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REMEDIAL INVESTIGATION REPORT FOR OPERABLE UNIT 2 ***FINAL*** - JANUARY 21, 1995 - VOLUME 6 OF 6 - APPENDIX I

01/21/95

DOE-FN 300 REPORT

EPAS

COMPREHENSIVE RESPONSE ACTION RISK EVALUATION FOR OPERABLE UNIT 2

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

REMEDIAL INVESTIGATION AND FEASIBILITY STUDY

VOLUME 6 OF 6
APPENDIX I

JANUARY 21, 1995

U.S. DEPARTMENT OF ENERGY
FERNALD FIELD OFFICE

FINAL

REMEDIAL INVESTIGATION AND FEASIBILITY STUDY

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

COMPREHENSIVE RESPONSE ACTION RISK EVALUATION FOR OPERABLE UNIT 2

Volume 6 of 6
Appendix I
January 21, 1995

U.S. DEPARTMENT OF ENERGY
FERNALD FIELD OFFICE

Appendix G
Active Flyash Pile

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KEY TO DATA TABLES

FLTD Filtered Status of the Sample (applies to water samples)

FILT	Filtered sample; filtered status identified on Request for Analysis/Chain of Custody
UNFI	Unfiltered sample; filtered status identified on Request for Analysis/Chain of Custody
*F	Filtered sample; filtered status not identified on Request for Analysis/Chain of Custody; determination based upon other field investigation documentation.
*U	Unfiltered sample; filtered status not identified on Request for Analysis/Chain of Custody; determination based upon other field investigation documentation.
UNKN	Unknown; filtered status could not be determined.

L Analytical Support Level (ASL)

The analytical support level for sample analyses and data validation, defined as follows:

A *Qualitative Field Analysis* - Analogous to EPA analytical level 1.

B *Qualitative, Semi-Quantitative, and Quantitative Analyses* - Analogous to EPA analytical level 2.

C *Quantitative with fully defined QA/QC* - Laboratory analyses generated with full QA/QC checks of types and frequencies specified for ASL D according to FEMP-specified analytical protocols for radiological and nonradiological parameters. The analytical methods are identical to ASL D for QA/QC sample analysis and method performance criteria. However, the data package does not typically contain raw instrument output but does include summaries of QA/QC sample results. Laboratories are required to retain, in the project file, raw instrument data to upgrade ASL C reports to ASL D. Analogous to EPA analytical level 3.

D *Confirmational with complete QA/QC and reporting* - Provides data generated with a full complement of QA/QC checks of specified types and frequencies according to FEMP-specified analytical protocols for radiological and nonradiological parameters. Analogous to EPA analytical level 4.

E *Nonstandard* - Analyses by nonstandard protocols that often require method development or validation. Analogous to EPA analytical level 5.

NOTE: The number 3 is sometimes used to indicate ASL C. Likewise, the numbers 4 and 5 are sometimes used to indicate ASLs D and E, respectively.

VQ Data Validation Qualifier

J Analyte was analyzed for and positively identified, but the associated numerical value may not be consistent with the amount present in the environmental sample.

KEY TO DATA TABLES
(continued)

VQ Data Validation Qualifier (continued)

N	Analysis indicates that an analyte is present and there are strong indications that the identity is correct.
R	Data are unusable for any purpose. Analyte was analyzed for, but the presence or absence of the analyte was not verified.
U	Analyte was analyzed for and was not present above the level of the associated value. Associated numerical value indicates the approximate concentration necessary to detect the analyte in the sample.
UJ	This is a combination of the U and J qualifiers. Analyte was analyzed for and was not present above the level of the associated value. The associated value may not accurately or precisely represent the concentration necessary to detect the analyte in the sample.
-	No data validation qualifier assigned.

TABLE G-1

TABLE G-1A

ACTIVE FLYASH PILE
SUMMARY OF RI/FS SAMPLE COLLECTION ACTIVITIES
PHASE I FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGMENT PROJECT

Location	Sample No.	Date Collected	Radionuclides	Pest/PCB[a]	VOC[b]	SVOC[b]	General Chem.	Metals	EP Toxicity	TCLP[d]
SURFACE WATER SAMPLES										
ASIT-004	001127	3/21/89	Total Uranium, Gross Alpha/Beta, Radium-226, Radium-228	-[e]	-	-	-	-	-	-
	001128	3/21/89		-	-	-	X[f]	X	-	-
	001222	11/7/89	X	-	-	-	-	-	-	-
	001223 (duplicate of 001222)	11/7/89	X	-	-	-	-	-	-	-
ASIT-005	001129	3/21/89	Total Uranium, Gross Alpha/Beta, Radium-226, Radium-228	-	-	-	-	-	-	-
	001130	3/21/89		-	-	-	X	X	-	-
	001224	11/7/89	X	-	-	-	-	-	-	-
	001225 (duplicate of 001224)	11/7/89	X	-	-	-	-	-	-	-
ASIT-006	001137	3/30/89	Total Uranium, Gross Alpha/Beta, Radium-226, Radium-228	-	-	-	-	-	-	-
	001138	3/30/89		-	-	-	-	-	-	-
ASIT-007	001139	3/30/89	Total Uranium, Gross Alpha/Beta, Radium-226, Radium-228	-	-	-	-	-	-	-
	001169	3/30/89		-	-	-	-	-	-	-

See footnotes at end of table

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TABLE G-1A
(Continued)

Location	Sample No.	Date Collected	Radionuclides	Pest/PCB[a]	VOC[b]	SVOC[b]	General Chem.	Metals	EP Toxicity	TCLP[d]
GROUNDWATER SAMPLES										
1045	066828	12/13/89	X	-	-	-	-	-	-	-
1048	003132	4/27/88	X	-	-	-	X	X	-	-
	003368	7/24/88	X	-	-	-	X	X	-	-
	003647	10/23/88	X	-	-	-	X	X	-	-
	003856	1/22/89	X	-	-	-	X	X	-	-
	066831	12/16/89	X	-	-	-	-	-	-	-
2045	003993	1/23/89	X	-	-	-	X	X	-	-
	004092	5/1/89	X	-	-	-	X	X	-	-
	004129 (duplicate of 004092)	5/1/89	X	-	-	-	X	X	-	-
	004158	7/25/89	X	-	-	-	X	X	-	-
	004218	4/1/90	X	-	-	-	X	X	-	-
	004266 (duplicate of 004218)	4/1/90	X	-	-	-	X	X	-	-
2048	003994	2/9/89	X	-	-	-	X	X	-	-
	004100	5/2/89	X	-	-	-	X	X	-	-
	004162	7/26/89	X	-	-	-	X	X	-	-
	004221	4/1/90	X	-	-	-	X	X	-	-
2049	003085	4/8/88	X	-	-	-	X	X	-	-
	003436	8/3/88	X	-	-	-	X	X	-	-
	003470 (duplicate of 003687)	12/6/88	X	-	-	-	X	X	-	-
	003687	12/6/88	X	-	-	-	X	X	-	-
	003885	2/7/89	X	-	-	-	X	X	-	-
	004134	5/10/89	X	-	-	-	-	-	-	-
	004164	7/30/89	X	-	-	-	X	X	-	-
	004222	4/3/90	X	-	-	-	X	X	-	-

See footnotes at end of table

TABLE G-1A
(Continued)

Location	Sample No.	Date Collected	Radionuclides	Pest/PCB[a]	VOC[b]	SVOC[b]	General Chem.	Metals	EP Toxicity	TCLP[d]
GROUNDWATER SAMPLES (Continued)										
3045	004198	5/23/90	X	-	-	-	X	X	-	-
	004319	8/9/90	X	-	-	-	X	X	-	-
3049	003992	1/31/89	X	-	-	-	X	X	-	-
	004091	5/1/89	X	-	-	-	X	X	-	-
	004246	4/26/90	X	-	-	-	X	X	-	-
	004271 (duplicate of 004246)	4/26/90	X	-	-	-	X	X	-	-

Location	Sample No.	Depth (ft)	Radionuclides	Pest/PCB[a]	VOC[b]	SVOC[b]	General Chem.	Metals	EP Toxicity	TCLP[d]
SEDIMENT SAMPLES										
ASIT-004	009044	0.0-0.5	Total Uranium, Gross Alpha/Beta, Radium-226, Radium-228	-	-	-	-	-	-	-
ASIT-005	009045	0.0-0.5	Total Uranium, Gross Alpha/Beta, Radium-226, Radium-228	-	-	-	-	-	-	-
ASIT-006	009046	0.0-0.5	Total Uranium, Gross Alpha/Beta, Radium-226, Radium-228	-	-	-	-	-	-	-
ASIT-007	009047	0.0-0.5	Total Uranium, Gross Alpha/Beta, Radium-226, Radium-228	X	X	X	X	X	-	-

See footnotes at end of table

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TABLE G-1A
(Continued)

Location	Sample No.	Depth (ft)	Radionuclides	Pest/PCB[a]	VOC[b]	SVOC[b]	General Chem.	Metals	EP Toxicity	TCLP[d]
SUBSURFACE SAMPLES										
1045	007207	7.5-9.0	X	-	-	-	-	-	-	-
1048	007217	1.5-3.0	X	-	-	-	-	-	-	-
	007220 (duplicate of 007217)		X	-	-	-	-	-	-	-
1406	098010	0.0-0.5	Total Uranium Only	-	-	-	-	-	-	-
	098011	1.5-2.0		-	-	-	-	-	-	-
	098012	2.0-2.5		-	-	-	-	-	-	-
	098014	3.5-4.0		-	-	-	-	-	-	-
	098017	6.0-6.5		-	-	-	-	-	-	-
	098020	9.5-10.0		-	-	-	-	-	-	-
	098024	13.5-14.0		-	-	-	-	-	-	-
	098028	16.5-17.0		-	-	-	-	-	-	-
1723	067166	3.0-4.5	X	-	-	-	-	-	-	-
	067167	4.5-6.0	-	X	X	X	-	X	-	-
	067170	9.0-10.5	-	-	-	-	-	-	-	X
	067171	10.5-12.0	-	-	-	-	-	-	X	-
	067172	12.0-13.5	X	-	-	-	-	-	-	-
	067173	13.5-15.0	-	X	X	X	-	X	-	-
	067182	26.0-27.5	X	-	-	-	-	-	-	-
	067184	29.0-30.5	-	X	X	X	-	X	-	-
	067186	composite	-	-	-	-	-	-	-	X
	067189	composite	-	-	-	-	-	-	-	X

See footnotes at end of table

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TABLE G-1A
(Continued)

Location	Sample No.	Depth (ft)	Radionuclides	Pest/PCB[a]	VOC[b]	SVOC[b]	General Chem.	Metals	EP Toxicity	TCLP[d]
SUBSURFACE SAMPLES (Continued)										
1724	067192	3.0-4.5	X	-	-	-	-	-	-	-
	067193	4.5-6.0	-	X	X	X	-	X	-	-
	067196	9.0-10.5	-	-	-	-	-	-	X	-
	067197	10.5-12.0	-	-	-	-	-	-	-	X
	067200	14.5-16.0	X	-	-	-	-	-	-	-
	067201	16.0-17.5	-	X	X	X	-	X	-	-
	067217	40.0-41.5	X	-	-	-	-	-	-	-
	067218	41.5-43.0	-	X	X	X	-	X	-	-
	067224	composite	-	-	-	-	-	-	-	X
	067225	composite	-	-	-	-	-	-	-	X
1726	067146	4.5-6.0	X	-	-	-	-	-	-	-
	067148	7.5-9.0	X	-	-	-	-	-	-	-
	067149	9.0-10.5	-	X	X	X	-	X	-	-
	067150	10.5-12.0	-	-	-	-	-	-	-	X
	067151	12.0-13.5	-	-	-	-	-	-	metals only	-
	067153	15.0-16.5	X	-	-	-	-	-	-	-
	067154	16.5-18.0	X	-	-	-	-	-	-	-
	067155	18.0-19.5	-	X	X	X	-	X	-	-
	067156	19.5-21.0	X	-	-	-	-	-	-	-
	067157	composite	-	-	-	-	-	-	-	X
	067162	composite	-	-	-	-	-	-	-	X

See footnotes at end of table

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TABLE G-1A
(Continued)

Location	Sample No.	Depth (ft)	Radionuclides	Pest/PCB[a]	VOC[b]	SVOC[b]	General Chem.	Metals	EP Toxicity	TCLP[d]
SUBSURFACE SAMPLES (Continued)										
1820	067507	0.0-9.5	-	-	-	-	-	-	-	X
	067503	1.5-3.0	X	X	X	X	TOC	X	-	-
	067504	3.0-4.5	-	-	-	-	-	-	-	organics only
	067505	6.0-7.5	X	X	X	X	TOC	X	-	-
	067506	9.5-12.0	X	X	X	X	TOC	X	-	-
1846	067706	6.0-7.5	-	-	X	X	TOC	-	-	-
	067711	13.5-15.0	-	-	X	X	TOC	-	-	-
2045	008948	35.0-36.5	X	-	-	-	-	-	-	-
2048	020498	65.0-66.5	X	-	-	-	-	-	-	-
3045	032609	105.0-106.5	X	-	-	-	-	-	-	-

[a]Pest/PCB = Pesticide/Polychlorinated Biphenyl

[b]VOC = Volatile Organic Compound

[c]SVOC = Semivolatile Organic Compound

[d]TCLP = Toxicity Characteristic Leaching Procedure

[e]Sample not analyzed for this parameter

[f]X = Sample analyzed for parameters indicated

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TABLE G-1B

SUMMARY OF RI/FS SAMPLE COLLECTION ACTIVITIES
ACTIVE FLYASH PILE - PHASE II FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Monitoring Well or Sample Location	Sample Numbers	Target Analyte List 20.03.05	
		Total Uranium Screening A	Full HSL, Gen. GW Qual., Full Rad. B
SURFACE WATER SAMPLES			
AFP-SW-01		X	X
AFP-SW-02	112243		X
	112245	X	
GROUNDWATER SAMPLES			
1045	112000		X[1]
	112001	X	
	112005[b]	X (Unfiltered)	
1048	110900		X
	111997	X	
2045	112003		X
	112004	X	
2048	110897		X
	110898	X	
2049	113305		X
	113307	X	
11031[b]			
21033	116970		X
	116972	X	

See footnotes at end of table.

TABLE G-1B
(Continued)

Sample Location	Sample Number	Sample Interval (ft.)	Target Analyte List 20.03.05							
			Screening	Chem/Rad	RCRA/Geotechnical					
			A	C	D	E	F	G	I	J
SEDIMENT SAMPLES										
AFP-SD-06	112246	0 - 0.5		X						
SURFACE SAMPLES										
1979	112091[b]	0-2.0		X						
1980	112129	0-2.0		X						
1981	112160	0-2.0		X						
AFP-SD-01	112263	0 - 0.5			SA,HA					
	112264			X						X
	112265				TOC					
AFP-SD-02	112241	0 - 0.5		X						
AFP-SD-03	112248	0 - 0.5		X						
AFP-SD-04	112249	0 - 0.5		X						
AFP-SD-05	112251	0 - 0.5		X						
AFP-SS-01	112252	0 - 0.5		X						X
	112260				SA,HA,W					
AFP-SS-02	112254	0 - 0.5		X						
AFP-SS-03	112255	0 - 0.5		X						
AFP-SS-04	112257	0 - 0.5		X						
AFP-SS-05	112258	0 - 0.5		X						
AFP-SS-06	112259	0 - 0.5		X						
SUBSURFACE SAMPLES										
1979	112092	2.0 - 4.0		X						
	112093								X	
	112094	4.0 - 6.0								X
	112095	6.0 - 8.0		X	W,SA					
	112096	8.0 - 10.0						DS		
	112117	20.0 - 22.0		X[b]						
	112122[a]	24.0 - 25.5			W,SA					
	112123	25.5 - 27.5		X						
	112124[a]	27.5 - 29.5			TOC					X
	112125[a]				X[g]					
	112126[a]	29.5 - 31.5		X				CIU		

See footnotes at end of table.

TABLE G-1B
(Continued)

Sample Location	Sample Number	Sample Interval (ft.)	Target Analyte List 20.03.05							
			Screening	Chem/Rad	RCRA/Geotechnical					
			A	C	D	E	F	G	I	J
SUBSURFACE SAMPLES (Continued)										
1980	112130	2.0 - 4.0		X						
	112131								X	
	112142	9.0 - 11.0								X
	112143	11.0 - 13.0						DS		
	112144	13.0 - 15.0			W,SA					
	112145			X						
	112146	15.0 - 17.0							X	
	112153[a]	20.0 - 22.0		X						
	112156[a]	22.0 - 24.0			X[g]					
	112159[a]				TOC					
	112157[a]	24.0 - 26.0		X						
1981	112161	2.0 - 4.0		X						
	112162	4.0 - 6.0								X
	112167	8.0 - 10.0		X						
	112168								X	
	112173[a]	12.0 - 14.0						CIU		
	112179[a]	16.0 - 17.0			W,SA					
	112180[a]	17.0 - 19.0		X						
	112181[a]	19.0 - 21.0		X						
21033	116898	45.0 - 60.0	X		SA[b]					

See footnotes at end of table.

TABLE G-1B
(Continued)

TARGET ANALYTE LIST DETAILS:

[A] Water/Soil - Total Uranium

[B] Water - Full Hazardous Substance List (HSL), Full Rad., General Groundwater Quality Parameters

[C] Soil/Sediment/Sludge/Waste - Full HSL, Full Rad.

[D] Classification Tests
SG = Specific Gravity
W = Water Content
LL = Liquid Limit
PL = Plastic Limit
Grain Size
SA = Sieve Analysis
HA = Hydrometer Analysis
Other
TOC = Total Organic Carbon

[E] CON = Consolidation Test

[F] HC = Hydraulic Conductivitys

[G] Strength Tests
UC = Unconfined Compression
CIU = Consolidated Isotropic Undrained Triaxial

[I] Toxicity Characteristic Leaching Procedure (TCLP) plus copper, iron, manganese, and zinc

[J] Dry Unit Weight

NOTES: X = Sample analyzed for parameter indicated, except where shaded.

The shaded areas represent samples or analyses that were specified in the Sampling and Analysis Plan (SAP) but were not performed. These differences may be due to field conditions (e.g., dry well) or laboratory variances (e.g., missed holding time).

