
Acetone	0.01900	B		NA		NA		NA		NA	
Bromodichloromethane	< 0.00600			NA		NA		NA		NA	
Bromoform	< 0.00600		UJ	NA		NA		NA		NA	
Bromomethane	< 0.01200		UJ	NA		NA		NA		NA	
Carbon disulfide	< 0.00600			NA		NA		NA		NA	
Chloroethane	< 0.01200			NA		NA		NA		NA	
Chloromethane	< 0.01200			NA		NA		NA		NA	
Dibromochloromethane	< 0.00600			NA		NA		NA		NA	
Ethylbenzene	< 0.00600			NA		NA		NA		NA	
Methylene chloride	0.05700	B		NA		NA		NA		NA	
Styrene	< 0.00600			NA		NA		NA		NA	
Toluene	< 0.00600			NA		NA		NA		NA	

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REPORT DATE : 26-APR-92

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1471 055972 - 4.0	a	b	1516 055411 - TCLP	a	1712 061319 1.5 - 2.0 TCLP	a	b	1713 061324 1.5 - 2.0 TCLP	a	b	1714 061329 1.5 - 2.0 TCLP	a	b
Total xylenes	< 0.00600			NA		NA			NA			NA		
Vinyl Acetate	< 0.01200			NA		NA			NA			NA		
cis-1,3-Dichloropropene	< 0.00600			NA		NA			NA			NA		
trans-1,3-Dichloropropene	< 0.00600			NA		NA			NA			NA		
1,1-Dichloroethene	< 0.00600			< 0.00500		< 0.00500			< 0.00500			< 0.00500		
1,2-Dichloroethane	< 0.00600			< 0.00500		< 0.00500			< 0.00500			< 0.00500		
2-Butanone	0.04200	B		< 0.01000		0.00300	BJ	JB	0.00100	BJ	JB	0.00300	BJ	JB
Benzene	< 0.00600			< 0.00500		< 0.00500			< 0.00500			< 0.00500		
Carbon Tetrachloride	< 0.00600			< 0.00500		< 0.00500			< 0.00500			< 0.00500		
Chlorobenzene	< 0.00600			< 0.00500		< 0.00500			< 0.00500			< 0.00500		
Chloroform	< 0.00600			< 0.00500		< 0.00500		JB	< 0.00500		JB	< 0.00500		JB
Pyridine	NA			< 0.01000		< 0.02000			< 0.02000			< 0.02000		
Tetrachloroethene	< 0.00600			< 0.00500		< 0.00500			< 0.00500			< 0.00500		
Trichloroethene	< 0.00600			< 0.00500		< 0.00500			< 0.00500			< 0.00500		
Vinyl chloride	< 0.01200			< 0.01000		< 0.01000			< 0.01000			< 0.01000		

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SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	1715 061334 1.5 - 2.0 TCLP			1792 067343 1.5 - 3.0			1792 067346 6.0 - 7.5			1792 067350 12.0 - 13.5		
		a	b		a	b		a	b		a	b
DIOXINS												
1,2,3,4,6,7,8-Heptachlorodib	NA			< 0.00003			< 0.00006			< 0.00085		
1,2,3,4,6,7,8-Heptachlorodib	NA			< 0.00003			< 0.00003			< 0.00250		
1,2,3,4,7,8,9-Heptachlorodib	NA			< 0.00004			< 0.00008			< 0.00350		
1,2,3,4,7,8-Hexachlorodibenz	NA			< 0.00004			< 0.00011			< 0.00037		
1,2,3,4,7,8-Hexachlorodibenz	NA			< 0.00008			< 0.00007			< 0.00030		
1,2,3,6,7,8-Hexachlorodibenz	NA			< 0.00007			< 0.00009			< 0.00026		
1,2,3,6,7,8-Hexachlorodibenz	NA			< 0.00004			< 0.00006			< 0.00029		
1,2,3,7,8,9-Hexachlorodibenz	NA			< 0.00007			< 0.00009			< 0.00031		
1,2,3,7,8,9-Hexachlorodibenz	NA			< 0.00005			< 0.00008			< 0.00190		
1,2,3,7,8-Pentachlorodibenzo	NA			< 0.00006			< 0.00006			< 0.00018		
1,2,3,7,8-Pentachlorodibenzo	NA			< 0.00004			< 0.00002			< 0.00070		
2,3,4,6,7,8-Hexachlorodibenz	NA			< 0.00005			< 0.00007			< 0.00170		
2,3,4,7,8-Pentachlorodibenzo	NA			< 0.00004			< 0.00003			< 0.00055		
2,3,7,8-TCDD	NA			< 0.00013			< 0.00010			< 0.00065		
2,3,7,8-TCDF	NA			< 0.00006			< 0.00006	J		< 0.00033		
Heptachlorodibenzofuran	NA			< 0.00003			< 0.00006			< 0.00290		
Heptachlorodibenzo-p-dioxin	NA			< 0.00003			< 0.00003			< 0.00085		
Hexachlorodibenzo-p-dioxin	NA			< 0.00007			< 0.00010			< 0.00032		
Hexachlorodibenzofuran	NA			< 0.00004			< 0.00007			< 0.00160		
Octachlorodibenzo-p-dioxin	NA			0.00018			0.00035			0.00075		
Octachlorodibenzofuran	NA			< 0.00004			< 0.00003			< 0.00130		
Pentachlorodibenzo-p-dioxin	NA			< 0.00006			< 0.00006			< 0.00070		
Pentachlorodibenzofuran	NA			< 0.00004			< 0.00003			< 0.00055		
Tetrachlorodibenzo-p-dioxin	NA			< 0.00001	UJ		< 0.00003	UJ		< 0.00012	UJ	
Tetrachlorodibenzofuran	NA			< 0.00002	JB		0.00002			< 0.00017		

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS

RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1715 061334 1.5 - 2.0 TCLP			1792 067343 1.5 - 3.0			1792 067346 6.0 - 7.5			1792 067350 12.0 - 13.5		
		a	b		a	b		a	b		a	b
HERBICIDE ORGANICS												
2,4,5-TP (Silvex)	< 0.00180			NA			NA			NA		
2,4-D	< 0.01200			NA			NA			NA		
ORGANOPHOSPOROUS PESTICIDES												
Azinphosmethyl	NA			< 1.00000			< 1.00000			< 1.00000		
Demeton	NA			< 0.20000			< 0.20000			< 0.20000		
Diazinon	NA			< 0.10000			< 0.10000		R	< 0.10000		
Dimethoate	NA			< 0.10000			< 0.10000		R	< 0.10000		
Disulfoton	NA			< 0.10000			< 0.10000		R	< 0.10000		
Ethion	NA			< 0.10000			< 0.10000		R	< 0.10000		
Famphur	NA			< 0.10000			< 0.10000		R	< 0.10000		
Malathion	NA			< 0.10000			< 0.10000		R	< 0.10000		
Parathion, ethyl	NA			< 0.10000			< 0.10000		R	< 0.10000		
Parathion, methyl	NA			< 0.10000			< 0.10000		R	< 0.10000		
Phorate	NA			< 0.10000			< 0.10000		R	< 0.10000		
Sulfotepp	NA			< 0.10000			< 0.10000		R	< 0.10000		
Tetraethylpyrophosphate	NA			< 0.40000			< 0.40000		R	< 0.40000		
Thionazin	NA			< 0.10000			< 0.10000			< 0.10000		
PESTICIDES												
Endrin	< 0.00010			< 0.01800			< 0.01800			< 0.01900		
Heptachlor	< 0.00005			< 0.00910			< 0.00890			< 0.00970		
Heptachlor epoxide	< 0.00005			< 0.00910			< 0.00890			< 0.00970		
Methoxychlor	< 0.00050			< 0.09100			< 0.08900			< 0.09700		
Toxaphene	< 0.00100			< 0.18000			< 0.18000			< 0.19000		

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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CHEMICAL PARAMETERS	1715 061334 1.5 - 2.0 TCLP	a	b	1792 067343 6.0 - 7.5	a	b	1792 067346 12.0 - 13.5	a	b	1792 067350	a	b
alpha-Chlordane	< 0.00050			< 0.09100			< 0.08900			< 0.09700		
gamma-BHC (Lindane)	< 0.00005			< 0.00910			< 0.00890			< 0.00970		
gamma-Chlordane	< 0.00050			< 0.09100			< 0.08900			< 0.09700		
4,4'-DDD	NA			< 0.01800			< 0.01800			< 0.01900		
4,4'-DDE	NA			< 0.01800			< 0.01800			< 0.01900		
4,4'-DDT	NA			< 0.01800			< 0.01800			< 0.01900		
Aldrin	NA			< 0.00910			< 0.00890			< 0.00970		
Aroclor-1016	NA			< 0.09100			< 0.08900			< 0.09700		
Aroclor-1221	NA			< 0.09100			< 0.08900			< 0.09700		
Aroclor-1232	NA			< 0.09100			< 0.08900			< 0.09700		
Aroclor-1242	NA			< 0.09100			< 0.08900			< 0.09700		
Aroclor-1248	NA			< 0.09100			< 0.08900			< 0.09700		
Aroclor-1254	NA			< 0.18000			0.03200	JX	J	0.10000	JX	J
Aroclor-1260	NA			< 0.18000			< 0.18000			< 0.19000		
Dieldrin	NA			< 0.01800			< 0.01800			< 0.01900		
Endosulfan II	NA			< 0.01800			< 0.01800			< 0.01900		
Endosulfan sulfate	NA			< 0.01800			< 0.01800			< 0.01900		
Endosulfan-I	NA			< 0.00910			< 0.00890			< 0.00970		
Endrin ketone	NA			< 0.01800			< 0.01800			< 0.01900		
alpha-BHC	NA			< 0.00910			< 0.00890			< 0.00970		
beta-BHC	NA			< 0.00910			< 0.00890			< 0.00970		
delta-BHC	NA			< 0.00910			< 0.00890			< 0.00970		
SEMI-VOLATILE ORGANICS												
1,4-Dichlorobenzene	< 0.02000			< 0.37000		R	< 0.36000		R	< 0.39000		R
2,4,5-Trichlorophenol	< 0.10000			< 1.80000		R	< 1.80000		R	< 1.90000		R
2,4,6-Trichlorophenol	< 0.02000			< 0.37000		R	< 0.36000		R	< 0.39000		R
2,4-Dinitrotoluene	< 0.02000			< 0.37000		R	< 0.36000		R	< 0.39000		R
2-Methylphenol	< 0.02000			< 0.37000		R	< 0.36000		R	< 0.39000		R
3-Methylphenol	< 0.02000			NA			NA			NA		
4-Methylphenol	< 0.02000			< 0.37000		R	< 0.36000		R	< 0.39000		R
Hexachlorobenzene	< 0.02000			< 0.37000		R	< 0.36000		R	< 0.39000		R
Hexachlorobutadiene	< 0.02000			< 0.37000		R	< 0.36000		R	< 0.39000		R
Hexachloroethane	< 0.02000			< 0.37000		R	< 0.36000		R	< 0.39000		R
Nitrobenzene	< 0.02000			< 0.37000		R	< 0.36000		R	< 0.39000		R
Pentachlorophenol	< 0.10000			< 1.80000		R	< 1.80000		R	< 1.90000		R
1,2,4-Trichlorobenzene	NA			< 0.37000		R	< 0.36000		R	< 0.39000		R
1,2-Dichlorobenzene	NA			< 0.37000		R	< 0.36000		R	< 0.39000		R
1,3-Dichlorobenzene	NA			< 0.37000		R	< 0.36000		R	< 0.39000		R
2,4-Dichlorophenol	NA			< 0.37000		R	< 0.36000		R	< 0.39000		R
2,4-Dimethylphenol	NA			< 0.37000		R	< 0.36000		R	< 0.39000		R
2,4-Dinitrophenol	NA			< 1.80000		R	< 1.80000		R	< 1.90000		R

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1715 061334 1.5 - 2.0 TCLP	a	b	1792 067343 1.5 - 3.0	a	b	1792 067346 6.0 - 7.5	a	b	1792 067350 12.0 - 13.5	a	b
2,6-Dinitrotoluene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
2-Chloronaphthalene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
2-Chlorophenol	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
2-Methylnaphthalene	NA			< 0.37000	R		< 0.36000	R		0.05600	J	J
2-Nitroaniline	NA			< 1.80000	R		< 1.80000	R		< 1.90000	R	
2-Nitrophenol	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
3,3'-Dichlorobenzidine	NA			< 0.75000	R		< 0.72000	R		< 0.78000	R	
3-Nitroaniline	NA			< 1.80000	R		< 1.80000	R		< 1.90000	R	
4,6-Dinitro-2-methylphenol	NA			< 1.80000	R		< 1.80000	R		< 1.90000	R	
4-Bromophenyl phenyl ether	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
4-Chloro-3-methylphenol	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
4-Chloroaniline	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
4-Chlorophenylphenyl ether	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
4-Nitroaniline	NA			< 1.80000	R		< 1.80000	R		< 1.90000	R	
4-Nitrophenol	NA			< 1.80000	R		< 1.80000	R		< 1.90000	R	
Acenaphthene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Acenaphthylene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Anthracene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Benzo(a)anthracene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Benzo(a)pyrene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Benzo(b)fluoranthene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Benzo(g,h,i)perylene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Benzo(k)fluoranthene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Benzoic acid	NA			< 1.80000	R		0.04750	J	J	< 1.90000	R	
Benzyl alcohol	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Butyl benzyl phthalate	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Chrysene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Di-n-butyl phthalate	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Di-n-octyl phthalate	NA			< 0.37000	R		< 0.36000	R		0.21000	J	J
Dibenzo(a,h)anthracene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Dibenzofuran	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Diethyl phthalate	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Dimethyl phthalate	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Fluoranthene	NA			< 0.37000	R		0.04200	J	J	< 0.39000	R	
Fluorene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Hexachlorocyclopentadiene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Indeno(1,2,3-cd)pyrene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Isophorone	NA			< 0.37000			< 0.36000	R		< 0.39000	R	
N-Nitroso-di-n-propylamine	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
N-Nitrosodiphenylamine	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Naphthalene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
O,O,O-Triethylphosphorothioa	NA			< 0.10000			< 0.10000			< 0.10000		
Phenanthrene	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	
Phenol	NA			< 0.37000	R		< 0.36000	R		< 0.39000	R	

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REPORT DATE : 26-APR-92

SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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CHEMICAL PARAMETERS	1715 061334 1.5 - 2.0 TCLP	a	b	1792 067343 1.5 - 3.0	a	b	1792 067346 6.0 - 7.5	a	b	1792 067350 12.0 - 13.5	a	b
Pyrene	NA			< 0.37000		R	0.04800	J	J	0.05100	J	J
bis(2-Chloroethoxy)methane	NA			< 0.37000		R	< 0.36000		R	< 0.39000		R
bis(2-Chloroethyl)ether	NA			< 0.37000		R	< 0.36000		R	< 0.39000		R
bis(2-Chloroisopropyl) ether	NA			< 0.37000		R	< 0.36000		R	< 0.39000		R
bis(2-Ethylhexyl) phthalate	NA			< 0.37000		R	< 0.36000		R	0.08300	J	R
Pyridine	< 0.02000			NA			NA			NA		
VOLATILE ORGANICS												
1,1-Dichloroethene	< 0.00500			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
1,2-Dichloroethane	< 0.00500			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
2-Butanone	0.00200	J	JB	0.01100	BJ	U	< 0.01100		UJ	0.01200	BJ	UJ
Benzene	< 0.00500			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
Carbon Tetrachloride	< 0.00500			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
Chlorobenzene	< 0.00500			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
Chloroform	0.00100	BJ	JB	< 0.00600			< 0.00500		UJ	< 0.00600		UJ
Tetrachloroethene	< 0.00500			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
Trichloroethene	< 0.00500			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
Vinyl chloride	< 0.01000			< 0.01100			< 0.01100		UJ	< 0.01200		UJ
1,1,1-Trichloroethane	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
1,1,2,2-Tetrachloroethane	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
1,1,2-Trichloroethane	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
1,1-Dichloroethane	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
1,2-Dichloroethylene	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
1,2-Dichloropropane	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
2-Hexanone	NA			< 0.01100			< 0.01100		UJ	0.00600	BJ	UJ
4-Methyl-2-pentanone	NA			< 0.01100			< 0.01100		UJ	< 0.01200		UJ
Acetone	NA			0.01100	BJ	U	0.00300	BJ	UJ	0.03600	B	UJ
Bromodichloromethane	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
Bromoform	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
Bromomethane	NA			< 0.01100			< 0.01100		UJ	< 0.01200		UJ
Carbon disulfide	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
Chloroethane	NA			< 0.01100			< 0.01100		UJ	< 0.01200		UJ
Chloromethane	NA			< 0.01100			< 0.01100		UJ	< 0.01200		UJ
Dibromochloromethane	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
Ethylbenzene	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
Methylene chloride	NA			0.00600	BJ	U	0.00500	BJ	UJ	0.00600	BJ	UJ
Styrene	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
Toluene	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
Total xylenes	NA			< 0.00600			< 0.00500		UJ	0.00200	J	J
Vinyl Acetate	NA			< 0.01100			< 0.01100		UJ	< 0.01200		UJ
cis-1,3-Dichloropropene	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ
trans-1,3-Dichloropropene	NA			< 0.00600			< 0.00500		UJ	< 0.00600		UJ

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	1792 067353 16.5 - 18.0			1792 067356 21.5 - 23.0			1792 067362 28.0 - 29.5 TCLP			1793 067333 3.0 - 4.5			1793 067335 6.0 - 7.5 TCLP		
			a			b			a			b			a
DIOXINS															
1,2,3,4,6,7,8-Heptachlorodib	<	0.00022	UJ	<	0.00012			NA		<	0.00009			NA	
1,2,3,4,6,7,8-Heptachlorodib	<	0.00016		<	0.00004			NA		<	0.00015			NA	
1,2,3,4,7,8,9-Heptachlorodib	<	0.00031	UJ	<	0.00017			NA		<	0.00013			NA	
1,2,3,4,7,8-Hexachlorodibenz	<	0.00025		<	0.00018			NA		<	0.00008			NA	
1,2,3,4,7,8-Hexachlorodibenz	<	0.00016		<	0.00006			NA		<	0.00049			NA	
1,2,3,6,7,8-Hexachlorodibenz	<	0.00022		<	0.00005			NA		<	0.00007			NA	
1,2,3,6,7,8-Hexachlorodibenz	<	0.00013		<	0.00014			NA		<	0.00039			NA	
1,2,3,7,8,9-Hexachlorodibenz	<	0.00014		<	0.00007			NA		<	0.00041			NA	
1,2,3,7,8,9-Hexachlorodibenz	<	0.00029		<	0.00015			NA		<	0.00009			NA	
1,2,3,7,8-Pentachlorodibenzo	<	0.00014		<	0.00003	UJ		NA		<	0.00055	UJ		NA	
1,2,3,7,8-Pentachlorodibenzo	<	0.00007		<	0.00006	UJ		NA		<	0.00033	UJ		NA	
2,3,4,6,7,8-Hexachlorodibenz	<	0.00026		<	0.00006			NA		<	0.00008			NA	
2,3,4,7,8-Pentachlorodibenzo	<	0.00007		<	0.00003	UJ		NA		<	0.00036	UJ		NA	
2,3,7,8-TCDD	<	0.00055		<	0.00036			NA		<	0.00011			NA	
2,3,7,8-TCDF	<	0.00020		<	0.00009			NA		<	0.00009			NA	
Heptachlorodibenzofuran	<	0.00025	UJ	<	0.00014			NA		<	0.00011			NA	
Heptachlorodibenzo-p-dioxin	<	0.00016		<	0.00004			NA		<	0.00015			NA	
Hexachlorodibenzo-p-dioxin	<	0.00014		<	0.00016	UJ		NA		<	0.00004			NA	
Hexachlorodibenzofuran	<	0.00025		<	0.00006	UJ		NA		<	0.00008			NA	
Octachlorodibenzo-p-dioxin		0.00110			0.00012	J		NA			0.00065			NA	
Octachlorodibenzofuran	<	0.00009	J	<	0.00008	UJ		NA		<	0.00013			NA	
Pentachlorodibenzo-p-dioxin	<	0.00014		<	0.00006	UJ		NA		<	0.00006	UJ		NA	
Pentachlorodibenzofuran	<	0.00007		<	0.00003	UJ		NA		<	0.00003	UJ		NA	
Tetrachlorodibenzofuran	<	0.00005	UJ	<	0.00003	UJ		NA		<	0.00004	UJ		NA	
Tetrachlorodibenzo-p-dioxin	<	0.00003		<	0.00015			NA		<	0.00002			NA	

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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CHEMICAL PARAMETERS	1792 067353 16.5 - 18.0 a b	1792 067356 21.5 - 23.0 a b	1792 067362 28.0 - 29.5 TCLP a b	1793 067333 3.0 - 4.5 a b	1793 067335 6.0 - 7.5 TCLP a b
HERBICIDE ORGANICS					
2,4,5-TP (Silvex)	NA	NA	< 0.00180	NA	< 0.00180
2,4-D	NA	NA	< 0.01000	NA	< 0.01000
ORGANOPHOSPOROUS PESTICIDES					
Azinphosmethyl	< 1.00000	< 1.00000	NA	< 0.20000	NA
Demeton	< 0.20000	< 0.20000	NA	< 0.20000	NA
Diazinon	< 0.10000	< 0.10000	NA	< 0.10000	NA
Dimethoate	< 0.10000	< 0.10000	NA	< 0.10000	NA
Disulfoton	< 0.10000	< 0.10000	NA	< 0.10000	NA
Ethion	< 0.10000	< 0.10000	NA	< 0.10000	NA
Famphur	< 0.10000	< 0.10000	NA	< 0.10000	NA
Malathion	< 0.10000	< 0.10000	NA	< 0.10000	NA
Parathion, ethyl	< 0.10000	< 0.10000	NA	< 0.10000	NA
Parathion, methyl	< 0.10000	< 0.10000	NA	< 0.10000	NA
Phorate	< 0.10000	< 0.10000	NA	< 0.10000	NA
Sulfotepp	< 0.10000	< 0.10000	NA	< 0.10000	NA
Tetraethylpyrophosphate	< 0.40000	< 0.40000	NA	< 0.40000	NA
Thionazin	< 0.10000	< 0.10000	NA	< 0.10000	NA
PESTICIDES					
4,4'-DDD	< 0.01900	< 0.02000	NA	< 0.01900	NA
4,4'-DDE	< 0.01900	< 0.02000	NA	< 0.01900	NA
4,4'-DDT	< 0.01900	< 0.02000	NA	< 0.01900	NA
Aldrin	< 0.00970	< 0.01000	NA	< 0.00940	NA
Aroclor-1016	< 0.09700	< 0.10000	NA	< 0.09400	NA

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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CHEMICAL PARAMETERS	1792 067353 16.5 - 18.0	a	b	1792 067356 21.5 - 23.0	a	b	1792 067362 28.0 - 29.5 TCLP	a	b	1793 067333 3.0 - 4.5	a	b	1793 067335 6.0 - 7.5 TCLP	a	b
Aroclor-1221	< 0.09700			< 0.10000			NA			< 0.09400			NA		
Aroclor-1232	< 0.09700			< 0.10000			NA			< 0.09400			NA		
Aroclor-1242	< 0.09700			< 0.10000			NA			< 0.09400			NA		
Aroclor-1248	< 0.09700			< 0.10000			NA			< 0.09400			NA		
Aroclor-1254	< 0.19000			< 0.20000			NA			0.82000	XF	R	NA		
Aroclor-1260	< 0.19000			< 0.20000			NA			< 0.19000			NA		
Dieldrin	< 0.01900			< 0.02000			NA			< 0.01900			NA		
Endosulfan II	< 0.01900			< 0.02000			NA			< 0.01900			NA		
Endosulfan sulfate	< 0.01900			< 0.02000			NA			< 0.01900			NA		
Endosulfan-I	< 0.00970			< 0.01000			NA			< 0.00940			NA		
Endrin	< 0.01900			< 0.02000			< 0.00010			< 0.01900			< 0.00010		
Endrin ketone	< 0.01900			< 0.02000			NA			< 0.01900			NA		
Heptachlor	< 0.00970			< 0.01000			< 0.00005			< 0.00940			< 0.00005		
Heptachlor epoxide	< 0.00970			< 0.01000			< 0.00005	J		< 0.00940			< 0.00005	J	
Methoxychlor	< 0.09700			< 0.10000			< 0.00050			< 0.09400			< 0.00050		
Toxaphene	< 0.19000			< 0.20000			< 0.00100			< 0.19000			< 0.00100		
alpha-BHC	< 0.00970			< 0.01000			NA			< 0.00940			NA		
alpha-Chlordane	< 0.09700			< 0.10000			< 0.00050	J		< 0.09400			< 0.00050	J	
beta-BHC	< 0.00970			< 0.01000			NA			< 0.00940			NA		
delta-BHC	< 0.00970			< 0.01000			NA			< 0.00940			NA		
gamma-BHC (Lindane)	< 0.00970			< 0.01000			< 0.00005	J		< 0.00940			< 0.00005	J	
gamma-Chlordane	< 0.09700			< 0.10000			< 0.00050	J		< 0.09400			< 0.00050	J	
SEMI-VOLATILE ORGANICS															
1,2,4-Trichlorobenzene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
1,2-Dichlorobenzene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
1,3-Dichlorobenzene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
1,4-Dichlorobenzene	< 0.39000		R	< 0.41000		R	< 0.02000			< 0.36000			< 0.02000		
2,4,5-Trichlorophenol	< 1.90000		R	< 2.00000		R	< 0.10000			< 1.70000			< 0.10000		
2,4,6-Trichlorophenol	< 0.39000		R	< 0.41000		R	< 0.02000			< 0.36000			< 0.02000		
2,4-Dichlorophenol	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
2,4-Dimethylphenol	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
2,4-Dinitrophenol	< 1.90000		R	< 2.00000		R	NA			< 1.70000			NA		
2,4-Dinitrotoluene	< 0.39000		R	< 0.41000		R	< 0.02000			< 0.36000			< 0.02000		
2,6-Dinitrotoluene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
2-Chloronaphthalene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
2-Chlorophenol	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
2-Methylnaphthalene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
2-Methylphenol	< 0.39000		R	< 0.41000		R	< 0.02000			< 0.36000			< 0.02000		
2-Nitroaniline	< 1.90000		R	< 2.00000		R	NA			< 1.70000			NA		
2-Nitrophenol	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
3,3'-Dichlorobenzidine	< 0.78000		R	< 0.81000		R	NA			< 0.72000		UJ	NA		

a = lab qualifiers
b = validation qualifiers

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1792 067353 16.5 - 18.0	a	b	1792 067356 21.5 - 23.0	a	b	1792 067362 28.0 - 29.5 TCLP	a	b	1793 067333 3.0 - 4.5	a	b	1793 067335 6.0 - 7.5 TCLP	a	b
3-Nitroaniline	< 1.90000		R	< 2.00000		R	NA			< 1.70000		UJ	NA		
4,6-Dinitro-2-methylphenol	< 1.90000		R	< 2.00000		R	NA			< 1.70000			NA		
4-Bromophenyl phenyl ether	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
4-Chloro-3-methylphenol	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
4-Chloroaniline	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
4-Chlorophenylphenyl ether	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
4-Methylphenol	< 0.39000		R	< 0.41000		R	< 0.02000			< 0.36000			< 0.02000		
4-Nitroaniline	< 1.90000		R	< 2.00000		R	NA			< 1.70000		UJ	NA		
4-Nitrophenol	< 1.90000		R	< 2.00000		R	NA			< 1.70000			NA		
Acenaphthene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Acenaphthylene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Anthracene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Benzo(a)anthracene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Benzo(a)pyrene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Benzo(b)fluoranthene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Benzo(g,h,i)perylene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Benzo(k)fluoranthene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Benzoic acid	0.05700	J	J	0.11000	J	J	NA			0.15000	J	J	NA		
Benzyl alcohol	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Butyl benzyl phthalate	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Chrysene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Di-n-butyl phthalate	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Di-n-octyl phthalate	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Dibenzo(a,h)anthracene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Dibenzofuran	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Diethyl phthalate	< 0.39000		R	0.08400	J	J	NA			< 0.36000			NA		
Dimethyl phthalate	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Fluoranthene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Fluorene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Hexachlorobenzene	< 0.39000		R	< 0.41000		R	< 0.02000			< 0.36000			< 0.02000		
Hexachlorobutadiene	< 0.39000		R	< 0.41000		R	< 0.02000			< 0.36000			< 0.02000		
Hexachlorocyclopentadiene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Hexachloroethane	< 0.39000		R	< 0.41000		R	< 0.02000			< 0.36000			< 0.02000		
Indeno(1,2,3-cd)pyrene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Isophorone	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
N-Nitroso-di-n-propylamine	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
N-Nitrosodiphenylamine	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Naphthalene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Nitrobenzene	< 0.39000		R	< 0.41000		R	< 0.02000			< 0.36000		UJ	< 0.02000		
O,O,O-Triethylphosphorothioa	< 0.10000			< 0.00010			NA			< 0.00010			NA		
Pentachlorophenol	< 1.90000		R	< 2.00000		R	< 0.10000			< 1.70000			< 0.10000		
Phenanthrene	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Phenol	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
Pyrene	0.05700	J	J	< 0.41000		R	NA			< 0.36000			NA		

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	1792 067353 16.5 - 18.0	a	b	1792 067356 21.5 - 23.0	a	b	1792 067362 28.0 - 29.5 TCLP	a	b	1793 067333 3.0 - 4.5	a	b	1793 067335 6.0 - 7.5 TCLP	a	b
bis(2-Chloroethoxy)methane	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
bis(2-Chloroethyl)ether	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
bis(2-Chloroisopropyl) ether	< 0.39000		R	< 0.41000		R	NA			< 0.36000		UJ	NA		
bis(2-Ethylhexyl) phthalate	< 0.39000		R	< 0.41000		R	NA			< 0.36000			NA		
3-Methylphenol	NA			NA			< 0.02000			NA			< 0.02000		
VOLATILE ORGANICS															
1,1,1-Trichloroethane	< 0.00600			< 0.00600		UJ	NA			< 0.00500		UJ	NA		
1,1,2,2-Tetrachloroethane	< 0.00600			< 0.00600		UJ	NA			< 0.00500		UJ	NA		
1,1,2-Trichloroethane	< 0.00600			< 0.00600		UJ	NA			< 0.00500		UJ	NA		
1,1-Dichloroethane	< 0.00600			< 0.00600		UJ	NA			< 0.00500		UJ	NA		
1,1-Dichloroethene	< 0.00600			< 0.00600		UJ	< 0.00500			< 0.00500		UJ	< 0.00500		
1,2-Dichloroethane	< 0.00600			< 0.00600		UJ	< 0.00500			< 0.00500		UJ	< 0.00500		
1,2-Dichloroethylene	< 0.00600			< 0.00600		UJ	NA			< 0.00500		UJ	NA		
1,2-Dichloropropane	< 0.00600			< 0.00600		UJ	NA			< 0.00500		UJ	NA		
2-Butanone	0.01200	BJ	U	0.00600	BJ	UJ	0.00300	J		< 0.01100		UJ	0.00200	J	
2-Hexanone	0.00600	BJ	U	< 0.01200		UJ	NA			< 0.01100		UJ	NA		
4-Methyl-2-pentanone	0.00100	J	J	0.00300	J	J	NA			< 0.01100		UJ	NA		
Acetone	0.03600	B		0.05600	B	J	NA			0.01100	BJ	UJ	NA		
Benzene	< 0.00600			< 0.00600		UJ	< 0.00500			< 0.00500		UJ	< 0.00500		
Bromodichloromethane	< 0.00600			< 0.00600		UJ	NA			< 0.00500		UJ	NA		
Bromoform	< 0.00600			< 0.00600		UJ	NA			< 0.00500		UJ	NA		
Bromomethane	< 0.01200			< 0.01200		UJ	NA			< 0.01100		UJ	NA		
Carbon Tetrachloride	< 0.00600			< 0.00600		UJ	< 0.00500		J	< 0.00500		UJ	< 0.00500		J
Carbon disulfide	< 0.00600			< 0.00600		UJ	NA			< 0.00500		UJ	NA		
Chlorobenzene	< 0.00600			< 0.00600		UJ	< 0.00500			< 0.00500		UJ	< 0.00500		
Chloroethane	< 0.00600			< 0.00600		UJ	NA			< 0.01100		UJ	NA		
Chloroform	< 0.01200			< 0.01200		UJ	< 0.00500			< 0.00500		UJ	< 0.00500		
Chloromethane	< 0.00600			< 0.00600		UJ	NA			< 0.01100		UJ	NA		
Dibromochloromethane	< 0.01200			< 0.00600		UJ	NA			< 0.00500		UJ	NA		
Ethylbenzene	< 0.00600			< 0.00600		UJ	NA			< 0.00500		UJ	NA		
Methylene chloride	< 0.00600			< 0.00600		UJ	NA			0.03400	B	UJ	NA		
Styrene	0.00600	BJ	U	0.01100	B	UJ	NA			< 0.00500		UJ	< 0.00500		
Tetrachloroethene	< 0.00600			< 0.00600		UJ	0.00100	J		< 0.00500		UJ	NA		
Toluene	< 0.00600			< 0.00600		UJ	NA			< 0.00500		UJ	NA		
Total xylenes	< 0.00600			< 0.00600		UJ	NA			< 0.00500		UJ	< 0.00500		
Trichloroethene	0.00100	J	J	< 0.00600		UJ	< 0.00500			< 0.00500		UJ	NA		
Vinyl Acetate	< 0.00600			< 0.00600		UJ	NA			< 0.01100		UJ	< 0.01000		
Vinyl chloride	< 0.01200			< 0.01200		UJ	< 0.01000			< 0.01100		UJ	NA		
cis-1,3-Dichloropropene	< 0.01200			< 0.01200		UJ	NA			< 0.00500		UJ	NA		
trans-1,3-Dichloropropene	< 0.00600			< 0.00600		UJ	NA			< 0.00500		UJ	< 0.02000		
Pyridine	< 0.00600			< 0.00600		UJ	< 0.02000			NA					
	NA			NA											

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1794 067324 0.0 - 1.0			1794 067326 1.5 - 2.0 TCLP			1794 067328 2.0 - 2.5			1794 067330 - FIELD BLANK			1795 067367 0.0 - 1.0			1795 067367 0.0 - 1.0 TCLP		
		a	b		a	b		a	b		a	b		a	b		a	b
DIOXINS																		
1,2,3,4,6,7,8-Heptachlorodib	< 0.00007		UJ		NA		< 0.00005				NA		< 0.00005				NA	
1,2,3,4,6,7,8-Heptachlorodib	< 0.00013				NA		< 0.00008		UJ		NA		< 0.00019				NA	
1,2,3,4,7,8,9-Heptachlorodib	< 0.00010		UJ		NA		< 0.00012		UJ		NA		< 0.00007				NA	
1,2,3,4,7,8-Hexachlorodibenz	< 0.00014				NA		< 0.00009				NA		< 0.00005				NA	
1,2,3,4,7,8-Hexachlorodibenz	< 0.00013				NA		< 0.00007				NA		< 0.00011				NA	
1,2,3,6,7,8-Hexachlorodibenz	< 0.00011				NA		< 0.00007				NA		< 0.00004				NA	
1,2,3,6,7,8-Hexachlorodibenz	< 0.00012				NA		< 0.00007				NA		< 0.00009				NA	
1,2,3,7,8,9-Hexachlorodibenz	< 0.00012				NA		< 0.00008				NA		< 0.00006				NA	
1,2,3,7,8,9-Hexachlorodibenz	< 0.00015				NA		< 0.00008				NA		< 0.00010				NA	
1,2,3,7,8-Pentachlorodibenzo	< 0.00002				NA		< 0.00007				NA		< 0.00012		UJ		NA	
1,2,3,7,8-Pentachlorodibenzo	< 0.00006				NA		< 0.00006				NA		< 0.00003		UJ		NA	
2,3,4,6,7,8-Hexachlorodibenz	< 0.00014				NA		< 0.00008				NA		< 0.00005				NA	
2,3,4,7,8-Pentachlorodibenzo	< 0.00003				NA		< 0.00006				NA		< 0.00004		UJ		NA	
2,3,7,8-TCDD	< 0.00016				NA		< 0.00010				NA		< 0.00021				NA	
2,3,7,8-TCDF	< 0.00014				NA		< 0.00006				NA		< 0.00028				NA	
Heptachlorodibenzofuran	< 0.00008		UJ		NA		< 0.00010		UJ		NA		< 0.00006				NA	
Heptachlorodibenzo-p-dioxin	< 0.00013		J		NA		< 0.00005				NA		< 0.00019				NA	
Hexachlorodibenzo-p-dioxin	< 0.00012				NA		< 0.00008				NA		< 0.00010				NA	
Hexachlorodibenzofuran	< 0.00013				NA		< 0.00008				NA		< 0.00005				NA	
Octachlorodibenzo-p-dioxin	0.00060				NA		0.00150				NA		0.00290		J		NA	
Octachlorodibenzofuran	< 0.00015				NA		< 0.00010				NA		< 0.00008		UJ		NA	
Pentachlorodibenzofuran	< 0.00002				NA		< 0.00006				NA		< 0.00003		UJ		NA	
Pentachlorodibenzo-p-dioxin	< 0.00006				NA		< 0.00007				NA		< 0.00012		UJ		NA	
Tetrachlorodibenzofuran	< 0.00003				NA		< 0.00006				NA		< 0.00003		UJ		NA	
Tetrachlorodibenzo-p-dioxin	< 0.00002				NA		< 0.00002				NA		< 0.00002				NA	
HERBICIDE ORGANICS																		
2,4,5-TP (Silvex)	NA			< 0.00180			NA			NA			NA			< 0.00180		
2,4-D	NA			< 0.01000			NA			NA			NA			< 0.01000		

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	1794 067324 0.0 - 1.0 a b	1794 067326 1.5 - 2.0 TCLP a b	1794 067328 2.0 - 2.5 a b	1794 067330 - FIELD BLANK a b	1795 067367 0.0 - 1.0 a b	1795 067367 0.0 - 1.0 TCLP a b
ORGANOPHOSPOROUS PESTICIDES						
Azinphosmethyl	< 0.20000	NA	< 0.20000	NA	NA	NA
Demeton	< 0.20000	NA	< 0.20000	NA	NA	NA
Diazinon	< 0.10000	NA	< 0.10000	NA	NA	NA
Dimethoate	< 0.10000	NA	< 0.10000	NA	< 0.10000	NA
Disulfoton	< 0.10000	NA	< 0.10000	NA	< 0.10000	NA
Ethion	< 0.10000	NA	< 0.10000	NA	< 0.10000	NA
Famphur	< 0.10000	NA	< 0.10000	NA	< 0.10000	NA
Malathion	< 0.10000	NA	< 0.10000	NA	NA	NA
Parathion, ethyl	< 0.10000	NA	< 0.10000	NA	< 0.10000	NA
Parathion, methyl	< 0.10000	NA	< 0.10000	NA	< 0.10000	NA
Phorate	< 0.10000	NA	< 0.10000	NA	< 0.10000	NA
Sulfotepp	< 0.10000	NA	< 0.10000	NA	< 0.10000	NA
Tetraethylpyrophosphate	< 0.40000	NA	< 0.40000	NA	NA	NA
Thionazin	< 0.10000	NA	< 0.10000	NA	< 0.10000	NA
PESTICIDES						
4,4'-DDD	< 0.02100	NA	< 0.01900	NA	< 0.01900	NA
4,4'-DDE	< 0.02100	NA	< 0.01900	NA	< 0.01900	NA
4,4'-DDT	< 0.02100	NA	< 0.01900	NA	< 0.01900	NA
Aldrin	< 0.01000	NA	< 0.00940	NA	< 0.00950	NA
Aroclor-1016	< 0.10000	NA	< 0.09400	NA	< 0.09500	NA
Aroclor-1221	< 0.10000	NA	< 0.09400	NA	< 0.09500	NA
Aroclor-1232	< 0.10000	NA	< 0.09400	NA	< 0.09500	NA
Aroclor-1242	< 0.10000	NA	< 0.09400	NA	< 0.09500	NA
Aroclor-1248	< 0.10000	NA	< 0.09400	NA	< 0.19000	NA
Aroclor-1254	< 0.21000	NA	< 0.19000	NA	< 0.19000	NA
Aroclor-1260	< 0.21000	NA	< 0.19000	NA	< 0.19000	NA
Dieldrin	< 0.02100	NA	< 0.01900	NA	< 0.01900	NA
Endosulfan II	< 0.02100	NA	< 0.01900	NA	< 0.01900	< 0.00001
Endosulfan sulfate	< 0.02100	NA	< 0.01900	NA	< 0.01900	NA
Endosulfan-I	< 0.01000	NA	< 0.00940	NA	< 0.00950	NA
Endrin	< 0.02100	< 0.00010	< 0.01900	NA	< 0.01900	NA
Endrin ketone	< 0.02100	NA	< 0.01900	NA	< 0.01900	NA
Heptachlor	< 0.01000	< 0.00005	< 0.00940	NA	< 0.00950	< 0.00005
Heptachlor epoxide	< 0.01000	< 0.00005	< 0.00940	NA	< 0.00950	< 0.00005
Methoxychlor	< 0.10000	< 0.00050	< 0.09400	NA	< 0.09500	< 0.00005
Toxaphene	< 0.21000	< 0.00100	< 0.19000	NA	< 0.19000	< 0.00010
alpha-BHC	< 0.01000	NA	< 0.00940	NA	< 0.00950	NA
alpha-Chlordane	< 0.10000	< 0.00050	< 0.09400	NA	< 0.09500	< 0.00005
beta-BHC	< 0.01000	NA	< 0.00940	NA	< 0.00950	NA
delta-BHC	< 0.01000	NA	< 0.00940	NA	< 0.00950	NA
gamma-BHC (Lindane)	< 0.01000	< 0.00005	< 0.00940	NA	< 0.00950	< 0.00005
gamma-Chlordane	< 0.10000	< 0.00050	< 0.09400	NA	< 0.09500	< 0.00005

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Results in parts per million (ppm).
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NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1794 067324 0.0 - 1.0	a	b	1794 067326 1.5 - 2.0 TCLP	a	b	1794 067328 2.0 - 2.5	a	b	1794 067330 - FIELD BLANK	a	b	1795 067367 0.0 - 1.0	a	b	1795 067367 0.0 - 1.0 TCLP	a	b
SEMI-VOLATILE ORGANICS																		
1,2,4-Trichlorobenzene	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
1,2-Dichlorobenzene	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
1,3-Dichlorobenzene	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
1,4-Dichlorobenzene	< 0.38000			< 0.02000			< 0.39000			NA			< 0.39000			< 0.02000		
2,4,5-Trichlorophenol	< 1.80000			< 0.10000			< 1.90000			NA			< 1.90000			NA		
2,4,6-Trichlorophenol	< 0.38000			< 0.02000			< 0.39000			NA			< 0.39000			< 0.02000		
2,4-Dichlorophenol	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
2,4-Dimethylphenol	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
2,4-Dinitrophenol	< 1.80000			NA			< 1.90000			NA			< 1.90000		UJ	NA		
2,4-Dinitrotoluene	< 0.38000			< 0.02000			< 0.39000			NA			< 0.02000			NA		
2,6-Dinitrotoluene	< 0.38000			NA			< 0.39000			NA			< 0.39000			< 0.02000		
2-Chloronaphthalene	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
2-Chlorophenol	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
2-Methylnaphthalene	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
2-Methylphenol	< 0.38000			< 0.02000			< 0.39000			NA			< 0.39000			< 0.02000		
2-Nitroaniline	< 1.80000			NA			< 1.90000		UJ	NA			< 1.90000			NA		
2-Nitrophenol	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
3,3'-Dichlorobenzidine	< 0.75000		UJ	NA			< 0.78000		UJ	NA			< 0.77000		J	NA		
3-Nitroaniline	< 1.80000		UJ	NA			< 1.90000		R	NA			< 1.90000			NA		
4,6-Dinitro-2-methylphenol	< 1.80000			NA			< 1.90000			NA			< 1.90000			NA		
4-Bromophenyl phenyl ether	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
4-Chloro-3-methylphenol	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
4-Chloroaniline	< 0.38000			NA			< 0.39000		UJ	NA			< 0.39000			NA		
4-Chlorophenylphenyl ether	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
4-Methylphenol	< 0.38000			< 0.02000			< 0.39000			NA			< 0.39000			< 0.02000		
4-Nitroaniline	< 1.80000		UJ	NA			< 1.90000		UJ	NA			< 1.90000			NA		
4-Nitrophenol	< 1.80000			NA			< 1.90000		UJ	NA			< 1.90000			NA		
Acenaphthene	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
Acenaphthylene	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
Anthracene	< 0.38000			NA			< 0.39000			NA			0.05800	J	J	NA		
Benzo(a)anthracene	0.10000	J	J	NA			0.07800	J	J	NA			0.27000	J	J	NA		
Benzo(a)pyrene	0.04600	J	J	NA			< 0.39000			NA			0.12000	J	J	NA		
Benzo(b)fluoranthene	0.14000	J	J	NA			0.08800	J	J	NA			0.36000	J	J	NA		
Benzo(g,h,i)perylene	0.04500	J	J	NA			< 0.39000			NA			0.10000	J	J	NA		
Benzo(k)fluoranthene	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
Benzoic acid	0.06600	J	J	NA			< 1.90000		UJ	NA			1.90000	BJ	UJ	NA		
Benzyl alcohol	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
Butyl benzyl phthalate	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
Chrysene	0.08200	J	J	NA			0.07000	J	J	NA			0.30000	J	J	NA		
Di-n-butyl phthalate	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		

a = lab qualifiers
b = validation qualifiers

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1794 067324 0.0 - 1.0	a	b	1794 067326 1.5 - 2.0 TCLP	a	b	1794 067328 2.0 - 2.5	a	b	1794 067330 - FIELD BLANK	a	b	1795 067367 0.0 - 1.0	a	b	1795 067367 0.0 - 1.0 TCLP	a	b
Di-n-octyl phthalate	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
Dibenzo(a,h)anthracene	< 0.38000		UJ	NA			< 0.39000			NA			< 0.39000			NA		
Dibenzofuran	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
Diethyl phthalate	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
Dimethyl phthalate	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
Fluoranthene	0.17000	J	J	NA			0.15000	J	J	NA			0.61000			NA		
Fluorene	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
Hexachlorobenzene	< 0.38000			< 0.02000			< 0.39000			NA			< 0.39000			< 0.02000		
Hexachlorobutadiene	< 0.38000			< 0.02000			< 0.39000			NA			< 0.39000			< 0.02000		
Hexachlorocyclopentadiene	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
Hexachloroethane	< 0.38000			< 0.02000			< 0.39000		UJ	NA			< 0.39000			< 0.02000		
Indeno(1,2,3-cd)pyrene	< 0.38000			NA			< 0.39000			NA			0.08400	J	J	NA		
Isophorone	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
N-Nitroso-di-n-propylamine	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
N-Nitrosodiphenylamine	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
Naphthalene	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
Nitrobenzene	< 0.38000		UJ	< 0.02000			< 0.39000			NA			< 0.39000			< 0.02000		
O,O,O-Triethylphosphorothioa	< 0.10000			NA			< 0.10000			NA			< 0.10000			NA		
Pentachlorophenol	< 1.80000			< 0.10000			< 1.90000			NA			< 1.90000			< 0.10000		
Phenanthrene	0.09600	J	J	NA			0.09300	J	J	NA			0.37000	J	J	NA		
Phenol	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
Pyrene	0.17000	J	J	NA			0.14000	J	J	NA			0.50000			NA		
bis(2-Chloroethoxy)methane	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
bis(2-Chloroethyl)ether	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
bis(2-Chloroisopropyl) ether	< 0.38000		UJ	NA			< 0.39000			NA			< 0.39000			NA		
bis(2-Ethylhexyl) phthalate	< 0.38000			NA			< 0.39000			NA			< 0.39000			NA		
3-Methylphenol	NA			< 0.02000			NA			NA			NA			NA		

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b = validation qualifiers

SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1794 067324 0.0 - 1.0	a	b	1794 067326 1.5 - 2.0 TCLP	a	b	1794 067328 2.0 - 2.5	a	b	1794 067330 - FIELD BLANK	a	b	1795 067367 0.0 - 1.0	a	b	1795 067367 0.0 - 1.0 TCLP	a	b
VOLATILE ORGANICS																		
1,1,1-Trichloroethane	< 0.00600		UJ	NA			< 0.00500		UJ	< 0.00500		UJ	< 0.00600			NA		
1,1,2,2-Tetrachloroethane	< 0.00600			NA			< 0.00500			< 0.00500			< 0.00600			NA		
1,1,2-Trichloroethane	< 0.00600			NA			< 0.00500			< 0.00500			< 0.00600			NA		
1,1-Dichloroethane	< 0.00600			NA			< 0.00500			< 0.00500			< 0.00600			NA		
1,1-Dichloroethene	< 0.00600			< 0.00500			< 0.00500			< 0.00500			< 0.00600			NA		
1,2-Dichloroethane	< 0.00600		UJ	< 0.00500			< 0.00500		UJ	< 0.00500			< 0.00600			NA		
1,2-Dichloroethylene	< 0.00600			NA			< 0.00500			< 0.00500			< 0.00600			NA		
1,2-Dichloropropane	< 0.00600			NA			< 0.00500			< 0.00500			< 0.00600			NA		
2-Butanone	< 0.01200		UJ	0.00200	JB		< 0.01100		UJ	< 0.01000		R	< 0.01100		UJ	NA		
2-Hexanone	< 0.01200			NA			< 0.01100			< 0.01000		UJ	< 0.01100		UJ	NA		
4-Methyl-2-pentanone	< 0.01200			NA			< 0.01100			< 0.01000			< 0.01100		UJ	NA		
Acetone	0.00500	J	J	NA			0.01000	J	J	0.00200	BJ	J	0.00500	J	J	NA		
Benzene	< 0.00600			< 0.00500			< 0.00500			< 0.00500		UJ	< 0.00600			NA		
Bromodichloromethane	< 0.00600		UJ	NA			< 0.00500		UJ	0.00600		J	< 0.00600			NA		
Bromoform	< 0.00600			NA			< 0.00500			< 0.00500			< 0.00600			NA		
Bromomethane	< 0.01200			NA			< 0.01100			< 0.01000			< 0.01100			NA		
Carbon Tetrachloride	< 0.00600		UJ	< 0.00500			< 0.00500		UJ	< 0.00500		UJ	< 0.00600		UJ	NA		
Carbon disulfide	< 0.00600			NA			< 0.00500			< 0.00500		UJ	< 0.00600			NA		
Chlorobenzene	< 0.00600			< 0.00500			< 0.00500			< 0.00500		UJ	< 0.00600			NA		
Chloroethane	< 0.01200			NA			< 0.01100			< 0.01000			< 0.01100			NA		
Chloroform	< 0.00600			< 0.00500			< 0.00500			0.04300		J	< 0.00600			NA		
Chloromethane	< 0.01200			NA			< 0.01100			< 0.01000		UJ	< 0.01100			NA		
Dibromochloromethane	< 0.00600		UJ	NA			< 0.00500		UJ	< 0.00500		UJ	< 0.00600			NA		
Ethylbenzene	< 0.00600			NA			< 0.00500			< 0.00500		UJ	< 0.00600			NA		
Methylene chloride	0.01000	B		NA			0.00600	B		0.00200	BJ	J	0.00900	B	UJ	NA		
Styrene	< 0.00600			NA			< 0.00500			< 0.00500		UJ	< 0.00600			NA		
Tetrachlorethene	< 0.00600			< 0.00500			< 0.00500			< 0.00500			< 0.00600			NA		
Toluene	0.00600	BJ	U	NA			0.00500	BJ	UJ	0.00100	BJ	J	< 0.00600			NA		
Total xylenes	< 0.00600			NA			< 0.00500			< 0.00500		UJ	< 0.00600			NA		
Trichloroethene	< 0.00600			< 0.00500			< 0.00500			< 0.00500			< 0.00600			NA		
Vinyl Acetate	< 0.01200			NA			< 0.01100			< 0.01000			< 0.01100			NA		
Vinyl chloride	< 0.01200			< 0.01000			< 0.01100			< 0.01000			< 0.01100		UJ	NA		
cis-1,3-Dichloropropene	< 0.00600		UJ	NA			< 0.00500		UJ	< 0.00500		UJ	< 0.00600			NA		
trans-1,3-Dichloropropene	< 0.00600		UJ	NA			< 0.00500		UJ	< 0.00500		UJ	< 0.00600			NA		
Pyridine	NA			< 0.02000			NA			NA			< 0.02000			< 0.020000		

a = lab qualifiers
b = validation qualifiers

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1795 067369 2.0 - 3.0 TCLP a	b	1795 067370 3.0 - 4.0 a	b	1882 067802 1.5 - 2.0 TCLP a	b	1883 067801 1.5 - 2.0 TCLP a	b	1884 067804 1.5 - 2.0 TCLP a	b
DIOXINS										
1,2,3,4,6,7,8-Heptachlorodib	NA		< 0.00002		NA		NA		NA	
1,2,3,4,6,7,8-Heptachlorodib	NA		< 0.00008		NA		NA		NA	
1,2,3,4,7,8,9-Heptachlorodib	NA		< 0.00003		NA		NA		NA	
1,2,3,4,7,8-Hexachlorodibenz	NA		< 0.00020		NA		NA		NA	
1,2,3,4,7,8-Hexachlorodibenz	NA		< 0.00002		NA		NA		NA	
1,2,3,6,7,8-Hexachlorodibenz	NA		< 0.00016		NA		NA		NA	
1,2,3,6,7,8-Hexachlorodibenz	NA		< 0.00002		NA		NA		NA	
1,2,3,7,8,9-Hexachlorodibenz	NA		< 0.00003		NA		NA		NA	
1,2,3,7,8,9-Hexachlorodibenz	NA		< 0.00017		NA		NA		NA	
1,2,3,7,8-Pentachlorodibenzo	NA		< 0.00007	UJ	NA		NA		NA	
1,2,3,7,8-Pentachlorodibenzo	NA		< 0.00003	UJ	NA		NA		NA	
2,3,4,6,7,8-Hexachlorodibenz	NA		< 0.00002		NA		NA		NA	
2,3,4,7,8-Pentachlorodibenzo	NA		< 0.00003	UJ	NA		NA		NA	
2,3,7,8-TCDD	NA		< 0.00049		NA		NA		NA	
2,3,7,8-TCDF	NA		< 0.00060		NA		NA		NA	
Heptachlorodibenzo-p-dioxin	NA		< 0.00008		NA		NA		NA	
Heptachlorodibenzofuran	NA		< 0.00002		NA		NA		NA	
Hexachlorodibenzo-p-dioxin	NA		< 0.00017		NA		NA		NA	
Hexachlorodibenzofuran	NA		< 0.00002		NA		NA		NA	
Octachlorodibenzo-p-dioxin	NA		0.00360	J	NA		NA		NA	
Octachlorodibenzofuran	NA		< 0.00002	UJ	NA		NA		NA	
Pentachlorodibenzofuran	NA		< 0.00003	UJ	NA		NA		NA	
Pentachlorodibenzo-p-dioxin	NA		< 0.00007	UJ	NA		NA		NA	
Tetrachlorodibenzofuran	NA		< 0.00003	UJ	NA		NA		NA	
Tetrachlorodibenzo-p-dioxin	NA		< 0.00010		NA		NA		NA	
ORGANOPHOSPOROUS PESTICIDES										
Dimethoate	NA		< 0.10000		NA		NA		NA	
Disulfoton	NA		< 0.10000		NA		NA		NA	
Ethion	NA		< 0.10000		NA		NA		NA	
Famphur	NA		< 0.10000		NA		NA		NA	
Parathion, ethyl	NA		< 0.10000		NA		NA		NA	
Parathion, methyl	NA		< 0.10000		NA		NA		NA	
Phorate	NA		< 0.10000		NA		NA		NA	
Sulfotepp	NA		< 0.10000		NA		NA		NA	
Thionazin	NA		< 0.10000		NA		NA		NA	
PESTICIDES										

