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OPERABLE UNIT 2 TREATABILITY STUDY WORK PLAN FOR FLYASH/LIME SLUDGE STABILIZATION VOLUME 2 OF 2 OCTOBER 1993

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OPERABLE UNIT 2 TREATABILITY STUDY WORK PLAN FOR FLYASH/ LIME SLUDGE STABILIZATION

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

VOLUME 2 OF 2
APPENDICIES

OCTOBER 1993

U.S. DEPARTMENT OF ENERGY
FERNALD FIELD OFFICE

001

APPENDIX A

LIME SLUDGE PONDS

PREVIOUS ANALYTICAL DATA

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

TABLE D-1

SURFACE MEDIA ANALYSES
ENVIRONMENTAL SURVEY
LIME SLUDGE PONDS

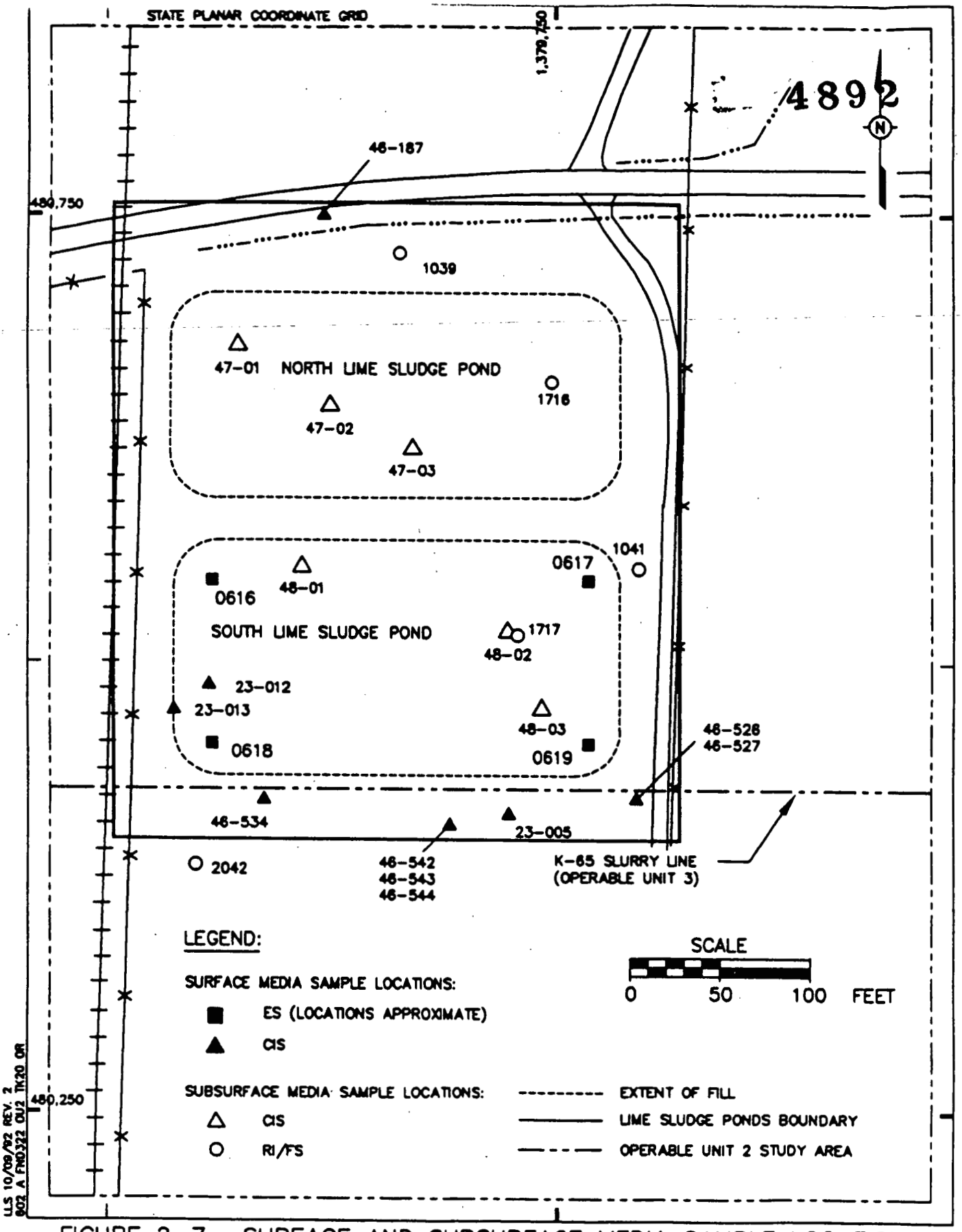

FIGURE 2-7. SURFACE AND SUBSURFACE MEDIA SAMPLE LOCATIONS IN THE LIME SLUDGE PONDS STUDY AREA

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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	↺	14	9	9
1,1,2,2-Tetrachloroethane	↺	↺	↺	↺
1,1,2-Trichloroethane	↺	↺	↺	↺
1,1-Dichloroethane	↺	↺	↺	↺
1,2-Dichloroethane	↺	↺	↺	↺
1,2-Dichloropropane	↺	↺	↺	↺
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	↺	↺	↺	↺
Bromodichloromethane	↺	↺	↺	↺
Bromoform	↺	↺	↺	↺
Bromomethane	<10	<10	<10	<10
Carbon disulfide	↺	↺	↺	↺
Carbon tetrachloride	↺	↺	↺	↺
Chlorobenzene	↺	↺	↺	↺
Chloroethane	<10	<10	<10	<10
Chloroform	7	11	7	8
Chloromethane	<10	<10	<10	<10
Cis-1,3-dichloropropene	↺	↺	↺	↺
Dibromochloromethane	↺	↺	↺	↺
Ethyl benzene	↺	↺	↺	↺
Methylene chloride	8 B	12 B	14 B	22 B
Styrene	↺	↺	↺	↺
Tetrachloroethene	↺	↺	↺	↺
Toluene	3 BJ	3 BJ	3 BJ	3 BJ
Total Xylenes	↺	↺	↺	↺
Trans-1,2-Dichloroethene	↺	↺	↺	↺
Trans-1,3-Dichloropropene	↺	↺	↺	↺

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

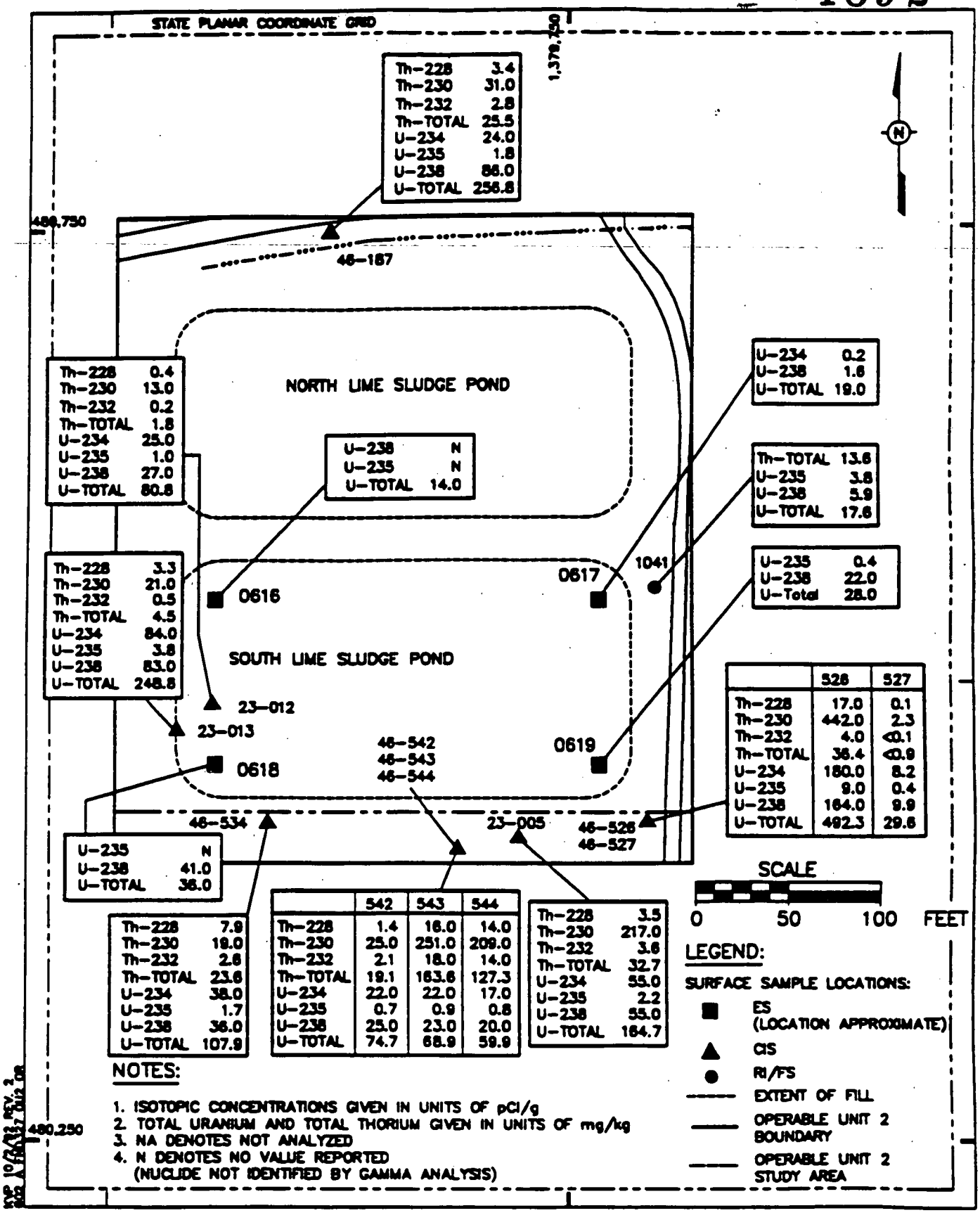
NA = Not Analyzed
N = Nuclide not identified by GAMANAL analysis as being present in the sample; no value reported.
I = Nuclide identified by GAMANAL analysis of sample spectrum, but values did not exceed room background at the 95% confidence level; no value reported
B = Analyte was found in the blank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



	528	527
Th-228	17.0	0.1
Th-230	442.0	2.3
Th-232	4.0	<0.1
Th-TOTAL	36.4	<0.9
U-234	180.0	8.2
U-235	9.0	0.4
U-238	164.0	9.9
U-TOTAL	492.3	29.6

	542	543	544
Th-228	1.4	16.0	14.0
Th-230	25.0	251.0	209.0
Th-232	2.1	18.0	14.0
Th-TOTAL	19.1	163.6	127.3
U-234	22.0	22.0	17.0
U-235	0.7	0.9	0.8
U-238	25.0	23.0	20.0
U-TOTAL	74.7	68.9	59.9

FIGURE 4-7. URANIUM AND THORIUM CONCENTRATIONS IN SURFACE MEDIA IN THE LIME SLUDGE PONDS STUDY AREA

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)
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	=	2.40	.80
	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	<	.60	
	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

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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-46-187	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	<	.80	
	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	=	995.00	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	=	9.80	.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	.80
	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	<	5.00	
	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-46-152	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	*	4.60	.80
	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	*	55.30	2.50
	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		.50	
	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		.80	
	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-SL-46-415	1380233.71	482220.47	.50	1.00	514.0	PB-210	=		
	FMP-SL-46-415	1380233.71	482220.47	.50	1.00	514.0	PU-238	<	.30	
	FMP-SL-46-415	1380233.71	482220.47	.50	1.00	514.0	PU-239/240	<	.10	
	FMP-SL-46-415	1380233.71	482220.47	.50	1.00	514.0	RA-226	=	5.20	1.09
	FMP-SL-46-415	1380233.71	482220.47	.50	1.00	514.0	RA-228	=		
	FMP-SL-46-415	1380233.71	482220.47	.50	1.00	514.0	RU-106	<	2.00	
	FMP-SL-46-415	1380233.71	482220.47	.50	1.00	514.0	SR-90	<	.80	
	FMP-SL-46-415	1380233.71	482220.47	.50	1.00	514.0	TC-99	<	4.00	
	FMP-SL-46-415	1380233.71	482220.47	.50	1.00	514.0	TH-228	=	9.10	.40
	FMP-SL-46-415	1380233.71	482220.47	.50	1.00	514.0	TH-230	=	12.00	1.00
	FMP-SL-46-415	1380233.71	482220.47	.50	1.00	514.0	TH-232	=	4.10	.30
	FMP-SL-46-415	1380233.71	482220.47	.50	1.00	514.0	U-234	=	21.00	1.00
	FMP-SL-46-415	1380233.71	482220.47	.50	1.00	514.0	U-235	=	1.20	.20
	FMP-SL-46-415	1380233.71	482220.47	.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	=	28.81	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	8.00

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

4892

014

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	480[illegible]		.16	537.0	NP-237	=	4.00	.90
	FMP-SS-46-526	1379796.09	480[illegible]	.00	.16	537.0	PB-210	=		
	FMP-SS-46-526	1379796.09	480420.[illegible]	.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	.60
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	TH-230	=	87.00	2.00
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	TH-232	=	4.90	.60
	FMP-SS-46-530	1379751.42	480396.98	.00	.16	334.0	U-234	=	29.00	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-SS-46-532	1379708.44	480398.15	.00	.16	316.6	RA-226	=	6.83	1.69
	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	529.2	CS-137	<	.50	
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	NP-237	<	.20	
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	PB-210	=		
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	PU-238	<	.10	
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	PU-239/240	<	.10	
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	RA-226	=	29.46	3.12
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	RA-228	=		
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	RU-106	<	5.00	
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	SR-90	<	.60	
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	TC-99	<	1.00	
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	TH-228	=	8.00	.70
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	TH-230	=	219.00	4.00
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	TH-232	=	9.40	.80
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	U-234	=	62.00	1.00
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	U-235	=	2.70	.20
	FMP-SS-46-545	1379745.26	480391.14	.00	.16	529.2	U-238	=	62.00	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

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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-SL-46-538	1379745.26	480391.14	.16	.50	471.0	TH-230	=	600.00	12.00
	FMP-SL-46-538	1379745.26	480391.14	.16	.50	471.0	TH-232	=	29.00	1.00
	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	1.05
	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

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.

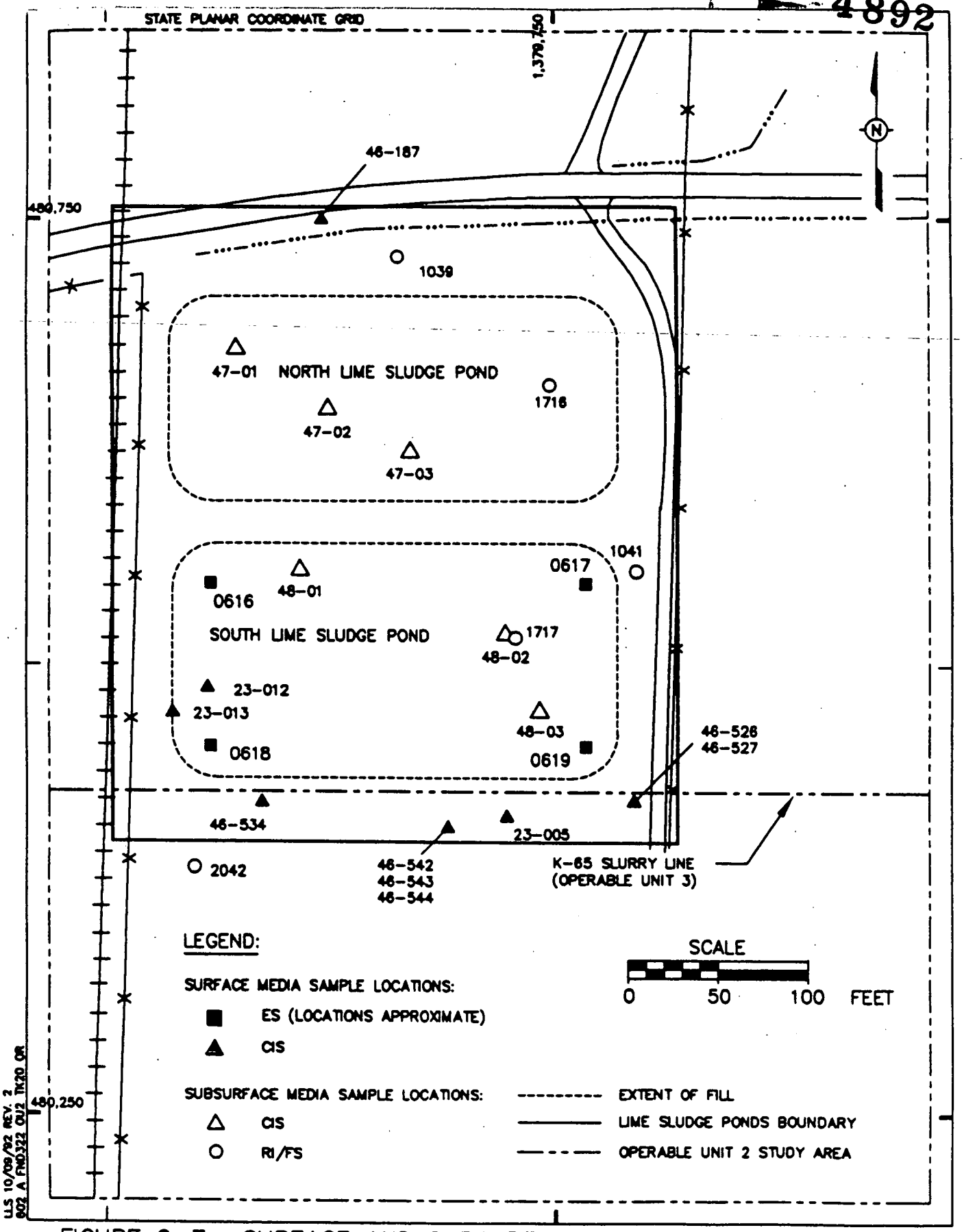

FIGURE 2-7. SURFACE AND SUBSURFACE MEDIA SAMPLE LOCATIONS IN THE LIME SLUDGE PONDS STUDY AREA

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.

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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	<	.80	
	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	

Ion 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)
18-02	8.00	9.00	RA-226	<	.20	
	8.00	9.00	TH-232	<	1.10	
	8.00	9.00	U-238	<	1.80	
18-03	.00	1.00	RA-226	<	.20	
	.00	1.00	TH-232	<	.40	
	.00	1.00	U-238	=	9.20	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.