[a]Substitute samples for samples specified in the SAP
[b]Additional samples not specified in the SAP
[c]TAL B or C without Rad.
[d]TAL B or C with Full Rad., Metals, and cyanide only
[e]TAL B or C with Full Rad. only
[f]TAL B or C without volatile organic compounds (VOCs)
[g]TAL B or D without total organic carbon (TOC)
[h]Unfiltered metals and Full Rad. only
[i]Total uranium, thorium, and radium
[j]VOCs, semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and pesticides only
[k]SVOCs, PCBs, and pesticides only
[l]Full Rad., VOCs, metals, and cyanide only
[m]VOCs only
[n]Metals only
[o]Total uranium, total thorium, isotopic uranium, and isotopic thorium
[p]PCBs and pesticides only

TABLE G-2

TABLE G-2A

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND[a] IN SURFACE SOIL SOURCE
PHASE II FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS								
1979	112091	0 - 2	10-MAY-93	Arsenic	145.000	-	140.97	mg/kg
VOLATILE ORGANICS								
1979	112091	0 - 2	10-MAY-93	Methylene chloride	5.000	J	0	ug/kg
1979	112091	0 - 2	10-MAY-93	Toluene	160.000	J	0	ug/kg
1981	112160	0 - 2	13-MAY-93	1,1,1-Trichloroethane	8.000	J	0	ug/kg
1981	112160	0 - 2	13-MAY-93	Toluene	51.000	J	0	ug/kg
1981	112160	0 - 2	13-MAY-93	Methylene chloride	63.000	J	0	ug/kg
AFP-SD-01	112264	-	15-MAY-93	Toluene	4.000	J	0	ug/kg
AFP-SD-03	112248	0 - .5	13-MAY-93	Tetrachloroethene	2.000	J	0	ug/kg
AFP-SD-05	112251	0 - .5	13-MAY-93	Toluene	62.000	J	0	ug/kg
AFP-SS-01	112252	0 - .5	14-MAY-93	Toluene	21.000	J	0	ug/kg
AFP-SS-02	112254	0 - .5	14-MAY-93	Methylene chloride	65.000	-	0	ug/kg
AFP-SS-03	112255	0 - .5	14-MAY-93	Toluene	62.000	J	0	ug/kg
AFP-SS-04	112257	0 - .5	14-MAY-93	Toluene	88.000	J	0	ug/kg
AFP-SS-05	112258	0 - .5	14-MAY-93	Methylene chloride	44.000	-	0	ug/kg
AFP-SS-05	112258	0 - .5	14-MAY-93	Toluene	52.000	J	0	ug/kg
AFP-SS-06	112259	0 - .5	14-MAY-93	Methylene chloride	110.000	J	0	ug/kg
SEMIVOLATILE ORGANICS								
1979	112091	0 - 2	10-MAY-93	Benzoic acid	76.000	J	0	ug/kg
1980	112129	0 - 2	12-MAY-93	bis(2-Ethylhexyl) phthalate	45.000	J	0	ug/kg
1981	112160	0 - 2	13-MAY-93	Benzoic acid	80.000	J	0	ug/kg
1981	112160	0 - 2	13-MAY-93	Di-n-butyl phthalate	58.000	J	0	ug/kg
AFP-SD-01	112264	-	15-MAY-93	2-Methylnaphthalene	56.000	J	0	ug/kg
AFP-SD-01	112264	-	15-MAY-93	Fluoranthene	130.000	J	0	ug/kg
AFP-SD-01	112264	-	15-MAY-93	Chrysene	69.000	J	0	ug/kg
AFP-SD-01	112264	-	15-MAY-93	Phenanthrene	99.000	J	0	ug/kg
AFP-SD-01	112264	-	15-MAY-93	Pyrene	100.000	J	0	ug/kg
AFP-SD-01	112264	-	15-MAY-93	Naphthalene	51.000	J	0	ug/kg
AFP-SD-01	112264	-	15-MAY-93	Benzo(a)anthracene	53.000	J	0	ug/kg
AFP-SD-01	112264	-	15-MAY-93	Benzo(b)fluoranthene	100.000	J	0	ug/kg

See footnote at end of table

TABLE G-2A
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
SEMIVOLATILE ORGANICS (Continued)								
AFP-SD-01	112264	-	15-MAY-93	Benzo(k)fluoranthene	54.000	J	0	ug/kg
AFP-SD-02	112241	0 - .5	12-MAY-93	bis(2-Ethylhexyl) phthalate	150.000	J	0	ug/kg
AFP-SD-04	112249	0 - .5	13-MAY-93	Benzo(a)anthracene	110.000	J	0	ug/kg
AFP-SD-04	112249	0 - .5	13-MAY-93	Pyrene	230.000	J	0	ug/kg
AFP-SD-04	112249	0 - .5	13-MAY-93	Phenanthrene	210.000	J	0	ug/kg
AFP-SD-04	112249	0 - .5	13-MAY-93	Indeno(1,2,3-cd)pyrene	74.000	J	0	ug/kg
AFP-SD-04	112249	0 - .5	13-MAY-93	Fluoranthene	390.000	J	0	ug/kg
AFP-SD-04	112249	0 - .5	13-MAY-93	Chrysene	150.000	J	0	ug/kg
AFP-SD-04	112249	0 - .5	13-MAY-93	Benzoic acid	120.000	J	0	ug/kg
AFP-SD-04	112249	0 - .5	13-MAY-93	Benzo(a)pyrene	120.000	J	0	ug/kg
AFP-SD-04	112249	0 - .5	13-MAY-93	Benzo(k)fluoranthene.	73.000	J	0	ug/kg
AFP-SD-04	112249	0 - .5	13-MAY-93	Benzo(b)fluoranthene	180.000	J	0	ug/kg
AFP-SD-05	112251	0 - .5	13-MAY-93	Benzo(a)pyrene	70.000	J	0	ug/kg
AFP-SD-05	112251	0 - .5	13-MAY-93	Fluoranthene	180.000	J	0	ug/kg
AFP-SD-05	112251	0 - .5	13-MAY-93	Benzo(b)fluoranthene	100.000	J	0	ug/kg
AFP-SD-05	112251	0 - .5	13-MAY-93	bis(2-Ethylhexyl) phthalate	1400.000	-	0	ug/kg
AFP-SD-05	112251	0 - .5	13-MAY-93	Pyrene	120.000	J	0	ug/kg
AFP-SD-05	112251	0 - .5	13-MAY-93	Phenanthrene	120.000	J	0	ug/kg
AFP-SD-05	112251	0 - .5	13-MAY-93	Chrysene	72.000	J	0	ug/kg
AFP-SS-01	112252	0 - .5	14-MAY-93	Di-n-butyl phthalate	98.000	J	0	ug/kg
AFP-SS-02	112254	0 - .5	14-MAY-93	Di-n-butyl phthalate	130.000	J	0	ug/kg
AFP-SS-02	112254	0 - .5	14-MAY-93	Phenanthrene	100.000	J	0	ug/kg
AFP-SS-02	112254	0 - .5	14-MAY-93	Pyrene	120.000	J	0	ug/kg
AFP-SS-02	112254	0 - .5	14-MAY-93	Fluoranthene	160.000	J	0	ug/kg
AFP-SS-03	112255	0 - .5	14-MAY-93	2-Methylnaphthalene	55.000	J	0	ug/kg
AFP-SS-03	112255	0 - .5	14-MAY-93	Phenanthrene	47.000	J	0	ug/kg
AFP-SS-04	112257	0 - .5	14-MAY-93	Butyl benzyl phthalate	180.000	J	0	ug/kg

[a]Surface soil source results are compared to ash background.

TABLE G-2B

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND[a] IN SUBSURFACE SOIL SOURCE
PHASE I FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
RADIONUCLIDES								
1723	067172	12 - 13.5	11-JUL-91	U-TOTAL	31.300	J	19	mg/kg
1723	067172	12 - 13.5	11-JUL-91	U-238	7.960	J	6.07	pCi/g
1724	067192	3 - 4.5	13-JUL-91	RA-226	6.220	J	5.25	pCi/g
1724	067192	3 - 4.5	13-JUL-91	TH-232	5.080	J	4.33	pCi/g
1726	067146	4.5 - 6	29-JUN-91	U-TOTAL	28.100	J	19	mg/kg
1726	067146	4.5 - 6	29-JUN-91	U-238	6.310	J	6.07	pCi/g
1726	067146	4.5 - 6	29-JUN-91	U-238	12.600	-	6.07	pCi/g
1726	067153	15 - 16.5	01-JUL-91	U-238	9.670	-	6.07	pCi/g
1726	067153	15 - 16.5	01-JUL-91	U-TOTAL	27.700	J	19	mg/kg
1726	067153	15 - 16.5	01-JUL-91	U-238	6.550	J	6.07	pCi/g
1726	067154	16.5 - 18	01-JUL-91	U-TOTAL	28.100	J	19	mg/kg
1726	067154	16.5 - 18	01-JUL-91	U-238	7.930	-	6.07	pCi/g
1820	067505	6 - 7.5	16-OCT-91	U-238	7.230	-	6.07	pCi/g
1820	067505	6 - 7.5	16-OCT-91	U-TOTAL	20.700	J	19	mg/kg
VOLATILE ORGANICS								
1723	067167	4.5 - 6	11-JUL-91	1,1,1-Trichloroethane	80.000	J	0	ug/kg
1723	067167	4.5 - 6	11-JUL-91	Methylene chloride	37.000	J	0	ug/kg
1723	067173	13.5 - 15	11-JUL-91	Carbon disulfide	7.000	J	0	ug/kg
1723	067173	13.5 - 15	11-JUL-91	Methylene chloride	65.000	J	0	ug/kg
1724	067193	4.5 - 6	13-JUL-91	1,1,1-Trichloroethane	1300.000	J	0	ug/kg
1724	067201	16 - 17.5	14-JUL-91	1,1,1-Trichloroethane	40.000	J	0	ug/kg
1724	067201	16 - 17.5	14-JUL-91	Methylene chloride	34.000	J	0	ug/kg
1724	067201	16 - 17.5	14-JUL-91	4-Methyl-2-pentanone	11.000	J	0	ug/kg
1726	067149	9 - 10.5	01-JUL-91	1,1,1-Trichloroethane	69.000	J	0	ug/kg
1726	067149	9 - 10.5	01-JUL-91	Toluene	13.000	J	0	ug/kg
1726	067149	9 - 10.5	01-JUL-91	Methylene chloride	73.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	2-Butanone	4.000	J	0	ug/kg
1820	067503	1.5 - 3	16-OCT-91	1,1,1-Trichloroethane	28.000	J	0	ug/kg
1820	067503	1.5 - 3	16-OCT-91	Toluene	13.000	J	0	ug/kg
1820	067505	6 - 7.5	16-OCT-91	1,1,1-Trichloroethane	32.000	J	0	ug/kg
1820	067505	6 - 7.5	16-OCT-91	Toluene	21.000	J	0	ug/kg

See footnote at end of table

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TABLE G-2B
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
VOLATILE ORGANICS (Continued)								
1846	067706	6 - 7.5	22-FEB-92	1,1,1-Trichloroethane	240.000	J	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	Toluene	130.000	J	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	Benzene	2.000	J	0	ug/kg
1846	067711	13.5 - 15	22-FEB-92	1,1,1-Trichloroethane	120.000	J	0	ug/kg
1846	067711	13.5 - 15	22-FEB-92	4-Methyl-2-pentanone	25.000	J	0	ug/kg
1846	067711	13.5 - 15	22-FEB-92	Toluene	110.000	J	0	ug/kg
SEMIVOLATILE ORGANICS								
1724	067193	4.5 - 6	13-JUL-91	2-Methylnaphthalene	160.000	J	0	ug/kg
1724	067193	4.5 - 6	13-JUL-91	Phenanthrene	72.000	J	0	ug/kg
1724	067193	4.5 - 6	13-JUL-91	Naphthalene	82.000	J	0	ug/kg
1724	067193	4.5 - 6	13-JUL-91	Benzoic acid	52.000	J	0	ug/kg
1726	067149	9 - 10.5	01-JUL-91	bis(2-Ethylhexyl) phthalate	480.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	2-Chlorophenol	48.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	Benzoic acid	73.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	4-Nitrophenol	48.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	bis(2-Ethylhexyl) phthalate	2700.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	Phenol	58.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	Phenanthrene	48.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	4-Chloro-3-methylphenol	58.000	J	0	ug/kg
1820	067503	1.5 - 3	16-OCT-91	Di-n-butyl phthalate	49.000	J	0	ug/kg
1820	067505	6 - 7.5	16-OCT-91	Di-n-octyl phthalate	3000.000	-	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	2-Methylnaphthalene	94.000	J	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	Benzoic acid	62.000	J	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	Naphthalene	52.000	J	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	bis(2-Ethylhexyl) phthalate	120.000	J	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	Di-n-butyl phthalate	69.000	J	0	ug/kg
1846	067711	13.5 - 15	22-FEB-92	2-Methylnaphthalene	49.000	J	0	ug/kg
1846	067711	13.5 - 15	22-FEB-92	Phenanthrene	43.000	J	0	ug/kg
1846	067711	13.5 - 15	22-FEB-92	Di-n-butyl phthalate	47.000	J	0	ug/kg
1846	067711	13.5 - 15	22-FEB-92	Benzoic acid	68.000	J	0	ug/kg
GENERAL CHEMICAL								
1820	067503	1.5 - 3	16-OCT-91	Total Organic Carbon	117400.000	-	0	mg/kg
1820	067505	6 - 7.5	16-OCT-91	Total Organic Carbon	420620.000	-	0	mg/kg
1846	067706	6 - 7.5	22-FEB-92	Total Organic Carbon	72154.000	-	0	mg/kg
1846	067711	13.5 - 15	22-FEB-92	Total Organic Carbon	63907.000	-	0	mg/kg

[a]Subsurface soil source results are compared to flyash background concentrations.

TABLE G-2C

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND[a] IN SUBSURFACE SOIL SOURCE
PHASE II FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
RADIONUCLIDES								
1979	112117	20 - 22	10-MAY-93	U-TOTAL	22.100	-	19	mg/kg
1979	112117	20 - 22	10-MAY-93	U-238	7.120	-	6.07	pCi/g
VOLATILE ORGANICS								
1979	112117	20 - 22	10-MAY-93	Toluene	140.000	J	0	ug/kg
1980	112130	2 - 4	12-MAY-93	1,1,1-Trichloroethane	12.000	J	0	ug/kg
1980	112130	2 - 4	12-MAY-93	Toluene	12.000	J	0	ug/kg
1980	112130	2 - 4	12-MAY-93	Xylenes, Total	53.000	J	0	ug/kg
1980	112145	13 - 15	12-MAY-93	1,1,1-Trichloroethane	600.000	J	0	ug/kg
1980	112145	13 - 15	12-MAY-93	Toluene	440.000	J	0	ug/kg
1981	112161	2 - 4	13-MAY-93	Toluene	130.000	J	0	ug/kg
1981	112167	8 - 10	13-MAY-93	1,1,1-Trichloroethane	740.000	J	0	ug/kg
1981	112167	8 - 10	13-MAY-93	2-Hexanone	10.000	J	0	ug/kg
1981	112167	8 - 10	13-MAY-93	Toluene	76.000	J	0	ug/kg
1981	112167	8 - 10	13-MAY-93	Acetone	37.000	J	0	ug/kg
SEMIVOLATILE ORGANICS								
1979	112092	2 - 4	10-MAY-93	Pentachlorophenol	56.000	J	0	ug/kg
1979	112117	20 - 22	10-MAY-93	Benzoic acid	95.000	J	0	ug/kg
1980	112130	2 - 4	12-MAY-93	bis(2-Ethylhexyl) phthalate	300.000	J	0	ug/kg
1980	112145	13 - 15	12-MAY-93	bis(2-Ethylhexyl) phthalate	780.000	-	0	ug/kg
1981	112161	2 - 4	13-MAY-93	Benzoic acid	2.000	J	0	ug/kg
1981	112167	8 - 10	13-MAY-93	Benzoic acid	100.000	J	0	ug/kg
1981	112167	8 - 10	13-MAY-93	Di-n-butyl phthalate	86.000	J	0	ug/kg
1981	112167	8 - 10	13-MAY-93	bis(2-Ethylhexyl) phthalate	48.000	J	0	ug/kg

[a]Subsoil source results are compared to flyash background concentrations.