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1795 067369 2.0 - 3.0 TCLP			1795 067370 3.0 - 4.0			1882 067802 1.5 - 2.0 TCLP			1883 067801 1.5 - 2.0 TCLP			1884 067804 1.5 - 2.0 TCLP		
		a	b		a	b		a	b		a	b		a	b
PESTICIDES															
4,4'-DDD	NA			< 0.01900			NA			NA			NA		
4,4'-DDE	NA			< 0.01900			NA			NA			NA		
4,4'-DDT	NA			< 0.01900			NA			NA			NA		
Aldrin	NA			< 0.00940			NA			NA			NA		
Aroclor-1016	NA			< 0.09400			NA			NA			NA		
Aroclor-1221	NA			< 0.09400			NA			NA			NA		
Aroclor-1232	NA			< 0.09400			NA			NA			NA		
Aroclor-1242	NA			< 0.09400			NA			NA			NA		
Aroclor-1248	NA			< 0.09400			NA			NA			NA		
Aroclor-1254	NA			< 0.19000			NA			NA			NA		
Aroclor-1260	NA			< 0.19000			NA			NA			NA		
Dieldrin	NA			< 0.01900			NA			NA			NA		
Endosulfan II	NA			< 0.01900			NA			NA			NA		
Endosulfan sulfate	NA			< 0.01900			NA			NA			NA		
Endosulfan-I	NA			< 0.00940			NA			NA			NA		
Endrin	NA			< 0.01900			NA			NA			NA		
Endrin ketone	NA			< 0.01900			NA			NA			NA		
Heptachlor	NA			< 0.00940			NA			NA			NA		
Heptachlor epoxide	NA			< 0.00940			NA			NA			NA		
Methoxychlor	NA			< 0.09400			NA			NA			NA		
Toxaphene	NA			< 0.19000			NA			NA			NA		
alpha-BHC	NA			< 0.00940			NA			NA			NA		
alpha-Chlordane	NA			< 0.09400			NA			NA			NA		
beta-BHC	NA			< 0.00940			NA			NA			NA		
delta-BHC	NA			< 0.00940			NA			NA			NA		
gamma-BHC (Lindane)	NA			< 0.00940			NA			NA			NA		
gamma-Chlordane	NA			< 0.09400			NA			NA			NA		
SEMI-VOLATILE ORGANICS															
1,2,4-Trichlorobenzene	NA			< 0.38000			NA			NA			NA		
1,2-Dichlorobenzene	NA			< 0.38000			NA			NA			NA		
1,3-Dichlorobenzene	NA			< 0.38000			NA			NA			NA		
1,4-Dichlorobenzene	NA			< 0.38000			< 0.02000			< 0.02000			< 0.02000		
2,4,5-Trichlorophenol	NA			< 1.80000			< 0.10000			< 0.10000			< 0.10000		
2,4,6-Trichlorophenol	NA			< 0.38000			< 0.02000			< 0.02000			< 0.02000		
2,4-Dichlorophenol	NA			< 0.38000			NA			NA			NA		
2,4-Dimethylphenol	NA			< 0.38000			NA			NA			NA		
2,4-Dinitrophenol	NA			< 1.80000	UJ		NA			NA			NA		

a = lab qualifiers
b = validation qualifiers

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REPORT DATE : 26-APR-92

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
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CHEMICAL PARAMETERS	1795 067369 2.0 - 3.0 TCLP		1795 067370 3.0 - 4.0		1882 067802 1.5 - 2.0 TCLP		1883 067801 1.5 - 2.0 TCLP		1884 067804 1.5 - 2.0 TCLP	
	a	b	a	b	a	b	a	b	a	b
2,4-Dinitrotoluene	NA		< 0.38000		< 0.02000		< 0.02000		< 0.02000	
2,6-Dinitrotoluene	NA		< 0.38000		NA		NA		NA	
2-Chloronaphthalene	NA		< 0.38000		NA		NA		NA	
2-Chlorophenol	NA		< 0.38000		NA		NA		NA	
2-Methylnaphthalene	NA		< 0.38000		NA		NA		NA	
2-Methylphenol	NA		< 0.38000		< 0.02000		< 0.02000		< 0.02000	
2-Nitroaniline	NA		< 1.80000		NA		NA		NA	
2-Nitrophenol	NA		< 0.38000		NA		NA		NA	
3,3'-Dichlorobenzidine	NA		< 0.76000	UJ	NA		NA		NA	
3-Nitroaniline	NA		< 1.80000		NA		NA		NA	
4,6-Dinitro-2-methylphenol	NA		< 1.80000		NA		NA		NA	
4-Bromophenyl phenyl ether	NA		< 0.38000		NA		NA		NA	
4-Chloro-3-methylphenol	NA		< 0.38000		NA		NA		NA	
4-Chloroaniline	NA		< 0.38000		NA		NA		NA	
4-Chlorophenylphenyl ether	NA		< 0.38000		NA		NA		NA	
4-Methylphenol	NA		< 0.38000		< 0.02000		< 0.02000		< 0.02000	
4-Nitroaniline	NA		< 1.80000		NA		NA		NA	
4-Nitrophenol	NA		< 1.80000		NA		NA		NA	
Acenaphthene	NA		< 0.38000		NA		NA		NA	
Acenaphthylene	NA		< 0.38000		NA		NA		NA	
Anthracene	NA		< 0.38000		NA		NA		NA	
Benzo(a)anthracene	NA		< 0.38000		NA		NA		NA	
Benzo(a)pyrene	NA		< 0.38000		NA		NA		NA	
Benzo(b)fluoranthene	NA		< 0.38000		NA		NA		NA	
Benzo(g,h,i)perylene	NA		< 0.38000		NA		NA		NA	
Benzo(k)fluoranthene	NA		< 0.38000		NA		NA		NA	
Benzoic acid	NA		0.04300	BJ UJ	NA		NA		NA	
Benzyl alcohol	NA		< 0.38000		NA		NA		NA	
Butyl benzyl phthalate	NA		< 0.38000		NA		NA		NA	
Chrysene	NA		< 0.38000		NA		NA		NA	
Di-n-butyl phthalate	NA		< 0.38000		NA		NA		NA	
Di-n-octyl phthalate	NA		< 0.38000		NA		NA		NA	
Dibenzo(a,h)anthracene	NA		< 0.38000		NA		NA		NA	
Dibenzofuran	NA		< 0.38000		NA		NA		NA	
Diethyl phthalate	NA		< 0.38000		NA		NA		NA	
Dimethyl phthalate	NA		< 0.38000		NA		NA		NA	
Fluoranthene	NA		< 0.38000		NA		NA		NA	
Fluorene	NA		< 0.38000		NA		NA		NA	
Hexachlorobenzene	NA		< 0.38000		< 0.02000		< 0.02000		< 0.02000	
Hexachlorobutadiene	NA		< 0.38000		< 0.02000		< 0.02000		< 0.02000	
Hexachlorocyclopentadiene	NA		< 0.38000		NA		NA		NA	
Hexachloroethane	NA		< 0.38000		< 0.02000		< 0.02000		< 0.02000	
Indeno(1,2,3-cd)pyrene	NA		< 0.38000		NA		NA		NA	
Isophorone	NA		< 0.38000		NA		NA		NA	

a = lab qualifiers
b = validation qualifiers

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1795 067369 2.0 - 3.0 TCLP	a	b	1795 067370 3.0 - 4.0	a	b	1882 067802 1.5 - 2.0 TCLP	a	b	1883 067801 1.5 - 2.0 TCLP	a	b	1884 067804 1.5 - 2.0 TCLP	a	b
N-Nitroso-di-n-propylamine	NA			< 0.38000			NA			NA			NA		
N-Nitrosodiphenylamine	NA			< 0.38000			NA			NA			NA		
Naphthalene	NA			< 0.38000			NA			NA			NA		
Nitrobenzene	NA			< 0.38000			< 0.02000			< 0.02000			< 0.02000		
O,O,O-Triethylphosphorothioa	NA			< 0.10000			NA			NA			NA		
Pentachlorophenol	NA			< 1.80000			< 0.10000			< 0.10000			< 0.10000		
Phenanthrene	NA			< 0.38000			NA			NA			NA		
Phenol	NA			< 0.38000			NA			NA			NA		
Pyrene	NA			< 0.38000			NA			NA			NA		
bis(2-Chloroethoxy)methane	NA			< 0.38000			NA			NA			NA		
bis(2-Chloroethyl)ether	NA			< 0.38000			NA			NA			NA		
bis(2-Chloroisopropyl) ether	NA			< 0.38000			NA			NA			NA		
bis(2-Ethylhexyl) phthalate	NA			< 0.38000			NA			NA			NA		
3-Methylphenol	NA			NA			< 0.02000		R	< 0.02000		R	< 0.02000		R
VOLATILE ORGANICS															
1,1-Dichloroethene	< 0.00500			< 0.00600			< 0.00500			< 0.00500			< 0.00500		
1,2-Dichloroethane	< 0.00500			< 0.00600			< 0.00500			< 0.00500			< 0.00500		
2-Butanone	0.01000	J		< 0.01100		UJ	0.00400	J		< 0.01000			0.00200	J	
Benzene	< 0.00500			< 0.00600			< 0.00500			< 0.00500			< 0.00500		
Carbon Tetrachloride	< 0.00500			< 0.00600		UJ	< 0.00500			< 0.00500			< 0.00500		
Chlorobenzene	< 0.00500			< 0.00600			< 0.00500			< 0.00500			< 0.00500		
Chloroform	< 0.00500			< 0.00600			< 0.00500			< 0.00500			< 0.00500		
Tetrachlorethene	< 0.00500			< 0.00600			< 0.00500			< 0.00500			< 0.00500		
Trichloroethene	< 0.00500			< 0.00600			< 0.00500			< 0.00500			< 0.00500		
Vinyl chloride	< 0.01000		J	< 0.01100		UJ	< 0.01000			< 0.01000			< 0.01000		
1,1,1-Trichloroethane	NA			< 0.00600			NA			NA			NA		
1,1,2,2-Tetrachloroethane	NA			< 0.00600			NA			NA			NA		
1,1,2-Trichloroethane	NA			< 0.00600			NA			NA			NA		
1,1-Dichloroethane	NA			< 0.00600			NA			NA			NA		
1,2-Dichloroethylene	NA			< 0.00600			NA			NA			NA		
1,2-Dichloropropane	NA			< 0.00600			NA			NA			NA		
2-Hexanone	NA			< 0.01100		UJ	NA			NA			NA		
4-Methyl-2-pentanone	NA			< 0.01100		UJ	NA			NA			NA		
Acetone	NA			0.00500	J	J	NA			NA			NA		
Bromodichloromethane	NA			< 0.00600			NA			NA			NA		
Bromoform	NA			< 0.00600			NA			NA			NA		
Bromomethane	NA			< 0.01100			NA			NA			NA		
Carbon disulfide	NA			< 0.00600			NA			NA			NA		
Chloroethane	NA			< 0.01100			NA			NA			NA		
Chloromethane	NA			< 0.01100			NA			NA			NA		
Dibromochloromethane	NA			< 0.00600			NA			NA			NA		

a = lab qualifiers
b = validation qualifiers

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SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1795 067369 2.0 - 3.0 TCLP			1795 067370 3.0 - 4.0			1882 067802 1.5 - 2.0 TCLP		1883 067801 1.5 - 2.0 TCLP		1884 067804 1.5 - 2.0 TCLP	
		a	b		a	b		a b		a b		a b
Ethylbenzene	NA			< 0.00600			NA		NA		NA	
Methylene chloride	NA			0.00700	B	UJ	NA		NA		NA	
Styrene	NA			< 0.00600			NA		NA		NA	
Toluene	NA			< 0.00600			NA		NA		NA	
Total xylenes	NA			< 0.00600			NA		NA		NA	
Vinyl Acetate	NA			< 0.01100			NA		NA		NA	
cis-1,3-Dichloropropene	NA			< 0.00600			NA		NA		NA	
trans-1,3-Dichloropropene	NA			< 0.00600			NA		NA		NA	
Pyridine	NA			NA			< 0.02000		< 0.02000		< 0.02000	

a = lab qualifiers
b = validation qualifiers

SOUTH FIELD
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceeded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1885 067803 - 1.5 TCLP			a	b
SEMI-VOLATILE ORGANICS					
1,4-Dichlorobenzene	<	0.02000			
2,4,5-Trichlorophenol	<	0.10000			
2,4,6-Trichlorophenol	<	0.02000			
2,4-Dinitrotoluene	<	0.02000			
2-Methylphenol	<	0.02000			
3-Methylphenol	<	0.02000			R
4-Methylphenol	<	0.02000			
Hexachlorobenzene	<	0.02000			
Hexachlorobutadiene	<	0.02000			
Hexachloroethane	<	0.02000			
Nitrobenzene	<	0.02000			
Pentachlorophenol	<	0.10000			
Pyridine	<	0.02000			
VOLATILE ORGANICS					
1,1-Dichloroethene	<	0.00500			
1,2-Dichloroethane	<	0.00500			
2-Butanone	<	0.01000			
Benzene	<	0.00500			
Carbon Tetrachloride	<	0.00500			
Chlorobenzene	<	0.00500			
Chloroform	<	0.00500			
Tetrachlorethene	<	0.00500			
Trichloroethene	<	0.00500			
Vinyl chloride	<	0.01000			

a = lab qualifiers
b = validation qualifiers

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EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING GENERAL CHEMICAL RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

Concentration Qualifiers

B = Reported value was obtained from a reading that was less than the Contract Laboratory Program (CLP) Contract Required Detection Limit (CRQL), but greater than or equal to the Instrument Detection Limit (IDL).

Quality Qualifiers

E = The reported value is estimated because of the presence of interference.

M = Duplicate injection precision not met.

N = Spiked sample recovery not within controls limits.

S = The reported value was determined by the Method of Standard Additions.

W = Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

G = Native analyte > 4 times spike added; therefore acceptance criteria do not apply.

X = Detection limit is higher than normal due to sample matrix interferences.

* = Duplication analysis not within control limits.

+ = Correlation coefficient for the MSA is less than 0.955.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1046 008034 RINSATE	a	b
GENERAL CHEMISTRY				
Ammonia		NA		
Chloride	<	0.5000		R
Fluoride	<	0.1000		R
Hydrogen ion		NA		
Nitrate		0.4250		R
Phenols		0.0100		R
Phosphorus (black, white,		NA		
Phosphate as P		NA		
Sulfate		4.2000		R
Total Kjeldahl Nitrogen		NA		
Total Organic Carbon		NA		
Total Organic Halides		NA		
Total Organic Nitrogen		NA		
METALS				
Aluminum		NA		
Antimony		NA		
Arsenic	<	0.2000		R
Barium		0.0100		R
Beryllium		NA		
Cadmium	<	0.0050		R
Calcium		NA		
Chromium	<	0.2000		R
Cobalt		NA		
Copper	<	0.0100		R
Cyanide		NA		
Hexavalent Chromium	<	0.0100		R
Iron		NA		
Lead	<	0.0500		R
Magnesium		NA		
Manganese	<	0.0200		R
Mercury	<	0.0002		R
Molybdenum	<	0.0200		R
Nickel	<	0.0200		R
Potassium		NA		
Selenium	<	0.2000		R
Silicon		NA		
Silver	<	0.0100		R
Sodium		NA		
Thallium		NA		
Vanadium		NA		
Zinc		NA		

a = lab qualifiers
b = validation qualifiers

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SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1456 055906 - 3.75	a	b
GENERAL CHEMISTRY			
Ammonia	NA		
Chloride	NA		
Fluoride	NA		
Hydrogen ion	NA		
Nitrate	NA		
Phenols	NA		
Phosphorus (black, white,	NA		
Phosphate as P	NA		
Sulfate	NA		
Total Kjeldahl Nitrogen	NA		
Total Organic Carbon	NA		
Total Organic Halides	NA		
Total Organic Nitrogen	NA		
METALS			
Aluminum	7820.0000		
Antimony	< 6.6000	N	R
Arsenic	8.1000		
Barium	76.9000		
Beryllium	1.5000		
Cadmium	4.4000	E	
Calcium	83300.0000	*	
Chromium	24.9000	E	
Cobalt	19.1000		
Copper	21.7000	E	
Cyanide	< 0.2800		
Hexavalent Chromium	NA		
Iron	18200.0000		
Lead	19.2000		
Magnesium	20600.0000	*	
Manganese	572.0000		
Mercury	0.2300	N	J
Molybdenum	< 2.2000		
Nickel	39.5000		
Potassium	761.0000	B	J
Selenium	< 0.3600	WN	R
Silicon	NA		
Silver	2.2000		
Sodium	144.0000	B	J
Thallium	0.2000	BW	J
Vanadium	24.8000	E	
Zinc	50.4000	E	J

a = lab qualifiers
b = validation qualifiers

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SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1459 055919 - 5.0	a	b
GENERAL CHEMISTRY			
Ammonia	NA		
Chloride	NA		
Fluoride	NA		
Hydrogen ion	NA		
Nitrate	NA		
Phenols	NA		
Phosphorus (black, white,	NA		
Phosphate as P	NA		
Sulfate	NA		
Total Kjeldahl Nitrogen	NA		
Total Organic Carbon	NA		
Total Organic Halides	NA		
Total Organic Nitrogen	NA		
METALS			
Aluminum	7950.0000		
Antimony	< 5.8000	N	R
Arsenic	4.6000		
Barium	84.5000		
Beryllium	1.4000		
Cadmium	4.1000	E	
Calcium	78600.0000	*	
Chromium	23.8000	E	
Cobalt	11.0000		
Copper	24.3000	E	
Cyanide	< 0.2700		
Hexavalent Chromium	NA		
Iron	15900.0000		
Lead	34.0000		
Magnesium	24600.0000	*	
Manganese	671.0000		
Mercury	0.2500	N	J
Molybdenum	< 1.9000		
Nickel	29.5000		
Potassium	733.0000	B	J
Selenium	< 0.3200	EN	R
Silicon	NA		
Silver	< 1.9000		
Sodium	227.0000	B	J
Thallium	< 0.1600	W	J
Vanadium	21.4000	E	
Zinc	65.1000	E	J

a = lab qualifiers
b = validation qualifiers

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SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1462 055932 - 4.0	a	b
GENERAL CHEMISTRY			
Ammonia	NA		
Chloride	NA		
Fluoride	NA		
Hydrogen ion	NA		
Nitrate	NA		
Phenols	NA		
Phosphorus (black, white,	NA		
Phosphate as P	NA		
Sulfate	NA		
Total Kjeldahl Nitrogen	NA		
Total Organic Carbon	NA		
Total Organic Halides	NA		
Total Organic Nitrogen	NA		
METALS			
Aluminum	5820.0000		
Antimony	< 6.5000	N	R
Arsenic	5.9000	*	
Barium	57.3000		
Beryllium	1.2000		
Cadmium	4.6000	E	
Calcium	109000.0000	*	
Chromium	24.0000	E	
Cobalt	10.7000	B	J
Copper	12.1000	E	
Cyanide	< 0.2900		
Hexavalent Chromium	NA		
Iron	14900.0000		
Lead	13.2000		
Magnesium	33100.0000	*	
Manganese	424.0000		
Mercury	< 0.1100		
Molybdenum	< 2.2000		
Nickel	32.1000		
Potassium	561.0000	B	J
Selenium	< 0.4400	WN	R
Silicon	NA		
Silver	< 2.2000		
Sodium	130.0000	B	J
Thallium	< 0.2200		
Vanadium	23.4000	E	
Zinc	39.8000	E	J

a = lab qualifiers
b = validation qualifiers

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SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1465 055945 - 3.5	a	b
GENERAL CHEMISTRY			
Ammonia	NA		
Chloride	NA		
Fluoride	NA		
Hydrogen ion	NA		
Nitrate	NA		
Phenols	NA		
Phosphorus (black, white,	NA		
Phosphate as P	NA		
Sulfate	NA		
Total Kjeldahl Nitrogen	NA		
Total Organic Carbon	NA		
Total Organic Halides	NA		
Total Organic Nitrogen	NA		
METALS			
Aluminum	7780.0000		
Antimony	< 6.1000	N	R
Arsenic	5.8000		
Barium	198.0000		
Beryllium	1.3000		U
Cadmium	4.5000	E	
Calcium	102000.0000	*	
Chromium	25.3000	E	
Cobalt	14.9000		
Copper	16.2000	E	
Cyanide	< 0.3000		
Hexavalent Chromium	NA		
Iron	20700.0000		
Lead	20.9000		
Magnesium	24800.0000	*	
Manganese	743.0000		
Mercury	< 0.1200		
Molybdenum	< 2.0000		
Nickel	38.0000		
Potassium	863.0000	B	
Selenium	< 0.4200	WN	R
Silicon	NA		
Silver	< 2.0000		
Sodium	187.0000	B	J
Thallium	< 0.2100		
Vanadium	22.8000	E	
Zinc	56.6000	E	J

a = lab qualifiers
b = validation qualifiers

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SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1468 055959 - 2.5	a	b	1471 055972 - 4.0	a	b
GENERAL CHEMISTRY						
Ammonia	NA			NA		
Chloride	NA			NA		
Fluoride	NA			NA		
Hydrogen ion	NA			NA		
Nitrate	NA			NA		
Phenols	NA			NA		
Phosphorus (black, white,	NA			NA		
Phosphate as P	NA			NA		
Sulfate	NA			NA		
Total Kjeldahl Nitrogen	NA			NA		
Total Organic Carbon	NA			NA		
Total Organic Halides	NA			NA		
Total Organic Nitrogen	NA			NA		
METALS						
Aluminum	8660.0000			13200.0000		
Antimony	< 5.1000	N	R	< 5.3000	N	
Arsenic	6.3000			7.0000		
Barium	79.5000			103.0000		
Beryllium	1.6000			1.2000		
Cadmium	3.0000	E		3.1000	E	
Calcium	126000.0000	*		12100.0000	*	
Chromium	21.3000	E		18.9000	E	
Cobalt	11.3000			12.7000		
Copper	9.7000	E		17.0000	E	
Cyanide	< 0.3000			< 0.2900		
Hexavalent Chromium	NA			NA		
Iron	17900.0000			25900.0000		
Lead	21.0000			15.0000		
Magnesium	12200.0000	*		6000.0000	*	
Manganese	823.0000			323.0000		
Mercury	< 0.1200		UJ	< 0.1000		
Molybdenum	< 1.7000			1.8000		
Nickel	26.9000			36.4000		
Potassium	548.0000	B	J	866.0000	B	
Selenium	0.4300	BWN	R	< 0.3500	WN	
Silicon	NA			NA		
Silver	< 1.7000			1.8000		
Sodium	235.0000	B	J	63.3000	B	
Thallium	< 0.1900	W	J	0.1900	BW	
Vanadium	23.3000	E		18.1000	E	
Zinc	41.0000	E	J	66.3000		

a = lab qualifiers
b = validation qualifiers

SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1516 055411 TCLP a -
GENERAL CHEMISTRY		
Ammonia		NA
Chloride		NA
Fluoride		NA
Hydrogen ion		NA
Nitrate		NA
Phenols		NA
Phosphorus (black, white,		NA
Phosphate as P		NA
Sulfate		NA
Total Kjeldahl Nitrogen		NA
Total Organic Carbon		NA
Total Organic Halides		NA
Total Organic Nitrogen		NA
METALS		
Aluminum		NA
Antimony		NA
Arsenic		0.2190
Barium		0.2070
Beryllium		NA
Cadmium		0.0200
Calcium		NA
Chromium		0.2940
Cobalt		NA
Copper		NA
Cyanide		NA
Hexavalent Chromium		NA
Iron		NA
Lead		0.1010
Magnesium		NA
Manganese		NA
Mercury	<	0.0002
Molybdenum		NA
Nickel		NA
Potassium		NA
Selenium		0.1670
Silicon		NA
Silver		0.1590
Sodium		NA
Thallium		NA
Vanadium		NA
Zinc		NA

a = lab qualifiers
b = validation qualifiers
- = Sample has not been validated

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SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1712 061319 1.5 - 2.0 TCLP	a	b		1712 061320 1.5 - 2.0 RCRA-4	a	b
GENERAL CHEMISTRY								
Ammonia		NA				NA		
Chloride		NA				NA		
Fluoride		NA				NA		
Hydrogen ion		NA				NA		
Nitrate		NA				NA		
Phenols		NA				NA		
Phosphorus (black, white,		NA				NA		
Phosphate as P		NA				NA		
Sulfate		NA				NA		
Total Kjeldahl Nitrogen		NA				NA		
Total Organic Carbon		NA				NA		
Total Organic Halides		NA				NA		
Total Organic Nitrogen		NA				NA		
METALS								
Aluminum		NA				NA		
Antimony		NA				NA		
Arsenic		0.3250				NA		
Barium		1.1900				NA		
Beryllium		NA				NA		
Cadmium		0.0140				NA		
Calcium		NA				NA		
Chromium		0.0770				NA		
Cobalt		NA				NA		
Copper		NA				NA		
Cyanide		NA			<	0.0555		
Hexavalent Chromium		NA				NA		
Iron		NA				NA		
Lead	<	0.2000				NA		
Magnesium		NA				NA		
Manganese		NA				NA		
Mercury	<	0.0002				NA		
Molybdenum		NA				NA		
Nickel		NA				NA		
Potassium		NA				NA		
Selenium	<	0.4000				NA		
Silicon		NA				NA		
Silver		0.1420				NA		
Sodium		NA				NA		
Thallium		NA				NA		
Vanadium		NA				NA		
Zinc		NA				NA		

a = lab qualifiers
b = validation qualifiers

REPORT DATE : 26-APR-92

SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1713 061324 1.5 - 2.0 TCLP	a	b	1713 061325 1.5 - 2.0 RCRA-4	a	b
GENERAL CHEMISTRY						
Ammonia	NA			NA		
Chloride	NA			NA		
Fluoride	NA			NA		
Hydrogen ion	NA			NA		
Nitrate	NA			NA		
Phenols	NA			NA		
Phosphorus (black, white,	NA			NA		
Phosphate as P	NA			NA		
Sulfate	NA			NA		
Total Kjeldahl Nitrogen	NA			NA		
Total Organic Carbon	NA			NA		
Total Organic Halides	NA			NA		
Total Organic Nitrogen	NA			NA		
METALS						
Aluminum	NA			NA		
Antimony	NA			NA		
Arsenic	0.2770			NA		
Barium	0.5600			NA		
Beryllium	NA			NA		
Cadmium	0.0200			NA		
Calcium	NA			NA		
Chromium	0.0970			NA		
Cobalt	NA			NA		
Copper	NA			NA		
Cyanide	NA			< 0.1112		
Hexavalent Chromium	NA			NA		
Iron	NA			NA		
Lead	< 0.2000			NA		
Magnesium	NA			NA		
Manganese	NA			NA		
Mercury	< 0.0002			NA		
Molybdenum	NA			NA		
Nickel	NA			NA		
Potassium	NA			NA		
Selenium	< 0.4000			NA		
Silicon	NA			NA		
Silver	0.1380			NA		
Sodium	NA			NA		
Thallium	NA			NA		
Vanadium	NA			NA		
Zinc	NA			NA		

a = lab qualifiers
b = validation qualifiers

SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1714 061329 1.5 - 2.0 TCLP a b	1714 061330 1.5 - 2.0 RCRA-4 a b
GENERAL CHEMISTRY			
Ammonia		NA	NA
Chloride		NA	NA
Fluoride		NA	NA
Hydrogen ion		NA	NA
Nitrate		NA	NA
Phenols		NA	NA
Phosphorus (black, white,		NA	NA
Phosphate as P		NA	NA
Sulfate		NA	NA
Total Kjeldahl Nitrogen		NA	NA
Total Organic Carbon		NA	NA
Total Organic Halides		NA	NA
Total Organic Nitrogen		NA	NA
METALS			
Aluminum		NA	NA
Antimony		NA	NA
Arsenic	<	0.2500	NA
Barium		1.0400	NA
Beryllium		NA	NA
Cadmium		0.0130	NA
Calcium		NA	NA
Chromium		0.0890	NA
Cobalt		NA	NA
Copper		NA	NA
Cyanide		NA	0.5693
Hexavalent Chromium		NA	NA
Iron		NA	NA
Lead	<	0.2000	NA
Magnesium		NA	NA
Manganese		NA	NA
Mercury	<	0.0002	NA
Molybdenum		NA	NA
Nickel		NA	NA
Potassium		NA	NA
Selenium	<	0.4000	NA
Silicon		NA	NA
Silver		0.1280	NA
Sodium		NA	NA
Thallium		NA	NA
Vanadium		NA	NA
Zinc		NA	NA

a = lab qualifiers
b = validation qualifiers

REPORT DATE : 26-APR-92

SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1715 061334 1.5 - 2.0 TCLP a b	1715 061335 1.5 - 2.0 RCRA-4 a b
GENERAL CHEMISTRY		
Ammonia	NA	NA
Chloride	NA	NA
Fluoride	NA	NA
Hydrogen ion	NA	NA
Nitrate	NA	NA
Phenols	NA	NA
Phosphorus (black, white,	NA	NA
Phosphate as P	NA	NA
Sulfate	NA	NA
Total Kjeldahl Nitrogen	NA	NA
Total Organic Carbon	NA	NA
Total Organic Halides	NA	NA
Total Organic Nitrogen	NA	NA
METALS		
Aluminum	NA	NA
Antimony	NA	NA
Arsenic	0.1200	NA
Barium	0.5120	NA
Beryllium	NA	NA
Cadmium	0.0020	NA
Calcium	NA	NA
Chromium	0.0210	NA
Cobalt	NA	NA
Copper	NA	NA
Cyanide	NA	13.4503
Hexavalent Chromium	NA	NA
Iron	NA	NA
Lead	< 0.0400	NA
Magnesium	NA	NA
Manganese	NA	NA
Mercury	< 0.0002	NA
Molybdenum	NA	NA
Nickel	NA	NA
Potassium	NA	NA
Selenium	0.1090	NA
Silicon	NA	NA
Silver	0.0240	NA
Sodium	NA	NA
Thallium	NA	NA
Vanadium	NA	NA
Zinc	NA	NA

a = lab qualifiers
b = validation qualifiers

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SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1792 067343 1.5 - 3.0	a	b	1792 067346 6.0 - 7.5	a	b	1792 067350 12.0 - 13.5	a	b	1792 067353 16.5 - 18.0	a	b	1792 067356 21.5 - 23.0	a	b
GENERAL CHEMISTRY															
Ammonia	NA			NA			NA			NA			NA		
Chloride	NA			NA			NA			NA			NA		
Fluoride	NA			NA			NA			NA			NA		
Hydrogen ion	NA			NA			NA			NA			NA		
Nitrate	NA			NA			NA			NA			NA		
Phenols	NA			NA			NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA			NA			NA		
Phosphate as P	NA			NA			NA			NA			NA		
Sulfate	NA			NA			NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA			NA			NA		
Total Organic Carbon	NA			NA			NA			NA			NA		
Total Organic Halides	NA			NA			NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA			NA			NA		
METALS															
Aluminum	13500.0000			4860.0000			6960.0000			8850.0000			10900.0000		
Antimony	7.8000	BN	J	29.7000	N	J	21.4000	N	J	18.7000	N	J	13.8000	BN	J
Arsenic	7.6000			4.2000	S		3.9000	S		4.5000	S		4.7000	S	
Barium	123.0000			52.5000			75.8000			77.7000			83.9000		
Beryllium	1.0000	B		0.8000	B		0.8500	B		0.9300	B		0.9700	B	
Boron	17.1000			36.0000		J	31.1000		J	31.2000		J	25.2000		
Cadmium	< 0.4400	N	J	4.9000	N	J	3.2000	N	J	2.9000	N	J	1.8000	N	J
Calcium	6430.0000			165000.0000			90400.0000			90700.0000			48800.0000		
Chromium	21.0000			27.3000			31.9000			29.1000			27.2000		
Cobalt	13.2000			10.0000	B	J	11.8000		J	12.0000		J	13.4000		
Copper	20.3000			16.5000			19.9000			20.0000			21.5000		
Cyanide	< 0.1100		J	< 0.1000		J	< 0.1200		J	< 0.1200		J	< 0.1300		J
Hexavalent Chromium	NA			NA			NA			NA			NA		
Iron	29200.0000			16200.0000			17700.0000			19000.0000			22800.0000		
Lead	14.3000			14.1000			1140.0000			17.1000			16.4000		
Magnesium	3810.0000			35300.0000			25300.0000			23000.0000			15100.0000		
Manganese	303.0000			361.0000			429.0000			502.0000			435.0000		
Mercury	< 0.1100			< 0.1100			< 0.1200			< 0.1100			< 0.1200		
Molybdenum	15.8000			13.0000		J	13.4000		J	14.1000		J	14.8000		
Nickel	22.7000			20.6000			22.1000			23.9000			24.2000		
Potassium	623.0000	B		642.0000	B		770.0000	B		1230.0000			979.0000	B	
Selenium	< 0.4400			< 0.4300			< 0.4700			< 0.4700			< 0.4800		
Silicon	636.0000	N	J	883.0000	N	J	941.0000	N	J	946.0000	N	J	975.0000	N	J
Silver	2.2000			16.2000			13.2000		J	13.3000		J	9.4000		
Sodium	37.5000	B		166.0000	B		155.0000	B		157.0000	B		114.0000	B	
Thallium	< 0.4400			< 0.4300			< 0.4700			< 0.4700			< 0.4800		
Vanadium	32.8000			24.9000			27.0000			29.0000			29.9000		
Zinc	56.9000			26.9000			53.2000			43.3000			50.9000		

a = lab qualifiers
b = validation qualifiers

SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS		1792 067362 28.0 - 29.5 TCLP	a	b
GENERAL CHEMISTRY				
Ammonia		NA		
Chloride		NA		
Fluoride		NA		
Hydrogen ion		NA		
Nitrate		NA		
Phenols		NA		
Phosphorus (black, white,		NA		
Phosphate as P		NA		
Sulfate		NA		
Total Kjeldahl Nitrogen		NA		
Total Organic Carbon		NA		
Total Organic Halides		NA		
Total Organic Nitrogen		NA		
METALS				
Aluminum		NA		
Antimony		NA		
Arsenic	<	0.2500		
Barium		0.8670		
Beryllium		NA		
Cadmium	<	0.0100		
Calcium		NA		
Chromium		0.1210		
Cobalt		NA		
Copper		NA		
Cyanide		NA		
Hexavalent Chromium		NA		
Iron		NA		
Lead		0.1510		
Magnesium		NA		
Manganese		NA		
Mercury	<	0.0002		
Molybdenum		NA		
Nickel		NA		
Potassium		NA		
Selenium		0.1610		
Silicon		NA		
Silver		0.0950		
Sodium		NA		
Thallium		NA		
Vanadium		NA		
Zinc		NA		

a = lab qualifiers
b = validation qualifiers

SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1793 067333 3.0 - 4.5	a	b	1793 067335 6.0 - 7.5 TCLP	a	b
GENERAL CHEMISTRY						
Ammonia	NA			NA		
Chloride	NA			NA		
Fluoride	NA			NA		
Hydrogen ion	NA			NA		
Nitrate	NA			NA		
Phenols	NA			NA		
Phosphorus (black, white,	NA			NA		
Phosphate as P	NA			NA		
Sulfate	NA			NA		
Total Kjeldahl Nitrogen	NA			NA		
Total Organic Carbon	NA			NA		
Total Organic Halides	NA			NA		
Total Organic Nitrogen	NA			NA		
METALS						
Aluminum	13200.0000			NA		
Antimony	< 6.8000	N	J	NA		
Arsenic	2.9000			< 0.2500		
Barium	102.0000			0.6900		
Beryllium	0.9900	B		NA		
Boron	NA			NA		
Cadmium	0.6900	BN	J	0.0150		
Calcium	19700.0000			NA		
Chromium	22.9000			0.1220		
Cobalt	12.8000			NA		
Copper	21.3000			NA		
Cyanide	< 0.1200			NA		
Hexavalent Chromium	NA			NA		
Iron	23900.0000			NA		
Lead	16.1000			0.1570		
Magnesium	6390.0000			NA		
Manganese	799.0000			NA		
Mercury	< 0.1100			< 0.0002		
Molybdenum	14.6000			NA		
Nickel	24.0000			NA		
Potassium	896.0000	B		NA		
Selenium	< 0.4500			0.1690		
Silicon	NA			NA		
Silver	4.7000			0.0930		
Sodium	74.2000	B		NA		
Thallium	< 0.4500			NA		
Vanadium	29.3000			NA		
Zinc	68.1000			NA		

a = lab qualifiers
b = validation qualifiers

SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1794 067324 0.0 - 1.0	a	b	1794 067326 1.5 - 2.0 TCLP	a	b	1794 067328 2.0 - 2.5	a	b
GENERAL CHEMISTRY									
Ammonia	NA			NA			NA		
Chloride	NA			NA			NA		
Fluoride	NA			NA			NA		
Hydrogen ion	NA			NA			NA		
Nitrate	NA			NA			NA		
Phenols	NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA		
Phosphate as P	NA			NA			NA		
Sulfate	NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA		
Total Organic Carbon	NA			NA			NA		
Total Organic Halides	NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA		
METALS									
Aluminum	10100.0000			NA			6590.0000		
Antimony	14.9000	N	J	NA			22.3000	N	J
Arsenic	6.1000			< 0.1000			4.3000	S	
Barium	173.0000			0.6160			60.8000		
Beryllium	1.1000	B		NA			0.8700	B	
Boron	NA			NA			NA		
Cadmium	1.7000	N	J	0.0070	B		3.4000	N	J
Calcium	42000.0000			NA			102000.0000		
Chromium	25.8000			0.0751			26.9000		
Cobalt	23.2000			NA			10.7000	B	
Copper	26.8000			NA			19.0000		
Cyanide	< 0.1200			NA			< 0.1100		
Hexavalent Chromium	NA			NA			NA		
Iron	25100.0000			NA			16300.0000		
Lead	18.2000			0.0811			13.6000		
Magnesium	15100.0000			NA			27300.0000		
Manganese	1060.0000			NA			515.0000		
Mercury	< 0.1200			< 0.0002			0.3100		
Molybdenum	14.9000			NA			12.3000		
Nickel	28.8000			NA			24.6000		
Potassium	1020.0000	B		NA			678.0000	B	
Selenium	< 0.4900			0.1380			< 0.4400	W	J
Silicon	NA			NA			NA		
Silver	8.6000			0.0662	N		13.2000		
Sodium	522.0000	B		NA			159.0000	B	
Thallium	< 0.4900			NA			< 0.4400		
Vanadium	34.1000			NA			24.7000		
Zinc	58.3000			NA			37.0000		

a = lab qualifiers
b = validation qualifiers

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SOUTH FIELD
SUBSURFACE MEDIA GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm)
Data presented by boring number, sample number, and depth in feet.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1795 067367 0.0 - 1.0	a	b	1795 067370 3.0 - 4.0	a	b	1795 067367 0.0 - 1.0 TCLP	a	b
GENERAL CHEMISTRY									
Ammonia	NA			NA			NA		
Chloride	NA			NA			NA		
Fluoride	NA			NA			NA		
Hydrogen ion	NA			NA			NA		
Nitrate	NA			NA			NA		
Phenols	NA			NA			NA		
Phosphorus (black, white,	NA			NA			NA		
Phosphate as P	NA			NA			NA		
Sulfate	NA			NA			NA		
Total Kjeldahl Nitrogen	NA			NA			NA		
Total Organic Carbon	NA			NA			NA		
Total Organic Halides	NA			NA			NA		
Total Organic Nitrogen	NA			NA			NA		
METALS									
Aluminum	10900.0000			12200.0000			NA		
Antimony	10.2000	BN	J	7.9000	BN	J	NA		
Arsenic	4.0000	S		6.9000	S		< 0.1500		
Barium	78.4000			159.0000			< 0.9030		
Beryllium	0.7700	B		0.8200	B		NA		
Boron	< 23.1000			< 22.7000			NA		
Cadmium	1.5000	N		< 0.4500	N	J	0.0068	B	
Calcium	31500.0000			3720.0000			NA		
Chromium	24.7000			20.8000			0.0917		
Cobalt	13.2000			14.4000			NA		
Copper	18.0000			21.3000			NA		
Cyanide	< 0.1100		J	2.6000			NA		
Hexavalent Chromium	NA			NA			NA		
Iron	20000.0000			24500.0000			NA		
Lead	10.5000			12.2000			0.0831		
Magnesium	9930.0000			4160.0000			NA		
Manganese	358.0000			380.0000			NA		
Mercury	< 0.1200		J	< 0.1100		J	< 0.0002		
Molybdenum	14.5000			15.5000			NA		
Nickel	21.8000			28.4000			NA		
Potassium	925.0000	B		696.0000	B		NA		
Selenium	< 0.4500			< 0.4500			0.1290		
Silicon	1530.0000	N	J	685.0000	N	J	NA		
Silver	8.0000			2.5000			0.0797		
Sodium	101.0000	B		76.6000	B		NA		
Thallium	< 0.4500			< 0.4500			NA		
Vanadium	26.3000			25.7000			NA		
Zinc	48.4000			59.0000			NA		

a = lab qualifiers
b = validation qualifiers

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TABLE G-8

HAZARDOUS CHARACTERISTIC DATA FOR SUBSURFACE MEDIA
RI/FS SAMPLING PROGRAM
SOUTH FIELD

TABLE G-8

HAZARDOUS CHARACTERISTIC DATA FOR SUBSURFACE MEDIA
RI/FS SAMPLING PROGRAM
SOUTH FIELD

Characteristic	1712 61320	1713 61325	1713 61325D	1714 61330	1715 61335
Ignitibility °C	>110	>110	>110	>110	>110
Corrosivity pH	8.08	8.02	8.1	8.19	8.47
Reactivity					
Cyanide (mg/kg)	<0.055 5	<0.1112	NA	0.5693	13.4503
Sulfide (mg/kg)	<21.8	NA	NA	21.8	21.8

NA = Not Analyzed
D = Duplicate Analysis

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TABLE G-9

GROUNDWATER ANALYSES
RI/FS SAMPLING PROGRAM
SOUTH FIELD

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

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Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER		1045 066828 12-13-1989			b
Actinium 231		NA			
Cesium 137		NA			
Lead 210		NA			
Neptunium 237		NA			
Plutonium 238		NA			
Plutonium 239/240		NA			
Polonium 210		NA			
Protactium 234		NA			
Radium 224		NA			
Radium 226		NA			
Radium 228		NA			
Ruthenium 106		NA			
Strontium 90		NA			
Technetium 99	<	30.0			J
Thorium 228	<	1.0			J
Thorium 230	<	1.0			J
Thorium 232		NA			
Total Thorium **		NA			
Uranium 234		1.7	±	0.3	
Uranium 235	<	1.0			J
Uranium 235/236		NA			
Uranium 238		2.2	±	0.4	
Total Uranium **		10.1	±	1.1	J

** Results reported in ug/ℓ

b = validation qualifiers

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Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	1046 003089 04-13-1988	1046 003370 07-24-1988	1046 003649 10-23-1988	1046 003854 01-22-1989	1046 066829 12-12-1989	
	-	-	-	-		b
Actinium 231	NA	NA	NA	NA	NA	
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	NA	
Lead 210	NA	NA	NA	NA	NA	
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	NA	
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	NA	
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	NA	
Polonium 210	NA	NA	NA	NA	NA	
Protactium 234	NA	NA	NA	NA	NA	
Radium 224	NA	NA	NA	NA	NA	
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0	NA	
Radium 228	< 3.0	< 3.0	< 3.0	< 3.3	NA	
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	NA	
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	NA	
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	*< 30.0	J
Thorium 228	1.1 ± 0.5	< 1.0	< 1.0	< 1.0	1.5 ± 0.5	J
Thorium 230	1.0 ± 0.5	< 1.0	< 1.0	< 1.0	7.8 ± 0.5	R
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0	NA	
Total Thorium **	NA	< 4.0	< 4.0	< 4.0	NA	
Uranium 234	62.5 ± 10.8	2.8 ± 0.5	2.0 ± 0.5	2.4 ± 0.5	3.0 ± 0.6	
Uranium 235/236	3.8 ± 1.3	< 1.0	< 1.0	< 1.0	NA	
Uranium 238	79.7 ± 13.5	2.0 ± 0.4	2.3 ± 0.5	1.9 ± 0.4	< 1.0	
Total Uranium **	203.0 ± 32.0	6.0 ± 1.0	6.0 ± 1.0	6.0 ± 1.0	8.4 ± 0.9	J

** Results reported in ug/ℓ

b = validation qualifiers

- = Sample has not been validated

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Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
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RADIOLOGICAL PARAMETER	1048 003132 04-27-1988	-	1048 003368 07-24-1988	-	1048 003647 10-23-1988	-	1048 003856 01-22-1989	-	1048 066831 12-16-1989	b
Actinium 231	NA		NA		NA		NA		NA	
Cesium 137	< 20.0		< 20.0		< 20.0		< 20.0		NA	
Lead 210	NA		NA		NA		NA		NA	
Neptunium 237	< 1.0		< 1.0		< 1.0		< 1.0		NA	
Plutonium 238	< 1.0		< 1.0		< 1.0		< 1.0		NA	
Plutonium 239/240	< 1.0		< 1.0		< 1.0		< 1.0		NA	
Polonium 210	NA		NA		NA		NA		NA	
Protactium 234	NA		NA		NA		NA		NA	
Radium 224	NA		NA		NA		NA		NA	
Radium 226	< 1.0		< 1.0		< 1.0		< 1.0		NA	
Radium 228	< 3.0		< 3.0		< 3.0		< 3.0		NA	
Ruthenium 106	< 150.0		< 150.0		< 150.0		< 150.0		NA	
Strontium 90	< 5.0		< 5.0		< 5.0		< 5.0		NA	
Technetium 99	< 30.0		< 30.0		< 30.0		< 30.0		< 30.0	R
Thorium 228	< 1.0		< 1.0		< 1.0		< 1.0		2.9 ± 1.2	J
Thorium 230	< 1.0		< 1.0		< 1.0		< 1.0		2.8 ± 1.1	J
Thorium 232	< 1.0		< 1.0		< 1.0		< 1.0		NA	
Total Thorium **	NA		< 4.0		5.0 ± 3.0		4.0 ± 2.0		NA	
Uranium 234	6.8 ± 1.2		5.4 ± 0.8		4.5 ± 1.0		6.6 ± 1.0		14.2 ± 2.0	
Uranium 235/236	< 1.0		< 1.0		< 1.0		< 1.0		NA	
Uranium 238	5.6 ± 1.0		5.3 ± 0.8		4.0 ± 1.0		6.9 ± 1.1		15.0 ± 2.0	
Total Uranium **	19.0 ± 3.0		17.0 ± 3.0		15.0 ± 3.0		21.0 ± 4.0		< 1.0	

** Results reported in ug/ℓ

b = validation qualifiers

- = Sample has not been validated

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Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	1516 046938 07-17-1990	-	1516 046941 08-21-1990	-
Actinium 231	NA		NA	
Cesium 137	NA		NA	
Lead 210	NA		NA	
Neptunium 237	NA		NA	
Plutonium 238	NA		NA	
Plutonium 239/240	NA		NA	
Polonium 210	NA		NA	
Protactium 234	NA		NA	
Radium 224	NA		NA	
Radium 226	NA		NA	
Radium 228	NA		NA	
Ruthenium 106	NA		NA	
Strontium 90	NA		NA	
Technetium 99	NA		NA	
Thorium 228	NA		NA	
Thorium 230	NA		NA	
Thorium 232	NA		NA	
Total Thorium **	NA		NA	
Uranium 234	NA		NA	
Uranium 235/236	NA		NA	
Uranium 238	NA		NA	
Total Uranium **	293.0 ± 46.0		687.0 ± 106.0	

** Results reported in ug/ℓ

- = Sample has not been validated

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SOUTH FIELD
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Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
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RADIOLOGICAL PARAMETER	1517 046944 07-17-1990 -	DUPLICATE 1517 046945 07-17-1990 -	1517 046946 08-21-1990 -
Actinium 231	NA	NA	NA
Cesium 137	NA	< 20.0	NA
Lead 210	NA	NA	NA
Neptunium 237	NA	< 1.0	NA
Plutonium 238	NA	< 1.0	NA
Plutonium 239/240	NA	< 1.0	NA
Polonium 210	NA	NA	NA
Protactium 234	NA	NA	NA
Radium 224	NA	NA	NA
Radium 226	NA	< 1.0	NA
Radium 228	NA	< 3.0	NA
Ruthenium 106	NA	< 150.0	NA
Strontium 90	NA	< 5.0	NA
Technetium 99	NA	< 30.0	NA
Thorium 228	NA	< 1.0	NA
Thorium 230	NA	< 1.0	NA
Thorium 232	NA	< 1.0	NA
Total Thorium **	NA	3.7 ± 2.7	NA
Uranium 234	NA	NA	NA
Uranium 235/236	NA	NA	NA
Uranium 238	NA	NA	NA
Total Uranium **	52.8 ± 8.7	966.0 ± 141.0	29.9 ± 5.9

** Results reported in ug/ℓ

- = Sample has not been validated

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Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	1518 046962 07-17-1990			-	1518 046965 08-21-1990			-
Actinium 231	NA				NA			
Cesium 137	NA				NA			
Lead 210	NA				NA			
Neptunium 237	NA				NA			
Plutonium 238	NA				NA			
Plutonium 239/240	NA				NA			
Polonium 210	NA				NA			
Protactium 234	NA				NA			
Radium 224	NA				NA			
Radium 226	NA				NA			
Radium 228	NA				NA			
Ruthenium 106	NA				NA			
Strontium 90	NA				NA			
Technetium 99	NA				NA			
Thorium 228	NA				NA			
Thorium 230	NA				NA			
Thorium 232	NA				NA			
Total Thorium **	NA				NA			
Uranium 234	NA				NA			
Uranium 235/236	NA				NA			
Uranium 238	NA				NA			
Total Uranium **	139.0	±	20.0		64.0	±	9.8	

** Results reported in ug/ℓ

- = Sample has not been validated

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Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
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RADIOLOGICAL PARAMETER	2014 003064 03-28-1988			-	2014 003384 07-28-1988			-	2014 003673 11-06-1988			-	2014 003869 01-31-1989			-	2014 004151 07-26-1989			-
Actinium 231		NA				NA				NA				NA				NA		
Cesium 137	<	20.0			<	20.0			<	20.0			<	20.0			<	20.0		
Lead 210		NA				NA				NA				NA				NA		
Neptunium 237	<	1.0			<	1.0			<	1.0			<	1.0			<	1.0		
Plutonium 238	<	1.0			<	1.0			<	1.0			<	1.0			<	1.0		
Plutonium 239/240	<	1.0			<	1.0			<	1.0			<	1.0			<	1.0		
Polonium 210		NA				NA				NA				NA				NA		
Protactium 234		NA				NA				NA				NA				NA		
Radium 224		NA				NA				NA				NA				NA		
Radium 226	<	1.0			<	1.0				1.2	±	0.5		1.4	±	0.3	<	1.0		
Radium 228	<	3.0			<	3.0			<	3.0			<	3.2			<	3.0		
Ruthenium 106	<	150.0			<	150.0			<	150.0			<	150.0			<	150.0		
Strontium 90	<	5.0			<	5.0			<	5.0			<	5.0			<	5.0		
Technetium 99	<	30.0			<	30.0			<	30.0			<	30.0			<	30.0		
Thorium 228	<	1.0			<	1.0			<	1.0			<	1.0			<	1.0		
Thorium 230		1.2	±	0.8	<	1.0			<	1.0			<	1.0			<	1.0		
Thorium 232	<	1.0			<	1.0			<	1.0			<	1.0			<	1.0		
Total Thorium **		NA			<	4.0			<	3.0			<	3.0			<	3.0		
Uranium 234		9.5	±	2.1		7.7	±	1.2		9.8	±	1.4		4.2	±	0.8		7.0	±	1.0
Uranium 235/236		1.6	±	0.7	<	1.0			<	1.0			<	1.0			<	1.0		
Uranium 238		13.1	±	2.7		9.9	±	1.4		13.5	±	1.9		5.7	±	0.9		9.0	±	1.2
Total Uranium **		32.0	±	5.0		33.0	±	5.0		35.0	±	6.0		17.0	±	3.0		33.0	±	7.0

** Results reported in ug/ℓ

- = Sample has not been validated

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Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER		2014 004211 04-01-1990		
Actinium 231		NA		
Cesium 137	<	20.0		
Lead 210		NA		
Neptunium 237	<	1.0		
Plutonium 238	<	1.0		
Plutonium 239/240	<	1.0		
Polonium 210		NA		
Protactium 234		NA		
Radium 224		NA		
Radium 226	<	1.0		
Radium 228	<	3.0		
Ruthenium 106	<	150.0		
Strontium 90	<	5.0		
Technetium 99	<	30.0		
Thorium 228	<	1.0		
Thorium 230	<	1.0		
Thorium 232	<	1.0		
Total Thorium **	<	2.2		
Uranium 234		7.2	±	1.0
Uranium 235/236	<	1.0		
Uranium 238		8.9	±	1.2
Total Uranium **		36.0	±	5.1

** Results reported in ug/ℓ

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SOUTH FIELD
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Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
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RADIOLOGICAL PARAMETER	2045 003993 01-23-1989	DUPLICATE 2045 004092 05-01-1989	2045 004129 05-01-1989	2045 004158 07-25-1989	2045 004218 04-01-1990
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	1.2 ± 0.5	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	5.0 ± 3.0	< 3.0	< 5.0	< 5.0	< 4.3
Uranium 234	78.9 ± 10.3	74.7 ± 10.6	77.6 ± 11.6	104.0 ± 14.0	97.0 ± 15.0
Uranium 235/236	3.5 ± 0.8	4.4 ± 1.1	3.2 ± 1.0	4.7 ± 1.1	3.6 ± 1.2
Uranium 238	92.3 ± 11.9	85.5 ± 12.1	87.5 ± 13.0	119.0 ± 17.0	104.0 ± 16.0
Total Uranium **	283.0 ± 46.0	265.0 ± 42.0	291.0 ± 46.0	341.0 ± 57.0	462.0 ± 61.0

** Results reported in ug/ℓ

- = Sample has not been validated

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Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
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RADIOLOGICAL PARAMETER		DUPLICATE 2045 004266 04-01-1990		
Actinium 231		NA		
Cesium 137	<	20.0		
Lead 210		NA		
Neptunium 237	<	1.0		
Plutonium 238	<	1.0		
Plutonium 239/240	<	1.0		
Polonium 210		NA		
Protactium 234		NA		
Radium 224		NA		
Radium 226		1.2	±	0.3
Radium 228	<	3.0		
Ruthenium 106	<	150.0		
Strontium 90	<	5.0		
Technetium 99	<	30.0		
Thorium 228	<	1.0		
Thorium 230	<	1.0		
Thorium 232		1.0	±	0.7
Total Thorium **		9.5	±	6.6
Uranium 234		95.3	±	15.0
Uranium 235/236		4.6	±	1.4
Uranium 238		103.0	±	16.0
Total Uranium **		461.0	±	63.0

** Results reported in ug/ℓ

- = Sample has not been validated

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Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
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RADIOLOGICAL PARAMETER	2046 003997 02-02-1989	2046 004097 05-10-1989	2046 004159 07-28-1989	2046 004219 04-03-1990
	-	-	-	-
Actinium 231	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 36.8	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	1.9 ± 0.6
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	< 2.0	< 3.0	< 6.0	< 4.1
Uranium 234	93.8 ± 11.9	219.0 ± 30.0	86.9 ± 11.7	199.0 ± 37.0
Uranium 235/236	4.3 ± 0.9	9.7 ± 1.9	3.8 ± 0.9	11.5 ± 3.2
Uranium 238	102.0 ± 13.0	231.0 ± 32.0	87.7 ± 11.8	206.0 ± 38.0
Total Uranium **	309.0 ± 51.0	851.0 ± 136.0	232.0 ± 39.0	907.0 ± 124.0

** Results reported in ug/ℓ

- = Sample has not been validated

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Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
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RADIOLOGICAL PARAMETER	2048 003994 02-09-1989	2048 004100 05-02-1989	2048 004162 07-26-1989	2048 004221 04-01-1990
Actinium 231	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	< 2.0	< 3.0	< 6.0	< 4.3
Uranium 234	< 1.0	< 1.0	< 1.0	3.4 ± 0.7
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	< 1.0	< 1.0	< 1.0	3.0 ± 0.6
Total Uranium **	< 1.0	< 1.0	< 1.0	2.1 ± 0.2

** Results reported in ug/ℓ

- = Sample has not been validated

SOUTH FIELD
GROUNDWATER RADIOLOGICAL RESULTS
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Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	2049 003085 04-08-1988	2049 003436 08-03-1988	2049 003470 12-06-1988	DUPLICATE 2049 003687 12-06-1988	2049 003885 02-07-1989
	-	-	-	-	-
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	1.5 ± 0.7	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	1.6 ± 0.7	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	NA	< 3.0	< 3.0	< 5.0	< 2.0
Uranium 234	50.8 ± 8.1	3.1 ± 0.6	1.3 ± 0.3	1.0 ± 0.3	2.3 ± 0.5
Uranium 235/236	2.3 ± 0.8	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	51.4 ± 8.1	2.8 ± 0.6	< 1.0	< 1.0	2.1 ± 0.4
Total Uranium **	130.0 ± 20.0	8.0 ± 1.0	3.0 ± 1.0	2.0 ± 1.0	6.0 ± 1.0

** Results reported in ug/ℓ

- = Sample has not been validated

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SOUTH FIELD
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	2049 004134 05-10-1989 -	2049 004164 07-30-1989 -	2049 004222 04-03-1990 -
Actinium 231	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA
Protactium 234	NA	NA	NA
Radium 224	NA	NA	NA
Radium 226	< 1.0	< 1.0	1.2 ± 0.2
Radium 228	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0
Technetium 99	< 37.2	< 30.0	< 30.0
Thorium 228	< 1.0	1.1 ± 0.4	2.3 ± 0.9
Thorium 230	< 1.0	< 1.0	1.3 ± 0.7
Thorium 232	< 1.0	< 1.0	2.3 ± 0.9
Total Thorium **	< 3.0	< 4.0	20.8 ± 8.5
Uranium 234	42.9 ± 5.5	83.2 ± 11.0	NA
Uranium 235/236	1.8 ± 0.5	1.4 ± 0.5	NA
Uranium 238	47.5 ± 6.0	89.9 ± 11.8	NA
Total Uranium **	175.0 ± 28.0	147.0 ± 24.0	43.3 ± 37.9