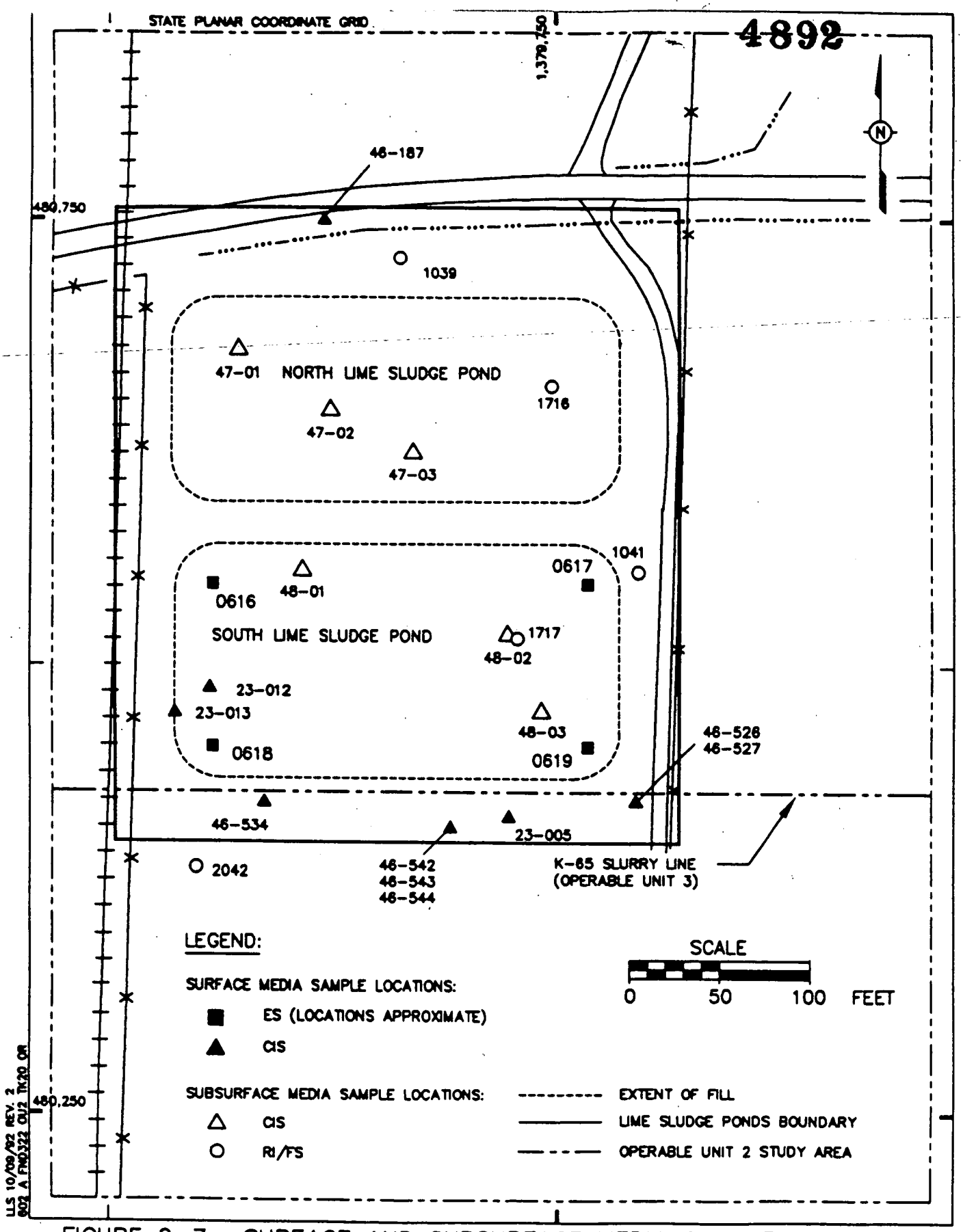

FIGURE 2-7. SURFACE AND SUBSURFACE MEDIA SAMPLE LOCATIONS IN THE LIME SLUDGE PONDS STUDY AREA

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	.50
	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

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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)
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	<	.80	
	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

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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	<	.80	
	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	870.00	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	810.00	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	810.00	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	78.00	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*
48-08	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	280.00	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	298.00	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	8708-948-0030	ZINC, TOTAL	75.00	MG/KG
		8708-948-0080	MERCURY, EP LEACHATE	.28	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	6986.07	MG/KG
			MAGNESIUM, TOTAL	17678.91	MG/KG
			MANGANESE, TOTAL	717.28	MG/KG
			POTASSIUM, TOTAL	348.20	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	78.34	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

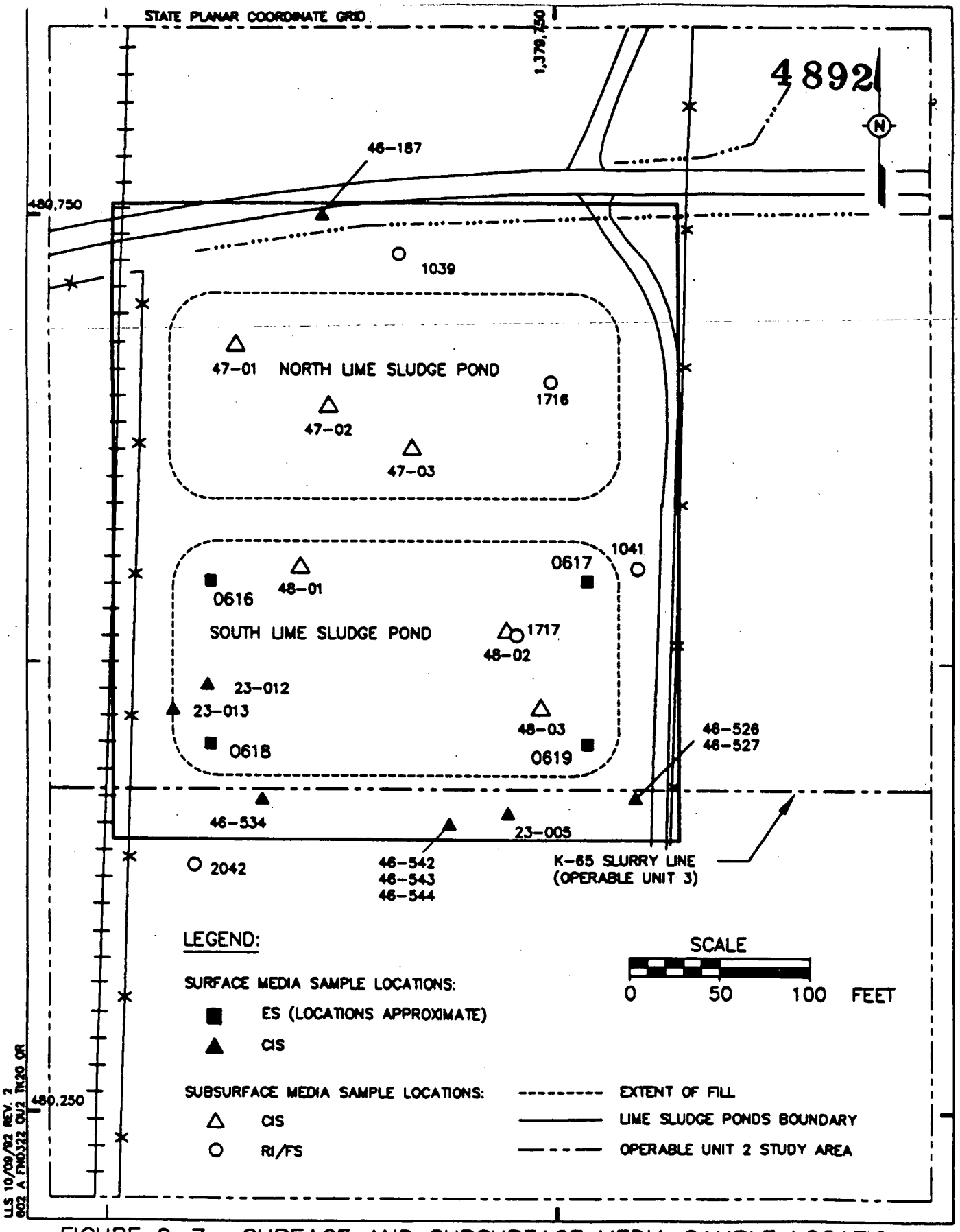

FIGURE 2-7. SURFACE AND SUBSURFACE MEDIA SAMPLE LOCATIONS IN THE LIME SLUDGE PONDS STUDY AREA

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 analysed; 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 analysed; 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

LIME SLUDGE POINDS
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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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 not 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 SL . 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 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	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	
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

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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
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					

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LIME SL. PONDS
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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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		

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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.
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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		
Dinosab	< 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		

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LIME SLA /ONDS
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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			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

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LIME SLUDGE PONDS
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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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		

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LIME SL PONDS
SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

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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		

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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 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	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	SWN	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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FER/OU2-RI/vah/LS-SBS-C.D05/October 8, 1992

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 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	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

REPORT DATE : 25-APR-92

TABLE D-6

SUBSURFACE MEDIA ANALYSES
RCRA FACILITY ASSESSMENT
NORTH LIME SLUDGE POND

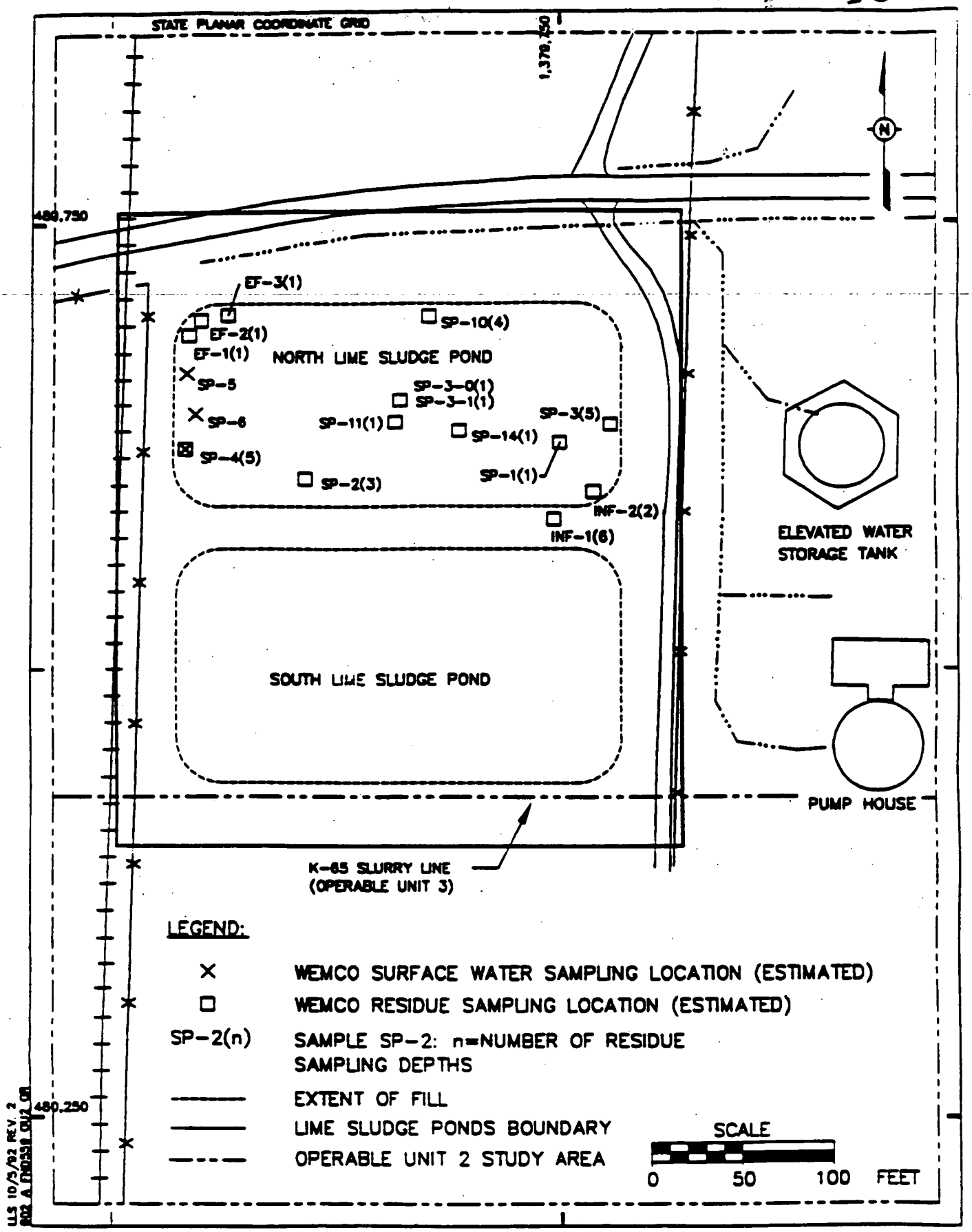

FIGURE 2-8. SURFACE WATER AND SUBSURFACE MEDIA SAMPLING LOCATIONS FOR THE RCRA FACILITY ASSESSMENT IN THE NORTH LIME SLUDGE POND

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LINE 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
Trichlorofluromethane		<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

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SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LINE 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

S08D

4898

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

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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

892

SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LINE 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

0070

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

4892

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 LINE 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
Trichlorofluromethane		<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

4892

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 LINE 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

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SUBSURFACE MEDIA ANALYSIS RCRA FACILITY ASSESSMENT
NORTH LINE 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

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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
Trichlorofluromethane		<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

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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

APPENDIX B

ACTIVE FLYASH PILES

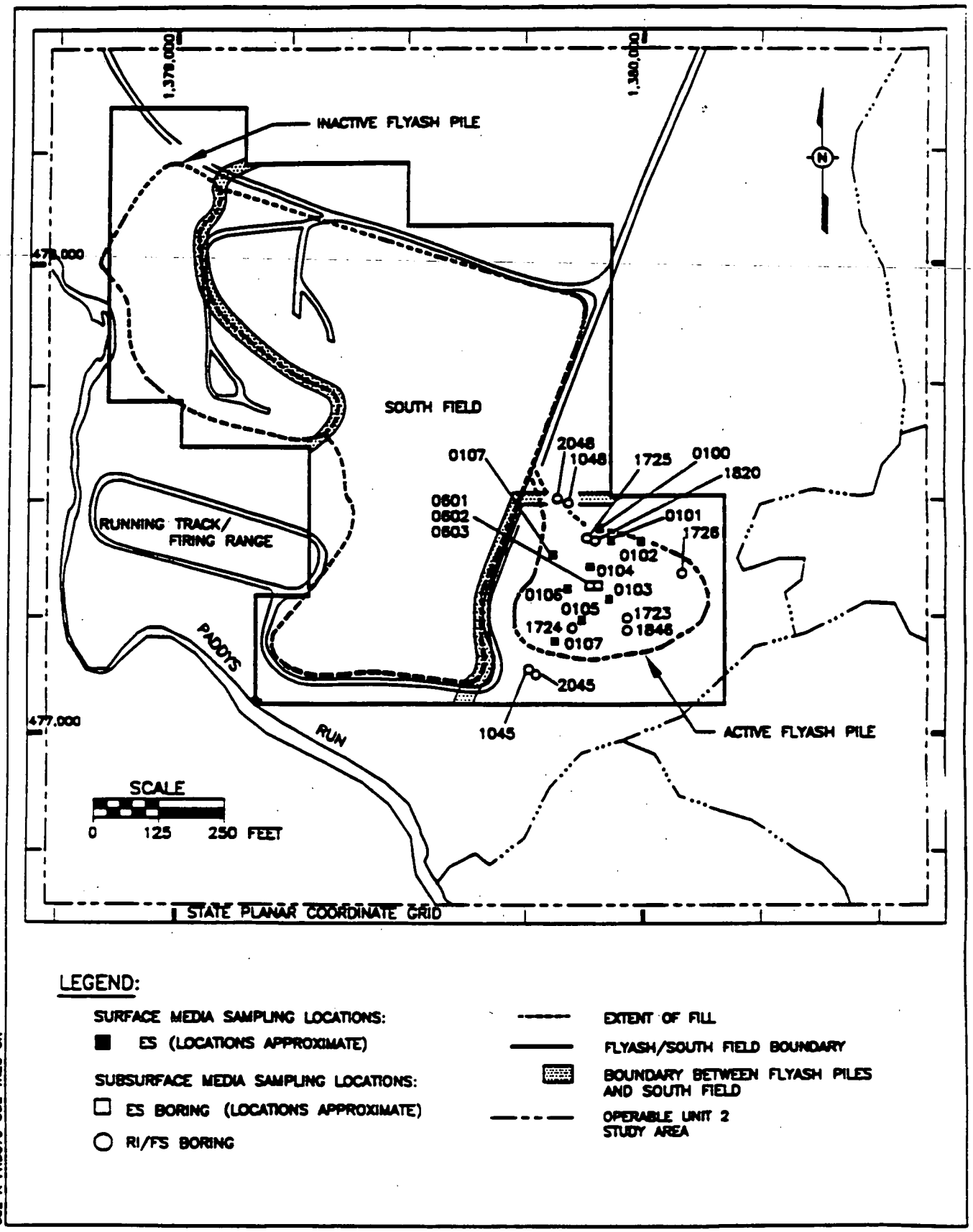
PREVIOUS ANALYTICAL DATA

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

TABLE E-1

SURFACE MEDIA ANALYSES
ENVIRONMENTAL SURVEY
ACTIVE FLYASH PILE



CRC 10/6/92 REV. 2
602 A FND379 OU2 TK20 OR

FIGURE 2-11. SURFACE AND SUBSURFACE MEDIA SAMPLE LOCATION IN THE ACTIVE FLYASH PILE STUDY AREA

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-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

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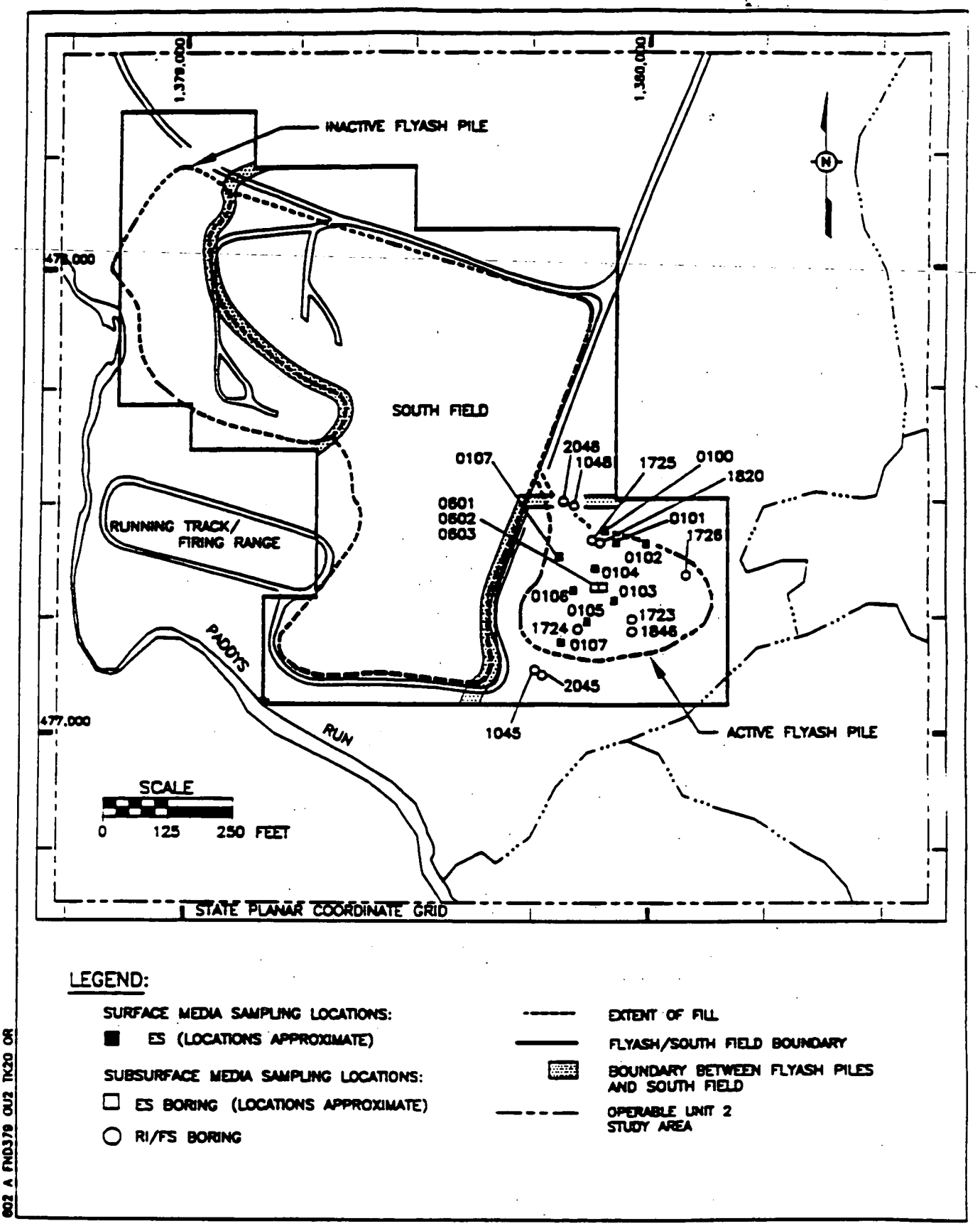
TABLE E-1
(continued)