TABLE G-2D

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND[a] IN SUBSURFACE SOIL SOURCE
PHASE I FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS								
1723	067167	4.5 - 6	11-JUL-91	Arsenic	51.100	-	9.704	mg/kg
1723	067167	4.5 - 6	11-JUL-91	Barium	508.000	-	121.064	mg/kg
1723	067167	4.5 - 6	11-JUL-91	Beryllium	3.900	-	.62	mg/kg
1723	067167	4.5 - 6	11-JUL-91	Copper	59.400	-	20.23	mg/kg
1723	067167	4.5 - 6	11-JUL-91	Lead	42.200	-	15.78	mg/kg
1723	067167	4.5 - 6	11-JUL-91	Molybdenum	8.600	-	.27	mg/kg
1723	067167	4.5 - 6	11-JUL-91	Sodium	312.000	-	227.947	mg/kg
1723	067167	4.5 - 6	11-JUL-91	Zinc	78.200	-	73.158	mg/kg
1723	067167	4.5 - 6	11-JUL-91	Thallium	2.100	-	.49	mg/kg
1723	067167	4.5 - 6	11-JUL-91	Selenium	5.500	-	0	mg/kg
1723	067173	13.5 - 15	11-JUL-91	Arsenic	66.100	-	9.704	mg/kg
1723	067173	13.5 - 15	11-JUL-91	Beryllium	4.600	-	.62	mg/kg
1723	067173	13.5 - 15	11-JUL-91	Cobalt	18.800	-	15.929	mg/kg
1723	067173	13.5 - 15	11-JUL-91	Cyanide	.260	-	.17	mg/kg
1723	067173	13.5 - 15	11-JUL-91	Lead	46.700	-	15.78	mg/kg
1723	067173	13.5 - 15	11-JUL-91	Copper	66.100	-	20.23	mg/kg
1723	067173	13.5 - 15	11-JUL-91	Zinc	117.000	-	73.158	mg/kg
1723	067173	13.5 - 15	11-JUL-91	Vanadium	40.300	-	38.088	mg/kg
1723	067173	13.5 - 15	11-JUL-91	Thallium	2.000	-	.49	mg/kg
1723	067173	13.5 - 15	11-JUL-91	Sodium	254.000	-	227.947	mg/kg
1723	067173	13.5 - 15	11-JUL-91	Selenium	3.400	-	0	mg/kg
1723	067173	13.5 - 15	11-JUL-91	Nickel	45.700	-	34.747	mg/kg
1723	067173	13.5 - 15	11-JUL-91	Molybdenum	12.500	-	.27	mg/kg
1724	067193	4.5 - 6	13-JUL-91	Arsenic	19.400	-	9.704	mg/kg
1724	067193	4.5 - 6	13-JUL-91	Barium	179.000	-	121.064	mg/kg
1724	067193	4.5 - 6	13-JUL-91	Thallium	.960	-	.49	mg/kg
1724	067193	4.5 - 6	13-JUL-91	Copper	35.600	-	20.23	mg/kg
1724	067193	4.5 - 6	13-JUL-91	Selenium	1.600	-	0	mg/kg
1724	067193	4.5 - 6	13-JUL-91	Molybdenum	7.900	-	.27	mg/kg
1724	067193	4.5 - 6	13-JUL-91	Lead	21.700	-	15.78	mg/kg
1724	067193	4.5 - 6	13-JUL-91	Beryllium	2.400	-	.62	mg/kg
1724	067201	16 - 17.5	14-JUL-91	Arsenic	65.500	-	9.704	mg/kg

See footnote at end of table

TABLE G-2D
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS (Continued)								
1724	067201	16 - 17.5	14-JUL-91	Barium	254.000	-	121.064	mg/kg
1724	067201	16 - 17.5	14-JUL-91	Cyanide	.190	J	.17	mg/kg
1724	067201	16 - 17.5	14-JUL-91	Zinc	74.100	-	73.158	mg/kg
1724	067201	16 - 17.5	14-JUL-91	Vanadium	40.000	-	38.088	mg/kg
1724	067201	16 - 17.5	14-JUL-91	Thallium	1.900	-	.49	mg/kg
1724	067201	16 - 17.5	14-JUL-91	Selenium	2.100	-	0	mg/kg
1724	067201	16 - 17.5	14-JUL-91	Molybdenum	10.300	-	.27	mg/kg
1724	067201	16 - 17.5	14-JUL-91	Lead	61.700	-	15.78	mg/kg
1724	067201	16 - 17.5	14-JUL-91	Copper	57.900	-	20.23	mg/kg
1724	067201	16 - 17.5	14-JUL-91	Beryllium	3.000	-	.62	mg/kg
1726	067149	9 - 10.5	01-JUL-91	Arsenic	66.500	-	9.704	mg/kg
1726	067149	9 - 10.5	01-JUL-91	Barium	203.000	-	121.064	mg/kg
1726	067149	9 - 10.5	01-JUL-91	Cyanide	.690	J	.17	mg/kg
1726	067149	9 - 10.5	01-JUL-91	Thallium	1.900	-	.49	mg/kg
1726	067149	9 - 10.5	01-JUL-91	Selenium	10.200	J	0	mg/kg
1726	067149	9 - 10.5	01-JUL-91	Molybdenum	18.800	-	.27	mg/kg
1726	067149	9 - 10.5	01-JUL-91	Lead	38.000	-	15.78	mg/kg
1726	067149	9 - 10.5	01-JUL-91	Copper	57.200	-	20.23	mg/kg
1726	067149	9 - 10.5	01-JUL-91	Beryllium	2.800	-	.62	mg/kg
1726	067155	18 - 19.5	01-JUL-91	Aluminum	17900.000	-	16277.291	mg/kg
1726	067155	18 - 19.5	01-JUL-91	Barium	132.000	-	121.064	mg/kg
1726	067155	18 - 19.5	01-JUL-91	Chromium	25.800	-	20.953	mg/kg
1726	067155	18 - 19.5	01-JUL-91	Molybdenum	17.900	-	.27	mg/kg
1726	067155	18 - 19.5	01-JUL-91	Lead	21.400	-	15.78	mg/kg
1726	067155	18 - 19.5	01-JUL-91	Copper	24.000	-	20.23	mg/kg
1726	067155	18 - 19.5	01-JUL-91	Cobalt	18.200	-	15.929	mg/kg
1726	067155	18 - 19.5	01-JUL-91	Beryllium	1.200	-	.62	mg/kg
1820	067503	1.5 - 3	16-OCT-91	Arsenic	64.700	-	9.704	mg/kg
1820	067503	1.5 - 3	16-OCT-91	Thallium	1.500	J	.49	mg/kg
1820	067503	1.5 - 3	16-OCT-91	Selenium	2.300	J	0	mg/kg
1820	067503	1.5 - 3	16-OCT-91	Molybdenum	6.500	-	.27	mg/kg
1820	067503	1.5 - 3	16-OCT-91	Lead	38.300	-	15.78	mg/kg
1820	067503	1.5 - 3	16-OCT-91	Barium	243.000	-	121.064	mg/kg
1820	067503	1.5 - 3	16-OCT-91	Copper	39.300	-	20.23	mg/kg
1820	067503	1.5 - 3	16-OCT-91	Cyanide	.350	-	.17	mg/kg
1820	067503	1.5 - 3	16-OCT-91	Beryllium	2.600	-	.62	mg/kg
1820	067505	6 - 7.5	16-OCT-91	Arsenic	51.000	-	9.704	mg/kg
1820	067505	6 - 7.5	16-OCT-91	Zinc	87.300	J	73.158	mg/kg
1820	067505	6 - 7.5	16-OCT-91	Selenium	.850	J	0	mg/kg
1820	067505	6 - 7.5	16-OCT-91	Molybdenum	4.300	-	.27	mg/kg
1820	067505	6 - 7.5	16-OCT-91	Lead	19.700	-	15.78	mg/kg

See footnote at end of table

TABLE G-2D
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
RADIONUCLIDES								
1820	067505	6 - 7.5	16-OCT-91	Copper	25.700	-	20.23	mg/kg
1820	067505	6 - 7.5	16-OCT-91	Cyanide	.200	-	.17	mg/kg
1820	067505	6 - 7.5	16-OCT-91	Beryllium	.650	-	.62	mg/kg
1723	067166	3 - 4.5	11-JUL-91	RA-226	4.120	J	1.47	pCi/g
1723	067166	3 - 4.5	11-JUL-91	RA-228	3.890	J	1.325	pCi/g
1723	067166	3 - 4.5	11-JUL-91	SR-90	1.010	J	.56	pCi/g
1723	067166	3 - 4.5	11-JUL-91	TH-228	3.460	J	1.341	pCi/g
1723	067166	3 - 4.5	11-JUL-91	TH-230	3.550	J	1.897	pCi/g
1723	067166	3 - 4.5	11-JUL-91	TH-232	2.840	J	1.269	pCi/g
1723	067166	3 - 4.5	11-JUL-91	TH-TOTAL	25.600	J	9.47	mg/kg
1723	067166	3 - 4.5	11-JUL-91	U-TOTAL	11.700	J	2.54	mg/kg
1723	067166	3 - 4.5	11-JUL-91	U-238	4.920	J	1.122	pCi/g
1723	067166	3 - 4.5	11-JUL-91	U-234	4.770	J	1.034	pCi/g
1723	067172	12 - 13.5	11-JUL-91	RA-226	4.050	J	1.47	pCi/g
1723	067172	12 - 13.5	11-JUL-91	SR-90	1.090	J	.56	pCi/g
1723	067172	12 - 13.5	11-JUL-91	TH-230	3.020	J	1.897	pCi/g
1723	067172	12 - 13.5	11-JUL-91	U-TOTAL	31.300	J	2.54	mg/kg
1723	067172	12 - 13.5	11-JUL-91	U-238	7.960	J	1.122	pCi/g
1723	067172	12 - 13.5	11-JUL-91	U-234	4.340	J	1.034	pCi/g
1723	067172	12 - 13.5	11-JUL-91	TH-TOTAL	17.400	J	9.47	mg/kg
1723	067172	12 - 13.5	11-JUL-91	TH-232	1.930	J	1.269	pCi/g
1723	067172	12 - 13.5	11-JUL-91	TH-228	2.990	J	1.341	pCi/g
1723	067172	12 - 13.5	11-JUL-91	RA-228	2.830	J	1.325	pCi/g
1724	067192	3 - 4.5	13-JUL-91	RA-226	6.220	J	1.47	pCi/g
1724	067192	3 - 4.5	13-JUL-91	U-TOTAL	18.400	J	2.54	mg/kg
1724	067192	3 - 4.5	13-JUL-91	U-238	4.960	J	1.122	pCi/g
1724	067192	3 - 4.5	13-JUL-91	U-234	4.750	J	1.034	pCi/g
1724	067192	3 - 4.5	13-JUL-91	TH-TOTAL	45.800	J	9.47	mg/kg
1724	067192	3 - 4.5	13-JUL-91	TH-232	5.080	J	1.269	pCi/g
1724	067192	3 - 4.5	13-JUL-91	TH-230	6.080	J	1.897	pCi/g
1724	067192	3 - 4.5	13-JUL-91	TH-228	5.790	J	1.341	pCi/g
1724	067192	3 - 4.5	13-JUL-91	RA-228	5.320	J	1.325	pCi/g
1724	067192	3 - 4.5	13-JUL-91	SR-90	1.530	J	.56	pCi/g
1724	067200	14.5 - 16	14-JUL-91	RA-226	3.600	J	1.47	pCi/g
1724	067200	14.5 - 16	14-JUL-91	RA-228	2.760	J	1.325	pCi/g
1724	067200	14.5 - 16	14-JUL-91	U-TOTAL	16.400	J	2.54	mg/kg
1724	067200	14.5 - 16	14-JUL-91	U-238	5.530	J	1.122	pCi/g
1724	067200	14.5 - 16	14-JUL-91	U-234	4.010	J	1.034	pCi/g
1724	067200	14.5 - 16	14-JUL-91	TH-TOTAL	21.900	J	9.47	mg/kg

See footnote at end of table

TABLE G-2D
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
RADIONUCLIDES (Continued)								
1724	067200	14.5 - 16	14-JUL-91	TH-232	2.420	J	1.269	pCi/g
1724	067200	14.5 - 16	14-JUL-91	TH-230	3.450	J	1.897	pCi/g
1724	067200	14.5 - 16	14-JUL-91	TH-228	3.210	J	1.341	pCi/g
1724	067200	14.5 - 16	14-JUL-91	SR-90	1.270	J	.56	pCi/g
1726	067146	4.5 - 6	29-JUN-91	PB-210	1.520	-	.857	pCi/g
1726	067146	4.5 - 6	29-JUN-91	RA-226	3.040	-	1.47	pCi/g
1726	067146	4.5 - 6	29-JUN-91	RA-224	3.440	-	1.019	pCi/g
1726	067146	4.5 - 6	29-JUN-91	U-TOTAL	28.100	J	2.54	mg/kg
1726	067146	4.5 - 6	29-JUN-91	U-238	6.310	J	1.122	pCi/g
1726	067146	4.5 - 6	29-JUN-91	U-238	12.600	-	1.122	pCi/g
1726	067146	4.5 - 6	29-JUN-91	U-235/236	4.120	J	.142	pCi/g
1726	067146	4.5 - 6	29-JUN-91	U-234	17.300	-	1.034	pCi/g
1726	067146	4.5 - 6	29-JUN-91	TH-TOTAL	26.200	J	9.47	mg/kg
1726	067146	4.5 - 6	29-JUN-91	TH-232	2.910	J	1.269	pCi/g
1726	067146	4.5 - 6	29-JUN-91	TH-230	5.920	J	1.897	pCi/g
1726	067146	4.5 - 6	29-JUN-91	TH-228	2.910	J	1.341	pCi/g
1726	067146	4.5 - 6	29-JUN-91	RA-228	2.910	-	1.325	pCi/g
1726	067148	7.5 - 9	01-JUL-91	RA-226	4.510	J	1.47	pCi/g
1726	067148	7.5 - 9	01-JUL-91	RA-228	3.610	J	1.325	pCi/g
1726	067148	7.5 - 9	01-JUL-91	TH-228	3.460	J	1.341	pCi/g
1726	067148	7.5 - 9	01-JUL-91	U-TOTAL	18.500	J	2.54	mg/kg
1726	067148	7.5 - 9	01-JUL-91	U-238	3.770	-	1.122	pCi/g
1726	067148	7.5 - 9	01-JUL-91	U-234	3.900	J	1.034	pCi/g
1726	067148	7.5 - 9	01-JUL-91	TH-TOTAL	25.300	-	9.47	mg/kg
1726	067148	7.5 - 9	01-JUL-91	TH-232	2.800	-	1.269	pCi/g
1726	067148	7.5 - 9	01-JUL-91	TH-230	3.700	J	1.897	pCi/g
1726	067148	7.5 - 9	01-JUL-91	SR-90	1.370	-	.56	pCi/g
1726	067153	15 - 16.5	01-JUL-91	PB-210	1.630	-	.857	pCi/g
1726	067153	15 - 16.5	01-JUL-91	RA-228	2.850	-	1.325	pCi/g
1726	067153	15 - 16.5	01-JUL-91	RA-226	3.760	-	1.47	pCi/g
1726	067153	15 - 16.5	01-JUL-91	RA-224	3.740	-	1.019	pCi/g
1726	067153	15 - 16.5	01-JUL-91	U-TOTAL	27.700	J	2.54	mg/kg
1726	067153	15 - 16.5	01-JUL-91	U-238	9.670	-	1.122	pCi/g
1726	067153	15 - 16.5	01-JUL-91	U-238	6.550	J	1.122	pCi/g
1726	067153	15 - 16.5	01-JUL-91	U-235/236	3.420	-	.142	pCi/g
1726	067153	15 - 16.5	01-JUL-91	U-234	12.300	-	1.034	pCi/g
1726	067153	15 - 16.5	01-JUL-91	TH-TOTAL	21.400	J	9.47	mg/kg
1726	067153	15 - 16.5	01-JUL-91	TH-232	2.370	J	1.269	pCi/g
1726	067153	15 - 16.5	01-JUL-91	TH-230	3.800	J	1.897	pCi/g
1726	067153	15 - 16.5	01-JUL-91	TH-228	2.930	J	1.341	pCi/g

See footnote at end of table

TABLE G-2D
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
RADIONUCLIDES (Continued)								
1726	067154	16.5 - 18	01-JUL-91	RA-226	4.520	J	1.47	pCi/g
1726	067154	16.5 - 18	01-JUL-91	RA-228	3.450	J	1.325	pCi/g
1726	067154	16.5 - 18	01-JUL-91	U-TOTAL	28.100	J	2.54	mg/kg
1726	067154	16.5 - 18	01-JUL-91	U-238	7.930	-	1.122	pCi/g
1726	067154	16.5 - 18	01-JUL-91	U-234	5.700	J	1.034	pCi/g
1726	067154	16.5 - 18	01-JUL-91	TH-TOTAL	25.300	-	9.47	mg/kg
1726	067154	16.5 - 18	01-JUL-91	TH-232	2.800	-	1.269	pCi/g
1726	067154	16.5 - 18	01-JUL-91	TH-230	3.620	J	1.897	pCi/g
1726	067154	16.5 - 18	01-JUL-91	TH-228	4.470	J	1.341	pCi/g
1726	067154	16.5 - 18	01-JUL-91	SR-90	1.160	J	.56	pCi/g
1820	067503	1.5 - 3	16-OCT-91	RA-226	3.160	J	1.47	pCi/g
1820	067503	1.5 - 3	16-OCT-91	SR-90	1.400	-	.56	pCi/g
1820	067503	1.5 - 3	16-OCT-91	U-TOTAL	9.080	J	2.54	mg/kg
1820	067503	1.5 - 3	16-OCT-91	U-238	3.150	-	1.122	pCi/g
1820	067503	1.5 - 3	16-OCT-91	U-234	3.680	J	1.034	pCi/g
1820	067503	1.5 - 3	16-OCT-91	TH-TOTAL	17.000	-	9.47	mg/kg
1820	067503	1.5 - 3	16-OCT-91	TH-232	1.890	-	1.269	pCi/g
1820	067503	1.5 - 3	16-OCT-91	TH-230	3.000	J	1.897	pCi/g
1820	067503	1.5 - 3	16-OCT-91	TH-228	3.180	J	1.341	pCi/g
1820	067503	1.5 - 3	16-OCT-91	RA-228	2.700	J	1.325	pCi/g
1820	067505	6 - 7.5	16-OCT-91	RA-226	2.530	J	1.47	pCi/g
1820	067505	6 - 7.5	16-OCT-91	U-TOTAL	20.700	J	2.54	mg/kg
1820	067505	6 - 7.5	16-OCT-91	U-238	7.230	-	1.122	pCi/g
1820	067505	6 - 7.5	16-OCT-91	U-234	3.080	J	1.034	pCi/g
1820	067505	6 - 7.5	16-OCT-91	TH-TOTAL	25.400	-	9.47	mg/kg
1820	067505	6 - 7.5	16-OCT-91	TH-232	2.820	-	1.269	pCi/g
1820	067505	6 - 7.5	16-OCT-91	TH-230	4.010	J	1.897	pCi/g
1820	067505	6 - 7.5	16-OCT-91	TH-228	3.440	J	1.341	pCi/g
1820	067505	6 - 7.5	16-OCT-91	RA-228	2.230	J	1.325	pCi/g
VOLATILE ORGANICS								
1723	067167	4.5 - 6	11-JUL-91	1,1,1-Trichloroethane	80.000	J	0	ug/kg
1723	067167	4.5 - 6	11-JUL-91	Methylene chloride	37.000	J	0	ug/kg
1723	067173	13.5 - 15	11-JUL-91	Carbon disulfide	7.000	J	0	ug/kg
1723	067173	13.5 - 15	11-JUL-91	Methylene chloride	65.000	J	0	ug/kg
1724	067193	4.5 - 6	13-JUL-91	1,1,1-Trichloroethane	1300.000	J	0	ug/kg
1724	067201	16 - 17.5	14-JUL-91	1,1,1-Trichloroethane	40.000	J	0	ug/kg
1724	067201	16 - 17.5	14-JUL-91	4-Methyl-2-pentanone	11.000	J	0	ug/kg
1724	067201	16 - 17.5	14-JUL-91	Methylene chloride	34.000	J	0	ug/kg
1726	067149	9 - 10.5	01-JUL-91	1,1,1-Trichloroethane	69.000	J	0	ug/kg