** Results reported in ug/ℓ

- = Sample has not been validated

SOUTH FIELD
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	2065 003095 04-19-1988 -	2065 003438 08-04-1988 -	2065 003693 11-08-1988 -	DUPLICATE 2065 003538 02-02-1989 -	2065 003884 02-02-1989 -
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.1	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	1.4 ± 0.9	1.2 ± 0.6
Thorium 230	1.2 ± 0.8	< 1.0	< 1.0	< 1.1	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.1	< 1.0
Total Thorium **	NA	< 7.0	< 3.0	< 10.0	< 7.0
Uranium 234	5.1 ± 1.3	4.6 ± 0.8	2.6 ± 0.5	5.3 ± 1.3	3.7 ± 1.2
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	3.3 ± 1.0	4.0 ± 0.7	2.6 ± 0.5	3.9 ± 1.1	3.3 ± 1.1
Total Uranium **	10.0 ± 1.0	9.0 ± 1.0	7.0 ± 1.0	9.0 ± 2.0	8.0 ± 1.0

** Results reported in ug/ℓ

- = Sample has not been validated

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GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	2065 004163 07-30-1989	DUPLICATE 2065 004168 07-30-1989	2065 004225 04-09-1990
Actinium 231	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA
Protactium 234	NA	NA	NA
Radium 224	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.3	< 1.1	< 1.0
Thorium 230	< 1.3	< 1.1	< 1.0
Thorium 232	< 1.3	< 1.1	< 1.0
Total Thorium **	< 12.0	< 10.0	< 4.5
Uranium 234	5.5 ± 1.0	4.1 ± 0.7	3.9 ± 0.6
Uranium 235/236	< 1.0	< 1.0	< 1.0
Uranium 238	5.3 ± 1.0	4.0 ± 0.7	3.8 ± 0.6
Total Uranium **	12.0 ± 2.0	11.0 ± 2.0	11.4 ± 1.9

** Results reported in ug/ℓ

- = Sample has not been validated

SOUTH FIELD
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER		2385 004303 07-10-1990		
Actinium 231		NA		
Cesium 137		NA		
Lead 210		NA		
Neptunium 237	<	1.0		
Plutonium 238	<	1.0		
Plutonium 239/240	<	1.0		
Polonium 210		NA		
Protactium 234		NA		
Radium 224		NA		
Radium 226	<	0.1		
Radium 228	<	2.0		
Ruthenium 106		NA		
Strontium 90	<	5.0		
Technetium 99	<	30.0		
Thorium 228		1.2	±	0.3
Thorium 230	<	1.0		
Thorium 232		52.9	±	8.8
Total Thorium **	<	1.9		
Uranium 234		34.8	±	4.5
Uranium 235/236		1.8	±	0.5
Uranium 238		36.2	±	4.7
Total Uranium **		108.0	±	14.0

** Results reported in ug/ℓ

- = Sample has not been validated

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SOUTH FIELD
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	3014 003084 04-08-1988 -	3014 003385 07-28-1988 -	3014 003672 11-06-1988 -	3014 003870 01-31-1989 -	3014 004239 04-01-1990 -
Actinium 231	NA	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0	< 3.1	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	2.5 ± 0.9	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	1.4 ± 0.6	< 1.0	< 1.0	< 1.0	1.1 ± 0.4
Thorium 232	1.1 ± 0.6	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	NA	7.0 ± 4.0	< 7.0	< 3.0	< 2.9
Uranium 234	6.7 ± 1.3	7.3 ± 1.1	7.1 ± 1.0	6.9 ± 1.0	17.1 ± 2.4
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0	1.5 ± 0.5
Uranium 238	8.5 ± 1.5	10.0 ± 1.4	8.7 ± 1.2	8.9 ± 1.2	16.4 ± 2.3
Total Uranium **	23.0 ± 4.0	29.0 ± 5.0	28.0 ± 5.0	30.0 ± 5.0	35.3 ± 5.0

** Results reported in ug/ℓ

- = Sample has not been validated

SOUTH FIELD
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER		3045 004198 05-23-1990				3045 004319 08-09-1990			
					-				-
Actinium 231			NA				NA		
Cesium 137		<	20.0			<	20.0		
Lead 210			NA				NA		
Neptunium 237		<	1.0			<	1.0		
Plutonium 238		<	1.0			<	1.0		
Plutonium 239/240		<	1.0			<	1.0		
Polonium 210			NA				NA		
Protactium 234			NA				NA		
Radium 224			NA				NA		
Radium 226		<	1.0			<	1.0		
Radium 228		<	3.0			<	3.0		
Ruthenium 106		<	150.0			<	150.0		
Strontium 90		<	5.0			<	5.0		
Technetium 99		<	30.0			<	30.0		
Thorium 228		<	1.0			<	1.0		
Thorium 230		<	1.0			<	1.0		
Thorium 232		<	1.0			<	1.0		
Total Thorium	**	<	6.7			<	1.8		
Uranium 234		<	1.0				4.6	±	0.7
Uranium 235/236		<	1.0			<	1.0		
Uranium 238		<	1.0				5.1	±	0.8
Total Uranium	**		6.0	±	0.6		15.2	±	2.4

** Results reported in ug/ℓ

- = Sample has not been validated

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GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	3046 004207 06-15-1990				3046 004332 08-24-1990			
				-				-
Actinium 231		NA				NA		
Cesium 137	<	20.0			<	20.0		
Lead 210		NA				NA		
Neptunium 237	<	1.0				NA		
Plutonium 238	<	1.0				NA		
Plutonium 239/240	<	1.0				NA		
Polonium 210		NA				NA		
Protactium 234		NA				NA		
Radium 224		NA				NA		
Radium 226		2.4	±	0.5	<	1.0		
Radium 228	<	3.0			<	3.0		
Ruthenium 106	<	150.0			<	150.0		
Strontium 90	<	5.0			<	5.0		
Technetium 99	<	30.0			<	31.0		
Thorium 228	<	1.0				1.6	±	0.4
Thorium 230	<	1.0			<	1.0		
Thorium 232	<	1.0			<	1.0		
Total Thorium **	<	3.1			<	1.7		
Uranium 234	<	1.0				1.7	±	0.3
Uranium 235/236	<	1.0			<	1.0		
Uranium 238	<	1.0			<	1.0		
Total Uranium **		1.7	±	0.2		3.0	±	0.8

** Results reported in ug/ℓ

- = Sample has not been validated

SOUTH FIELD
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	3049 003992 01-31-1989 -	3049 004091 05-01-1989 -	3049 004246 04-26-1990 -	DUPLICATE 3049 004271 04-26-1990 -
Actinium 231	NA	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA	NA
Protactium 234	NA	NA	NA	NA
Radium 224	NA	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0	< 1.0
Radium 228	< 3.4	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0	< 1.0
Total Thorium **	< 3.0	< 7.0	< 3.6	< 3.1
Uranium 234	< 1.0	< 1.0	< 1.0	6.0 ± 0.9
Uranium 235/236	< 1.0	< 1.0	< 1.0	< 1.0
Uranium 238	< 1.0	< 1.0	< 1.0	< 1.0
Total Uranium **	< 1.0	< 1.0	< 1.0	1.2 ± 0.2

** Results reported in ug/ℓ

- = Sample has not been validated

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GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER	3065 003995 01-25-1989 -	3065 004098 05-31-1989 -	3065 004249 04-09-1990 -
Actinium 231	NA	NA	NA
Cesium 137	< 20.0	< 20.0	< 20.0
Lead 210	NA	NA	NA
Neptunium 237	< 1.0	< 1.0	< 1.0
Plutonium 238	< 1.0	< 1.0	< 1.0
Plutonium 239/240	< 1.0	< 1.0	< 1.0
Polonium 210	NA	NA	NA
Protactium 234	NA	NA	NA
Radium 224	NA	NA	NA
Radium 226	< 1.0	< 1.0	< 1.0
Radium 228	< 3.0	< 3.0	< 3.0
Ruthenium 106	< 150.0	< 150.0	< 150.0
Strontium 90	< 5.0	< 5.0	< 5.0
Technetium 99	< 30.0	< 30.0	< 30.0
Thorium 228	< 1.0	< 1.0	< 1.0
Thorium 230	< 1.0	< 1.0	< 1.0
Thorium 232	< 1.0	< 1.0	< 1.0
Total Thorium **	< 2.0	< 2.0	< 1.8
Uranium 234	< 1.0	< 1.0	< 1.0
Uranium 235/236	< 1.0	< 1.0	< 1.0
Uranium 238	< 1.0	< 1.0	< 1.0
Total Uranium **	< 1.0	< 1.0	0.8 ± 0.5

** Results reported in ug/ℓ

- = Sample has not been validated

SOUTH FIELD
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that
the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER		3385 004309 07-24-1990				3385 004363 01-10-1991			
Actinium 231			NA				NA		
Cesium 137		<	20.0			<	20.0		
Lead 210			NA				NA		
Neptunium 237		<	1.0			<	2.4		
Plutonium 238		<	1.0			<	1.0		
Plutonium 239/240		<	1.0			<	1.0		
Polonium 210			NA				NA		
Protactium 234			NA				NA		
Radium 224			NA				NA		
Radium 226			NA			<	1.0		
Radium 228			NA			<	3.0		
Ruthenium 106		<	150.0			<	150.0		
Strontium 90			NA			<	5.0		
Technetium 99			NA			<	31.0		
Thorium 228		<	1.0				1.2	±	0.4
Thorium 230			2.2	±	0.6	<	1.0		
Thorium 232			1.0	±	0.4	<	1.0		
Total Thorium	**		9.4	±	3.6	<	2.4		
Uranium 234			1.1	±	0.3		1.4	±	0.3
Uranium 235/236		<	1.0			<	1.0		
Uranium 238		<	1.0			<	1.0		
Total Uranium	**		2.3	±	0.8		2.9	±	0.3

** Results reported in ug/ℓ

- = Sample has not been validated

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SOUTH FIELD
GROUNDWATER RADIOLOGICAL RESULTS
RI/FS DATA

Results in picocuries per liter (pCi/ℓ).
Data presented by well number, sample number, and sample date
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETER		4014 003871 01-31-1989 -		4014 004089 05-01-1989 -		4014 066866 12-13-1989 -
Actinium 231		NA		NA		NA
Cesium 137	<	20.0	<	20.0		NA
Lead 210		NA		NA		NA
Neptunium 237	<	1.0	<	1.0		NA
Plutonium 238	<	1.0	<	1.0		NA
Plutonium 239/240	<	1.0	<	1.0		NA
Polonium 210		NA		NA		NA
Protactium 234		NA		NA		NA
Radium 224		NA		NA		NA
Radium 226	<	1.0	<	1.0		NA
Radium 228	<	3.0	<	3.0		NA
Ruthenium 106	<	150.0	<	150.0		NA
Strontium 90	<	5.0	<	5.0		NA
Technetium 99	<	30.0	<	30.0	<	1.0
Thorium 228	<	1.0	<	1.0	<	1.0
Thorium 230	<	1.0	<	1.0	<	1.0
Thorium 232	<	1.0	<	1.0		NA
Total Thorium **	<	2.0	<	4.0		NA
Uranium 234	<	1.0	<	1.0	<	1.0
Uranium 235/236	<	1.0	<	1.0		NA
Uranium 238	<	1.0	<	1.0	<	1.0
Total Uranium **	<	1.0	<	1.0	<	1.0

** Results reported in ug/ℓ

- = Sample has not been validated

EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING HAZARDOUS SUBSTANCE LIST RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

J = Indicates an estimated value. This flag is used when the mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.

C = This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

E = This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to pesticides/PCBs analyzed by GC/EC methods.

D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.

F = Estimated value due to a confirmed compound which is off-scale in both columns.

X = A flag that FORMASTER III CLP software automatically inserts to indicate that the data was entered manually.

Z = No estimated value reported, or an elevated CRQL reported because matrix effects interfere with or obscure the compound on one or both columns. In either situation, the compound does not confirm as a positive identification.

* = Values outside of contract laboratory-required QC limits.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOUTH FIELD
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1517 046945 07-17-1990 a -	2014 003064 03-28-1988 a -	2014 004028 01-31-1989 a -	2065 003095 04-19-1988 a -	2065 003544 02-02-1989 a -
ORGANOPHOSPOROUS PESTICIDES					
Azinphosmethyl	NA	NA	< 0.00250	NA	< 0.00250
Demeton	NA	NA	< 0.00025	NA	< 0.00025
Diazinon	NA	NA	< 0.00025	NA	< 0.00025
Disulfoton	NA	NA	< 0.00025	NA	< 0.00025
Ethion	NA	NA	< 0.00025	NA	< 0.00025
Malathion	NA	NA	< 0.00025	NA	< 0.00025
Parathion, ethyl	NA	NA	< 0.00025	NA	< 0.00025
Parathion, methyl	NA	NA	< 0.00025	NA	< 0.00025
PESTICIDES					
4,4'-DDD	NA	< 0.00010	NA	< 0.00010	NA
4,4'-DDE	NA	< 0.00010	NA	< 0.00010	NA
4,4'-DDT	NA	< 0.00010	NA	< 0.00010	NA
Aldrin	NA	< 0.00005	NA	< 0.00005	NA
Aroclor-1016	NA	< 0.00050	NA	< 0.00050	NA
Aroclor-1221	NA	< 0.00050	NA	< 0.00050	NA
Aroclor-1232	NA	< 0.00050	NA	< 0.00050	NA
Aroclor-1242	NA	< 0.00050	NA	< 0.00050	NA
Aroclor-1248	NA	< 0.00050	NA	< 0.00050	NA
Aroclor-1254	NA	< 0.00100	NA	< 0.00100	NA
Aroclor-1260	NA	< 0.00100	NA	< 0.00100	NA
Dieldrin	NA	< 0.00010	NA	< 0.00005	NA
Endosulfan II	NA	< 0.00010	NA	< 0.00010	NA
Endosulfan sulfate	NA	< 0.00010	NA	< 0.00010	NA
Endosulfan-I	NA	< 0.00005	NA	< 0.00005	NA
Endrin	NA	< 0.00010	NA	< 0.00005	NA
Endrin ketone	NA	< 0.00010	NA	< 0.00010	NA
Heptachlor	NA	< 0.00005	NA	< 0.00005	NA
Heptachlor epoxide	NA	< 0.00005	NA	< 0.00005	NA
Methoxychlor	NA	< 0.00050	NA	< 0.00050	NA
Toxaphene	NA	< 0.00100	NA	< 0.00100	NA
alpha-BHC	NA	< 0.00005	NA	< 0.00005	NA
alpha-Chlordane	NA	< 0.00050	NA	< 0.00050	NA
beta-BHC	NA	< 0.00005	NA	< 0.00005	NA
delta-BHC	NA	< 0.00005	NA	< 0.00005	NA
gamma-BHC (Lindane)	NA	< 0.00005	NA	< 0.00005	NA
gamma-Chlordane	NA	< 0.00050	NA	< 0.00050	NA
SEMI-VOLATILE ORGANICS					

a = lab qualifiers

- = Sample has not been validated

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SOUTH FIELD
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1517 046945 07-17-1990 a -	2014 003064 03-28-1988 a -	2014 004028 01-31-1989 a -	2065 003095 04-19-1988 a -	2065 003544 02-02-1989 a -
SEMI-VOLATILE ORGANICS					
1,2,4-Trichlorobenzene	< 0.01000	< 0.01000	NA	< 0.01000	NA
1,2-Dichlorobenzene	< 0.01000	< 0.01000	NA	< 0.01000	NA
1,3-Dichlorobenzene	< 0.01000	< 0.01000	NA	< 0.01000	NA
1,4-Dichlorobenzene	< 0.01000	< 0.01000	NA	< 0.01000	NA
2,4,5-Trichlorophenol	< 0.05000	< 0.05000	NA	< 0.05000	NA
2,4,6-Trichlorophenol	< 0.01000	< 0.01000	NA	< 0.01000	NA
2,4-Dichlorophenol	< 0.01000	< 0.01000	NA	< 0.01000	NA
2,4-Dimethylphenol	< 0.01000	< 0.01000	NA	< 0.01000	NA
2,4-Dinitrophenol	< 0.05000	< 0.05000	NA	< 0.05000	NA
2,4-Dinitrotoluene	< 0.01000	< 0.01000	NA	< 0.01000	NA
2,6-Dinitrotoluene	< 0.01000	< 0.01000	NA	< 0.01000	NA
2-Chloronaphthalene	< 0.01000	< 0.01000	NA	< 0.01000	NA
2-Chlorophenol	< 0.01000	< 0.01000	NA	< 0.01000	NA
2-Methylnaphthalene	< 0.01000	< 0.01000	NA	< 0.01000	NA
2-Methylphenol	< 0.01000	< 0.01000	NA	< 0.01000	NA
2-Nitroaniline	< 0.05000	< 0.05000	NA	< 0.05000	NA
2-Nitrophenol	< 0.01000	< 0.01000	NA	< 0.01000	NA
3,3'-Dichlorobenzidine	< 0.02000	< 0.02000	NA	< 0.02000	NA
3-Nitroaniline	< 0.05000	< 0.05000	NA	< 0.05000	NA
4,6-Dinitro-2-methylphenol	< 0.05000	< 0.05000	NA	< 0.05000	NA
4-Bromophenyl phenyl ether	< 0.01000	< 0.01000	NA	< 0.01000	NA
4-Chloro-3-methylphenol	< 0.01000	< 0.01000	NA	< 0.01000	NA
4-Chloroaniline	< 0.01000	< 0.01000	NA	< 0.01000	NA
4-Chlorophenylphenyl ether	< 0.01000	< 0.01000	NA	< 0.01000	NA
4-Methylphenol	< 0.01000	< 0.01000	NA	< 0.01000	NA
4-Nitroaniline	< 0.05000	< 0.05000	NA	< 0.05000	NA
4-Nitrophenol	< 0.05000	< 0.05000	NA	< 0.05000	NA
Acenaphthene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Acenaphthylene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Anthracene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Benzo(a)anthracene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Benzo(a)pyrene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Benzo(b)fluoranthene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Benzo(g,h,i)perylene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Benzo(k)fluoranthene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Benzoic acid	< 0.05000	< 0.05000	NA	< 0.05000	NA
Benzyl alcohol	< 0.01000	< 0.01000	NA	< 0.01000	NA
Butyl benzyl phthalate	< 0.01000	< 0.01000	NA	< 0.01000	NA
Chrysene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Di-n-butyl phthalate	< 0.01000	< 0.01000	NA	< 0.01000	NA

a = lab qualifiers

- = Sample has not been validated

REPORT DATE: 1-MAY-92

SOUTH FIELD
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1517 046945 07-17-1990 a -	2014 003064 03-28-1988 a -	2014 004028 01-31-1989 a -	2065 003095 04-19-1988 a -	2065 003544 02-02-1989 a -
Di-n-octyl phthalate	< 0.01000	< 0.01000	NA	< 0.01000	NA
Dibenzo(a,h)anthracene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Dibenzofuran	< 0.01000	< 0.01000	NA	< 0.01000	NA
Diethyl phthalate	< 0.01000	< 0.01000	NA	0.02000	NA
Dimethyl phthalate	< 0.01000	< 0.01000	NA	< 0.01000	NA
Fluoranthene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Fluorene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Hexachlorobenzene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Hexachlorobutadiene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Hexachlorocyclopentadiene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Hexachloroethane	< 0.01000	< 0.01000	NA	< 0.01000	NA
Indeno(1,2,3-cd)pyrene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Isophorone	< 0.01000	< 0.01000	NA	< 0.01000	NA
N-Nitroso-di-n-propylamine	< 0.01000	< 0.01000	NA	< 0.01000	NA
N-Nitrosodiphenylamine	< 0.01000	< 0.01000	NA	< 0.01000	NA
Naphthalene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Nitrobenzene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Pentachlorophenol	< 0.05000	< 0.05000	NA	< 0.05000	NA
Phenanthrene	< 0.01000	< 0.01000	NA	< 0.01000	NA
Phenol	< 0.01000	< 0.01000	NA	< 0.01000	NA
Pyrene	< 0.01000	< 0.01000	NA	< 0.01000	NA
bis(2-Chloroethoxy)methane	< 0.01000	< 0.01000	NA	< 0.01000	NA
bis(2-Chloroethyl)ether	< 0.01000	< 0.01000	NA	< 0.01000	NA
bis(2-Chloroisopropyl) eth	< 0.01000	< 0.01000	NA	< 0.01000	NA
bis(2-Ethylhexyl) phthalat	< 0.01000	0.00200 J	NA	< 0.01000	NA
VOLATILE ORGANICS					
1,1,1-Trichloroethane	0.00500	< 0.00500	NA	< 0.00500	NA
1,1,2,2-Tetrachloroethane	< 0.00500	< 0.00500	NA	< 0.00500	NA
1,1,2-Trichloroethane	< 0.00500	< 0.00500	NA	< 0.00500	NA
1,1-Dichloroethane	0.00900	< 0.00500	NA	< 0.00500	NA
1,1-Dichloroethene	< 0.00500	< 0.00500	NA	< 0.00500	NA
1,2-Dichloroethane	< 0.00500	< 0.00500	NA	< 0.00500	NA
1,2-Dichloroethene	NA	< 0.00500	NA	NA	NA
1,2-Dichloroethylene	0.00500	< 0.00500	NA	< 0.00500	NA
1,2-Dichloropropane	< 0.00500	< 0.00500	NA	< 0.00500	NA
2-Butanone	< 0.01000	< 0.01000	NA	< 0.01000	NA
2-Hexanone	< 0.01000	< 0.01000	NA	< 0.01000	NA
4-Methyl-2-pentanone	< 0.01000	< 0.01000	NA	< 0.01000	NA
Acetone	0.00500 J	0.00200 J	NA	< 0.00500	NA
Benzene	< 0.00500	< 0.00500	NA	< 0.00500	NA
Bromodichloromethane	< 0.00500	< 0.00500	NA	< 0.00500	NA
Bromoform	< 0.00500	< 0.00500	NA	< 0.00500	NA

a = lab qualifiers

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SOUTH FIELD
GROUNDWATER HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1517 046945 07-17-1990 a -	2014 003064 03-28-1988 a -	2014 004028 01-31-1989 a -	2065 003095 04-19-1988 a -	2065 003544 02-02-1989 a -
Bromomethane	< 0.01000	< 0.01000	NA	< 0.01000	NA
Carbon Tetrachloride	< 0.00500	< 0.00500	NA	< 0.00500	NA
Carbon disulfide	< 0.00500	< 0.00500	NA	< 0.00500	NA
Chlorobenzene	< 0.00500	< 0.00500	NA	< 0.00500	NA
Chloroethane	< 0.01000	< 0.01000	NA	< 0.01000	NA
Chloroform	< 0.00500	< 0.00500	NA	< 0.00500	NA
Chloromethane	< 0.01000	< 0.01000	NA	< 0.01000	NA
Dibromochloromethane	< 0.00500	< 0.00500	NA	< 0.00500	NA
Ethylbenzene	< 0.00500	< 0.00500	NA	< 0.00500	NA
Methylene chloride	< 0.00500	< 0.00500	NA	< 0.00500	NA
Styrene	< 0.00500	< 0.00500	NA	< 0.00500	NA
Tetrachlorethene	< 0.00500	< 0.00500	NA	< 0.00500	NA
Toluene	< 0.00500	< 0.00500	NA	< 0.00500	NA
Total xylenes	< 0.00500	< 0.00500	NA	< 0.00500	NA
Trichloroethene	0.00700	< 0.00500	NA	< 0.00500	NA
Vinyl Acetate	< 0.01000	< 0.01000	NA	< 0.01000	NA
Vinyl chloride	< 0.01000	< 0.01000	NA	< 0.01000	NA
cis-1,3-Dichloropropene	< 0.00500	< 0.00500	NA	< 0.00500	NA
trans-1,3-Dichloropropene	< 0.00500	< 0.00500	NA	< 0.00500	NA

a = lab qualifiers

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REPORT DATE: 1-MAY-92

EXPLANATION FOR LABORATORY QUALIFIERS SHOWN ON THE FOLLOWING GENERAL CHEMICAL RESULTS TABLE

On the data tables that follow, an individual analytical result may include one or more data qualifers. The list below presents all possible qualifiers and can be used as a reference when looking at the data. The qualifiers are standard Contract Laboratory Program (CLP) data qualifiers.

One note of caution; two types of chemical results tables are presented in this appendix: general chemical results and hazardous substance list results. There are two separate lists of data qualifiers for these separate tables and, although some of the symbols are the same for each, they may have different definitions.

Concentration Qualifiers

B = Reported value was obtained from a reading that was less than the Contract Laboratory Program (CLP) Contract Required Detection Limit (CRQL), but greater than or equal to the Instrument Detection Limit (IDL).

Quality Qualifiers

E = The reported value is estimated because of the presence of interference.

M = Duplicate injection precision not met.

N = Spiked sample recovery not within controls limits.

S = The reported value was determined by the Method of Standard Additions.

W = Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

G = Native analyte > 4 times spike added; therefore acceptance criteria do not apply.

X = Detection limit is higher than normal due to sample matrix interferences.

* = Duplication analysis not within control limits.

+ = Correlation coefficient for the MSA is less than 0.955.

EXPLANATION FOR DATA VALIDATION QUALIFIERS

On the following data tables that follow, an individual analytical result may include the following validation qualifiers in the "b" column.

These qualifiers are consistent for both chemical results and hazardous substance list results.

Code Relating to Identification (Confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

R = Results unusable. Analyte may or may not be present in the sample. Supporting data necessary to confirm results. Resampling and reanalyses are necessary.

N = Tentative identification. Considered present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

Codes Related to Quantitation (can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

The following codes shall be assigned to radiochemical samples in order to identify confidence of quantitation.

J = Analyte present. Reported value may not be accurate or precise. Qualifier is applied where:

- Calculated total uranium value is outside the acceptance limits.
- Calculated percent enrichment value is outside the acceptance limits.
- Calculated U_{234} to U_{238} activity is outside the acceptance limits.

R = Result unusable. Analyte may or may not be present in the sample. Qualifier is applied where QC data not located or where QC data exceeds control limits. Supporting data necessary to confirm results. Resampling and reanalysis are necessary.

SOUTH FIELD
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1046 003089 04-13-1988 a	1046 003370 07-24-1988 a	1046 003649 10-23-1988 a	1046 003854 01-22-1989 a
GENERAL CHEMISTRY				
Ammonia	< 0.1000	< 0.0200	< 0.1000	< 0.1000
Chloride	2.7000	21.0000	20.0000	1.5000
Fluoride	0.3800	0.3300	0.3500	0.3000
Hydrogen ion	NA	NA	NA	NA
Nitrate	< 0.1000	0.3100	< 0.1000	0.0600
Phenols	0.0200	< 0.0020	0.0200	< 0.0100
Phosphorus (black, white,	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA
Sulfate	12.0000	89.0000	65.0000	120.0000
Total Kjeldahl Nitrogen	NA	NA	0.5000	0.2000
Total Organic Carbon	NA	NA	NA	NA
Total Organic Halides	NA	NA	< 0.0500	< 0.0100
Total Organic Nitrogen	< 0.1000	< 0.0500	0.5000	0.2000
Total Phosphorus	< 0.0500	< 0.1100	NA	NA
METALS				
Aluminum	NA	NA	NA	NA
Antimony	NA	NA	NA	NA
Arsenic	< 0.2000	< 0.0100	< 0.0020	< 0.0020
Barium	0.1190	< 0.5000	0.1020	0.0690
Beryllium	NA	NA	NA	NA
Cadmium	< 0.0020	< 0.0050	< 0.0020	0.0080
Calcium	103.0000	110.0000	99.9000	122.0000
Chromium	< 0.0200	< 0.0100	< 0.0200	0.0270
Cobalt	NA	NA	NA	NA
Copper	< 0.0100	< 0.0100	< 0.0100	0.0130
Cyanide	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA
Iron	< 0.0050	< 0.1000	0.0510	0.0640
Lead	< 0.0500	< 0.0050	0.0030	< 0.0020
Magnesium	41.2000	41.0000	37.6000	48.6000
Manganese	0.1670	0.0600	0.0570	0.0070
Mercury	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Molybdenum	< 0.0200	< 0.0500	< 0.0200	< 0.0200
Nickel	< 0.0200	< 0.0300	< 0.0200	0.0240
Potassium	1.0100	10.0000	1.1200	1.0000
Selenium	< 0.2000	< 0.0050	0.0020	0.0050
Silicon	NA	NA	NA	NA
Silver	< 0.0100	< 0.0100	< 0.0005	< 0.0005
Sodium	6.8900	11.0000	6.5000	9.9800
Thallium	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA
Zinc	NA	NA	NA	NA

a = lab qualifiers

- = Sample has not been validated

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SOUTH FIELD
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1048 003132 04-27-1988 a -	1048 003368 07-24-1988 a -	1048 003647 10-23-1988 a -	1048 003856 01-22-1989 a -
GENERAL CHEMISTRY				
Ammonia	< 0.1000	< 0.0200	< 0.1000	< 0.1000
Chloride	45.6000	16.0000	12.5000	3.5000
Fluoride	0.1900	0.4100	0.5000	0.3000
Hydrogen ion	NA	NA	NA	NA
Nitrate	0.1400	0.4100	0.3380	< 0.0500
Phenols	< 0.0100	< 0.0020	< 0.0100	< 0.0100
Phosphorus (black, white,	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA
Sulfate	99.0000	93.0000	69.0000	59.0000
Total Kjeldahl Nitrogen	NA	NA	0.3600	0.5000
Total Organic Carbon	NA	NA	NA	NA
Total Organic Halides	NA	NA	< 0.0500	< 0.0100
Total Organic Nitrogen	0.1000	< 0.0500	0.3600	0.5000
Total Phosphorus	0.4400	0.2100	NA	NA
METALS				
Aluminum	NA	NA	NA	NA
Antimony	NA	NA	NA	NA
Arsenic	< 0.2000	< 0.0100	< 0.0020	< 0.0020
Barium	0.1120	< 0.5000	0.1010	0.0710
Beryllium	NA	NA	NA	NA
Cadmium	0.0069	< 0.0050	< 0.0020	0.0030
Calcium	114.0000	110.0000	103.0000	51.8000
Chromium	< 0.0200	< 0.0100	< 0.0200	0.0150
Cobalt	NA	NA	NA	NA
Copper	< 0.0100	< 0.0100	< 0.0100	0.0110
Cyanide	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA
Iron	< 0.0500	< 0.1000	0.0610	0.1530
Lead	0.0600	< 0.0050	0.0040	< 0.0020
Magnesium	80.2000	63.0000	48.3000	15.4000
Manganese	0.1870	0.0200	0.0030	0.0050
Mercury	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Molybdenum	< 0.0200	< 0.0500	< 0.0200	< 0.0200
Nickel	< 0.0200	< 0.0300	< 0.0200	< 0.0200
Potassium	1.6800	4.5000	3.4200	5.4300
Selenium	< 0.2000	< 0.0050	< 0.0020	< 0.0020
Silicon	NA	NA	NA	NA
Silver	0.0770	< 0.0100	< 0.0005	< 0.0005
Sodium	18.2100	31.0000	22.5000	9.8500
Thallium	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA
Zinc	NA	NA	NA	NA

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SOUTH FIELD
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	1516 046939 07-17-1990 a -	1516 046940 08-21-1990 a -
GENERAL CHEMISTRY		
Ammonia	NA	NA
Chloride	NA	NA
Fluoride	NA	NA
Hydrogen ion	NA	NA
Nitrate	0.6000	0.2600
Phenols	NA	NA
Phosphorus (black, white,	NA	NA
Phosphate as P	NA	NA
Sulfate	NA	NA
Total Kjeldahl Nitrogen	NA	NA
Total Organic Carbon	NA	NA
Total Organic Halides	NA	NA
Total Organic Nitrogen	NA	NA
METALS		
Aluminum	NA	NA
Antimony	NA	NA
Arsenic	NA	NA
Barium	NA	NA
Beryllium	NA	NA
Cadmium	NA	NA
Calcium	NA	NA
Chromium	NA	NA
Cobalt	NA	NA
Copper	NA	NA
Cyanide	NA	NA
Hexavalent Chromium	NA	NA
Iron	NA	NA
Lead	NA	NA
Magnesium	NA	NA
Manganese	NA	NA
Mercury	NA	NA
Molybdenum	NA	NA
Nickel	NA	NA
Potassium	NA	NA
Selenium	NA	NA
Silicon	NA	NA
Silver	NA	NA
Sodium	NA	NA
Thallium	NA	NA
Vanadium	NA	NA
Zinc	NA	NA

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SOUTH FIELD
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
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CHEMICAL PARAMETERS	1517 046945 07-17-1990 a -	1517 046947 08-21-1990 a -
GENERAL CHEMISTRY		
Ammonia	NA	NA
Chloride	NA	NA
Fluoride	NA	NA
Hydrogen ion	NA	NA
Nitrate	2.4700	1.7800
Phenols	NA	NA
Phosphorus (black, white,	NA	NA
Phosphate as P	NA	NA
Sulfate	NA	NA
Total Kjeldahl Nitrogen	NA	NA
Total Organic Carbon	NA	NA
Total Organic Halides	NA	NA
Total Organic Nitrogen	NA	NA
METALS		
Aluminum	NA	NA
Antimony	NA	NA
Arsenic	NA	NA
Barium	NA	NA
Beryllium	NA	NA
Cadmium	NA	NA
Calcium	NA	NA
Chromium	NA	NA
Cobalt	NA	NA
Copper	NA	NA
Cyanide	NA	NA
Hexavalent Chromium	NA	NA
Iron	NA	NA
Lead	NA	NA
Magnesium	NA	NA
Manganese	NA	NA
Mercury	NA	NA
Molybdenum	NA	NA
Nickel	NA	NA
Potassium	NA	NA
Selenium	NA	NA
Silicon	NA	NA
Silver	NA	NA
Sodium	NA	NA
Thallium	NA	NA
Vanadium	NA	NA
Zinc	NA	NA

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SOUTH FIELD
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	1518 046963 07-17-1990 a -	1518 046964 08-21-1990 a -
GENERAL CHEMISTRY		
Ammonia	NA	NA
Chloride	NA	NA
Fluoride	NA	NA
Hydrogen ion	NA	NA
Nitrate	0.8900	0.9900
Phenols	NA	NA
Phosphorus (black, white,	NA	NA
Phosphate as P	NA	NA
Sulfate	NA	NA
Total Kjeldahl Nitrogen	NA	NA
Total Organic Carbon	NA	NA
Total Organic Halides	NA	NA
Total Organic Nitrogen	NA	NA
METALS		
Aluminum	NA	NA
Antimony	NA	NA
Arsenic	NA	NA
Barium	NA	NA
Beryllium	NA	NA
Cadmium	NA	NA
Calcium	NA	NA
Chromium	NA	NA
Cobalt	NA	NA
Copper	NA	NA
Cyanide	NA	NA
Hexavalent Chromium	NA	NA
Iron	NA	NA
Lead	NA	NA
Magnesium	NA	NA
Manganese	NA	NA
Mercury	NA	NA
Molybdenum	NA	NA
Nickel	NA	NA
Potassium	NA	NA
Selenium	NA	NA
Silicon	NA	NA
Silver	NA	NA
Sodium	NA	NA
Thallium	NA	NA
Vanadium	NA	NA
Zinc	NA	NA

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SOUTH FIELD
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
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CHEMICAL PARAMETERS	2014 003064 03-28-1988 a -	2014 003384 07-28-1988 a -	2014 003673 11-06-1988 a -	2014 003869 01-31-1989 a -	2014 004151 07-26-1989 a -
GENERAL CHEMISTRY					
Ammonia	< 0.1000	< 0.1000	< 0.1000	0.1450	< 0.1000
Chloride	27.0000	24.0000	21.0000	29.0000	22.5000
Fluoride	< 0.5000	0.9000	< 0.1000	0.0980	0.3200
Hydrogen ion	NA	NA	NA	NA	NA
Nitrate	< 5.0000	1.8000	0.5050	3.5900	1.7200
Phenols	< 0.0100	< 0.0500	< 0.0100	0.0300	< 0.0100
Phosphorus (black, white,	NA	NA	NA	NA	0.1960
Phosphate as P	NA	NA	NA	NA	NA
Sulfate	64.0000	69.0000	60.8000	59.2000	49.3000
Total Kjeldahl Nitrogen	NA	NA	1.0700	0.7620	< 0.1000
Total Organic Carbon	NA	NA	NA	NA	3.7200
Total Organic Halides	NA	NA	1.7000	0.1740	0.0600
Total Organic Nitrogen	0.3000	< 0.1000	1.0700	0.6170	0.4590
Total Phosphorus	NA	0.4500	0.0880	NA	NA
METALS					
Aluminum	0.7550	NA	NA	NA	0.2430
Antimony	< 0.0300	NA	NA	NA	NA
Arsenic	< 0.0300	< 0.0100	< 0.0020	< 0.0020	< 0.0020
Barium	0.0280	< 0.2000	0.0200	0.0360	0.0460
Beryllium	< 0.0010	NA	NA	NA	NA
Cadmium	< 0.0050	< 0.0050	0.0060	< 0.0020	0.0040
Calcium	81.0000	84.0000	96.5000	90.0000	96.5000
Chromium	< 0.0100	< 0.0100	< 0.0200	0.0250	0.0320
Cobalt	< 0.0200	NA	NA	NA	NA
Copper	< 0.0100	< 0.0250	< 0.0100	0.0180	< 0.0100
Cyanide	< 0.0200	NA	NA	NA	NA
Hexavalent Chromium	< 0.0200	NA	NA	NA	NA
Iron	1.6000	< 0.1000	0.3000	0.0770	0.4360
Lead	< 0.0020	< 0.2000	0.0330	< 0.0020	0.0060
Magnesium	20.0000	21.0000	21.0000	23.6000	22.6000
Manganese	0.0020 B	< 0.0150	0.0050	0.0130	0.3800
Mercury	< 0.0010	0.0008	< 0.0002	0.0004	< 0.0002
Molybdenum	< 0.0100	< 0.0500	< 0.0200	< 0.0200	< 0.0100
Nickel	< 0.0200	< 0.0400	< 0.0200	< 0.0200	0.0840
Potassium	2.0000	< 5.0000	2.4400	2.4000	2.1700
Selenium	< 0.0100	< 0.0050	< 0.0020	0.0030	< 0.0020
Silicon	NA	NA	NA	NA	3.8200
Silver	< 0.0050	< 0.0100	< 0.0100	< 0.0005	< 0.0100
Sodium	12.7000	14.0000	11.1000	13.1000	11.4000
Thallium	< 0.0040 W	NA	NA	NA	NA
Vanadium	< 0.0100	NA	NA	NA	0.0140
Zinc	0.0340	NA	NA	NA	NA

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SOUTH FIELD
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS		2014 004211 04-01-1990 a -
GENERAL CHEMISTRY		
Ammonia	<	0.1000
Chloride		12.2000
Fluoride		0.2800
Hydrogen ion		NA
Nitrate		1.8200
Phenols		0.0120
Phosphorus (black, white,		0.3500
Phosphate as P		NA
Sulfate		71.6000
Total Kjeldahl Nitrogen		NA
Total Organic Carbon		4.0700
Total Organic Halides		0.9730
Total Organic Nitrogen		0.1200
METALS		
Aluminum		0.1640
Antimony		NA
Arsenic	<	0.0020
Barium		0.0410
Beryllium		NA
Cadmium		0.0050
Calcium		88.3000
Chromium		0.0300
Cobalt		NA
Copper	<	0.0100
Cyanide		NA
Hexavalent Chromium		NA
Iron		0.1360
Lead		0.0050
Magnesium		21.8000
Manganese		0.0190
Mercury	<	0.0002
Molybdenum		0.0490
Nickel	<	0.0200
Potassium		3.5800
Selenium	<	0.0020
Silicon		3.1200
Silver	<	0.1000
Sodium		12.2000
Thallium		NA
Vanadium		0.0160
Zinc		NA

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SOUTH FIELD
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	2045 003993 01-23-1989 a -	2045 004092 05-01-1989 a -	DUPLICATE 2045 004129 05-01-1989 a -	2045 004158 07-25-1989 a -	2045 004218 04-01-1990 a -
GENERAL CHEMISTRY					
Ammonia	< 0.1000	< 0.1000	< 0.1000	< 0.1000	< 0.1000
Chloride	15.0000	23.0000	22.5000	4.7500	6.9400
Fluoride	0.1700	0.3700	0.3400	0.3300	0.3300
Hydrogen ion	NA	NA	NA	NA	NA
Nitrate	1.9700	2.1900	1.9500	0.7330	1.1700
Phenols	0.0200	< 0.0100	< 0.0100	< 0.0100	0.0130
Phosphorus (black, white,	NA	NA	NA	0.1900	0.3500
Phosphate as P	NA	NA	NA	NA	NA
Sulfate	54.2000	64.8000	45.3000	57.2000	58.5000
Total Kjeldahl Nitrogen	0.2730	0.6000	0.5900	0.2310	NA
Total Organic Carbon	NA	NA	NA	2.2400	2.5000
Total Organic Halides	< 0.0100	0.0100	< 0.0100	< 0.0100	< 0.0100
Total Organic Nitrogen	0.2730	0.6000	0.5900	0.2310	0.2400
METALS					
Aluminum	NA	NA	NA	0.2190	0.1630
Antimony	NA	NA	NA	NA	NA
Arsenic	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Barium	0.0440	0.0424	0.0424	0.0400	0.0440
Beryllium	NA	NA	NA	NA	NA
Cadmium	0.0040	0.0028	0.0036	0.0060	0.0040
Calcium	108.0000	103.0000	102.0000	107.0000	118.0000
Chromium	0.0250	0.0153	0.0167	0.0400	0.0370
Cobalt	NA	NA	NA	NA	NA
Copper	0.0120	0.0110	0.0106	0.0130	< 0.0100
Cyanide	NA	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA	NA
Iron	0.0430	0.0430	0.0279	0.0950	0.1280
Lead	< 0.0020	< 0.0020	0.0072	0.0115	0.0050
Magnesium	25.7000	23.4000	23.2000	24.4000	28.6000
Manganese	0.0120	0.0080	0.0094	0.0120	0.0120
Mercury	0.0006	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Molybdenum	< 0.0200	< 0.0100	< 0.0100	< 0.0100	< 0.0100
Nickel	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200
Potassium	2.1000	2.1600	2.1000	1.5200	2.3400
Selenium	< 0.0020	< 0.0020	< 0.0020	0.0050	0.0040
Silicon	NA	NA	NA	4.8500	5.4700
Silver	< 0.0005	< 0.0005	< 0.0005	0.0110	0.0130
Sodium	9.1200	9.7000	9.6500	4.6800	7.3000
Thallium	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	0.0170	0.0210
Zinc	NA	NA	NA	NA	NA

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SOUTH FIELD
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

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CHEMICAL PARAMETERS		DUPLICATE 2045 004266 04-01-1990 a -
GENERAL CHEMISTRY		
Ammonia	<	0.1000
Chloride		7.0000
Fluoride		0.3200
Hydrogen ion		NA
Nitrate		1.3200
Phenols	<	0.0100
Phosphorus (black, white,		0.3000
Phosphate as P		NA
Sulfate		59.2000
Total Kjeldahl Nitrogen		NA
Total Organic Carbon		2.4500
Total Organic Halides	<	0.0100
Total Organic Nitrogen		0.2200
METALS		
Aluminum		0.1600
Antimony		NA
Arsenic	<	0.0020
Barium		0.0460
Beryllium		NA
Cadmium		0.0040
Calcium		120.0000
Chromium		0.0350
Cobalt		NA
Copper	<	0.0100
Cyanide		NA
Hexavalent Chromium		NA
Iron		0.0830
Lead		0.0030
Magnesium		29.1000
Manganese		0.0110
Mercury	<	0.0002
Molybdenum	<	0.0100
Nickel	<	0.0200
Potassium		2.3700
Selenium		0.0020
Silicon		5.5300
Silver		0.0130
Sodium		7.6000
Thallium		NA
Vanadium		0.0220
Zinc		NA

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SOUTH FIELD
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

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CHEMICAL PARAMETERS	2046 003997 02-02-1989 a	2046 004097 05-10-1989 a	2046 004159 07-28-1989 a	2046 004219 04-03-1990 a
GENERAL CHEMISTRY				
Ammonia	< 0.1000	< 0.1000	< 0.1000	< 0.1000
Chloride	3.0000	18.0000	25.0000	8.8900
Fluoride	0.1500	0.1150	0.1800	0.1800
Hydrogen ion	NA	NA	NA	NA
Nitrate	1.3500	1.4700	2.4100	1.6000
Phenols	0.0100	0.0147	< 0.0100	< 0.0100
Phosphorus (black, white,	NA	0.8010	0.3920	0.0800
Phosphate as P	NA	NA	NA	NA
Sulfate	73.5000	84.3000	59.5000	86.4000
Total Kjeldahl Nitrogen	0.2750	0.3770	0.5160	NA
Total Organic Carbon	NA	< 1.0000	2.8300	0.2340
Total Organic Halides	< 0.0100	0.0210	< 0.0100	0.0324
Total Organic Nitrogen	0.2750	0.3770	0.5160	< 0.1000
METALS				
Aluminum	NA	0.0723	0.1240	0.1850
Antimony	NA	NA	NA	NA
Arsenic	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Barium	0.0670	0.0886	0.0590	0.0687
Beryllium	NA	NA	NA	NA
Cadmium	0.0060	0.0021	0.0060	0.0065
Calcium	112.0000	143.0000	104.0000	120.0000
Chromium	0.0230	< 0.0100	0.0340	0.0410
Cobalt	NA	NA	NA	NA
Copper	0.0210	< 0.0100	< 0.0100	< 0.0100
Cyanide	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA
Iron	0.1170	0.0565	0.0400	0.0956
Lead	0.0060	0.0040	0.0090	0.0030
Magnesium	31.7000	38.7000	25.9000	34.3000
Manganese	0.0170	< 0.0020	0.0100	0.0102
Mercury	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Molybdenum	< 0.0200	< 0.1000	< 0.0100	< 0.0100
Nickel	0.0200	< 0.0200	< 0.0200	< 0.0200
Potassium	2.8600	3.2300	2.5900	3.5100
Selenium	0.0030	< 0.0020	< 0.0020	< 0.0020
Silicon	NA	5.5900	4.1000	4.9100
Silver	< 0.0005	< 0.0100	0.0100	0.0150
Sodium	10.2000	10.3000	11.3000	11.0000
Thallium	NA	NA	NA	NA
Vanadium	NA	< 0.0100	0.0160	0.0243
Zinc	NA	NA	NA	NA

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SOUTH FIELD
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

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CHEMICAL PARAMETERS	2048 003994 02-09-1989 a -	2048 004100 05-02-1989 a -	2048 004162 07-26-1989 a -	2048 004221 04-01-1990 a -
GENERAL CHEMISTRY				
Ammonia	< 0.1000	< 0.1000	< 0.1000	< 0.1000
Chloride	1.0000	17.3000	12.8000	5.6900
Fluoride	0.1200	0.1000	0.1400	0.1400
Hydrogen ion	NA	NA	NA	NA
Nitrate	1.8300	1.1900	1.1000	0.5300
Phenols	< 0.0100	0.0194	< 0.0100	0.3400
Phosphorus (black, white,	NA	1.2910	0.3660	NA
Phosphate as P	NA	NA	NA	NA
Sulfate	59.0000	56.5000	54.1000	NA
Total Kjeldahl Nitrogen	0.4410	0.7250	0.6230	NA
Total Organic Carbon	NA	< 1.0000	2.2200	2.7200
Total Organic Halides	< 0.0100	< 0.0100	< 0.0100	0.0318
Total Organic Nitrogen	0.4410	0.7250	0.2950	0.1000
Total Phosphorus	0.9600	NA	NA	NA
METALS				
Aluminum	NA	0.1220	0.1190	0.1430
Antimony	NA	NA	NA	NA
Arsenic	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Barium	0.0420	0.0387	0.0400	0.0350
Beryllium	NA	NA	NA	NA
Cadmium	0.0080	0.0032	0.0060	0.0050
Calcium	97.0000	102.0000	119.0000	108.0000
Chromium	0.0310	0.0141	0.0380	0.0350
Cobalt	NA	NA	NA	NA
Copper	0.0170	0.0102	0.0150	< 0.0100
Cyanide	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA
Iron	0.1150	0.0666	0.0460	0.0650
Lead	< 0.0020	0.0034	< 0.0020	0.0040
Magnesium	24.6000	29.1000	33.9000	33.0000
Manganese	0.0130	0.0145	0.0120	0.0090
Mercury	0.0003	< 0.2000	< 0.0002	< 0.0002
Molybdenum	0.0080	< 0.0100	< 0.0100	< 0.0100
Nickel	0.0200	< 0.0200	< 0.0200	< 0.0200
Potassium	2.0300	1.8200	1.7700	2.1000
Selenium	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Silicon	NA	4.5300	4.7600	4.8600
Silver	< 0.0005	< 0.0005	0.0100	0.0130
Sodium	8.0300	6.6500	6.3900	7.4200
Thallium	NA	NA	NA	NA
Vanadium	NA	0.0111	0.0180	0.0200
Zinc	NA	NA	NA	NA

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GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	2049 003085 04-08-1988 a -	2049 003436 08-03-1988 a -	2049 003470 12-06-1988 a -	DUPLICATE 2049 003687 12-06-1988 a -	2049 003885 02-07-1989 a -
GENERAL CHEMISTRY					
Ammonia	< 0.1000	< 0.1000	< 0.1000	< 0.1000	< 0.1000
Chloride	23.7000	18.0000	1.5000	6.0000	15.0000
Fluoride	0.3500	0.9100	0.1900	0.2100	0.2300
Hydrogen ion	NA	NA	NA	NA	NA
Nitrate	< 0.1000	3.3000	9.0400	8.9500	2.2100
Phenols	0.0200	< 0.0500	< 0.0100	< 0.0100	< 0.0100
Phosphorus (black, white,	NA	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA	NA
Sulfate	70.0000	54.0000	41.4000	43.8000	49.4000
Total Kjeldahl Nitrogen	NA	NA	0.4400	0.4300	0.3700
Total Organic Carbon	NA	NA	NA	NA	NA
Total Organic Halides	NA	NA	< 0.0500	< 0.0500	< 0.0500
Total Organic Nitrogen	< 0.1000	< 0.1000	0.4400	0.4300	0.3700
Total Phosphorus	< 0.0500	NA	NA	NA	NA
METALS					
Aluminum	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA
Arsenic	< 0.2000	< 0.0100	< 0.0020	< 0.0020	< 0.0020
Barium	0.0180	< 0.2000	0.0390	0.0390	0.0420
Beryllium	NA	NA	NA	NA	NA
Cadmium	< 0.0020	< 0.0050	< 0.0020	< 0.0020	0.0060
Calcium	96.2000	120.0000	116.0000	116.0000	119.0000
Chromium	< 0.0200	< 0.0100	< 0.0200	< 0.0200	0.0330
Cobalt	NA	NA	NA	NA	NA
Copper	< 0.0100	< 0.0300	< 0.0100	< 0.0100	0.0130
Cyanide	NA	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA	NA
Iron	< 0.0050	< 0.1000	0.0150	0.0110	0.0320
Lead	< 0.0500	< 0.0050	< 0.0020	0.0060	< 0.0020
Magnesium	19.7700	24.0000	26.2000	25.7000	26.9000
Manganese	< 0.0010	< 0.0200	0.0020	0.0010	0.0050
Mercury	< 0.0002	< 0.0002	< 0.0002	0.0003	< 0.0002
Molybdenum	< 0.0200	< 0.0500	< 0.0200	< 0.0200	< 0.0200
Nickel	< 0.0200	< 0.0400	< 0.0200	< 0.0200	< 0.0200
Potassium	2.6000	< 5.0000	2.3400	2.2300	2.1300
Selenium	< 0.2000	< 0.0050	< 0.0020	< 0.0020	0.0020
Silicon	NA	NA	NA	NA	NA
Silver	< 0.0100	< 0.0100	< 0.0200	< 0.0200	< 0.0005
Sodium	8.8500	9.0000	8.3700	8.4100	15.2000
Thallium	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA

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GROUNDWATER GENERAL CHEMICAL DATA
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CHEMICAL PARAMETERS	2049 004164 07-30-1989 a -	2049 004222 04-03-1990 a -
GENERAL CHEMISTRY		
Ammonia	< 0.1000	< 0.1000
Chloride	6.5000	9.5100
Fluoride	0.3600	0.4200
Hydrogen ion	NA	NA
Nitrate	0.6850	4.0600
Phenols	< 0.0100	< 0.0100
Phosphorus (black, white,	0.3060	2.7100
Phosphate as P	NA	NA
Sulfate	43.2000	51.3000
Total Kjeldahl Nitrogen	0.2450	NA
Total Organic Carbon	1.9800	0.2540
Total Organic Halides	< 0.0100	< 0.0100
Total Organic Nitrogen	0.2450	1.6400
METALS		
Aluminum	0.1330	0.1540
Antimony	NA	NA
Arsenic	< 0.0020	< 0.0020
Barium	0.0250	0.0280
Beryllium	NA	NA
Cadmium	0.0040	0.0045
Calcium	106.0000	124.0000
Chromium	0.0440	0.0368
Cobalt	NA	NA
Copper	< 0.0100	< 0.0100
Cyanide	NA	NA
Hexavalent Chromium	NA	NA
Iron	0.0340	0.0661
Lead	0.0030	0.0020
Magnesium	21.4000	27.3000
Manganese	0.0080	0.0087
Mercury	< 0.0002	< 0.0002
Molybdenum	< 0.0100	< 0.0100
Nickel	< 0.0200	0.0200
Potassium	2.0900	3.4500
Selenium	< 0.0020	< 0.0020
Silicon	4.4600	4.5500
Silver	0.0100	0.0126
Sodium	5.8900	17.9000
Thallium	NA	NA
Vanadium	0.0160	0.0204
Zinc	NA	NA

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SOUTH FIELD
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
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CHEMICAL PARAMETERS	2065 003095 04-19-1988 a -	2065 003438 08-04-1988 a -	2065 003538 02-02-1989 a -	2065 003693 11-08-1988 a -	2065 003884 02-02-1989 a -
GENERAL CHEMISTRY					
Ammonia	0.2000	< 0.1000	< 0.1000	< 0.1000	< 0.1000
Chloride	13.2000	14.0000	NA	15.5000	NA
Fluoride	0.2700	0.1700	0.1100	< 0.1000	0.1100
Hydrogen ion	NA	NA	NA	NA	NA
Nitrate	0.1500	0.1000	< 0.1000	< 0.1000	< 0.1000
Phenols	< 0.0100	0.0200	< 0.0100	< 0.0100	< 0.0100
Phosphorus (black, white,	NA	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA	NA
Sulfate	165.0000	198.0000	214.0000	133.0000	229.0000
Total Kjeldahl Nitrogen	NA	NA	1.7900	0.1300	0.1000
Total Organic Carbon	NA	NA	NA	NA	NA
Total Organic Halides	NA	NA	< 0.0100	< 0.0500	< 0.0100
Total Organic Nitrogen	0.2000	< 0.1000	1.7900	0.1300	0.1000
Total Phosphorus	NA	NA	0.0600	NA	0.0800
METALS					
Aluminum	< 0.0500	NA	NA	NA	NA
Antimony	< 0.0005	NA	NA	NA	NA
Arsenic	< 0.0020	< 0.0100	< 0.0020	< 0.0020	< 0.0020
Barium	0.0440 BE	< 0.2000	0.0720	0.0600	0.0770
Beryllium	< 0.0010	NA	NA	NA	NA
Cadmium	< 0.0020	< 0.0050	0.0090	< 0.0020	0.0090
Calcium	135.0000	160.0000	177.0000	140.0000	185.0000
Chromium	< 0.0200	< 0.0100	0.0330	< 0.0200	0.0370
Cobalt	< 0.0100	NA	NA	NA	NA
Copper	< 0.0100	< 0.0300	0.0240	< 0.0100	0.0260
Cyanide	< 0.0100	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA	NA
Iron	0.0900 B	0.6000	1.0200	0.9000	1.1100
Lead	< 0.0020 WN	< 0.0050	0.0020	0.0040	< 0.0020
Magnesium	42.8000	46.0000	50.1000	39.4000	51.3000
Manganese	0.3620	0.5100	0.4970	0.4500	0.5170
Mercury	< 0.0002	< 0.0003	0.0009	< 0.0002	0.0011
Molybdenum	< 0.0200	< 0.0500	< 0.0200	< 0.0200	< 0.0200
Nickel	< 0.0200	< 0.0400	0.0230	< 0.0200	0.0320
Potassium	4.0700 B	< 5.0000	3.2500	2.6300	3.1900
Selenium	< 0.0020 W	< 0.0050	0.0050	< 0.0020	0.0060
Silicon	NA	NA	NA	NA	NA
Silver	< 0.0050	< 0.0100	< 0.0005	< 0.1000	< 0.0005
Sodium	13.8000	13.0000	14.0000	12.4000	14.2000
Thallium	< 0.0010	NA	NA	NA	NA
Vanadium	0.0170 B	NA	NA	NA	NA
Zinc	< 0.0100	NA	NA	NA	NA