Analyte	FEO100WP	FEO101WP	FEO102WP	FEO103WP	FEO104WP	FEO105WP	FEO106WP	FEO107WP
Styrene	↺	↺	↺	↺	↺	↺	↺	↺
Tetrachloroethene	↺	↺	↺	↺	↺	↺	↺	↺
Toluene	34	19	↺	↺	89	↺	↺	↺
Total xylenes	↺	↺	↺	↺	↺	↺	↺	↺
Trans 1,2-dichloroethene	↺	↺	↺	↺	↺	↺	↺	↺
Trans 1,3-dichloropropene	↺	↺	↺	↺	↺	↺	↺	↺
Trichloroethene	↺	↺	↺	↺	↺	↺	↺	↺
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



CRC 10/6/92 REV. 2
602 A FND379 OU2 TK20 OR

FIGURE 2-11. SURFACE AND SUBSURFACE MEDIA SAMPLE LOCATION IN THE ACTIVE FLYASH PILE STUDY AREA

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	↺
1,1,2,2-Tetrachlorethane	↺	↺	↺
1,1,2-Trichloroethane	↺	↺	↺
1,1-Dichloroethane	↺	↺	↺
1,2-Dichloroethane	↺	↺	↺
1,2-Dichloropropane	↺	↺	↺
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	↺	↺	↺
Bromodichloromethane	↺	↺	↺
Bromoform	↺	↺	↺
Bromomethane	<10	<10	<10
Carbon disulfide	↺	↺	↺
Carbon tetrachloride	↺	↺	↺
Chrolobenzene	↺	↺	↺
Chloroethane	<10	<10	<10
Chloroform	↺	↺	11
Chloroethane	<10	<10	<10
Cis 1,3-dichloropropene	↺	↺	↺
Dibromoiochloromethane	↺	↺	↺
Ethyl benzene	↺	↺	↺
Methylene chloride	160	200	↺

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TABLE E-2
(continued)

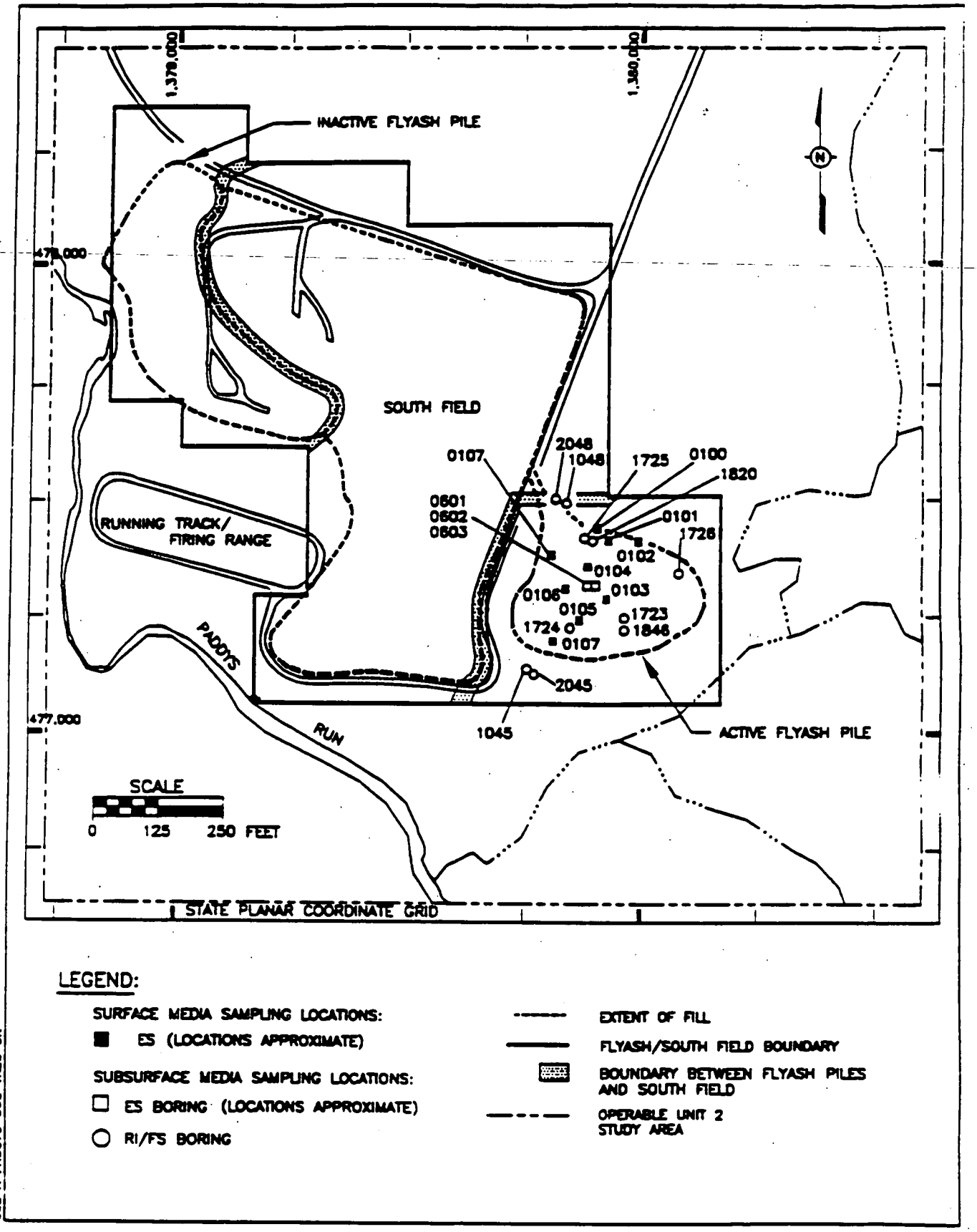
Analyte	FEO601WP	FEO602WP	FEO603WP
Styrene	↺	↺	↺
Tetrachloroethene	↺	↺	↺
Toluene	↺	↺	↺
Total xylenes	↺	↺	↺
Trans 1,2-dichloroethene	↺	↺	↺
Trans 1,3-dichloropropene	↺	↺	↺
Trichloroethene	↺	↺	↺
Vinyl acetate	<10	<10	<10
Vinyl chloride	<10	<10	<10
PCBs (mg/kg)	NA	NA	NA
Aroclor-1242	NA	NA	NA
Aroclor-1248	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.

0090
E00

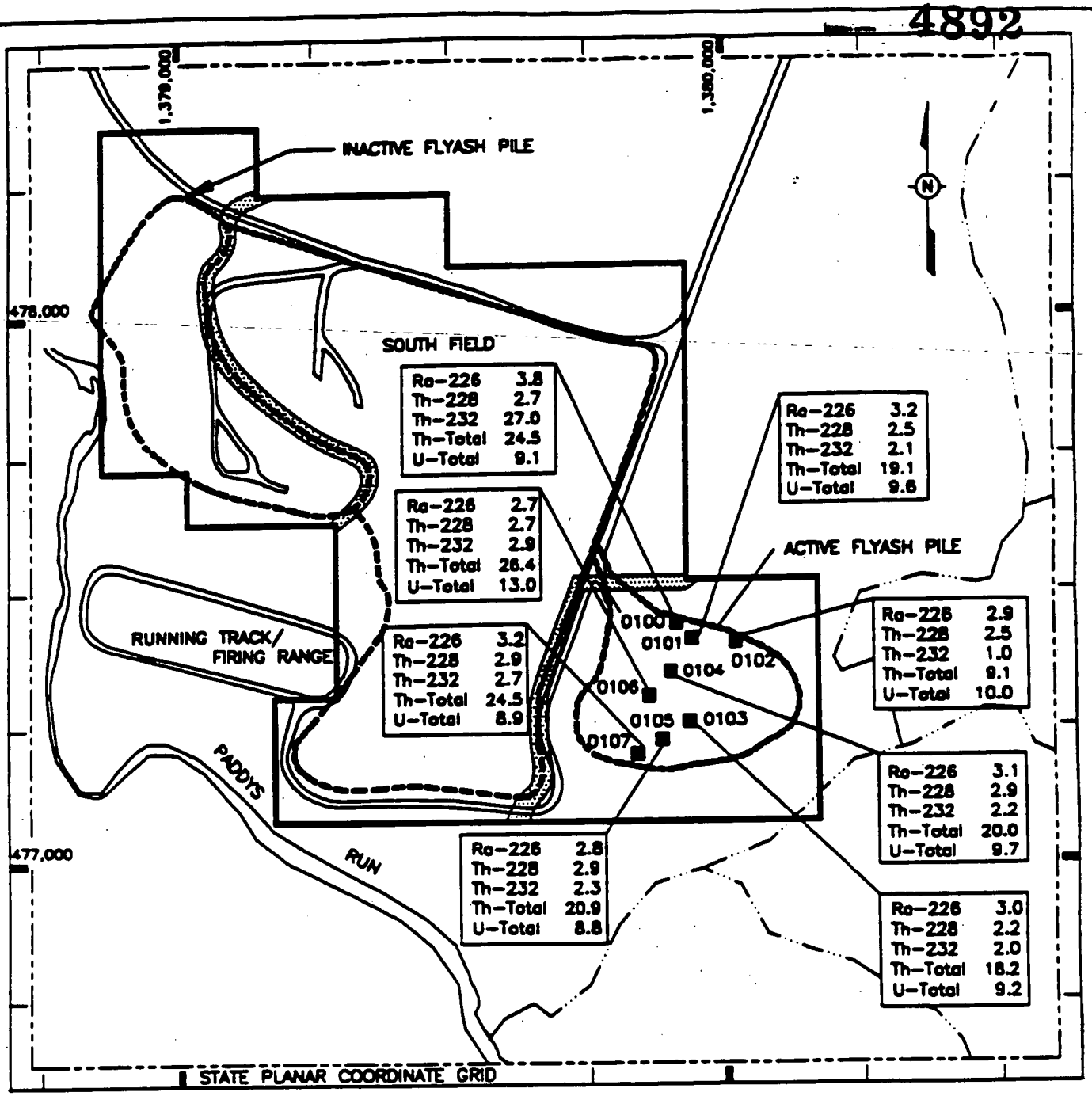
TABLE E-3

SUBSURFACE MEDIA ANALYSES
RI/FS SAMPLING PROGRAM
ACTIVE FLYASH PILE



CRC 10/6/92 REV. 2
602 A FN0378 OU2 TK20 OR

FIGURE 2-11. SURFACE AND SUBSURFACE MEDIA SAMPLE LOCATION IN THE ACTIVE FLYASH PILE STUDY AREA



LEGEND:

- ES SURFACE SAMPLE LOCATION
- EXTENT OF FILL
- FLYASH/SOUTH FIELD BOUNDARY
- BOUNDARY BETWEEN FLYASH PILES AND SOUTH FIELD
- OPERABLE UNIT 2 STUDY AREA

SCALE

0 125 250 FEET

NOTES:

1. ALL RESULTS EXCEPT TOTAL URANIUM GIVEN IN pCi/g
2. TOTAL URANIUM VALUES ARE GIVEN IN mg/kg

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802_A_FM0357_OU2_TK20.DR

FIGURE 4-9. URANIUM, THORIUM, AND RADIUM CONCENTRATION IN SURFACE MEDIA IN THE ACTIVE FLYASH PILE

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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 FILE
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	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

REPORT DATE : 22-APR-92

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PER/OU2-RI/vab/AP-SBS-RE03/August 14, 1992 - 9:04 am

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.
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

REPORT DATE : 22-APR-92

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.
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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REPORT DATE : 22-APR-92

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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.
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.
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 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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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.
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

** 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.
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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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.
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 FL. ⊿ 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	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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REPORT DATE : 22-APR-92

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.
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.

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

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.
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	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

REPORT DATE : 25-APR-92

ACTIVE FL. .A 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

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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 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	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		
Tetrachloroethene	< 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		

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REPORT DATE : 23-APR-92

SUBSURFACE MEDIA HAZARDOUS SUBSTANCE LIST RESULTS
RI/FS DATA

Results in parts per million (ppm).
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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 RP 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		

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REPORT DATE : 25-APR-92

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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	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
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	

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REPORT DATE : 25-APR-92

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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		
Nephthalene	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
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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 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	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
Tetrachloroethene	< 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

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4892

ACTIVE F[illegible] [illegible] 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 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
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

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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	1723 067180 - NA FIELD BLANK		1723 067184 29.0 - 30.5		1723 067186 COMPOSITE TCLP		1724 067193 4.5 - 6.0		1724 067196 9.0 - 10.5 RP TOXICITY	
	a	b	a	b	a	b	a	b	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		0.02000	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

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ACTIVE FLT. 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		

a = lab qualifiers
b = validation qualifiers

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ACTIVE FLYAWAY 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 RP 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		
Tetrachloroethene	< 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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ACTIVE FLD. FILE
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	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			< 2.20000			< 1.90000			< 0.10000		J
2,4,6-Trichlorophenol	< 0.02000			NA			< 0.45000			< 0.40000			< 0.02000		

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.
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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		

a = lab qualifiers
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ACTIVE FLY. 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 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	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
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	
Tetrachloroethene	< 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		

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	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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REPORT DATE : 25-APR-92

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ACTIVE FLYA /ILE
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 proceeded 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
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		

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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		

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ACTIVE FLY. . 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 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	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		
Tetrachloroethene	< 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 FLT. FILE
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	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
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		

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 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	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

a = lab qualifiers
b = validation qualifiers

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ACTIVE FLYA. /ILE
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 FLASH 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 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		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 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		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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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

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ACTIVE FLYASH FILE
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)
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	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 067219 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 W	R		NA			NA		<	7.8000 W	R		9.0000 BW	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 W	J	<	0.0020			0.0065		<	0.5200 W	J		1.3000 B	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 B*	
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 B		<	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.
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	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		

a = lab qualifiers
b = Validation qualifiers

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ACTIVE FLARE 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 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	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	W	R	NA			NA			< 7.0000	W	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	W	J	0.0075			< 0.0020	J		< 0.4700	W	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

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	1726 067150 COMPOSITE TCLP	a	b	1726 067150 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

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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	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

REPORT DATE : 25-APR-92

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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

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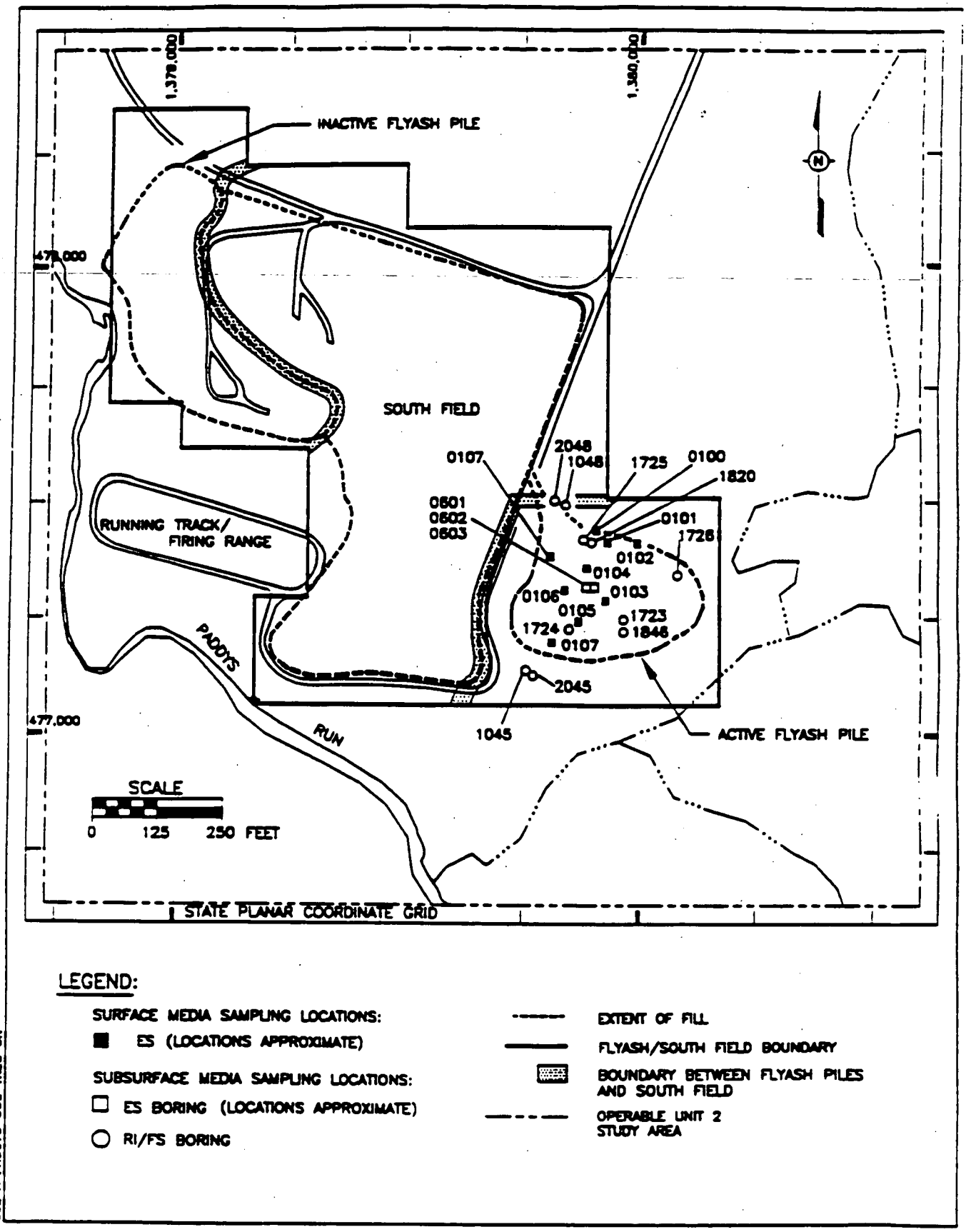
TABLE E-4

HAZARDOUS CHARACTERISTIC DATA FOR SUBSURFACE MEDIA
RI/FS SAMPLING PROGRAM
ACTIVE FLYASH PILE



CRC 10/6/92 REV. 2
802 A FN0379 OU2 TK20 OR

FIGURE 2-11. SURFACE AND SUBSURFACE MEDIA SAMPLE LOCATION IN THE ACTIVE FLYASH PILE STUDY AREA

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 (^{o}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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APPENDIX C