See footnote at end of table

TABLE G-2D
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
VOLATILE ORGANICS (Continued)								
1726	067149	9 - 10.5	01-JUL-91	Methylene chloride	73.000	J	0	ug/kg
1726	067149	9 - 10.5	01-JUL-91	Toluene	13.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	2-Butanone	4.000	J	0	ug/kg
1820	067503	1.5 - 3	16-OCT-91	1,1,1-Trichloroethane	28.000	J	0	ug/kg
1820	067503	1.5 - 3	16-OCT-91	Toluene	13.000	J	0	ug/kg
1820	067505	6 - 7.5	16-OCT-91	1,1,1-Trichloroethane	32.000	J	0	ug/kg
1820	067505	6 - 7.5	16-OCT-91	Toluene	21.000	J	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	1,1,1-Trichloroethane	240.000	J	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	Toluene	130.000	J	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	Benzene	2.000	J	0	ug/kg
1846	067711	13.5 - 15	22-FEB-92	1,1,1-Trichloroethane	120.000	J	0	ug/kg
1846	067711	13.5 - 15	22-FEB-92	4-Methyl-2-pentanone	25.000	J	0	ug/kg
1846	067711	13.5 - 15	22-FEB-92	Toluene	110.000	J	0	ug/kg
SEMIVOLATILE ORGANICS								
1724	067193	4.5 - 6	13-JUL-91	2-Methylnaphthalene	160.000	J	0	ug/kg
1724	067193	4.5 - 6	13-JUL-91	Phenanthrene	72.000	J	0	ug/kg
1724	067193	4.5 - 6	13-JUL-91	Naphthalene	82.000	J	0	ug/kg
1724	067193	4.5 - 6	13-JUL-91	Benzoic acid	52.000	J	0	ug/kg
1726	067149	9 - 10.5	01-JUL-91	bis(2-Ethylhexyl) phthalate	480.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	2-Chlorophenol	48.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	Benzoic acid	73.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	4-Nitrophenol	48.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	bis(2-Ethylhexyl) phthalate	2700.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	Phenol	58.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	Phenanthrene	48.000	J	0	ug/kg
1726	067155	18 - 19.5	01-JUL-91	4-Chloro-3-methylphenol	58.000	J	0	ug/kg
1820	067503	1.5 - 3	16-OCT-91	Di-n-butyl phthalate	49.000	J	0	ug/kg
1820	067505	6 - 7.5	16-OCT-91	Di-n-octyl phthalate	3000.000	-	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	2-Methylnaphthalene	94.000	J	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	Benzoic acid	62.000	J	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	Naphthalene	52.000	J	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	bis(2-Ethylhexyl) phthalate	120.000	J	0	ug/kg
1846	067706	6 - 7.5	22-FEB-92	Di-n-butyl phthalate	69.000	J	0	ug/kg
1846	067711	13.5 - 15	22-FEB-92	2-Methylnaphthalene	49.000	J	0	ug/kg
1846	067711	13.5 - 15	22-FEB-92	Phenanthrene	43.000	J	0	ug/kg
1846	067711	13.5 - 15	22-FEB-92	Di-n-butyl phthalate	47.000	J	0	ug/kg
1846	067711	13.5 - 15	22-FEB-92	Benzoic acid	68.000	J	0	ug/kg

See footnote at end of table

TABLE G-2D
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
GENERAL CHEMISTRY								
1820	067503	1.5 - 3	16-OCT-91	Total Organic Carbon	117400.000	-	0	mg/kg
1820	067505	6 - 7.5	16-OCT-91	Total Organic Carbon	420620.000	-	0	mg/kg
1846	067706	6 - 7.5	22-FEB-92	Total Organic Carbon	72154.000	-	0	mg/kg
1846	067711	13.5 - 15	22-FEB-92	Total Organic Carbon	63907.000	-	0	mg/kg

[a]Subsurface soil source results are compared to subsurface soil background concentrations.

TABLE G-2E

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND[a] IN SUBSURFACE SOIL SOURCE
PHASE II FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS								
1979	112092	2 - 4	10-MAY-93	Arsenic	23.200	-	9.704	mg/kg
1979	112092	2 - 4	10-MAY-93	Barium	190.000	J	121.064	mg/kg
1979	112092	2 - 4	10-MAY-93	Beryllium	2.400	-	.62	mg/kg
1979	112092	2 - 4	10-MAY-93	Lead	30.300	-	15.78	mg/kg
1979	112092	2 - 4	10-MAY-93	Selenium	2.700	-	0	mg/kg
1979	112092	2 - 4	10-MAY-93	Thallium	1.200	-	.49	mg/kg
1979	112092	2 - 4	10-MAY-93	Copper	48.700	J	20.23	mg/kg
1979	112117	20 - 22	10-MAY-93	Arsenic	87.800	-	9.704	mg/kg
1979	112117	20 - 22	10-MAY-93	Cobalt	16.300	-	15.929	mg/kg
1979	112117	20 - 22	10-MAY-93	Sodium	231.000	J	227.947	mg/kg
1979	112117	20 - 22	10-MAY-93	Selenium	3.200	-	0	mg/kg
1979	112117	20 - 22	10-MAY-93	Zinc	120.000	J	73.158	mg/kg
1979	112117	20 - 22	10-MAY-93	Vanadium	42.600	J	38.088	mg/kg
1979	112117	20 - 22	10-MAY-93	Thallium	3.100	-	.49	mg/kg
1979	112117	20 - 22	10-MAY-93	Lead	68.200	-	15.78	mg/kg
1979	112117	20 - 22	10-MAY-93	Copper	59.800	J	20.23	mg/kg
1979	112117	20 - 22	10-MAY-93	Barium	385.000	J	121.064	mg/kg
1979	112117	20 - 22	10-MAY-93	Beryllium	2.500	-	.62	mg/kg
1980	112130	2 - 4	12-MAY-93	Arsenic	79.300	-	9.704	mg/kg
1980	112130	2 - 4	12-MAY-93	Cobalt	21.800	-	15.929	mg/kg
1980	112130	2 - 4	12-MAY-93	Beryllium	3.900	-	.62	mg/kg
1980	112130	2 - 4	12-MAY-93	Zinc	88.600	J	73.158	mg/kg
1980	112130	2 - 4	12-MAY-93	Vanadium	38.200	J	38.088	mg/kg
1980	112130	2 - 4	12-MAY-93	Thallium	2.500	-	.49	mg/kg
1980	112130	2 - 4	12-MAY-93	Selenium	2.500	J	0	mg/kg
1980	112130	2 - 4	12-MAY-93	Molybdenum	5.200	-	.27	mg/kg
1980	112130	2 - 4	12-MAY-93	Lead	40.500	-	15.78	mg/kg
1980	112130	2 - 4	12-MAY-93	Copper	51.900	-	20.23	mg/kg
1980	112130	2 - 4	12-MAY-93	Barium	216.000	J	121.064	mg/kg
1980	112145	13 - 15	12-MAY-93	Arsenic	75.900	-	9.704	mg/kg
1980	112145	13 - 15	12-MAY-93	Barium	147.000	J	121.064	mg/kg
1980	112145	13 - 15	12-MAY-93	Beryllium	3.900	-	.62	mg/kg
1980	112145	13 - 15	12-MAY-93	Selenium	3.300	J	0	mg/kg

See footnote at end of table

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TABLE G-2E
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS (Continued)								
1980	112145	13 - 15	12-MAY-93	Molybdenum	6.300	-	.27	mg/kg
1980	112145	13 - 15	12-MAY-93	Thallium	3.000	-	.49	mg/kg
1980	112145	13 - 15	12-MAY-93	Lead	42.600	-	15.78	mg/kg
1980	112145	13 - 15	12-MAY-93	Copper	46.800	-	20.23	mg/kg
1981	112161	2 - 4	13-MAY-93	Arsenic	16.900	J	9.704	mg/kg
1981	112161	2 - 4	13-MAY-93	Thallium	.750	-	.49	mg/kg
1981	112161	2 - 4	13-MAY-93	Copper	40.000	J	20.23	mg/kg
1981	112161	2 - 4	13-MAY-93	Cyanide	.340	-	.17	mg/kg
1981	112161	2 - 4	13-MAY-93	Lead	31.900	J	15.78	mg/kg
1981	112161	2 - 4	13-MAY-93	Beryllium	2.300	-	.62	mg/kg
1981	112167	8 - 10	13-MAY-93	Antimony	2.000	J	0	mg/kg
1981	112167	8 - 10	13-MAY-93	Vanadium	40.400	-	38.088	mg/kg
1981	112167	8 - 10	13-MAY-93	Thallium	1.800	-	.49	mg/kg
1981	112167	8 - 10	13-MAY-93	Selenium	11.400	-	0	mg/kg
1981	112167	8 - 10	13-MAY-93	Molybdenum	9.700	-	.27	mg/kg
1981	112167	8 - 10	13-MAY-93	Lead	38.700	J	15.78	mg/kg
1981	112167	8 - 10	13-MAY-93	Copper	50.800	J	20.23	mg/kg
1981	112167	8 - 10	13-MAY-93	Cyanide	.330	-	.17	mg/kg
1981	112167	8 - 10	13-MAY-93	Beryllium	3.800	-	.62	mg/kg
1981	112167	8 - 10	13-MAY-93	Barium	171.000	J	121.064	mg/kg
1981	112167	8 - 10	13-MAY-93	Arsenic	55.600	J	9.704	mg/kg
RADIONUCLIDES								
1979	112092	2 - 4	10-MAY-93	GROSS ALPHA	43.500	J	0	pCi/g
1979	112092	2 - 4	10-MAY-93	GROSS BETA	45.600	J	0	pCi/g
1979	112092	2 - 4	10-MAY-93	U-234	3.080	-	1.034	pCi/g
1979	112092	2 - 4	10-MAY-93	TH-TOTAL	26.700	-	9.47	mg/kg
1979	112092	2 - 4	10-MAY-93	TH-232	2.900	-	1.269	pCi/g
1979	112092	2 - 4	10-MAY-93	TH-230	3.300	-	1.897	pCi/g
1979	112092	2 - 4	10-MAY-93	TH-228	3.200	-	1.341	pCi/g
1979	112092	2 - 4	10-MAY-93	SR-90	.705	-	.56	pCi/g
1979	112092	2 - 4	10-MAY-93	RA-228	2.910	-	1.325	pCi/g
1979	112092	2 - 4	10-MAY-93	RA-226	3.510	-	1.47	pCi/g
1979	112092	2 - 4	10-MAY-93	U-TOTAL	9.340	-	2.54	mg/kg
1979	112092	2 - 4	10-MAY-93	U-238	3.270	-	1.122	pCi/g
1979	112092	2 - 4	10-MAY-93	PU-238	.081	J	0	pCi/g
1979	112092	2 - 4	10-MAY-93	NP-237	.122	N	0	pCi/g
1979	112117	20 - 22	10-MAY-93	GROSS ALPHA	62.000	J	0	pCi/g
1979	112117	20 - 22	10-MAY-93	GROSS BETA	45.300	J	0	pCi/g
1979	112117	20 - 22	10-MAY-93	NP-237	.059	N	0	pCi/g

See footnote at end of table

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TABLE G-2E
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
RADIONUCLIDES (Continued)								
1979	112117	20 - 22	10-MAY-93	PU-239/240	.017	J	0	pCi/g
1979	112117	20 - 22	10-MAY-93	RA-226	4.020	-	1.47	pCi/g
1979	112117	20 - 22	10-MAY-93	PU-238	.062	J	0	pCi/g
1979	112117	20 - 22	10-MAY-93	U-TOTAL	22.100	-	2.54	mg/kg
1979	112117	20 - 22	10-MAY-93	U-238	7.120	-	1.122	pCi/g
1979	112117	20 - 22	10-MAY-93	U-235/236	.326	J	.142	pCi/g
1979	112117	20 - 22	10-MAY-93	U-234	5.020	-	1.034	pCi/g
1979	112117	20 - 22	10-MAY-93	TH-TOTAL	28.900	-	9.47	mg/kg
1979	112117	20 - 22	10-MAY-93	TH-232	3.140	-	1.269	pCi/g
1979	112117	20 - 22	10-MAY-93	TH-230	3.520	-	1.897	pCi/g
1979	112117	20 - 22	10-MAY-93	TH-228	2.880	-	1.341	pCi/g
1979	112117	20 - 22	10-MAY-93	RA-228	3.690	-	1.325	pCi/g
1980	112130	2 - 4	12-MAY-93	GROSS ALPHA	37.000	-	0	pCi/g
1980	112130	2 - 4	12-MAY-93	NP-237	.110	N	0	pCi/g
1980	112130	2 - 4	12-MAY-93	PU-239/240	.048	J	0	pCi/g
1980	112130	2 - 4	12-MAY-93	U-TOTAL	12.900	-	2.54	mg/kg
1980	112130	2 - 4	12-MAY-93	U-238	3.460	-	1.122	pCi/g
1980	112130	2 - 4	12-MAY-93	U-235/236	.190	J	.142	pCi/g
1980	112130	2 - 4	12-MAY-93	U-234	3.580	-	1.034	pCi/g
1980	112130	2 - 4	12-MAY-93	TH-TOTAL	21.700	J	9.47	mg/kg
1980	112130	2 - 4	12-MAY-93	TH-232	2.360	J	1.269	pCi/g
1980	112130	2 - 4	12-MAY-93	TH-230	3.320	J	1.897	pCi/g
1980	112130	2 - 4	12-MAY-93	TH-228	2.440	J	1.341	pCi/g
1980	112130	2 - 4	12-MAY-93	RA-228	2.840	-	1.325	pCi/g
1980	112130	2 - 4	12-MAY-93	RA-226	3.970	-	1.47	pCi/g
1980	112130	2 - 4	12-MAY-93	PU-238	.082	J	0	pCi/g
1980	112130	2 - 4	12-MAY-93	GROSS BETA	30.100	-	0	pCi/g
1980	112145	13 - 15	12-MAY-93	GROSS ALPHA	36.200	-	0	pCi/g
1980	112145	13 - 15	12-MAY-93	U-238	3.940	-	1.122	pCi/g
1980	112145	13 - 15	12-MAY-93	U-235/236	.179	J	.142	pCi/g
1980	112145	13 - 15	12-MAY-93	U-234	3.040	-	1.034	pCi/g
1980	112145	13 - 15	12-MAY-93	TH-TOTAL	18.900	J	9.47	mg/kg
1980	112145	13 - 15	12-MAY-93	TH-232	2.050	J	1.269	pCi/g
1980	112145	13 - 15	12-MAY-93	TH-230	2.400	J	1.897	pCi/g
1980	112145	13 - 15	12-MAY-93	TH-228	1.800	J	1.341	pCi/g
1980	112145	13 - 15	12-MAY-93	RA-228	2.230	-	1.325	pCi/g
1980	112145	13 - 15	12-MAY-93	U-TOTAL	13.000	-	2.54	mg/kg
1980	112145	13 - 15	12-MAY-93	RA-226	2.960	-	1.47	pCi/g
1980	112145	13 - 15	12-MAY-93	PU-238	.123	J	0	pCi/g
1980	112145	13 - 15	12-MAY-93	GROSS BETA	38.700	-	0	pCi/g

See footnote at end of table

TABLE G-2E
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
RADIONUCLIDES (Continued)								
1981	112161	2 - 4	13-MAY-93	GROSS ALPHA	38.400	-	0	pCi/g
1981	112161	2 - 4	13-MAY-93	NP-237	.300	N	0	pCi/g
1981	112161	2 - 4	13-MAY-93	GROSS BETA	36.400	-	0	pCi/g
1981	112161	2 - 4	13-MAY-93	PU-238	.470	-	0	pCi/g
1981	112161	2 - 4	13-MAY-93	RA-226	3.550	-	1.47	pCi/g
1981	112161	2 - 4	13-MAY-93	U-TOTAL	14.100	-	2.54	mg/kg
1981	112161	2 - 4	13-MAY-93	U-238	3.320	-	1.122	pCi/g
1981	112161	2 - 4	13-MAY-93	U-234	3.430	-	1.034	pCi/g
1981	112161	2 - 4	13-MAY-93	TH-TOTAL	28.400	-	9.47	mg/kg
1981	112161	2 - 4	13-MAY-93	TH-232	3.120	-	1.269	pCi/g
1981	112161	2 - 4	13-MAY-93	TH-230	5.520	-	1.897	pCi/g
1981	112161	2 - 4	13-MAY-93	TH-228	3.270	-	1.341	pCi/g
1981	112161	2 - 4	13-MAY-93	SR-90	.650	J	.56	pCi/g
1981	112161	2 - 4	13-MAY-93	RA-228	3.070	-	1.325	pCi/g
1981	112161	2 - 4	13-MAY-93	PU-239/240	.860	-	0	pCi/g
1981	112167	8 - 10	13-MAY-93	GROSS ALPHA	35.700	-	0	pCi/g
1981	112167	8 - 10	13-MAY-93	GROSS BETA	31.800	-	0	pCi/g
1981	112167	8 - 10	13-MAY-93	TH-232	2.170	-	1.269	pCi/g
1981	112167	8 - 10	13-MAY-93	TH-230	5.010	-	1.897	pCi/g
1981	112167	8 - 10	13-MAY-93	U-TOTAL	15.700	-	2.54	mg/kg
1981	112167	8 - 10	13-MAY-93	U-238	3.580	-	1.122	pCi/g
1981	112167	8 - 10	13-MAY-93	U-235/236	.220	-	.142	pCi/g
1981	112167	8 - 10	13-MAY-93	U-234	3.230	-	1.034	pCi/g
1981	112167	8 - 10	13-MAY-93	TH-TOTAL	20.000	-	9.47	mg/kg
1981	112167	8 - 10	13-MAY-93	TH-228	3.120	-	1.341	pCi/g
1981	112167	8 - 10	13-MAY-93	RA-228	2.420	-	1.325	pCi/g
1981	112167	8 - 10	13-MAY-93	RA-226	3.270	-	1.47	pCi/g
1981	112167	8 - 10	13-MAY-93	PU-239/240	.110	J	0	pCi/g
1981	112167	8 - 10	13-MAY-93	PU-238	.320	-	0	pCi/g
1981	112167	8 - 10	13-MAY-93	NP-237	.450	N	0	pCi/g
VOLATILE ORGANICS								
1979	112117	20 - 22	10-MAY-93	Toluene	140.000	J	0	ug/kg
1980	112130	2 - 4	12-MAY-93	1,1,1-Trichloroethane	12.000	J	0	ug/kg
1980	112130	2 - 4	12-MAY-93	Xylenes, Total	53.000	J	0	ug/kg
1980	112130	2 - 4	12-MAY-93	Toluene	12.000	J	0	ug/kg
1980	112145	13 - 15	12-MAY-93	1,1,1-Trichloroethane	600.000	J	0	ug/kg
1980	112145	13 - 15	12-MAY-93	Toluene	440.000	J	0	ug/kg
1981	112161	2 - 4	13-MAY-93	Toluene	130.000	J	0	ug/kg
1981	112167	8 - 10	13-MAY-93	1,1,1-Trichloroethane	740.000	J	0	ug/kg

See footnote at end of table

TABLE G-2E
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
VOLATILE ORGANICS (Continued)								
1981	112167	8 - 10	13-MAY-93	2-Hexanone	10.000	J	0	ug/kg
1981	112167	8 - 10	13-MAY-93	Acetone	37.000	J	0	ug/kg
1981	112167	8 - 10	13-MAY-93	Toluene	76.000	J	0	ug/kg
SEMIVOLATILE ORGANICS								
1979	112092	2 - 4	10-MAY-93	Pentachlorophenol	56.000	J	0	ug/kg
1979	112117	20 - 22	10-MAY-93	Benzoic acid	95.000	J	0	ug/kg
1980	112130	2 - 4	12-MAY-93	bis(2-Ethylhexyl) phthalate	300.000	J	0	ug/kg
1980	112145	13 - 15	12-MAY-93	bis(2-Ethylhexyl) phthalate	780.000	-	0	ug/kg
1981	112161	2 - 4	13-MAY-93	Benzoic acid	2.000	J	0	ug/kg
1981	112167	8 - 10	13-MAY-93	Benzoic acid	100.000	J	0	ug/kg
1981	112167	8 - 10	13-MAY-93	Di-n-butyl phthalate	86.000	J	0	ug/kg
1981	112167	8 - 10	13-MAY-93	bis(2-Ethylhexyl) phthalate	48.000	J	0	ug/kg

[8]Subsurface soil source results are compared to subsurface soil background concentrations.