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GROUNDWATER GENERAL CHEMICAL DATA
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CHEMICAL PARAMETERS	2065 004163 07-30-1989 a	DUPLICATE 2065 004168 07-30-1989 a	2065 004225 04-09-1990 a
GENERAL CHEMISTRY			
Ammonia	< 0.1000	< 0.1000	< 0.1000
Chloride	15.0000	11.9000	8.5100
Fluoride	0.1400	0.1400	0.1100
Hydrogen ion	NA	NA	NA
Nitrate	0.1450	0.1740	0.1700
Phenols	< 0.0100	< 0.0100	0.0140
Phosphorus (black, white,	0.5690	0.5630	NA
Phosphate as P	NA	NA	NA
Sulfate	281.0000	292.0000	NA
Total Kjeldahl Nitrogen	0.4090	0.4520	NA
Total Organic Carbon	3.0100	1.4700	NA
Total Organic Halides	< 0.0100	< 0.0100	0.0130
Total Organic Nitrogen	0.4090	0.4520	< 0.1000
METALS			
Aluminum	0.1740	0.1780	0.1630
Antimony	NA	NA	NA
Arsenic	< 0.0020	< 0.0020	< 0.0020
Barium	0.0500	0.0480	0.0455
Beryllium	NA	NA	NA
Cadmium	0.0080	0.0080	0.0068
Calcium	184.0000	183.0000	170.0000
Chromium	0.0500	0.0520	0.0516
Cobalt	NA	NA	NA
Copper	0.0130	0.0140	< 0.0100
Cyanide	NA	NA	NA
Hexavalent Chromium	NA	NA	NA
Iron	0.1110	0.0730	< 0.0787
Lead	< 0.0020	0.0040	0.0034
Magnesium	54.3000	54.3000	58.2000
Manganese	0.3260	0.2770	0.1680
Mercury	< 0.0002	< 0.0002	< 0.0002
Molybdenum	< 0.0100	< 0.0100	< 0.0100
Nickel	< 0.0200	< 0.0200	< 0.0200
Potassium	2.8500	2.9500	3.4600
Selenium	< 0.0020	< 0.0020	< 0.0020
Silicon	5.3500	5.2200	5.1500
Silver	0.0120	0.0130	0.0162
Sodium	16.1000	15.6000	14.9000
Thallium	NA	NA	NA
Vanadium	0.0260	0.0260	0.0305
Zinc	NA	NA	NA

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GROUNDWATER GENERAL CHEMICAL DATA
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CHEMICAL PARAMETERS	2385 004192 05-06-1990 a -	2385 004303 07-10-1990 a -
GENERAL CHEMISTRY		
Ammonia	< 0.1000	< 0.1000
Chloride	10.7000	10.4000
Fluoride	0.2400	< 0.0500
Hydrogen ion	NA	NA
Nitrate	1.2600	0.3300
Phenols	< 0.0100	< 0.0100
Phosphorus (black, white,	NA	NA
Phosphate as P	NA	NA
Sulfate	NA	NA
Total Kjeldahl Nitrogen	NA	NA
Total Organic Carbon	62.0000	2.8900
Total Organic Halides	< 0.0100	0.0130
Total Organic Nitrogen	< 0.1000	0.1700
METALS		
Aluminum	0.1000	0.0700
Antimony	NA	NA
Arsenic	< 0.0020	< 0.0020
Barium	0.0640	0.0710
Beryllium	NA	NA
Cadmium	0.0080	0.0060
Calcium	146.0000	136.0000
Chromium	0.0410	0.0380
Cobalt	NA	NA
Copper	0.0150	0.0120
Cyanide	NA	NA
Hexavalent Chromium	NA	NA
Iron	0.0440	0.1630
Lead	< 0.0020	< 0.0020
Magnesium	44.2000	40.6000
Manganese	0.3300	0.1980
Mercury	< 0.0002	< 0.0002
Molybdenum	0.0140	< 0.0100
Nickel	0.0420	0.0230
Potassium	1.8700	2.8600
Selenium	< 0.0020	< 0.0020
Silicon	6.0100	5.6100
Silver	0.0260	0.0180
Sodium	12.6000	12.3000
Thallium	NA	NA
Vanadium	0.0220	0.0160
Zinc	NA	NA

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CHEMICAL PARAMETERS	3014 003084 04-08-1988 a -	3014 003385 07-28-1988 a -	3014 003672 11-06-1988 a -	3014 003870 01-31-1989 a -	3014 004239 04-01-1990 a -
GENERAL CHEMISTRY					
Ammonia	< 0.1000	< 0.1000	< 0.1000	0.1080	< 0.1000
Chloride	24.7000	24.0000	25.8000	23.0000	9.5100
Fluoride	0.3000	0.8700	0.1600	0.1050	0.2300
Hydrogen ion	NA	NA	NA	NA	NA
Nitrate	0.1000	3.8000	1.6800	2.9100	3.1300
Phenols	< 0.0100	< 0.0500	< 0.0100	0.0200	0.0180
Phosphorus (black, white,	NA	NA	NA	NA	6.1400
Phosphate as P	NA	NA	NA	NA	NA
Sulfate	48.0000	62.0000	51.4000	50.7000	53.6000
Total Kjeldahl Nitrogen	NA	NA	0.2900	0.2860	NA
Total Organic Carbon	NA	NA	NA	NA	4.4500
Total Organic Halides	NA	NA	1.1000	1.3100	0.3790
Total Organic Nitrogen	0.3000	< 0.1000	0.2900	0.1780	0.2800
Total Phosphorus	0.2400	< 0.0100	< 0.0200	NA	NA
METALS					
Aluminum	NA	NA	NA	NA	0.1030
Antimony	NA	NA	NA	NA	NA
Arsenic	< 0.2000	< 0.0100	< 0.0020	< 0.0020	< 0.0020
Barium	0.0270	< 0.2000	0.0300	0.0370	0.0290
Beryllium	NA	NA	NA	NA	NA
Cadmium	< 0.0020	< 0.0050	0.0040	< 0.0020	0.0030
Calcium	73.4000	78.0000	74.1000	87.0000	73.3000
Chromium	< 0.0200	< 0.0100	< 0.0200	0.0240	0.0250
Cobalt	NA	NA	NA	NA	NA
Copper	< 0.0100	< 0.0250	< 0.0100	0.0140	< 0.0100
Cyanide	NA	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA	NA
Iron	< 0.0050	< 0.1000	0.0300	0.0680	0.0730
Lead	< 0.0500	< 0.2000	0.0160	< 0.0020	0.0020
Magnesium	18.0500	21.0000	18.7000	22.7000	19.3000
Manganese	< 0.0010	< 0.0150	< 0.0010	0.0040	0.0060
Mercury	< 0.0002	0.0009	< 0.0002	0.0008	< 0.0002
Molybdenum	< 0.0200	< 0.0500	< 0.0200	< 0.0200	< 0.0100
Nickel	< 0.0200	< 0.0400	< 0.0200	< 0.0200	< 0.0200
Potassium	2.4600	< 5.0000	1.9400	2.4700	2.5200
Selenium	< 0.2000	< 0.0050	0.0020	0.0040	< 0.0020
Silicon	NA	NA	NA	NA	2.6500
Silver	< 0.0100	< 0.0100	< 0.0100	< 0.0005	< 0.0100
Sodium	9.6600	13.0000	10.9000	12.7000	12.4000
Thallium	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	0.0140
Zinc	NA	NA	NA	NA	NA

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RI/FS DATA

Results in parts per million (ppm).
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CHEMICAL PARAMETERS	3045 004198 05-23-1990 a -	3045 004319 08-09-1990 a -
GENERAL CHEMISTRY		
Ammonia	0.2000	< 0.1000
Chloride	21.0000	12.3000
Fluoride	0.1000	0.1300
Hydrogen ion	NA	NA
Nitrate	0.9000	1.2800
Phenols	0.0170	0.0100
Phosphorus (black, white,	NA	NA
Phosphate as P	NA	NA
Sulfate	NA	NA
Total Kjeldahl Nitrogen	NA	NA
Total Organic Carbon	2.0000	1.0700
Total Organic Halides	< 0.0500	< 0.0100
Total Organic Nitrogen	0.0000	< 0.1000
METALS		
Aluminum	0.0390	0.0810
Antimony	NA	NA
Arsenic	< 0.0020	< 0.0020
Barium	0.0470	0.0450
Beryllium	NA	NA
Cadmium	0.0010	0.0020
Calcium	88.9000	94.0000
Chromium	0.0040	0.0210
Cobalt	NA	NA
Copper	0.0070	< 0.0100
Cyanide	NA	NA
Hexavalent Chromium	NA	NA
Iron	0.1280	0.0870
Lead	< 0.0010	< 0.0020
Magnesium	22.5000	23.1000
Manganese	0.0880	0.0570
Mercury	< 0.0002	< 0.0002
Molybdenum	0.0070	< 0.0100
Nickel	0.0050	< 0.0200
Potassium	2.6000	2.6000
Selenium	< 0.0030	< 0.0020
Silicon	1.9000	3.9800
Silver	0.0030	0.0130
Sodium	10.2000	10.6000
Thallium	NA	NA
Vanadium	0.0060	< 0.0100
Zinc	NA	NA

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GROUNDWATER GENERAL CHEMICAL DATA
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CHEMICAL PARAMETERS	3046 004207 06-15-1990 a -	3046 004332 08-24-1990 a -
GENERAL CHEMISTRY		
Ammonia	< 0.1000	< 0.1000
Chloride	11.3600	25.3000
Fluoride	0.1370	0.1400
Hydrogen ion	NA	NA
Nitrate	0.5600	0.4000
Phenols	< 0.0100	< 0.0100
Phosphorus (black, white,	NA	NA
Phosphate as P	NA	NA
Sulfate	NA	NA
Total Kjeldahl Nitrogen	NA	NA
Total Organic Carbon	2.9900	2.1000
Total Organic Halides	0.0110	0.0190
Total Organic Nitrogen	0.1200	0.1400
METALS		
Aluminum	< 0.0600	< 0.0600
Antimony	NA	NA
Arsenic	< 0.0020	0.0020
Barium	0.0510	0.0450
Beryllium	NA	NA
Cadmium	0.0050	0.0030
Calcium	85.5000	83.8000
Chromium	0.0420	0.0260
Cobalt	NA	NA
Copper	< 0.0100	< 0.0100
Cyanide	NA	NA
Hexavalent Chromium	NA	NA
Iron	0.6910	0.2570
Lead	< 0.0020	0.0080
Magnesium	22.9000	21.4000
Manganese	0.3400	0.3130
Mercury	< 0.0002	< 0.0002
Molybdenum	< 0.0100	< 0.0100
Nickel	< 0.0300	< 0.0200
Potassium	2.6800	2.6500
Selenium	< 0.0020	< 0.0020
Silicon	3.6100	3.3400
Silver	0.0130	0.0120
Sodium	12.3000	11.1000
Thallium	NA	NA
Vanadium	< 0.0100	< 0.0100
Zinc	NA	NA

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CHEMICAL PARAMETERS	3049 003992 01-31-1989 a	3049 004091 05-01-1989 a	3049 004246 04-26-1990 a	DUPLICATE 3049 004271 04-26-1990 a
GENERAL CHEMISTRY				
Ammonia	< 0.1000	< 0.1000	< 0.1000	< 0.1000
Chloride	32.0000	24.0000	28.0000	24.0000
Fluoride	0.1100	0.1700	0.2000	0.2000
Hydrogen ion	NA	NA	NA	NA
Nitrate	0.1900	1.6200	1.6000	1.7000
Phenols	< 0.0100	< 0.0100	0.0110	0.0220
Phosphorus (black, white,	NA	NA	NA	NA
Phosphate as P	NA	NA	NA	NA
Sulfate	115.0000	62.5000	NA	NA
Total Kjeldahl Nitrogen	0.3380	0.1520	NA	NA
Total Organic Carbon	NA	NA	< 1.0000	1.0000
Total Organic Halides	0.0210	< 0.0100	NA	NA
Total Organic Nitrogen	0.3380	0.1520	0.2000	0.1000
Total Phosphorus	0.5400	NA	NA	NA
METALS				
Aluminum	NA	NA	< 0.0600	< 0.0600
Antimony	NA	NA	NA	NA
Arsenic	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Barium	0.0230	0.0434	0.0440	0.0440
Beryllium	NA	NA	NA	NA
Cadmium	< 0.0200	0.0030	< 0.0020	< 0.0020
Calcium	53.2000	84.0000	84.3000	83.1000
Chromium	0.0160	0.0143	< 0.0100	< 0.0100
Cobalt	NA	NA	NA	NA
Copper	< 0.0100	0.0100	< 0.0100	< 0.0100
Cyanide	NA	NA	NA	NA
Hexavalent Chromium	NA	NA	NA	NA
Iron	0.1500	0.0274	0.0560	0.0500
Lead	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Magnesium	28.2000	21.9000	21.9000	21.6000
Manganese	0.0530	0.0820	0.0880	0.0870
Mercury	0.0005	< 0.0002	< 0.0002	< 0.0002
Molybdenum	0.0370	< 0.0100	< 0.0100	< 0.0100
Nickel	< 0.0210	< 0.0200	< 0.0200	< 0.0200
Potassium	4.9200	2.4500	2.7600	2.7400 B
Selenium	< 0.0020	< 0.0020	< 0.0030	< 0.0030
Silicon	NA	NA	2.0000	2.3000
Silver	< 0.0005	< 0.0005	< 0.0100	< 0.0100
Sodium	34.0000	10.4000	10.6000	10.4000
Thallium	NA	NA	NA	NA
Vanadium	NA	NA	< 0.0100	< 0.0100
Zinc	NA	NA	NA	NA

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SOUTH FIELD
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

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CHEMICAL PARAMETERS	3065 003995 01-25-1989 a -	3065 004098 05-31-1989 a -	3065 004249 04-09-1990 a -
GENERAL CHEMISTRY			
Ammonia	< 0.1000	< 0.1000	< 0.1000
Chloride	19.0000	20.0000	9.9400
Fluoride	0.0600	0.1700	0.1000
Hydrogen ion	NA	NA	NA
Nitrate	< 0.1000	< 0.1000	0.1700
Phenols	0.0100	0.0274	0.0170
Phosphorus (black, white,	NA	< 0.0200	NA
Phosphate as P	NA	NA	NA
Sulfate	62.5000	106.0000	NA
Total Kjeldahl Nitrogen	0.1000	0.1120	NA
Total Organic Carbon	NA	< 1.0000	NA
Total Organic Halides	< 0.0100	0.0105	< 0.0100
Total Organic Nitrogen	0.1000	0.1120	< 0.1000
Total Phosphorus	0.6700	NA	NA
METALS			
Aluminum	NA	0.0863	0.1090
Antimony	NA	NA	NA
Arsenic	< 0.0020	< 0.0020	< 0.0020
Barium	0.0510	0.0564	0.0594
Beryllium	NA	NA	NA
Cadmium	0.0040	0.0048	0.0029
Calcium	83.4000	87.0500	90.6000
Chromium	0.0210	0.0350	0.0331
Cobalt	NA	NA	NA
Copper	0.0110	< 0.0100	< 0.0100
Cyanide	NA	NA	NA
Hexavalent Chromium	NA	NA	NA
Iron	2.8000	1.5500	1.3900
Lead	< 0.0020	0.0033	0.0030
Magnesium	21.0000	22.0000	23.0000
Manganese	0.2230	0.2140	0.2320
Mercury	< 0.0002	< 0.0002	< 0.0002
Molybdenum	< 0.0200	< 0.0100	< 0.0100
Nickel	0.0250	< 0.0200	< 0.0200
Potassium	2.6500	2.3800	2.5100
Selenium	< 0.0020	< 0.0020	< 0.0020
Silicon	NA	4.2400	4.1700
Silver	< 0.0005	0.0120	0.0112
Sodium	10.4000	9.9400	10.3000
Thallium	NA	NA	NA
Vanadium	NA	0.0158	0.0174
Zinc	NA	NA	NA

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CHEMICAL PARAMETERS		3385 004309 07-24-1990 a -		3385 004363 01-10-1991 a -
GENERAL CHEMISTRY				
Ammonia	<	0.1000	<	0.1000
Chloride		13.9000		26.7000
Fluoride		0.1400		0.1500
Hydrogen ion		NA		NA
Nitrate		0.2500		0.3600
Phenols	<	0.0100	<	0.0100
Phosphorus (black, white,		NA		NA
Phosphate as P		NA		NA
Sulfate		NA		NA
Total Kjeldahl Nitrogen		NA		NA
Total Organic Carbon		1.5000		2.6400
Total Organic Halides	<	0.0100		0.1640
Total Organic Nitrogen		0.1800		0.1600
METALS				
Aluminum		0.0670		0.0690
Antimony		NA		NA
Arsenic	<	0.0020	<	0.0020
Barium		0.0570		0.0590
Beryllium		NA		NA
Cadmium		0.0040		0.0030
Calcium		92.7000		85.8000
Chromium		0.0250		0.0170
Cobalt		NA		NA
Copper	<	0.0100	<	0.0100
Cyanide		NA		NA
Hexavalent Chromium		NA		NA
Iron		2.3900		0.3430
Lead	<	0.0020		0.0030
Magnesium		24.4000		23.0000
Manganese		0.3920		0.3280
Mercury	<	0.0002	<	0.0002
Molybdenum	<	0.0100	<	0.0100
Nickel		0.0290	<	0.0200
Potassium		3.0500		2.8500
Selenium	<	0.0020	<	0.0020
Silicon		3.8900		3.8500
Silver		0.0120		0.0180
Sodium		12.6000		11.2000
Thallium		NA		NA
Vanadium	<	0.0100	<	0.0100
Zinc		NA		NA

a = lab qualifiers

- = Sample has not been validated

REPORT DATE : 1-MAY-92

SOUTH FIELD
GROUNDWATER GENERAL CHEMICAL DATA
RI/FS DATA

Results in parts per million (ppm).
Data presented by well number, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

CHEMICAL PARAMETERS	4014 003871 01-31-1989 a -	4014 004089 05-01-1989 a -
GENERAL CHEMISTRY		
Ammonia	0.2020	< 0.1000
Chloride	18.0000	21.5000
Fluoride	0.0620	0.1400
Hydrogen ion	NA	NA
Nitrate	< 0.1000	0.1600
Phenols	0.1000	0.0350
Phosphorus (black, white,	NA	NA
Phosphate as P	NA	NA
Sulfate	58.4000	72.0000
Total Kjeldahl Nitrogen	0.1920	< 0.1000
Total Organic Carbon	NA	NA
Total Organic Halides	< 0.0100	< 0.0100
Total Organic Nitrogen	< 0.1000	< 0.1000
METALS		
Aluminum	NA	NA
Antimony	NA	NA
Arsenic	< 0.0020	< 0.0020
Barium	0.0710	0.0693
Beryllium	NA	NA
Cadmium	< 0.0020	0.0033
Calcium	92.7000	92.0000
Chromium	0.0230	0.0139
Cobalt	NA	NA
Copper	0.0120	< 0.0100
Cyanide	NA	NA
Hexavalent Chromium	NA	NA
Iron	2.5100	1.9100
Lead	< 0.0020	0.0110
Magnesium	22.7000	22.1000
Manganese	0.3170	0.3500
Mercury	0.0064	0.0031
Molybdenum	< 0.0200	< 0.0100
Nickel	< 0.0200	< 0.0200
Potassium	2.5200	2.2200
Selenium	0.0030	< 0.0020
Silicon	NA	NA
Silver	< 0.0005	< 0.0005
Sodium	10.4000	10.2000
Thallium	NA	NA
Vanadium	NA	NA
Zinc	NA	NA

a = lab qualifiers

- = Sample has not been validated

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REPORT DATE : 1-MAY-92

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TABLE G-10

BIOTA ANALYSES
RI/FS SAMPLING PROGRAM
SOUTH FIELD

SOUTH FIELD
BIOLOGICAL RADIOLOGICAL RESULTS
RI/FS DATA*

Results in picocuries per gram (pCi/g).
Data presented by location, sample number, and sample date.
NA indicates not analyzed; a number preceded by a "less than" symbol indicates that the compound was not present above the detection limit of the analytical instrument.

RADIOLOGICAL PARAMETERS	23 Grass Roots 000050 09-02-1987				23 Grass Leaves 000051 09-02-1987
Actinium 231		NA			NA
Cesium 137		0.3	±	0.1	< 0.2
Lead 210		NA			NA
Neptunium 237		NA			NA
Plutonium 238		NA			NA
Plutonium 239/240		NA			NA
Polonium 210		NA			NA
Protactium 234		NA			NA
Radium 224		NA			NA
Radium 226		NA			NA
Radium 228		NA			NA
Ruthenium 106		NA			NA
Strontium 90	<	0.5			< 0.5
Technetium 99		NA			NA
Thorium 228		NA			NA
Thorium 230		NA			NA
Thorium 232		NA			NA
Total Thorium **		NA			NA
Uranium 234	<	0.6			< 0.6
Uranium 235/236	<	0.6			< 0.6
Uranium 238	<	0.6			< 0.6
Total Uranium **		NA			NA

* Data validation in progress.

** Results reported in mg/kg

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REPORT DATE : 12-MAY-9

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TABLE G-11

GEOTECHNICAL ANALYSES
RI/FS SAMPLING PROGRAM
SOUTH FIELD

TABLE G-11

GEOTECHNICAL DATA FOR SURFACE MEDIA
RI/FS SAMPLING PROGRAM
SOUTH FIELD

Location:	#6	#7	#8
North & East Coordinates	477954.08, 1379278.99	477981.51, 1379498.98	477465.47, 1379454.57
Wet Density (pcf)	111.0	103.7	107.6
Dry Density (pcf)	110.2	95.6	94.9
Moisture Content (%)	10.7	8.5	13.4

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TABLE G-12

BORING LOGS
CHARACTERIZATION INVESTIGATION STUDY
SOUTH FIELD

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-01
SITE COORDINATES (ft.):
N 5 5485 E 3207
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-8-87
DATE COMPLETED: 5-8-87
FIELD REP.: Vance A. Peers.

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Upper fly ash area
SITE CONDITION Slight slope, grass covered.

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'	X	6"	6"	U	100	5-6-7-7	13	CL-CH	Yellowish brown (10YR 5/4) CLAY, Trace (+) Silt, damp, slightly mottled, soft, grass and grass roots
2'-4'	X	16"	16"	U	T 30 B 40	10-14-14-14	28	CL-CH	Same as above (0'-2'), grass roots, mottled.
4'-6'	X	5½"	5½"	U	55	8-9-40-57	49	CL-CH	Dark yellowish brown CLAY, Trace (-) Silt, little (+) medium to fine Gravel, trace coarse to fine Sand, damp, harder than above, undisturbed.
6'-8'	X	17"	17"		75	27-34-37-44	71		Very dark grayish brown (10YR 3/2) CLAY, dense, hard. Transition from material at (4'-6') to materia at (6'-8') occurs at (6'-6'1").

1010

COMMENTS: Logs for UFA, B-01 are in Field Book 44.1 pg 40-41. CPM taken with HP-210T (Eberline) - conversion for HP-210T : 1mRad/hr/1489 CPM. T - Top of sample B - Bottom of sample.

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

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BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-02
SITE COORDINATES (ft.):
N S 5468 E 3069
GROUND ELEVATION (ft, MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 5-12-87
DATE COMPLETED: 5-12-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Upper fly ash area, boring 2.
SITE CONDITION Grass covered, flat surface.

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0-2'		12"	12"	U	110	13-24-100/3	124/9	CL-CH	Yellowish brown (10YR 5/4) CLAY, little (+) Silt, trace fine Sand, little medium to fine Gravel, dry to slightly damp, crumbles easily, burned pieces of coal present (coke), piece of fiber board present.
2'-4'		16"	16"	U	75	14-15-20-30	35	CL-CH	Dark yellowish brown (10YR 3/6) CLAY, trace Silt, little medium to fine Gravel, damp, dense, mottled, dark staining from burned coal in isolated areas.
4'-6'		11"	11"	U	90	8-10-13-18	23	CL-CH	Olive gray 5Y 4/2 CLAY, damp to slightly moist, trace medium to fine Gravel, mottled, piece of metal present, soft.

1012

COMMENTS: Logs for UFA, B-02 are in Field Book 44, pg 46-53. CPM Taken with Eberline HP-210T. Conversion for HP-210T: 1mRad/hr/1489CPM

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: EMPC LOCATION ID: UFA, B-02
SITE COORDINATES (ft.):
N 5 5468 E 3069
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser - Morner
DATE STARTED: 5-12-87
DATE COMPLETED: 5-12-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
6'-8'		12"	12"	U	75	5-7-8-9	15	CL-CH	Same as above (4'-6'), moist, soft, mottled, trace amounts of coke and chard material.
8'-10'		0	0	U	—	5-5-8-10	13	—	
10'-12'		24"	24"	U	50	5-7-9-14	16	CL-CH	Same as above (4'-8'), moist, softer than above, trace(-) fine Gravel, black staining from chard material in isolated areas.
12'-14'		24"	24"	U	50	6-7-11-20	18	CL-CH	(12'-13') Same as above (4'-12'), trace amount chard material, trace amount white lime or fertilzer like materials in pockets.
						1013		CL-CH	(13'-14') Light olive brown (2.5Y 5/4) CLAY (same clay as above with color change), soft, moist, trace chard material, decaying organic material.

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-02
SITE COORDINATES (ft.):
N 35468 E 3069
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow Stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-12-87
DATE COMPLETED: 5-12-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
14'-16'		4"	4"	U	55	10-10-12-14	22	CL-CH	Same as above (13'-14'), undisturbed.
16'-18'		24"	24"	U	50	10-42-45-32	87	CL-CH	(16'-16'7½") Same as above (13'-16'). moist.
								CL	(16'7½"-17'4") Dark gray (5Y 4/1) CLAY and fine Sand, moist to slightly wet, hard, black staining from decaying organic material. Grain size increases with depth with same overall color to 18'
								SW-	(17'4"-18') The above dark gray 5Y 4/1 CLAY and fine Sand grades into coarse to fine SAND and (-) medium to fine Gravel, grains are rounded to well rounded.

1014

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-02
SITE COORDINATES (ft.):
N S 5468 E 3069
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 5-12-87
DATE COMPLETED: 5-12-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION See page 1

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	* ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
18'-20'		23"	23"	U	45	32-36-44-45	80	SW	(18'-19'6") Same as above (16'-18') Top is coarse to fine SAND, trace (+) medium to fine Gravel.
								CL	* This grades to a dense CLAY trace medium to fine Sand Bottom, damp.
								CL	(19'6"-19'11") Dark yellowish brown CLAY, slightly softer than above, moist, trace medium to fine Sand.

1015

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-03
SITE COORDINATES (ft.):
N S 5212.5 E 3070E
GROUND ELEVATION (ft, MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser - Morner
DATE STARTED: 5-12-87
DATE COMPLETED: 5-12-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Upper fly ash area, boring 3
SITE CONDITION Grass covered, flat surface

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'		13"	13"	U	200	24-20-31-32	51	CL-CH	Brown (10YR 5/4) CLAY, little Silt, trace medium to fine Gravel, dry, crumbles easily.
2'-4'		14"	14"	U	90	13-17-52-52	69	CL-CH	Very dark grayish brown (10YR 3/2) CLAY, trace Silt, dense, hard, trace amount of decaying organic material, trace medium to fine Gravel, roots present (from grass), piece of concrete present.
4'-6'		16"	16"	U	50	15-17-21-41	38	CL-CH	Olive brown (2.5Y 4/4) CLAY, little coarse to fine Gravel, piece of concrete, decaying organic material, gravel is angular to rounded. material is damp.

1016

COMMENTS: Logs for UFA, B-03 are in Field Book 44.1 pg 54-57. CPM taken with Eberline HP-210T. HP-210T conversion: 1mRad/hr/1489 CPM.

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-03
SITE COORDINATES (ft.):
N S 5212.5 E 3070 E
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 5-12-87
DATE COMPLETED: 5-12-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
6'-8'		20"	20"	U	50	11-13-36-43	49	CL-CH	(6'-6'3") Same as above (4'-6')
								CL-CH	(6'3"-7'8") Dark gray (5Y 4/2) CLAY, mottled, little fine Gravel, decaying organic material throughout in trace amounts, undisturbed.
8'-10'		20"	20"	U	50	19-20-27-29	47	CL-CH	(8'-8'10") Same as above (6'3"-7'8"), damp, dense, hard.
								CH	(8'10"-9'8") Dark yellowish brown (10YR 3/4) CLAY, slightly softer than above, damp.

1017

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-04
SITE COORDINATES (ft.):
N 4799 S E 3369
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-13-87
DATE COMPLETED: 5-13-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Upper fly ash area boring 4
SITE CONDITION Grass covered flat surface

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'		17"	17"	U	50	15-40-21-21	61	CL-CH	Dark yellowish brown (10YR 4/4) CLAY little Silt, little coarse to fine Gravel, damp to slightly dry, roots, decaying organic material, gravel is angular to rounded, disturbed.
2'-4'		23"	23"	U	T 80 B 50	11-26-21-21	47	CL-CH CL-CH	(2'-2'2") Same as above (0'-2') (2'2"-3'11") Dark grayish brown (10YR 4/2) CLAY, Trace Silt - grades to dark yellowish brown (10YR 3/4) color. Orange spots of oxidation through out.

1013

COMMENTS: Logs for UFA, B-04 are Field Book 44.1 pg 60-61. CPM taken with Eberline HP-210T conversion for HP-210T: 1mRad/hr/1489 CPM. T-Top of sample B-Bottom of sample.

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

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WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-05
SITE COORDINATES (ft.):
N 54700 E 3082
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-13-87
DATE COMPLETED: 5-13-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Upper fly ash area, boring 5
SITE CONDITION Grass covered, flat surface

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'		16"	16"	U	T-300 B-500	15-17-33-23	50	CL-CH	Dark yellowish brown 10YR 4/3 CLAY, little silt, little medium to fine Gravel, hard, moderately dense, slightly dry, gravel is rounded to angular.
2'-4'		19"	19"	U	100	24-34-24-39	58	CL-CH	(2'-3'2") Same as above (0'-2') with color grading to gray (5Y 5/1) toward bottom, dense, at (2'9") pocket of slightly cemented white coarse sand size material occurs, hard. (3'2"-3'7") Yellowish brown (10YR 5/6) CLAY, trace silt, slightly softer than above, undisturbed material; dense.

1080

COMMENTS: Logs for UFA, B-05 are in Field Book 44.1 pg 62-65. CPM taken with Eberline HP-210T, HP-210T conversion: 1mRad/hr/1489 CPM. T- Top of Sample. B- Bottom of sample

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-05
SITE COORDINATES (ft.):
N 54700 E 3082
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 5-13-87
DATE COMPLETED: 5-13-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
4'-6'	X	16"	16"	U	70	13-16-18-20	34	CL-CH	Same as above (3'2"-3'7"), dense, softer than above.
6'-8'	X	16	16	U	70	13-15-17-20	32	CL-	Same color as above (3'2"-6') with increase in sand. Now- Yellowish brown (10YR 5/6) CLAY, some medium to fine(+) Sand, trace Silt, moist, soft, mottled, well defined layering.

1021

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

3838 WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-06
SITE COORDINATES (ft.):
N 54662.5 E 2980
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 5-13-87
DATE COMPLETED: 5-13-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Upper fly ash area, boring 6
SITE CONDITION Grass covered, flat surface.

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0-2'		20"	20"	U	45	21-42-56-26	98	CL-CH	(0"-10") Very dark grayish brown (10YR 3/2) CLAY, some (+) Silt, dry, some organic material, layered.
								CL-CH	(10"-1'8") Yellowish brown (10YR 5/6) CLAY, trace fine Gravel, damp, dense, undisturbed, grass and tree root present.
2-4'		21"	21"	U	65	10-17-20-24	37	CL-CH	Same as above (10"-1'8") with no gravel.
4'-6'		21"	21"	U	65	6-7-11-20	18	CL-CH	(4'-5'4") Same color as above (10"-4"). Same CLAY as above down to 4'10". at 4'10" gradual increase in fine sand.
								SC.	(5'4"-5'9") Yellowish brown fine SAND and Clay, trace(+) Silt, moist. Alternate layering of lighter and darker shades.

1022

COMMENTS: Logs for UFA, B-06 are in Field Book 44.1 pg 66-67. CPM taken with Eberline HP-210T. Conversion for HP-210 : 1 mRad/hr/1489 CPM

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-06
SITE COORDINATES (ft.):
N 54662.5 E 2980
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 5-13-87
DATE COMPLETED: 5-13-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION See page 1

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
6'-8'	X	10"	10"	U	65	9-12-24-36	36	SC-	Yellowish brown (10YR 5/4) fine SAND and Clay, Trace (+) Silt, moist to slightly wet, layering

1023

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-07
SITE COORDINATES (ft.):
N 54675 E 2857
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser - Morner
DATE STARTED: 5-14-87
DATE COMPLETED: 5-14-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Upper fly ash area, boring 7
SITE CONDITION Grass covered, flat surface.

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	* ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'		16"	16"	U	100	25-87-72-56	159	CL-CH	Dark yellowish brown (10YR 3/4) CLAY, little silt, trace (-) medium to fine Gravel, dry (top) to slightly (damp) (bottom), grass and grass roots, pieces of medium gravel size chunks of concrete with white paint on one surface.
2'-4'		13½"	13½"	U	90	38-29-23-27	52	CL-CH	Same as above (0'-2') with no medium gravel, damp, decaying organic material in trace amounts throughout, occasional layers (⅛" thick) of decaying organic material.
4'-6'		17"	17"	U	60	9-17-23-31	40	CL-CH	Same as above (0'-4') with no gravel, gradual color change to yellowish brown (10 YR 5/4), damp, last 4" contain little (-) white nodules (1/16"-⅛") throughout.

COMMENTS: Logs for UFA, B-07 are in Field Book 44.1 pg 70-71. CPM taken with Eberline HP-210T. conversion for HP-210T: 1mRad/hr/1489CPM.

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: EMPC LOCATION ID: UFA, B-07
SITE COORDINATES (ft.):
N 5 4675 E 2857
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem augers
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 5-14-87
DATE COMPLETED: 5-14-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
6'-8'		13	13	U	50	8-19-23-35	42	CL-CH	Same as above. (0'-6') with color change to brown (10YR 5/3), damp, white nodules (1/16-1/8 dia.) throughout.

1025

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-08
SITE COORDINATES (ft.):
N S 4694 E 2687
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-14-87
DATE COMPLETED: 5-14-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Upper fly ash area, boring 8
SITE CONDITION Grass covered, flat surface

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'		14"	14"	U	450	30-44-100/4	144/10	CL-CH	Dark yellowish brown (10YR 3/4) CLAY, little Silt, little coarse to fine Gravel, dry to slightly damp, grass and grass roots, gravel is angular to rounded.
2'-4'		0	0	U	—	57-98-100/4	198/10	—	—
4'-6'		24"	24"	U	T-75 B-100	8-17-19-23	36	CL-CH CL-CH	(4'-4'2") same as above (0'-2'), damp. (4'2"-4'10") Dark gray (5Y 4/1) CLAY, Trace (-) Silt, damp to slightly moist. (4'10"-6') Brown (10YR 5/3) CLAY, damp * (4'2"-6') looks undisturbed.

COMMENTS: Logs for UFA, B-08 are in Field Book 44.1 pg 72-73, CPM taken with Eberline HP-210T. Conversion for HP-210T: 1mRad/hr/1489 CPM. T-Top of sample B-bottom of Sample.

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-08
SITE COORDINATES (ft.):
N 5 4694 E 2687
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-14-87
DATE COMPLETED: 5-14-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID *CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
6'-8'		15"	15"	U	50	10-13-12-22	25	SC-	Same color as above grading To brownish yellow (10YR 5/6). Medium To fine SAND and Clay at Top grading To a coarse to fine SAND, and medium to fine (+) Gravel, Trace (+) Clay - near bottom, wet.
								SP-	

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-09
SITE COORDINATES (ft.):
N 5 4825 E 2761.5
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-14-87
DATE COMPLETED: 5-14-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION Upper fly ash area, boring 9
SITE CONDITION Grass covered, flat surface.

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID +CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
0'-2'		18"	18"	U	50	12-56-34-15	90	CL-CH	Yellowish brown (10YR 5/4) CLAY, some medium to fine Gravel, trace Silt, dry to slightly damp, grass and grass roots present, gravel is angular, small piece of brick present.
2'-4'		8"	8"	U	150	32-54-98-18	152	CL-CH	Same color as above grading to dark yellowish brown (10YR 3/4) CLAY, little Silt, little (-) coarse to fine Gravel, damp, gravel is angular to rounded, piece of concrete, piece of chard material.
4'-6		7"	7"	U	120	34-21-10-9	31	CL-CH	Dark yellowish brown (10YR 4/4) CLAY, trace Silt, trace (-) Gravel, damp, soft, gravel is rounded.

1028

COMMENTS: Logs for UFA, B-09 are in Field Book 441 pg 74-77, CPM taken with Eberline HP-210T, conversion for HP-210T: 1 mRad/hr/1489 CPM

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-09
SITE COORDINATES (ft.):
N S 4825 E 2761.5
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser-Morner
DATE STARTED: 5-14-87
DATE COMPLETED: 5-14-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
6'-8'		4"	4"	U	100	18-10-4-6	14	CL-CH	Same as above (4'-6') with trace medium to fine Gravel. Contains some soft white grease like material with fibers in it, some black chard material present.
8'-10'		17"	17"	U	80	5-6-6-10	12	CL-CH	Same as above (4'-8') with trace (-) medium to fine Gravel, chard material in trace amounts, gravel is angular to rounded, moist, material is disturbed (not in natural state).
10-12'		13"	13"	U	60	26-20-24-45	44	CL -	Top color - dark yellowish brown (10YR 4/4) grades to a light yellowish brown (10YR 6/4). Material is CLAY, trace fine Gravel, moist, hard, dense, mottled, areas of oxidation.

1029

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

WESTON

BOREHOLE LOG (SOIL)

LOCATION MAP:

SITE ID: FMPC LOCATION ID: UFA, B-09
SITE COORDINATES (ft.):
N S 4825 E 2761.5
GROUND ELEVATION (ft. MSL): N/A
DRILLING METHOD: Hollow stem auger
DRILLING CONTR.: Bowser Morner
DATE STARTED: 5-14-87
DATE COMPLETED: 5-14-87
FIELD REP.: Vance A. Peers

GROUNDWATER LEVELS		
DATE	TIME	DEPTH (ft.)

LOCATION DESCRIPTION See page 1
SITE CONDITION

DEPTH	SAMPLE INTERVAL	SAMPLE RECOVERY	SAMPLE RETAINED	TYPE	ID CPM	BLOWS PER 6 in.	N VALUE	USCS	VISUAL CLASSIFICATION
12'-14'		21"	21"	U	75	15-22-36-40	58	CL	Same as above (10'-12') with increase in fine Sand toward bottom, moist on top half, wet near bottom.

1030

COMMENTS: See page 1

SAMPLE TYPE
A - Auger cuttings
S - 2" O.D. 1.38" I.D. drive sample
U - 3" O.D. 2.42" I.D. tube sample
T - 3" O.D. thin-walled Shelby tube

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TABLE G-13

BORING LOGS
RI/FS SAMPLING PROGRAM
SOUTH FIELD

FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS	
BORING NUMBER: 1014	COORDINATES: NORTH 476,797.85 EAST 1,379,581.49	DATE:
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/17/87
ENGINEER/GEOLOGIST: D OAKLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 10/18/87
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	007353	10/17/87	4 6 8	15	STIFF, DARK YELLOWISH-BROWN (10YR 4/4), SILT, TRACE CLAY AND SAND, DRY. 0.7'-STIFF, DARK YELLOWISH-BROWN (10YR 4/4), SILT, TRACE SAND, DRY.	ML ML	2.25 1.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
3.0	007354	10/17/87	7 11 13	16	VERY STIFF, DARK YELLOWISH BROWN (10YR 4/4), SILT, TRACE SAND, DRY.	ML	4.5+	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
4.5	007355	10/17/87	13 20 16	16	DARK YELLOWISH BROWN (10YR 4/4), SILT, SOME VERY FINE SAND, DRY. 3.5'-DENSE, YELLOWISH BROWN (10YR 5/4), GRAVEL, SOME SAND, GRAVEL SIZE LIMESTONE, DRY, TRACE SILT, DRY.	ML GW	N/A 4.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
6.0	007356	10/17/87	7 6 5	14	DENSE, YELLOWISH BROWN (10YR 5/4), GRAVEL, SOME SAND, GRAVEL SIZE LIMESTONE, DRY, TRACE SILT, DRY. 5.0'-STIFF, DARK YELLOWISH BROWN (10YR 4/4), SILT, SOME SAND, TRACE CLAY, WOOD FIBER, DRY. 5.3'-YELLOWISH BROWN (10YR 5/4), SAND, SOME SILT, TRACE GRAVEL, DRY.	GW ML SM	4.5 N/A N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
7.5	007357	10/17/87	3 3 3	15	LOOSE, YELLOWISH BROWN (10YR 5/4), SAND, SOME SILT, TRACE GRAVEL, DRY. 7.3'-YELLOWISH BROWN (10YR 5/4), SAND AND CLAY, TRACE GRAVEL, DRY.	SM SC	N/A N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
9.0	007358	10/18/87	1 1 7	11	YELLOWISH BROWN (10YR 5/4), SAND AND CLAY, TRACE GRAVEL, DRY. 8.6'-LOOSE, LIGHT YELLOWISH BROWN (10YR 6/4), SAND, SOME SILT, TRACE CLAY AND GRAVEL, DRY.	SC SM	N/A N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
10.5	007359	10/18/87	13 13 15	12	LOOSE, LIGHT YELLOWISH BROWN (10YR 6/4), SAND, SOME SILT, TRACE CLAY AND GRAVEL, DRY. 9.9'-MEDIUM DENSE, GRAVEL AND SAND, TRACE CLAY AND SILT, DRY.	SM GC	N/A N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
12.0	007360	10/18/87	3 10 17	13	MEDIUM DENSE, GRAVEL AND SAND, TRACE CLAY AND SILT, DRY. 10.7'-DENSE, YELLOWISH BROWN (10YR 5/4), GRAVELLY SAND, TRACE SILT, DRY.	GC SW	N/A N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
13.5	007361	10/18/87	6 13 18	11	DENSE, YELLOWISH BROWN (10YR 5/4), GRAVELLY SAND, TRACE SILT, DRY.	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
15.0	007362	10/18/87	6 10 13	11	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), GRAVELLY SAND, TRACE SILT, MOIST.	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
16.5	007363	10/18/87	4 7 12	18	MEDIUM DENSE, DARK YELLOWISH BROWN (10YR 5/4), GRAVELLY SAND, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
18.0	007364	10/18/87	3 4 5	5	LOOSE, DARK YELLOWISH BROWN (10YR 4/4), GRAVEL, SOME SAND, WET.	GW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS	
BORING NUMBER: 1014	COORDINATES: NORTH 476,797.85 EAST 1,379,581.49	DATE:
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/17/87
ENGINEER/GEOLOGIST: D OAKLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 10/18/87
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
19.5	007365	10/18/87	4 5 5	5	LOOSE, DARK YELLOWISH BROWN (10YR 4/4), SANDY GRAVEL, TRACE CLAY, WET.	GW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
21.0	007366	10/18/87	4 5 6	13	MEDIUM DENSE, LIGHT YELLOWISH BROWN (10YR 4/4), SAND, FINE SIZED GRAINS, WET.	SP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
22.5	007367	10/18/87	5 13 19	18	DENSE, LIGHT YELLOWISH BROWN (10YR 4/4), SAND, FINE SIZED GRAINS, WET. 22.1'-DENSE, LIGHT YELLOWISH BROWN (10YR 4/4), SANDY GRAVEL, WET.	SP GW	N/A N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm

BOTTOM OF BORING 22.5

NOTES:
MONITORING WELL INSTALLED.

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1046	COORDINATES: NORTH 478,054.76 EAST 1,379,428.45	DATE: 02/06/88	
GROUND ELEVATION: 576.5	GWL: Depth N/A Date/Time N/A	DATE STARTED: 02/06/88	
ENGINEER/GEOLOGIST: T SULLIVAN	Depth N/A Date/Time N/A	DATE COMPLETED: 02/09/88	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	008014 02/06/88 1120		5 5 7	14	HARD, DARK BROWNISH GRAY (10YR 3/1), SILT (TOPSOIL), ORGANIC RICH, DRY. 0.7'-HARD, YELLOW-BROWN (10YR 3/6), SILTY, CLAY, DRY.	OL CL	>5 >5	Hnu= 0 ppm α = 2 cpm βΓ = 60 cpm
3.0	008015 02/06/88 1128		6 9 14	17	HARD, YELLOW-BROWN (10YR 3/6), SILTY, CLAY, DRY.	CL	3.0	Hnu= 0 ppm α = 2 cpm βΓ = 60 cpm
4.5	008016 02/06/88 1135		10 8 7	16	SOFT, YELLOW-BROWN (10YR 3/6), SILTY, CLAY, DRY.	CL	0.5	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
6.0	008017 02/06/88 1140		7 11 15	18	SOFT, YELLOW-BROWN (10YR 3/4), SILT, TRACE SAND, WET.	ML	1.0	Hnu= 0 ppm α = 2 cpm βΓ = 60 cpm
7.5	008018 02/06/88 1145		5 10 15	17	MEDIUM DENSE, YELLOW-BROWN (10YR 3/4), FINE GRAINED, SAND, SOME SILT, WET (SATURATED SAND).	SM	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
9.0	008019 02/07/88 1455		4 7 7	11	MEDIUM DENSE, YELLOW-BROWN (10YR 4/6), FINE GRAINED, SAND AND SILT, WET. 8.5'-VERY STIFF, YELLOW-BROWN (10YR 4/4), CLAY, TRACE SILT, DRY. 8.9'-VERY STIFF, GRAY (10YR 4/1), CLAY, DRY.	SM CL	N/A 3.0	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
10.5	008020 02/07/88 1645		3 5 4	11	STIFF, GRAY (10YR 5/1), CLAY, SOME SILT, DRY.	CL	1.25	Hnu= 0 ppm α = 2 cpm βΓ = 100 cpm
12.0	008021 02/07/88 1730		N/A	N/A	SHELBY TUBE PUSHED 10.5-12.2 FT: GRAY (10YR 5/1), CLAY, TRACE GRAVEL, DRY.	CL	N/A	Hnu= 0 ppm α = 2 cpm βΓ = 100 cpm
13.5	008022 02/08/88 0815		0 4 6	8	GRAY (10YR 5/1), CLAY, TRACE GRAVEL, DRY. 12.2'-LOOSE, GRAY-BROWN (10YR 4/2), FINE GRAINED, SAND, SOME SILT, MOIST. 12.6'-VERY STIFF, GRAY (10YR 4/1), CLAY, TRACE SILT, MOIST.	CL SM CL	N/A N/A 2.25	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
15.0	008023 02/08/88 0825		6 6 5	7	VERY STIFF, GRAY (10YR 4/1), CLAY, TRACE SILT, MOIST. STIFF, GRAY (10YR 4/1), CLAY, TRACE SILT, MOIST. 14.3'-MEDIUM DENSE, GRAY-BROWN (10YR 3/2), SAND, SOME SILT AND CLAY, MOIST.	CL CL SM	2.25 1.5 N/A	Hnu= 0 ppm α = 2 cpm βΓ = 80 cpm
16.5	008024 02/08/88 0840		6 7 7	13	MEDIUM DENSE, GRAY-BROWN (10YR 3/2), SAND, SOME SILT AND CLAY, TRACE GRAVEL, MOIST. 16.1'-STIFF GRAY (10YR 4/1), SILT AND CLAY, SOME SAND, MOIST.	SM CL	N/A 1.25	Hnu= 0 ppm α = 2 cpm βΓ = 100 cpm
18.0	008027 02/08/88 0910		5 4 5	13	STIFF, GRAY (10YR 4/1), SILT AND CLAY, SOME SAND, MOIST. STIFF, GRAY (10YR 4/1), CLAY AND SILT, TRACE SAND, MOIST. 17.6'-LOOSE, GRAY (10YR 4/1), SAND, SOME SILT AND CLAY, TRACE GRAVEL, MOIST.	CL CL SM	1.25 1.25 N/A	Hnu= 0 ppm α = 2 cpm βΓ = 100 cpm
19.5	008028 02/08/88 0940		5 6 8	8	VERY STIFF, GRAY-BROWN (10YR 3/1), CLAY, SOME GRAVEL, DRY. 18.4'-STIFF, GRAY (10YR 5/1), CLAY, SOME GRAVEL, DRY. STIFF, GRAY (10YR 4/1), CLAY, SOME SILT, TRACE GRAVEL, DRY.	CL CL CL	4.0 1.25 1.0	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1046	COORDINATES: NORTH 478,054.76 EAST 1,379,428.45	DATE: 02/06/88	
GROUND ELEVATION: 576.5	GWL: Depth N/A Date/Time N/A	DATE STARTED: 02/06/88	
ENGINEER/GEOLOGIST: T SULLIVAN	Depth N/A Date/Time N/A	DATE COMPLETED: 02/09/88	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
21.0	008029	02/08/88 1025	3 3 6	9	STIFF, GRAY (10YR 4/1), CLAY, SOME SILT, TRACE GRAVEL, DRY.	CL	1.0	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
22.5	008030	02/08/88 1040	3 13 18	18	HARD, GREEN-GRAY (5Y 4/1), CLAY, SOME GRAVEL AND PEBBLES, WOOD FRAGMENTS, DRY.	CL	>5	Hnu= 0 ppm α = 0 cpm βΓ = 110 cpm
24.0	008031	02/08/88 1145	8 18 20	13	HARD, GREEN-GRAY (5Y 4/1), CLAY, SOME GRAVEL AND PEBBLES, DRY. VERY STIFF, GREEN-GRAY (5Y 4/1), CLAY, SOME GRAVEL, DRY.	CL CL	>5 3.0	Hnu= 0 ppm α = 2 cpm βΓ = 100 cpm
25.5	008032	02/08/88 1400	9 19 23	16	VERY STIFF, GREEN-GRAY (5Y 4/1), CLAY, SOME GRAVEL, DRY. 24.2'-HARD, YELLOW-BROWN (10YR 4/4), CLAY, SOME GRAVEL, DRY. 24.8'-DENSE, BROWN (10YR 4/3), SAND, SOME SILT AND GRAVEL, TRACE CLAY, DRY.	CL CL SP	3.0 >5 N/A	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
27.0	N/A		N/A	N/A	DRILLER MISSED INTERVAL, NO SAMPLE COLLECTED.	N/A	N/A	N/A
28.5	008033	02/08/88 1455	14 23 24	14	DENSE, YELLOW-BROWN (10YR 4/4), SAND, SOME GRAVEL AND SILT, DRY.	SP	N/A	Hnu= 0 ppm α = 2 cpm βΓ = 80 cpm

BOTTOM OF BORING 28.5

NOTES:
BASE OF TILL AT 24.8 FT. PENNSYLVANIA DRILLING CO. BUCYRUS ERIE 24-W DRILLING RIG. DRILLER: DAVE NEWMAN, HELPER: JOE BARILE. BLOWS ON SAMPLER FOLLOW ASTM STANDARD FOR 2IN X 18IN SPLIT SPOON SAMPLER. SOLID COLORS FOLLOW MUNSELL COLOR CHARTS. APPROX 95 GALLONS USED IN DRILLING. MONITORING WELL INSTALLED.

FERNALD RI/FS

VISUAL CLASSIFICATION OF SOILS

3838 SF

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS	
BORING NUMBER: 1065	COORDINATES: NORTH 477,860.01 EAST 1,380,415.92	DATE: 10/04/87
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/04/87
ENGINEER/GEOLOGIST: D OAKLEY	Depth N/A Date/Time N/A	DATE COMPLETED: 10/06/87
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 1

DEPTH	SAMPLE	DATE	TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 14.0									

BOTTOM OF BORING 14.0

NOTES:
SEE BORING LOG #2065 FOR STRATIGRAPHY. NO SAMPLES TAKEN FROM THIS BORING.
MONITORING WELL INSTALLED.

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FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1455	COORDINATES: NORTH 477,915 EAST 1,379,479	DATE: 11/04/89	
GROUND ELEVATION: 577.9	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/04/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/05/89	
DRILLING METHODS: CAT 225 B LC BACKHOE TRENCHING		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS
3.0 3.2	55900 55907	11/04/89 0930	N/A		N/A		LOOSE, BROWN (7.5YR 4/2), SILTY SAND, TRACE GRAVEL (0.5-1.5 IN.).	SM	N/A	Hnu=0.4 ppm α =0 cpm βΓ =60-100 cpm ESP1=16,000 cpm
3.75 3.95	55901 55908	11/04/89 0935	N/A		N/A		VERY STIFF, YELLOWISH BROWN (10YR 5/6) MOTTLED GRAY (10YR 5/1), TRACE OF SILTY LAYERS, TRACE GRAVEL (0.5-1.0 IN), LOW TO MEDIUM PLASTICITY, MOIST.	CL	2.0	Hnu=0.0 ppm α =0 cpm βΓ =60 cpm ESP/SPA-3= 16,100 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #1.
TOP 8 INCHES CONSISTS OF OVERGROWTH GRASS, ROOTS, ETC
SAMPLES 55900, 55901 ARE FOR FULL RAD.
FILL MATERIAL MADE FROM NON-NATIVE SOIL. SOME CONSTRUCTION RUBBLE EVIDENT IN FILL. CONCRETE FOUND (0.0-1.5 FT);
METAL SCRAP (βΓ=1000 cpm) FROM 0.5-1.0 FT.
FILL/TILL BOUNDARY AT 3.6 FT.

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FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1456	COORDINATES: NORTH 477,940 EAST 1,379,479	DATE: 11/04/89	
GROUND ELEVATION: 577.9	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/04/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/05/89	
DRILLING METHODS: CAT 225B LC		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
3.75 3.9	55902 55909	11/04/89 0955	N/A	N/A	LOOSE, BROWN (7.5YR 4/2), SILTY SAND, TRACE GRAVEL (0.5-2.5 IN), TRACE CLAY, SLIGHTLY COHESIVE, MOIST.	SM	N/A	Hnu=0.0 ppm α =0 cpm βΓ =100-140 cpm ESP1=14,400 cpm
4.25 4.4	55903 55910	11/04/89 1000	N/A	N/A	VERY STIFF, MOTTLED GRAY (10YR 5/1) WITH YELLOWISH BROWN WITH 10YR 5/6), CLAY, TRACE FINE GRAVEL (0.5-1.0 IN), MEDIUM PLASTICITY, MOIST.	CL	2.0	Hnu=0.0 ppm α =0 cpm βΓ =100 cpm ESP1= 14,400 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #1.
TOP 8 INCHES CONSISTS OF OVERGROWTH GRASS, ROOTS, ETC.
FILL MATERIAL CONSISTS OF CONSTRUCTION RUBBLE, NON-NATIVE SOIL, CONCRETE, ASPHALT, AND METAL SCRAP.
FILL/TILL BOUNDARY AT 4.0 FT.
SAMPLES 55902, 55903 ARE FOR FULL RAD. HSL SAMPLE #55906 TAKEN AT 3.75 FT.

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FERNALD RI/FS

VISUAL CLASSIFICATION OF SOILS

SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1457	COORDINATES: NORTH 477,965 EAST 1,379,479	DATE: 11/04/89	
GROUND ELEVATION: 577.3	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/04/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/05/89	
DRILLING METHODS: CAT 225B LC		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES	USCS SYMBOL	TSF	REMARKS
4.0 4.2	55904 55911 11/04/89 1030		N/A		N/A	LOOSE, BROWN (7.5YR 4/2), SILTY SAND, SOME GRAVEL (0.5-2.5 IN), SLIGHTLY COHESIVE, MOIST.	SM	N/A	Hnu=0.2 ppm α =0 cpm βΓ =200-400 cpm ESP1=35,000 cpm
4.4 4.6	55905 55912 11/04/89 1040		N/A		N/A	VERY STIFF, YELLOWISH BROWN (10YR 5/6), CLAY, TRACE OF SILTY LAYERS THROUGHOUT, SOME GRAVEL (0.5-1.5 IN), LOW TO MEDIUM PLASTICITY, MOIST.	CL	2.0	Hnu=0.2 ppm α =0 cpm βΓ =60-80 cpm ESP1=31,000 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #1.
TOP 8 INCHES OVERGROWTH GRASS, WEEDS, ROOTS.
FILL COMPOSED OF CONSTRUCTION RUBBLE, CONCRETE, ASPHALT, ORGANIC ROOTS, AND SILTY SAND WITH GRAVEL.
FILL/TILL BOUNDARY AT 4.0 FT.
SAMPLES 55904, 55905 ARE FOR FULL RAD.