INACTIVE FLYASH PILE

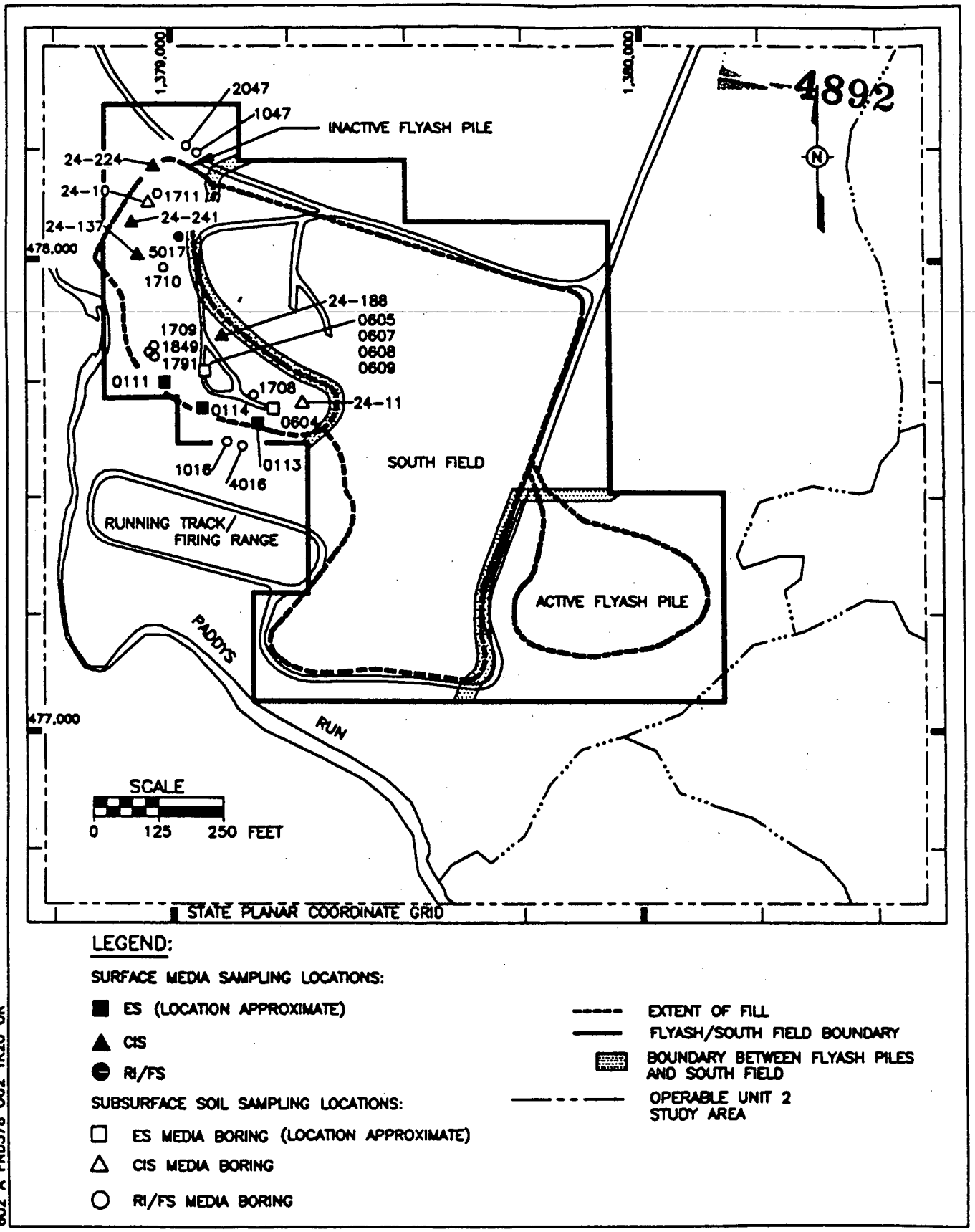
PREVIOUS ANALYTICAL DATA

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

TABLE F-1

SURFACE MEDIA ANALYSES
ENVIRONMENTAL SURVEY
INACTIVE FLYASH PILE



CRC 10/6/92 REV. 2
602 A FND378 OU2 TK20 OR

FIGURE 2-15. SURFACE AND SUBSURFACE MEDIA SAMPLE LOCATIONS IN THE INACTIVE FLYASH PILE STUDY AREA

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	↺	↺	↺
1,1,2,2-Tetrachloroethane	↺	↺	↺
1,1,2-Trichloroethane	↺	↺	↺
1,1-Dichloroethane	↺	↺	↺
1,2-Dichloroethane	↺	↺	↺
1,2-Dichloropropane	↺	↺	↺
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	↺	↺	↺
Bromodichloromethane	↺	↺	↺
Bromoform	↺	↺	↺
Bromomethane	<10	<10	<10
Carbon disulfide	↺	↺	↺
Carbon tetrachloride	↺	↺	↺
Chlorobenzene	↺	↺	↺
Chloroethane	<10	<10	<10
Chloroform	4 BJ	4 BJ	2 BJ
Chloromethane	<10	<10	↺
Cis-1,3-dichloropropene	↺	↺	↺
Dibromochloromethane	↺	↺	↺
Ethyl benzene	↺	↺	↺
Methylene chloride	100 Z5	42	30 B
Styrene	↺	↺	↺
Tetrachloroethene	↺	↺	↺
Toluene	20	10 B	6 B
Total xylenes	↺	↺	↺

TABLE F-1
(continued)

Analyte	FE0111SS	FE0113SS	FE0114SS
Trans-1,2-dichloroethene	Ø	Ø	Ø
Trans-1,3-dichloropropene	Ø	Ø	Ø
Trichlorothene	Ø	Ø	Ø
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

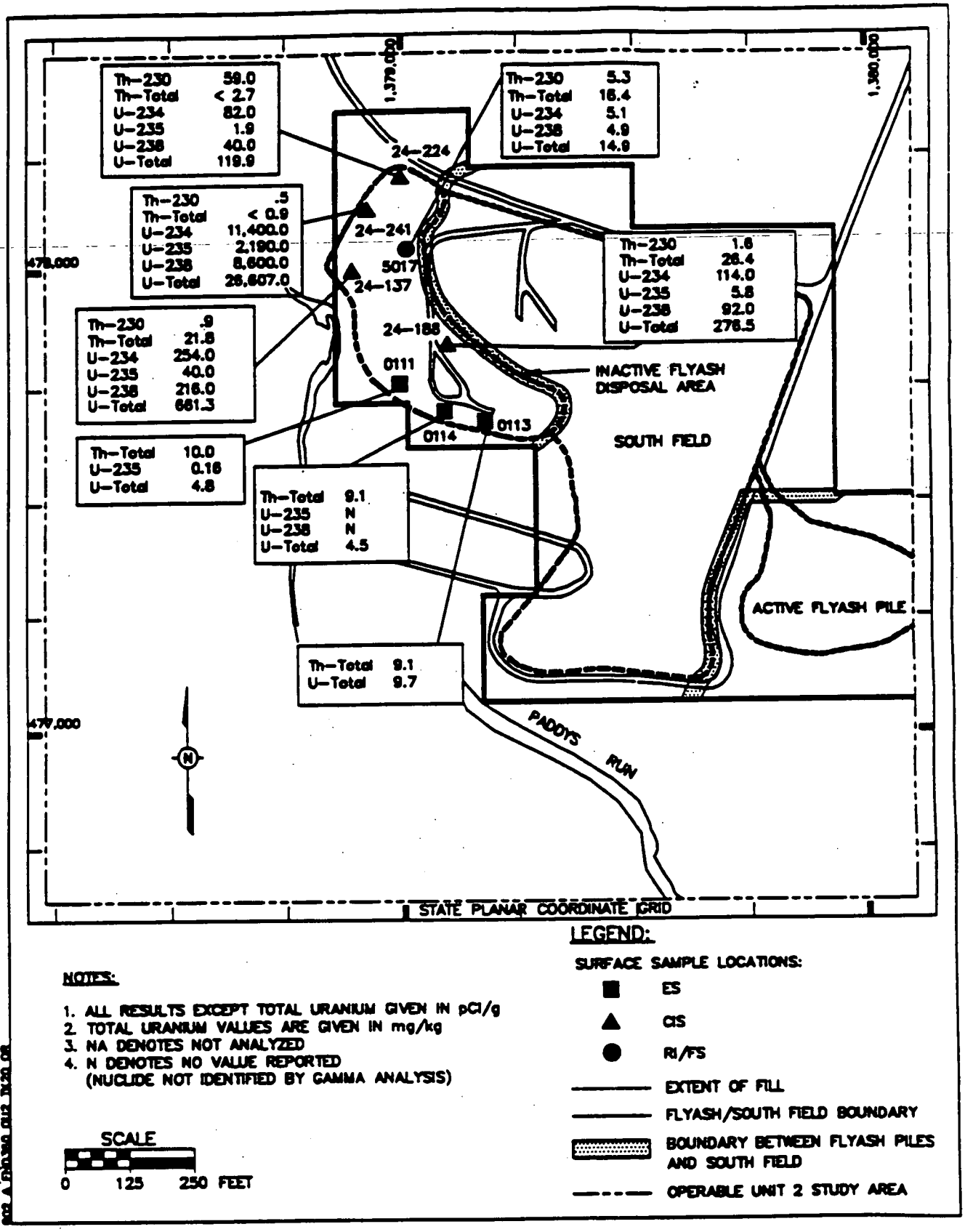


FIGURE 4-12. URANIUM AND THORIUM CONCENTRATIONS IN SURFACE MEDIA IN THE INACTIVE FLYASH PILE

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	=	1.40	.70
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	TH-230	=	125.00	8.00
	FMP-SS-24-133	1379584.30	477945.63	.00	.16	678.0	TH-232	=	8.40	.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	.80
	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	=	5.80	.80
	FMP-SS-24-142	1379136.13	478018.92	.00	.16	586.0	U-234	=	95.00	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	=	46.00	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	<	5.49	
	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	=	31.00	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	=	.10	
	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	<	1.50	.75
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	RA-226	=		
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	RA-228	=	2.00	
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	RU-106	<	.80	
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	SR-90	<	1.00	
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	TC-99	<	1.90	.20
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	TH-228	=	7.10	.40
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	TH-230	=	2.40	.20
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	TH-232	=	117.00	2.00
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	U-234	=	1.90	.30
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	U-235	=	124.00	2.00
	FMP-SS-24-221	1379156.85	478081.38	.00	.16	662.0	U-238	=		
	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-24-224	1378998.33	478210.76	.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	=	41.00	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	=	18.12	.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 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.

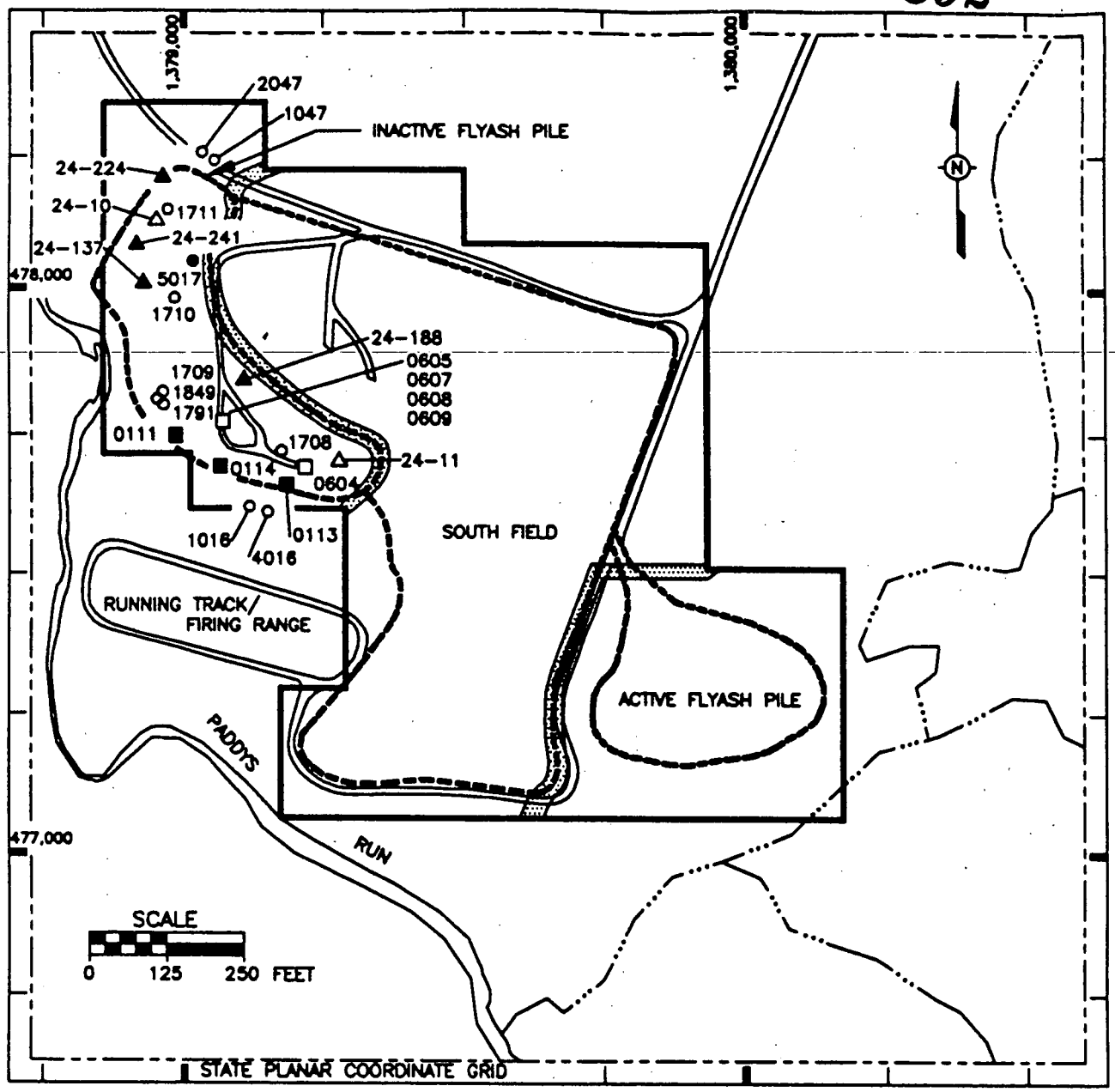
UJ = Not detected, quantitation limit may be inaccurate or imprecise.

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.



LEGEND:

SURFACE MEDIA SAMPLING LOCATIONS:

- ■ ES (LOCATION APPROXIMATE)
- ▲ CIS
- ● RI/FS

SUBSURFACE SOIL SAMPLING LOCATIONS:

- □ ES MEDIA BORING (LOCATION APPROXIMATE)
- △ CIS MEDIA BORING
- ○ RI/FS MEDIA BORING

- EXTENT OF FILL
- FLYASH/SOUTH FIELD BOUNDARY
- BOUNDARY BETWEEN FLYASH PILES AND SOUTH FIELD
- OPERABLE UNIT 2 STUDY AREA

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FIGURE 2-15. SURFACE AND SUBSURFACE MEDIA SAMPLE LOCATIONS IN THE INACTIVE FLYASH PILE STUDY AREA

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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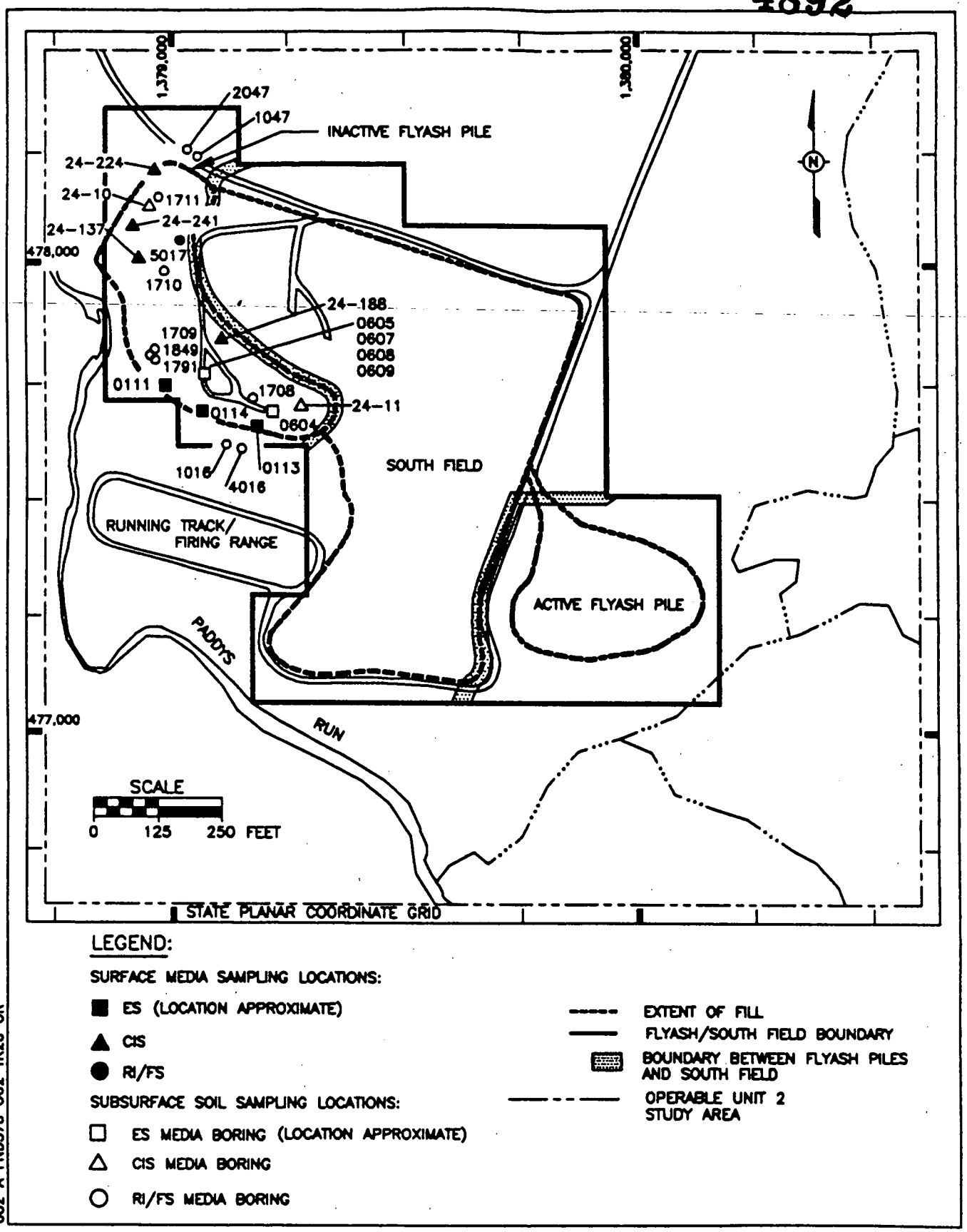
TABLE F-4

SUBSURFACE MEDIA ANALYSES
ENVIRONMENTAL SURVEY
INACTIVE FLYASH PILE



CRC 10/6/92 REV. 2
802 A FND378 OU2 TK20 OR

FIGURE 2-15. SURFACE AND SUBSURFACE MEDIA SAMPLE LOCATIONS IN THE INACTIVE FLYASH PILE STUDY AREA

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	↺	↺	↺	100	84
1,1,2,2-Tetrachloroethane	↺	↺	↺	↺	↺
1,1,2-Trichloroethane	↺	↺	↺	↺	↺
1,1-Dichloroethane	↺	↺	↺	↺	↺
1,2-Dichloroethane	↺	↺	↺	↺	↺
1,2-Dichloropropane	↺	↺	↺	↺	↺
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	↺	↺	↺	↺	↺
Bromodichloromethane	↺	↺	↺	↺	↺
Bromoform	↺	↺	↺	↺	↺
Bromomethane	<10	<10	<10	<10	<10
Carbon disulfide	↺	↺	↺	↺	↺
Carbon tetrachloride	↺	↺	↺	↺	↺
Chlorobenzene	↺	↺	↺	↺	↺
Chloroethane	<10	<10	<10	<10	<10
Chloroform	↺	↺	↺	↺	↺
Chloromethane	<10	<10	<10	<10	↺
Cis-1,3-dichloropropene	↺	↺	↺	↺	↺
Dibromeochloromethane	↺	↺	↺	↺	↺
Ethyl benzene	↺	↺	↺	↺	↺
Methylene chloride	110	52	21 B	28 B	27
Styrene	↺	↺	↺	↺	↺
Tetrachloroethene	↺	↺	↺	↺	↺
Toluene	↺	60	↺	↺	34
Total xylenes	↺	↺	↺	↺	↺

TABLE F-4
(continued)

Analyte	FEO604WP	FEO605WP	FEO607WP	FEO608WP	FEO609WP
Trans-1,2-dichloroethene	↺	↺	↺	↺	↺
Trans-1,3-dichloropropene	↺	↺	↺	↺	↺
Trichlorothene	↺	↺	↺	↺	↺
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.