TABLE G-2F

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND IN SUBSURFACE SOIL NONSOURCE
PHASE I FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER		RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS									
1723	067184	29 - 30.5	12-JUL-91	Antimony		31.100	J	.000	mg/kg
1723	067184	29 - 30.5	12-JUL-91	Beryllium		.750	-	.620	mg/kg
1723	067184	29 - 30.5	12-JUL-91	Cadmium		5.200	J	.910	mg/kg
1723	067184	29 - 30.5	12-JUL-91	Calcium		155000.000	-	150000.000	mg/kg
1723	067184	29 - 30.5	12-JUL-91	Molybdenum		12.500	J	.270	mg/kg
1723	067184	29 - 30.5	12-JUL-91	Silver		18.500	-	.000	mg/kg
1723	067184	29 - 30.5	12-JUL-91	Sodium		247.000	-	227.947	mg/kg
1723	067184	29 - 30.5	12-JUL-91	Copper		21.300	-	20.230	mg/kg
1723	067184	29 - 30.5	12-JUL-91	Chromium		26.800	-	20.953	mg/kg
1724	067218	41.5 - 43	16-JUL-91	Antimony		9.000	J	.000	mg/kg
1724	067218	41.5 - 43	16-JUL-91	Molybdenum		13.200	-	.270	mg/kg
1724	067218	41.5 - 43	16-JUL-91	Beryllium		.740	-	.620	mg/kg
1724	067218	41.5 - 43	16-JUL-91	Silver		6.600	-	.000	mg/kg
1724	067218	41.5 - 43	16-JUL-91	Selenium		2.300	-	.000	mg/kg
1724	067218	41.5 - 43	16-JUL-91	Cadmium		1.300	J	.910	mg/kg
1820	067506	9.5 - 12	16-OCT-91	Antimony		21.700	J	.000	mg/kg
1820	067506	9.5 - 12	16-OCT-91	Cadmium		5.100	J	.910	mg/kg
1820	067506	9.5 - 12	16-OCT-91	Silver		11.900	-	.000	mg/kg
1820	067506	9.5 - 12	16-OCT-91	Molybdenum		8.700	J	.270	mg/kg
RADIONUCLIDES									
1045	007207	7.5 - 9	07-OCT-87	SR-90		1.200	-	.560	pCi/g
1048	007217	1.5 - 3	13-OCT-87	TH-228		1.600	-	1.341	pCi/g
1048	007217	1.5 - 3	13-OCT-87	TH-230		1.900	-	1.897	pCi/g
1048	007217	1.5 - 3	13-OCT-87	U-238		2.400	J	1.122	pCi/g
1048	007220	1.5 - 3	13-OCT-87	TH-230	DUP	2.200	-	1.897	pCi/g
1048	007220	1.5 - 3	13-OCT-87	U-234	DUP	1.400	J	1.034	pCi/g
1048	007220	1.5 - 3	13-OCT-87	U-238	DUP	2.800	J	1.122	pCi/g
1406	098010	0 - .5	16-MAY-89	U-TOTAL		7.000	-	2.540	mg/kg
1406	098011	1.5 - 2	16-MAY-89	U-TOTAL		4.000	-	2.540	mg/kg
1406	098014	3.5 - 4	16-MAY-89	U-TOTAL		7.000	-	2.540	mg/kg
1406	098017	6 - 6.5	16-MAY-89	U-TOTAL		8.000	-	2.540	mg/kg
1406	098024	13.5 - 14	16-MAY-89	U-TOTAL		7.000	-	2.540	mg/kg
1406	098028	16.5 - 17	16-MAY-89	U-TOTAL		4.000	-	2.540	mg/kg
1723	067182	26 - 27.5	12-JUL-91	SR-90		.700	J	.560	pCi/g

TABLE G-2F
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
RADIONUCLIDES (Continued)								
1723	067182	26 - 27.5	12-JUL-91	TH-228	1.760	J	1.341	pCi/g
1723	067182	26 - 27.5	12-JUL-91	U-TOTAL	2.720	J	2.540	mg/kg
1724	067217	40 - 41.5	16-JUL-91	SR-90	3.610	-	.560	pCi/g
1724	067217	40 - 41.5	16-JUL-91	U-TOTAL	7.170	J	2.540	mg/kg
1724	067217	40 - 41.5	16-JUL-91	U-234	1.270	J	1.034	pCi/g
1724	067217	40 - 41.5	16-JUL-91	U-238	2.040	-	1.122	pCi/g
1726	067156	19.5 - 21	01-JUL-91	SR-90	1.210	J	.560	pCi/g
1726	067156	19.5 - 21	01-JUL-91	U-TOTAL	3.080	J	2.540	mg/kg
1726	067156	19.5 - 21	01-JUL-91	TH-228	2.090	J	1.341	pCi/g
1726	067156	19.5 - 21	01-JUL-91	TH-230	1.970	J	1.897	pCi/g
3045	032609	105 - 106.5	09-MAY-90	U-TOTAL	2.850	J	2.540	mg/kg
VOLATILE ORGANICS								
1723	067184	29 - 30.5	12-JUL-91	1,1,1-Trichloroethane	25.000	-	.000	ug/kg
1723	067184	29 - 30.5	12-JUL-91	1,1-Dichloroethene	2.000	J	.000	ug/kg
1724	067218	41.5 - 43	16-JUL-91	2-Butanone	3.000	J	.000	ug/kg
SEMIVOLATIVE ORGANICS								
1723	067184	29 - 30.5	12-JUL-91	bis(2-Ethylhexyl) phthalate	42.000	J	.000	ug/kg
GENERAL CHEMISTRY								
1820	067506	9.5 - 12	16-OCT-91	Total Organic Carbon	12331.000	-	.000	mg/kg

TABLE G-2G

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND IN SUBSURFACE SOIL NONSOURCE
PHASE II FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS								
1979	112123	25.5 - 27.5	11-MAY-93	Arsenic	11.000	-	9.704	mg/kg
1979	112123	25.5 - 27.5	11-MAY-93	Cadmium	.980	-	.910	mg/kg
1979	112123	25.5 - 27.5	11-MAY-93	Potassium	2030.000	J	2007.519	mg/kg
1979	112123	25.5 - 27.5	11-MAY-93	Selenium	3.700	-	.000	mg/kg
1979	112123	25.5 - 27.5	11-MAY-93	Lead	18.900	-	15.780	mg/kg
1979	112123	25.5 - 27.5	11-MAY-93	Silicon	1210.000	J	1069.496	mg/kg
1979	112126	29.5 - 31.5	11-MAY-93	Beryllium	.640	-	.620	mg/kg
1979	112126	29.5 - 31.5	11-MAY-93	Cadmium	.920	-	.910	mg/kg
1980	112153	20 - 22	12-MAY-93	Beryllium	1.400	-	.620	mg/kg
1980	112153	20 - 22	12-MAY-93	Cadmium	1.200	-	.910	mg/kg
1980	112153	20 - 22	12-MAY-93	Copper	22.300	-	20.230	mg/kg
1980	112153	20 - 22	12-MAY-93	Molybdenum	2.000	-	.270	mg/kg
1980	112157	24 - 26	13-MAY-92	Arsenic	10.600	-	9.704	mg/kg
1980	112157	24 - 26	13-MAY-92	Molybdenum	1.300	-	.270	mg/kg
1980	112157	24 - 26	13-MAY-92	Beryllium	1.400	-	.620	mg/kg
1981	112180	17 - 19	14-MAY-93	Aluminum	22400.000	J	16277.291	mg/kg
1981	112180	17 - 19	14-MAY-93	Beryllium	1.100	-	.620	mg/kg
1981	112180	17 - 19	14-MAY-93	Barium	144.000	J	121.064	mg/kg
1981	112180	17 - 19	14-MAY-93	Arsenic	18.700	J	9.704	mg/kg
1981	112180	17 - 19	14-MAY-93	Vanadium	54.800	-	38.088	mg/kg
1981	112180	17 - 19	14-MAY-93	Silver	10.700	J	.000	mg/kg
1981	112180	17 - 19	14-MAY-93	Potassium	2100.000	J	2007.519	mg/kg
1981	112180	17 - 19	14-MAY-93	Molybdenum	9.600	-	.270	mg/kg
1981	112180	17 - 19	14-MAY-93	Manganese	1070.000	-	1045.407	mg/kg
1981	112180	17 - 19	14-MAY-93	Lead	31.100	J	15.780	mg/kg
1981	112180	17 - 19	14-MAY-93	Iron	33600.000	J	31188.164	mg/kg
1981	112180	17 - 19	14-MAY-93	Copper	22.900	J	20.230	mg/kg
1981	112180	17 - 19	14-MAY-93	Chromium	23.200	J	20.953	mg/kg
1981	112181	19 - 21	14-MAY-93	Aluminum	25500.000	J	16277.291	mg/kg
1981	112181	19 - 21	14-MAY-93	Beryllium	1.100	-	.620	mg/kg
1981	112181	19 - 21	14-MAY-93	Barium	195.000	J	121.064	mg/kg
1981	112181	19 - 21	14-MAY-93	Copper	32.300	J	20.230	mg/kg
1981	112181	19 - 21	14-MAY-93	Chromium	26.100	J	20.953	mg/kg
1981	112181	19 - 21	14-MAY-93	Arsenic	14.000	J	9.704	mg/kg
1981	112181	19 - 21	14-MAY-93	Zinc	89.900	J	73.158	mg/kg

TABLE G-2G
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS (Continued)								
1981	112181	19 - 21	14-MAY-93	Vanadium	64.500	-	38.088	mg/kg
1981	112181	19 - 21	14-MAY-93	Silver	14.100	J	.000	mg/kg
1981	112181	19 - 21	14-MAY-93	Potassium	2380.000	-	2007.519	mg/kg
1981	112181	19 - 21	14-MAY-93	Nickel	36.700	J	34.747	mg/kg
1981	112181	19 - 21	14-MAY-93	Molybdenum	13.500	-	.270	mg/kg
1981	112181	19 - 21	14-MAY-93	Manganese	1900.000	-	1045.407	mg/kg
1981	112181	19 - 21	14-MAY-93	Lead	21.200	J	15.780	mg/kg
1981	112181	19 - 21	14-MAY-93	Iron	44800.000	J	31188.164	mg/kg
RADIONUCLIDES								
1979	112123	25.5 - 27.5	11-MAY-93	GROSS ALPHA	20.300	J	.000	pCi/g
1979	112123	25.5 - 27.5	11-MAY-93	GROSS BETA	30.400	J	.000	pCi/g
1979	112123	25.5 - 27.5	11-MAY-93	PU-238	.085	J	.000	pCi/g
1979	112123	25.5 - 27.5	11-MAY-93	U-TOTAL	4.490	-	2.540	mg/kg
1979	112123	25.5 - 27.5	11-MAY-93	PU-239/240	.027	J	.000	pCi/g
1979	112123	25.5 - 27.5	11-MAY-93	NP-237	.146	N	.000	pCi/g
1979	112126	29.5 - 31.5	11-MAY-93	GROSS ALPHA	15.900	J	.000	pCi/g
1979	112126	29.5 - 31.5	11-MAY-93	U-TOTAL	4.270	-	2.540	mg/kg
1979	112126	29.5 - 31.5	11-MAY-93	PU-239/240	.060	J	.000	pCi/g
1979	112126	29.5 - 31.5	11-MAY-93	GROSS BETA	21.300	J	.000	pCi/g
1979	112126	29.5 - 31.5	11-MAY-93	NP-237	.190	N	.000	pCi/g
1980	112153	20 - 22	12-MAY-93	GROSS ALPHA	9.430	-	.000	pCi/g
1980	112153	20 - 22	12-MAY-93	NP-237	.152	N	.000	pCi/g
1980	112153	20 - 22	12-MAY-93	GROSS BETA	33.500	-	.000	pCi/g
1980	112153	20 - 22	12-MAY-93	U-TOTAL	3.340	J	2.540	mg/kg
1980	112153	20 - 22	12-MAY-93	U-238	1.190	-	1.122	pCi/g
1980	112153	20 - 22	12-MAY-93	PU-238	.036	J	.000	pCi/g
1980	112157	24 - 26	13-MAY-92	GROSS ALPHA	19.700	-	.000	pCi/g
1980	112157	24 - 26	13-MAY-92	NP-237	.052	N	.000	pCi/g
1980	112157	24 - 26	13-MAY-92	U-TOTAL	4.534	-	2.540	mg/kg
1980	112157	24 - 26	13-MAY-92	U-238	1.210	-	1.122	pCi/g
1980	112157	24 - 26	13-MAY-92	PU-238	.031	J	.000	pCi/g
1980	112157	24 - 26	13-MAY-92	GROSS BETA	22.300	-	.000	pCi/g
1981	112180	17 - 19	14-MAY-93	GROSS ALPHA	11.800	-	.000	pCi/g
1981	112180	17 - 19	14-MAY-93	U-TOTAL	4.150	-	2.540	mg/kg
1981	112180	17 - 19	14-MAY-93	U-238	1.200	-	1.122	pCi/g
1981	112180	17 - 19	14-MAY-93	TH-TOTAL	12.400	-	9.470	mg/kg
1981	112180	17 - 19	14-MAY-93	TH-232	1.350	-	1.269	pCi/g
1981	112180	17 - 19	14-MAY-93	TH-230	3.600	-	1.897	pCi/g
1981	112180	17 - 19	14-MAY-93	TH-228	1.370	-	1.341	pCi/g
1981	112180	17 - 19	14-MAY-93	RA-228	1.330	-	1.325	pCi/g
1981	112180	17 - 19	14-MAY-93	RA-226	1.730	-	1.470	pCi/g
1981	112180	17 - 19	14-MAY-93	NP-237	.400	N	.000	pCi/g

TABLE G-2G
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
RADIONUCLIDES (Continued)								
1981	112180	17 - 19	14-MAY-93	GROSS BETA	22.700	-	.000	pCi/g
1981	112181	19 - 21	14-MAY-93	GROSS ALPHA	16.200	-	.000	pCi/g
1981	112181	19 - 21	14-MAY-93	GROSS BETA	20.700	-	.000	pCi/g
1981	112181	19 - 21	14-MAY-93	U-TOTAL	3.300	-	2.540	mg/kg
1981	112181	19 - 21	14-MAY-93	TH-230	2.670	-	1.897	pCi/g
1981	112181	19 - 21	14-MAY-93	NP-237	.120	N	.000	pCi/g
VOLATILE ORGANICS								
1980	112153	20 - 22	12-MAY-93	1,1,1-Trichloroethane	4.000	J	.000	ug/kg
1980	112153	20 - 22	12-MAY-93	Toluene	2.000	J	.000	ug/kg
1980	112157	24 - 26	13-MAY-92	1,1,1-Trichloroethane	5600.000	-	.000	ug/kg
1981	112180	17 - 19	14-MAY-93	Methylene chloride	25.000	-	.000	ug/kg
SEMIVOLATILE ORGANICS								
1979	112123	25.5 - 27.5	11-MAY-93	Di-n-octyl phthalate	46.000	J	.000	ug/kg
1980	112153	20 - 22	12-MAY-93	bis(2-Ethylhexyl) phthalate	4200.000	-	.000	ug/kg
1980	112157	24 - 26	13-MAY-92	bis(2-Ethylhexyl) phthalate	98.000	J	.000	ug/kg
1981	112181	19 - 21	14-MAY-93	Benzoic acid	56.000	J	.000	ug/kg

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TABLE G-2H

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND[a] IN SURFACE WATER
PHASE I FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	FILTER FLAG	DUPS	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS										
ASIT-004	001128	-	21-MAR-89	Barium	UNKN		.043	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Calcium	UNKN		73.000	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Chromium	UNKN		.016	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Iron	UNKN		.262	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Magnesium	UNKN		155.000	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Manganese	UNKN		.158	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Mercury	UNKN		.001	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Molybdenum	UNKN		.006	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Nickel	UNKN		.015	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Potassium	UNKN		2.420	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Sodium	UNKN		87.800	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Arsenic	UNKN		.046	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Barium	UNKN		.063	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Calcium	UNKN		80.800	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Chromium	UNKN		.022	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Iron	UNKN		.048	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Lead	UNKN		.036	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Magnesium	UNKN		268.000	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Manganese	UNKN		.002	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Mercury	UNKN		.000	J	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Molybdenum	UNKN		.018	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Nickel	UNKN		.012	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Potassium	UNKN		2.420	J	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Sodium	UNKN		69.400	-	.000	mg/L
RADIONUCLIDES										
ASIT-004	001127	-	21-MAR-89	U-TOTAL	FLTR		318.000	-	.000	ug/L
ASIT-004	001128	-	21-MAR-89	U-TOTAL	UNKN		1692.000	-	.000	ug/L
ASIT-004	001222	-	07-NOV-89	TH-TOTAL	UNKN		3.930	-	.000	ug/L
ASIT-004	001222	-	07-NOV-89	U-234	UNKN		26.000	-	.000	pCi/L
ASIT-004	001222	-	07-NOV-89	U-235/236	N/A		1.940	-	.000	pCi/L
ASIT-004	001222	-	07-NOV-89	U-238	UNKN		43.300	-	.000	pCi/L
ASIT-004	001222	-	07-NOV-89	U-TOTAL	UNKN		107.000	-	.000	ug/L
ASIT-004	001223	-	07-NOV-89	U-234	UNKN	DUP	28.900	-	.000	pCi/L
ASIT-004	001223	-	07-NOV-89	U-235/236	UNKN	DUP	1.710	-	.000	pCi/L