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1044

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1458	COORDINATES: NORTH 477,880 EAST 1,379,631	DATE: 11/06/89	
GROUND ELEVATION: 578.6	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/06/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/06/89	
DRILLING METHODS: BACKHOE TRENCH CAT 225 B LC		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS
3.8 4.0	55913 55920	11/06/89 0900	N/A		N/A		LOOSE, BROWN (7.5YR 4/2), SILTY SAND, TRACE GRAVEL (0.5-3.5 IN), TRACE OF CLAYEY LENSES OR LAYERS, MOIST.	SM	N/A	Hnu=0.0 ppm α =0 cpm βΓ =100-200 cpm ESP1=13,000 cpm
4.5 4.7	55914 55921	11/06/89 0920	N/A		N/A		VERY STIFF, GRAYISH BROWN (10YR 4/2), CLAY, TRACE SILT, TRACE GRAVEL (0.5-1.0 IN), LOW PLASTICITY, MOIST.	CL	2.5	Hnu=0.0 ppm α =0 cpm βΓ =300-400 cpm ESP1=13,500 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #2, SOUTH END.
TOP 5 TO 8 INCHES OVERGROWTH. FILL MATERIAL FROM 0.0-4.0 FT CONSISTS OF OCCASIONAL PIECES OF CONSTRUCTION RUBBLE, CONCRETE (3-10 IN), ASPHALT, LESS THAN 1% OF FILL COMPOSED OF RUBBLE. FILL MATERIAL MAINLY SILTY SAND, TRACE OF GRAVEL (0.5-3.0 IN), MOIST.
FILL/TILL BOUNDARY AT 4.0 FT.
INTERFACE BETWEEN FILL AND TILL SHOWED SOME OXIDATION FROM MOISTURE OR WATER LEACHING, BETA GAMA READING WERE ELEVATED RELATIVE TO FILL MATERIAL.

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1046

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1459	COORDINATES: NORTH 477,905 EAST 1,379,631	DATE: 11/06/89	
GROUND ELEVATION: 581.0	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/06/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/06/89	
DRILLING METHODS: BACKHOE 225 B LC		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS
5.0 5.2	55915 55922	11/06/89	0950	N/A		N/A		LOOSE, BROWN (7.5YR 4/2), SILTY SAND, TRACE GRAVEL (0.5-1.0 IN), MOIST.	SM		N/A	Hnu=0 ppm α =0 cpm βΓ =100-120 cpm ESP1=11,500 cpm
6.0 6.2	55916 55923	11/06/89	1000	N/A		N/A		VERY STIFF, YELLOWISH BROWN (10YR 4/3), SILTY CLAY, TRACE GRAVEL (0.5 IN), MEDIUM PLASTICITY, MOIST.	CL		2.5	Hnu=0 ppm α =0 cpm βΓ =300-450 cpm ESP1=13,600 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #2.
TOP 5 TO 8 INCHES ORGANIC OVERGROWTH. FILL MATERIAL FROM SURFACE TO 5.5 FT (FILL/TILL BOUNDARY) CONSISTS OF OCCASIONAL PIECES OF CONSTRUCTION RUBBLE, CONCRETE, ASPHALT, METAL LESS THAN 1 %. FILL MATERIAL MOSTLY UNIFORM THROUGHOUT, SILTY SAND, TRACE OF GRAVEL (0.5-3.0 IN), MOIST. CONCRETE PIECES (5 IN TO 12 IN DIA), ASPHALT PIECES (5 IN TO 10 IN).
HSL SAMPLE #55919 TAKEN AT 5.0 FT.

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FERNALD RI/FS VISUAL CLASSIFICATION OF SOILS SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1460	COORDINATES: NORTH 477,930 EAST 1,379,631	DATE: 11/06/89	
GROUND ELEVATION: 578.8	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/06/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/06/89	
DRILLING METHODS: BACKHOE 225 B LC		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS
3.5 3.7	55917 55924 11/06/89 1040		N/A		N/A		LOOSE, BROWN (7.5YR 4/2), SILTY SAND, TRACE TO SOME GRAVEL 0.5-1.0 IN), MOIST.	SM	-	N/A	Hnu=0.0 ppm α =0 cpm βΓ =150 cpm ESP1=13,200 cpm
4.25 4.45	55918 55925 11/06/89 1055		N/A		N/A		VERY STIFF, YELLOWISH BROWN TO GRAYISH BROWN (10YR 4/3), SILTY, CLAY, TRACE GRAVEL (0.5-1.0 IN), LOW PLASTICITY, MOIST.	CL		2.0	Hnu=0.0 ppm α =0 cpm βΓ =300-500 cpm ESP1=12,000 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #2.
TOP 5 TO 8 INCHES ORGANIC OVERGROWTH. FILL MATERIAL (0.5-3.75 FT) COMPOSED MAINLY OF SOIL, SOME LARGE GRAVEL AND COBBLES, SEVERAL PIECES OF CONCRETE (0.5-1.0 FT), SEVERAL PIECES OF SCRAP METAL (0.5 FT LONG).

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FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1461	COORDINATES: NORTH 477,842 EAST 1,379,784	DATE: 11/07/89	
GROUND ELEVATION: 579.2	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/07/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/07/89	
DRILLING METHODS: BACKHOE CAT 225 B LC		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS
4.0 4.2	55926 55933	11/07/89	1107	N/A		N/A		LOOSE, BROWN (7.5YR 4/2), SILTY SAND, SOME GRAVEL (0.5-3.0 IN), SLIGHTLY COHESIVE, MOIST.	SM	N/A	Hnu=0.2 ppm α =0 cpm BΓ =80-100 cpm ESP1/SPA-3= 7,630 cpm
5.0 5.2	55927 55934	11/07/89	1110	N/A		N/A		VERY STIFF, YELLOWISH BROWN (10YR 4/4) WITH (10YR 4/2) MOTTLED, SILTY CLAY, LOW TO MEDIUM PLASTICITY, MOIST.	CL	2.5	Hnu=0.2 ppm α =0 cpm BΓ =100-120 cpm ESP1/SPA-3= 12,600 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #3, SOUTH END.
TOP 3 TO 5 INCHES OVERGROWTH. FILL MATERIAL IS PREDOMINATELY FREE OF CONSTRUCTION RUBBLE AT THIS LOCATION TO THE DEPTH OF THE GLACIAL FILL. ONE OR TWO PIECES OF CONCRETE FOUND (6 IN SIZE).
FILL/TILL BOUNDARY AT 4.25 FT.

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FERNALD RI/FS

VISUAL CLASSIFICATION OF SOILS

SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1462	COORDINATES: NORTH 477,867 EAST 1,379,784	DATE: 11/07/89	
GROUND ELEVATION: 579.1	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/07/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/07/89	
DRILLING METHODS: BACKHOE TRENCHING CAT 225 B LC		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS
4.25 4.4	55928 55935	11/07/89 1130	N/A		N/A		LOOSE, BROWN (7.5YR 4/2 TO 7.5YR 4/3), SILTY SAND, TRACE GRAVEL (0.5-3.0 IN), MOIST.	SM	N/A	Hnu=0.2 ppm α =0 cpm Bγ =100 cpm ESP1/SPA-3= 11,000 cpm
5.0 5.2	55929 55936	11/07/89 1135	N/A		N/A		STIFF, YELLOWISH BROWN (10YR 4/3), CLAY, SOME SILT, LOW PLASTICITY, SLIGHTLY OXIDIZED, MOIST.	CL	1.5	Hnu=0.2 ppm α =0 cpm Bγ =110-120 cpm ESP1/SPA-3= 11,000 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #3, MIDPOINT.
TOP 3 TO 5 IN OVERGROWTH. FILL MATERIAL IN THIS LOCATION IS FREE OF CONSTRUCTION RUBBLE AND NO CONCRETE WAS FOUND.
FILL IS PREDOMINATELY SILTY SAND WITH A TRACE OF GRAVEL.
FILL/TILL BOUNDARY AT 4.25 FT.
HSL SAMPLE #55932 TAKEN AT 4.0 FT DEPTH.
SAMPLES 55928, 55929 ARE FOR FULL RAD ANALYSIS ONLY, ARCHIVE SAMPLES FOR THE SAME INTERVAL WERE COLLECTED BUT HAVE DIFFERENT SAMPLE #'S.

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FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1463	COORDINATES: NORTH 477,892 EAST 1,379,784	DATE: 11/07/89	
GROUND ELEVATION: 579.0	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/07/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/07/89	
DRILLING METHODS: CAT 225 B LC BACKHOE		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS
3.5 3.7	55930 55937	11/07/89 1420	N/A		N/A		LOOSE TO MEDIUM DENSE, BROWN (7.5YR 4/2) TO GRAYISH BROWN (10 YR 4/3), SILTY SAND, MOIST.	SM	N/A	Hnu=0.2 ppm α =0 cpm βΓ =80-100 cpm ESP1/SPA-3= 12,000 cpm
4.5 4.7	55931 55938	11/07/89 1425	N/A		N/A		STIFF, BROWNISH GRAY (10YR 4/2) WITH YELLOWISH BROWN (10YR 4/4), SILTY CLAY, LOW PLASTICITY, MOIST.	CL	2.0	Hnu=0.2 ppm α =0 cpm βΓ =100 cpm ESP1/SPA-3= 12,500 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #3, NORTH END.
OVERGROWTH GRASS, ROOTS (0 TO 6 IN); FILL MATERIAL PREDOMINATELY FREE OF CONSTRUCTION RUBBLE. MATERIAL IS MAINLY SILTY SAND WITH GRAVEL (0.5-3.0 IN), MOIST, LOOSE DENSITY. TWO PIECES OF WOOD FOUND (2x4, 2 FT LONG), ERODED.
FILL/TILL BOUNDARY AT 4.0 FT.
SAMPLES 55930, 55931 ARE FOR FULL RAD ANALYSIS ONLY, ARCHIVE SAMPLES WERE COLLECTED AT SAME LOCATIONS.

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FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS	
BORING NUMBER: 1464	COORDINATES: NORTH 477,734 EAST 1,379,566	DATE: 11/08/89
GROUND ELEVATION: 575.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/08/89
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/08/89
DRILLING METHODS: CAT 225 BACKHOE (TRACKS)		PAGE 1 OF 1

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS
3.75 3.95	55939 55946	11/08/89 1100	N/A		N/A		LOOSE, BROWN TO GRAYISH BROWN (7.5YR 4/2 TO 10YR 4/3), SILTY SAND, 30-40% SILT, TRACE GRAVEL (0.5-3.0 IN), MOIST.	SM		N/A	Hnu=0.0 ppm α =0 cpm Bγ =60-90 cpm ESP/SPA-3= 8,000 cpm
4.5 4.7	55940 55947	11/08/89 1115	N/A		N/A		STIFF, YELLOWISH BROWN (10YR 4/4), SILTY CLAY, LOW PLASTICITY, MOIST.	CL		1.5	Hnu=0.0 ppm α =0 cpm Bγ =60-80 cpm ESP/SPA-3= 10,000 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #4, NORTH END.
OVERGROWTH GRASS, TOP 4 INCHES. FILL MATERIAL IS A SILTY SAND, WITH GRAVEL, (0.5-3.0 IN). CONDITIONS MOIST WITH LOOSE DENSITY, SOME (3 PIECES) CONCRETE FOUND, 2 FT LONG. MATERIAL MONITORED AS STOCKPILED, READINGS WERE BACKGROUND.
FILL/TILL BOUNDARY AT 4.5 FT.
SAMPLES 55939, 55940 ARE FULL RAD SAMPLES, ARCHIVE SAMPLES HAVE DIFFERENT NUMBERS.

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FERNALD RI/FS VISUAL CLASSIFICATION OF SOILS SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1465	COORDINATES: NORTH 477,709 EAST 1,379,566	DATE: 11/08/89	
GROUND ELEVATION: 575.5	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/08/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/08/89	
DRILLING METHODS: CAT 225 TRENCH BACKHOE TRUCK MOUNTED		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
3.5 3.7	55941 55948	11/08/89 1135	N/A	N/A	LOOSE, BROWN (7.5YR 4/2), SILTY SAND, CONSIDERABLE GRAVEL 0.5-3.0 IN), MOIST.	SM	N/A	Hnu=0.0 ppm α =0 cpm BΓ =60-100 cpm ESP/SPA-3= 9,000 cpm
4.5 4.7	55942 55949	11/08/89 1325	N/A	N/A	MEDIUM STIFF, YELLOWISH BROWN (10YR 4/4), SILTY CLAY, TRACE OF FINE GRAVEL (0.5 IN), LOW TO MEDIUM PLASTICITY, MOIST.	CL	1.0	Hnu=0.0 ppm α =0 cpm BΓ =100 cpm ESP/SPA-3= 11,000 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #4, MIDPOINT.
TOP 5 INCHES OVERGROWTH GRASS, ROOTS. FILL MATERIAL IS A SILTY SAND WITH A TRACE OF GRAVEL (0.5-3.0 IN). THREE PIECES OF WOOD FOUND (BΓ=100 cpm) AS CONSTRUCTION RUBBLE. MATERIAL SCANNED AS IT WAS STOCKPILED, NO READINGS ABOVE BACKGROUND.
FILL/TILL BOUNDARY AT 3.75 FT.
SAMPLES 55941, 55942 ARE FULL RAD, ARCHIVE SAMPLES HAVE DIFFERENT NUMBERS.

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FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1466	COORDINATES: NORTH 477,684 EAST 1,379,566	DATE: 11/08/89	
GROUND ELEVATION: 575.3	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/08/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/08/89	
DRILLING METHODS: CAT 225 BACKHOE		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS
3.0 3.2	55943 55950	11/08/89	1345	N/A		N/A		LOOSE, BROWN (7.5YR 4/2), SILTY SAND, TRACE GRAVEL (0.5-4.0 IN), MOIST.	SM		N/A	Hnu=0.0 ppm α =0 cpm BΓ =60-80 cpm ESP/SPA-3= 9,000 cpm
4.5 4.7	55944 55951	11/08/89	1350	N/A		N/A		MEDIUM STIFF, YELLOWISH BROWN (10YR 4/4), SILTY CLAY, TRACE FINE GRAVEL, MEDIUM PLASTICITY, MOIST.	CL		1.0	Hnu=0 ppm α =0 cpm BΓ =60-80 cpm ESP/SPA-3= 11,500 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #4, SOUTH END.
TOP 5 INCHES, OVERGROWTH. FILL MATERIAL IS A SILTY SAND WITH GRAVEL (0.5-4.0 IN). NO RUBBLE FOUND IN SOUTH END OF TRENCH. MATERIAL MONITORED AS STOCKPILED, SOIL READINGS BELOW BACKGROUND.
FILL/TILL BOUNDARY 3.75 FT.
SAMPLES 55943, 55944 ARE FOR FULL RAD, ARCHIVE SAMPLES HAVE DIFFERENT NUMBERS.

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FERNALD RI/FS

VISUAL CLASSIFICATION OF SOILS

SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1467	COORDINATES: NORTH 477,658 EAST 1,379,700	DATE: 11/14/89	
GROUND ELEVATION: 576.3	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/14/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/14/89	
DRILLING METHODS: CAT 225 B LC BACKHOE		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
2.5 2.7	55952 55960	11/14/89 0940	N/A	N/A	LOOSE, BROWN (7.5YR 4/2), SILTY SAND, SOME GRAVEL (0.5-2.0 IN), MOIST.	SM	N/A	Hnu=0 ppm α =0 cpm Bγ =40-60 cpm ESP1/SPA-3= 8,200 cpm
3.5 3.7	55953 55961	11/14/89 0950	N/A	N/A	STIFF, YELLOWISH BROWN (10YR 4/4) WITH GRAYISH BROWN (10YR 4/2), SILTY CLAY, TRACE GRAVEL (0.5 IN), LOW PLASTICITY, MOIST.	CL	1.5	Hnu=0 ppm α =0 cpm Bγ =40 cpm ESP/SPA-3= 11,500 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #5.
TOP 4 TO 5 INCHES OVERGROWTH GRASS, ROOTLETS, WEEDS. FILL MATERIAL COMPOSED OF SOIL AND SEVERAL PIECES OF CONSTRCUTION RUBBLE, CONCRETE (0.5 FT), ASBESTOS (6 IN LONG), BUILDING SIDING, AND WOOD FRAGMENTS. SURVEY OF FILL MATERIALS PRODUCED READINGS OF BACKGROUND.
FILL/TILL BOUNDARY 2.75 FT.
ARCHIVE SAMPLE NUMBERS 55960, 55961.

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FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS	
BORING NUMBER: 1468	COORDINATES: NORTH 477,633 EAST 1,379,700	DATE: 11/14/89
GROUND ELEVATION: 575.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/14/89
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/14/89
DRILLING METHODS: CAT 225 B LC BACKHOE		PAGE 1 OF 1

DEPTH	SAMPLE	DATE	TIME	BLOWS ON SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS
2.5 2.7	55954 55962	11/14/89	1000	N/A	N/A		LOOSE, BROWN (7.5YR 4/2) TO GRAYISH BROWN (10YR 4/2), SILTY SAND, TRACE GRAVEL (0.5 IN), MOIST.	SM		N/A	Hnu=0.0 ppm α =0 cpm βΓ =40-80 cpm ESP/SPA-3= 8,900 cpm
3.5 3.7	55955 55963	11/14/89	1005	N/A	N/A		STIFF, YELLOWISH BROWN (10YR 4/3), SILTY CLAY, TRACE GRAVEL (0.5-1.0 IN), LOW PLASTICITY, MOIST.	CL		1.0	Hnu=0.0 ppm α =0 cpm βΓ =40-60 cpm ESP/SPA-3= 9,600 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #5.
TOP 4 TO 5 INCHES OVERGROWTH. FILL MATERIAL COMPOSED OF SOIL WITH LESS THAN 1% CONSTRUCTION RUBBLE; CONCRETE (0.5-1.0 FT), TRACE WOOD FRAGMENTS. FILL MATERIAL SURVEYED AS STOCKPILED, READINGS ON SOIL AT BACKGROUND LEVELS.
FILL/TILL BOUNDARY AT 2.75 FT.
ARCHIVE SAMPLE NUMBERS 55962 AND 55963.

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1066

FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1469	COORDINATES: NORTH 477,608 EAST 1,379,700	DATE: 11/14/89	
GROUND ELEVATION: 575.9	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/14/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/14/89	
DRILLING METHODS: BACKHOE CAT 225 B LC		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
2.5 2.7	55956 55964	11/14/89 1040	N/A	N/A	LOOSE, BROWN WITH GRAYISH BROWN (10YR 4/2 WITH 7.5YR 4/2) SILTY SAND, TRACE GRAVEL (0.5-1.0 IN), MOIST.	SM	N/A	Hnu=0.0 ppm α =0 cpm Bγ =60 cpm ESP/SPA-3= 8,900 cpm
3.5 3.7	55957 55965	11/14/89 1045	N/A	N/A	STIFF, YELLOWISH BROWN (10YR 4/4), SILTY CLAY, LOW PLASTICITY, MOIST.	CL	1.0	Hnu=0.0 ppm α =0 cpm Bγ =40-60 cpm ESP/SPA-3= 10,400 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #5.
TOP 4 TO 5 INCHES OVERGROWTH. FILL MATERIAL COMPOSED OF SOIL WITH LESS THAN 1% RUBBLE ENCOUNTERED; CONCRETE (0.5 FT), WOOD FRAGMENTS. FILL MATERIAL SURVEYED AS STOCKPILED, READINGS AT BACKGROUND.
FILL/TILL BOUNDARY AT 2.75 FT.
ARCHIVE SAMPLE NUMBERS 55964 AND 55965.

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FERNALD RI/FS

VISUAL CLASSIFICATION OF SOILS

SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS	
BORING NUMBER: 1470	COORDINATES: NORTH 477,370 EAST 1,379,639	DATE: 11/16/89
GROUND ELEVATION: 568.1	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/15/89
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/16/89
DRILLING METHODS: CAT 225 B LC TRACKHOE		PAGE 1 OF 1

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
3.0 3.2	55966 55973	11/16/89 1100	N/A	N/A	LOOSE, BROWN (7.5YR 4/2), SILTY SAND, TRACE GRAVEL (0.5-3.0 IN), MOIST.	SM	N/A	Hnu=0.0-0.2 ppm α =0 cpm Bγ =40-60 cpm ESP/SPA-3= 8,500 cpm
4.2 4.4	55967 55974	11/16/89 1112	N/A	N/A	MEDIUM STIFF, YELLOWISH BROWN (10YR 4/3), SILTY CLAY, TRACE COARSE SAND TO FINE GRAVEL, MOIST, LOW PLASTICITY.	CL	1.0	Hnu=0.2 ppm α =0 cpm Bγ =40 cpm ESP/SPA-3= 9,900 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #6, SOUTH END.
TOP 3 TO 5 INCHES OVERGROWTH GRASS, ROOTS, WEEDS. FILL MATERIAL IS PREDOMINATELY SOIL WITH LESS THAN 1% RUBBLE WHICH CONSISTED OF SMALL BROKEN PIECES OF CONCRETE SLAB (0.5 FT), SEVERAL PIECES OF ASPHALT (3 TO 4 IN). FILL MATERIAL IS SILTY SAND WITH GRAVEL (0.5-3.0 IN), LOOSE DENSITY. MATERIAL MONITORED DURING STOCKPILING, READINGS WERE BACKGROUND OR LESS.
FILL/TILL BOUNDARY AT 3.5 FT.
ARCHIVE SAMPLE NUMBERS 55973 AND 55974.

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FERNALD RI/FS

VISUAL CLASSIFICATION OF SOILS

SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1471	COORDINATES: NORTH 477,395 EAST 1,379,639	DATE: 11/10/89	
GROUND ELEVATION: 570.8	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/15/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/16/89	
DRILLING METHODS: CAT 225 B LC TRACKHOE		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES	USCS	SYMBOL	TSF	REMARKS
4.25 4.4	55968 55975	11/16/89 0837	N/A		N/A	LOOSE, BROWN (7.5YR 4/2 TO 10YR 5/3), SILTY SAND, TRACE GRAVEL (0.5-1.0 IN), MOIST.	SM		N/A	Hnu=0.0 ppm α =0 cpm βΓ =20-40 cpm ESP/SPA-3= 8,300 cpm
5.5 5.7	55969 55976	11/16/89 0845	N/A		N/A	MEDIUM STIFF, GRAYISH BROWN (10YR 5/2), SILTY CLAY, TRACE GRAVEL (0.5-0.75 IN), LOW PLASTICITY, MOIST.	CL		1.0	Hnu=0.0 ppm α =0 cpm βΓ =40 cpm ESP/SPA-3= 11,000 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #6, MIDPOINT.
TOP 3 TO 5 INCHES OVERGROWTH. FILL MATERIAL PREDOMINATELY SOIL WITH LESS THAN 1% OR LESS RUBBLE MATERIAL. TWO SMALL PIECES (0.5-1.0 FT) OF CONCRETE WERE UNCOVERED. FILL MATERIAL MONITORED DURING EXCAVATION, READINGS ON SOIL AND MATERIAL WERE BACKGROUND.
FILL/TILL BOUNDARY AT 5.25 FT.
ARCHIVE SAMPLE NUMBERS 55975 AND 55976.

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FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1472	COORDINATES: NORTH 477,420 EAST 1,379,639	DATE: 11/16/89	
GROUND ELEVATION: 571.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/15/89	
ENGINEER/GEOLOGIST: E TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/16/89	
DRILLING METHODS: CAT 225 BACKHOE		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
4.25 4.4	55970 55977	11/16/89 0900	N/A	N/A	LOOSE, BROWN TO GRAYISH BROWN (10YR 5/2), SILTY SAND, TRACE OF GRAVEL (0.5-1.5 IN), MOIST.	SM	N/A	Hnu=0.0 ppm α =0 cpm βΓ =40 cpm ESP/SPA-3= 9,200 cpm
5.0 5.2	55971 55978	11/16/89 0905	N/A	N/A	MEDIUM DENSE, GRAYISH BROWN (10YR 5/2), SILTY CLAY, TRACE FINE GRAVEL, MEDIUM PLASTICITY, MOIST.	CL	1.0	Hnu=0.0 ppm α =0 cpm βΓ =40 cpm ESP/SPA-3= 11,900 cpm

BOTTOM OF EXCAVATION

NOTES:
THIS EXCAVATION AND SAMPLING AT TRENCH #6.
TOP 3 TO 5 INCHES OVERGROWTH. FILL MATERIAL IS PREDOMINATELY SOIL WITH 1% OR LESS CONSTRUCTION RUBBLE. ONE PIECE CONCRETE FOUND (0.5 FT). SILTY SAND, TRACE GRAVEL (0.5-3.0 IN), LOOSE DENSITY, MOIST. FILL MATERIAL MONITORED DURING EXCAVATION OF TRENCH, READINGS AT BACKGROUND.
FILL/TILL BOUNDARY AT 4.5 FT.
ARCHIVE SAMPLE NUMBERS 55977 AND 55978.

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FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1516	COORDINATES: NORTH 477,071.10 EAST 1,379,636.54	DATE: 05/19/90	
GROUND ELEVATION: 539.31	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/19/90	
ENGINEER/GEOLOGIST: M GARMAN	Depth N/A Date/Time N/A	DATE COMPLETED: 05/19/90	
DRILLING METHODS: HOLLOW STEM AUGER (SPLIT SPOON SAMPLING)		PAGE 1 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.5	55371	05/19/90 1010	2	6	LOOSE, DARK GRAYISH BROWN (10YR 4/2), CLAYEY, SILT, TRACE FINE SAND, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
1.0	55372	05/19/90 1010	3	6	LOOSE, DARK GRAYISH BROWN (10YR 4/2), SILTY, FINE, SAND, SLIGHTLY MOIST.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
1.5	55373	05/19/90 1010	2	2	LOOSE, DARK GRAYISH BROWN (10YR 4/2), SILTY, FINE, SAND, SLIGHTLY MOIST.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
2.0	55374	05/19/90 1026	20	6	MEDIUM DENSE, YELLOWISH BROWN (10YR 4/2) MEDIUM GRAINED, SAND, TRACE SILT, LOW MOISTURE.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
2.5	55375	05/19/90 1026	15	5	MEDIUM DENSE, YELLOWISH BROWN (10YR 4/2) MEDIUM GRAINED, SAND, TRACE SILT, LOW MOISTURE.	SP	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
3.0	55376	05/19/90 1026	14	0	NO RECOVERY.	N/A	N/A	N/A
3.5	55377	05/19/90 1030	16	6	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND, TRACE SILT, TRACE GRAVEL, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
4.0	55378	05/19/90 1030	14	6	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND, TRACE SILT, TRACE GRAVEL, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
4.5	55379	05/19/90 1030	17	2	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND, TRACE SILT, TRACE GRAVEL, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
5.0	55380	05/19/90 1046	2	6	LOOSE, GRAYISH BROWN (10YR 5/2), SILTY, MEDIUM GRAINED, SAND, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
5.5	55381	05/19/90 1046	3	0	NO RECOVERY.	N/A	N/A	N/A
6.0	55382	05/19/90 1046	4	0	NO RECOVERY.	N/A	N/A	N/A
6.5	55383	05/19/90 1050	6	6	MEDIUM DENSE, GRAYISH BROWN (10YR 5/2), SILTY, MEDIUM GRAINED SAND, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
7.0	55384	05/19/90 1050	11	4	MEDIUM DENSE, BROWN (10YR 5/3), WELL GRADED, SAND, TRACE SILT, TRACE GRAVEL, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1516	COORDINATES: NORTH 477,071.10 EAST 1,379,636.54	DATE: 05/19/90	
GROUND ELEVATION: 539.31	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/19/90	
ENGINEER/GEOLOGIST: M GARMAN	Depth N/A Date/Time N/A	DATE COMPLETED: 05/19/90	
DRILLING METHODS: HOLLOW STEM AUGER (SPLIT SPOON SAMPLING)		PAGE 2 OF 3	

DEPTH	SAMPLE / DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
7.5	55385 05/19/90 1050	14	0	NO RECOVERY.	N/A	N/A	N/A
8.0	55386 05/19/90 1055	34	6	VERY DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, TRACE SILT, TRACE GRAVEL, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =80 cpm
8.5	55387 05/19/90 1055	30	6	VERY DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, TRACE SILT, TRACE GRAVEL, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =80 cpm
9.0	55388 05/19/90 1055	22	2	VERY DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, TRACE SILT, TRACE GRAVEL, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =80 cpm
9.5	55389 05/19/90 1105	5	6	MEDIUM DENSE, BROWN (10YR 5/3), WELL GRADED, SAND, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =80 cpm
10.0	55390 05/19/90 1105	12	6	MEDIUM DENSE, BROWN (10YR 5/3), WELL GRADED, SAND, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =80 cpm
10.5	55391 05/19/90 1105	15	2	MEDIUM DENSE, BROWN (10YR 5/3), WELL GRADED, SAND, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =80 cpm
11.0	55392 05/19/90 1110	6	6	DENSE, BROWN (10YR 5/3), WELL GRADED, SAND, TRACE SILT, MOIST.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
11.5	55393 05/19/90 1110	20	6	DENSE, BROWN (10YR 5/3), WELL GRADED, SAND, TRACE SILT, MOIST.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
12.0	55394 05/19/90 1110	28	3	DENSE, BROWN (10YR 5/3), WELL GRADED, SAND, TRACE SILT, MOIST.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
12.5	55395 05/19/90 1126	20	6	VERY DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, TRACE GRAVEL, TRACE SILT, MOIST.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =80 cpm
13.0	55396 05/19/90 1126	31	6	VERY DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, TRACE GRAVEL, TRACE SILT, MOIST.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =80 cpm
13.5	55397 05/19/90 1126	27	0	NO RECOVERY.	N/A	N/A	N/A
14.0	55398 05/19/90 1129	7	6	MEDIUM DENSE, DARK GRAYISH BROWN (10YR 4/2), WELL GRADED, SAND (FINE TO MEDIUM GRAINED) SOME SILT. MOIST.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm

FERNALD RI/FS

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1516	COORDINATES: NORTH 477,071.10 EAST 1,379,636.54	DATE: 05/19/90	
GROUND ELEVATION: 539.31	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/19/90	
ENGINEER/GEOLOGIST: M GARMAN	Depth N/A Date/Time N/A	DATE COMPLETED: 05/19/90	
DRILLING METHODS: HOLLOW STEM AUGER (SPLIT SPOON SAMPLING)		PAGE 3 OF 3	

DEPTH	SAMPLE DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
14.5	55399 05/19/90 1129	11	6	MEDIUM DENSE, DARK GRAYISH BROWN (10YR 4/2), WELL GRADED, SAND (FINE TO MEDIUM GRAINED) SOME SILT, MOIST.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
15.0	55400 05/19/90 1129	12	4	MEDIUM DENSE, DARK GRAYISH BROWN (10YR 4/2), WELL GRADED, SAND (FINE TO MEDIUM GRAINED) SOME SILT, MOIST.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
15.5	55401 05/19/90 1332	6	6	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND, SOME SILT, VERY MOIST.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
16.0	55402 05/19/90 1332	18	6	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND, SOME GRAVEL, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
16.5	55403 05/19/90 1332	22	0	NO RECOVERY.	N/A	N/A	N/A
17.0	55404 05/19/90 1335	12	6	DENSE, BROWN (10YR 5/3), WELL GRADED, SAND, TRACE GRAVEL, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
17.5	55405 05/19/90 1335	17	6	DENSE, BROWN (10YR 5/3), WELL GRADED, SAND, TRACE GRAVEL, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
18.0	55406 05/19/90 1335	18	6	DENSE, BROWN (10YR 5/3), WELL GRADED, SAND, TRACE GRAVEL, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
18.5	55407 05/19/90 1340	8	6	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND, SOME GRAVEL, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
19.0	55408 05/19/90 1340	12	6	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND, SOME GRAVEL, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
19.5	55409 05/19/90 1340	17	6	DENSE, BROWN (10YR 5/3), WELL GRADED, SAND, SOME SILT, TRACE GRAVEL, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
20.0	55410 05/19/90 1340	20	4	DENSE, BROWN (10YR 5/3), WELL GRADED, SAND, SOME SILT, TRACE GRAVEL, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm

BOTTOM OF BORING 20.0

NOTES:
ALL SAMPLES COLLECTED ACCORDING TO ASTM STANDARDS. SOIL COLORS DESCRIBED BY MUNSELL COLOR CHARTS.

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FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1517	COORDINATES: NORTH 477,022.52 EAST 1,379,642.08	DATE: 05/20/90	
GROUND ELEVATION: 538.56	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/20/90	
ENGINEER/GEOLOGIST: M GARMAN	Depth N/A Date/Time N/A	DATE COMPLETED: 05/21/90	
DRILLING METHODS: HOLLOW STEM AUGER (SPLIT SPOON SAMPLING)		PAGE 1 OF 3	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.5	55413 05/20/90 1040	3	6	MEDIUM DENSE, (10YR 3/3) DARK BROWN SILT, SOME CLAY, TRACE SAND, LOW MOISTURE.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
1.0	55414 05/20/90 1040	7	0	NO RECOVERY.	N/A	N/A	N/A
1.5	55415 05/20/90 1040	9	0	NO RECOVERY.	N/A	N/A	N/A
2.0	55416 05/20/90 1050	4	4	LOOSE, VERY DARK GRAYISH BROWN (10YR 3/2), CLAYEY, SILT, TRACE GRAVEL, LOW MOISTURE.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =70 cpm
2.5	55417 05/20/90 1050	5	0	NO RECOVERY.	N/A	N/A	N/A
3.0	55418 05/20/90 1050	5	0	NO RECOVERY.	N/A	N/A	N/A
3.5	55419 05/20/90 1054	5	6	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), SILTY SAND, TRACE GRAVEL, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
4.0	55420 05/20/90 1054	9	6	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), SILTY SAND, TRACE GRAVEL, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
4.5	55421 05/20/90 1054	9	0	NO RECOVERY.	N/A	N/A	N/A
5.0	55422 05/20/90 1119	8	6	MEDIUM DENSE, BROWN (10YR 5/3), SILTY SAND, TRACE GRAVEL, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =70 cpm
5.5	55423 05/20/90 1119	9	0	NO RECOVERY.	N/A	N/A	N/A
6.0	55424 05/20/90 1119	9	0	NO RECOVERY.	N/A	N/A	N/A
6.5	55425 05/20/90 1123	7	6	MEDIUM DENSE, BROWN (10YR 5/3), SILTY SAND, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
7.0	55426 05/20/90 1123	9	6	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, TRACE GRAVEL, TRACE SILT, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1517	COORDINATES: NORTH 477,022.52 EAST 1,379,642.08	DATE: 05/20/90	
GROUND ELEVATION: 538.56	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/20/90	
ENGINEER/GEOLOGIST: M GARMAN	Depth N/A Date/Time N/A	DATE COMPLETED: 05/21/90	
DRILLING METHODS: HOLLOW STEM AUGER (SPLIT SPOON SAMPLING)		PAGE 2 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
7.5	55427	05/20/90 1123	9	2	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, TRACE GRAVEL, TRACE SILT, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
8.0	55428	05/20/90 1125	7	6	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, SOME SILT, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
8.5	55429	05/20/90 1125	6	6	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, SOME SILT, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
9.0	55430	05/20/90 1125	6	3	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, SOME SILT, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
9.5	55431	05/20/90 1129	7	6	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, SOME SILT, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
10.0	55432	05/20/90 1129	7	6	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, SOME GRAVEL, TRACE SILT, SLIGHTLY MOIST TO MOIST.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
10.5	55433	05/20/90 1129	6	4	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, SOME GRAVEL, TRACE SILT, SLIGHTLY MOIST TO MOIST.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
11.0	55434	05/20/90 1315	7	6	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, TRACE SILT, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
11.5	55435	05/20/90 1315	7	0	NO RECOVERY.	N/A	N/A	N/A
12.0	55436	05/20/90 1315	7	0	NO RECOVERY.	N/A	N/A	N/A
12.5	55437	05/20/90 1319	16	6	DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, TRACE GRAVEL, TRACE SILT, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
13.0	55438	05/20/90 1319	16	4	DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, TRACE GRAVEL, TRACE SILT, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
13.5	55439	05/20/90 1319	17	0	NO RECOVERY.	N/A	N/A	N/A
14.0	55440	05/20/90 1322	16	6	DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, TRACE GRAVEL, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm

FERNALD RI/FS VISUAL CLASSIFICATION OF SOILS SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1517	COORDINATES: NORTH 477,022.52 EAST 1,379,642.08	DATE: 05/20/90	
GROUND ELEVATION: 538.56	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/20/90	
ENGINEER/GEOLOGIST: M GARMAN	Depth N/A Date/Time N/A	DATE COMPLETED: 05/21/90	
DRILLING METHODS: HOLLOW STEM AUGER (SPLIT SPOON SAMPLING)		PAGE 3 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
14.5	55441	05/20/90 1322	16	5	DENSE, YELLOWISH BROWN (10YR 5/4), SILTY, FINE, SAND, WET.	SM	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
15.0	55442	05/20/90 1322	12	0	NO RECOVERY.	N/A	N/A	N/A
15.5	55443	05/20/90 1333	5	5	MEDIUM DENSE, BROWN (10YR 5/3), WELL GRADED GRAVEL, SOME SAND, WET.	GW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
16.0	55444	05/20/90 1333	12	0	NO RECOVERY.	N/A	N/A	N/A
16.5	55445	05/20/90 1333	15	0	NO RECOVERY.	N/A	N/A	N/A
17.0	55446	05/20/90 1337	8	6	MEDIUM DENSE, BROWN (10YR 5/3) SANDY, WELL GRADED GRAVEL, TRACE SILT, WET.	GW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
17.5	55447	05/20/90 1337	14	3	MEDIUM DENSE, BROWN (10YR 5/3) SANDY, WELL GRADED GRAVEL, TRACE SILT, WET.	GW	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
18.0	55448	05/20/90 1337	12	0	NO RECOVERY.	N/A	N/A	N/A
18.5	55449	05/20/90 1343	8	6	MEDIUM DENSE, BROWN (10YR 5/3), GRAVELLY, WELL GRADED, SAND, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
19.0	55450	05/20/90 1343	12	6	MEDIUM DENSE, BROWN (10YR 5/3), GRAVELLY, WELL GRADED, SAND, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
19.5	55451	05/20/90 1343	14	6	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, SOME SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
20.0	55452	05/20/90 1343	15	6	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, SOME SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm

BOTTOM OF BORING 20.0

NOTES:
ALL SAMPLES COLLECTED ACCORDING TO ASTM STANDARDS. SOIL COLORS DESCRIBED BY MUNSELL SOIL COLOR CHARTS.

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FERNALD RI/FS

VISUAL CLASSIFICATION OF SOILS

SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1518	COORDINATES: NORTH 476,976.12 EAST 1,379,619.39	DATE: 05/22/90	
GROUND ELEVATION: 537.26	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/22/90	
ENGINEER/GEOLOGIST: M GARMAN	Depth N/A Date/Time N/A	DATE COMPLETED: 05/22/90	
DRILLING METHODS: HOLLOW STEM AUGER (SPLIT SPOON SAMPLING)		PAGE 1 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.5	55454	05/22/90 0816	6	6	MEDIUM DENSE, (10YR 4/3) BROWN SILT, TRACE SAND, LOW MOISTURE.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =100 cpm
1.0	55455	05/22/90 0816	9	6	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), SILTY SAND, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =100 cpm
1.5	55456	05/22/90 0816	9	2	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/4), SILTY SAND, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =100 cpm
2.0	55457	05/22/90 0818	6	6	MEDIUM DENSE, BROWN (10YR 5/3), SILTY SAND, TRACE GRAVEL, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
2.5	55458	05/22/90 0818	11	6	MEDIUM DENSE, BROWN (10YR 5/3), SILTY SAND, TRACE GRAVEL, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
3.0	55459	05/22/90 0818	12	2	MEDIUM DENSE, BROWN (10YR 5/3), SILTY SAND, TRACE GRAVEL, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
3.5	55460	05/22/90 0820	6	6	MEDIUM DENSE, BROWN (10YR 5/3), SILTY SAND, TRACE GRAVEL, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
4.0	55461	05/22/90 0820	8	6	MEDIUM DENSE, BROWN (10YR 5/3), SILTY SAND, TRACE GRAVEL, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
4.5	55462	05/22/90 0820	9	1	MEDIUM DENSE, BROWN (10YR 5/3), SILTY SAND, TRACE GRAVEL, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
5.0	55463	05/22/90 0823	4	6	LOOSE, BROWN (10YR 5/4), SILTY SAND, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =80 cpm
5.5	55464	05/22/90 0823	4	6	LOOSE, BROWN (10YR 5/4), SILTY SAND, LOW MOISTURE. 5.25'-LOOSE, YELLOWISH BROWN (10YR 5/4), CLAYEY, SILT, SLIGHTLY MOIST.	SM ML	N/A N/A	Hnu=0 ppm α =0 cpm BΓ =80 cpm
6.0	55465	05/22/90 0823	5	3	LOOSE, YELLOWISH BROWN (10YR 5/4), CLAYEY, SILT, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =80 cpm
6.5	55466	05/22/90 0929	3	6	MEDIUM DENSE, BROWN (10YR 5/3), CLAYEY, SILT, MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
7.0	55467	05/22/90 0929	5	6	STIFF, BROWN (10YR 5/3), SILTY CLAY, MEDIUM PLASTICITY, MOIST	CL	1.75	Hnu=0 ppm α =0 cpm BΓ =90 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1518	COORDINATES: NORTH 476,976.12 EAST 1,379,619.39	DATE: 05/22/90	
GROUND ELEVATION: 537.26	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/22/90	
ENGINEER/GEOLOGIST: M GARMAN	Depth N/A Date/Time N/A	DATE COMPLETED: 05/22/90	
DRILLING METHODS: HOLLOW STEM AUGER (SPLIT SPOON SAMPLING)		PAGE 2 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
7.5	55468	05/22/90 0929	7	5	MEDIUM DENSE, BROWN (10YR 5/3), CLAYEY, SILT, MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
8.0	55469	05/22/90 0932	10	6	DENSE, YELLOWISH BROWN (10YR 5/4) SILT, TRACE SAND, MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
8.5	55470	05/22/90 0932	16	6	DENSE, BROWN (10YR 5/3), SILTY, FINE, SAND, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
9.0	55471	05/22/90 0932	21	3	DENSE, BROWN (10YR 5/3), SILTY, FINE, SAND, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
9.5	55472	05/22/90 0935	16	6	DENSE, BROWN (10YR 5/3), SILTY, FINE, SAND, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
10.0	55473	05/22/90 0935	17	6	DENSE, BROWN (10YR 5/3), SILTY, FINE, SAND, LOW MOISTURE.	SM	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
10.5	55474	05/22/90 0935	22	4	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND, SOME SILT, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm
11.0	55475	05/22/90 0944	12	6	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND, SOME GRAVEL, TRACE SILT, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =100 cpm
11.5	55476	05/22/90 0944	19	6	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND, SOME GRAVEL, TRACE SILT, LOW MOISTURE.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =100 cpm
12.0	55477	05/22/90 0944	21	0	NO RECOVERY.	N/A	N/A	N/A
12.5	55478	05/22/90 1015	16	6	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND (GRAVELLY), SOME SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =100 cpm
13.0	55479	05/22/90 1015	18	6	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND (GRAVELLY), SOME SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =100 cpm
13.5	55480	05/22/90 1015	21	0	NO RECOVERY.	N/A	N/A	N/A
14.0	55481	05/22/90 1020	19	6	DENSE, GRAYISH BROWN (10YR 5/2), GRAVELLY, WELL GRADED, SAND, SOME SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm BΓ =90 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1518	COORDINATES: NORTH 476,976.12 EAST 1,379,619.39	DATE: 05/22/90	
GROUND ELEVATION: 537.26	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/22/90	
ENGINEER/GEOLOGIST: M GARMAN	Depth N/A Date/Time N/A	DATE COMPLETED: 05/22/90	
DRILLING METHODS: HOLLOW STEM AUGER (SPLIT SPOON SAMPLING)		PAGE 3 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
14.5	55482	05/22/90 1020	24	6	DENSE, GRAYISH BROWN (10YR 5/2), GRAVELLY, WELL GRADED, SAND, SOME SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
15.0	55483	05/22/90 1020	21	1	DENSE, GRAYISH BROWN (10YR 5/2), GRAVELLY, WELL GRADED, SAND, SOME SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
15.5	55484	05/22/90 1030	6	6	MEDIUM DENSE, GRAYISH BROWN (10YR 5/2), GRAVELLY, WELL GRADED SAND, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =100 cpm
16.0	55485	05/22/90 1030	11	5	MEDIUM DENSE, GRAYISH BROWN (10YR 5/2), GRAVELLY, WELL GRADED SAND, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =100 cpm
16.5	55486	05/22/90 1030	15	0	NO RECOVERY.	N/A	N/A	N/A
17.0	55487	05/22/90 1035	16	6	DENSE, BROWN (10YR 5/3), WELL GRADED, SAND, TRACE GRAVEL, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
17.5	55488	05/22/90 1035	18	6	DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
18.0	55489	05/22/90 1035	23	5	DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, SAND, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
18.5	55490	05/22/90 1045	12	6	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND, SOME GRAVEL, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
19.0	55491	05/22/90 1045	16	6	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND, SOME GRAVEL, TRACE SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
19.5	55492	05/22/90 1045	18	6	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND, SOME SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm
20.0	55493	05/22/90 1045	24	5	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, SAND, SOME SILT, WET.	SW	N/A	Hnu=0 ppm α =0 cpm βΓ =90 cpm

BOTTOM OF BORING 20.0

NOTES:
ALL SAMPLES COLLECTED ACCORDING TO ASTM STANDARDS. SOIL COLORS DESCRIBED BY MUNSELL SOIL COLOR CHARTS.

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FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1792	COORDINATES: NORTH 477,280.15 EAST 1,379,372.54	DATE:	
GROUND ELEVATION: 566.1	GWL: Depth N/A Date/Time N/A	DATE STARTED: 08/21/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 08/22/91	
DRILLING METHODS: 53 MOBILE AUGER		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67342	08/21/91 1315	4 11 21	14	HARD, DARK YELLOWISH BROWN (10YR 3/4), SILTY CLAY, TRACE GRAVEL, SOME ORGANICS, LOW PLASTIC, MOIST.	CL	2.5	Hnu=0 ppm α =0 cpm BΓ =60 cpm
3.0	67343	08/21/91 1320	22 23 27	17	VERY HARD, BROWN (10YR 5/3), SILTY CLAY, SOME LARGE GRAVEL, LOW PLASTICITY, MOIST.	CL	>4.5	Hnu=0 ppm α =0 cpm BΓ =60 cpm
4.5	67344	08/21/91 1325	24 25 27	17	VERY HARD, YELLOWISH BROWN (10YR 5/4), SILTY CLAY, SOME LARGE GRAVEL, LOW PLASTICITY, SLIGHTLY MOIST.	CL	>4.5	Hnu=0 ppm α =0 cpm BΓ =60 cpm
6.0	67345	08/21/91 1330	25 42 27	16	VERY HARD, YELLOWISH BROWN (10YR 5/4), SILTY CLAY, SOME LARGE GRAVEL, LOW PLASTICITY, SLIGHTLY MOIST.	CL	>4.5	Hnu=0 ppm α =0 cpm BΓ =60 cpm
7.5	67346	08/21/91 1500	37 43 39	13	VERY HARD, YELLOWISH BROWN (10YR 5/4), SILTY CLAY, SOME LARGE GRAVEL, LOW PLASTICITY, SLIGHTLY MOIST.	CL	4.5	Hnu=0 ppm α =0 cpm BΓ =60 cpm
9.0	67347	08/21/91 1505	21 24 29	13	VERY HARD, VERY DARK GRAYISH-BROWN (10YR 3/2), SILTY CLAY, SOME LARGE GRAVEL, LOW PLASTICITY, SLIGHTLY MOIST.	CL	>4.5	Hnu=0 ppm α =0 cpm BΓ =60 cpm
10.5	67348	08/21/91 1510	21 24 19	12	DENSE, YELLOWISH BROWN (10YR 5/4) CLAYEY SILT, SOME GRAVEL, MOIST. 10.0-HARD, OLIVE GRAVEL (5Y 3/2), SILTY CLAY, SOME GRAVEL, MEDIUM PLASTICITY, MOIST.	ML CL	N/A 2.5	Hnu=0 ppm α =0 cpm BΓ =60 cpm
12.0	67349	08/21/91 1515	9 6 7	4	FIRM, OLIVE (5Y 4/4), CLAY, SOME GRAVEL, MEDIUM PLASTICITY, MOIST.	CL	0.5	Hnu=0 ppm α =0 cpm BΓ =60 cpm
13.5	67350	08/21/91 1530	8 6 7	18	FIRM, OLIVE (2.5Y 4/3), SILTY CLAY, SOME GRAVEL, MEDIUM PLASTICITY, MOIST.	CL	0.5	Hnu=5-12 ppm α =0 cpm BΓ =60 cpm
15.0	67351	08/21/91 1535	8 9 7	18	FIRM, OLIVE (2.5Y 4/3), SILTY CLAY, SOME GRAVEL, MEDIUM PLASTICITY, MOIST.	CL	0.5	Hnu=1-2 ppm α =0 cpm BΓ =60 cpm
16.5	67352	08/22/91 0830	4 5 8	18	FIRM, OLIVE (2.5Y 4/3), SILTY CLAY, SOME GRAVEL, MEDIUM PLASTICITY, MOIST.	CL	0.5	Hnu=0 ppm α =0 cpm BΓ =60 cpm
18.0	67353	08/22/91 0835	8 9 11	18	FIRM, OLIVE (2.5Y 4/3), SILTY CLAY, SOME GRAVEL, MEDIUM PLASTICITY, MOIST, TRACE WOOD CHIPS.	CL	0.5	Hnu=2 ppm α =0 cpm BΓ =80 cpm
20.0	67354	08/22/91 0840	100/5	4	FIRM, OLIVE (5Y 5/4), SILTY CLAY, SOME GRAVEL, MEDIUM PLASTICITY, MOIST, INPENETRABLE STRUCK, AUGERED TO 20.0'FT.	CL	2.0	Hnu=0 ppm α =0 cpm BΓ =80 cpm

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1792	COORDINATES: NORTH 477,280.15 EAST 1,379,372.54	DATE:	
GROUND ELEVATION: 566.1	GWL: Depth N/A Date/Time N/A	DATE STARTED: 08/21/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 08/22/91	
DRILLING METHODS: 53 MOBILE AUGER		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
21.5	67355	08/22/91 1400	8 11 12	12	FIRM, OLIVE (5Y 5/4), SILTY CLAY, SOME GRAVEL, MEDIUM PLASTICITY, MOIST.	CL	0.75	Hnu=0 ppm α =0 cpm βΓ =80 cpm
23.0	67356	08/22/91 1405	17 19 21	18	FIRM, OLIVE GRAY (5Y 4/2), CLAY, TRACE GRAVEL, LOW TO MEDIUM PLASTICITY, MOIST.	CL	1.25	Hnu=0 ppm α =0 cpm βΓ =80 cpm
24.5	67357	08/22/91 1410	27 29 33	12	FIRM, OLIVE GRAY (5Y 4/2), CLAY, TRACE GRAVEL, LOW TO MEDIUM PLASTICITY, MOIST.	CL	1.25	Hnu=2 ppm α =0 cpm βΓ =80 cpm
26.5	67358	08/22/91 1415	36 42 39	0	NO RECOVERY.	N/A	N/A	N/A
28.0	67359	08/22/91 1420	18 18 22	6	FIRM, LIGHT OLIVE BROWN (2.5Y 5/4), SILTY CLAY, SOME GRAVEL, TRACE SAND, MOIST.	CL	1.25	Hnu=0 ppm α =0 cpm βΓ =80 cpm
29.5	67362 67363	08/22/91 1430	16 17 17	18	FIRM, LIGHT OLIVE BROWN (2.5Y 5/4), SILTY CLAY, SOME GRAVEL, TRACE SAND, MOIST. 29.0'-DENSE, BROWN (10YR 4/5) CLAYEY SILT, MOIST.	CL ML	1.25 N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
31.0	67364	08/22/91 1435	17 19 21	18	DENSE, BROWN (10YR 4/5) CLAYEY SILT, MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
32.5	67365	08/22/91 1615	36 35 50	18	DENSE, BROWN (10YR 4/5), CLAYEY SILT, MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm βΓ =80 cpm
34.0	67366	08/22/91 1620	49 37 32	18	FIRM, DARK YELLOWISH BROWN (10YR 4/6), SILTY CLAY, LOW PLASTICITY.	CL	3.5	Hnu=0 ppm α =0 cpm βΓ =80 cpm

BOTTOM OF BORING 34.0

NOTES:
DRILLING & SAMPLING ENDS AT 34.0 FT. ALL SAMPLES TAKEN ACCORDING TO OU-2 WORK PLAN SOUTHFIELD ADDENDUM.
BORING PLUGGED AND ABANDONED.

PROJECT NUMBER: 602 3.7	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 1793	COORDINATES: NORTH 477,464.98 EAST 1,379,446.76	DATE: 08/15/91	
GROUND ELEVATION: 572.2	GWL: Depth N/A Date/Time N/A	DATE STARTED: 08/15/91	
ENGINEER/GEOLOGIST: J LEAR	Depth N/A Date/Time N/A	DATE COMPLETED: 08/20/91	
DRILLING METHODS: 53 MOBILE AUGER		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	67331	08/15/91 1015	4 11 25	16	DENSE, BROWN (10YR 4/3), CLAYEY, SILT, SOME GRAVEL, SOME ORGANICS, SLIGHTLY MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =80 cpm
3.0	67332	08/15/91 1020	17 25 27	18	VERY HARD, GRAY TO YELLOWISH BROWN (10YR 5/1 TO 10YR 4/6), SILTY CLAY, TRACE GRAVEL, TRACE ORGANICS, LOW PLASTICITY, SLIGHTLY MOIST.	CL	>4.5	Hnu=0 ppm α =0 cpm BΓ =80 cpm
4.5	67333	08/15/91 1025	27 27 42	12	VERY HARD, BROWN (10YR 5/3), SILTY CLAY, SOME GRAVEL, TRACE ORGANICS, LOW PLASTICITY, DRY.	CL	>4.5	Hnu=0 ppm α =0 cpm BΓ =80 cpm
6.0	67334	08/15/91 1030	40 37 28	16	VERY HARD, VERY DARK GRAYISH BROWN (10YR 3/2), SILTY CLAY, SOME GRAVEL, TRACE ORGANICS, LOW PLASTICITY, SLIGHTLY MOIST.	CL	>4.5	Hnu=0 ppm α =0 cpm BΓ =80 cpm
7.5	67335	08/20/91 1030	90 33 26	17	VERY HARD, BROWN TO DARK GRAY (10YR 5/3 TO 10YR 4/1), SILTY CLAY, SOME GRAVEL, TRACE ORGANICS, LOW PLASTICITY, DRY TO SLIGHTLY MOIST.	CL	>4.5	Hnu=0 ppm α =0 cpm BΓ =80 cpm
9.0	67336	08/20/91 1035	26 20 23	18	HARD, YELLOWISH BROWN (10YR 5/6) MOTTLED, SILTY CLAY, TRACE SAND, LOW PLASTICITY, MOIST.	CL	3.75	Hnu=0 ppm α =0 cpm BΓ =80 cpm
10.5	67337	08/20/91 1040	21 19 14	18	HARD, YELLOWISH BROWN (10YR 5/6) MOTTLED, SILTY CLAY, TRACE SAND, TRACE GRAVEL, LOW PLASTICITY, MOIST.	CL	3.75	Hnu=0 ppm α =0 cpm BΓ =80 cpm
12.0	67338	08/20/91 1045	14 19 21	12	HARD, YELLOWISH BROWN (10YR 5/6) MOTTLED, SILTY CLAY, TRACE SAND, TRACE GRAVEL, LOW PLASTICITY, MOIST. 11.0'-DENSE, BROWN (10YR 5/3), SILT, SOME CLAY, MOIST.	CL ML	3.0 N/A	Hnu=0 ppm α =0 cpm BΓ =80 cpm
13.5	67339	08/20/91 1315	20 20 22	17	DENSE, BROWN (10YR 5/3), SILT, SOME CLAY, MOIST. 12.5'-HARD, BROWN (10YR 5/3), CLAYEY, SILT, MOIST.	ML	N/A	Hnu=0 ppm α =0 cpm BΓ =80 cpm
15.0	67340	08/20/91 1320	18 21 32	18	HARD, BROWN (10YR 5/3), CLAYEY, SILT, MOIST. 14.0'-HARD, BROWN (10YR 5/3), SILTY CLAY, TRACE GRAVEL, LOW PLASTICITY, MOIST.	ML CL	N/A 3.0	Hnu=0 ppm α =0 cpm BΓ =80 cpm

BOTTOM OF BORING 15.0

NOTES:
ALL SAMPLES TAKEN ACCORDING TO THE OU-2 SOUTHFIELD ADDENDUM WORK PLAN. LANDFILL ENDS AT 7.5 FT.