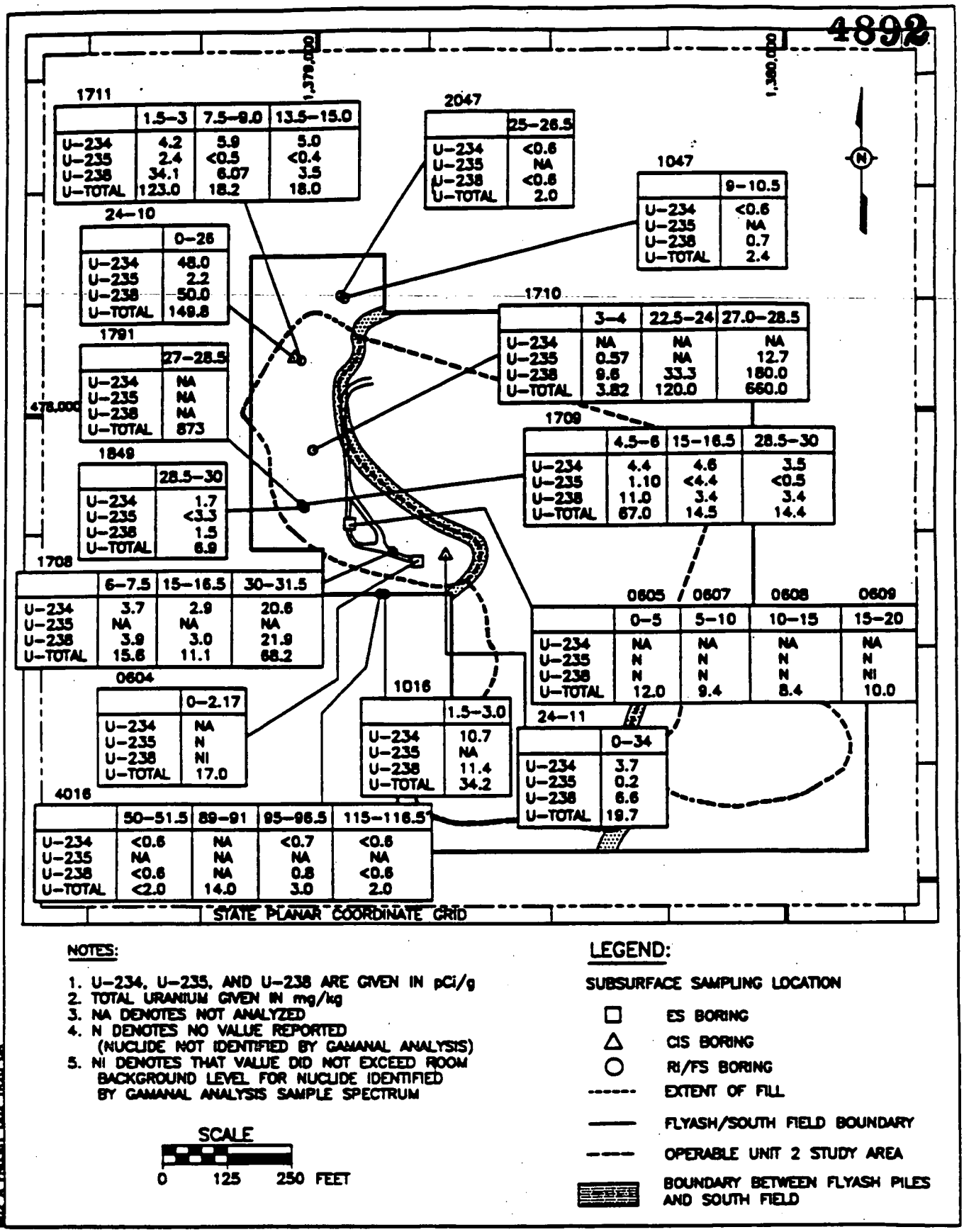


FIGURE 4–13. URANIUM CONCENTRATIONS IN SUBSURFACE MEDIA SAMPLES IN THE INACTIVE FLYASH PILE STUDY AREA

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	=	.60	.40
	9.00	10.00	U-238	=	6.80	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	.50
	11.00	12.00	TH-232	<	1.60	
	11.00	12.00	U-238	<	10.50	
	12.00	13.00	RA-226	=	.70	.50
	12.00	13.00	TH-232	<	2.50	
	12.00	13.00	U-238	<	8.50	
	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	4.80

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	.60
	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	

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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)
24-10	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	=	18.70	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

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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)
24-11	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

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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)
24-11	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	=	1.80	.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	=	5.80	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.

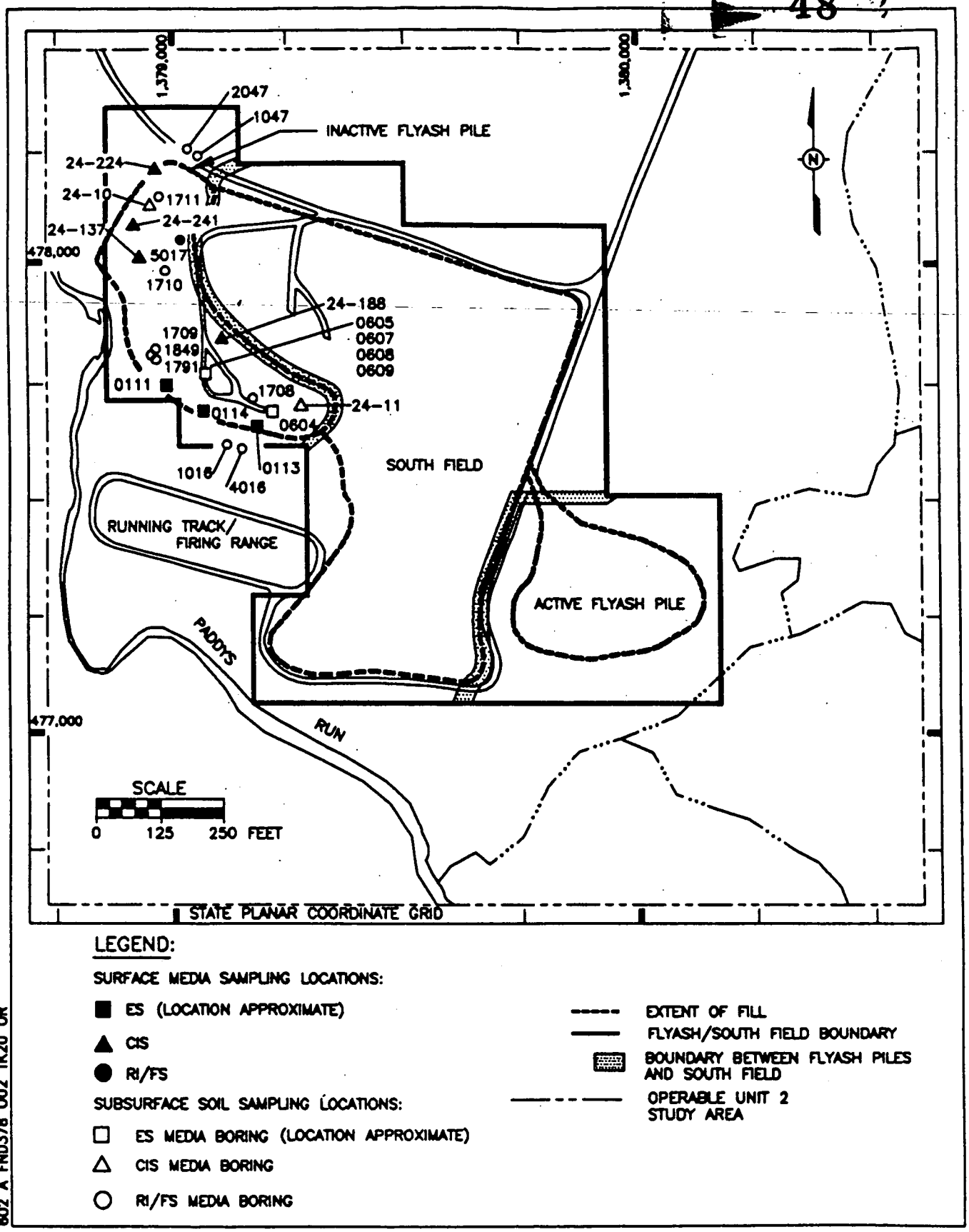

FIGURE 2-15. SURFACE AND SUBSURFACE MEDIA SAMPLE LOCATIONS IN THE INACTIVE FLYASH PILE STUDY AREA

Mon Nov 28

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	=	1.80	.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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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	=	2.80	.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	=	8.00	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	=	8.70	.80
	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	.60
	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

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	280.00	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-24-048	8705-415-0060	AROCLOR-1254	120.00	UG/KG	J
24-06	FMP-PS-24-017	8705-415-0050	AROCLOR-1254	860.00	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	8705-426-0080	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	14488.12	MG/KG
			ARSENIC, TOTAL	9.05	MG/KG
			BARIUM, TOTAL	70.08	MG/KG
			CADMIUM, TOTAL	4.85	MG/KG
			CALCIUM, TOTAL	113966.18	MG/KG
			CHROMIUM, TOTAL	19.19	MG/KG
			COBALT, TOTAL	12.72	MG/KG
			COPPER, TOTAL	18.96	MG/KG
			IRON, TOTAL	16726.04	MG/KG
			LEAD, TOTAL	82.98	MG/KG
			MAGNESIUM, TOTAL	29953.85	MG/KG
			MANGANESE, TOTAL	564.37	MG/KG
			NICKEL, TOTAL	25.90	MG/KG
			POTASSIUM, TOTAL	1867.80	MG/KG
			SODIUM, TOTAL	138.78	MG/KG
			VANADIUM, TOTAL	51.91	MG/KG
			ZINC, TOTAL	58.96	MG/KG
24-09	FMP-PS-24-095	8705-426-0030	ALUMINUM, TOTAL	7406.89	MG/KG
			ARSENIC, TOTAL	5.62	MG/KG
			CADMIUM, TOTAL	8.68	MG/KG
			CALCIUM, TOTAL	107187.03	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

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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	1.48	MG/KG
			CADMIUM, TOTAL	3.82	MG/KG
			CALCIUM, TOTAL	54215.80	MG/KG
			CHROMIUM, TOTAL	15.79	MG/KG
			COPPER, TOTAL	28.45	MG/KG
			IRON, TOTAL	14807.88	MG/KG
			LEAD, TOTAL	55.95	MG/KG
			MAGNESIUM, TOTAL	8528.86	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	2.48	MG/KG
			CALCIUM, TOTAL	12069.71	MG/KG
			CHROMIUM, TOTAL	12.44	MG/KG
			COPPER, TOTAL	22.45	MG/KG
			IRON, TOTAL	7201.86	MG/KG
			LEAD, TOTAL	18.78	MG/KG
			MAGNESIUM, TOTAL	3305.51	MG/KG
			MANGANESE, TOTAL	298.04	MG/KG
			MERCURY, TOTAL	.15	MG/KG
			NICKEL, TOTAL	18.25	MG/KG
			SODIUM, TOTAL	189.35	MG/KG
			VANADIUM, TOTAL	29.48	MG/KG
			ZINC, TOTAL	96.24	MG/KG
24-12	FMP-PS-24-147	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	94419.00	MG/KG
			CHROMIUM, TOTAL	18.32	MG/KG

TABLE F-7

SUBSURFACE MEDIA ANALYSES
RI/FS SAMPLING PROGRAM
INACTIVE FLYASH PILE

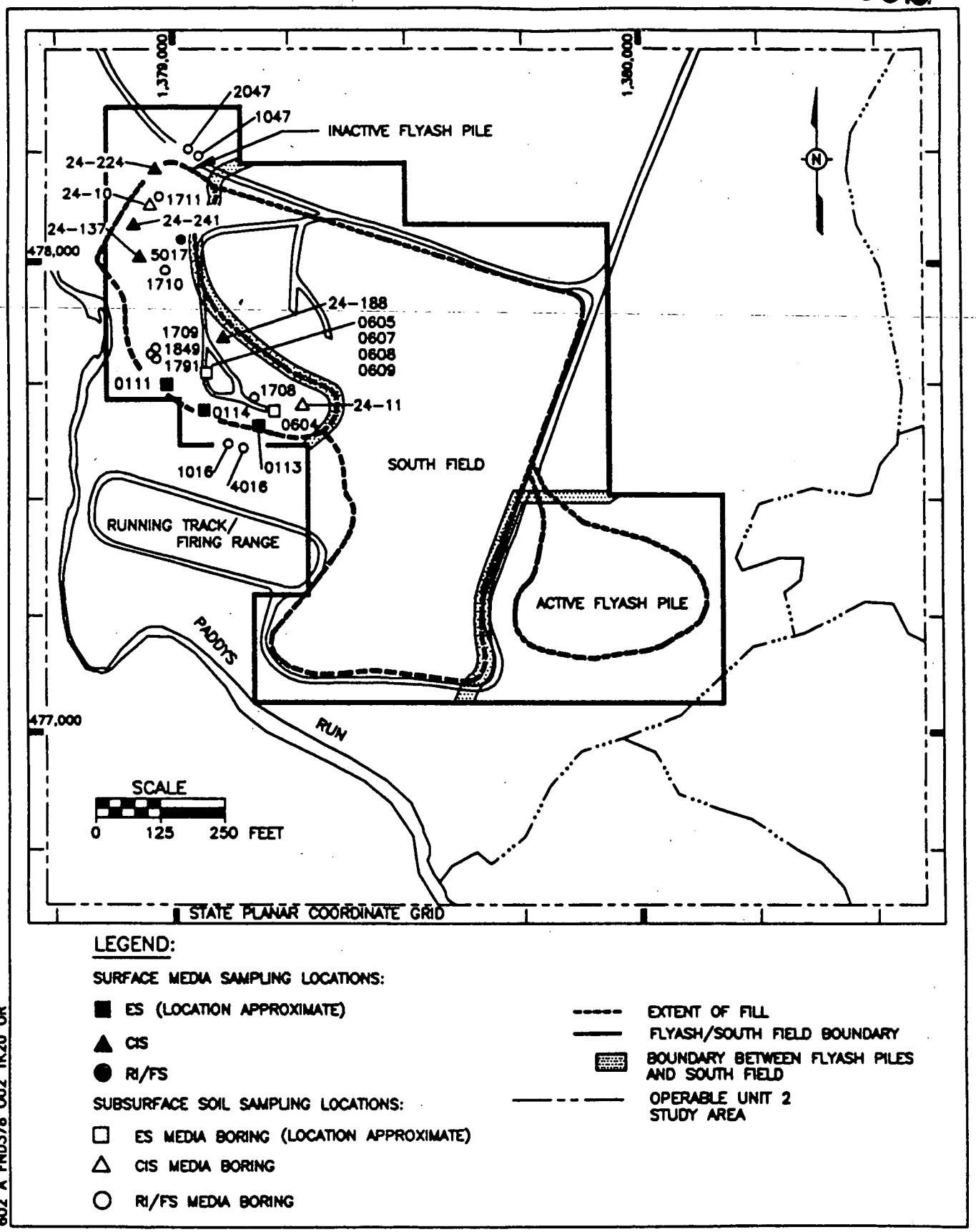

FIGURE 2-15. SURFACE AND SUBSURFACE MEDIA SAMPLE LOCATIONS IN THE INACTIVE FLYASH PILE STUDY AREA

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 **	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 **	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 analysed; 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	●	[illegible]	<	1.0		
Radium 228		0.6	●	0.[illegible]	<	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

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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 analysed; 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	16.0	±	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	56.6	±	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	107.0	±	25.0	BJ
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 **	30.2	±	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 analysed; 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		10.0	±	4.0	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 analysed; 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	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

** 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 analysed; 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	1049 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

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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	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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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	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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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
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
b = validation qualifiers

REPORT DATE : 23-APR-92

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 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

REPORT DATE : 25-APR-92

14802

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		
Tetrachloroethene	< 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		

a = lab qualifiers
b = validation qualifiers

REPORT DATE : 25-APR-92

02021
4892

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 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	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		

a = lab qualifiers
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REPORT DATE : 25-APR-92

C2383

14892

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 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		

a = lab qualifiers
b = validation qualifiers

REPORT DATE : 25-APR-92

0204
4892

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 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	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		
Tetrachloroethene	< 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

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 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		

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 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

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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 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	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
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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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
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 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	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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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
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 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	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		

a = lab qualifiers
b = validation qualifiers

REPORT DATE : 25-APR-92

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
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

REPORT DATE : 25-APR-92

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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
Tetrachloroethene	< 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		

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 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	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

a = lab qualifiers
b = validation qualifiers

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REPORT DATE : 25-APR-92

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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		

a = lab qualifiers
b = validation qualifiers

REPORT DATE : 25-APR-92

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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 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	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		

a = lab qualifiers
b = validation qualifiers

REPORT DATE : 23-APR-92

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FER/OU2-RI/vah/IF-SBS-H.F07/October 11, 1992

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 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	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		
Tetrachloroethene	< 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		

a = lab qualifiers
b = validation qualifiers

REPORT DATE : 25-APR-92

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
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	JK	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
b = validation qualifiers

REPORT DATE : 25-APR-92

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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 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	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			< 0.02000		
2,4,5-Trichlorophenol	< 2.20000			< 0.10000			NA			NA			< 4.00000		
2,4,6-Trichlorophenol	< 0.46000			< 0.02000			NA			NA			< 0.02000		
2,4-Dichlorophenol	< 0.46000		UJ	NA			NA			NA			< 0.02000		
2,4-Dimethylphenol	< 0.46000			NA			NA			NA			< 0.02000		
2,4-Dinitrophenol	< 2.20000			NA			NA			NA			< 4.00000		UJ
2,4-Dinitrotoluene	< 0.46000			< 0.02000			NA			NA			< 0.02000		
2,6-Dinitrotoluene	< 0.46000			NA			NA			NA			< 0.02000		
2-Chloronaphthalene	< 0.46000			NA			NA			NA			< 0.02000		
2-Chlorophenol	< 0.46000			NA			NA			NA			< 0.02000		
2-Methylnaphthalene	< 0.46000			NA			NA			NA			< 0.02000		
2-Methylphenol	< 0.46000			< 0.02000			NA			NA			< 0.02000		
2-Nitroaniline	< 2.20000			NA			NA			NA			< 4.00000		
2-Nitrophenol	< 0.46000			NA			NA			NA			< 0.02000		
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			< 0.02000		
4-Chloro-3-methylphenol	< 0.46000			NA			NA			NA			< 0.02000		
4-Chloroaniline	< 0.46000			NA			NA			NA			< 0.02000		
4-Chlorophenylphenyl ether	< 0.46000			NA			NA			NA			< 0.02000		
4-Methylphenol	< 0.46000			< 0.02000			NA			NA			< 0.02000		
4-Nitroaniline	< 2.20000			NA			NA			NA			< 4.00000		
4-Nitrophenol	< 2.20000			NA			NA			NA			< 4.00000		
Acenaphthene	< 0.46000			NA			NA			NA			< 0.02000		
Acenaphthylene	< 0.46000			NA			NA			NA			< 0.02000		
Anthracene	< 0.46000			NA			NA			NA			< 0.02000		
Benzo(a)anthracene	< 0.46000			NA			NA			NA			< 0.02000		
Benzo(a)pyrene	< 0.46000			NA			NA			NA			< 0.02000		
Benzo(b)fluoranthene	< 0.46000			NA			NA			NA			< 0.02000		
Benzo(g,h,i)perylene	< 0.46000			NA			NA			NA			< 0.02000		
Benzo(k)fluoranthene	< 0.46000			NA			NA			NA			< 0.02000		
Benzoic acid	0.15000	J	J	NA			NA			NA			< 4.00000		
Benzyl alcohol	< 0.46000			NA			NA			NA			< 0.02000		
Butyl benzyl phthalate	< 0.46000			NA			NA			NA			< 0.02000		
Chrysene	< 0.46000			NA			NA			NA			< 0.02000		
Di-n-butyl phthalate	< 0.46000			NA			NA			NA			< 0.02000		
Di-n-octyl phthalate	< 0.46000			NA			NA			NA			< 0.02000		
Dibenzo(a,h)anthracene	< 0.46000			NA			NA			NA			< 0.02000		
Dibenzofuran	< 0.46000			NA			NA			NA			< 0.02000		
Diethyl phthalate	< 0.46000			NA			NA			NA			< 0.02000		
Dimethyl phthalate	< 0.46000			NA			NA			NA			< 0.02000		
Fluoranthene	< 0.46000			NA			NA			NA			< 0.02000		
Fluorene	< 0.46000			NA			NA			NA			< 0.02000		

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 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	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			< 0.02000		
Hexachlorobutadiene	< 0.46000			< 0.02000			NA			NA			< 0.02000		
Hexachlorocyclopentadiene	< 0.46000			NA			NA			NA			< 0.02000		
Hexachloroethane	< 0.46000			< 0.02000			NA			NA			< 0.02000		
Indeno(1,2,3-cd)pyrene	< 0.46000			NA			NA			NA			< 0.02000		
Isophorone	< 0.46000			NA			NA			NA			< 0.02000		
N-Nitroso-di-n-propylamine	< 0.46000			NA			NA			NA			< 0.02000		
N-Nitrosodiphenylamine	< 0.46000			NA			NA			NA			< 0.02000		
Naphthalene	< 0.46000			NA			NA			NA			< 0.02000		
Nitrobenzene	< 0.46000			< 0.02000			NA			NA			< 0.02000		
Pentachlorophenol	< 2.20000			< 0.10000			NA			NA			< 4.00000		
Phenanthrene	< 0.46000			NA			NA			NA			< 0.02000		
Phenol	0.46000	BJ	U	NA			NA			NA			< 0.02000		
Pyrene	< 0.46000			NA			NA			NA			< 0.02000		
bis(2-Chloroethoxy)methane	< 0.46000			NA			NA			NA			< 0.02000		
bis(2-Chloroethyl)ether	< 0.46000			NA			NA			NA			< 0.02000		
bis(2-Chloroisopropyl) ether	< 0.46000			NA			NA			NA			< 0.02000		UJ
bis(2-Ethylhexyl) phthalate	< 0.46000			NA			NA			NA			< 0.02000		
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		

a = lab qualifiers
b = validation qualifiers

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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).
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	1711 067020 10.0 - 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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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	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

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 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	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
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	

a = lab qualifiers
b = validation qualifiers

REPORT DATE : 29-APR-92

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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 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	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	B	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.