See footnotes at end of table

TABLE G-2H
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	FILTER FLAG	DUPS	RESULTS	VAL QUAL	BACKGROUND	UNITS
RADIONUCLIDES (Continued)										
ASIT-004	001223	-	07-NOV-89	U-238	N/A	DUP	45.900	-	.000	pCi/L
ASIT-004	001223	-	07-NOV-89	U-TOTAL	UNKN	DUP	98.000	-	.000	ug/L
ASIT-005	001129	-	21-MAR-89	U-TOTAL	FLTR		1829.000	-	.000	ug/L
ASIT-005	001130	-	21-MAR-89	U-TOTAL	UNKN		499.000	-	.000	ug/L
ASIT-005	001224	-	07-NOV-89	U-234	UNKN		89.000	J	.000	pCi/L
ASIT-005	001224	-	07-NOV-89	U-235/236	UNKN		4.980	-	.000	pCi/L
ASIT-005	001224	-	07-NOV-89	U-238	UNKN		102.000	-	.000	pCi/L
ASIT-005	001224	-	07-NOV-89	U-TOTAL	UNKN		274.000	-	.000	ug/L
ASIT-005	001225	-	07-NOV-89	NP-237	UNKN	DUP	4.120	J	.000	pCi/L
ASIT-005	001225	-	07-NOV-89	U-234	UNKN	DUP	99.000	J	.000	pCi/L
ASIT-005	001225	-	07-NOV-89	U-235/236	UNKN	DUP	4.940	J	.000	pCi/L
ASIT-005	001225	-	07-NOV-89	U-238	N/A	DUP	111.000	J	.000	pCi/L
ASIT-005	001225	-	07-NOV-89	U-TOTAL	UNKN	DUP	260.000	-	.000	ug/L
ASIT-006	001137	-	30-MAR-89	U-TOTAL	UNFL		14.000	-	.000	ug/L
ASIT-006	001138	-	30-MAR-89	U-TOTAL	FLTR		14.000	-	.000	ug/L
ASIT-007	001139	-	30-MAR-89	U-TOTAL	UNFL		24.000	-	.000	ug/L
ASIT-007	001169	-	30-MAR-89	U-TOTAL	FLTR		24.000	-	.000	ug/L
GENERAL CHEMISTRY										
ASIT-004	001128	-	21-MAR-89	Ammonia	UNFL		.188	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Chloride	UNFL		8.000	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Fluoride	UNFL		.680	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Nitrate	UNFL		.120	J	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Phosphorus	UNFL		.827	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Sulfate	UNFL		253.000	J	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Total Kjeldahl Nitrogen	UNFL		1.910	-	.000	mg/L
ASIT-004	001128	-	21-MAR-89	Total Organic Nitrogen	UNFL		1.720	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Ammonia	UNFL		.152	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Chloride	UNFL		15.000	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Fluoride	UNFL		.800	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Nitrate	UNFL		.440	J	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Phosphorus	UNFL		1.100	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Sulfate	UNFL		327.000	J	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Total Kjeldahl Nitrogen	UNFL		2.030	-	.000	mg/L
ASIT-005	001130	-	21-MAR-89	Total Organic Nitrogen	UNFL		1.880	-	.000	mg/L

[a]Zero background concentration has been used for surface water. Background data for surface water is not available at this time.
FLTR = Filtered sample; filtered status identified on Request for Analysis/Chain of Custody
UNFL = Unfiltered sample; filtered status identified on Request for Analysis/Chain of Custody
UNKN = Unknown; filtered status could not be determined.
DUP = Duplicate Sample
N/A = Not Applicable

TABLE G-2I

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND[a] IN SURFACE WATER
PHASE II FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	FILTER FLAG	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS									
AFP-SW-02	112243	-	13-MAY-93	Arsenic	UNFL	.005	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Barium	UNFL	.027	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Calcium	UNFL	43.300	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Iron	UNFL	.082	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Magnesium	UNFL	6.910	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Manganese	UNFL	.005	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Potassium	UNFL	4.650	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Selenium	UNFL	.001	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Silicon	UNFL	4.120	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Sodium	UNFL	.795	-	.000	mg/L
RADIONUCLIDES									
AFP-SW-02	112243	-	13-MAY-93	GROSS ALPHA	UNFL	3.900	J	.000	pCi/L
AFP-SW-02	112243	-	13-MAY-93	GROSS BETA	UNFL	6.220	J	.000	pCi/L
AFP-SW-02	112243	-	13-MAY-93	NP-237	UNFL	.264	N	.000	pCi/L
AFP-SW-02	112243	-	13-MAY-93	PU-238	UNFL	.108	J	.000	pCi/L
AFP-SW-02	112243	-	13-MAY-93	RA-228	UNFL	1.700	J	.000	pCi/L
AFP-SW-02	112243	-	13-MAY-93	U-234	UNFL	1.500	-	.000	pCi/L
AFP-SW-02	112243	-	13-MAY-93	U-235/236	UNFL	.102	J	.000	pCi/L
AFP-SW-02	112243	-	13-MAY-93	U-238	UNFL	1.690	-	.000	pCi/L
AFP-SW-02	112243	-	13-MAY-93	U-TOTAL	UNFL	4.180	-	.000	ug/L
GENERAL CHEMISTRY									
AFP-SW-02	112243	-	13-MAY-93	Ammonia	UNFL	.150	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Chloride	UNFL	1.500	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Fluoride	UNFL	.200	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Sulfate	UNFL	30.400	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Total Kjeldahl Nitrogen	UNFL	.500	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Total Organic Carbon	UNFL	9.060	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Total Organic Halides	UNFL	.021	-	.000	mg/L
AFP-SW-02	112243	-	13-MAY-93	Total Organic Nitrogen	UNFL	.850	-	.000	mg/L

[a]Zero background concentration has been used for surface water. Background data for surface water is not available at this time.

TABLE G-2J

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND IN SEDIMENT
PHASE I FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS								
ASIT-004	009044	-	27-JUN-88	U-TOTAL	38.900	J	3.240	mg/kg
ASIT-005	009045	-	27-JUN-88	U-TOTAL	51.800	J	3.240	mg/kg
ASIT-006	009046	-	27-JUN-88	U-TOTAL	22.900	J	3.240	mg/kg
ASIT-007	009047	-	28-JUN-88	U-TOTAL	4.530	J	3.240	mg/kg
GENERAL CHEMISTRY								
ASIT-007	009047	-	28-JUN-88	Ammonia	50.400	-	.000	mg/kg
ASIT-007	009047	-	28-JUN-88	Chloride	230.000	-	.000	mg/kg
ASIT-007	009047	-	28-JUN-88	Fluoride	7.580	-	.000	mg/kg
ASIT-007	009047	-	28-JUN-88	Nitrate	2.760	J	.000	mg/kg
ASIT-007	009047	-	28-JUN-88	Phosphorus	37.400	-	.000	mg/kg
ASIT-007	009047	-	28-JUN-88	Sulfate	697.000	-	.000	mg/kg
ASIT-007	009047	-	28-JUN-88	Total Organic Nitrogen	355.000	-	.000	mg/kg

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TABLE G-2K

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND IN SEDIMENT
PHASE II FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS								
AFP-SD-06	112246	0 - .5	13-MAY-93	Beryllium	1.400	-	.600	mg/kg
AFP-SD-06	112246	0 - .5	13-MAY-93	Calcium	49200.000	-	5296.781	mg/kg
AFP-SD-06	112246	0 - .5	13-MAY-93	Copper	22.200	-	15.700	mg/kg
AFP-SD-06	112246	0 - .5	13-MAY-93	Molybdenum	1.700	-	.000	mg/kg
AFP-SD-06	112246	0 - .5	13-MAY-93	Sodium	140.000	J	55.145	mg/kg
AFP-SD-06	112246	0 - .5	13-MAY-93	Magnesium	16100.000	-	1460.000	mg/kg
RADIONUCLIDES								
AFP-SD-06	112246	0 - .5	13-MAY-93	GROSS ALPHA	20.700	-	.000	pCi/g
AFP-SD-06	112246	0 - .5	13-MAY-93	PU-238	.024	J	.000	pCi/g
AFP-SD-06	112246	0 - .5	13-MAY-93	U-234	2.770	-	1.319	pCi/g
AFP-SD-06	112246	0 - .5	13-MAY-93	PU-239/240	.049	J	.000	pCi/g
AFP-SD-06	112246	0 - .5	13-MAY-93	U-TOTAL	11.300	-	3.240	mg/kg
AFP-SD-06	112246	0 - .5	13-MAY-93	U-238	2.900	-	1.270	pCi/g
AFP-SD-06	112246	0 - .5	13-MAY-93	NP-237	.038	N	.000	pCi/g
AFP-SD-06	112246	0 - .5	13-MAY-93	GROSS BETA	31.500	-	.000	pCi/g
SEMIVOLATILE ORGANICS								
AFP-SD-06	112246	0 - .5	13-MAY-93	4-Methylphenol	1700.000	-	.000	ug/kg
AFP-SD-06	112246	0 - .5	13-MAY-93	Phenol	230.000	J	.000	ug/kg
AFP-SD-06	112246	0 - .5	13-MAY-93	Benzoic acid	680.000	J	.000	ug/kg
AFP-SD-06	112246	0 - .5	13-MAY-93	Di-n-butyl phthalate	64.000	J	.000	ug/kg

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TABLE G-2L

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND[a] IN GROUNDWATER - 1000 SERIES
PHASE I FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	FILTER FLAG	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS									
1048	003132	-	27-APR-88	Lead	FLTR	.060	-	.050	mg/L
1048	003132	-	27-APR-88	Magnesium	FLTR	80.200	-	49.627	mg/L
1048	003132	-	27-APR-88	Manganese	FLTR	.187	-	.165	mg/L
1048	003368	-	24-JUL-88	Magnesium	*F	63.000	-	49.627	mg/L
RADIONUCLIDES									
1045	066828	-	13-DEC-89	U-238	UNKN	2.150	-	1.070	pCi/L
1045	066828	-	13-DEC-89	U-TOTAL	UNKN	10.100	-	4.000	ug/L
1048	003368	-	24-JUL-88	U-234	*U	5.400	J	1.900	pCi/L
1048	003368	-	24-JUL-88	U-238	*U	5.300	J	1.070	pCi/L
1048	003368	-	24-JUL-88	U-TOTAL	*U	17.000	-	4.000	ug/L
1048	003647	-	23-OCT-88	TH-TOTAL	*U	5.000	J	3.000	ug/L
1048	003647	-	23-OCT-88	U-234	*U	4.500	J	1.900	pCi/L
1048	003647	-	23-OCT-88	U-238	*U	4.000	J	1.070	pCi/L
1048	003647	-	23-OCT-88	U-TOTAL	*U	15.000	-	4.000	ug/L
1048	003856	-	22-JAN-89	TH-TOTAL	UNKN	4.000	-	3.000	ug/L
1048	003856	-	22-JAN-89	U-234	UNKN	6.600	-	1.900	pCi/L
1048	003856	-	22-JAN-89	U-238	UNKN	6.900	-	1.070	pCi/L
1048	003856	-	22-JAN-89	U-TOTAL	UNKN	21.000	-	4.000	ug/L
1048	066831	-	16-DEC-89	TH-228	UNKN	2.930	-	1.040	pCi/L
1048	066831	-	16-DEC-89	TH-230	UNKN	2.780	-	2.000	pCi/L
1048	066831	-	16-DEC-89	U-234	UNKN	14.200	-	1.900	pCi/L
1048	066831	-	16-DEC-89	U-238	UNKN	15.000	-	1.070	pCi/L
1048	066831	-	16-DEC-89	U-TOTAL	UNKN	52.600	-	4.000	ug/L
GENERAL CHEMISTRY									
1048	003132	-	27-APR-88	Phosphorus	UNFL	.440	-	.223	mg/L
1048	003132	-	27-APR-88	Total Organic Nitrogen	UNFL	.100	J	.000	mg/L
1048	003647	-	23-OCT-88	Total Organic Nitrogen	N/A	.360	-	.000	mg/L

See footnotes at end of table

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TABLE G-2L
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	FILTER FLAG	RESULTS	VAL QUAL	BACKGROUND	UNITS
GENERAL CHEMISTRY (Continued)									
1048	003856	-	22-JAN-89	Phosphorus	UNFL	.600	-	.223	mg/L
1048	003856	-	22-JAN-89	Total Kjeldahl Nitrogen	UNFL	.500	-	.000	mg/L
1048	003856	-	22-JAN-89	Total Organic Nitrogen	UNFL	.500	-	.000	mg/L

[a]Background concentrations established for metals are filtered while all other background parameters are unfiltered

FLTR = Filtered sample; filtered status identified on Request for Analysis/Chain of Custody

UNFL = Unfiltered sample; filtered status identified on Request for Analysis/Chain of Custody

UNKN = Unknown; filtered status could not be determined.

*F = Filtered sample; filtered status not identified on Request for Analysis/Chain of Custody; determination based upon other field investigation documentation.

*U = Unfiltered sample; filtered status not identified on Request for Analysis/Chain of Custody; determination based upon other field investigation documentation.

N/A = Not applicable

TABLE G-2M

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND[a] GROUNDWATER - 2000 SERIES
PHASE I FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	FILTER FLAG	DUPS	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS										
2045	004158	-	25-JUL-89	Aluminum	FLTR		.219	-	.184	mg/L
2049	004164	-	30-JUL-89	Chromium	FLTR		.044	-	.042	mg/L
2049	004222	-	03-APR-90	Potassium	FLTR		3.450	J	3.087	mg/L
RADIONUCLIDES										
2045	003993	-	23-JAN-89	U-234	*U		78.900	-	1.900	pCi/L
2045	003993	-	23-JAN-89	U-235/236	*U		3.500	-	.000	pCi/L
2045	003993	-	23-JAN-89	U-238	*U		92.300	-	.900	pCi/L
2045	003993	-	23-JAN-89	U-TOTAL	*U		283.000	-	2.920	ug/L
2045	004092	-	01-MAY-89	U-234	*U		74.700	-	1.900	pCi/L
2045	004092	-	01-MAY-89	U-235/236	*U		4.400	-	.000	pCi/L
2045	004092	-	01-MAY-89	U-238	*U		85.500	-	.900	pCi/L
2045	004092	-	01-MAY-89	U-TOTAL	*U		265.000	-	2.920	ug/L
2045	004129	-	01-MAY-89	U-234	*U	DUP	77.600	-	1.900	pCi/L
2045	004129	-	01-MAY-89	U-235/236	*U	DUP	3.200	-	.000	pCi/L
2045	004129	-	01-MAY-89	U-238	*U	DUP	87.500	-	.900	pCi/L
2045	004129	-	01-MAY-89	U-TOTAL	*U	DUP	291.000	-	2.920	ug/L
2045	004158	-	25-JUL-89	U-234	*U		104.000	-	1.900	pCi/L
2045	004158	-	25-JUL-89	U-235/236	*U		4.700	-	.000	pCi/L
2045	004158	-	25-JUL-89	U-238	*U		119.000	-	.900	pCi/L
2045	004158	-	25-JUL-89	U-TOTAL	*U		341.000	-	2.920	ug/L
2045	004218	-	01-APR-90	U-234	*U		97.000	J	1.900	pCi/L
2045	004218	-	01-APR-90	U-235/236	*U		3.560	J	.000	pCi/L
2045	004218	-	01-APR-90	U-238	*U		104.000	J	.900	pCi/L
2045	004218	-	01-APR-90	U-TOTAL	*U		462.000	-	2.920	ug/L
2045	004266	-	01-APR-90	TH-232	*U		1.050	-	.000	pCi/L
2045	004266	-	01-APR-90	TH-TOTAL	*U		9.470	-	2.000	ug/L
2045	004266	-	01-APR-90	U-234	*U		95.300	J	1.900	pCi/L
2045	004266	-	01-APR-90	U-235/236	*U		4.550	J	.000	pCi/L
2045	004266	-	01-APR-90	U-238	*U		103.000	J	.900	pCi/L
2045	004266	-	01-APR-90	U-TOTAL	*U		461.000	-	2.920	ug/L