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FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2046	COORDINATES: NORTH 478,058.45 EAST 1,379,418.68	DATE: 12/14/88	
GROUND ELEVATION: 575.9	GWL: Depth N/A Date/Time N/A	DATE STARTED: 12/13/88	
ENGINEER/GEOLOGIST: W A HERTEL	Depth N/A Date/Time N/A	DATE COMPLETED: 12/18/88	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 1	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
30.0 31.5	008950	12/14/88 1350	17 22 27	15	DENSE, YELLOWISH BROWN (10YR 5/6), POORLY GRADED SAND, LESS THAN 5% GRAVEL, DRY.	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
35.5 37.0	008951	12/14/88 1450	9 35 38	15	VERY DENSE, YELLOWISH BROWN (10YR 5/6), POORLY GRADED SAND, LESS THAN 1% GRAVEL, DRY.	SP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
41.0 42.5	008952	12/14/88 1520	16 46 43	14	VERY DENSE, LIGHT YELLOWISH BROWN (10YR 6/4), WELL GRADED SAND AND GRAVEL, DRY.	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
45.5 47.0	008953	12/14/88 1625	47 50+	8	VERY DENSE, YELLOWISH BROWN (10YR 5/6), WELL GRADED, SAND AND GRAVEL, DRY.	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
51.0 52.5	008954	12/15/88 0900	43 50+	6	51.0'-VERY DENSE, LIGHT GRAY (10YR 7/2), WELL GRADED SAND AND GRAVEL. 51.2'-VERY DENSE, DARK GRAY (10YR 3/1), WELL GRADED SAND AND GRAVEL. 51.4'-VERY DENSE, YELLOWISH BROWN (10YR 6/6), WELL GRADED SAND AND GRAVEL, DRY.	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
55.0 56.5	008955	12/15/88 1045	50+	6	VERY DENSE, PALE BROWN (10YR 6/3), WELL GRADED, SAND AND GRAVEL, DAMP.	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
61.0 62.5	008956	12/15/88 1330	5 6 11	15	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/6), POORLY GRADED, SAND, LESS THAN 5% GRAVEL, WET.	SP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
66.0 67.5	008957	12/15/88 1430	20 27 26	12	VERY DENSE, PALE BROWN (10YR 6/3), WELL GRADED, SAND AND GRAVEL, APPROX 10% GRAVEL, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
71.5 73.0	008958	12/15/88 1605	6 7 9	15	MEDIUM DENSE, BROWN (10YR 4/3), WELL GRADED, SAND AND GRAVEL, APPROX 10% GRAVEL, WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm

BOTTOM OF BORING 73.0

NOTES:
SEE BORING 1046 FOR 0.0-28.5 FT INTERVAL CLASSIFICATION. SAMPLING THIS BORING AT 5.0 FT INTERVALS STARTING AT 30.0 FT. SAMPLES COLLECTED PER STANDARD ASTM PENETRATION TEST. COLORS IDENTIFIED USING MUNSELL COLOR CHART. MONITORING WELL INSTALLED.

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FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2049	COORDINATES: NORTH 477,020.51 EAST 1,380,072.04	DATE:	
GROUND ELEVATION: 541.20	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/06/87	
ENGINEER/GEOLOGIST: LOWELL WILLE	Depth N/A Date/Time N/A	DATE COMPLETED: 10/14/87	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	007280	10/06/87 1630	6 9 7	16	SOFT BLACK (7.5YR 3/0), ORGANIC SILTY CLAY, SOME SAND AND FLYASH, MOIST. 0.5'-LIMESTONE ROCK. 0.8'-STIFF, BROWN (10YR 6/4), SILTY CLAY, SOME SAND AND PEBBLES, DRY.	OL N/A CL	N/A N/A 3.5	α = 2 cpm BΓ = 70 cpm
3.0	007281	10/06/87 1730	6 5 5	16	STIFF, BROWN (10YR 6/4), SILTY CLAY, SOME SAND AND PEBBLES, DRY. STIFF, BROWN (10YR 4/6), SILTY CLAY, TRACE SAND, SOME PEBBLES AND GRAVEL, DRY.	CL CL	3.5 3.0	α = 2 cpm BΓ = 70 cpm
4.5	007282	10/06/87 1740	30 42 20	17	STIFF, BROWN (10YR 4/6), SILTY CLAY, TRACE SAND AND PEBBLES, SOME GRAVEL, DRY. 4.0'-DENSE, BROWN (10YR 6/5), SAND AND GRAVEL, SOME SILT AND CLAY, DRY.	CL GM	3.7 N/A	α = 2 cpm BΓ = 70 cpm
6.0	007283	10/07/87 1415	6 7 9	11	LOOSE, BROWN (10YR 6/4), SAND AND GRAVEL, SOME SILT AND CLAY, SILTY CLAY, DENSE, AT 5.5 FEET, DRY.	GM	N/A	α = 1 cpm BΓ = 70 cpm
7.5	007284	10/07/87 1450	18 17 21	16	DENSE, BROWN (10YR 6/5), SAND AND GRAVEL SOME PEBBLES, TRACE SILT AND CLAY, DRY.	GM	N/A	α = 1 cpm BΓ = 70 cpm
9.0	007285	10/07/87 1500	18 20 15	16	DENSE, BROWN (10YR 4/5)SAND AND GRAVEL, SOME SILT AND CLAY, TRACE PEBBLES, DRY. 8.5'-DENSE, BROWN (10YR 6/4), MEDIUM TO FINE SAND, TRACE SILT AND CLAY, DRY.	GM	N/A	α = 1 cpm BΓ = 70 cpm
10.5	007286	10/07/87 1715	18 26 38	16	DENSE, BROWN (10YR,6/4)MEDIUM TO FINE SAND, TRACE SILT AND CLAY, DRY. DENSE, BROWN (10YR 6/4) MEDIUM TO FINE SAND, TRACE SILT AND CLAY, DRY. 10.0'-DENSE, BROWN (10YR 6/4) SAND AND GRAVEL, SOME SILT AND CLAY, TRACE PEBBLES, DRY.	SM SM GM	3.0 2.8 N/A	α = 1 cpm BΓ = 70 cpm
12.0	007287	10/07/87 1725	27 50+	12	DENSE, BROWN (10YR 6/4), SAND AND GRAVEL, SOME SILT, CLAY AND PEBBLES, DRY.	GM	N/A	α = 1 cpm BΓ = 65 cpm
15.0 16.5	007288	10/08/87 0930	15 22 28	16	DENSE, BROWN (10YR 5/6), SAND AND GRAVEL, SOME SILT, CLAY AND PEBBLES, DRY.	GM	N/A	α = 1 cpm BΓ = 65 cpm
20.0 21.5	007289	10/08/87 1030	17 22 21	16	DENSE, BROWN (10YR 5/6), SAND AND GRAVEL, SOME SILT, CLAY AND PEBBLES, DRY.	GM	N/A	α = 1 cpm BΓ = 65 cpm
25.0 26.5	007290	10/13/87 0910	9 9 8	13	LOOSE, BROWN (10YR 6/8), SANDY GRAVEL, SOME SILT AND CLAY, MOIST.	GM	N/A	α = 1 cpm BΓ = 65 cpm
30.0 31.5	007291	10/13/87 1105	35 30 26	17	DENSE, BROWN (10YR 6/6), SANDY GRAVEL, SOME SILT AND CLAY, TRACE PEBBLES AND COBBLES, MOIST.	GM	<0.1	α = 1 cpm BΓ = 65 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2049	COORDINATES: NORTH 477,020.51 EAST 1,380,072.04	DATE:	
GROUND ELEVATION: 541.20	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/06/87	
ENGINEER/GEOLOGIST: LOWELL WILLE	Depth N/A Date/Time N/A	DATE COMPLETED: 10/14/87	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
35.0 36.5	007292 10/13/87 1335		6 6 8	18	LOOSE, BROWN (10YR 5/4), SAND, SOME SILT AND CLAY, TRACE GRAVEL, WET.	SM	<0.1	α = 1 cpm βΓ = 65 cpm
40.0 41.5	007293 10/13/87 1515		6 9 25	18	LOOSE, BROWN (10YR 5/4), SAND, SOME SILT, CLAY AND GRAVEL, WET. 41.0'-DENSE, BROWN (10YR 6/6), SANDY GRAVEL, SOME PEBBLES, COBBLES, SILT AND CLAY, WET.	SM GM	<0.1 N/A	α = 1 cpm βΓ = 65 cpm

BOTTOM OF BORING 41.5

NOTES:
WATER TABLE AT 24 FT, 10/13/87 AT 1730. WATER TABLE AT 31.5 FT, 10/13/87 AT 1215.
HIT 6" DIA BLACK IRON PIPE AT 2 FT ON 10/06/87 AT 1730. BACKED RIG UP 5 FT AND STARTED BORING OVER AGAIN. DID NOT RESAMPLE 0.0-4.5 FT INTERVAL.
SAMPLES SCANNED AT BACKGROUND.
WATER USED DURING DRILLING, 185 GALS.
MONITORING WELL INSTALLED.

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2065	COORDINATES: NORTH 477,866.51 EAST 1,380,434.37	DATE:	
GROUND ELEVATION: 571.5	GWL: Depth N/A Date/Time N/A	DATE STARTED: 09/24/87	
ENGINEER/GEOLOGIST: D OAKLEY/L WILLIE	Depth N/A Date/Time N/A	DATE COMPLETED: 10/01/87	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	007175	09/24/87	5 12 11	12	VERY SOFT, DARK YELLOWISH BROWN (10YR 4/4), SILT, SOME CLAY, TRACE GRAVEL AND SAND, MOIST. 1.0'-HARD, BROWNISH YELLOW (10YR 6/6), CLAY, SOME SILT, TRACE GRAVEL AND SAND, DRY.	ML CL	0.2 4.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
3.0	007176	09/24/87	8 7 12	10	HARD, BROWNISH YELLOW (10YR 6/6), CLAY, SOME SILT, TRACE GRAVEL AND SAND, DRY. 2.0'-HARD, BROWNISH YELLOW (10YR 6/8), SILT, SOME CLAY, TRACE GRAVEL AND SAND, DRY.	CL ML	4.5 0.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
4.5	007177	09/24/87	4 5 7	9	HARD, BROWNISH YELLOW (10YR 6/8), SILT, SOME CLAY, TRACE GRAVEL AND SAND, DRY. 3.5'-MEDIUM STIFF, YELLOWISH BROWN (10YR 5/4), SILT, SOME CLAY, TRACE GRAVEL AND SAND, DRY.	ML ML	0.5 1.25	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
6.0	007178	09/24/87	7 11 12	16	VERY STIFF, YELLOWISH BROWN (10YR 5/6), SILT, SOME CLAY, TRACE GRAVEL, DRY.	ML	2.0	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
7.5	007179	09/24/87	9 10 10	13	VERY STIFF, BROWNISH YELLOW (10YR 6/8), SILT, SOME SAND AND CLAY, DRY.	ML	3.0	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
9.0	007180	09/29/87 1015	22 23 22	14	DENSE, BROWN (7.5YR 5/6), SAND AND GRAVEL, SOME SILT AND CLAY, MOIST. 8.0'-STIFF, BROWN (7.5YR 5/6) MOTTLED ORANGE AND RED, SILTY CLAY, TRACE SAND, MOIST.	ML ML	1.0 N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
10.5	007181	09/29/87 1040	2 4 11	11	MEDIUM STIFF, GRAY (5YR 4/2), SILT CLAY SOME PEBBLES, TRACE FINE SAND AND GRAVEL, MOIST.	ML	0.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
12.0	007182	09/29/87 1100	3 3 14	10	STIFF, BROWN GRAY (5YR 4/2), SILTY CLAY, SOME PEBBLES, TRACE FINE SAND, MOIST.	ML	1.0	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
13.5	007183	09/29/87 1110	10 20 25	12	MEDIUM STIFF, GRAY (5.5YR 3/0), SILTY CLAY, SOME PEBBLES, TRACE FINE SAND, DRY.	ML	0.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
15.0	007184	09/29/87 1140	4 9 14	12	STIFF, GRAY (5YR 3/0), SILTY CLAY, SOME PEBBLES AND FINE SAND, MOIST.	ML	1.0	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
16.5	007185	09/29/87 1205	10 33 50	14	VERY DENSE, BROWN (10YR 5/2), SAND AND GRAVEL, SOME SILT AND CLAY, TRACE PEBBLES, MOIST.	SP	1.25	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
18.0	007186	09/29/92 1320	25 40 34+	12	VERY DENSE, BROWN (10YR 4/2), COARSE SAND TO FINE GRAVEL, SOME MEDIUM TO COARSE SAND, SILT, AND CLAY, DRY.	SP	1.25	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
19.5	007187	09/29/87 1445	18 30 44	12	VERY DENSE, BROWN (10YR 4/2), SAND AND GRAVEL, SOME SILT AND CLAY, TRACE PEBBLES, DRY.	SP	1.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2065	COORDINATES: NORTH 477,866.51 EAST 1,380,434.37	DATE:	
GROUND ELEVATION: 571.5	GWL: Depth N/A Date/Time N/A	DATE STARTED: 09/24/87	
ENGINEER/GEOLOGIST: D OAKLEY/L WILLIE	Depth N/A Date/Time N/A	DATE COMPLETED: 10/01/87	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
19.5 21.0	007188	09/29/87 1515	19 31 27	14	DENSE, BROWN (10YR 5/2), SAND AND GRAVEL, SOME SILT, CLAY AND PEBBLES, TRACE STONES, DRY.	SP	1.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
25.0 26.5	007189	09/29/87 1550	6 29 50+	1.6	VERY DENSE, BROWN (10YR 5/4), SAND AND GRAVEL, SOME SILT, CLAY AND PEBBLES, DRY.	SP	2.0	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
30.0 31.5	007190	09/29/87 1610	20 55 50+	18	VERY DENSE, BROWN (10YR 3/4), SAND, SOME GRAVEL, PEBBLES AND SILT, TRACE CLAY, DRY.	SP	3.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
35.0 36.5	007191	09/29/87 1640	8 17 22	18	DENSE, BROWN (10YR 4/3), SAND, SOME SILT, CLAY AND FINE GRAVEL, TRACE MEDIUM TO COARSE GRAVEL AND PEBBLES, MOIST.	SP	0.5	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
40.0 41.5	007192	09/29/87 1725	20 45 50+	18	VERY DENSE, BROWN-RED (10YR 6/4), SAND, SOME GRAVEL, SILT, TRACE PEBBLES AND CLAY, MOIST.	SP	0.25	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
45.0 46.5	007193	09/30/87	18 14 18	18	DENSE, BROWN (10YR 5/4), COARSE SAND AND GRAVEL, SOME SILT, CLAY AND PEBBLES, TRACE STONES, MOIST (POSSIBLE WET).	GP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
50.0 51.5	007194	09/30/87	6 17 20	7	LOOSE, BROWN (10YR 3/2), SAND AND GRAVEL, SOME SILT AND CLAY, TRACE COBBLES AND STONES, MOIST (POSSIBLE WET).	SP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
55.0 56.5	007195	09/30/87	7 6 12	7	LOOSE, GRAY (7.5YR 4/0), SAND, SOME FINE GRAVEL AND SILT, TRACE CLAY, WET.	SP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
60.0 61.5	007196	09/30/87	11 7 7	7	LOOSE, GRAY (7.5YR 4/0), SAND, SOME FINE GRAVEL AND SILT, TRACE CLAY, WET.			Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm
65.0 66.5	007197	10/01/87	4 11 15	7	LOOSE, GRAY (5YR 5/0), SAND AND GRAVEL, SOME SILT, PEBBLES AND CLAY, WET.			Hnu= 0 ppm α = 0 cpm βΓ = 40-80 cpm

BOTTOM OF BORING 66.5

NOTES:
PENNSYLVANIA DRILLING CO, CYCLONE RIG, DRILLER HARRY DYKES, HELPER TIM HARRIS.
SAMPLES COLLECTED PER ASTM STANDARD PENETRATION TEST. COLORS IDENTIFIED USING MUNSELL COLOR CHART.
MONITORING WELL INSTALLED.

FERNALD RI/FS — VISUAL CLASSIFICATION OF SOILS — SF

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2385	COORDINATES: NORTH 477,886.51 EAST 1,379,923.25	DATE: 04/20/90	
GROUND ELEVATION: 577.6	GWL: Depth N/A Date/Time N/A	DATE STARTED: 04/20/90	
ENGINEER/GEOLOGIST: M SWANSON	Depth N/A Date/Time N/A	DATE COMPLETED: 04/25/90	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 3	

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
0.0 1.5	032619 04/20/90 1110	3 18 25	14	FIRM, VERY DARK BROWN (10YR 2/2) MOTTLED, CLAYEY SILT, SLIGHT PLASTICITY, FRIABLE, DRY.	ML	1.0	Hnu= 0.1 ppm α = 0 cpm BΓ = 40 cpm
3.0	032620 04/20/90 1116	13 13 21	4	FIRM, VERY DARK BROWN (10YR 2/2) MOTTLED, CLAYEY SILT, SLIGHT PLASTICITY, FRIABLE, DRY. 1.8'-FIRM, YELLOWISH BROWN (10YR 5/4) MOTTLED, SILTY, CLAY, SOME SAND, LOW PLASTICITY, DRY TO SLIGHTLY MOIST.	ML CL	1.0 1.75	Hnu= 0.1 ppm α = 0 cpm BΓ = 40 cpm
4.5	032621 04/20/90 1123	13 13 13	18	FIRM, YELLOWISH BROWN (10YR 5/4) MOTTLED, SILTY, CLAY, SOME SAND, LOW PLASTICITY, DRY TO SLIGHTLY MOIST.	CL	1.75	Hnu= 0.1 ppm α = 0 cpm BΓ = 40-50 cpm
6.0	032622 04/20/90 1127	8 9 11	12	FIRM, YELLOWISH BROWN (10YR 5/4) MOTTLED, SILTY, CLAY, SOME SAND, LOW PLASTICITY, DRY TO SLIGHTLY MOIST. 5.0'-FIRM, GRAYISH BROWN (2.5 Y 5/2) MOTTLED, CLAY, SOME SAND, SILT, LOW PLASTICITY, DRY.	CL CL	1.75 2.0	Hnu= 0.1 ppm α = 0 cpm BΓ = 50-60 cpm
7.5	032623 04/20/90 1131	7 9 11	18	FIRM, BROWNISH YELLOW (10YR 6/6), CLAY, SOME GRAVEL, SAND, LOW TO MED. PLASTICITY, MOIST. 6.5'-FIRM, LIGHT YELLOWISH BROWN (10YR 6/4) MOTTLED, CLAY, TRACE SAND, DRY, LOW PLASTICITY.	CL CL	1.0 2.0	Hnu= 0.1 ppm α = 0 cpm BΓ = 40-60 cpm
9.0	032624 04/20/90 1137	8 8 9	18	HARD, LIGHT OLIVE BROWN (2.5 Y 5/4), CLAY, SOME SAND, .25 IN. SAND LENSE WITH WATER AT 8.7 FT., LOW PLASTICITY, MOIST.	CL	2.5	Hnu= 0.1 ppm α = 0 cpm BΓ = 40-50 cpm
10.5	032625 04/20/90 1510	1 5 7	16	FIRM, BROWNISH YELLOW (10YR 6/8), SANDY CLAY, HIGH PLASTICITY, MOIST; SAND LENSES OF 1 IN. AT 9.6 AND 10.1 FT.	CH	0.75	Hnu= 0.5 ppm α = 0 cpm BΓ = 40-60 cpm
12.0	032626 04/20/90 1514	6 8 10	18	FIRM, BROWNISH YELLOW (10YR 6/8), SAND/CLAY MIXTURE, SOME ANGULAR TO SUBROUNDED PEBBLES, LOW TO MEDIUM PLASTICITY; MOIST CLAY, WET SANDS.	CL	1.25	Hnu= 0.3 ppm α = 0 cpm BΓ = 40-50 cpm
13.5	032627 04/20/90 1535	6 7 10	18	FIRM, BROWNISH YELLOW (10YR 6/8), SAND/CLAY MIXTURE, SOME ANGULAR TO SUBROUNDED PEBBLES, LOW TO MEDIUM PLASTICITY, MOIST, CLAY, WET SANDS; SAND LENSES 0.5 IN THICK AT 12.3 FT. 13.0'-HARD, GRAY (10YR 5/1), SILTY CLAY, TRACE SANDS, LOW PLASTICITY, DRY.	CL CL	1.25 2.75	Hnu= 0.2 ppm α = 0 cpm BΓ = 40-60 cpm
15.0	032628 04/20/90 1541	7 9 12	15	HARD, GRAY (10YR 5/1), SILTY, CLAY, TRACE OF SAND, LOW PLASTICITY, DRY.	CL	2.75	Hnu= 0.2 ppm α = 0 cpm BΓ = 50-60 cpm
16.5	032629 04/20/90 1552	3 3 6	10	HARD, GRAY (10YR 5/1), CLAY, SOME ANGULAR PEBBLES, TRACE OF SILT, LOW PLASTICITY, DRY.	CL	2.5	Hnu= 0.5 ppm α = 0 cpm BΓ = 40-60 cpm
18.0	032630 04/20/90 1602	6 9 10	18	HARD, GRAY (10YR 5/1), CLAY, SOME ANGULAR PEBBLES, TRACE OF SILT, LOW PLASTICITY, DRY.	CL	2.5	Hnu= 0.5 ppm α = 0 cpm BΓ = 50-60 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2385	COORDINATES: NORTH 477,886.51 EAST 1,379,923.25	DATE: 04/20/90	
GROUND ELEVATION: 577.6	GWL: Depth N/A Date/Time N/A	DATE STARTED: 04/20/90	
ENGINEER/GEOLOGIST: M SWANSON	Depth N/A Date/Time N/A	DATE COMPLETED: 04/25/90	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
19.5	032631	04/20/90 1607	7 10 12	12	HARD, GRAY (10YR 5/1), CLAY, SOME ANGULAR PEBBLES, TRACE OF SILT, LOW PLASTICITY, DRY.	CL	2.5	Hnu= 0.4 ppm α = 0 cpm βΓ = 40-50 cpm
21.0	032632	04/21/90 0940	10 18 30	14	HARD, OLIVE GRAY (5Y 5/2), SILTY, CLAY, TRACE OF SAND, LIMESTONE COBBLE, DRY.	CL	3.5	Hnu= 0.1 ppm α = 0 cpm βΓ = 40 cpm
22.5	032633	04/21/90 1005	17 20 25	16	HARD, OLIVE GRAY (5Y 5/2), SILTY, CLAY, TRACE OF SAND, LIMESTONE COBBLE, DRY.	CL	3.5	Hnu= 0.1 ppm α = 0 cpm βΓ = 40-60 cpm
24.0	032634	04/21/90 1012	12 17 32	18	HARD, OLIVE GRAY (5Y 5/2), SILTY, CLAY, TRACE OF SAND, LIMESTONE COBBLE, DRY. 23.5'-DENSE, YELLOWISH BROWN (10YR 5/6), POORLY GRADED, FINE SAND, DRY.	CL SP	3.5 N/A	Hnu= 0.1 ppm α = 0 cpm βΓ = 40-60 cpm
25.5	032635	04/21/90 1040	16 42 36	16	VERY DENSE, LIGHT GRAY (10YR 7/1) AND BLACK (10YR 2/1) WITH BROWNISH YELLOW (10YR 6/8), WELL GRADED, SAND, SOME PEBBLES AND GRAVEL (SUBROUNDED), DRY.	SW	N/A	Hnu= 0.1 ppm α = 0 cpm βΓ = 40-60 cpm
30.0 31.5	032636	04/21/90 1419	5 16 21	9	DENSE, YELLOWISH BROWN (10YR 5/6), WELL GRADED, GRAVELLY, SANDS, SUBROUNDED, DRY.	SW	N/A	Hnu= 0.08 ppm α = 0 cpm βΓ = 60-70 cpm
35.0 36.5	032637	04/21/90 1441	13 17 27	10	DENSE, LIGHT GRAY (10YR 7/1) WITH BANDS OF YELLOWISH BROWN (10YR 5/6), POORLY GRADED, FINE, SAND, SOME ROUNDED PEBBLES, DRY.	SP	N/A	Hnu= 0.1 ppm α = 0 cpm βΓ = 70 cpm
40.0 41.5	032638	04/21/90 1540	18 19 19	12	DENSE, YELLOWISH BROWN (10YR 5/6), POORLY GRADED, FINE, SAND, DRY.	SP	N/A	Hnu= 0.5 ppm α = 0 cpm βΓ = 40 cpm
45.0 46.5	032639	04/21/90 1618	3 23 26	8	DENSE, BROWNISH YELLOW (10YR 6/6), WELL GRADED, GRAVELLY, SAND, SUBROUNDED, MOIST.	SW	N/A	Hnu= 0.5 ppm α = 0 cpm βΓ = 40-65 cpm
50.0 51.5	032640	04/22/90 0850	9 19 41	11	VERY DENSE, LIGHT YELLOWISH BROWN (10YR 6/4), WELL GRADED, GRAVELLY, SAND, SOME PEBBLES, SUBROUNDED TO SUBANGULAR, DRY TO SLIGHTLY MOIST.	SW	N/A	Hnu= 0.15 ppm α = 0 cpm βΓ = 60-80 cpm
55.0 56.5	032641	04/22/90 0955	5 13 38	7	VERY DENSE, PALE BROWN (10YR 6/3), POORLY GRADED, GRAVELLY, FINE, SAND, ROUNDED TO SUBANGULAR, SATURATED; 1.0 IN BAND OF IRON OXIDE STAINING AT 55.4 FT.	SP	N/A	Hnu= 0.20 ppm α = 0 cpm βΓ = 70-80 cpm
60.0 61.5	032642	04/22/90 1110	5 8 13	6	MEDIUM DENSE, GRAY (10YR 5/1), GRAVELLY, PEBBLEY, SAND, WELL GRADED AND FINE TO COARSE, LIMESTONE COBBLE, SUBROUNDED, SATURATED.	SW	N/A	Hnu= 0.1 ppm α = 0 cpm βΓ = 60-80 cpm
65.0 66.5	032643	04/22/90 1315	13 16 18	8	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, GRAVELLY, SAND, SUBROUNDED, SATURATED.	SW	N/A	Hnu= 0.1 ppm α = 0 cpm βΓ = 50-60 cpm

VISUAL CLASSIFICATION OF SOILS

3838 SF

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 2385	COORDINATES: NORTH 477,886.51 EAST 1,379,923.25	DATE: 04/20/90	
GROUND ELEVATION: 577.6	GWL: Depth N/A Date/Time N/A	DATE STARTED: 04/20/90	
ENGINEER/GEOLOGIST: M SWANSON	Depth N/A Date/Time N/A	DATE COMPLETED: 04/25/90	
DRILLING METHODS: CABLE-TOOL		PAGE 3 OF 3	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS
70.0 71.5	032644 04/22/90 1445			15 21 29		6		DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, GRAVELLY, COARSE, SAND, ROUNDED TO SUBANGULAR, SATURATED.	SW		N/A	Hnu= 0.15 ppm α = 0 cpm βΓ = 40-50 cpm

BOTTOM OF BORING 75.0

NOTES:
ALL SOIL SAMPLES COLLECTED ACCORDING TO ASTM STANDARD PENETRATION TEST. MUNSELL COLOR CHARTS USED FOR SOIL COLOR DESCRIPTIONS. END OF TILL AT 23.5 FT. MONITORING WELL INSTALLED.

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FERNALD RI/FS

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3044	COORDINATES: NORTH 477,773.57 EAST 1,378,162.79	DATE: 03/01/88	
GROUND ELEVATION: 571.8	GWL: Depth N/A Date/Time N/A	DATE STARTED: 03/01/88	
ENGINEER/GEOLOGIST: T SULLIVAN	Depth N/A Date/Time N/A	DATE COMPLETED: 03/07/88	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 4	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	008083 03/01/88 1010		2 3 4	13	STIFF, BROWN (10YR 4/2), ORGANIC RICH SILT AND CLAY, ABUNDANT ROOTS, DRY. 0.5'-VERY STIFF, YELLOW-BROWN (10YR 4/4), CLAY, TRACE ORGANIC MATERIAL.	ML/CL CL	1.5 2.75	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
3.0	008084 03/01/88 1030		2 3 6	14	VERY STIFF, YELLOW-BROWN (10YR 4/4), CLAY, SLIGHTLY MOTTLED, DRY.	CL	2.5	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
4.5	008085 03/01/88 1035		3 6 7	15	VERY STIFF, YELLOW-BROWN (10YR 4/4), CLAY, TRACE SILT, SLIGHTLY MOTTLED, 1" SILT LENS AT 4.3', DRY.	CL	2.75	Hnu= 0 ppm α = 4 cpm βΓ = 140 cpm
6.0	008086 03/01/88 1040		7 10 9	18	HARD, YELLOW-BROWN (10YR 5/4), CLAY, SLIGHTLY MOTTLED, TRACE SILT IN BOTTOM 2", DRY.	CL	4.25	Hnu= 0 ppm α = 2 cpm βΓ = 120 cpm
7.5	008087 03/01/88 1042		10 11 11	16	VERY STIFF, YELLOW-BROWN (10YR 5/4) MOTTLED WITH LIGHT GRAY (10YR 6/3) CLAY, TRACE SILT, DRY. 7.3'-VERY STIFF, YELLOW-BROWN (10YR 6/4), CLAY WITH SOME FINE GRAVEL, TRACE SILT, DRY.	CL CL	3.0 3.25	Hnu= 0 ppm α = 2 cpm βΓ = 100 cpm
9.0	008088 03/01/88 1430		4 8 13	14	VERY STIFF, YELLOW-BROWN (10YR 6/6), CLAY, SOME SILT, SLIGHTLY MOTTLED, DRY.	CL	3.5	Hnu= 0 ppm α = 2 cpm βΓ = 100 cpm
10.5	008091 03/01/88 1450		3 11 13	10	MEDIUM DENSE, YELLOW-BROWN (10YR 4/4), SAND, SOME SILT, SOME CLAY, TRACE GRAVEL, MOIST, SANDY CLAY LENSE AT 9.6 AND 10.0 FT, 1" THICK.	SM	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
12.0	008092 03/01/88 1515		10 8 14	6	MEDIUM DENSE, YELLOW-BROWN (10YR 4/4), SAND, SOME SILT AND CLAY, TRACE FINE GRAVEL, MOIST. 11.3'-VERY STIFF, YELLOW-BROWN (10YR 5/4), CLAY, TRACE GRAVEL, DRY.	SM CL	N/A 2.5	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
13.5	008093 03/01/88 1525		4 9 9	11	MEDIUM STIFF, GRAY (10YR 4/1), SANDY CLAY, SOME SILT, MOIST, BOTTOM 3" VERY SANDY.	CL	1.0	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
15.0	008094 03/01/88 1540		4 4 3	1	GRAY-BROWN (10YR 4/3), SANDY CLAY, TRACE GRAVEL, SOME SILT, MOIST. NO RECOVERY ON FIRST AND SECOND TRY, 1" ON THIRD TRY.	CL	?	Hnu= 0 ppm α = 2 cpm βΓ = 80 cpm
16.5	008095 03/01/88 1605		2 2 3	1	GRAY (10YR 4/1), CLAY, SOME SILT AND SAND, TRACE GRAVEL, MOIST.	CL	?	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
18.0	008096 03/01/88 1615		3 2 5	6	STIFF, GRAY (10YR 5/1), CLAY, TRACE SILT, TRACE GRAVEL, MOIST.	CL	1.5	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
19.5	008097 03/01/88 1630		7 26 26	5	VERY DENSE, GRAY-BROWN (10YR 5/2), COARSE SAND, SOME GRAVEL, SOME SILT AND CLAY, MOIST. 19.3'-HARD, GRAY-BROWN (10YR 5/2), CLAY, SOME COARSE GRAVEL, TRACE SILT, DRY.	SM CL	N/A >5	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3044	COORDINATES: NORTH 477,773.57 EAST 1,378,162.79	DATE: 03/01/88	
GROUND ELEVATION: 571.8	GWL: Depth N/A Date/Time N/A	DATE STARTED: 03/01/88	
ENGINEER/GEOLOGIST: T SULLIVAN	Depth N/A Date/Time N/A	DATE COMPLETED: 03/07/88	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 4	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
21.0	008098	03/01/88 1725	15 25 28	8	HARD, GRAY-GREEN (5Y 3/2), CLAY, TRACE SILT, TRACE GRAVEL, DRY.	CL	>5	Hnu= 0 ppm α = 2 cpm βΓ = 100 cpm
22.5	008099	03/02/88 0805	8 15 21	13	DENSE, YELLOW-BROWN (10YR 4/4), FINE TO MEDIUM SAND, TRACE SILT, DRY.	SM	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
24.0	008100	03/02/88 0820	9 19 23	14	DENSE, YELLOW-BROWN (10YR 4/4), FINE GRAINED SAND, TRACE SILT, DRY.	SM	N/A	Hnu= 0 ppm α = 2 cpm βΓ = 60 cpm
25.5	008101	03/02/88 0850	9 10 18	11	MEDIUM DENSE, YELLOW-BROWN (10YR 5/4), VERY FINE SAND, SOME SILT, DRY.	SM	N/A	Hnu= 0 ppm α = 2 cpm βΓ = 100 cpm
30.0 31.5	008102	03/02/88 1035	6 11 13	9	MEDIUM DENSE, GRAY (10YR 5/3), FINE SAND, SOME SILT, DRY.	SM	N/A	Hnu= 0 ppm α = 2 cpm βΓ = 100 cpm
35.0 36.5	008103	03/02/88 1100	18 17 22	12	DENSE, TAN (10YR 5/4) VERY FINE SAND, SOME SILT, DRY, GRAVEL IN BOTTOM 2".	SM	N/A	Hnu= 0 ppm α = 2 cpm βΓ = 100 cpm
40.0 41.5	008104	03/02/88 1335	14 22 30	11	VERY DENSE, TAN (10YR 5/4) MEDIUM TO COARSE SAND, TRACE SILT, SOME GRAVEL, DRY.	SM	N/A	Hnu= 0 ppm α = 2 cpm βΓ = 80 cpm
45.0 46.5	008245	03/02/88 1445	17 55	8	VERY DENSE, BROWN-GRAY (10YR 5/3), FINE-MEDIUM SAND, SOME SILT, TRACE CLAY, DRY.	SM	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
50.0 51.5	008246	03/02/88 1520	11 16 18	13	DENSE, GRAY-BROWN (10YR 4/3), MEDIUM-COARSE SAND, TRACE SILT, TRACE FINE GRAVEL, WET.	SM	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
55.0 56.5	008247	03/02/88 1545	8 8 11	8	MEDIUM DENSE, GRAY-BROWN (10YR 4/2), MEDIUM SAND, TRACE SILT, TRACE FINE GRAVEL, WET.	SM	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
60.0 61.5	008248	03/05/88 1010	5 12 21	13	DENSE, BROWN-GRAY (10YR 4/2), MEDIUM SAND, SOME SILT, TRACE FINE GRAVEL, WET.	SM	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 60 cpm
65.0 66.5	008249	03/02/88 1310	5 12 14	13	MEDIUM DENSE, BROWN-GRAY (10YR 4/2), MEDIUM SAND, SOME SILT, TRACE FINE TO COARSE GRAVEL, WET.	SM	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
70.0 71.5	008250	03/05/88 1500	22 53 34	17	VERY DENSE, BROWN-GRAY (10YR 4/2), MEDIUM TO COARSE SAND, SOME SILT, WET. 70.3'-DENSE, BROWN-GRAY (10YR 4/2), COARSE SAND, GRAVELLY, SOME SILT, WET.	SM SW	N/A N/A	Hnu= 0 ppm α = 2 cpm βΓ = 100 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3044	COORDINATES: NORTH 477,773.57 EAST 1,378,162.79	DATE: 03/01/88	
GROUND ELEVATION: 571.8	GWL: Depth N/A Date/Time N/A	DATE STARTED: 03/01/88	
ENGINEER/GEOLOGIST: T SULLIVAN	Depth N/A Date/Time N/A	DATE COMPLETED: 03/07/88	
DRILLING METHODS: CABLE-TOOL		PAGE 3 OF 4	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
75.0 76.5	008251	03/05/88 1535	9 13 14		18	MEDIUM DENSE, GRAY-BROWN (10YR 4/3), MEDIUM SAND, TRACE SILT, WET.	SM	N/A	Hnu= 0 ppm α = 2 cpm BΓ = 90 cpm
80.0 81.5	008252	03/05/88 1555	4 10 12		17	MEDIUM DENSE, BROWN (10YR 4/2), FINE-MEDIUM SAND, SOME SILT, WET. 81.0'-MEDIUM DENSE, BROWN (10YR 4/2), MEDIUM TO COARSE SAND, SOME COARSE GRAVEL, SOME SILT, WET.	SM SP	N/A N/A	Hnu= 0 ppm α = 2 cpm BΓ = 80 cpm
85.0 86.5	008253	03/05/88 1725	12 24 24		18	DENSE, BROWN (10YR 4/2), FINE TO MEDIUM SAND, SOME SILT, WET. 85.5'-DENSE, BROWN (10YR 4/2), SANDY GRAVEL, MEDIUM TO COARSE SAND, SOME PEBBLES, SOME SILT, WET.	SM GP	N/A N/A	Hnu= 0 ppm α = 0 cpm BΓ = 100 cpm
90.0 91.5	008254	03/06/88 0825	5 6 7		11	MEDIUM DENSE, BROWN (10YR 4/2), FINE SAND, SOME SILT, UNIFORM GRAIN SIZE, WET. GRAVELLY LENSE AT 90.1 TO 90.2 FT.	SM	N/A	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm
95.0 96.5	008255	03/06/88 1030	15 22 24		16	DENSE, BROWN (10YR 3/3), VERY FINE SAND, WELL GRADED, SOME SILT, WET.	SM	N/A	Hnu= 0 ppm α = 0 cpm BΓ = 40 cpm
100.0 101.5	008256	03/06/88 1100	5 4 5		18	LOOSE, GRAY-BROWN (10YR 4/2), VERY FINE GRAINED SAND, SOME SILT, SOME CLAY, WET.	SM	N/A	Hnu= 0 ppm α = 2 cpm BΓ = 60 cpm
105.0 106.5	008257	03/06/88 1335	2 3 4		16	LOOSE, GRAY (10YR 3/1), FINE SAND, SOME SILT, TRACE CLAY, WELL GRADED, WET.	SM	N/A	Hnu= 0 ppm α = 0 cpm BΓ = 80 cpm
110.0 111.5	008258	03/06/88 1450	5 9 13		16	MEDIUM DENSE, GRAY (10YR 4/1), FINE SAND, SOME SILT, TRACE CLAY, WET. 111.3'-GRAY (10YR 4/1), VERY FINE SAND AND SILT, SOME CLAY, WET.	SM ML	N/A N/A	Hnu= 0 ppm α = 2 cpm BΓ = 80 cpm
115.0 116.5	008259	03/06/88 1630	5 15 28		18	DENSE, GRAY (10YR 4/1), FINE-MEDIUM SAND, SOME SILT, TRACE CLAY, WET.	SM	N/A	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm
120.0 121.5	008260	03/06/88 1745	8 24 26		18	DENSE, GRAY (10YR 4/1), FINE SAND, SOME SILT, TRACE CLAY, WET.	SM	N/A	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm
125.0 126.5	008261	03/07/88 0920	4 7 8		18	STIFF, GRAY-GREEN (5YR 4/1), CLAY, SOME SILT, MOIST.	CL	1.25	Hnu= 0 ppm α = 2 cpm BΓ = 60 cpm
127.4	008262	03/07/88 1040	N/A		N/A	SHELBY TUBE PUSHED 126.5-127.4 FT. VERY STIFF, GRAY-GREEN (5Y 3/1), CLAY, SOME SILT, DRY.	CL	2.5	Hnu= 0 ppm α = 0 cpm BΓ = 60 cpm

BOTTOM OF BORING 127.4

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3044	COORDINATES: NORTH 477,773.57 EAST 1,378,162.79	DATE: 03/01/88	
GROUND ELEVATION: 571.8	GWL: Depth N/A Date/Time N/A	DATE STARTED: 03/01/88	
ENGINEER/GEOLOGIST: T SULLIVAN	Depth N/A Date/Time N/A	DATE COMPLETED: 03/07/88	
DRILLING METHODS: CABLE-TOOL		PAGE 4 OF 4	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES	USCS	SYMBOL	TSF	REMARKS

NOTES:
PENNSYLVANIA DRILLING CO, BUCKRUS ERIE 24-W RIG, DRILLER DAVE NEWMAN, HELPER BOB JOHNSON.
BLOWS ON SAMPLER FOLLOW ASTM STANDARD FOR 2 x 18 IN SPLIT SPOON. SOIL COLORS FOLLOW MUNSELL COLOR CHART.
WATER USED IN DRILLING, APPROX 300 GALS.
BASE OF TILL AT 21.0 FT.
55.0-56.5 FT - NO RECOVERY ON FIRST TRY, COBBLE CAUGHT IN SPOON. 2ND TRY HAD 8" RECOVERY.
70.0-71.5 FT - COBBLE SMASHED IN SPOON.
SHELBY TUBE PUSHED 126.5-127.4 FT, 1.7 FT PENETRATION, 0.9 FT RECOVERY. APPROX 0.6 FT OF SAND CLEANED OUT OF TUBE.
"BLUE" CLAY ENCOUNTERED AT APPROX 124.0 TO 124.5 FT.
MONITORING WELL INSTALLED.

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3046	COORDINATES: NORTH 478,051.23 EAST 1,379,438.66	DATE: 05/24/90	
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/22/90	
ENGINEER/GEOLOGIST: M SWANSON	Depth N/A Date/Time N/A	DATE COMPLETED: 06/04/90	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
75.0 76.5	032704 05/24/90 1041		16 21 27		18	DENSE, GRAY TO DARK GRAY (10YR 5/1 TO 10YR 4/1), WELL GRADED COARSE SAND, SOME SILT AND COBBLES (TO 0.75 IN), SOME SILT, SATURATED.	SW	N/A	Hnu= 0.8 ppm α = 0 cpm βΓ = 60-85 cpm
80.0 81.5	032705 05/30/90 0905		10 21 22		15	DENSE, DARK GRAYISH BROWN (10YR 4/2), POORLY GRADED, FINE, SAND, TRACE OF SUBROUNDED PEBBLES, SOME SILT, SATURATED.	SP	N/A	Hnu= 0.2 ppm α = 0 cpm βΓ = 40-50 cpm
85.0 86.5	032706 05/30/90 0925		15 20 22		18	DENSE, DARK BROWN (7.5 YR 4/2), SILTY FINE GRAINED POORLY GRADED SAND, SOME ROUNDED PEBBLES, (TO 0.2 IN.) SATURATED.	SM	N/A	Hnu= 0.2 ppm α = 0 cpm βΓ = 40-60 cpm
90.0 91.5	032707 05/30/90 0956		7 7 8		15	MEDIUM DENSE, BROWN (10YR 5/3), SILTY, WELL GRADED, COARSENING, SAND, SOME ROUNDED PEBBLES, SATURATED.	SM	N/A	Hnu= 0.1 ppm α = 0 cpm βΓ = 50-70 cpm
95.0 96.5	032708 05/30/90 1347		33 76 50/5		17	VERY DENSE, GRAYISH-BROWN (10YR 5/2), POORLY GRADED, COARSE SAND, TRACE OF SILT, PEBBLES (TO 0.15 IN.), SATURATED.	SP	N/A	Hnu= 0.2 ppm α = 0 cpm βΓ = 70-90 cpm
100.0 101.5	032709 05/30/90 1418		3 9 22		18	DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, COARSE, SAND, SOME SILT, SATURATED.	SW	N/A	Hnu= 0.1 ppm α = 0 cpm βΓ = 60-80 cpm
105.0 106.5	032710 05/30/90 1620		9 11 15		16	MEDIUM DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED FINE SAND, SOME SILT, SATURATED.	SW	N/A	Hnu= 0.1 ppm α = 0 cpm βΓ = 40-50 cpm
110.0 111.5	032711 05/30/90 1642		2 3 11		14	MEDIUM DENSE, DARK GRAY (2.5 Y 4/0), WELL GRADED, FINE, SAND, SOME SILT, TRACE OF ROUNDED PEBBLES (TO 0.25 IN.), SATURATED.	SW	N/A	Hnu= 0.06 ppm α = 0 cpm βΓ = 60-70 cpm
115.0 116.5	032712 05/31/90 1033		8 20 22		16	DENSE, DARK GRAY (10YR 4/1), POORLY GRADED, FINE, SILTY, SAND, SATURATED.	SM	N/A	Hnu= 0.15 ppm α = 0 cpm βΓ = 40-50 cpm
120.0 121.5	032713 05/31/90 1441		6 13 20		13	DENSE, DARK GRAY (10YR 4/1), WELL-GRADED SILTY SAND, SOME PEBBLES (TO 0.2 IN), SUBROUNDED, COARSE SAND, SATURATED.	SW	N/A	Hnu= 0.15 ppm α = 0 cpm βΓ = 60-80 cpm
125.0 126.5	032714 05/31/90 1552		7 9 18		17	MEDIUM DENSE, GRAY (2.5 Y 5/0), POORLY GRADED, MEDIUM TO COARSE SAND, SOME SILT, SATURATED.	SP	N/A	Hnu= 0.1 ppm α = 0 cpm βΓ = 40-70 cpm
130.0 131.5	032715 05/31/90 1727		2 3 16		18	MEDIUM DENSE, DARK GRAY (2.5Y 4/0), WELL GRADED, GRAVEL/SAND MIXTURE, SOME SILT, GRAVEL TO 1.0 IN, FRACTURED LIMESTONE COBBLES, SATURATED.	GW	N/A	Hnu= 0.1 ppm α = 0 cpm βΓ = 40-60 cpm
135.0 136.5	032716 06/01/90 1115		22 16 15		14	DENSE, GRAY (2.5 Y 5/0), SILT/GRAVEL/SAND MIXTURE, GRAVEL TO 1.25 IN, SATURATED.	GM	N/A	Hnu= 0.08 ppm α = 0 cpm βΓ = 50 cpm

BOTTOM OF BORING 136.5

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3046	COORDINATES: NORTH 478,051.23 EAST 1,379,438.66	DATE: 05/24/90	
GROUND ELEVATION:	GWL: Depth N/A Date/Time N/A	DATE STARTED: 05/22/90	
ENGINEER/GEOLOGIST: M SWANSON	Depth N/A Date/Time N/A	DATE COMPLETED: 06/04/90	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES	USCS	SYMBOL	TSF	REMARKS

NOTES:
ALL SOIL SAMPLES COLLECTED PER ASTM STANDARD PENETRATION TEST. SOIL SAMPLE COLORS IDENTIFIED USING MUNSELL COLOR CHARTS. NO "BLUE CLAY" ENCOUNTERED. MONITORING WELL INSTALLED.

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3049	COORDINATES: NORTH 477,021.22 EAST 1,380,061.42	DATE:	
GROUND ELEVATION: 540.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/01/88	
ENGINEER/GEOLOGIST: L ADAMS	Depth N/A Date/Time N/A	DATE COMPLETED: 11/14/88	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
45.0 46.5	008980	11/02/88 1440	20 24 44	10	VERY DENSE, GRAYISH BROWN (10YR 4/2), WELL GRADED GRAVEL/SAND MIXTURE, WET.	GW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 20 cpm
50.0 51.5	008981	11/02/88 1545	6 8 9	14	MEDIUM DENSE, GRAY-BROWN (10YR 4/2), WELL GRADED GRAVELLY SAND, WET. 50.7'-STIFF, YELLOW BROWN (10YR 5/3), GRAVELLY CLAY (TO 0.25"), DAMP. 51.2'-MEDIUM DENSE, GRAY-BROWN (10YR 4/2), WELL GRADED GRAVEL/SAND MIXTURE (GRAVEL 0.25 TO 0.5 IN), WET.	SW CL GW	N/A 2.0 N/A	Hnu= 0 ppm α = 0 cpm βΓ = 20 cpm
55.0 56.5	008982	11/03/88 0950	25 28 41	18	ENCOUNTERED BLOW SAND AT 55 FT. VERY DENSE, GRAY BROWN (10YR 4/3), WELL GRADED GRAVEL/SAND MIXTURE (GRAVEL SIZE 0.25-0.75 IN), WET.	GW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 20 cpm
60.0 61.5	008983	11/03/88 1135	8 9 10	18	MEDIUM DENSE, GRAY BROWN (10YR 4/3), WELL GRADED GRAVEL/SAND MIXTURE, VERY WET. 60.8'-MEDIUM DENSE, GRAY ORANGISH BROWN POORLY GRADED SANDS, TRACE GRAVEL (10YR 4/4), WET, (GRAVEL 0.5 IN).	GW SP	N/A N/A	Hnu= 0 ppm α = 0 cpm βΓ = 20 cpm
65.0 66.5	008984	11/03/88 1555	85 70 56	18	VERY DENSE, BROWN TO ORANGE-BROWN (10YR 4/3) MEDIUM TO WELL SORTED GRAVEL/SAND MIXTURE (GRAVEL 0.1-1.0 IN), WET.	GW	N/A	Hnu= 0 ppm α = 2 cpm βΓ = 20 cpm
70.0 71.5	008985	11/06/88 0925	9 10 13	12	MEDIUM DENSE, DARK GRAYISH BROWN (10YR 4/3), POORLY SORTED SAND, TRACE GRAVEL (3/8 IN), DAMP-DRY, TRACE CLAY.	SC	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 80 cpm
75.0 76.5	008986	11/06/88 1133	32 25 20	12	VERY DENSE, DARK BROWN GRAY (10YR 4/2), POORLY SORTED SAND, SOME GRAVEL (GRAVEL TO 0.8 IN), DAMP.	SP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40 cpm
80.0 81.5	008987	11/07/88 0846	12 13 14	10	MEDIUM DENSE, DARK GRAYISH BROWN (10YR 3/3), POORLY SORTED, VERY FINE SAND, SOME GRAVEL, WET.	SP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 100 cpm
85.0 86.5	008988	11/07/88 1030	6 9 9	8	MEDIUM DENSE, MEDIUM TO DARK GRAYISH BROWN (10YR 4/2), POORLY GRADED GRAVELLY SAND (GRAVEL TO 0.75 IN), WET.	SP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40 cpm
90.0 91.5	008989	11/07/88 1510	13 14 10	11	MEDIUM DENSE, DARK GRAYISH BROWN (10YR 4/2), MEDIUM TO WELL SORTED GRAVELLY SAND (GRAVEL TO 0.75 IN), WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 40-60 cpm
95.0 96.5	008990	11/07/88 1626	18 16 15	6	DENSE, DARK GRAY BROWN (10YR 4/2), WELL SORTED, GRAVELLY SAND (GRAVEL TO 0.5 IN), WET.	SW	N/A	Hnu= 0 ppm α = 1 cpm βΓ = 40 cpm
100.0 101.5	008991	11/08/88 0900	18 20 19	12	DENSE, GRAY BROWN (10YR 4/2), POORLY SORTED FINE SAND, DAMP TO MEDIUM WET.	SP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 20-40 cpm

BOTTOM OF BORING 101.5

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS	
BORING NUMBER: 3049	COORDINATES: NORTH 477,021.22 EAST 1,380,061.42	DATE:
GROUND ELEVATION: 540.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/01/88
ENGINEER/GEOLOGIST: L ADAMS	Depth N/A Date/Time N/A	DATE COMPLETED: 11/14/88
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS

NOTES:
INTERVAL 0.0-40.0 FT PREVIOUSLY SAMPLED AT BORING #2049. SAMPLING FROM THIS BORING COMMENCES AT 45.0 FT DEPTH AND CONTINUES AT 5.0 FT INTERVALS.
SAMPLES COLLECTED PER ASTM STANDARD PENETRATION TEST. COLORS IDENTIFIED USING MUNSELL COLOR CHART.
MONITORING WELL INSTALLED.

FERNALD RI/FS

VISUAL CLASSIFICATION OF SOILS

SF

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3065	COORDINATES: NORTH 477,856.08 EAST 1,380,406.96	DATE: 11/01/88	
GROUND ELEVATION: 571.7	GWL: Depth N/A Date/Time N/A	DATE STARTED: 11/01/88	
ENGINEER/GEOLOGIST: D HOEKSTRA	Depth N/A Date/Time N/A	DATE COMPLETED: 11/09/88	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
70.0 71.5	008928 11/03/88 0920		17 25 30	12	VERY DENSE, GREY BROWN (10YR 5/2), WELL GRADED GRAVELLY SAND (1/8"-1/4"), SOME FINES, WET. 71.0'-DARK GREY (10YR 3/1), WELL GRADED GRAVELLY SAND, WET.	SP	N/A	Hnu= 0 ppm α = 0-2 cpm βΓ = 70 cpm
75.0 76.5	008929 11/03/88 1115		8 40 66	18	VERY DENSE, DARK YELLOWISH BROWN (10YR 3/2), VERY WELL GRADED GRAVELLY SAND (MEDIUM SAND TO 1" GRAVEL), LITTLE OR NO FINES, WET. 76.0'-BROWN TO YELLOW BROWN (10YR 5/2), POORLY GRADED MEDIUM SAND, NO GRAVEL, LITTLE OR NO FINES, WET.	SW SP	N/A N/A	Hnu= 0 ppm α = 1 cpm βΓ = 50 cpm
80.0 81.5	008930 11/03/88 1320		3 2 2	6	VERY LOOSE, GREYISH BROWN (10YR 4/2), WELL GRADED GRAVELLY SAND (FINE SAND TO 1/4" GRAVEL), WET.	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 50 cpm
85.0 86.5	008931 11/03/88 1345		2 3 13	2	MEDIUM DENSE, GREYISH BROWN (10YR 4/2), WELL GRADED GRAVELLY SAND (FINE SAND TO 1/4" GRAVEL).	SW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 50 cpm
90.0 91.5	008932 11/03/88 1617		24 54 50	14	VERY DENSE, DARK BROWN (10YR 3/2), WELL GRADED COARSE SAND, TRACE GRAVEL, WET.	SW	N/A	Hnu= 0 ppm α = 2 cpm βΓ = 60 cpm
95.0 96.5	008933 11/03/88 1645		9 20 23	4	VERY DENSE, DARK YELLOWISH BROWN (10YR 4/2), WELL GRADED SANDY GRAVEL (COARSE SAND TO 1/4"), WET.	GW	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 50 cpm
100.0 101.5	008934 11/03/88 1710		9 9 10	6	MEDIUM DENSE, BROWN (10YR 4/2), POORLY GRADED COARSE SAND, SOME 1/4" GRAVEL, SOME FINES, WET.	SP	N/A	Hnu= 0 ppm α = 2 cpm βΓ = 40 cpm
105.0 106.5	008935 11/06/88 0935		39 50/0.3 50/0.2	12	VERY DENSE, DARK BROWN GREYISH (10YR 4/1), WELL GRADED GRAVELLY SAND (MEDIUM SAND TO 1/2" GRAVEL), WET.	SW	N/A	Hnu= 0 ppm α = 1 cpm βΓ = 60 cpm
110.0 111.5	008936 11/06/88 1030		7 10 16	2	MEDIUM DENSE, GREYISH DARK BROWN (10YR 4/1), WELL GRADED SAND WITH SOME GRAVEL (MEDIUM SAND TO 1/4"), WET.	SW	N/A	Hnu= 0 ppm α = 1 cpm βΓ = 50 cpm
115.0 116.5	008937 11/06/88 1150		12 42 50+	10	VERY DENSE, GREYISH DARK BROWN (10YR 4/1), POORLY GRADED MEDIUM SAND, SOME GRAVEL (1/4"), WET.	SP	N/A	Hnu= 0 ppm α = 1 cpm βΓ = 80 cpm
120.0 121.5	008938 11/07/88 0830		7 11 13	2	MEDIUM DENSE, DARK BROWN TAN (10YR 5/2), WELL GRADED SAND (MEDIUM TO COARSE), SOME GRAVEL (1/4" TO 1/2"), WET.	SW	N/A	
125.3 127.3	008940 11/07/88 1330		N/A	24	DROVE SHELBY TUBE 125.3-127.3 FT, 2.0 FT RECOVERY. STIFF, OLIVE GRAY (5Y 4/1), "BLUE" CLAY, LEAN CLAY WITH TRACE SILT, SOME BLACK ORGANIC MATERIAL PRESENT, WET.	CL	1.2	Hnu= 0 ppm α = 1 cpm βΓ = 50 cpm

BOTTOM OF BORING 127.3

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3065	COORDINATES: NORTH 477,856.08 EAST 1,380,406.96	DATE:	11/01/88
GROUND ELEVATION: 571.7	GWL: Depth N/A Date/Time N/A	DATE STARTED:	11/01/88
ENGINEER/GEOLOGIST: D HOEKSTRA	Depth N/A Date/Time N/A	DATE COMPLETED:	11/09/88
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS

NOTES:
0.0-66.5 INTERVAL PREVIOUSLY DESCRIBED IN BORING #2065. VISUAL CLASSIFICATION OF SOILS TO BEGIN AT 70.0 FT AND CONTINUE AT 5.0 FT INTERVALS.
WATER USED DURING DRILLING, 1100 GALS.
MONITORING WELL INSTALLED.
ESTIMATED CLAY/SAND-GRAVEL HORIZON AT 123.5 FT.