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

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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	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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4 2 7
4 8 6 9 2

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		
Tetrachloroethene	< 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
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.

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 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		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		1.0300
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

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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.
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	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 SNN		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

REPORT DATE : 25-APR-92

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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	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	SN	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.
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	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 RP 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 NN		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		

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 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	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		

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	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	BN	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
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 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		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		

a = lab qualifiers
b = validation qualifiers

REPORT DATE : 25-APR-92

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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	1791 067122 28.5 - 30.0	a	b	1791 067124 COMPOSITE TCLP	a	b	1791 067125 COMPOSITE TCLP	a	b	1791 067125 COMPOSITE RCRA-8	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			0.120			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

REPORT DATE : 25-APR-92

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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	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

REPORT DATE : 25-APR-92

0241
S0 4896

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	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

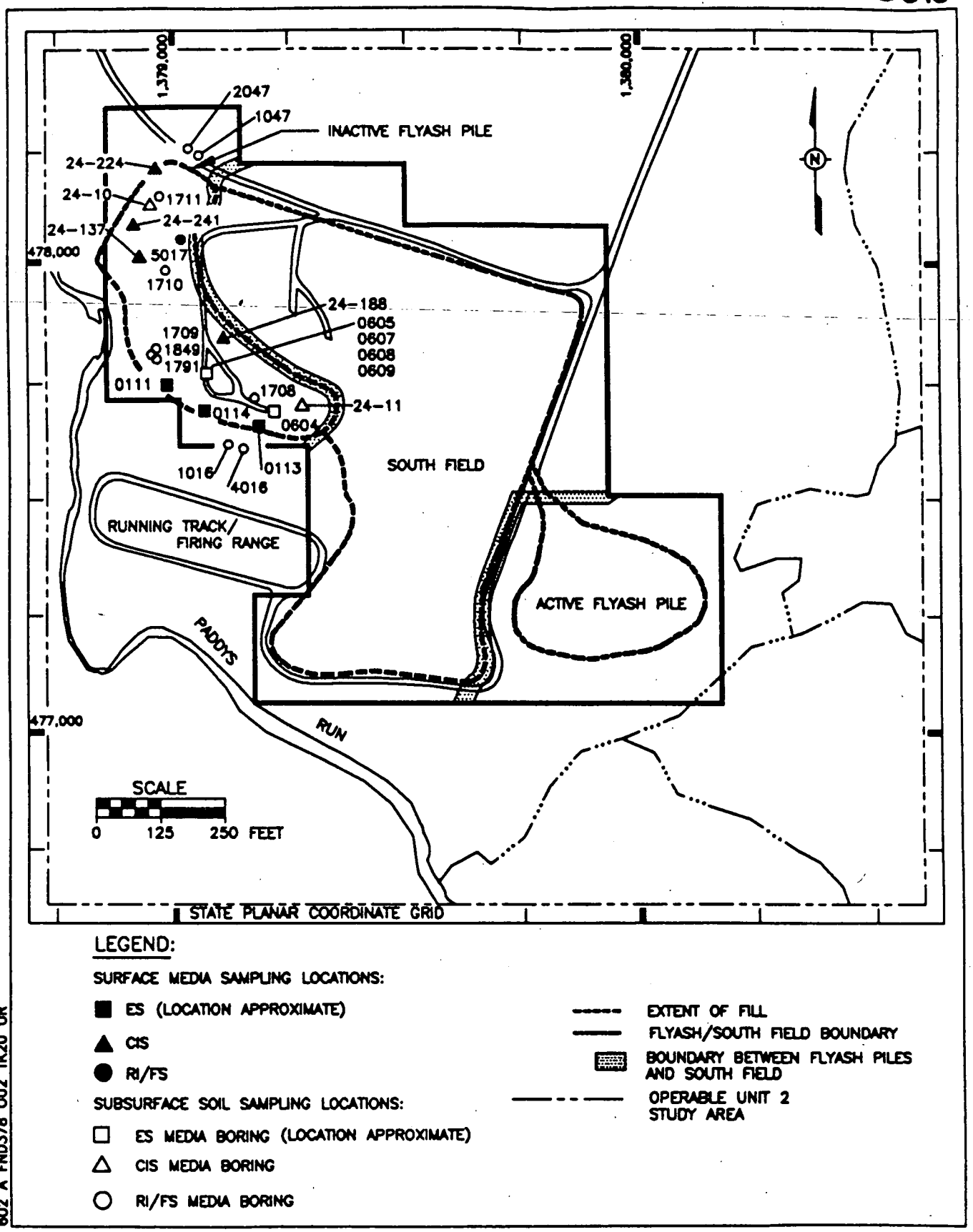
REPORT DATE : 25-APR-92

0242

4892

TABLE F-8

HAZARDOUS CHARACTERISTIC DATA FOR SUBSURFACE MEDIA
RI/FS SAMPLING PROGRAM
INACTIVE FLYASH PILE



CRC 10/6/92 REV. 2
602 A FND378 OU2 TK20 OR

FIGURE 2-15. SURFACE AND SUBSURFACE MEDIA SAMPLE LOCATIONS IN THE INACTIVE FLYASH PILE STUDY AREA

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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

C246

4892

APPENDIX D

BORING LOGS

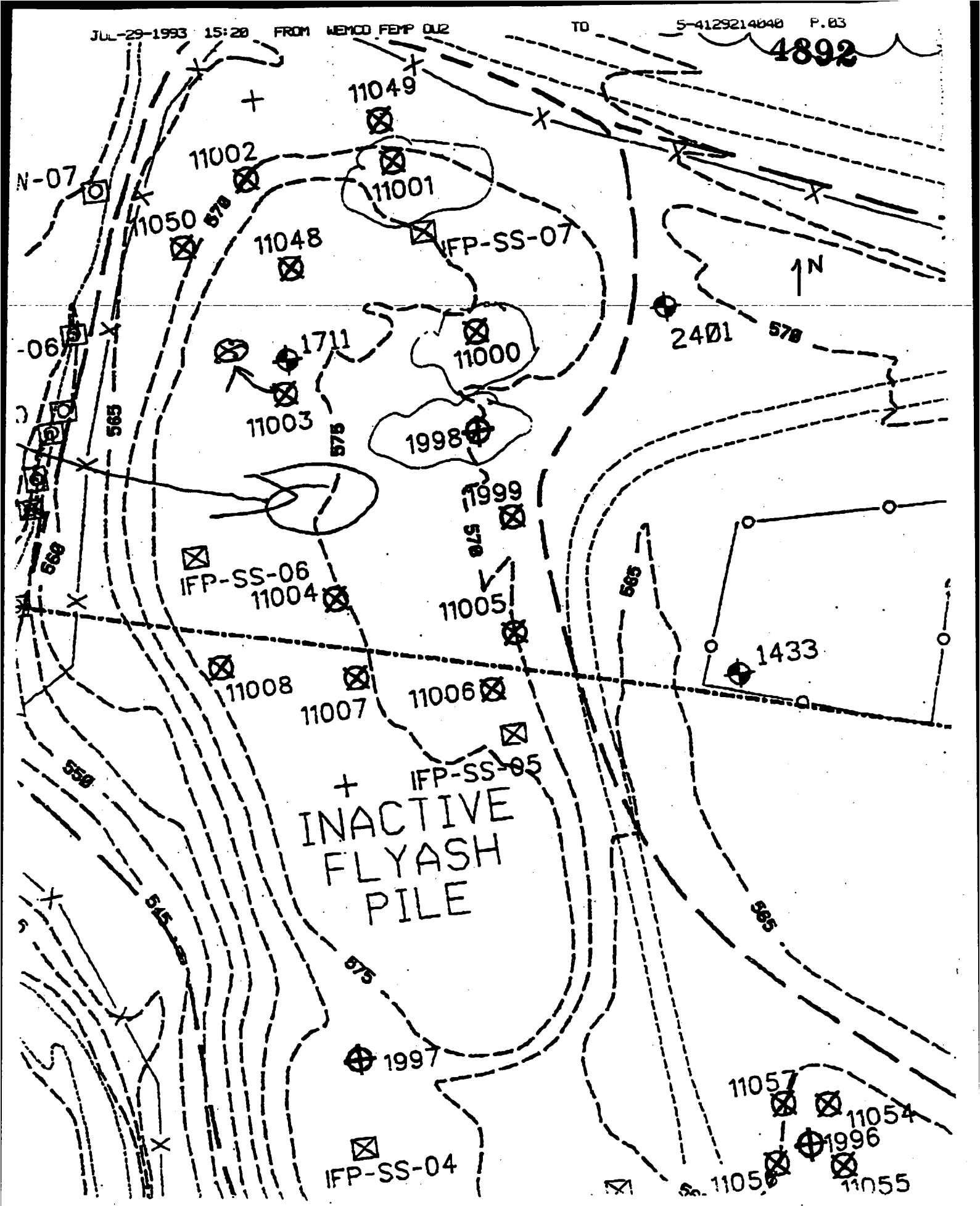
COVER SHEET

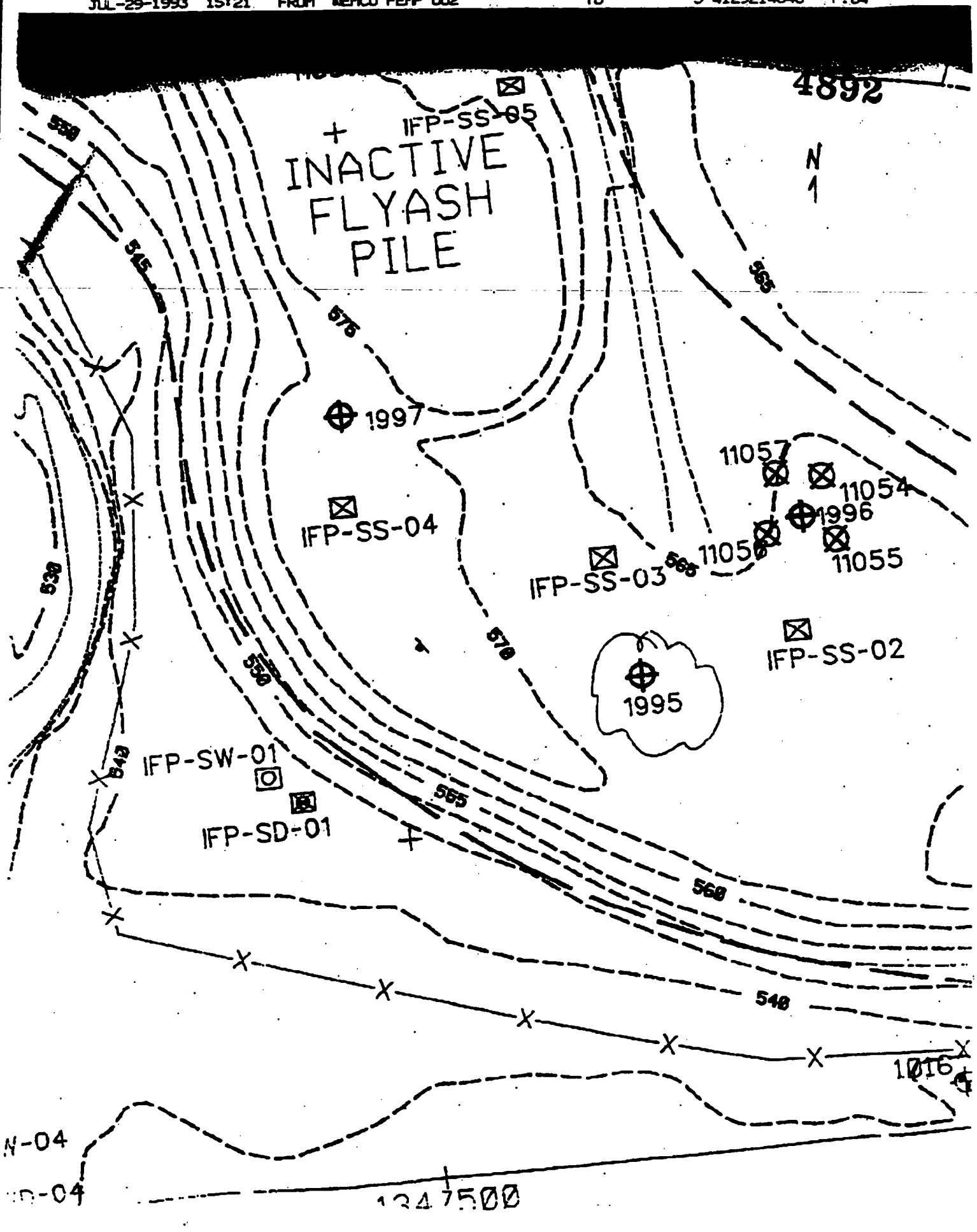
2/2

4892

Boring Log	Interval(s) with layering effect
1998	0-9.5 Feet
1995	0-8.5 Feet
11001	0-8.5 Feet
11000	0-9.5 Feet

4892


11049
11002
11001
N-07
11050
578
11048
IFP-SS-07
N
2401
578
-06
1711
11000
11003
565
575
1998
1999
575
IFP-SS-06
11004
11005
565
1433
11008
11007
11006
IFP-SS-05
550
INACTIVE
FLYASH
PILE
545
575
565
1997
11057
11054
1996
IFP-SS-04
11056
11055


4892
IFP-SS-05
INACTIVE
FLYASH
PILE
N
1
530
545
575
565
1997
11057
11054
1996
11056
11055
IFP-SS-04
IFP-SS-03
568
530
570
IFP-SS-02
1995
550
IFP-SW-01
540
565
IFP-SD-01
560
540
1016
N-04
D-04
1347500

RI/FS

3/20

4892

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER was 30.00.06	PROJECT NAME RI/FS Sonkfield	
BORING NUMBER: 1998	COORDINATES:	DATE 4/28/93
ELEVATION:	GWL: Depth Date/Time	DATE STARTED: 4/28/93
ENGINEER/GEOLOGIST: Debes/Roper	Depth Date/Time	DATE COMPLETED: 4/28/93
DRILLING METHODS: Hollow Stem Auger		PAGE 1 OF 6

DEPTH (FT)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER 6 IN.	RECOVERY (IN.)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
0.0	112072 0840 4/28/93	8	6	Black (2.5 Y, 2.5/1), Silty sand, low plasticity, dry	sm	NA	Microtip = 0.3 ppm; BG = 80 cpm
0.5	112072 0840 4/28/93	7	6	Black (2.5 Y, 2.5/1), fly ash	NA	NA	
1.0	112072 0840 4/28/93	14	6	SAA	NA	NA	
1.5	112072 112074 0840 4/28/93	18	6	SAA	NA	NA	
2.0	112075 0905 4/28/93	5	6	SAA	NA	NA	Microtip = 0.5 ppm; BG = 80 cpm
2.5	112075 0905 4/28/93	5	6	SAA	NA	NA	
3.0	112075 0905 4/28/93	5	6	SAA	NA	NA	
3.5	112076 112077 0905 4/28/93	5	6	Very stiff, Yellowish brown (10YR, 5/4), Silty clay, low plasticity, dry	cl	2.5	
4.0	112078 0930 4/28/93	3	6	Black (2.5 Y, 2.5/1), Silty sand, low plasticity, dry	sm NA fly ash	NA	Microtip = 0.6 ppm; BG = 80 cpm
4.5	112078 0930 4/28/93	3	6	Black (2.5 Y, 2.5/1) Fly ash.	NA	NA	
5.0							

NOTES:
Pennsylvania Drilling
SME-75
Driller: Joe Raab
Helper: Roger Davis

SAA = Same As Above
NA = Not Applicable

Samples collected per ASTM Standard Penetration Test
Colors identified using Munsell Color Chart.

RI/FS

4/20

VISUAL CLASSIFICATION OF SOILS 4892

PROJECT NUMBER. WAS 20.02.05	PROJECT NAME. RI/FS South field	
BORING NUMBER. 1998	COORDINATES:	DATE 4/28/93
ELEVATION:	GWL: Depth Date/Time	DATE STARTED 4/28/93
ENGINEER/GEOLOGIST. Dabes/Roger	Depth Date/Time	DATE COMPLETED: 4/28/93
DRILLING METHODS: Hollow Stem Auger		PAGE 2 OF 6

DEPTH (ft.)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER (6 in.)	RECOVERY (in.)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
5.0	112042 0920 4/28/93	6	6	Stiff, Yellowish brown (10YR, 5/4), Silty clay with roots and wood fragments, low plasticity, dry	cl	1.75	AT = 0.6 ppm PID = 80 ppm
5.5	112049 112050 0920 4/28/93	14	6	SAA	cl	1.75	
6.0	112051 0950 4/28/93	5	6	Black (2.5Y, 2.5/1), Fly ash, wet.	NA	NA	AT = 0.6 ppm PID = 80 ppm
6.5	112051 0950 4/28/93	17	6	Hard, Light yellowish brown (10YR, 6/4) and gray (10YR, 7/2), Silty clay, med. plasticity, sl. moist	cl	3.5	
7.0	112051 0950 4/28/93	22	6	SAA	cl	3.5	
7.5	112052 112053 0950 4/28/93	28	6	SAA	cl	3.5	
8.0	112054 1055 4/28/93	8	6	Black (2.5Y, 2.5/1), Fly ash, moist.	NA	NA	AT = 0.6 ppm PID = 60 ppm
8.5	112054 1055 4/28/93	6	6	Very stiff, Light yellowish brown (10YR, 6/4), Silty clay, low plasticity, dry.	cl	2.5	
9.0	112055 1055 4/28/93	8	6	Black (2.5Y, 2.5/1), Fly ash, wet.	NA	NA	
9.5	112056 112057 1055 4/28/93	14	6	Very stiff. Gray (10YR, 6/1), Silty clay with iron stringers and gravel, low plasticity, dry	cl	3.0	
10.0							

NOTES:
Pennsylvania Drilling
CME - 45
Driller : Joe Raab
Helper : Roger Davis

AT = Analyzed photo ionization
SAA = Same as Above
NA = Not Applicable
Samples collected per ASTM Standard Penetration Test.
Colors identified using Munsell Color Chart.