See footnotes at end of table

TABLE G-2M
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	FILTER FLAG	DUPS	RESULTS	VAL QUAL	BACKGROUND	UNITS
RADIONUCLIDES (Continued)										
2048	004221	-	01-APR-90	U-234	*U		3.400	J	1.900	pCi/L
2048	004221	-	01-APR-90	U-238	*U		3.020	J	.900	pCi/L
2049	003085	-	08-APR-88	TH-232	*U		1.600	J	.000	pCi/L
2049	003085	-	08-APR-88	U-234	*U		50.800	J	1.900	pCi/L
2049	003085	-	08-APR-88	U-235/236	*U		2.300	J	.000	pCi/L
2049	003085	-	08-APR-88	U-238	*U		51.400	J	.900	pCi/L
2049	003085	-	08-APR-88	U-TOTAL	*U		130.000	J	2.920	ug/L
2049	003436	-	03-AUG-88	U-234	*U		3.100	J	1.900	pCi/L
2049	003436	-	03-AUG-88	U-238	*U		2.800	J	.900	pCi/L
2049	003436	-	03-AUG-88	U-TOTAL	*U		8.000	-	2.920	ug/L
2049	003470	-	06-DEC-88	U-TOTAL	*U	DUP	3.000	-	2.920	ug/L
2049	003885	-	07-FEB-89	U-234	*U		2.300	-	1.900	pCi/L
2049	003885	-	07-FEB-89	U-238	*U		2.100	-	.900	pCi/L
2049	003885	-	07-FEB-89	U-TOTAL	*U		6.000	J	2.920	ug/L
2049	004134	-	10-MAY-89	U-234	UNKN		42.900	-	1.900	pCi/L
2049	004134	-	10-MAY-89	U-235/236	UNKN		1.800	-	.000	pCi/L
2049	004134	-	10-MAY-89	U-238	N/A		47.500	-	.900	pCi/L
2049	004134	-	10-MAY-89	U-TOTAL	UNKN		175.000	-	2.920	ug/L
2049	004164	-	30-JUL-89	U-234	*U		83.200	-	1.900	pCi/L
2049	004164	-	30-JUL-89	U-235/236	*U		1.400	-	.000	pCi/L
2049	004164	-	30-JUL-89	U-238	*U		89.900	-	.900	pCi/L
2049	004164	-	30-JUL-89	U-TOTAL	*U		147.000	-	2.920	ug/L
2049	004222	-	03-APR-90	U-TOTAL	*U		43.300	-	2.920	ug/L
GENERAL CHEMISTRY										
2045	003993	-	23-JAN-89	Total Kjeldahl Nitrogen	UNFL		.273	J	.000	mg/L
2045	004092	-	01-MAY-89	Phosphorus	UNFL		1.140	-	.693	mg/L
2045	004092	-	01-MAY-89	Total Kjeldahl Nitrogen	UNFL		.600	-	.000	mg/L
2045	004129	-	01-MAY-89	Total Kjeldahl Nitrogen	UNFL	DUP	.590	-	.000	mg/L
2045	004158	-	25-JUL-89	Total Kjeldahl Nitrogen	UNFL		.231	-	.000	mg/L
2048	003994	-	09-FEB-89	Phosphorus	UNFL		.960	J	.693	mg/L
2048	003994	-	09-FEB-89	Total Kjeldahl Nitrogen	UNFL		.441	J	.000	mg/L
2048	004100	-	02-MAY-89	Phosphorus	UNFL		1.291	-	.693	mg/L
2048	004100	-	02-MAY-89	Total Kjeldahl Nitrogen	UNFL		.725	-	.000	mg/L
2048	004100	-	02-MAY-89	Total Organic Nitrogen	UNFL		.725	-	.652	mg/L
2049	003470	-	06-DEC-88	Phosphorus	UNFL	DUP	1.420	-	.693	mg/L
2049	003687	-	06-DEC-88	Phosphorus	UNFL		.907	-	.693	mg/L
2049	003885	-	07-FEB-89	Phosphorus	UNFL		.800	-	.693	mg/L
2049	003885	-	07-FEB-89	Total Kjeldahl Nitrogen	UNFL		.370	J	.000	mg/L

See footnotes at end of table

TABLE G-2M
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	FILTER FLAG	DUPS	RESULTS	VAL QUAL	BACKGROUND	UNITS
GENERAL CHEMISTRY (Continued)										
2049	004164	-	30-JUL-89	Total Kjeldahl Nitrogen	UNFL		.245	-	.000	mg/L
2049	004222	-	03-APR-90	Phosphorus	UNFL		2.710	-	.693	mg/L
2049	004222	-	03-APR-90	Total Organic Nitrogen	UNFL		1.640	-	.652	mg/L

[a]Background concentrations established for metals are filtered while all other background parameters are unfiltered.

FLTR = Filtered sample; filtered status identified on Request for Analysis/Chain of Custody

UNFL = Unfiltered sample; filtered status identified on Request for Analysis/Chain of Custody

UNKN = Unknown; filtered status could not be determined.

DUP = Duplicate Sample

*F = Filtered sample; filtered status not identified on Request for Analysis/Chain of Custody; determination based upon other field investigation documentation.

*U = Unfiltered sample; filtered status not identified on Request for Analysis/Chain of Custody; determination based upon other field investigation documentation.

N/A = Not applicable

TABLE G-2N

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND[a] GROUNDWATER - 3000 SERIES
PHASE I FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	FILTER FLAG	DUPS	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS										
3049	003992	-	31-JAN-89	Molybdenum	FLTR		.037	J	.027	mg/L
3049	003992	-	31-JAN-89	Potassium	FLTR		4.920	J	3.087	mg/L
RADIONUCLIDES										
3045	004198	-	23-MAY-90	U-TOTAL	*U		6.020	-	2.920	ug/L
3045	004319	-	09-AUG-90	U-234	*U		4.630	-	1.900	pCi/L
3045	004319	-	09-AUG-90	U-238	*U		5.060	-	.900	pCi/L
3045	004319	-	09-AUG-90	U-TOTAL	*U		15.200	-	2.920	ug/L
3049	004271	-	26-APR-90	U-234	*U	DUP	5.960	-	1.900	pCi/L
GENERAL CHEMISTRY										
3049	003992	-	31-JAN-89	Total Kjeldahl Nitrogen	UNFL		.338	J	.000	mg/L
3049	004091	-	01-MAY-89	Total Kjeldahl Nitrogen	UNFL		.152	-	.000	mg/L

[a]Background concentrations established for metals are filtered while all other background parameters are unfiltered.

FLTR = Filtered sample; filtered status identified on Request for Analysis/Chain of Custody

UNFL = Unfiltered sample; filtered status identified on Request for Analysis/Chain of Custody

DUP = Duplicate Sample

*U = Unfiltered sample; filtered status not identified on Request for Analysis/Chain of Custody; determination based upon other field investigation documentation.

N/A = Not applicable

TABLE G-2O

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND[a] GROUNDWATER - 1000 SERIES
PHASE II FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	FILTER FLAG	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS									
1045	112000	-	29-APR-93	Aluminum	UNFL	.543	-	.123	mg/L
1045	112000	-	29-APR-93	Selenium	FLTR	.018	-	.000	mg/L
1045	112000	-	29-APR-93	Selenium	UNFL	.020	-	.000	mg/L
1045	112000	-	29-APR-93	Silicon	FLTR	10.800	-	.000	mg/L
1045	112000	-	29-APR-93	Silicon	UNFL	10.800	-	.000	mg/L
1048	110900	-	28-APR-93	Aluminum	FLTR	.163	-	.123	mg/L
1048	110900	-	28-APR-93	Calcium	FLTR	153.000	-	125.574	mg/L
1048	110900	-	28-APR-93	Magnesium	FLTR	139.000	-	49.627	mg/L
1048	110900	-	28-APR-93	Manganese	FLTR	.378	-	.165	mg/L
1048	110900	-	28-APR-93	Silicon	FLTR	10.700	-	.000	mg/L
RADIONUCLIDES									
1045	112000	-	29-APR-93	GROSS BETA	FLTR	7.040	J	.000	pCi/L
1045	112000	-	29-APR-93	GROSS BETA	UNFL	7.350	J	.000	pCi/L
1045	112000	-	29-APR-93	NP-237	FLTR	.490	N	.000	pCi/L
1045	112000	-	29-APR-93	NP-237	UNFL	.480	N	.000	pCi/L
1045	112000	-	29-APR-93	PU-238	FLTR	.290	J	.000	pCi/L
1045	112000	-	29-APR-93	PU-238	UNFL	.170	J	.000	pCi/L
1045	112000	-	29-APR-93	PU-239/240	UNFL	.200	J	.000	pCi/L
1045	112000	-	29-APR-93	TH-232	UNFL	.032	J	.000	pCi/L
1045	112000	-	29-APR-93	U-238	UNFL	1.190	-	1.070	pCi/L
1048	110900	-	28-APR-93	GROSS BETA	UNFL	14.100	J	.000	pCi/L
1048	110900	-	28-APR-93	PU-238	UNFL	.122	J	.000	pCi/L
1048	110900	-	28-APR-93	SR-90	UNFL	1.190	J	.000	pCi/L
1048	110900	-	28-APR-93	U-234	UNFL	11.400	-	1.900	pCi/L
1048	110900	-	28-APR-93	U-235/236	UNFL	.560	J	.000	pCi/L
1048	110900	-	28-APR-93	U-238	UNFL	12.500	-	1.070	pCi/L
1048	110900	-	28-APR-93	U-TOTAL	UNFL	31.100	-	4.000	ug/L
VOLATILE ORGANICS									
1048	110900	-	28-APR-93	2-Butanone	UNFL	1.000	J	.000	ug/L

See footnotes at end of table

TABLE G-2O
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	FILTER FLAG	RESULTS	VAL QUAL	BACKGROUND	UNITS
GENERAL CHEMISTRY									
1048	110900	-	28-APR-93	Total Kjeldahl Nitrogen	UNFL	.230	-	.000	mg/L
1048	110900	-	28-APR-93	Total Organic Carbon	UNFL	2.940	-	.000	mg/L
1048	110900	-	28-APR-93	Total Organic Halides	UNFL	62.300	-	.000	mg/L
1048	110900	-	28-APR-93	Total Organic Nitrogen	UNFL	.230	-	.000	mg/L

[a]Background concentrations established for metals are filtered while all other background parameters are unfiltered.

FLTR = Filtered sample; filtered status identified on Request for Analysis/Chain of Custody

UNFL = Unfiltered sample; filtered status identified on Request for Analysis/Chain of Custody

TABLE G-2P

ACTIVE FLYASH PILE
CONCENTRATIONS OF DETECTED ANALYTES
ABOVE BACKGROUND[a] GROUNDWATER - 2000 SERIES
PHASE II FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	FILTER FLAG	RESULTS	VAL QUAL	BACKGROUND	UNITS
METALS									
21033	116970	-	17-JUN-93	Aluminum	UNFL	.350	-	.184	mg/L
21033	116970	-	17-JUN-93	Calcium	FLTR	171.000	-	135.163	mg/L
21033	116970	-	17-JUN-93	Calcium	UNFL	173.000	-	135.163	mg/L
21033	116970	-	17-JUN-93	Magnesium	FLTR	45.300	-	38.070	mg/L
21033	116970	-	17-JUN-93	Magnesium	UNFL	46.000	-	38.070	mg/L
21033	116970	-	17-JUN-93	Potassium	FLTR	7.370	-	3.087	mg/L
21033	116970	-	17-JUN-93	Potassium	UNFL	7.460	-	3.087	mg/L
RADIONUCLIDES									
2045	112003	-	28-APR-93	GROSS ALPHA	FLTR	148.000	J	.000	pCi/L
2045	112003	-	28-APR-93	GROSS BETA	FLTR	98.800	J	.000	pCi/L
2045	112003	-	28-APR-93	NP-237	FLTR	.314	N	.000	pCi/L
2045	112003	-	28-APR-93	PU-238	FLTR	.207	J	.000	pCi/L
2045	112003	-	28-APR-93	U-234	FLTR	131.000	-	1.900	pCi/L
2045	112003	-	28-APR-93	U-235/236	FLTR	5.460	-	.000	pCi/L
2045	112003	-	28-APR-93	U-238	FLTR	144.000	-	.900	pCi/L
2045	112003	-	28-APR-93	U-TOTAL	FLTR	364.000	-	2.920	ug/L
2048	110897	-	27-APR-93	PU-238	UNFL	.135	J	.000	pCi/L
2049	113305	-	10-MAY-93	GROSS ALPHA	UNFL	59.900	J	.000	pCi/L
2049	113305	-	10-MAY-93	GROSS BETA	UNFL	25.800	J	.000	pCi/L
2049	113305	-	10-MAY-93	U-234	UNFL	41.500	-	1.900	pCi/L
2049	113305	-	10-MAY-93	U-235/236	UNFL	1.860	-	.000	pCi/L
2049	113305	-	10-MAY-93	U-238	UNFL	46.400	-	.900	pCi/L
2049	113305	-	10-MAY-93	U-TOTAL	UNFL	111.000	-	2.920	ug/L
21033	116970	-	17-JUN-93	GROSS ALPHA	FLTR	17.900	J	.000	pCi/L
21033	116970	-	17-JUN-93	GROSS ALPHA	UNFL	22.800	J	.000	pCi/L
21033	116970	-	17-JUN-93	GROSS BETA	FLTR	16.800	J	.000	pCi/L
21033	116970	-	17-JUN-93	GROSS BETA	UNFL	12.100	J	.000	pCi/L
21033	116970	-	17-JUN-93	PU-238	FLTR	.281	J	.000	pCi/L
21033	116970	-	17-JUN-93	U-234	FLTR	12.800	-	1.900	pCi/L
21033	116970	-	17-JUN-93	U-234	UNFL	13.100	-	1.900	pCi/L
21033	116970	-	17-JUN-93	U-235/236	FLTR	.673	J	.000	pCi/L

See footnotes at end of table

TABLE G-2P
(Continued)

SAMPLE LOCATION	SAMPLE ID	SAMPLE INTERVALS	SAMPLE DATE	PARAMETER	FILTER FLAG	RESULTS	VAL QUAL	BACKGROUND	UNITS
RADIONUCLIDES (Continued)									
21033	116970	-	17-JUN-93	U-235/236	UNFL	.666	J	.000	pCi/L
21033	116970	-	17-JUN-93	U-238	FLTR	15.600	-	.900	pCi/L
21033	116970	-	17-JUN-93	U-238	UNFL	16.100	-	.900	pCi/L
21033	116970	-	17-JUN-93	U-TOTAL	FLTR	41.200	-	2.920	ug/L
21033	116970	-	17-JUN-93	U-TOTAL	UNFL	43.200	-	2.920	ug/L
VOLATILE ORGANICS									
2045	112003	-	28-APR-93	Acetone	UNFL	3.000	J	.000	ug/L
SEMIVOLATILE ORGANICS									
2049	113305	-	10-MAY-93	Di-n-butyl phthalate	UNFL	19.000	-	.000	ug/L
GENERAL CHEMISTRY									
2045	112003	-	28-APR-93	Total Kjeldahl Nitrogen	UNFL	.160	-	.000	mg/L
2048	110897	-	27-APR-93	Total Kjeldahl Nitrogen	UNFL	.150	-	.000	mg/L
2049	113305	-	10-MAY-93	Total Kjeldahl Nitrogen	UNFL	.120	-	.000	mg/L
21033	116970	-	17-JUN-93	Total Kjeldahl Nitrogen	UNFL	.130	-	.000	mg/L

[a]Background concentrations established for metals are filtered while all other background parameters are unfiltered.

FLTR = Filtered sample; filtered status identified on Request for Analysis/Chain of Custody

UNFL = Unfiltered sample; filtered status identified on Request for Analysis/Chain of Custody

TABLE G-3

TABLE G-3A

ACTIVE FLYASH PILE
RI/FS SURFACE SOIL RESULTS
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

PHASE II - RADIOLOGICAL PARAMETERS

BORING NUMBER	1979			1980			1981		
SAMPLE NUMBER	112091			112129			112160		
	0 - 2			0 - 2			0 - 2		
SAMPLING DATE	05/10/93			05/12/93			05/13/93		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
CS-137	0.115	pci/g	UJ	0.090	pci/g	UJ	0.080	pci/g	UJ
GROSS ALPHA	42.100	pci/g	J	47.100	pci/g	-	46.000	pci/g	-
GROSS BETA	35.800	pci/g	J	39.000	pci/g	-	47.800	pci/g	-
NP-237	5.480	pci/g	NV	0.083	pci/g	N	0.300	pci/g	N
PU-238	0.318	pci/g	R	0.057	pci/g	J	0.300	pci/g	-
PU-239/240	0.194	pci/g	R	0.022	pci/g	UJ	0.120	pci/g	J
RA-226	3.320	pci/g	-	3.450	pci/g	-	4.610	pci/g	-
RA-228	2.860	pci/g	-	2.690	pci/g	-	3.170	pci/g	-
RU-106	0.902	pci/g	UJ	0.838	pci/g	UJ	0.750	pci/g	UJ
SR-90	0.255	pci/g	UJ	0.324	pci/g	UJ	0.760	pci/g	J
TC-99	0.525	pci/g	UJ	0.414	pci/g	UJ	0.460	pci/g	UJ
TH-228	2.350	pci/g	-	2.390	pci/g	J	3.080	pci/g	NV
TH-230	2.430	pci/g	-	2.890	pci/g	J	6.740	pci/g	-
TH-232	2.000	pci/g	-	2.440	pci/g	J	3.740	pci/g	-
TH-TOTAL	18.400	mg/kg	-	22.400	mg/kg	J	2.900	mg/kg	NV
U-234	2.940	pci/g	-	3.430	pci/g	-	3.370	pci/g	-
U-235/236	0.082	pci/g	J	0.083	pci/g	UJ	0.190	pci/g	-
U-238	2.880	pci/g	-	3.470	pci/g	-	3.670	pci/g	-
U-TOTAL	10.780	mg/kg	-	7.860	mg/kg	-	13.300	mg/kg	J

TABLE G-3A
(Continued)

PHASE II - RADIOLOGICAL PARAMETERS

BORING NUMBER	AFP-SD-01			AFP-SD-02			AFP-SD-03		
SAMPLE NUMBER	112264			112241			112248		
				0 - 0.5			0 - 0.5		
SAMPLING DATE	05/15/93			05/12/93			05/13/93		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
CS-137	0.122	pci/g	UJ	0.919	pci/g	-	0.459	pci/g	-
GROSS ALPHA	42.400	pci/g	-	22.400	pci/g	J	17.900	pci/g	-
GROSS BETA	34.000	pci/g	-	32.300	pci/g	J	25.700	pci/g	-
NP-237	2.110	pci/g	R	0.120	pci/g	N	0.057	pci/g	N
PU-238	0.173	pci/g	J	0.071	pci/g	J	0.032	pci/g	J
PU-239/240	0.075	pci/g	J	0.099	pci/g	J	0.041	pci/g	J
RA-226	3.530	pci/g	-	1.300	pci/g	-	1.380	pci/g	-
RA-228	2.920	pci/g	-	1.010	pci/g	-	1.290	pci/g	-
RU-106	1.000	pci/g	UJ	0.681	pci/g	UJ	0.771	pci/g	UJ
SR-90	0.245	pci/g	UJ	0.227	pci/g	J	0.156	pci/g	UJ
TC-99	0.353	pci/g	UJ	0.533	pci/g	UJ	0.298	pci/g	UJ
TH-228	2.380	pci/g	J	0.805	pci/g	J	1.090	pci/g	-
TH-230	3.090	pci/g	J	1.500	pci/g	J	1.550	pci/g	-
TH-232	2.410	pci/g	J	0.931	pci/g	J	1.230	pci/g	-
TH-TOTAL	22.200	mg/kg	J	8.570	mg/kg	J	11.200	mg/kg	-
U-234	3.390	pci/g	J	4.140	pci/g	-	2.830	pci/g	-
U-235/236	0.199	pci/g	J	0.196	pci/g	J	0.130	pci/g	J
U-238	3.420	pci/g	-	4.390	pci/g	-	3.110	pci/g	-
U-TOTAL	14.800	mg/kg	-	13.600	mg/kg	-	10.700	mg/kg	-