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3385	COORDINATES: NORTH 477,883.04 EAST 1,379,932.66	DATE: 06/13/90	
GROUND ELEVATION: 577.4	GWL: Depth N/A Date/Time N/A	DATE STARTED: 06/05/90	
ENGINEER/GEOLOGIST: M SWANSON	Depth N/A Date/Time N/A	DATE COMPLETED: 07/01/90	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
75.0 76.5	032724	06/13/90 1325	10 21 23	18	DENSE, DARK GRAYISH BROWN (10YR 4/2), WELL-GRADED, COARSE, SAND, SOME SUBROUNDED PEBBLES AND COBBLES, TRACE OF SILT, SATURATED.	SW	N/A	Hnu= 0.8 ppm α = 0 cpm Bγ = 80-100 cpm
80.0 81.5	032725	06/13/90 1357	4 18 24	16	DENSE, DARK GRAY (10YR 4/1), POORLY GRADED, FINE, SAND, SOME SUBROUNDED PEBBLES, SATURATED.	SP	N/A	Hnu= 0.8 ppm α = 0 cpm Bγ = 80-90 cpm
85.0 86.5	032726	06/13/90 1552	18 19 22	10	DENSE, DARK BROWN (10YR 4/3), WELL GRADED, COARSE, SAND, SOME SUBROUNDED PEBBLES, TRACE SILT, SATURATED.	SW	N/A	Hnu= 1.0 ppm α = 0 cpm Bγ = 60-80 cpm
90.0 91.5	032727	06/13/90 1710	18 20 19	18	DENSE, DARK BROWN (10YR 4/3), WELL GRADED, COARSENING, SAND, SOME SILT AND PEBBLES (0.5 IN.), SATURATED.	SW	N/A	Hnu= 1.1 ppm α = 0 cpm Bγ = 60-80 cpm
95.0 96.5	032728	06/14/90 0937	10 25 33	14	VERY DENSE, GRAYISH BROWN (10YR 5/2), WELL GRADED, COARSENING, SAND, SOME SILT, SOME PEBBLES AND GRAVEL (TO 0.75 IN), SATURATED.	SW	N/A	Hnu= 0.6 ppm α = 0 cpm Bγ = 40-60 cpm
95.0 96.5	032738	06/28/90 0842	15 23 25	16	DENSE, DARK GRAY (10YR 4/1), WELL GRADED, FINE, SILTY, SAND, SATURATED.	SM	N/A	Hnu= 0.0 ppm α = 0 cpm Bγ = 40-140 cpm
100.0 101.5	032739	06/28/90 0924	11 14 9	12	MEDIUM DENSE, DARK GRAYISH BROWN (10YR 4/2), WELL GRADED, GRAVELLY SAND, SOME SILT AND PEBBLES (TO 0.30 IN), SUBANGULAR, SATURATED.	SW	N/A	Hnu= 0.0 ppm α = 0 cpm Bγ = 20-100 cpm
100.0 101.5	032729	06/14/90 1037	18 25 36	16	VERY DENSE, DARK GRAYISH BROWN (10YR 4/2), SILTY, FINE GRAINED, SAND, TRACE PEBBLES AND GRAVEL (TO 0.5 IN), SATURATED.	SM	N/A	Hnu= 0.4 ppm α = 0 cpm Bγ = 80-100 cpm
105.0 106.5	032740	06/28/90 1049	19 25 31	10	VERY DENSE, YELLOWISH BROWN (10YR 5/4), WELL GRADED, COARSENING, SAND, SOME SILT AND PEBBLES AND GRAVEL (TO 0.75 IN), SATURATED.	SW	N/A	Hnu= 0.0 ppm α = 0 cpm Bγ = 40-100 cpm
105.0 106.5	032730	06/14/90 1334	16 25 28	14	VERY DENSE, BROWN TO GRAYISH BROWN (10YR 4/3 TO 10YR 5/2), WELL GRADED, SAND, SOME SILT, GRAVEL, PEBBLES AND LIMESTONE COBBLES (TO 1 IN), SATURATED.	SW	N/A	Hnu= 0.4 ppm α = 0 cpm Bγ = 40-60 cpm
110.0 111.5	032731	06/14/90 1552	20 31 27	13	DENSE, GRAYISH BROWN (10YR 5/2), POORLY GRADED, FINE SAND, SOME SILT, PEBBLES TO 0.20 IN, SATURATED. 110.5'-MEDIUM DENSE, DARK GRAYISH BROWN (10YR 4/2), SANDY SILT, FINE GRAINED SAND WITH PEBBLES TO 0.25 IN, SATURATED.	SP SM	N/A <0.25	Hnu= 0.4 ppm α = 0 cpm Bγ = 80-100 cpm
115.0 116.5	032732	06/15/90 0912	7 18 19	8	DENSE, DARK GRAY (10YR 4/1), WELL GRADED, SANDY, GRAVEL (COBBLES TO 1.0 IN) SOME SILT, SATURATED.	GW	N/A	Hnu= 0.4 ppm α = 0 cpm Bγ = 80-90 cpm
120.0 121.5	032733	06/15/90 1111	7 12 16	6	VERY SOFT, DARK GRAY (2.5 Y 4/0), VERY FINE SANDY SILT, TRACE OF SUBROUNDED PEBBLES AT 120.0 FT, SATURATED.	ML	<0.25	Hnu= 0.3 ppm α = 0 cpm Bγ = 50-60 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 3385	COORDINATES: NORTH 477,883.04 EAST 1,379,932.66	DATE: 06/13/90	
GROUND ELEVATION: 577.4	GWL: Depth N/A Date/Time N/A	DATE STARTED: 06/05/90	
ENGINEER/GEOLOGIST: M SWANSON	Depth N/A Date/Time N/A	DATE COMPLETED: 07/01/90	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 2	

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS
125.0 126.5	032734	06/15/90 1400	10 12 13		10		SOFT, DARK GRAY (2.5 Y 4/0), SAND/SILT MIXTURE (APPROX 2:3), FINE GRAINED, POORLY SORTED, SAND, SATURATED.	SM		0.35	Hnu= 0.2 ppm α = 0 cpm BΓ = 40-60 cpm
130.0 131.5	032735	06/15/90 1532	10 29 36		12		VERY DENSE, DARK GRAY (10YR 4/1), SILTY GRAVEL, SOME SAND, LIMESTONE COBBLE FRAGMENTS, SUBROUNDED, SATURATED.	GM		N/A	Hnu= 0.2 ppm α = 0 cpm BΓ = 40-60 cpm
135.0 136.5	032736	06/16/90 0747	42 50+/4		10		VERY DENSE, OLIVE GRAY (5Y 5/2), POORLY GRADED FINE SAND, SOME SILT, SATURATED. 135.5'-VERY DENSE, OLIVE GRAY (5Y 5/2), SILTY GRAVEL, TRACE OF SAND, SATURATED.	SP GM		N/A N/A	Hnu= 0.4 ppm α = 0 cpm BΓ = 40-80 cpm

BOTTOM OF BORING 136.5

NOTES:
SAMPLES COLLECTED PER ASTM STANDARD PENETRATION TEST. COLORS IDENTIFIED USING MUNSELL COLOR CHART. SAMPLES 032738, 032739, AND 032740 WERE COLLECTED 6/28/90 DURING REDRILLING OF BORING 3385. MONITORING WELL INSTALLED.

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 4014	COORDINATES: NORTH 476,786.78 EAST 1,379,582.56	DATE:	
GROUND ELEVATION: 533.4	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/26/88	
ENGINEER/GEOLOGIST: SLUSARSKI/TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/08/88	
DRILLING METHODS: CABLE-TOOL		PAGE 1 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
25.0 26.5	010385 11/01/88 0952		15 21 25	12	DENSE, DARK YELLOW-BROWN (10YR 4/2), WELL GRADED GRAVELLY SAND, SOME SILT, SOME GRAVEL (0.25-0.5"), WET.	SW	N/A	Hnu= 0 ppm α = 0-5 cpm BΓ = 40-60 cpm
30.0 31.5	010386 11/01/88 1108		10 10 9	10	MEDIUM DENSE, DARK OLIVE-BROWN (10YR 4/2), WELL GRADED GRAVEL/SAND MIXTURE (GRAVEL 0.25-1.0 IN), WET. 31.2'-MEDIUM DENSE, DARK OLIVE-BROWN (10YR 4/2), POORLY GRADED GRAVELLY SAND, WET.	GW SP	N/A N/A	Hnu= 0 ppm α = 0-5 cpm BΓ = 40-60 cpm
35.0 36.5	010387 11/01/88 1405		15 17 18	14	DENSE, YELLOW-BROWN (10YR 5/3), WELL GRADED GRAVEL/SAND MIXTURE, GRAVEL (0.25-1.0 IN), WET.	GW	N/A	Hnu= 0 ppm α = 0-5 cpm BΓ = 40-60 cpm
40.0 41.5	010388 11/01/88 1455		20 16 17	8	MEDIUM DENSE, YELLOW-BROWN (10YR 5/3), WELL GRADED GRAVEL/SAND MIXTURE (GRAVEL 0.25-0.5), WET.	GW	N/A	Hnu= 0 ppm α = 0-5 cpm BΓ = 40-60 cpm
45.0 46.5	010389 11/01/88 1615		28 30 28	12	VERY DENSE, YELLOW-BROWN (10YR 5/3), WELL GRADED GRAVEL/SAND MIXTURE, TRACE COARSE GRAVEL (0.5-1.0 IN), WET.	GW	N/A	Hnu= 0 ppm α = 0-5 cpm BΓ = 40-60 cpm
50.0 51.5	010390 11/02/88 0930		15 8 8	10	MEDIUM DENSE, YELLOW-BROWN (10YR 4/2), WELL GRADED GRAVELLY SAND, WET.	SW	N/A	Hnu= 0 ppm α = 0-5 cpm BΓ = 30 cpm
55.0 56.5	010391 11/02/88 1020		15 19 24	15	DENSE, YELLOW-BROWN (10YR 4/2), POORLY GRADED SAND, SOME FINE GRAVEL, WET.	SP	N/A	Hnu= 0 ppm α = 0-5 cpm BΓ = 30 cpm
60.0 61.5	010392 11/02/88 1100		3 5 7	10	MEDIUM DENSE, YELLOW-BROWN (10YR 4/2), WELL GRADED SAND, SOME 1/4" GRAVEL, WET.	SW	N/A	Hnu= 0 ppm α = 0-5 cpm BΓ = 30 cpm
65.0 66.5	010393 11/02/88 1355		13 24 25	15	DENSE, YELLOW BROWN (10YR 4/4), POORLY GRADED SAND, SOME GRAVEL (3/8"-1/4"), WET.	SP	N/A	Hnu= 0 ppm α = 0-5 cpm BΓ = 20 cpm
70.0 71.5	010394 11/02/88 1700		50/3"	3	VERY DENSE, DARK YELLOW BROWN (10YR 3/2), WELL GRADED GRAVEL (FINE TO COARSE), WET.	GW	N/A	Hnu= 0 ppm α = 0-5 cpm BΓ = 30 cpm
75.0 76.5	010395 11/03/88 0900		17 19 15	10	DENSE, YELLOW BROWN (10YR 4/3), WELL GRADED SAND, LITTLE FINES, WET.	SW	N/A	Hnu= 0 ppm α = 0-5 cpm BΓ = 30 cpm
80.0 81.5	010396 11/03/88 0930		6 7 14	6	MEDIUM DENSE, YELLOWISH BROWN (10YR 4/3), POORLY GRADED SAND, VERY LITTLE FINES, WET.	SP	N/A	Hnu= 0 ppm α = 0-5 cpm BΓ = 20 cpm
85.0 86.5	010397 11/03/88 1100		9 15 20	9	DENSE, DARK BROWN (10YR 3/3), POORLY GRADED SAND, VERY LITTLE FINES, WET.	SP	N/A	Hnu= 0 ppm α = 0 cpm BΓ = 30 cpm

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 4014	COORDINATES: NORTH 476,786.78 EAST 1,379,582.56	DATE:	
GROUND ELEVATION: 533.4	GWL: Depth N/A Date/Time N/A	DATE STARTED: 10/26/88	
ENGINEER/GEOLOGIST: SLUSARSKI/TROLLINGER	Depth N/A Date/Time N/A	DATE COMPLETED: 11/08/88	
DRILLING METHODS: CABLE-TOOL		PAGE 2 OF 3	

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
90.0 91.5	010398	11/03/88 1200	8 12 13	18	MEDIUM DENSE, YELLOWISH BROWN (10YR 4/3), WELL GRADED SAND, SOME GRAVEL (0.25-0.5 IN), WET.	SW	N/A	Hnu= 0 ppm α = 0-5 cpm βΓ = 20 cpm
95.0 96.5	010399	11/03/88 1645	30 50/5"	10	VERY DENSE, YELLOWISH BROWN (10YR 4/3), WELL GRADED GRAVEL, FINE, WET.	GW	N/A	Hnu= 0 ppm α = 0-5 cpm βΓ = 20 cpm
100.0 101.5	010400	11/06/88 0915	50 39 50	10	VERY DENSE, LIGHT BROWNISH GRAY (10YR 6/2), WELL GRADED GRAVEL, FINE GRAVEL RANGE, WET.	GW	N/A	Hnu= 0 ppm α = 0-5 cpm βΓ = 10-20 cpm
105.0 106.5	010401	11/06/88 1152	50/6"	4	VERY DENSE, LIGHT BROWNISH GRAY (10YR 6/2), WELL GRADED GRAVEL, COARSE TO FINE RANGE, WET.	GW	N/A	Hnu= 0 ppm α = 0-5 cpm βΓ = 20 cpm
110.0 111.5	010402	11/07/88 0845	16 14 12	6	MEDIUM DENSE, YELLOWISH BROWN (10YR 5/3), POORLY GRADED SAND, TRACE OF FINE GRAVEL, WET.	SP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 10-20 cpm
115.0 116.5	010403	11/07/88 1002	15 30 30	10	VERY DENSE, BROWN (10YR 4/2), POORLY GRADED SAND, PREDOMINANTLY MEDIUM TO FINE GRAINED, WET.	SP	N/A	Hnu= 0 ppm α = 0-5 cpm βΓ = 20 cpm
120.0 121.5	010404	11/07/88 1110	6 7 8	8	MEDIUM DENSE, YELLOWISH BROWN (10YR 4/3), POORLY GRADED SAND, WET.	SP	N/A	Hnu= 0 ppm α = 0 cpm βΓ = 10-20 cpm
125.0 126.5	010405	11/07/88 1505	20 50/5"	8	VERY DENSE, YELLOWISH BROWN (10YR 4/3), POORLY GRADED SAND, WET.	SP	N/A	Hnu= 0 ppm α = 0-5 cpm βΓ = 10-20 cpm
130.0 131.5	010406	11/07/88 1535	10 16 50/5"	10	VERY DENSE, YELLOWISH BROWN (10YR 4/3), POORLY GRADED SAND, SOME GRAVEL (1/4 IN SIZE), WET.	SP	N/A	Hnu= 0 ppm α = 0-5 cpm βΓ = 20 cpm
135.0 136.5	010407	11/08/88 0850	11 25 29	8	VERY DENSE, BROWN (10YR 4/3), WELL GRADED SAND, SOME FINE GRAVEL (0.25"), WET.	SW	N/A	Hnu= 0 ppm α = 0-5 cpm βΓ = 20 cpm
140.0 141.5	010408	11/08/88 1000	8 13 13	6	MEDIUM DENSE, BROWN (10YR 3/3), POORLY GRADED SAND, VERY LITTLE GRAVEL (0.25"), WET.	SP	N/A	Hnu= 0 ppm α = 0-5 cpm βΓ = 20 cpm
145.0 146.5	010409	11/08/88 1406	23 50/2"	4	VERY DENSE, LIGHT BROWN (10YR 5/3), WELL GRADED GRAVEL, (0.25-0.5"), WET.	GW	N/A	Hnu= 0 ppm α = 0-5 cpm βΓ = 20 cpm
150.0	N/A		50/2"		BEDROCK, GRAY LIMESTONE.			

BOTTOM OF BORING 150.0

VISUAL CLASSIFICATION OF SOILS

3838 SF

PROJECT NUMBER: 602 3.2	PROJECT NAME: FMPC RI/FS		
BORING NUMBER: 4014	COORDINATES: NORTH 476,786.78 EAST 1,379,582.56	DATE:	
GROUND ELEVATION: 533.4	GWL: Depth N/A	Date/Time N/A	DATE STARTED: 10/26/88
ENGINEER/GEOLOGIST: SLUSARSKI/TROLLINGER	Depth N/A	Date/Time N/A	DATE COMPLETED: 11/08/88
DRILLING METHODS: CABLE-TOOL			PAGE 3 OF 3

DEPTH	SAMPLE	DATE	TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES	USCS	SYMBOL	TSF	REMARKS

NOTES:
INTERVAL 0.0-22.5 FT PREVIOUSLY SAMPLED IN BORING #1014. SAMPLING BEGINS AT 25.0 FT DEPTH AND CONTINUES AT 5.0 FT INTERVALS. SAMPLES COLLECTED AS PER ASTM STANDARD PENETRATION TEST. COLORS IDENTIFIED USING MUNSELL COLOR CHART. BASE OF TILL AT 5.3 FT. MONITORING WELL INSTALLED.

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TABLE G-14

GROUNDWATER ELEVATIONS
RI/FS SAMPLING PROGRAM
SOUTH FIELD

WATER ELEVATION REPORT FOR WELL NUMBER : 1014
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1014

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	01/09/88	LKP	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	02/10/88	SDG	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	03/09/88	DPH	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	04/12/88	RMG	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	05/10/88	SDG	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	06/08/88	RWO	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	07/08/88	GS	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	08/06/88	CAM	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	09/09/88	CAM	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	10/09/88	LKP	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	11/08/88	FXM	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	12/12/88	CAM	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	01/09/89	CAM	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	02/09/89	CAM	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	03/10/89	CAM	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	04/16/89	CAM	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	05/13/89	LKP	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	06/15/89	CAM	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	07/13/89	CAM	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	08/15/89	CM	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	09/11/89	CM SM	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	10/10/89	CM BH	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	11/17/89	CM GY	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	12/15/89	CAM	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	01/21/90	CM MG	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	02/14/90	CM DN	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	03/31/90	DN BB	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	04/21/90	BB DN	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	10.26	525.61	NO	05/17/90	CM AHW	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	10.43	525.44	NO	06/16/90	CM AW	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	10.71	525.16	NO	07/16/90	AHW BB	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	11.76	524.11	NO	08/07/90	CM AW	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	10.77	525.10	NO	09/18/90	CM AW	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	10.78	525.09	NO	10/18/90	CM GY	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	10.82	525.05	NO	11/14/90	CM GY	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	12/12/90	CM BB GY	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	10.45	525.42	NO	01/16/91	CM WB	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	01/24/91	CM WB	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	10.65	525.22	NO	02/19/91	CM WB	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	NR	NA	NO	03/19/91	CM JL	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	10.56	525.31	NO	05/31/91	CM CT	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	11.73	524.14	NO	07/25/91	CM BM RR	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	10.74	525.13	NO	08/21/91	CM DS	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	10.74	525.13	NO	09/06/91	CM DS	ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	dry	535.87	NO	10/15/91		ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	DRY	535.87	NO	11/05/91		ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	DRY	535.87	NO	12/10/91		ON-SITE
476797.85	1379581.49	535.87	536.47		534.50	DRY	535.87	NO	02/03/92		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 1014
REPORT DATE : 10/08/92

TASK NUMBER :

RIFS WELL ID : 1014

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
476797.85	1379581.49	535.87	536.47		534.50	DRY	535.87	NO	03/02/92		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 1045
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1045

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477134.69	1379751.49	547.59	548.15		546.20	NR	NA	NO	01/09/88	LKP	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	5.07	542.52	NO	02/10/88	SDG	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	4.71	542.88	NO	03/09/88	DPH	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	7.77	539.82	NO	04/12/88	RMG	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	8.49	539.10	NO	05/10/88	SDG	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	8.48	539.11	NO	06/08/88	DPH	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	8.62	538.97	NO	07/08/88	GS	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	8.90	538.69	NO	08/06/88	CAM	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	9.40	538.19	NO	09/09/88	FXM	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	NR	NA	NO	10/09/88	LKP	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	NR	NA	NO	11/08/88	CAM	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	NR	NA	NO	12/12/88	CAM	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	4.70	542.89	NO	01/09/89	CAM	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	5.28	542.31	NO	02/09/89	CAM	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	4.59	543.00	NO	03/10/89	CAM	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	5.11	542.48	NO	05/13/89	LKP	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	5.00	542.59	NO	06/15/89	CAM	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	5.96	541.63	NO	07/13/89	CAM	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	6.39	541.20	NO	08/15/89	CM	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	6.71	540.88	NO	09/11/89	CM SM	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	5.54	542.05	NO	10/10/89	CM BH	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	6.24	541.35	NO	11/17/89	CM GY	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	8.29	539.30	NO	12/15/89	CAM	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	4.55	543.04	NO	01/21/90	CM MG	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	4.98	542.61	NO	02/14/90	CM DN	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	5.10	542.49	NO	03/31/90	DN BB	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	5.18	542.41	NO	04/24/90	BB DN	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	4.36	543.23	NO	05/17/90	CM AHW	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	5.52	542.07	NO	06/16/90	CM AW	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	6.05	541.54	NO	07/16/90	AHW BB	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	8.33	539.26	NO	08/07/90	CM AW	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	6.84	540.75	NO	09/18/90	CM AW	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	7.17	540.42	NO	10/18/90	CM GY	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	5.04	542.55	NO	11/14/90	CM GY	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	5.18	542.41	NO	12/12/90	CM BB	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	4.98	542.61	NO	01/16/91	CM WB	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	4.40	543.19	NO	02/19/91	CM WB	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	4.43	543.16	NO	03/18/91	CM JL	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	5.91	541.68	NO	05/31/91	CM CT	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	7.60	539.99	NO	07/25/91	CM BM RR	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	7.18	540.41	NO	08/22/91	CM DS	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	7.53	540.06	NO	09/06/91	CM DS	ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	8.37	539.22	NO	10/15/91		ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	8.70	538.89	NO	11/05/91		ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	9.15	538.44	NO	12/10/91		ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	4.91	542.68	NO	02/04/92		ON-SITE
477134.69	1379751.49	547.59	548.15		546.20	5.17	542.42	NO	03/02/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 1046
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1046

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
478054.76	1379428.45	579.13	579.45	576.5		9.85	569.28	NO	05/10/88	SDG	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		11.44	567.69	NO	06/08/88	DPH	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		13.65	565.48	NO	07/09/88	DH	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		14.45	564.68	NO	08/06/88	CAM	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		15.15	563.98	NO	09/09/88	FXM	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		15.60	563.53	NO	10/09/88	LKP	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		15.95	563.18	NO	11/08/88	CAM	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		15.47	563.66	NO	12/12/88	CAM	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		9.47	569.66	NO	01/09/89	CAM	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		8.37	570.76	NO	02/09/89	CAM	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		4.82	574.31	NO	03/10/89	CAM	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		6.18	572.95	NO	04/16/89	CAM	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		5.40	573.73	NO	05/13/89	LKP	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		6.81	572.32	NO	06/15/89	CAM	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		9.54	569.59	NO	07/14/89	CAM	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		12.84	566.29	NO	08/15/89	CM	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		12.09	567.04	NO	09/11/89	CM SM	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		14.30	564.83	NO	10/10/89	CM DN	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		8.80	570.33	NO	11/17/89	CM GY	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		11.49	567.64	NO	12/15/89	CAM	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		5.82	573.31	NO	01/21/90	CM MG	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		5.47	573.66	NO	02/14/90	CM DN	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		6.48	572.65	NO	03/31/90	DN BB	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		6.02	573.11	NO	04/22/90	BB DN	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		4.55	574.58	NO	05/18/90	CAM AHW BB	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		7.94	571.19	NO	06/18/90	CM AW	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		7.84	571.29	NO	07/17/90	AHW BB	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		11.15	567.98	NO	08/08/90	CM AW	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		12.85	566.28	NO	09/18/90	CM AW	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		5.40	573.73	NO	10/19/90	CM GY	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		7.89	571.24	NO	11/15/90	CM GY	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		6.55	572.90	NO	12/14/90	CM GY	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		4.76	574.37	NO	01/16/91	CM WB	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		4.54	574.59	NO	02/19/91	CM WB	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		5.58	573.55	NO	03/19/91	CM JL	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		8.26	570.87	NO	05/31/91	CM	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		13.29	565.84	NO	07/25/91	CM BM RR	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		13.93	565.20	NO	08/22/91	CM DS	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		14.04	565.09	NO	09/05/91	CM DS	ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		14.94	564.19	NO	10/15/91		ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		15.30	563.83	NO	11/05/91		ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		15.13	564.00	NO	12/10/91		ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		10.10	569.03	NO	02/04/92		ON-SITE
478054.76	1379428.45	579.13	579.45	576.5		7.48	571.65	NO	03/24/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 1048
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1048

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477477.45	1379877.15	573.17	573.64		571.80	10.17	563.00	NO	01/09/88	LKP	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	7.15	566.02	NO	02/10/88	SDG	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	4.17	569.00	NO	03/09/88	DPH	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	4.59	568.58	NO	04/12/88	RMG	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	7.00	566.17	NO	05/10/88	SDG	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	8.28	564.89	NO	06/08/88	DPH	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	9.60	563.57	NO	07/08/88	GS	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	10.05	563.12	NO	08/06/88	CAM	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	10.68	562.49	NO	09/09/88	FXM	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	11.18	561.99	NO	10/09/88	LKP	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	11.05	562.12	NO	11/08/88	CAM	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	9.85	563.32	NO	12/12/88	CAM	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	7.71	565.46	NO	01/09/89	CAM	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	6.84	566.33	NO	02/09/89	CAM	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	4.27	568.90	NO	03/10/89	CAM	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	4.08	569.09	NO	04/16/89	CAM	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	3.65	569.52	NO	05/13/89	LKP	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	4.72	568.45	NO	06/15/89	CAM	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	6.89	566.28	NO	07/13/89	CAM	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	8.35	564.82	NO	08/15/89	CM	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	7.71	565.46	NO	09/11/89	CM SM	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	9.82	563.35	NO	10/10/89	CM BH	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	6.83	566.34	NO	11/17/89	CM GY	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	8.07	565.10	NO	12/15/89	CAM	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	5.18	567.99	NO	01/21/90	CM MG	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	4.25	568.92	NO	02/14/90	CM DN	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	5.00	568.17	NO	03/31/90	DN BB	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	5.30	567.87	NO	04/21/90	BB DN	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	29.60	543.57	NO	05/17/90	CAM AHW BB	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	5.46	567.71	NO	06/16/90	CM AW	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	6.31	566.86	NO	07/16/90	AHW BB	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	6.51	566.66	NO	08/07/90	CM AW	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	8.66	564.51	NO	09/18/90	CM AW	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	5.91	567.26	NO	10/18/90	CM GY	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	6.03	567.14	NO	11/14/90	CM GY	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	5.55	567.62	NO	12/12/90	CM BB	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	3.12	570.05	NO	01/16/91	CM WB	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	3.47	569.70	NO	02/19/91	CM WB	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	3.70	569.47	NO	03/19/91	CM JL	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	6.48	566.69	NO	05/31/91	CM CT	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	8.80	564.37	NO	07/25/91	CM BM RR	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	9.19	563.98	NO	08/22/91	CM DS	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	9.28	563.89	NO	09/07/91	CM DS	ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	10.03	563.14	NO	10/09/91		ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	10.47	562.70	NO	11/05/91		ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	10.38	562.79	NO	12/10/91		ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	7.62	565.55	NO	02/04/92		ON-SITE
477477.45	1379877.15	573.17	573.64		571.80	7.17	566.00	NO	03/03/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 1065
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1065

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477860.01	1380415.92	572.96	573.26		571.40	11.21	561.75	NO	01/09/88	LKP	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	7.25	565.71	NO	02/10/88	SDG	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	6.24	566.72	NO	03/09/88	DPH	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	7.00	565.96	NO	04/12/88	RMG	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	9.15	563.81	NO	05/10/88	SDG	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	10.58	562.38	NO	06/08/88	DPH	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	11.55	561.41	NO	07/09/88	DH	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	14.90	558.06	NO	08/06/88	CAM	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	13.27	559.69	NO	09/09/88	CAM	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	13.30	559.66	NO	10/09/88	LKP	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	13.45	559.51	NO	11/08/88	CAM	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	12.25	560.71	NO	12/12/88	CAM	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	6.84	566.12	NO	01/09/89	CAM	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	7.87	565.09	NO	02/09/89	CAM	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	5.10	567.86	NO	03/10/89	CAM	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	7.49	565.47	NO	04/16/89	CAM	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	6.85	566.11	NO	05/13/89	LKP	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	7.25	565.71	NO	06/15/89	CAM	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	9.85	563.11	NO	07/13/89	CAM	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	11.14	561.82	NO	08/15/89	CM	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	10.18	562.78	NO	09/11/89	CM SM	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	11.80	561.16	NO	10/10/89	CM BH	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	8.68	564.28	NO	11/16/89	CM GY	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	9.44	563.52	NO	12/13/89	DN LP WB	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	5.51	567.45	NO	01/21/90	CM MG	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	6.60	566.36	NO	02/14/90	CM DN	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	7.69	565.27	NO	03/31/90	DN BB	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	7.30	565.66	NO	04/21/90	BB DN	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	5.36	567.60	NO	05/18/90	CAM AHW BB	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	8.25	564.71	NO	06/16/90	CM AW	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	7.71	565.25	NO	07/16/90	AHW BB	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	10.38	562.58	NO	08/07/90	CM AW	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	10.74	562.22	NO	09/18/90	CM AW	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	NR	NA	NO	10/19/90	CM GY	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	8.29	564.67	NO	11/14/90	CM GY	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	7.42	565.54	NO	12/12/90	CM BB	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	5.90	567.06	NO	01/16/91	CM WB	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	5.46	567.50	NO	02/19/91	CM WB	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	5.52	567.44	NO	03/19/91	CM JL	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	9.54	563.42	NO	05/31/91	CM CT	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	11.74	561.22	NO	07/25/91	CM BM RR	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	12.82	560.14	NO	08/22/91	CM DS	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	12.52	560.44	NO	09/07/91	CM DS	ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	12.86	560.10	NO	10/09/91		ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	12.54	560.42	NO	11/05/91		ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	12.93	560.03	NO	12/10/91		ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	8.35	564.61	NO	02/04/92		ON-SITE
477860.01	1380415.92	572.96	573.26		571.40	8.08	564.88	NO	03/03/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 1516
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1516

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477071.10	1379636.54	540.95	541.20		539.31	16.61	524.59	NO	06/16/90	CM AW	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	17.2	524.00	NO	07/16/90	AHW BB	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	16.98	524.22	NO	07/17/90	AHW BB	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	18.22	522.98	NO	08/07/90	CM AW	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	19.00	522.20	NO	09/18/90	CM AW	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	17.97	523.23	NO	10/18/90	CM GY	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	18.14	523.06	NO	11/14/90	CM GY	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	12.91	528.29	NO	12/12/90	CM BB GY	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	16.15	525.05	NO	01/16/91	CM WB	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	16.10	525.10	NO	02/19/91	CM WB	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	16.14	525.06	NO	03/19/91	CM JL	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	16.94	524.26	NO	05/31/91	CM CT	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	18.79	522.41	NO	07/25/91	CM BM RR	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	19.06	522.14	NO	08/21/91	CM DS	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	19.42	521.78R	NO	08/22/91	CM DS	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	19.77	521.43	NO	09/06/91	CM DS	ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	20.63	520.57	NO	10/09/91		ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	21.25	519.95	NO	11/05/91		ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	DRY	541.20	NO	12/10/91		ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	21.55	519.65	NO	02/04/92		ON-SITE
477071.10	1379636.54	540.95	541.20		539.31	DRY	541.20	NO	03/02/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 1517
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1517

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477022.52	1379642.08	540.06	540.33		538.56	15.79	524.54	NO	06/16/90	CM AW	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	16.32	524.01	NO	07/16/90	AHW BB	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	16.05	524.28	NO	07/17/90	AHW BB	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	17.36	522.97	NO	08/07/90	CM AW	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	18.12	522.21	NO	09/18/90	CM AW	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	17.04	523.29	NO	10/18/90	CM GY	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	17.26	523.07	NO	11/14/90	CM GY	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	17.02	523.31	NO	12/12/90	CM BB GY	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	15.24	525.09	NO	01/16/91	CM WB	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	15.21	525.12	NO	02/19/91	CM WB	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	15.21	525.12	NO	03/19/91	CM JL	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	16.01	524.32	NO	05/31/91	CM CT	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	17.90	522.43	NO	07/25/91	CM BM RR	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	18.52	521.81	NO	08/21/91	CM DS	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	18.90	521.43	NO	09/06/91	CM DS	ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	19.91	520.42	NO	10/15/91		ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	20.40	519.93	NO	11/05/91		ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	20.98	519.35	NO	12/10/91		ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	20.66	519.67	NO	02/04/92		ON-SITE
477022.52	1379642.08	540.06	540.33		538.56	20.96	519.37	NO	03/02/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 1518
REPORT DATE : 10/08/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 1518

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
476976.12	1379619.39	538.77	539.08		537.26	11.51	527.57	NO	06/16/90	CM AW	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	15.02	524.06	NO	07/16/90	AHW BB	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	14.78	524.30	NO	07/17/90	AHW BB	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	16.15	522.93	NO	08/07/90	CM AW	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	16.85	522.23	NO	09/18/90	CM AW	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	15.66	523.42	NO	10/18/90	CM GY	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	15.94	523.14	NO	11/14/90	CM GY	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	15.74	523.34	NO	12/12/90	CM BB GY	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	13.98	525.10	NO	01/16/91	CM WB	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	13.93	525.15	NO	02/19/91	CM WB	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	13.98	525.10	NO	03/19/91	CM JL	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	14.81	524.27	NO	05/31/91	CM CT	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	16.60	522.48	NO	07/25/91	CM BM RR	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	17.26	521.82	NO	08/21/91	CM DS	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	17.62	521.46	NO	09/06/91	CM DS	ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	18.61	520.47	NO	10/15/91		ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	19.11	519.97	NO	11/05/91		ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	19.68	519.40	NO	12/10/91		ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	19.35	519.73	NO	02/04/92		ON-SITE
476976.12	1379619.39	538.77	539.08		537.26	19.16	519.92	NO	03/02/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 2014
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 2014

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
476802.99	1379584.94	534.92	535.94		533.90	NR	NA	YES	01/09/88	LKP	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	NR	NA	YES	02/10/88	SDG	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	14.38	521.56	YES	03/09/88	DPH	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	14.05	521.89	YES	04/12/88	RMG	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	NR	NA	YES	05/10/88	SDG	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	15.74	520.20	YES	06/08/88	RWO	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	NR	NA	YES	07/09/88	DH	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	16.90	519.04	YES	08/06/88	CAM	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	17.45	518.49	YES	09/09/88	CAM	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	17.88	518.06	YES	10/09/88	LKP	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	18.25	517.69	YES	11/08/88	FXM	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	18.45	517.49	YES	12/12/88	CAM	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	16.92	519.02	YES	01/09/89	CAM	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	16.88	519.06	YES	02/09/89	CAM	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	14.92	521.02	YES	03/10/89	CAM	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	13.04	522.90	YES	04/16/89	CAM	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	12.10	523.84	YES	05/13/89	LKP	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	11.64	524.30	YES	06/15/89	CAM	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	13.00	522.94	YES	07/13/89	CAM	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	13.99	521.95	YES	08/15/89	CM	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	14.41	521.53	YES	09/11/89	CM SM	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	16.43	519.51	YES	10/10/89	CM BH	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	14.78	521.16	YES	11/17/89	CM GY	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	15.70	520.24	YES	12/15/89	CAM	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	14.67	521.27	YES	01/21/90	CM MG	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	13.44	522.50	YES	02/14/90	CM DN	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	12.22	523.72	YES	03/31/90	DN BB	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	11.98	523.96	YES	04/21/90	BB DN	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	10.50	525.44	YES	05/17/90	CM AHW	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	11.53	524.41	YES	06/16/90	CM AW	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	11.92	524.02	YES	07/16/90	AHW BB	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	12.81	523.13	YES	07/27/90	AHW BB	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	13.07	522.87	YES	08/07/90	CM AW	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	13.81	522.13	YES	09/18/90	CM AW	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	12.60	523.34	YES	10/18/90	CM GY	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	12.87	523.07	YES	11/14/90	CM GY	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	12.63	523.31	YES	12/12/90	CM BB GY	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	10.88	525.06	YES	01/16/91	CM WB	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	10.83	525.11	YES	02/19/91	CM WB	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	10.92	525.02	YES	03/19/91	CM JL	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	11.67	524.27	YES	05/31/91	CM CT	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	13.53	522.41	YES	07/25/91	CM BM RR	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	14.18	521.76	YES	08/21/91	CM DS	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	14.55	521.39	YES	09/06/91	CM DS	ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	15.55	520.39	YES	10/15/91		ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	16.02	519.92	YES	11/05/91		ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	16.61	519.33	YES	12/10/91		ON-SITE
476802.99	1379584.94	534.92	535.94		533.90	16.20	518.72	YES	02/03/92		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 2014
REPORT DATE : 10/09/92

TASK NUMBER :

RIFS WELL ID : 2014

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
476802.99	1379584.94	534.92	535.94		533.90	16.58	519.36	YES	03/02/92		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 2045
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 2045

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477129.91	1379760.54	547.34	547.89	545.4		NR	NA	NO	12/12/88	CAM	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		29.91	517.43	NO	12/13/88	CAM	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		28.83	518.51	NO	01/09/89	CAM	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		28.49	518.85	NO	02/09/89	CAM	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		26.88	520.46	NO	03/10/89	CAM	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		23.80	523.54	NO	05/13/89	LKP	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		23.30	524.04	NO	06/15/89	CAM	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		24.40	522.94	NO	07/13/89	CAM	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		25.30	522.04	NO	08/15/89	CM	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		25.78	521.56	NO	09/11/89	CM SM	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		27.84	519.50	NO	10/10/89	CM BH	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		26.34	521.00	NO	11/17/89	CM GY	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		26.97	520.37	NO	12/15/89	CAM	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		26.40	520.94	NO	01/21/90	CM MG	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		25.24	522.10	NO	02/14/90	CM DN	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		23.96	523.38	NO	03/31/90	DN BB	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		23.69	523.65	NO	04/24/90	BB DN	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		22.39	524.95	NO	05/17/90	CM AHW	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		22.90	524.44	NO	06/16/90	CM AW	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		23.08	524.26	NO	07/16/90	AHW BB	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		24.42	522.92	NO	08/07/90	CM AW	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		25.19	522.15	NO	09/18/90	CM AW	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		24.40	522.94	NO	10/18/90	CM GY	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		24.42	522.92	NO	11/14/90	CM GY	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		24.23	523.11	NO	12/12/90	CM BB	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		22.37	524.97	NO	01/16/91	CM WB	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		22.36	524.98	NO	02/19/91	CM WB	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		22.41	524.93	NO	03/18/91	CM JL	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		23.12	524.22	NO	05/31/91	CM CT	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		24.99	522.35	NO	07/25/91	CM BM RR	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		25.65	521.69	NO	08/22/91	CM DS	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		26.00	521.34	NO	09/06/91	CM DS	ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		27.02	520.32	NO	10/15/91		ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		27.51	519.83	NO	11/05/91		ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		28.14	519.20	NO	12/10/91		ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		27.88	519.46	NO	02/04/92		ON-SITE
477129.91	1379760.54	547.34	547.89	545.4		28.13	519.21	NO	03/02/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 2046
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 2046

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
478058.45	1379418.68	577.81	578.23	575.9		59.55	518.26	NO	01/09/89	CAM	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		58.86	518.95	NO	02/09/89	CAM	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		57.65	520.16	NO	03/10/89	CAM	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		55.51	522.30	NO	04/16/89	CAM	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		54.32	523.49	NO	05/13/89	LKP	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		53.70	524.11	NO	06/15/89	CAM	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		54.64	523.17	NO	07/14/89	CAM	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		55.44	522.37	NO	08/15/89	CM	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		55.92	521.89	NO	09/11/89	CM SM	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		58.02	519.79	NO	10/10/89	CM DN	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		57.64	520.17	NO	11/17/89	CM GY	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		57.10	520.71	NO	12/15/89	CAM	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		56.80	521.01	NO	01/21/90	CM MG	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		55.60	522.21	NO	02/14/90	CM DN	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		54.28	523.53	NO	03/31/90	DN BB	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		54.00	523.81	NO	04/22/90	BB DN	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		53.06	524.75	NO	05/18/90	CAM AHW BB	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		52.95	524.86	NO	06/18/90	CM AW	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		53.68	524.13	NO	07/17/90	AHW BB	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		54.36	523.45	NO	08/08/90	CM AW	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		55.24	522.57	NO	09/18/90	CM AW	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		54.74	523.07	NO	10/19/90	CM GY	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		54.55	523.26	NO	11/15/90	CM GY	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		54.54	523.69	NO	12/14/90	CM GY	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		52.89	524.92	NO	01/16/91	CM WB	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		52.68	525.13	NO	02/19/91	CM WB	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		52.63	525.18	NO	03/19/91	CM JL	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		52.91	524.90	NO	05/31/91	CM	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		54.93	522.88	NO	07/25/91	CM BM RR	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		55.66	522.15	NO	08/22/91	CM DS	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		56.09	521.72	NO	09/05/91	CM DS	ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		57.09	520.72	NO	10/15/91		ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		57.62	520.19	NO	11/05/91		ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		58.32	519.49	NO	12/10/91		ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		58.14	519.67	NO	02/04/92		ON-SITE
478058.45	1379418.68	577.81	578.23	575.9		58.24	519.57	NO	03/24/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 2048
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 2048

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477480.23	1379866.55	573.56	574.02	571.5		56.25	517.31	NO	12/12/88	CAM	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		55.46	518.10	NO	01/09/89	CAM	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		54.85	518.71	NO	02/09/89	CAM	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		53.56	520.00	NO	03/10/89	CAM	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		51.48	522.08	NO	04/16/89	CAM	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		50.23	523.33	NO	05/13/89	LKP	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		49.90	523.66	NO	06/15/89	CAM	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		50.56	523.00	NO	07/13/89	CAM	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		51.69	521.87	NO	08/15/89	CM	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		51.98	521.58	NO	09/11/89	CM SM	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		54.04	519.52	NO	10/10/89	CM BH	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		52.71	520.85	NO	11/17/89	CM GY	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		53.17	520.39	NO	12/15/89	CAM	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		52.84	520.72	NO	01/21/90	CM MG	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		51.72	521.84	NO	02/14/90	CM DN	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		50.39	523.17	NO	03/31/90	DN BB	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		50.13	523.43	NO	04/21/90	BB DN	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		49.08	524.48	NO	05/17/90	CAM AHW BB	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		52.98	520.58	NO	06/16/90	CM AW	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		49.77	523.79	NO	07/16/90	AHW BB	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		50.56	523.00	NO	08/07/90	CM AW	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		51.37	522.19	NO	09/18/90	CM AW	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		50.92	522.64	NO	10/18/90	CM GY	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		50.72	522.84	NO	11/14/90	CM GY	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		56.58	516.98	NO	12/12/90	CM BB	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		48.71	524.85	NO	01/16/91	CM WB	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		48.72	524.84	NO	02/19/91	CM WB	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		48.70	524.86	NO	03/19/91	CM JL	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		49.24	524.32	NO	05/31/91	CM	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		51.12	522.44	NO	07/25/91	CM BM RR	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		51.85	521.71	NO	08/22/91	CM DS	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		52.26	521.30	NO	09/07/91	CM DS	ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		53.13	520.43	NO	10/09/91		ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		53.79	519.77	NO	11/05/91		ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		54.45	519.11	NO	12/10/91		ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		54.31	519.25	NO	02/04/92		ON-SITE
477480.23	1379866.55	573.56	574.02	571.5		54.56	519.00	NO	03/03/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 2049
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 2049

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477020.51	1380072.04	542.71	543.13		541.20	24.00	518.71	NO	01/09/88	LKP	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	23.13	519.58	NO	02/10/88	SDG	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	21.74	520.97	NO	03/09/88	DPH	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	21.41	521.30	NO	04/12/88	RMG	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	22.03	520.68	NO	05/10/88	SDG	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	22.69	520.02	NO	06/08/88	DPH	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	23.38	519.33	NO	07/08/88	GS	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	23.90	518.81	NO	08/06/88	CAM	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	24.49	518.22	NO	09/09/88	FXM	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	24.93	517.78	NO	10/09/88	LKP	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	25.30	517.41	NO	11/08/88	CAM	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	25.52	517.19	NO	12/12/88	CAM	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	24.52	518.19	NO	01/09/89	CAM	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	24.19	518.52	NO	02/09/89	CAM	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	22.55	520.16	NO	03/10/89	CAM	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	20.62	522.09	NO	04/16/89	CAM	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	19.41	523.30	NO	05/13/89	LKP	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	18.79	523.92	NO	06/15/89	CAM	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	19.91	522.80	NO	07/13/89	CAM	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	20.82	521.89	NO	08/15/89	CM	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	21.31	521.40	NO	09/11/89	CM SM	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	23.35	519.36	NO	10/10/89	CM BH	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	21.94	520.77	NO	11/17/89	CM GY	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	22.37	520.34	NO	12/15/89	CAM	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	22.05	520.66	NO	01/21/90	CM MG	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	21.00	521.71	NO	02/14/90	CM DN	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	19.70	523.01	NO	03/31/90	DN BB	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	19.47	523.24	NO	04/21/90	BB DN	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	18.20	524.51	NO	05/17/90	CM AHW	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	18.58	524.13	NO	06/16/90	CM AW	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	19.1	523.61	NO	07/16/90	AHW BB	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	19.98	522.73	NO	08/07/90	CM AW	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	20.79	521.92	NO	09/18/90	CM AW	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	20.13	522.58	NO	10/18/90	CM GY	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	20.13	522.58	NO	11/14/90	CM GY	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	19.93	522.78	NO	12/12/90	CM BB	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	17.83	524.88	NO	01/16/91	CM WB	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	18.13	524.58	NO	02/19/91	CM WB	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	18.04	524.67	NO	03/19/91	CM JL	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	18.76	523.95	NO	05/31/91	CM CT	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	NR	NA	NO	07/25/91	CM BM RR	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	NR	NA	NO	08/22/91	CM DS	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	21.71	521.00	NO	09/07/91	CM DS	ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	22.71	520.00	NO	10/15/91		ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	23.20	519.51	NO	11/05/91		ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	23.82	518.89	NO	12/10/91		ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	23.65	519.06	NO	02/03/92		ON-SITE
477020.51	1380072.04	542.71	543.13		541.20	23.90	518.81	NO	03/02/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 2065
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 2065

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477866.51	1380434.37	573.36	573.81	571.5		54.40	518.96	NO	01/09/88	LKP	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		53.79	519.57	NO	02/10/88	SDG	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		52.64	520.72	NO	03/09/88	DPH	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		52.07	521.29	NO	04/12/88	RMG	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		52.36	521.00	NO	05/10/88	SDG	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		53.00	520.36	NO	06/08/88	DPH	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		53.75	519.61	NO	07/09/88	DH	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		54.30	519.06	NO	08/06/88	CAM	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		54.92	518.44	NO	09/09/88	CAM	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		55.38	517.98	NO	10/09/88	CAM	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		55.78	517.58	NO	11/08/88	CAM	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		55.93	517.43	NO	12/12/88	CAM	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		55.61	517.75	NO	01/09/89	CAM	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		54.92	518.44	NO	02/09/89	CAM	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		53.77	519.59	NO	03/10/89	CAM	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		51.55	521.81	NO	04/16/89	CAM	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		50.13	523.23	NO	05/13/89	LKP	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		49.19	524.17	NO	06/15/89	CAM	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		50.02	523.34	NO	07/13/89	CAM	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		50.91	522.45	NO	08/15/89	CM	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		51.52	521.84	NO	09/11/89	CM SM	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		53.58	519.78	NO	10/10/89	CM BH	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		52.43	520.93	NO	11/16/89	CM GY	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		52.65	520.71	NO	12/15/89	CAM	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		52.64	520.72	NO	01/21/90	CM MG	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		52.26	521.10	NO	02/14/90	CM DN	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		50.22	523.14	NO	03/31/90	DN BB	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		50.03	523.33	NO	04/21/90	BB DN	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		49.03	524.33	NO	05/18/90	CAM AHW BB	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		48.81	524.55	NO	06/16/90	CM AW	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		49.50	523.86	NO	07/16/90	AHW BB	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		50.19	523.17	NO	08/07/90	CM AW	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		50.91	522.45	NO	09/18/90	CM AW	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		51.21	522.15	NO	10/19/90	CM GY	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		50.54	522.82	NO	11/14/90	CM GY	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		50.46	522.90	NO	12/12/90	CM BB	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		48.27	525.09	NO	01/16/91	CM WB	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		48.35	525.01	NO	02/19/91	CM WB	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		48.44	524.92	NO	03/19/91	CM JL	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		NR	NA	NO	05/31/91	CM CT	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		50.74	522.62	NO	07/25/91	CM BM RR	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		51.59	521.77	NO	08/22/91	CM DS	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		52.01	521.35	NO	09/07/91	CM DS	ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		52.94	520.42	NO	10/09/91		ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		53.61	519.75	NO	11/05/91		ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		54.64	519.17	NO	12/10/91		ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		54.75	519.06	NO	02/04/92		ON-SITE
477866.51	1380434.37	573.36	573.81	571.5		54.90	518.91	NO	03/03/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 2385
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 2385

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477886.51	1379923.25	579.35	579.86	577.6		55.24	524.11	NO	05/17/90	CAM AHW BB	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		59.78	519.57	NO	06/16/90	CM AW	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		55.62	523.73	NO	07/16/90	AHW BB	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		56.28	523.07	NO	08/07/90	CM AW	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		57.13	522.22	NO	09/18/90	CM AW	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		56.89	522.46	NO	10/18/90	CM GY	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		56.62	522.73	NO	11/14/90	CM GY	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		56.52	522.83	NO	12/12/90	CM BB	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		54.64	524.71	NO	01/16/91	CM WB	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		55.25	524.10	NO	02/19/91	CM WB	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		54.62	524.73	NO	03/18/91	CM JL	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		55.01	524.34	NO	05/31/91	CM	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		56.90	522.45	NO	07/25/91	CM BM RR	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		57.64	521.71	NO	08/22/91	CM DS	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		58.07	521.28	NO	09/05/91	CM DS	ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		58.95	520.40	NO	10/09/91		ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		59.61	519.74	NO	11/05/91		ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		60.35	519.00	NO	12/10/91		ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		60.30	519.05	NO	02/04/92		ON-SITE
477886.51	1379923.25	579.35	579.86	577.6		60.46	518.89	NO	03/03/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 3014
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 3014

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
476805.31	1379579.24	534.25	535.97		533.90	16.75	519.22	YES	01/09/88	LKP	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	15.58	520.39	YES	02/10/88	SDG	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	14.42	521.55	YES	03/09/88	DPH	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	14.09	521.88	YES	04/12/88	RMG	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	15.06	520.91	YES	05/10/88	SDG	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	15.79	520.18	YES	06/08/88	RWO	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	16.45	519.52	YES	07/09/88	DH	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	16.95	519.02	YES	08/06/88	CAM	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	17.48	518.49	YES	09/09/88	CAM	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	17.93	518.04	YES	10/09/88	LKP	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	18.28	517.69	YES	11/08/88	FXM	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	18.50	517.47	YES	12/12/88	CAM	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	16.99	518.98	YES	01/09/89	CAM	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	16.92	519.05	YES	02/09/89	CAM	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	15.01	520.96	YES	03/10/89	CAM	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	13.12	522.85	YES	04/16/89	CAM	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	12.17	523.80	YES	05/13/89	LKP	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	11.71	524.26	YES	06/15/89	CAM	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	13.08	522.89	YES	07/13/89	CAM	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	14.00	521.97	YES	08/15/89	CM	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	14.43	521.54	YES	09/11/89	CM SM	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	16.46	519.51	YES	10/10/89	CM BH	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	14.63	521.34	YES	11/17/89	CM GY	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	15.57	520.40	YES	12/15/89	CAM	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	14.74	521.23	YES	01/21/90	CM MG	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	13.52	522.45	YES	02/14/90	CM DN	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	12.30	523.67	YES	03/31/90	DN BB	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	12.07	523.90	YES	04/21/90	BB DN	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	12.07	523.90R	YES	04/24/90	BB DN	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	10.59	525.38	YES	05/17/90	CM AHW	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	11.56	524.41	YES	06/16/90	CM AW	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	11.99	523.98	YES	07/16/90	AHW BB	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	12.82	523.15	YES	07/27/90	AHW BB	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	13.08	522.89	YES	08/07/90	CM AW	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	13.84	522.13	YES	09/18/90	CM AW	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	12.42	523.55	YES	10/18/90	CM GY	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	12.91	523.06	YES	11/14/90	CM GY	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	12.66	523.31	YES	12/12/90	CM BB GY	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	10.96	525.01	YES	01/16/91	CM WB	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	10.91	525.06	YES	02/19/91	CM WB	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	11.01	524.96	YES	03/19/91	CM JL	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	11.80	524.17	YES	05/31/91	CM CT	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	13.60	522.37	YES	07/25/91	CM BM RR	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	14.24	521.73	YES	08/21/91	CM DS	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	14.54	521.43	YES	09/05/91	CM DS	ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	15.57	520.40	YES	10/15/91		ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	16.05	519.92	YES	11/05/91		ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	16.62	519.35	YES	12/10/91		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 3014
REPORT DATE : 10/09/92

TASK NUMBER :

RIFS WELL ID : 3014

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
476805.31	1379579.24	534.25	535.97		533.90	16.26	519.71	YES	02/03/92		ON-SITE
476805.31	1379579.24	534.25	535.97		533.90	16.62	519.35	YES	03/02/92		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 3044
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 3044

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477773.57	1378162.79	574.01	574.37	571.8		51.11	522.90	NO	04/12/88	RMG	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		51.79	522.22	NO	05/10/88	SDG	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		52.77	521.24	NO	06/08/88	DPH	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		53.41	520.60	NO	07/08/88	GS	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		53.91	520.10	NO	08/06/88	CAM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		54.46	519.55	NO	09/09/88	FXM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		54.90	519.11	NO	10/09/88	CAM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		55.25	518.76	NO	11/08/88	CAM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		55.27	518.74	NO	12/12/88	CAM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		54.28	519.73	NO	01/09/89	CAM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		53.44	520.57	NO	02/09/89	CAM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		52.27	521.74	NO	03/10/89	CAM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		50.38	523.63	NO	04/16/89	CAM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		49.63	524.38	NO	05/13/89	LKP	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		49.35	524.66	NO	06/15/89	CAM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		50.51	523.50	NO	07/13/89	CAM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		51.20	522.81	NO	08/15/89	CM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		51.55	522.46	NO	09/11/89	CM SM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		53.57	520.44	NO	10/10/89	CM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		52.11	521.90	NO	11/15/89	CM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		52.49	521.52	NO	12/14/89	CAM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		51.70	522.31	NO	01/21/90	MG CM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		50.27	523.74	NO	02/14/90	CM DN	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		48.71	525.30	NO	03/31/90	BB DN	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		49.00	525.01	NO	04/22/90	BB DN CG	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		48.45	525.56	NO	05/15/90	CM BB	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		48.43	525.58R	NO	05/20/90	CAM AHW	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		48.15	525.86	NO	06/17/90	CM AW	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		49.17	524.84	NO	07/16/90	AHW BB	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		49.39	524.62	NO	08/07/90	CM AW	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		50.59	523.42	NO	09/19/90	CM AW	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		49.80	524.21	NO	10/20/90	CM GY	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		49.54	524.47	NO	11/15/90	CM GY	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		49.36	524.65	NO	12/11/90	CM GY	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		48.45	525.56	NO	01/18/91	CM WB	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		48.04	525.97	NO	02/26/91	CM DN	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		47.71	526.30	NO	03/27/91	CM CT	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		48.10	525.91	NO	06/01/91	CM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		50.14	523.87	NO	07/26/91	CM BM	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		50.84	523.17	NO	08/24/91	CM DS	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		51.14	522.87	NO	09/08/91	CM DS	ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		51.86	522.15	NO	10/07/91		ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		52.51	521.50	NO	11/04/91		ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		53.50	520.87	NO	12/02/91		ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		53.20	521.17	NO	02/03/92		ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		53.22	521.15	NO	03/02/92		ON-SITE
477773.57	1378162.79	574.01	574.37	571.8		53.19	521.18	NO	03/25/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 3046
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 3046