RI/FS

5/20

VISUAL CLASSIFICATION OF SOILS

4892

PROJECT NUMBER. WBS 20.03.05	PROJECT NAME. RI/FS South Field	
BORING NUMBER. 1998	COORDINATES:	DATE 4/28/93
ELEVATION:	GWL: Depth Date/Time	DATE STARTED 4/28/93
ENGINEER/GEOLOGIST. Debes/Boyer	Depth Date/Time	DATE COMPLETED: 4/28/93
DRILLING METHODS: Hollow Stem Auger		PAGE 3 OF 6

DEPTH (Ft.)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER 1 (in.)	RECOVERY (in.)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
10.0	112057 1330 4/28/93	3	6	Medium stiff, light brownish gray (10YR, 6/2), silty clay, med. plasticity, dry	cl	1.5	MT = 0.3 ppm BG = 60 cpm
10.5	112057 1330 4/28/93	6	6	SAA	cl	1.5	
11.0	112057 1330 4/28/93	12	6	Light olive brown (2.5Y, 5/4), Gravelly sand, wet.	sw	NA	
11.5	112058 112059 1330 4/28/93	17	6	Hard, light olive brown (2.5Y, 5/4), Silty clay with pea gravel, low plasticity, dry.	cl	3.5	
12.0	112060 1355 4/28/93	4	6	Light olive brown (2.5Y, 5/4), Poorly graded gravelly sand, wet.	sp	NA	MT = 0.5 ppm BG = 60 cpm
12.5	112060 1355 4/28/93	10	6	Stiff, gray (2.5Y, 5/1), Silty clay with pea gravel, dry.	cl	3.5	
13.0	112060 1355 4/28/93	17	6	SAA	cl	3.5	
13.5	112061 112062 1355 4/28/93	20	6	SAA	cl	3.5	
14.0	112063 1410 4/28/93	3	6	Stiff, Gray (2.5, 5/1), Silty clay with pea gravel, med. plasticity, sl. moist.	cl	3.0	MT = 0.5 ppm BG = 60 cpm
14.5	112064 1410 4/28/93	5	6	SAA	cl	3.0	
15.0							

NOTES:
Pennsylvania Drilling.
CME-45
Driller: Joe Raab
Helper: Roger Davis

MT = Microtip Photoionization
SAA = Same As Above
NA = Not Applicable
Samples collected per ASTM Standard Penetration Test.
Colors identified using Munsell Color Chart.

FEMPALU
RI/FS

4892

6/20

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: WAS 20.03.05	PROJECT NAME: RI/FS Southfield	
BORING NUMBER: 1998	COORDINATES:	DATE 4/28/93
ELEVATION:	GWL: Depth Date/Time	DATE STARTED 4/28/93
ENGINEER/GEOLOGIST Bates/Boyer	Depth Date/Time	DATE COMPLETED: 4/28/93
DRILLING METHODS: Hollow Stem Auger		PAGE 4 OF 6

DEPTH (FEET)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER (6 in.)	RECOVERY (in.)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
15.0	112063 1910 4/28/93	12	6	Stiff, Gray (2.5Y, 5/1), Silty clay with pea gravel, mod. plasticity, sl. moist.	cl	3.0	RT = 0.5 ppm BG = 60 cpm
15.5	112063 1910 4/28/93	14	3	Gray (2.5Y, 5/1), Poorly graded sand, moist.	sp	NA	
16.0	112064 1930 4/28/93	NA	6	Shelby Tube	NA	NA	The shelby tube could only be pushed 1-foot in this material.
16.5	112064 1930 4/28/93	NA	6	Shelby Tube	NA	NA	
17.0	112065 1529 4/28/93	>50/6	6	Hard, Gray (2.5Y, 5/1), Silty clay with pea gravel, low plasticity, dry. (Hard Pan)	cl	4.0	RT = 0.5 ppm BG = 60 cpm
17.5	112065 1529 4/28/93	>50/6	6	SAA	cl	4.0	
18.0	112065 1529 4/28/93	>50/6	6	SAA	cl	4.0	
18.5	112066 112067 1529 4/28/93	>50/6	6	SAA	cl	4.0	
19.0				Bottom of boring 19.0 feet			

NOTES:
Pennsylvania Drilling
CME-75
Driller: Joe Raab
Helper: Roger Davis

RT = Microtip Photoionization
SAA = Same As Above
NA = Not Applicable
Samples collected per ASTM Standard Penetration Test.
Colors identified using Munsell Color Chart.

002-11-05

RI/FS

7/4892

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER 20.03.05	PROJECT NAME FEP-OU-2		
BORING NUMBER 1995	COORDINATES	DATE 04 050193	
ELEVATION:	GWL: Depth Date/Time	DATE STARTED 050193	
ENGINEER/GEOLOGIST J. Bayer	Depth Date/Time	DATE COMPLETED 050293	
DRILLING METHODS Hollow Stem Auger		PAGE 1 OF 7	

DEPTH (FT)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER 6"	RECOVERY (")	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
	116077	4 9	6	MEDIUM DENSE, (2.5y, 5/4) light olive brown, sandy silt with gravel, trace flyash	ML		Bγ = 40-100 cpm MT = 1.9 ppm
15	1	12 14	6	SAA		NA	
	116079		6	SAA			
	116078			SAA	ML		
	116079		6	(10yR, 2/1), black, flyash, sl. moist	NA		
	116080	9 9 11 15	6	(10yR, 2/1) black, flyash sll moist, trace silty clay	NA	NA	Bγ = 180 cpm
20	3		6	STIFF, (2.5y, 5/4) light olive brown, silty clay with gravel trace flyash.	CL	1.5	Bγ = 120 cpm
	116080		6	SAA	CL	NA	
	116081		6	(10yR, 2/1) black			Bγ = 120 cpm
	116082	200		FLYASH, sli moist, trace clay	NA	NA	MT = 1.5 ppm
	116083	82 73	6	LOOSE, (2.5y, 5/6) light olive brown, clayey silt with gravel, trace flyash.	ML		Bγ = 80 cpm
30	5	42	6	SAA	ML	NA	MT = 0.0 ppm
	116083	4	6	(10yR, 2/1) black, flyash, sli dry moist.	NA		
	116084 116085		6	LOOSE, (2.5y, 5/6) light olive brown, clayey silt with gravel, trace flyash	ML		
	116086	3	6	STIFF, (2.5y 5/6) light olive brown, silty clay with gravel and flyash.	CL	1.0	Bγ = 90 cpm
	116087	4	6				MT = 0.1 ppm
40	7	4	3	SAA	CL	1.0	
	116088			SAA	CL	1.0	ZONE CEMENT AT 7.5 FT.

NOTES

DRILLERS:
JOE RAAB
ROGER DAVIS
Rig: CME-45

HSA AUGER REFUSAL AT 8 FEET. MOVED ALONG EAST. TOOK A SHELBY TUBE AT 3-5FT (1160 89, 1300) AT NEW HOLE AND THEN DRILLED to 8 FEET.

MT = MICROTIP
MT = BACKGROUND ~1.3 ppm
SAA = SAME AS ABOVE

RI/FS

VISUAL CLASSIFICATION OF SOILS

8/20 4892

PROJECT NUMBER 20.03.05	PROJECT NAME. IFP - OU-2		
BORING NUMBER 1995	COORDINATES.	DATE 05/01/93	
ELEVATION	GWL: Depth Date/Time	DATE STARTED 05/01/93	
ENGINEER/GEOLOGIST Berger	Depth Date/Time	DATE COMPLETED 05/02/93	
DRILLING METHODS Hollow Stem Auger		PAGE 2 OF 7	

DEPTH (FT)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER 6"	RECOVERY (IN)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
		49	0	No Recovery	NA	NA	
8	116090	1	6	(10YR, 2/1) Black, Flyash, Slightly moist,	NA		Bz = 60cpm
315 9	116091	1	6	SAA	NA	NA	MT = 0.0 ppm
	116092	1	6	SAA	NA		
	NA	1	0	SAA NA	NA		
10	116093	1	6	(10YR, 2/1) Black, Flyash sli. moist. SAA	NA		Bz = 60cpm
330 11	116094	2	6	SAA	NA	NA	MT = 0.0ppm
	116095	2	6	SAA	NA		
		1	0		NA		
12	NA			NA	NA	NA	
1400 13	116096	2	6	(10YR, 2/1), Black, Flyash sli moist	NA	NA	Bz = 90cpm
	116097	2	6	SAA	NA		MT = 0.0ppm
	116098	2	6	SAA	NA		
		2	6	SAA	NA		
14	116099	1	6	SAA	NA		Bz = 80cpm
115 15	116099	1	6	SAA	NA		MT = 0.0 ppm

MT = MICROTIP
Bz
SAA = SAME AS ABOVE

RMS

VISUAL CLASSIFICATION OF SOILS

4892

PROJECT NUMBER 20.03.35	PROJECT NAME. IFP OU-2		
BORING NUMBER 1995	COORDINATES.		DATE 050193
ELEVATION.	GWL: Depth	Date/Time	DATE STARTED 050193
ENGINEER/GEOLOGIST J. Boyer	Depth	Date/Time	DATE COMPLETED. 050293
DRILLING METHODS Hollow Stem Auger			PAGE 3 OF 7

TIME	DEPTH (ft)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER 6"	RECOVERY (in)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
1445		116100 116101	1	6	(10YR, 2/1) BLACK, FLYASH, slightly moist.	NA	NA	Bγ = 80cpm MT = 0.0ppm
		NA		0	NA	NA		
	16	116102	2	6	(10YR, 2/1) BLACK, flyash, slightly moist	NA	NA	Bγ = 60cpm MT = 0.0ppm
		↓	3					
1450	17	116102	3	6	SAA	NA	NA	
		116103 116104	4	3	SAA	NA	NA	
		NA		0	NO RECOVERY	NA	NA	
	18	116105	5	6	(10YR, 2/1) BLACK, flyash, slightly moist	NA	NA	Bγ = 60cpm MT = 0.0 ppm
		↓	3	6	SAA	NA	NA	
1450	19		2					
		116105	6	6	SAA			
		116106 116107		6	SAA			
	20	116108	1	6	SAA	NA	NA	Bγ = 60cpm MT = 0.3ppm
		↓	2	6	SAA			
1530	21	116108	1	6	SAA			
		116109 116110	1	6	SAA			
1540	22	116111	2	6	SAA	NA	NA	

NOTES

MT = MICROTIP
SAA = SAME AS ABOVE

RI/FS

4892

10/20

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER 20.03.05	PROJECT NAME. IEP OU-2		
BORING NUMBER 1995	COORDINATES.		DATE 050193
ELEVATION.	GWL: Depth	Date/Time	DATE STARTED 050193
ENGINEER/GEOLOGIST J. Boyer	Depth	Date/Time	DATE COMPLETED 050293
DRILLING METHODS HOLLOW STEM AUGER			PAGE 4 OF 7

TIME	DEPTH ft	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER 6"	RECOVERY 6"	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
1540	23	116111	2	6	(10YR, 2/1) Black, Fluffy, Slightly moist.	NA	NA	Bg = 40cpm MT = 0.3ppm
		116111	4 7	6	SAA			
		116112 116113		6	SAA			
1555	24	116114	2	6	SAA	NA	NA	Bg = 40cpm MT = 0.1ppm
	25		3	6	SAA			
		116114	4	6	SAA			
		116115 116116	1	6	SAA			
1610	26	116117	3	6	Medium dense, (10YR, 3/2) SAA gas very dark grayish brown, SILT, moist, high nodules	ml	1.5	26 gas Bg = 8 60cpm
			7	6	SAA	ml	2.0	MT = 0.0ppm
	27	116117	4	6	SAA	ml	3.0	Mg nodules may indicate original soil horizon
		116118 116119	14	6	gas SAA	ml	3.0	
1630	28	116120	15	6	~~Very stiff~~ Dark Brown (10YR, 4/3) Brown, Clayey SILT, no lenses, soil moist	ml	2.5	Bg = 60cpm MT = 0.3ppm
			21	6	SAA	ml	2.5	
	29		27	6	SAA	ml	2.5	
		116120	28	4	SAA	ml	3.0	
	30							

- At 26-26.5 ft magnesium nodules were found in the silt this may indicate an original soil horizon.

MT = MICROTIP
SAA = SAME AS ABOVE

RI/FS

VISUAL CLASSIFICATION OF SO[redacted]-489 2 1/20

PROJECT NUMBER 20.03.05	PROJECT NAME. IFP OU-2		9m
BORING NUMBER 1995	COORDINATES.		DATE 05 250193
ELEVATION	GWL: Depth	Date/Time	DATE STARTED 050193
ENGINEER/GEOLOGIST J. Boyer	Depth	Date/Time	DATE COMPLETED 050293
DRILLING METHODS Hollow Stem Auger			PAGE 5 OF 7

DEPTH	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER 6"	RECOVERY IN	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
30		34	6	Medium Dense, (10yr, 4/4) Dark Yellowish Brown, Clayey Silt, Trace Gravel, Moist, Low Plasticity	ml	NA	Bg = 80cpm MT = 0.9ppm
	116172	13					
		16	6	SAA	ml		
31		22		Medium Dense, (10yr, 5/4) Yellowish Brown, Silty Gravel with Coarse Sand, Fine Grained Moist.	Gm		
			6				
	116173		4	SAA	Gm		
32	116174						
				Bottom Boring 32 feet			

NOTES

SAA = Same as above
MT = microrep

VISUAL CLASSIFICATION OF SOILS 4892

PROJECT NUMBER: 20.03.05	PROJECT NAME: OU2 Phase 2		
BORING NUMBER: FP HP-03/1100	COORDINATES:	DATE: 04/12/93	
ELEVATION:	GWL: Depth Date/Time	DATE STARTED: 04/12/93	
ENGINEER/GEOLOGIST: A. Lomo	Depth Date/Time	DATE COMPLETED: 04/13/93	
DRILLING METHODS: Hollow Stem Auger		PAGE 1 OF 5	

DEPTH (FT)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER 6 IN	RECOVERY (IN)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
1	1530 111691 04/12	3	6	Hard (2.5Y 4/4) olive brown silty clay, some black ash, small gravel, low plasticity, dry	CL	3.5	HNV = 0 ppm Bγ = 50-60 cpm
	1530 111692 04/12	7	4	SAA	CL	4.0	HNV = 0 ppm Bγ = 50-60 cpm
	NA	12	0	No Recovery	NA	NA	HNV = NA Bγ = NA
2	1535 111693 04/12	8	6	Hard (2.5Y 5/4) light olive brown silty clay, some black ash, small gravel, low plasticity, dry	CL	3.5	HNV = 0 ppm Bγ = 90-100 cpm
	1535 111694 04/12	9	6	SAA	CL	2.0	HNV = 0 ppm Bγ = 90-100 cpm
3	NA	12	0	No Recovery	NA	NA	HNV = NA Bγ = NA
	1540 111695 04/12	3	6	Firm (2.5Y 5/4) light olive brown silty clay with black ash, small gravel, low plasticity, dry	CL	1.0	HNV = 0 ppm Bγ = 40-50 cpm
4	1540 111696 04/12	6	6	Black ash, dry	NA	NA	HNV = 0 ppm Bγ = 40-50 cpm
	1540 111697 04/12	5	2	Black ash, dry	NA	NA	HNV = 0 ppm Bγ = 40-50 cpm
5	1545 111698 04/12	7	6	Hard (2.5Y 4/4) olive brown silty clay, medium 4/13/93 some small gravel, some black ash, medium plasticity, dry	CL	2.5	HNV = 0 ppm Bγ = 40-50 cpm

NOTES:

Drilling Co. Pennsylvania Drilling
Drilling Equipment Mobile B-80
Driller D. Smith
Assistant S. Smith

Background: HNV = 0 ppm
Bγ = 50 cpm

SAA - Same As Above
NA - Not Applicable
3" Split Spoons driven by ASTM Standards

VISUAL CLASSIFICATION OF SOILS

4892 12/20

PROJECT NUMBER: 20.03.05	PROJECT NAME: OU2 Phase 2		
BORING NUMBER: IFP-HP-03/1001	COORDINATES:	DATE: 04/12/93	
ELEVATION:	GWL: Depth Date/Time	DATE STARTED: 04/12/93	
ENGINEER/GEOLOGIST: A. Como	Depth Date/Time	DATE COMPLETED: 04/13/93	
DRILLING METHODS: Hollow Stem Auger		PAGE 2 OF 5	

DEPTH (FT)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER (6 in)	RECOVERY (in)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
5	1345 111699 04/12	8	6	Black ash, dry	NA	NA	HNV = 0 ppm Bγ = 40-50 cpm
	NA	9	0	No Recovery	NA	NA	HNV = NA Bγ = NA
6	1610 111700 04/12	2	6	Black Ash, dry	NA	NA	HNV = 0 ppm Bγ = 40-50 cpm
	1610 111701 04/12	4	6	Black Ash, dry	NA	NA	HNV = 0 ppm Bγ = 40-50 cpm
7	1610 111702 04/12	12	6	Hard (2.5Y 5/2) grayish brown silty clay, some gravel, some black ash, low plasticity, dry	CL	3.25	HNV = 0 ppm Bγ = 40-50 cpm
	1615 111703 04/12	2	6	SAA Firm,	CL	1.0	HNV = 0 ppm Bγ = 50-60 cpm
8	1615 111704 04/12	4	6	Black ash, dry	NA	NA	HNV = 0 ppm Bγ = 50-60 cpm
	1615 111705 04/12	12	6	Hard (2.5Y 6/8) olive yellow, silty clay, some black ash, low plasticity, dry	CL	2.75	HNV = 0 ppm Bγ = 50-60 cpm
9	1620 111706 04/12	7	6	Hard (2.5Y 6/6) olive yellow, silty clay, black ash, low plasticity, dry	CL	2.5	HNV = 0 ppm Bγ = 40-50 cpm
	1620 111707 04/12	9	6	Hard (2.5Y 5/4) light olive brown, silty clay, medium plasticity, moist	CL	2.5	HNV = 0 ppm Bγ = 40-50 cpm
10							

NOTES:
Drilling Co. Pennsylvania Drilling
Drilling Equipment Mobile B-80
Driller D. Smith
Assistant S. Smith

Background: HNV = 0 ppm
Bγ = 50 cpm

SAA - Same As Above
NA - Not Applicable
3" Split Spoon driven by ASTM Standard

VISUAL CLASSIFICATION OF SOILS 4892

PROJECT NUMBER: 20.03.05	PROJECT NAME: OU2 Phase 2		
BORING NUMBER: IFP-HP-03/11001	COORDINATES:	DATE: 04/12/93	
ELEVATION:	GWL: Depth Date/Time	DATE STARTED: 04/12/93	
ENGINEER/GEOLOGIST: A. Gomez	Depth Date/Time	DATE COMPLETED: 04/13/93	
DRILLING METHODS: Hollow Stem Auger		PAGE 3 OF 5	

DEPTH (ft)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER 6 in	RECOVERY (in)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
10	1620 111708 04/12	9	6	Hard (2.5Y 5/4) light olive brown, silty clay, medium plasticity, moist	CL	2.5	HNU = 0 ppm Bγ = 40-50 cpm
	1625 111709 04/12	7	6	SAA light olive brown	CL	2.0	HNU = 0 ppm Bγ = 40-50 cpm
11	1625 111710 04/12	12	6	Hard (2.5Y 5/4) light olive brown silty clay, low plasticity, moist	CL	2.0	HNU = 0 ppm Bγ = 40-50 cpm
	1625 111711 04/12	15	6	Firm (2.5Y 6/0) gray silty clay, medium plasticity, moist	CL ~~NA~~ ac 04/13/93	1.0	HNU = 0 ppm Bγ = 40-50 cpm
12	1635 111712 04/12	4	6	Firm, SAA	CL ~~NA~~ ac 04/13/93	1.25	HNU = 0 ppm Bγ = 50-60 cpm
	1635 111713 04/12	4	6	Very loose (2.5Y 6/0) gray sandy silt, some clay, low plasticity, wet	ML ~~NA~~ ac 04/13/93	NA ~~0.75~~ ac 04/13/93	HNU = 0 ppm Bγ = 50-60 cpm
13	1635 111714 04/12	5	6	SAA	ML ~~NA~~ ac 04/13/93	NA	HNU = 0 ppm Bγ = 50-60 cpm
	0830 111715 04/13	6	6	Firm (2.5Y 5/4) light olive brown, silty clay, some sand, some black ash, medium plasticity, moist	CL	1.25	HNU = 0 ppm Bγ = 10-20 cpm
14	0830 111716 04/13	8	6	SAA	CL	1.75	HNU = 0 ppm Bγ = 10-20 cpm
	0830 111717 04/13	12	6	Medium Dense (2.5Y 6/4) light yellowish brown, sandy silt, some clay, low plasticity, moist	ML ~~NA~~ ac 04/13/93	ac 04/13/93 ~~2.0~~	HNU = 0 ppm Bγ = 10-20 cpm
15							