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
478051.23	1379438.66	578.60	579.09		576.96	53.67	524.93	NO	06/18/90	CM AW	ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	54.41	524.19	NO	07/17/90	AHW BB	ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	55.10	523.50	NO	08/08/90	CM AW	ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	55.91	522.69	NO	09/18/90	CM AW	ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	55.48	523.12	NO	10/19/90	CM GY	ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	55.28	523.32	NO	11/15/90	CM GY	ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	55.25	523.84	NO	12/14/90	CM GY	ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	53.58	525.02	NO	01/16/91	CM WB	ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	53.37	525.23	NO	02/19/91	CM WB	ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	53.49	525.11	NO	03/19/91	CM JL	ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	53.64	524.96	NO	05/31/91	CM	ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	55.62	522.98	NO	07/25/91	CM BM RR	ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	56.36	522.24	NO	08/22/91	CM DS	ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	56.10	522.50	NO	09/05/91	CM DS	ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	57.80	520.80	NO	10/15/91		ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	58.31	520.29	NO	11/05/91		ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	59.55	519.54	NO	12/10/91		ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	59.36	519.73	NO	02/04/92		ON-SITE
478051.23	1379438.66	578.60	579.09		576.96	59.52	519.57	NO	03/24/92		ON-SITE

WATER ELEVATION REPORT FOR WELL NUMBER : 3045
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 3045

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477139.87	1379742.30	547.86	548.42		546.23	23.34	524.52	NO	06/16/90	CM AW	ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	23.94	523.92	NO	07/16/90	AHW BB	ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	24.86	523.00	NO	08/07/90	CM AW	ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	25.64	522.22	NO	09/18/90	CM AW	ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	24.84	523.02	NO	10/18/90	CM GY	ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	24.88	522.98	NO	11/14/90	CM GY	ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	24.67	523.19	NO	12/12/90	CM BB	ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	22.83	525.03	NO	01/16/91	CM WB	ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	22.81	525.05	NO	02/19/91	CM WB	ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	22.85	525.01	NO	03/18/91	CM JL	ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	23.56	524.30	NO	05/31/91	CM CT	ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	25.40	522.46	NO	07/25/91	CM BM RR	ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	26.10	521.76	NO	08/22/91	CM DS	ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	26.46	521.40	NO	09/06/91	CM DS	ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	27.48	520.38	NO	10/15/91		ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	27.98	519.88	NO	11/05/91		ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	29.14	519.28	NO	12/10/91		ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	28.90	519.52	NO	02/04/92		ON-SITE
477139.87	1379742.30	547.86	548.42		546.23	29.16	519.26	NO	03/02/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 3049
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 3049

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477021.22	1380061.42	542.50	543.12	540.7		25.29	517.21	NO	12/12/88	CAM	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		24.33	518.17	NO	01/09/89	CAM	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		23.94	518.56	NO	02/09/89	CAM	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		22.36	520.14	NO	03/10/89	CAM	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		20.39	522.11	NO	04/16/89	CAM	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		19.20	523.30	NO	05/13/89	LKP	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		23.56	518.94	NO	06/15/89	CAM	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		19.61	522.89	NO	07/13/89	CAM	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		20.56	521.94	NO	08/15/89	CM	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		21.07	521.43	NO	09/11/89	CM SM	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		23.11	519.39	NO	10/10/89	CM BH	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		21.72	520.78	NO	11/17/89	CM GY	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		22.17	520.33	NO	12/15/89	CAM	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		21.83	520.67	NO	01/21/90	CM MG	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		20.78	521.72	NO	02/14/90	CM DN	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		19.48	523.02	NO	03/31/90	DN BB	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		19.44	523.06	NO	04/21/90	BB DN	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		18.02	524.48	NO	05/17/90	CM AHW	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		18.32	524.18	NO	06/16/90	CM AW	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		18.86	523.64	NO	07/16/90	AHW BB	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		20.38	522.12	NO	08/07/90	CM AW	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		20.52	521.98	NO	09/18/90	CM AW	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		19.90	522.60	NO	10/18/90	CM GY	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		19.88	522.62	NO	11/14/90	CM GY	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		19.68	522.82	NO	12/12/90	CM BB	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		17.62	524.88	NO	01/16/91	CM WB	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		17.70	524.80	NO	02/19/91	CM WB	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		17.80	524.70	NO	03/19/91	CM JL	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		18.52	523.98	NO	05/31/91	CM CT	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		20.35	522.15	NO	07/25/91	CM BM RR	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		21.72	520.78	NO	08/22/91	CM DS	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		21.44	521.06	NO	09/07/91	CM DS	ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		22.43	520.07	NO	10/15/91		ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		22.95	519.55	NO	11/05/91		ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		23.54	518.96	NO	12/10/91		ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		23.40	519.10	NO	02/03/92		ON-SITE
477021.22	1380061.42	542.50	543.12	540.7		23.62	518.88	NO	03/02/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 3065
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 3065

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477856.08	1380406.96	573.41	573.93	571.7		56.41	517.00	N/A	12/12/88	CAM	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		56.02	517.39	N/A	01/09/89	CAM	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		55.34	518.07	N/A	02/09/89	CAM	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		54.17	519.24	N/A	03/10/89	CAM	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		51.99	521.42	N/A	04/16/89	CAM	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		50.56	522.85	N/A	05/13/89	LKP	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		49.60	523.81	N/A	06/15/89	CAM	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		50.45	522.96	N/A	07/13/89	CAM	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		51.36	522.05	N/A	08/15/89	CM	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		51.95	521.46	N/A	09/11/89	CM SM	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		54.00	519.41	N/A	10/10/89	CM BH	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		52.93	520.48	N/A	11/16/89	CM GY	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		53.17	520.24	N/A	12/15/89	CAM	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		53.13	520.28	N/A	01/21/90	CM MG	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		52.82	520.59	N/A	02/14/90	CM DN	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		50.72	522.69	N/A	03/31/90	DN BB	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		50.45	522.96	N/A	04/21/90	BB DN	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		49.45	523.96	N/A	05/18/90	CAM AHW BB	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		49.22	524.19	N/A	06/16/90	CM AW	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		49.94	523.47	N/A	07/16/90	AHW BB	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		50.51	522.90	N/A	08/07/90	CM AW	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		51.42	521.99	N/A	09/18/90	CM AW	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		51.69	521.72	N/A	10/19/90	CM GY	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		51.01	522.40	N/A	11/14/90	CM GY	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		50.88	522.53	N/A	12/12/90	CM BB	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		48.72	524.69	N/A	01/16/91	CM WB	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		48.79	524.62	N/A	02/19/91	CM WB	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		48.86	524.55	N/A	03/19/91	CM JL	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		49.32	524.09	N/A	05/31/91	CM CT	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		52.25	521.16	N/A	07/25/91	CM BM RR	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		52.03	521.38	N/A	08/22/91	CM DS	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		52.49	520.92	N/A	09/07/91	CM DS	ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		53.36	520.05	N/A	10/09/91		ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		54.02	519.39	N/A	11/05/91		ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		54.77	518.64	N/A	12/10/91		ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		54.79	518.62	N/A	02/04/92		ON-SITE
477856.08	1380406.96	573.41	573.93	571.7		55.02	518.39	N/A	03/03/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 3385
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 3385

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
477883.04	1379932.66	579.29	579.78	577.4		NR	NA	NO	06/16/90	CM AW	ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		55.86	523.43	NO	07/25/90	AHW BB	ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		56.19	523.10	NO	08/07/90	CM AW	ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		57.04	522.25	NO	09/18/90	CM AW	ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		56.81	522.48	NO	10/18/90	CM GY	ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		56.52	522.77	NO	11/14/90	CM GY	ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		56.40	522.89	NO	12/12/90	CM BB	ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		54.55	524.74	NO	01/16/91	CM WB	ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		55.15	524.14	NO	02/19/91	CM WB	ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		54.52	524.77	NO	03/18/91	CM JL	ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		54.90	524.39	NO	05/31/91	CM	ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		56.80	522.49	NO	07/25/91	CM BM RR	ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		57.63	521.66	NO	08/22/91	CM DS	ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		57.99	521.30	NO	09/05/91	CM DS	ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		58.84	520.45	NO	10/09/91		ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		59.52	519.77	NO	11/05/91		ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		60.80	518.98	NO	12/10/91		ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		60.75	519.03	NO	02/04/92		ON-SITE
477883.04	1379932.66	579.29	579.78	577.4		60.97	518.81	NO	03/03/92		ON-SITE

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WATER ELEVATION REPORT FOR WELL NUMBER : 4014
REPORT DATE : 10/09/92

TASK NUMBER : 602.03.02.02

RIFS WELL ID : 4014

NORTH COORDINATE	EAST COORDINATE	TOP OF WELL (MSL)	TOP OF CASING (MSL)	GROUND LEVEL (MSL)	CONC-RETE LEVEL (MSL)	READ-ING	DEPTH OF WATER (MSL)	RCRA WELL?	DATE READ	RECORDED BY	LOCATION OF WELL
476786.78	1379582.56	535.43	535.88	533.4		17.95	517.48	N/A	12/12/88	CAM	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		16.59	518.84	N/A	01/09/89	CAM	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		16.40	519.03	N/A	02/09/89	CAM	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		14.62	520.81	N/A	03/10/89	CAM	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		12.73	522.70	N/A	04/16/89	CAM	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		11.75	523.68	N/A	05/13/89	LKP	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		11.31	524.12	N/A	06/15/89	CAM	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		12.50	522.93	N/A	07/13/89	CAM	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		13.46	521.97	N/A	08/15/89	CM	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		13.90	521.53	N/A	09/11/89	CM SM	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		15.93	519.50	N/A	10/10/89	CM BH	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		14.28	521.15	N/A	11/17/89	CM GY	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		15.19	520.24	N/A	12/15/89	CAM	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		14.32	521.11	N/A	01/21/90	CM MG	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		13.13	522.30	N/A	02/14/90	CM DN	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		12.48	522.95R	N/A	02/17/90	CM DN	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		11.92	523.51	N/A	03/31/90	DN BB	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		12.08	523.35R	N/A	04/09/90	BB DN	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		11.69	524.19	N/A	04/21/90	BB DN	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		11.65	523.78R	N/A	04/24/90	BB DN	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		10.26	525.17	N/A	05/17/90	CM AHW	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		11.06	524.37	N/A	06/16/90	CM AW	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		11.53	523.90	N/A	07/16/90	AHW BB	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		12.3	523.13	N/A	07/27/90	AHW BB	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		12.56	522.87	N/A	08/07/90	CM AW	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		13.41	522.02	N/A	09/18/90	CM AW	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		12.11	523.32	N/A	10/18/90	CM GY	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		12.48	522.95	N/A	11/14/90	CM GY	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		12.22	523.21	N/A	12/12/90	CM BB GY	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		10.48	524.95	N/A	01/16/91	CM WB	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		10.45	524.98	N/A	02/19/91	CM WB	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		10.55	524.88	N/A	03/19/91	CM JL	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		11.29	524.14	N/A	05/31/91	CM CT	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		13.40	522.03	N/A	07/25/91	CM BM RR	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		13.70	521.73	N/A	08/21/91	CM DS	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		14.05	521.38	N/A	09/06/91	CM DS	ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		15.04	520.39	N/A	10/15/91		ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		15.52	519.91	N/A	11/05/91		ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		15.12	520.31	N/A	12/10/91		ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		15.78	519.65	N/A	02/03/92		ON-SITE
476786.78	1379582.56	535.43	535.88	533.4		16.11	519.32	N/A	03/02/92		ON-SITE

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TABLE G-15

MONITORING WELL INSTALLATION RECORDS
RI/FS SAMPLING PROGRAM
SOUTH FIELD

MONITORING WELL INSTALLATION RECORD

09/22/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1014
WELL NUMBER: 1014

FIELD ENG./GEO.: D. OAKLEY DATE: 10/18/87
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 476797.85, 1379581.4
DATE OF INSTAL.: 10/18/87

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 2 TO: 16
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: Yes
CASING TYPE : MONITORING
CASING DIAM.: 4 In.
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 20
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: .010 (In.)
TOTAL PERFORATED AREA: 5 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 5 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREAD AND COUPLE (FLUSH JOINT THREAD)

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 In.
* LOCKING CAP AND LOCK

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	535.87
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	-2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0.0	2.0	N/A	N/A
Sand	2.0	10.0	N/A	N/A
Bentonite Pellets	10.0	12.0	N/A	N/A
Sand	12.0	22.5	N/A	N/A
PERFORATED SECTION	3.5	8.5	N/A	N/A

WELL TIP	9.0	N/A
BOTTOM OF BOREHOLE	22.5	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
09/22/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: D. OAKLEY DATE: 10/18/87
PROJECT NO. : 602.3.2 CHECKED BY : Not Noted DATE: N/A
BORING NO. : 1014 N,E COORDINATES: 476797.85, 1379581.4
WELL NUMBER: 1014 DATE OF INSTAL.: 10/18/87

REMARKS -- COMMENT AREA

REMARKS : THIS FORM DID NOT REPRESENT THE INSTALLED MONITORING WELL, THEREFORE, IT WAS MODIFIED WITH WHITE OUT BY D. OAKLEY.

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1045
WELL NUMBER: 1045

FIELD ENG./GEO.: D. OAKLEY
CHECKED BY : Not Noted
N,E COORDINATES: 477134.69, 1379751.4
DATE OF INSTAL.: 10/09/87

DATE: 10/07/87
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0 TO: 18
FLUID: N/A FROM: N/A TO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: Yes
CASING TYPE : MONITORING WELL
CASING DIAM.: 4 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 15
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: .010 (In.)
TOTAL PERFORATED AREA: 5 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 5 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREAD COUPLE (FLUSH JOINT THREAD)

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 10 In.
* LOCKING CAP

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	547.59
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	-2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0	1.5	N/A	N/A
Sand	1.5	9.0	N/A	N/A
Bentonite Pellets	9.0	10.0	N/A	N/A
PERFORATED SECTION	2.5	7.9	N/A	N/A

WELL TIP	7.9	N/A
BOTTOM OF BOREHOLE	18.0	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.: D. OAKLEY	DATE: 10/07/87
PROJECT NO. : 602.3.2	CHECKED BY : Not Noted	DATE: N/A
BORING NO. : 1045	N,E COORDINATES: 477134.69, 1379751.4	
WELL NUMBER: 1045	DATE OF INSTAL.: 10/09/87	

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1046
WELL NUMBER: 1046

FIELD ENG./GEO.: T. SULLIVAN DATE: 02/09/88
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 478054.76, 1379428.4
DATE OF INSTAL.: 02/09/88

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0 TO: 27
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 25
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 10 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: SCREW FLUSH JOINT THREADS.

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 3 In.
* LOCKING CAP AND LOCK.

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.5 Ft.	579.13
GROUND SURFACE	0.0	576.5
BOTTOM OF PROTECTIVE PIPE	2.25 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0	7	N/A	N/A
Sand	7	22	N/A	N/A
PERFORATED SECTION	9.5	19.5	N/A	N/A
WELL TIP	21.9		N/A	
BOTTOM OF BOREHOLE	28.5		N/A	
GWL AFTER INSTALLATION	4.05		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.: T. SULLIVAN	DATE: 02/09/88
PROJECT NO. : 602.3.2	CHECKED BY : Not Noted	DATE: N/A
BORING NO. : 1046	N,E COORDINATES: 478054.76, 1379428.4	
WELL NUMBER: 1046	DATE OF INSTAL.: 02/09/88	

REMARKS — COMMENT AREA

REMARKS : BENTONITE PELLETS FROM TOTAL DEPTH TO 22 FT., TIP OF SUMP ON WELL IS JUST ABOVE BENTONITE PLUG.

COMMENTS:

MONITORING WELL INSTALLATION RECORD FOR WELL #1048

10/06/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1048
WELL NUMBER : 1048

FIELD ENG./GEO.:WILL KEGLEY DATE:10/14/87
CHECKED BY :Not Noted DATE:N/A
N,E COORDINATES:477477.45, 1379877.1
DATE OF INSTAL.:10/14/87

BOREHOLE DRILLING

DRILLING METHOD:Cable Tool
DRILLING FLUID(S) USED:(in Feet)
FLUID:WATER FROM:0 TO:19.5
FLUID:N/A FROM:N/A TO:N/A
NOTES/COMMENTS:

TYPE OF BIT:Flat Head Hammer
IS CASING TEMPORARY?:Yes
CASING TYPE :MONITORING WELL
CASING DIAM.:4 In. ID
CASING SIZE(S) USED:(in Feet)
SIZE:10 FROM:0 TO:18
SIZE:N/A FROM:N/A TO:N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE:Screen
AVG. SIZE OF PERFORATIONS:.010 (In.)
TOTAL PERFORATED AREA:10 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL:Stainless Steel
RISER PIPE DIAMETERS:
O.D.:4 3/8 In. I.D.:4 In.
LENGTH OF 1ST PIPE SECTION:5 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREAD COUPLE (FLUSH JOINT THREAD)

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:5.0 Ft.
PROTECTIVE PIPE O.D.:10 In.
* LOCKING TOP AND LOCK

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	573.17
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	-2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0	3.5	N/A	N/A
Sand	3.5	16.2	N/A	N/A
Bentonite Pellets	16.2	17.0	N/A	N/A
Sand	17.0	19.5	N/A	N/A
PERFORATED SECTION	5.5	15.5	N/A	N/A

WELL TIP	15.5	N/A
BOTTOM OF BOREHOLE	19.5	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL? : No

MONITORING WELL INSTALLATION RECORD FOR WELL #1048 (Continued)
10/06/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.:WILL KEGLEY DATE:10/14/87
PROJECT NO. : 602.3.2 CHECKED BY :Not Noted DATE:N/A
BORING NO. : 1048 N,E COORDINATES:477477.45, 1379877.1
WELL NUMBER : 1048 DATE OF INSTAL.:10/14/87

REMARKS -- COMMENT AREA

REMARKS : THIS FORM DID NOT REPRESENT THE INSTALLED MONITORING WELL, THEREFORE, IT HAS BEEN MODIFIED WITH WHITE OUT.

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

09/22/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1065
WELL NUMBER: 1065

FIELD ENG./GEO.: D. OAKLEY DATE: 10/06/87
CHECKED BY : D. HOLZMAN DATE: 10/07/87
N,E COORDINATES: 477860.01, 1380415.9
DATE OF INSTAL.: 10/06/87

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 2 TO: 14
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING
CASING DIAM.: 4 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 14
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: .010 (In.)
TOTAL PERFORATED AREA: 10 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 5 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREAD AND COUPLE (FLUSH JOINT THREADS)

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 In.
* LOCKING CAP AND LOCK

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	572.96
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0	1.5	N/A	N/A
Sand	1.5	14	N/A	N/A
PERFORATED SECTION	3.0	13.6	N/A	N/A
WELL TIP	14.0		N/A	
BOTTOM OF BOREHOLE	14.0		N/A	
GWL AFTER INSTALLATION	NONE		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
09/22/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: D. OAKLEY DATE: 10/06/87
PROJECT NO. : 602.3.2 CHECKED BY : D. HOLZMAN DATE: 10/07/87
BORING NO. : 1065 N,E COORDINATES: 477860.01, 1380415.9
WELL NUMBER: 1065 DATE OF INSTAL.: 10/06/87

REMARKS -- COMMENT AREA

REMARKS : DRY WELL. NO VOLCLAY NEEDED BECAUSE OF SHALLOW DEPTH.
COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1516
WELL NUMBER: 1516

FIELD ENG./GEO.: M. GARMAN DATE: 05/19/90
CHECKED BY : E. TROLLINGER DATE: 05/30/90
N,E COORDINATES: 477071.10, 1379636.5
DATE OF INSTAL.: 05/19/90

BOREHOLE DRILLING

DRILLING METHOD: AUGER
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: AUGER
IS CASING TEMPORARY?: No
CASING TYPE : SCHEDULE 40 PVC
CASING DIAM.: 2.0 In. ID
CASING SIZE(S) USED: (Units N/A)
SIZE: NA FROM: N/A TO: N/A
SIZE: NA FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Slots
AVG. SIZE OF PERFORATIONS: 0.02 (In.)
TOTAL PERFORATED AREA: 10. Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: SCHEDULE 40 PVC
RISER PIPE DIAMETERS:
O.D.: 2 5/16 In. I.D.: 2.0 In.
LENGTH OF 1ST PIPE SECTION: 10.0 Ft.
2ND PIPE SECTION: 1.7 Ft.
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: FLUSH JOINT THREADED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 4 3/ In.
* HINGED LOCKING COVER W/ PADLOC

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	540.95
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	0.0	1.0	N/A	N/A
Bentonite Pellets	1.0	7.5	N/A	N/A
Sand	7.5	20.0	N/A	N/A
PERFORATED SECTION	9.5	19.5	N/A	N/A
WELL TIP	19.7		N/A	
BOTTOM OF BOREHOLE	20.0		N/A	
GWL AFTER INSTALLATION	NA		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: M. GARMAN DATE: 05/19/90
PROJECT NO. : 602.3.2 CHECKED BY : E. TROLLINGER DATE: 05/30/90
BORING NO. : 1516 N,E COORDINATES: 477071.10, 1379636.5
WELL NUMBER: 1516 DATE OF INSTAL.: 05/19/90

REMARKS -- COMMENT AREA

REMARKS : PIEZOMETER WAS TO BE SET AT 20.0 FT., BUT CAME UP 0.3 FT. DURING INSTALLATION. 15.0 FT. - BEGIN H2O ZONE.

COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1517
WELL NUMBER: 1517

FIELD ENG./GEO.: M. GARMAN DATE: 05/21/90
CHECKED BY : E. TROLLINGER DATE: 05/20/90
N,E COORDINATES: 477022.52, 1379642.0
DATE OF INSTAL.: 05/21/90

BOREHOLE DRILLING

DRILLING METHOD: AUGER
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: AUGER
IS CASING TEMPORARY?: No
CASING TYPE : SCHEDULE 40 PVC
CASING DIAM.: 2.0 In. ID
CASING SIZE(S) USED: (Units N/A)
SIZE: NA FROM: NA TO: NA
SIZE: NA FROM: NA TO: NA

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Slots
AVG. SIZE OF PERFORATIONS: 0.02 (In.)
TOTAL PERFORATED AREA: 10. Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: SCHEDULE 40 PVC
RISER PIPE DIAMETERS:
O.D.: 2 5/16 In. I.D.: 2.0 In.
LENGTH OF 1ST PIPE SECTION: 10.0 Ft.
2ND PIPE SECTION: 2.0 Ft.
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: FLUSH JOINT THREADED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 4 3/ In.
* HINGED LOCKING COVER W/ PADLOC

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	540.06
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	0.0	1.0	N/A	N/A
Bentonite Pellets	1.0	6.5	N/A	N/A
Sand	6.5	20.0	N/A	N/A
PERFORATED SECTION	10.0	20.0	N/A	N/A
WELL TIP	20.0		N/A	
BOTTOM OF BOREHOLE	20.0		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1517
WELL NUMBER: 1517

FIELD ENG./GEO.: M. GARMAN DATE: 05/21/90
CHECKED BY : E. TROLLINGER DATE: 05/20/90
N,E COORDINATES: 477022.52, 1379642.0
DATE OF INSTAL.: 05/21/90

REMARKS — COMMENT AREA

REMARKS : 10.0 IN. AUGER USED TO SET WELL BECAUSE OF BLOW SANDS. 13.5 FT. - BEGIN H2O ZONE.

COMMENTS:

MONITORING WELL INSTALLATION RECORD
08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1518
WELL NUMBER: 1518

FIELD ENG./GEO.: M. GARMAN DATE: 05/22/90
CHECKED BY : E. TROLLINGER DATE: 05/30/90
N,E COORDINATES: 476976.12, 1379619.3
DATE OF INSTAL.: 05/22/90

BOREHOLE DRILLING

DRILLING METHOD: AUGER
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: AUGER
IS CASING TEMPORARY?: No
CASING TYPE : SCHEDULE 40 PVC
CASING DIAM.: 2.0 In. ID
CASING SIZE(S) USED: (Units N/A)
SIZE: NA FROM: N/A TO: N/A
SIZE: NA FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Slots
AVG. SIZE OF PERFORATIONS: 0.02 (In.)
TOTAL PERFORATED AREA: 10. Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: SCHEDULE 40 PVC
RISER PIPE DIAMETERS:
O.D.: 2 5/16 In. I.D.: 2.0 In.
LENGTH OF 1ST PIPE SECTION: 10.0 Ft.
2ND PIPE SECTION: 2.0 Ft.
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: FLUSH JOINT THREADED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 4 3/ In.
OTHER PROTECTION (* NOTED BELOW)
* HINGED LOCKING COVER W/ PADLOC

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	538.77
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0.0	1.0	N/A	N/A
Sand	1.0	7.5	N/A	N/A
PERFORATED SECTION	7.5	20.0	N/A	N/A
	10.0	20.0	N/A	N/A

WELL TIP	20.0	N/A
BOTTOM OF BOREHOLE	20.0	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1518
WELL NUMBER: 1518

FIELD ENG./GEO.: M. GARMAN DATE: 05/22/90
CHECKED BY : E. TROLLINGER DATE: 05/30/90
N,E COORDINATES: 476976.12, 1379619.3
DATE OF INSTAL.: 05/22/90

REMARKS -- COMMENT AREA

REMARKS : 12.0 FT. - BEGIN H2O ZONE
COMMENTS:

MONITORING WELL INSTALLATION RECORD

10/02/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1712
WELL NUMBER: 1712

FIELD ENG./GEO.: DATE:
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 477418.76, 1379588.1
DATE OF INSTAL.:

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: N/A
IS CASING TEMPORARY?: N/A
CASING TYPE : Not Noted
CASING DIAM.:
CASING SIZE(S) USED: (Units N/A)
SIZE: FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: N/A
AVG. SIZE OF PERFORATIONS: (N/A)
TOTAL PERFORATED AREA:
NOTES/COMMENTS:

RISER PIPE MATERIAL: N/A
RISER PIPE DIAMETERS:
O.D.: I.D.:
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: Not Noted

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:
PROTECTIVE PIPE O.D.:

OTHER PROTECTION (* NONE NOTED)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	N/A	N/A
GROUND SURFACE	0.0	572.2
BOTTOM OF PROTECTIVE PIPE	N/A	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	N/A	N/A	N/A	N/A
PERFORATED SECTION	N/A	N/A	N/A	N/A
WELL TIP	N/A		N/A	
BOTTOM OF BOREHOLE	N/A		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : N/A
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : N/A

MONITORING WELL INSTALLATION RECORD (Continued)
10/02/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1712
WELL NUMBER: 1712

FIELD ENG./GEO.: DATE:
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 477418.76, 1379588.1
DATE OF INSTAL.:

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

10/02/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1713
WELL NUMBER: 1713

FIELD ENG./GEO.:
CHECKED BY : Not Noted
N,E COORDINATES: 477342.63, 1379411.6
DATE OF INSTAL.:

DATE:
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: N/A
IS CASING TEMPORARY?: N/A
CASING TYPE : Not Noted
CASING DIAM.:
CASING SIZE(S) USED: (Units N/A)
SIZE: FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: N/A
AVG. SIZE OF PERFORATIONS: (N/A)
TOTAL PERFORATED AREA:
NOTES/COMMENTS:

RISER PIPE MATERIAL: N/A
RISER PIPE DIAMETERS:
O.D.: I.D.:
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: Not Noted

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:
PROTECTIVE PIPE O.D.:

OTHER PROTECTION (* NONE NOTED)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	N/A	N/A
GROUND SURFACE	0.0	570.0
BOTTOM OF PROTECTIVE PIPE	N/A	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	N/A	N/A	N/A	N/A
PERFORATED SECTION	N/A	N/A	N/A	N/A

WELL TIP	N/A	N/A
BOTTOM OF BOREHOLE	N/A	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : N/A
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : N/A

MONITORING WELL INSTALLATION RECORD (Continued)

10/02/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.:		DATE:
PROJECT NO. : 602.3.2	CHECKED BY :	Not Noted	DATE: N/A
BORING NO. : 1713	N,E COORDINATES:	477342.63, 1379411.6	
WELL NUMBER: 1713	DATE OF INSTAL.:		

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

10/02/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1714
WELL NUMBER: 1714

FIELD ENG./GEO.:
CHECKED BY : Not Noted
N,E COORDINATES: 477954.45, 1379280.9
DATE OF INSTAL.:

DATE:
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: N/A
IS CASING TEMPORARY?: N/A
CASING TYPE : Not Noted
CASING DIAM.:
CASING SIZE(S) USED: (Units N/A)
SIZE: FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: N/A
AVG. SIZE OF PERFORATIONS: (N/A)
TOTAL PERFORATED AREA:
NOTES/COMMENTS:

RISER PIPE MATERIAL: N/A
RISER PIPE DIAMETERS:
O.D.: I.D.:
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: Not Noted

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:
PROTECTIVE PIPE O.D.:

OTHER PROTECTION (* NONE NOTED)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	N/A	N/A
GROUND SURFACE	0.0	573.4
BOTTOM OF PROTECTIVE PIPE	N/A	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	N/A	N/A	N/A	N/A
PERFORATED SECTION	N/A	N/A	N/A	N/A
WELL TIP	N/A		N/A	
BOTTOM OF BOREHOLE	N/A		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : N/A
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : N/A

MONITORING WELL INSTALLATION RECORD (Continued)
10/02/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.:		DATE:
PROJECT NO. : 602.3.2	CHECKED BY :	Not Noted	DATE: N/A
BORING NO. : 1714	N,E COORDINATES:	477954.45, 1379280.9	
WELL NUMBER: 1714	DATE OF INSTAL.:		

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

10/02/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1715
WELL NUMBER: 1715

FIELD ENG./GEO.:
CHECKED BY : Not Noted
N,E COORDINATES: 477901.68, 1379517.3
DATE OF INSTAL.:

DATE:
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: N/A
IS CASING TEMPORARY?: N/A
CASING TYPE : Not Noted
CASING DIAM.:
CASING SIZE(S) USED: (Units N/A)
SIZE: FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: N/A
AVG. SIZE OF PERFORATIONS: (N/A)
TOTAL PERFORATED AREA:
NOTES/COMMENTS:

RISER PIPE MATERIAL: N/A
RISER PIPE DIAMETERS:
O.D.: I.D.:
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: Not Noted

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:
PROTECTIVE PIPE O.D.:

OTHER PROTECTION (* NONE NOTED)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	N/A	N/A
GROUND SURFACE	0.0	579.4
BOTTOM OF PROTECTIVE PIPE	N/A	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	N/A	N/A	N/A	N/A
PERFORATED SECTION	N/A	N/A	N/A	N/A

WELL TIP	N/A	N/A
BOTTOM OF BOREHOLE	N/A	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : N/A
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : N/A

MONITORING WELL INSTALLATION RECORD (Continued)

10/02/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.:		DATE:
PROJECT NO. : 602.3.2	CHECKED BY :	Not Noted	DATE: N/A
BORING NO. : 1715	N,E COORDINATES:	477901.68, 1379517.3	
WELL NUMBER: 1715	DATE OF INSTAL.:		

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD
10/02/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1882
WELL NUMBER: 1882

FIELD ENG./GEO.:
CHECKED BY : Not Noted
N,E COORDINATES: 477419.98, 1379589.4
DATE OF INSTAL.:

DATE:
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: N/A
IS CASING TEMPORARY?: N/A
CASING TYPE : Not Noted
CASING DIAM.:
CASING SIZE(S) USED: (Units N/A)
SIZE: FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: N/A
AVG. SIZE OF PERFORATIONS: (N/A)
TOTAL PERFORATED AREA:
NOTES/COMMENTS:

RISER PIPE MATERIAL: N/A
RISER PIPE DIAMETERS:
O.D.: I.D.:
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: Not Noted

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:
PROTECTIVE PIPE O.D.:

OTHER PROTECTION (* NONE NOTED)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	N/A	N/A
GROUND SURFACE	0.0	572.5
BOTTOM OF PROTECTIVE PIPE	N/A	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	N/A	N/A	N/A	N/A
PERFORATED SECTION	N/A	N/A	N/A	N/A
WELL TIP	N/A		N/A	
BOTTOM OF BOREHOLE	N/A		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : N/A
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : N/A

MONITORING WELL INSTALLATION RECORD (Continued)
10/02/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.:		DATE:
PROJECT NO. : 602.3.2	CHECKED BY :	Not Noted	DATE: N/A
BORING NO. : 1882	N,E COORDINATES:	477419.98, 1379589.4	
WELL NUMBER: 1882	DATE OF INSTAL.:		

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

10/02/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1883
WELL NUMBER: 1883

FIELD ENG./GEO.:
CHECKED BY : Not Noted
N,E COORDINATES: 477303.62, 1379404.7
DATE OF INSTAL.:

DATE:
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: N/A
IS CASING TEMPORARY?: N/A
CASING TYPE : Not Noted
CASING DIAM.:
CASING SIZE(S) USED: (Units N/A)
SIZE: FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: N/A
AVG. SIZE OF PERFORATIONS: (N/A)
TOTAL PERFORATED AREA:
NOTES/COMMENTS:

RISER PIPE MATERIAL: N/A
RISER PIPE DIAMETERS:
O.D.: I.D.:
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: Not Noted

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:
PROTECTIVE PIPE O.D.:

OTHER PROTECTION (* NONE NOTED)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	N/A	N/A
GROUND SURFACE	0.0	568.8
BOTTOM OF PROTECTIVE PIPE	N/A	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	N/A	N/A	N/A	N/A
PERFORATED SECTION	N/A	N/A	N/A	N/A

WELL TIP	N/A	N/A
BOTTOM OF BOREHOLE	N/A	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : N/A
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : N/A

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MONITORING WELL INSTALLATION RECORD
08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 2014
WELL NUMBER: 2014

FIELD ENG./GEO.: DATE:
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 476802.99, 1379584.9
DATE OF INSTAL.:

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: N/A
IS CASING TEMPORARY?: N/A
CASING TYPE : Not Noted
CASING DIAM.:
CASING SIZE(S) USED: (Units N/A)
SIZE: FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: N/A
AVG. SIZE OF PERFORATIONS: (N/A)
TOTAL PERFORATED AREA:
NOTES/COMMENTS:

RISER PIPE MATERIAL: N/A
RISER PIPE DIAMETERS:
O.D.: I.D.:
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: Not Noted

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:
PROTECTIVE PIPE O.D.:

OTHER PROTECTION (* NONE NOTED)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	N/A	534.92
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	N/A	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	N/A	N/A	N/A	N/A
PERFORATED SECTION	N/A	N/A	N/A	N/A
WELL TIP	N/A		N/A	
BOTTOM OF BOREHOLE	N/A		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : N/A
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : N/A

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.:		DATE:
PROJECT NO. : 602.3.2	CHECKED BY	: Not Noted	DATE: N/A
BORING NO. : 2014	N,E COORDINATES:	476802.99, 1379584.9	
WELL NUMBER: 2014	DATE OF INSTAL.:		

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 2045
WELL NUMBER: 2045

FIELD ENG./GEO.: W.A HERTEL
CHECKED BY : B.D.
N,E COORDINATES: 477129.91, 1379760.5
DATE OF INSTAL.: 12/07/88

DATE: 12/08/88
DATE: 12/12/88

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (Units N/A)
FLUID: WATER FROM: SURFACTO: 45.0
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4.0 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0.0 TO: 45.0
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 15. Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4.0 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: 5 Ft.
3RD PIPE SECTION: 1.5 Ft.
COMMENTS

RISER JOINING METHOD: SCREW TYPE, THREADED FLUSH JOINT

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 3 In.
* LOCKING LID

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	547.34
GROUND SURFACE	0.0	545.4
BOTTOM OF PROTECTIVE PIPE	2.4 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	SURFACE	14.0	N/A	14.0
Bentonite Pellets	14.0	19.0	N/A	N/A
Sand	19.0	45.0	N/A	N/A
PERFORATED SECTION	23.0	38.0	N/A	N/A

WELL TIP	39.5	N/A
BOTTOM OF BOREHOLE	45.0	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.:	W.A HERTEL	DATE: 12/08/88
PROJECT NO. : 602.3.2	CHECKED BY :	B.D.	DATE: 12/12/88
BORING NO. : 2045	N,E COORDINATES:	477129.91, 1379760.5	
WELL NUMBER: 2045	DATE OF INSTAL.:	12/07/88	

REMARKS — COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 2046
WELL NUMBER: 2046

FIELD ENG./GEO.: W. A. HERTEL DATE: 12/19/88
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 478058.45, 1379418.6
DATE OF INSTAL.: 12/13/88

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0.0TO: 73.0
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4.0 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0.0 TO: 73.7
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 15. Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4.0 In.
LENGTH OF 1ST PIPE SECTION: 5.0 Ft.
2ND PIPE SECTION: 10.0 Ft.
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREADED, SCREW TYPE FLUSH JOINTED.

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 10.7 In.
* LOCKING COVER WITH PADLOCK

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	577.81
GROUND SURFACE	0.0	575.9
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0.0	41.0	N/A	N/A
Bentonite Pellets	41.0	47.0	N/A	N/A
Sand	47.0	73.0	N/A	N/A
PERFORATED SECTION	53.4	68.4	N/A	N/A
WELL TIP	70.1		N/A	
BOTTOM OF BOREHOLE	73.0		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.: W. A. HERTEL	DATE: 12/19/88
PROJECT NO. : 602.3.2	CHECKED BY : Not Noted	DATE: N/A
BORING NO. : 2046	N,E COORDINATES: 478058.45, 1379418.6	
WELL NUMBER: 2046	DATE OF INSTAL.: 12/13/88	

REMARKS — COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD FOR WELL #2048

10/07/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 2048
WELL NUMBER : 2048

FIELD ENG./GEO.:BILL HERTEL DATE:12/03/88
CHECKED BY :B. DUNNING DATE:12/12/88
N,E COORDINATES:477480.23, 1379866.5
DATE OF INSTAL.:11/30/88

BOREHOLE DRILLING

DRILLING METHOD:Cable Tool
DRILLING FLUID(S) USED:(in Feet)
FLUID:WATER FROM:0.0 TO:68.0
FLUID:N/A FROM:N/A TO:N/A
NOTES/COMMENTS:

TYPE OF BIT:Flat Head Hammer
IS CASING TEMPORARY?:No
CASING TYPE :MONITORING WELL
CASING DIAM.:4.0 In. ID
CASING SIZE(S) USED:(in Feet)
SIZE:10 FROM:0.0 TO:70.0
SIZE:N/A FROM:N/A TO:N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE:Screen
AVG. SIZE OF PERFORATIONS:0.01 (In.)
TOTAL PERFORATED AREA:15. Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL:Stainless Steel
RISER PIPE DIAMETERS:
O.D.:4 3/8 In. I.D.:4.0 In.
LENGTH OF 1ST PIPE SECTION:2.0 Ft.
2ND PIPE SECTION:10.0 Ft.
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: FLUSH THREAD SCREW TYPE JOINT

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:5.0 Ft.
PROTECTIVE PIPE O.D.:10 3 In.
* LOCKING CAP

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	573.56
GROUND SURFACE	0.0	571.5
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0.0	39.0	N/A	N/A
Bentonite Pellets	39.0	45.0	N/A	N/A
Sand	45.0	68.0	N/A	N/A
PERFORATED SECTION	50.0	65.0	N/A	N/A
WELL TIP	66.5		N/A	
BOTTOM OF BOREHOLE	68.0		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL? : No

MONITORING WELL INSTALLATION RECORD FOR WELL #2048 (Continued)
10/07/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.:BILL HERTEL	DATE:12/03/88
PROJECT NO. : 602.3.2	CHECKED BY :B. DUNNING	DATE:12/12/88
BORING NO. : 2048	N,E COORDINATES:477480.23, 1379866.5	
WELL NUMBER : 2048	DATE OF INSTAL.:11/30/88	

REMARKS -- COMMENT AREA

REMARKS : ONE BUCKET OF BENTONITE PELLETS WAS POURED AROUND THE PROTECTIVE PIPE AT THE SURFACE TO SERVE AS A SEAL

COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 2049
WELL NUMBER: 2049

FIELD ENG./GEO.: LOWELL WILLE DATE: 10/14/87
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 477020.51, 1380072.0
DATE OF INSTAL.: 10/14/87

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0 TO: 23
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: Yes
CASING TYPE : MONITORING WELL
CASING DIAM.: 4 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 41.5
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 15 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: SCREW (FLUSH JOINT THREAD)

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 In.
• LOCKING CAP AND LOCK

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	542.71
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	2 1/2 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0	11	N/A	N/A
Bentonite Pellets	11	16	N/A	N/A
Sand	16	41 1/2	N/A	N/A
PERFORATED SECTION	18	33	N/A	N/A

WELL TIP	35.4	N/A
BOTTOM OF BOREHOLE	41.5	N/A
GWL AFTER INSTALLATION	21.4	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.:	LOWELL WILLE	DATE: 10/14/87
PROJECT NO. : 602.3.2	CHECKED BY :	Not Noted	DATE: N/A
BORING NO. : 2049	N,E COORDINATES:	477020.51, 1380072.0	
WELL NUMBER: 2049	DATE OF INSTAL.:	10/14/87	

REMARKS -- COMMENT AREA

REMARKS : WHITE OUT CORRECTIONS WERE MADE BY L. WILLIE AT THE TIME THIS FORM WAS COMPLETED.

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 2065
WELL NUMBER: 2065

FIELD ENG./GEO.: L. WILLIE DATE: 10/06/87
CHECKED BY : D. HOLZMAN DATE: 10/07/87
N,E COORDINATES: 477866.51, 1380434.3
DATE OF INSTAL.: 10/03/87

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 2 TO: 64
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: Yes
CASING TYPE : MONITORING WELL
CASING DIAM.: 4 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 64
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 15 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREAD AND COUPLE (FLUSH JOINT THREADS)

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 In.
• LOCKING CAP AND LOCK

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE		ELEVATION MSL	
TOP OF RISER PIPE	2.0 Ft.		573.36	
GROUND SURFACE	0.0		571.5	
BOTTOM OF PROTECTIVE PIPE	-2.5 Ft.			
BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	2	39.5	N/A	N/A
Bentonite Pellets	39.5	44.5	N/A	N/A
Sand	44.5	65.0	N/A	N/A
PERFORATED SECTION	46.5	61.5	N/A	N/A
WELL TIP	64.0		N/A	
BOTTOM OF BOREHOLE	66.5		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: L. WILLIE DATE: 10/06/87
PROJECT NO. : 602.3.2 CHECKED BY : D. HOLZMAN DATE: 10/07/87
BORING NO. : 2065 N,E COORDINATES: 477866.51, 1380434.3
WELL NUMBER: 2065 DATE OF INSTAL.: 10/03/87

REMARKS -- COMMENT AREA

REMARKS : WHITE CORRECTION WAS MADE BY L. WILLIE AT THE TIME THIS FORM WAS COMPLETED.

COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 2385
WELL NUMBER: 2385

FIELD ENG./GEO.: M. SWANSON DATE: 04/25/90
CHECKED BY : E.T. DATE: 05/02/90
N,E COORDINATES: 477886.51, 1379923.2
DATE OF INSTAL.: 04/25/90

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: H2O FROM: 0.0TO: 75.0
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4.0 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10. FROM: 0.0 TO: 75.0
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 15. Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4.0 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: 15 Ft.
3RD PIPE SECTION: 5 Ft.
COMMENTS

RISER JOINING METHOD: THREADED, FLUSH JOINTED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 In.
PROTECTIVE PIPE O.D.: 10.7 In.
* HINGED, LOCKING LID COVER WITH

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	579.35
GROUND SURFACE	0.0	577.6
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0.0	42.0	N/A	N/A
Bentonite Pellets	42.0	48.0	N/A	N/A
Sand	48.0	70.0	N/A	N/A
PERFORATED SECTION	53.0	68.0	N/A	N/A

WELL TIP	69.7	N/A
BOTTOM OF BOREHOLE	75.0	N/A
GWL AFTER INSTALLATION	54.0	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: M. SWANSON DATE: 04/25/90
PROJECT NO. : 602.3.2 CHECKED BY : E.T. DATE: 05/02/90
BORING NO. : 2385 N,E COORDINATES: 477886.51, 1379923.2
WELL NUMBER: 2385 DATE OF INSTAL.: 04/25/90

REMARKS -- COMMENT AREA

REMARKS : TWO (2) BUCKETS OF BENTONITE ADDED AROUND PROTECTIVE CASING, AS WELL AS RISER PIPE.

COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 3014
WELL NUMBER: 3014

FIELD ENG./GEO.:
CHECKED BY : Not Noted
N,E COORDINATES: 476805.31, 1379579.2
DATE OF INSTAL.:

DATE:
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: N/A
IS CASING TEMPORARY?: N/A
CASING TYPE : Not Noted
CASING DIAM.:
CASING SIZE(S) USED: (Units N/A)
SIZE: FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: N/A
AVG. SIZE OF PERFORATIONS: (N/A)
TOTAL PERFORATED AREA:
NOTES/COMMENTS:

RISER PIPE MATERIAL: N/A
RISER PIPE DIAMETERS:
O.D.: I.D.:
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: Not Noted

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:
PROTECTIVE PIPE O.D.:

OTHER PROTECTION (* NONE NOTED)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	N/A	534.25
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	N/A	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	N/A	N/A	N/A	N/A
PERFORATED SECTION	N/A	N/A	N/A	N/A
WELL TIP	N/A		N/A	
BOTTOM OF BOREHOLE	N/A		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : N/A
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : N/A

MONITORING WELL INSTALLATION RECORD (Continued)

08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.:		DATE:
PROJECT NO. : 602.3.2	CHECKED BY	: Not Noted	DATE: N/A
BORING NO. : 3014	N,E COORDINATES:	476805.31, 1379579.2	
WELL NUMBER: 3014	DATE OF INSTAL.:		

REMARKS -- COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 3045
WELL NUMBER: 3045

FIELD ENG./GEO.: M. GARMAN
CHECKED BY : Not Noted
N,E COORDINATES: 477139.87, 1379742.3
DATE OF INSTAL.: 05/17/90

DATE: 05/09/90
DATE: N/A

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0 TO: 106.5
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITOR WELL
CASING DIAM.:
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 103
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Slots
AVG. SIZE OF PERFORATIONS: 0.01 (In.)
TOTAL PERFORATED AREA: 10. Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4.0 In.
LENGTH OF 1ST PIPE SECTION: 10.0 Ft.
2ND PIPE SECTION: 5.0 Ft.
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREADED, FLUSH JOINTED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 10 3 In.
* HINGED LOCKING COVER WITH PADL

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	547.86
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0.0	78.0	N/A	N/A
Sand	78.0	106.5	N/A	N/A
PERFORATED SECTION	83.0	93.0	N/A	N/A
WELL TIP	94.7		N/A	
BOTTOM OF BOREHOLE	106.5		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.: M. GARMAN	DATE: 05/09/90
PROJECT NO. : 602.3.2	CHECKED BY : Not Noted	DATE: N/A
BORING NO. : 3045	N,E COORDINATES: 477139.87, 1379742.3	
WELL NUMBER: 3045	DATE OF INSTAL.: 05/17/90	

REMARKS -- COMMENT AREA

REMARKS : 2 BUCKETS BENTONITE ADDED INSIDE AND OUTSIDE PROTECTIVE WELL COVER.
COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 3046
WELL NUMBER: 3046

FIELD ENG./GEO.: M. SWANSON DATE: 06/01/90
CHECKED BY : E. TROLLINGER DATE: 06/28/90
N,E COORDINATES: 478051.23, 1379438.6
DATE OF INSTAL.: 06/04/90

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: H2O FROM: 0 TO: 136.5
FLUID: N/A FROM: N/A TO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 136.5
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 10 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREADED-FLUSH JOINTED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10.7 In.
* HINGED, LOCKING LID COVER

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	578.60
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	-2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0.0	110.0	N/A	N/A
Sand	110.0	136.5	N/A	N/A
PERFORATED SECTION	115.0	125.0	N/A	N/A

WELL TIP	126.7	N/A
BOTTOM OF BOREHOLE	136.5	N/A
GWL AFTER INSTALLATION	52.8	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: M. SWANSON DATE: 06/01/90
PROJECT NO. : 602.3.2 CHECKED BY : E. TROLLINGER DATE: 06/28/90
BORING NO. : 3046 N,E COORDINATES: 478051.23, 1379438.6
WELL NUMBER: 3046 DATE OF INSTAL.: 06/04/90

REMARKS -- COMMENT AREA

REMARKS : 3 BUCKETS OF BENTONITE PELLETS ADDED AROUND PROTECTIVE CASING.
COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 3049
WELL NUMBER: 3049

FIELD ENG./GEO.: L. ADAMS DATE: 11/10/88
CHECKED BY : B. DUNNING DATE: 12/12/88
N,E COORDINATES: 477021.22, 1380061.4
DATE OF INSTAL.: 11/08/88

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0.0TO: 100.0
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4.0 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10. FROM: 0.0 TO: 100.0
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.01 (In.)
TOTAL PERFORATED AREA: 10. Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4.0 In.
LENGTH OF 1ST PIPE SECTION: 10.0 Ft.
2ND PIPE SECTION: 2.5 Ft.
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: FLUSH JOINT, THREADED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 Ft.
PROTECTIVE PIPE O.D.: 10 3 In.
* LOCKING CAP

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	542.50
GROUND SURFACE	0.0	540.7
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	5.0	73.0	N/A	N/A
Bentonite Pellets	0.0	5.0	N/A	N/A
Sand	73.0	88.0	N/A	N/A
Gravel	88.0	92.0	N/A	N/A
PERFORATED SECTION	78.0	88.0	N/A	N/A

WELL TIP	90.5	N/A
BOTTOM OF BOREHOLE	101.5	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS FIELD ENG./GEO.: L. ADAMS DATE: 11/10/88
PROJECT NO. : 602.3.2 CHECKED BY : B. DUNNING DATE: 12/12/88
BORING NO. : 3049 N,E COORDINATES: 477021.22, 1380061.4
WELL NUMBER: 3049 DATE OF INSTAL.: 11/08/88

REMARKS -- COMMENT AREA

REMARKS : OPEN HOLE INTERVAL FROM 100.0 FT TO 92.0 FT. WAS ALLOWED TO COLLAPSE ON ITSELF. EIGHT BUCKETS OF BENTONITE PELLETS WERE USED TO FILL OPEN HOLE INTERVAL FROM 0.0 - 5.0 FT. AND TO SERVE AS A SURFACE SEAL AROUND THE PROTECTIVE WELL COVER.

COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 3065
WELL NUMBER: 3065

FIELD ENG./GEO.: D. HOEKSTRA DATE: 11/09/88
CHECKED BY : B. DUNNING DATE: 12/12/88
N,E COORDINATES: 477856.08, 1380406.9
DATE OF INSTAL.: 11/09/88

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0.0TO: 127.3
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4 3/8 In. OD
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0.0 TO: 127.3
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.01 (In.)
TOTAL PERFORATED AREA: 10. In.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4.0 In.
LENGTH OF 1ST PIPE SECTION: 10.0 In.
2ND PIPE SECTION: 2.0 In.
3RD PIPE SECTION: 2.5 In.
COMMENTS

RISER JOINING METHOD: SCREW TYPE - FLUSH THREAD

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5.0 In.
PROTECTIVE PIPE O.D.: 10 3 In.
* LOCKING CAP MASTER LOCK 3217

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	573.41
GROUND SURFACE	0.0	571.7
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	2.0	103.0	N/A	N/A
Bentonite Pellets	0.5	2.0	N/A	N/A
Sand	103.0	122.5	N/A	N/A
Gravel	122.5	125	N/A	N/A
PERFORATED SECTION	110.0	120.0	N/A	N/A
WELL TIP	122.5		N/A	
BOTTOM OF BOREHOLE	127.3		N/A	
GWL AFTER INSTALLATION	56.26		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 3065
WELL NUMBER: 3065

FIELD ENG./GEO.: D. HOEKSTRA DATE: 11/09/88
CHECKED BY : B. DUNNING DATE: 12/12/88
N,E COORDINATES: 477856.08, 1380406.9
DATE OF INSTAL.: 11/09/88

REMARKS -- COMMENT AREA

REMARKS : 1 1/2 BUCKETS BENTONITE PELLETS ADDED AFTER GROUT SETTLED INSIDE PROTECTIVE CASING AND AROUND PROTECTIVE CASING ON THE OUTSIDE.

COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 3385
WELL NUMBER: 3385

FIELD ENG./GEO.: M. SWANSON DATE: 06/19/90
CHECKED BY : E. TROLLINGER DATE: 07/13/90
N,E COORDINATES: 477883.04, 1379932.6
DATE OF INSTAL.: 07/01/90

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: H2O FROM: 0 TO: 135.0
FLUID: N/A FROM: N/A TO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 135.0
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Slots
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 10 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: THREADED - FLUSH JOINTED

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10.7 In.
* HINGED, LOCKING LID COVER WITH

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	579.29
GROUND SURFACE	0.0	577.4
BOTTOM OF PROTECTIVE PIPE	-2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0.0	110.0	N/A	N/A
Sand	110.0	126.7	N/A	N/A
PERFORATED SECTION	115.0	125.0	N/A	N/A
WELL TIP	126.7		N/A	
BOTTOM OF BOREHOLE	126.7		N/A	
GWL AFTER INSTALLATION	53.8		N/A	

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS	FIELD ENG./GEO.: M. SWANSON	DATE: 06/19/90
PROJECT NO. : 602.3.2	CHECKED BY : E. TROLLINGER	DATE: 07/13/90
BORING NO. : 3385	N,E COORDINATES: 477883.04, 1379932.6	
WELL NUMBER: 3385	DATE OF INSTAL.: 07/01/90	

REMARKS -- COMMENT AREA

REMARKS : NO BENTONITE PLUG. 3 BUCKETS OF BENTONITE ADDED AROUND PROTECTIVE CASING.

COMMENTS:

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 4014
WELL NUMBER: 4014

FIELD ENG./GEO.: E. TROLLINGER DATE: 11/09/88
CHECKED BY : B. DUNNING DATE: 12/12/88
N,E COORDINATES: 476786.78, 1379582.5
DATE OF INSTAL.: 11/09/88

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0.0TO: 150.0
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0.0 TO: 150.0
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: Screen
AVG. SIZE OF PERFORATIONS: 0.010 (In.)
TOTAL PERFORATED AREA: 10 Ft.
NOTES/COMMENTS:

RISER PIPE MATERIAL: Stainless Steel
RISER PIPE DIAMETERS:
O.D.: 4 3/8 In. I.D.: 4.0 In.
LENGTH OF 1ST PIPE SECTION: 10 Ft.
2ND PIPE SECTION: 2 Ft.
3RD PIPE SECTION: 12 Ft.
COMMENTS

RISER JOINING METHOD: SCREW TYPE, THREADED FLUSH JOINTED.

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH: 5 Ft.
PROTECTIVE PIPE O.D.: 10 3 In.
* LOCKING LID

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.0 Ft.	535.43
GROUND SURFACE	0.0	533.4
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Grout/Slurry	0.0	121.0	N/A	N/A
Sand	121.0	150.0	N/A	N/A
PERFORATED SECTION	129.5	139.5	N/A	N/A

WELL TIP	141.7	N/A
BOTTOM OF BOREHOLE	150.0	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : No
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : No

MONITORING WELL INSTALLATION RECORD (Continued)
08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 4014
WELL NUMBER: 4014

FIELD ENG./GEO.: E. TROLLINGER DATE: 11/09/88
CHECKED BY : B. DUNNING DATE: 12/12/88
N,E COORDINATES: 476786.78, 1379582.5
DATE OF INSTAL.: 11/09/88

REMARKS — COMMENT AREA

COMMENTS: _____

MONITORING WELL INSTALLATION RECORD

09/22/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 4914
WELL NUMBER: 4914

FIELD ENG./GEO.: DATE:
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 476852.06, 1379517.8
DATE OF INSTAL.:

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: NONE NOTED
NOTES COMMENTS:

TYPE OF BIT: N/A
IS CASING TEMPORARY?: N/A
CASING TYPE : Not Noted
CASING DIAM.:
CASING SIZE(S) USED: (Units N/A)
SIZE: FROM: N/A TO: N/A
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

TYPE: MONITORING WELL
DIAMETER OF PERFORATED SECTION:
PERFORATION TYPE: N/A
AVG. SIZE OF PERFORATIONS: (N/A)
TOTAL PERFORATED AREA:
NOTES/COMMENTS:

RISER PIPE MATERIAL: N/A
RISER PIPE DIAMETERS:
O.D.: I.D.:
LENGTH OF 1ST PIPE SECTION:
2ND PIPE SECTION: Not Noted
3RD PIPE SECTION: Not Noted
COMMENTS

RISER JOINING METHOD: Not Noted

PROTECTION SYSTEM

RISER PROTECTIVE PIPE LENGTH:
PROTECTIVE PIPE O.D.:

OTHER PROTECTION (* NONE NOTED)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	N/A	535.95
GROUND SURFACE	0.0	N/A
BOTTOM OF PROTECTIVE PIPE	N/A	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
	N/A	N/A	N/A	N/A
PERFORATED SECTION	N/A	N/A	N/A	N/A

WELL TIP	N/A	N/A
BOTTOM OF BOREHOLE	N/A	N/A
GWL AFTER INSTALLATION	N/A	N/A

WAS THE WELL FLUSHED AFTER INSTALLATION? : N/A
WAS A SENSITIVITY TEST PERFORMED ON THE WELL : N/A

MONITORING WELL INSTALLATION RECORD (Continued)

09/22/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 4914
WELL NUMBER: 4914

FIELD ENG./GEO.:
CHECKED BY : Not Noted
N,E COORDINATES: 476852.06, 1379517.8
DATE OF INSTAL.:

DATE:
DATE: N/A

REMARKS -- COMMENT AREA

COMMENTS: _____