NOTES:

Drilling Co. Pennsylvania Drilling
Drilling Equipment Mobile B-60
Driller D. Smith
Assistant S. Smith

Background: HNU = 0 ppm
Bγ = 50 cpm

SAA - Same As Above
NA - Not Applicable
3" split spoon driven by ASTM standards

VISUAL CLASSIFICATION OF SOILS 4892

PROJECT NUMBER: 20.03.05	PROJECT NAME: OU2 Phase 2	
BORING NUMBER: IFP-HP-03/11001	COORDINATES:	DATE: 04/13/93
LEVATION:	GWL: Depth Date/Time	DATE STARTED: 04/12/93
ENGINEER/GEOLOGIST: A. Como	Depth Date/Time	DATE COMPLETED: 04/13/93
DRILLING METHODS: Hollow Stem Auger		PAGE 4 OF 5

DEPTH (FT)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER 6 in	RECOVERY (in)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
15	0835 111718 04/13	4	6	Firm (2.5Y 6/6) olive yellow, clay, some black ash, high plasticity, moist	CL	1.0	HNU = 0 ppm Bq = 10-20cpm
	0835 111719 04/13	6	6	Firm, SAA	CL	1.5	HNU = 0 ppm Bq = 10-20cpm
16	0835 111720 04/13	12	4	Medium dense (2.5Y 6/8) olive yellow sandy silt, some gravel, low plasticity, wet	ML	NA	HNU = 0 ppm Bq = 10-20 cpm
	0840 111721 04/13	12	6	Medium dense (2.5Y 5/4) light olive brown, small gravel, moist	ML	NA	HNU = 0 ppm Bq = 10-20 cpm
17	0840 111722 04/13	13	6	Medium dense (5Y 5/1) gray sandy silt, some gravel, dry	ML	NA	HNU = 0 ppm Bq = 10-20 cpm
	0840 111723 04/13	13	6	SAA	ML	NA	HNU = 0 ppm Bq = 10-20cpm
18	0850 111724 04/13	6	6	Loose (2.5Y 6/4) light yellowish brown, sandy silt, some clay, low plasticity, wet	ML	NA	HNU = 0 ppm Bq = 10-20 cpm
	0850 111725 04/13	8	6	Loose (5Y 6/1) gray silt, some gravel, no plasticity, moist	ML	NA	HNU = 0 ppm Bq = 10-20 cpm
19	0850 111726 04/13	12	6	SAA, dry	ML	NA	HNU = 0 ppm Bq = 10-20 cpm
	0910 111727 04/13	13	6	SAA, wet	ML	NA	HNU = 0 ppm Bq = 10-20 cpm
20							

NOTES:
Drilling Co. Pennsylvania Drilling
Drilling Equipment Mobile B-80
Driller D. Smith
Assistant S. Smith

Background: HNU = 0 ppm
Bq = 10-20 cpm

SAA - Same As Above
NA - Not Applicable
3" Split spoons driven by ASTM standards

VISUAL CLASSIFICATION OF SOILS 4892 16/20

PROJECT NUMBER: 20.03.05	PROJECT NAME: OU2 Phase 2	
BORING NUMBER: IFR-HP-03/11001	COORDINATES:	DATE: 04/12/93
ELEVATION:	GWL: Depth Date/Time	DATE STARTED: 04/12/93
ENGINEER/GEOLOGIST: A. Como	Depth Date/Time	DATE COMPLETED: 04/13/93
DRILLING METHODS: Hollow Stem Auger		PAGE 5 OF 5

DEPTH (FT)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER 6 IN	RECOVERY (IN)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
20	0910 111728 04/13	12	6	(20.0'-20.3') SAA medium dense (5Y4/1) dark gray, sand silt, wet odor(+)	ML	NA	HNV = 0ppm Bσ = 10-20cpm
	0910 111729 04/13	15	6	Medium dense (5Y4/1) dark gray, silt, dry	ML	NA	HNV = 0ppm Bσ = 10-20cpm
21	1005 111730 04/13	12	6	SAA	ML	NA	HNV = 0ppm Bσ = 10-20cpm
	1005 111731 04/13	12	6	SAA	ML	NA	HNV = 0ppm Bσ = 10-20cpm
22	NA	10	0	No Recovery	NA	NA	HNV = NA Bσ = NA
							HNV = Bσ =
							HNV = Bσ =
							HNV = Bσ =
							HNV = Bσ =
							HNV = Bσ =

NOTES:
Drilling Co. Pennsylvania Drilling
Drilling Equipment Mobile B-80
Driller D. Smith
Assistant S. Smith

Background: HNV = 0ppm
Bσ = 10-20cpm

SAA - Same As Above
NA - Not Applicable
2" Split Spoons driven by ASTM standard

VISUAL CLASSIFICATION OF SOILS 4892 17/20

PROJECT NUMBER: 20.03.05	PROJECT NAME: OU2 Phase 2		
BORING NUMBER: IFP-HP-02/11000	COORDINATES:	DATE: 04/13/93	
EVATION:	GWL: Depth Date/Time	DATE STARTED: 04/13/93	
ENGINEER/GEOLOGIST: A. Lemo	Depth Date/Time	DATE COMPLETED: 04/15/93	
DRILLING METHODS: Hollow Stem Auger		PAGE 1 OF 4	

DEPTH (FT)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER (6 in)	RECOVERY (in)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
1	1530 111732 04/13	6	6	Hard (2.5Y 5/4) light olive brown silty clay, some small gravel, some black ash, low plasticity, dry	CL	2.5	HNU = 0 ppm Bγ = 40-50cpm
	1530 111733 04/13	6	6	SAA	CL	3.0	HNU = 0 ppm Bγ = 40-50cpm
	NA	8	0	No Recovery	NA	NA	HNU = NA Bγ = NA
2	1535 111734 04/13	9	6	Black Ash, dry	NA	NA	HNU = 0 ppm Bγ = 40-50cpm
	1535 111735 04/13	12	6	SAA	NA	NA	HNU = 0 ppm Bγ = 40-50cpm
3	NA	13	0	No Recovery	NA	NA	HNU = NA Bγ = NA
	1540 111736 04/13	15	6	Black Ash, dry	NA	NA	HNU = 0 ppm Bγ = 40-50cpm
4	1540 111737 04/13	18	6	SAA	NA	NA	HNU = 0 ppm Bγ = 40-50cpm
	1540 111738 04/13	21	6	SAA	NA	NA	HNU = 0 ppm Bγ = 40-50cpm
5	1545 111739 04/13	6	6	SAA	NA	NA	HNU = 0 ppm Bγ = 40-50cpm

NOTES:

Background: HNU = 0 ppm
Bγ = 40-50 cpm

Drilling Co. Pennsylvania Drilling
Drilling Equipment Mobile B-60
Driller Don Smith
Assistant Sam Smith

SAA - Same As Above
NA - Not Applicable
3" split spoons driven by ASTM stan

VISUAL CLASSIFICATION OF SOILS 489 28/20

PROJECT NUMBER: 20.03.05	PROJECT NAME: OU2 Phase 2		
BORING NUMBER: IFP-HP-02/1000	COORDINATES:	DATE: 04/13/93	
ELEVATION:	GWL: Depth Date/Time	DATE STARTED: 04/13/93	
ENGINEER/GEOLOGIST: A. Como	Depth Date/Time	DATE COMPLETED: 04/15/93	
DRILLING METHODS: Hollow Stem Auger		PAGE 2 OF 4	

DEPTH (FT)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER 6 IN	RECOVERY (IN)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
5	1545 111740 04/13	6	6	Black Ash, dry	NA	NA	HNU = 0 ppm Bγ = 40-50 cpm
	1545 111741 04/13	8	6	SAA	NA	NA	HNU = 0 ppm Bγ = 40-50 cpm
6	1550 111742 04/13	7	6	SAA	NA	NA	HNU = 0 ppm Bγ = 90-100 cpm
	1550 111743 04/13	10	6	Hard (2.5Y 5/6) light olive brown silty clay, some gravel, low plasticity, dry	CL	2.25	HNU = 0 ppm Bγ = 90-100 cpm
7	NA	11	0	No Recovery	NA	NA	HNU = NA Bγ = NA
	1555 111744 04/13	10	6	Black Ash, dry	NA	NA	HNU = 0 ppm Bγ = 40-50 cpm
8	1555 111745 04/13	12	6	Hard. (2.5Y 6/8) olive yellow silty clay, low plasticity, dry	CL	3.0	HNU = 0 ppm Bγ = 40-50 cpm
	1565 111746 04/13	16	6	SAA	CL	3.0	HNU = 0 ppm Bγ = 40-50 cpm
9	1600 111747 04/13	8	6	Black Ash, some gravel, moist	NA	NA	HNU = 0 ppm Bγ = 90-100 cpm
	1600 111748 04/13	8	6	Hard (2.5Y 6/8) olive yellow and (5Y 6/1) gray silty clay interbedded, low plasticity, dry	CL	3.0	HNU = 0 ppm Bγ = 90-100 cpm
10							

NOTES:

Drilling Co. Pennsylvania Drilling
Drilling Equipment Mobile B-80
Driller D. Smith
Assistant S. Smith

Background: HNU = 0 ppm
Bγ = 40-50 cpm

SAA - Same As Above
NA - Not Applicable
3" Split Spoons driven by ASTM standard

VISUAL CLASSIFICATION OF SOILS 4892 19/20

PROJECT NUMBER: 20.03.05	PROJECT NAME: OU2 Phase 2		
BORING NUMBER: HP-HP-02/1000	COORDINATES:	DATE: 04/13/93	
ELEVATION:	GWL: Depth Date/Time	DATE STARTED: 04/13/93	
ENGINEER/GEOLOGIST: A. Como	Depth Date/Time	DATE COMPLETED: 04/15/93	
DRILLING METHODS: Hollow Stem Auger		PAGE 3 OF 4	

DEPTH (FT)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER (6 in)	RECOVERY (in)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
10	1600 111749 04/13	12	6	Hard (2.5Y 6/8) olive yellow and (5Y 6/1) gray silty clay interbedded, low plasticity, dry	CL	3.0	HNU = 0 ppm Bγ = 90-100 cpm
	1600 111750 04/13	6	6	Hard (2.5Y 5/6) silty clay, some sand, low plasticity, dry	CL	3.75	HNU = 0 ppm Bγ = 90-100 cpm
11	1610 111751 04/13	8	6	SAA	CL	1.5	HNU = 0 ppm Bγ = 90-100 cpm
	1610 111752 04/13	7	6	Firm (2.5Y 6/4) light yellowish brown (5Y 6/1) clayey silt, low plasticity, moist	ML ~~CL~~ 04/13/93	1.0	HNU = 0 ppm Bγ = 90-100 cpm
12	1605 111753 04/13	2	6	Very Loose (2.5Y 4/0) dark gray clayey silt, some gravel, trace black ash, low plasticity, wet	ML	NA	HNU = 0 ppm Bγ = 40-50 cpm
	1615 111754 04/13	4	6	Very Loose (2.5Y 6/6) olive yellow silty sand, no plasticity, wet	ML	NA	HNU = 0 ppm Bγ = 40-50 cpm
13	1615 111755 04/13	9	6	SAA	ML	NA	HNU = 0 ppm Bγ = 40-50 cpm
	1635 111756 04/13	6	6	Firm (2.5Y 5/6) light olive brown silty clay, some gravel, low plasticity, wet	CL	1.0	HNU = 0 ppm Bγ = 40-50 cpm
14	1635 111757 04/13	5	6	Loose (2.5Y 6/8) olive yellow silty sand, no plasticity, wet	ML	NA	HNU = 0 ppm Bγ = 40-50 cpm
	1635 111758 04/13	8	6	Loose (10YR 6/1) gray clayey silt, some gravel, low plasticity, dry	ML	NA	HNU = 0 ppm Bγ = 40-50 cpm
15							

NOTES:

Drilling Co. Pennsylvania Drilling
Drilling Equipment Mobile B-80
Driller D. Smith
Assistant S. Smith

Background: HNU = 0 ppm
Bγ = 40-50 cpm

SAA - Same As Above
NA - Not Applicable
3" Split Spoons driven by ASTM Standard

VISUAL CLASSIFICATION OF SOILS 48 of 70

PROJECT NUMBER: 30.03.05	PROJECT NAME: OU2 Phase 2		
BORING NUMBER: 1FP-HP-02/11000	COORDINATES:	DATE: 04/15/93	
EVATION:	GWL: Depth Date/Time	DATE STARTED: 04/13/93	
ENGINEER/GEOLOGIST: A. Como	Depth Date/Time	DATE COMPLETED: 04/15/93	
DRILLING METHODS: Hollow Stem Auger		PAGE 4 OF 4	

DEPTH (FT)	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER 6 in	RECOVERY (in)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
15	0915 11176C 4/15	6	6	(2.5Y 6/6) olive yellow, silty clay, low plasticity, dry, some gravel	CL	2.5	HNV = 0 ppm Bγ = 50-60 cpm
	0915 11176D 4/15	7	6	SAA	CL	2.75	HNV = 0 ppm Bγ = 50-60 cpm
16	0915 NA 4/15	8	0	No Recovery	NA	NA	HNV = NA Bγ = NA
	0940 11176E 4/15	17	6	5Y 5/1 gray clayey silt, some sand, low plasticity, dry	NA	NA	HNV = 0 ppm Bγ = 40-50 cpm
17	0940 11176F 4/15	12	6	SAA, no plasticity	NA	NA	HNV = 0 ppm Bγ = 40-50 cpm
	0940 11176G 4/15	18	10	SAA, no plasticity	NA	NA	HNV = 0 ppm Bγ = 40-50 cpm
18							HNV = Bγ =
							HNV = Bγ =
19							HNV = Bγ =
							HNV = Bγ =
20							

NOTES:
Drilling Co.: Pennsylvania Drilling
Drilling Equipment: Mobile B-50
Driller: K. Myers
Assistant: S. Smith

Background: HNV = 0 ppm
Bγ = 50-60 cpm

SAA - Same As Above
NA - Not Applicable
3" split spoons driven by ASTM standard

APPENDIX E

ANALYTICAL PARAMETER LIST

APPENDIX E.1

FULL HSL - VOLATILE ORGANIC ANALYTICAL PARAMETERS

Volatile Organics	
1	1,1-Dichloroethane
2	1,1-Dichloroethene
3	1,1,1-Trichloroethane
4	1,1,2-Trichloroethane
5	1,1,2,2-Tetrachloroethane
6	1,2-Dichloroethane
7	1,2-Dichloroethene (Total)
8	1,2-Dichloroethylene
9	1,2-Dichloropropane
10	2-Butanone
11	2-Hexanone
12	4-Methyl-2-pentanone
13	Acetone
14	Benzene
15	Bromodichloromethane
16	Bromoform
17	Bromomethane
18	Carbon disulfide
19	Carbon tetrachloride
20	Chlorobenzene
21	Chloroethane
22	Chloroform
23	Chloromethane
24	cis-1,3-Dichloropropene
25	Dibromochloromethane
26	Ethylbenzene
27	Methylene chloride

FULL HSL - VOLATILE ORGANIC ANALYTICAL PARAMETERS
PAGE 2

Volatile Organics	
28	Styrene
29	Tetrachloroethene
30	Toluene
31	Total xylenes
32	trans-1,3-Dichloropropene
33	Trichloroethene
34	Vinyl acetate
35	Vinyl chloride

APPENDIX E.2

FULL HSL - SEMI-VOLATILE ORGANIC ANALYTICAL PARAMETERS

Semi-Volatile Organics	
1	1,2-Dichlorobenzene
2	1,2,4-Trichlorobenzene
3	1,3-Dichlorobenzene
4	1,4-Dichlorobenzene
5	2-Chloronaphthalene
6	2-Chlorophenol
7	2-Methylnaphthalene
8	2-Methylphenol
9	2-Nitroanaline
10	2-Nitrophenol
11	2,4-Dichlorophenol
12	2,4-Dimethylphenol
13	2,4-Dinitrophenol
14	2,4-Dinitrotoluene
15	2,4,5-Trichlorophenol
16	2,4,6-Trichlorophenol
17	2,6-Dinitrotoluene
18	3-Nitroanaline
19	3,3'-Dichlorobenzidine
20	4-Bromophenol phenylether
21	4-Chloro-3-methylphenol
22	4-Chloroanaline
23	4-Chlorophenol phenylether
24	4-Methylphenol
25	4-Nitroanaline
26	4-Nitrophenol
27	4,6-Dinitro-2-methylphenol
28	Acenaphthene

FULL HSL - SEMI-VOLATILE ORGANIC ANALYTICAL PARAMETERS
PAGE 2

Semi-Volatile Organics	
29	Acenaphthylene
30	Anthracene
31	Benzoic acid
32	Benzo(a)anthracene
33	Benzo(a)pyrene
34	Benzo(b)fluoranthene
35	Benzo(g,h,i)perylene
36	Benzo(k)fluoranthene
37	Benzyl alcohol
38	bis(2-chloroethoxy)methane
39	bis(2-chloroethyl)ether
40	bis(2-chloroisopropyl)ether
41	bis(2-ethyhexyl)phthalate
42	Butyl benzylphthalate
43	Carbazole
44	Chrysene
45	Dibenzofuran
46	Dibenzo(a,h)anthracene
47	Diethylphthalate
48	Dimethylphthalate
49	Di-n-butylphthalate
50	Di-n-octylphalate
51	Fluoranthene
52	Fluorene
53	Hexachlorobenzene
54	Hexachlorobutadiene
55	Hexachlorocyclopentadiene

FULL HSL - SEMI-VOLATILE ORGANIC ANALYTICAL PARAMETERS
PAGE 3

Semi-Volatile Organics	
56	Hexachloroethane
57	Indeno(1,2,3-cd)pyrene
58	Isophorone
59	Naphthalene
60	Nitrobenzene
61	N-Nitroso-di-n-propylamine
62	N-Nitrosodiphenylamine
63	Pentachlorophenol
64	Phenanthrene
65	Phenol
66	Pyrene

FULL HSL - SEMI-VOLATILE ORGANIC ANALYTICAL PARAMETERS
PAGE 4

Pesticides/PCBs	
1	4,4'-DDD
2	4,4'-DDE
3	4,4'-DDT
4	Aldrin
5	alpha-BHC
6	alpha-Chlordane
7	Aroclor 1018
8	Aroclor 1221
9	Aroclor 1232
10	Arcolor 1242
11	Arcolor 1248
12	Aroclor 1254
13	Aroclor 1260
14	beta-BHC
15	delta-BHC
16	Dieldrin
17	Endosulfan sulfate
18	Endosulfan-I
19	Endosulfan-II
20	Endrin
21	Endrin aldehyde
22	Endrin ketone
23	gamma-BHC
24	gamma-Chlordane
25	Heptachlor
26	Heptachlor epoxide
27	Methoxychlor
28	Toxaphene

APPENDIX E.3

FULL HSL - INORGANIC ANALYTICAL PARAMETERS

Inorganics	
1	Aluminum
2	Antimony
3	Arsenic
4	Barium
5	Beryllium
6	Cadmium
7	Calcium
8	Chromium (Total)
9	Cobalt
10	Copper
11	Cyanide
12	Iron
13	Lead
14	Magnesium
15	Manganese
16	Mercury
17	Molybdenum
18	Nickel
19	Potassium
20	Selenium
21	Silicon
22	Silver
23	Sodium
24	Thallium
25	Vanadium
26	Zinc
Additional Non-HSL Metal	Boron