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TABLE G-3A
(Continued)

PHASE II - RADIOLOGICAL PARAMETERS

BORING NUMBER	AFP-SD-04			AFP-SD-05			AFP-SS-01		
SAMPLE NUMBER	112249			112251			112252		
	0 - 0.5			0 - 0.5			0 - 0.5		
SAMPLING DATE	05/13/93			05/13/93			05/14/93		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
CS-137	0.072	pci/g	J	0.171	pci/g	J	0.110	pci/g	UJ
GROSS ALPHA	20.300	pci/g	-	37.200	pci/g	-	47.200	pci/g	-
GROSS BETA	25.600	pci/g	-	35.900	pci/g	-	38.000	pci/g	-
NP-237	0.124	pci/g	N	0.058	pci/g	N	7.520	pci/g	R
PU-238	0.035	pci/g	J	0.036	pci/g	J	0.290	pci/g	J
PU-239/240	0.030	pci/g	J	0.011	pci/g	J	0.120	pci/g	J
RA-226	1.960	pci/g	-	2.750	pci/g	-	3.290	pci/g	-
RA-228	1.670	pci/g	-	2.480	pci/g	-	2.900	pci/g	-
RU-106	0.768	pci/g	UJ	0.893	pci/g	UJ	0.820	pci/g	UJ
SR-90	0.153	pci/g	UJ	0.214	pci/g	J	4.240	pci/g	J
TC-99	0.310	pci/g	UJ	0.296	pci/g	UJ	0.360	pci/g	UJ
TH-228	1.400	pci/g	-	1.780	pci/g	-	2.560	pci/g	J
TH-230	1.730	pci/g	-	2.660	pci/g	-	3.010	pci/g	J
TH-232	1.610	pci/g	-	1.810	pci/g	-	2.450	pci/g	J
TH-TOTAL	14.700	mg/kg	-	16.500	mg/kg	-	22.300	mg/kg	J
U-234	2.370	pci/g	-	3.250	pci/g	-	3.060	pci/g	-
U-235/236	0.173	pci/g	J	0.152	pci/g	J	0.120	pci/g	J
U-238	3.050	pci/g	-	3.620	pci/g	-	3.360	pci/g	-
U-TOTAL	10.200	mg/kg	-	12.500	mg/kg	-	13.100	mg/kg	J

TABLE G-3A
(Continued)

PHASE II - RADIOLOGICAL PARAMETERS

BORING NUMBER	AFP-SS-02			AFP-SS-03			AFP-SS-04		
SAMPLE NUMBER	112254			112255			112257		
	0 - 0.5			0 - 0.5			0 - 0.5		
SAMPLING DATE	05/14/93			05/14/93			05/14/93		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
CS-137	0.090	pci/g	UJ	0.083	pci/g	UJ	0.109	pci/g	UJ
GROSS ALPHA	41.000	pci/g	-	37.800	pci/g	-	53.900	pci/g	-
GROSS BETA	42.100	pci/g	-	39.900	pci/g	-	42.100	pci/g	-
NP-237	3.080	pci/g	R	0.369	pci/g	R	0.954	pci/g	R
PU-238	0.060	pci/g	J	1.290	pci/g	-	0.043	pci/g	J
PU-239/240	0.020	pci/g	UJ	0.030	pci/g	UJ	0.371	pci/g	UJ
RA-226	3.280	pci/g	-	3.600	pci/g	-	3.730	pci/g	-
RA-228	2.580	pci/g	-	2.920	pci/g	-	2.980	pci/g	-
RU-106	0.800	pci/g	UJ	0.748	pci/g	UJ	0.894	pci/g	UJ
SR-90	4.470	pci/g	J	0.386	pci/g	J	1.730	pci/g	J
TC-99	0.380	pci/g	UJ	0.429	pci/g	UJ	0.396	pci/g	UJ
TH-228	2.340	pci/g	J	2.380	pci/g	J	2.510	pci/g	J
TH-230	2.830	pci/g	J	2.930	pci/g	J	3.030	pci/g	J
TH-232	2.340	pci/g	J	2.130	pci/g	J	2.550	pci/g	J
TH-TOTAL	21.300	mg/kg	J	19.600	mg/kg	J	23.500	mg/kg	J
U-234	3.090	pci/g	-	3.210	pci/g	-	3.400	pci/g	-
U-235/236	0.160	pci/g	J	0.178	pci/g	J	0.151	pci/g	J
U-238	2.950	pci/g	-	3.110	pci/g	-	3.500	pci/g	-
U-TOTAL	8.440	mg/kg	J	10.000	mg/kg	-	10.400	mg/kg	-

000058

TABLE G-3A
(Continued)

PHASE II - RADIOLOGICAL PARAMETERS

BORING NUMBER	AFP-SS-05			AFP-SS-06		
SAMPLE NUMBER	112258			112259		
	0 - 0.5			0 - 0.5		
SAMPLING DATE	05/14/93			05/14/93		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
CS-137	0.088	pci/g	UJ	0.107	pci/g	UJ
GROSS ALPHA	33.900	pci/g	-	37.100	pci/g	-
GROSS BETA	38.200	pci/g	-	37.500	pci/g	-
NP-237	0.225	pci/g	R	3.210	pci/g	R
PU-238	0.015	pci/g	UJ	0.127	pci/g	J
PU-239/240	0.022	pci/g	J	0.070	pci/g	UJ
RA-226	3.530	pci/g	-	3.800	pci/g	-
RA-228	2.750	pci/g	-	2.800	pci/g	-
RU-106	0.827	pci/g	UJ	0.850	pci/g	UJ
SR-90	0.281	pci/g	UJ	0.293	pci/g	UJ
TC-99	0.376	pci/g	UJ	0.350	pci/g	UJ
TH-228	2.230	pci/g	J	2.410	pci/g	J
TH-230	2.870	pci/g	J	3.310	pci/g	J
TH-232	2.100	pci/g	J	2.530	pci/g	J
TH-TOTAL	19.300	mg/kg	J	23.300	mg/kg	J
U-234	3.700	pci/g	-	4.430	pci/g	-
U-235/236	0.159	pci/g	J	0.106	pci/g	J
U-238	3.370	pci/g	-	3.900	pci/g	-
U-TOTAL	12.700	mg/kg	-	14.200	mg/kg	-

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1979			1980			1981		
SAMPLE NUMBER	112091			112129			112160		
	0-2			0-2			0-2		
SAMPLING DATE	05/10/93			05/12/93			05/13/93		
CHEMICAL PARAMETERS	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ
Inorganics									
Aluminum	8150.000	mg/kg	C -	5540.000	mg/kg	C -	6970.000	mg/kg	C J
Antimony	6.300	mg/kg	C UJ	4.900	mg/kg	C UJ	3.200	mg/kg	C J
Arsenic	145.000	mg/kg	C -	94.800	mg/kg	C -	115.000	mg/kg	C J
Barium	248.000	mg/kg	C J	283.000	mg/kg	C J	275.000	mg/kg	C J
Beryllium	5.400	mg/kg	C -	6.400	mg/kg	C -	5.800	mg/kg	C -
Cadmium	0.560	mg/kg	C -	0.580	mg/kg	C -	1.300	mg/kg	C U
Calcium	2760.000	mg/kg	C -	3520.000	mg/kg	C -	4680.000	mg/kg	C J
Chromium	15.400	mg/kg	C -	14.100	mg/kg	C -	15.000	mg/kg	C J
Cobalt	21.100	mg/kg	C -	22.100	mg/kg	C -	24.900	mg/kg	C -
Copper	72.600	mg/kg	C J	73.600	mg/kg	C -	81.000	mg/kg	C J
Cyanide	0.130	mg/kg	C U	0.130	mg/kg	C R	0.190	mg/kg	C -
Iron	10600.000	mg/kg	C J	6350.000	mg/kg	C J	14200.000	mg/kg	C J
Lead	77.400	mg/kg	C -	70.300	mg/kg	C -	61.600	mg/kg	C J
Magnesium	566.000	mg/kg	C -	423.000	mg/kg	C -	582.000	mg/kg	C J
Manganese	31.500	mg/kg	C J	20.600	mg/kg	C J	38.200	mg/kg	C -
Mercury	0.260	mg/kg	C -	0.120	mg/kg	C U	0.120	mg/kg	C U
Molybdenum	11.400	mg/kg	C -	8.800	mg/kg	C -	10.400	mg/kg	C -
Nickel	46.000	mg/kg	C -	54.200	mg/kg	C -	52.900	mg/kg	C J
Potassium	1290.000	mg/kg	C J	874.000	mg/kg	C J	1100.000	mg/kg	C -
Selenium	10.300	mg/kg	C -	3.300	mg/kg	C J	2.800	mg/kg	C U
Silicon	661.000	mg/kg	C J	413.000	mg/kg	C J	504.000	mg/kg	C J
Silver	0.520	mg/kg	C U	0.500	mg/kg	C U	4.700	mg/kg	C J
Sodium	198.000	mg/kg	C J	186.000	mg/kg	C J	203.000	mg/kg	C -
Thallium	4.400	mg/kg	C -	2.900	mg/kg	C -	3.400	mg/kg	C -
Vanadium	56.500	mg/kg	C J	49.900	mg/kg	C J	66.300	mg/kg	C -
Zinc	44.800	mg/kg	C J	81.900	mg/kg	C J	87.700	mg/kg	C J
Volatile Organics									
1,1,1-Trichloroethane	13.000	ug/kg	C UJ	12.000	ug/kg	C R	8.000	ug/kg	C J
1,1,2,2-Tetrachloroethane	13.000	ug/kg	C R	12.000	ug/kg	C R	13.000	ug/kg	C R
1,1,2-Trichloroethane	13.000	ug/kg	C UJ	12.000	ug/kg	C R	13.000	ug/kg	C R
1,1-Dichloroethane	13.000	ug/kg	C UJ	12.000	ug/kg	C R	13.000	ug/kg	C UJ
1,1-Dichloroethene	13.000	ug/kg	C UJ	12.000	ug/kg	C R	13.000	ug/kg	C UJ
1,2-Dichloroethane	13.000	ug/kg	C UJ	12.000	ug/kg	C R	13.000	ug/kg	C UJ
1,2-Dichloroethene	13.000	ug/kg	C UJ	12.000	ug/kg	C R	13.000	ug/kg	C UJ
1,2-Dichloropropane	13.000	ug/kg	C UJ	12.000	ug/kg	C R	13.000	ug/kg	C R
2-Butanone	13.000	ug/kg	C UJ	12.000	ug/kg	C R	13.000	ug/kg	C UJ
2-Hexanone	13.000	ug/kg	C R	12.000	ug/kg	C R	13.000	ug/kg	C R
4-Methyl-2-pentanone	13.000	ug/kg	C R	12.000	ug/kg	C R	13.000	ug/kg	C R
Acetone	13.000	ug/kg	C UJ	46.000	ug/kg	C R	13.000	ug/kg	C UJ
Benzene	13.000	ug/kg	C UJ	12.000	ug/kg	C R	13.000	ug/kg	C R

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1979				1980				1981			
SAMPLE NUMBER	112091				112129				112160			
	0-2				0-2				0-2			
SAMPLING DATE	05/10/93				05/12/93				05/13/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
Bromodichloromethane	13.000	ug/kg	C	UJ	12.000	ug/kg	C	R	13.000	ug/kg	C	R
Bromoform	13.000	ug/kg	C	UJ	12.000	ug/kg	C	R	13.000	ug/kg	C	R
Bromomethane	13.000	ug/kg	C	UJ	12.000	ug/kg	C	R	13.000	ug/kg	C	UJ
Carbon Tetrachloride	13.000	ug/kg	C	UJ	12.000	ug/kg	C	R	13.000	ug/kg	C	R
Carbon disulfide	13.000	ug/kg	C	UJ	12.000	ug/kg	C	R	13.000	ug/kg	C	UJ
Chlorobenzene	13.000	ug/kg	C	R	12.000	ug/kg	C	R	13.000	ug/kg	C	R
Chloroethane	13.000	ug/kg	C	UJ	12.000	ug/kg	C	R	13.000	ug/kg	C	UJ
Chloroform	13.000	ug/kg	C	UJ	12.000	ug/kg	C	R	13.000	ug/kg	C	UJ
Chloromethane	13.000	ug/kg	C	UJ	12.000	ug/kg	C	R	13.000	ug/kg	C	UJ
Dibromochloromethane	13.000	ug/kg	C	UJ	12.000	ug/kg	C	R	13.000	ug/kg	C	R
Ethylbenzene	13.000	ug/kg	C	R	12.000	ug/kg	C	R	13.000	ug/kg	C	R
Methylene chloride	5.000	ug/kg	C	J	59.000	ug/kg	C	R	63.000	ug/kg	C	J
Styrene	13.000	ug/kg	C	R	12.000	ug/kg	C	R	13.000	ug/kg	C	R
Tetrachloroethene	13.000	ug/kg	C	R	12.000	ug/kg	C	R	13.000	ug/kg	C	R
Toluene	160.000	ug/kg	C	J	12.000	ug/kg	C	R	51.000	ug/kg	C	J
Trichloroethene	13.000	ug/kg	C	UJ	12.000	ug/kg	C	R	13.000	ug/kg	C	R
Vinyl Acetate	13.000	ug/kg	C	UJ	NA				13.000	ug/kg	C	R
Vinyl chloride	13.000	ug/kg	C	UJ	12.000	ug/kg	C	R	13.000	ug/kg	C	UJ
Xylenes, Total	13.000	ug/kg	C	R	12.000	ug/kg	C	R	13.000	ug/kg	C	R
cis-1,3-Dichloropropene	13.000	ug/kg	C	UJ	12.000	ug/kg	C	R	13.000	ug/kg	C	R
trans-1,3-Dichloropropene	13.000	ug/kg	C	UJ	12.000	ug/kg	C	R	13.000	ug/kg	C	R
Semivolatile Organics												
1,2,4-Trichlorobenzene	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
1,2-Dichlorobenzene	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
1,3-Dichlorobenzene	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
1,4-Dichlorobenzene	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
2,4,5-Trichlorophenol	1000.000	ug/kg	C	U	1000.000	ug/kg	C	U	1070.000	ug/kg	C	U
2,4,6-Trichlorophenol	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
2,4-Dichlorophenol	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
2,4-Dimethylphenol	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
2,4-Dinitrophenol	1000.000	ug/kg	C	U	1000.000	ug/kg	C	U	1070.000	ug/kg	C	UJ
2,4-Dinitrotoluene	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
2,6-Dinitrotoluene	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Benzyl-4-chlorophenol	NA				NA				440.000	ug/kg	C	U
2-Chloronaphthalene	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Chlorophenol	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Methylnaphthalene	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Methylphenol	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Nitroaniline	1000.000	ug/kg	C	U	1000.000	ug/kg	C	U	1070.000	ug/kg	C	U
2-Nitrophenol	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1979			1980			1981		
SAMPLE NUMBER	112091			112129			112160		
	0-2			0-2			0-2		
SAMPLING DATE	05/10/93			05/12/93			05/13/93		
CHEMICAL PARAMETERS	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ
Semivolatile Organics									
3,3'-Dichlorobenzidine	410.000	ug/kg	C U	410.000	ug/kg	C UJ	440.000	ug/kg	C U
3-Nitroaniline	1000.000	ug/kg	C U	1000.000	ug/kg	C U	1070.000	ug/kg	C U
4,6-Dinitro-2-methylphenol	1000.000	ug/kg	C U	1000.000	ug/kg	C U	1070.000	ug/kg	C U
4-Bromophenyl phenyl ether	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
4-Chloro-3-methylphenol	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
4-Chlorophenylphenyl ether	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
4-Methylphenol	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
4-Nitroaniline	1000.000	ug/kg	C U	1000.000	ug/kg	C U	1070.000	ug/kg	C U
4-Nitrophenol	1000.000	ug/kg	C U	1000.000	ug/kg	C U	1070.000	ug/kg	C U
Acenaphthene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Acenaphthylene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Anthracene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Benzo(a)anthracene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Benzo(a)pyrene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Benzo(b)fluoranthene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Benzo(g,h,i)perylene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Benzo(k)fluoranthene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Benzoic acid	76.000	ug/kg	C J	2000.000	ug/kg	C UJ	80.000	ug/kg	C J
Benzyl alcohol	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C R
Butyl benzyl phthalate	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Carbazole	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Chrysene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Di-n-butyl phthalate	410.000	ug/kg	C U	410.000	ug/kg	C U	58.000	ug/kg	C J
Di-n-octyl phthalate	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Dibenzo(a,h)anthracene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Dibenzofuran	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Diethyl phthalate	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Dimethyl phthalate	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Fluoranthene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Fluorene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Hexachlorobenzene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Hexachlorobutadiene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Hexachlorocyclopentadiene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Hexachloroethane	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Indeno(1,2,3-cd)pyrene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Isophorone	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
N-Nitroso-di-n-propylamine	410.000	ug/kg	C U	410.000	ug/kg	C UJ	440.000	ug/kg	C U
N-Nitrosodimethylamine	NA			NA			440.000	ug/kg	C U
N-Nitrosodiphenylamine	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Naphthalene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Nitrobenzene	410.000	ug/kg	C U	410.000	ug/kg	C U	440.000	ug/kg	C U
Pentachlorophenol	1000.000	ug/kg	C U	1000.000	ug/kg	C U	1070.000	ug/kg	C U

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1979				1980				1981			
SAMPLE NUMBER	112091				112129				112160			
	0-2				0-2				0-2			
SAMPLING DATE	05/10/93				05/12/93				05/13/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
Phenanthrene	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
Phenol	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
Pyrene	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
Tributyl phosphate	NA				NA				440.000	ug/kg	C	U
bis(2-Chloroethoxy)methane	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/Kg	C	U
bis(2-Chloroethyl)ether	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
bis(2-Chloroisopropyl) ether	410.000	ug/kg	C	U	410.000	ug/kg	C	UJ	440.000	ug/kg	C	U
bis(2-Ethylhexyl) phthalate	410.000	ug/kg	C	U	45.000	ug/kg	C	J	440.000	ug/kg	C	U
p-Chloroaniline	410.000	ug/kg	C	U	410.000	ug/kg	C	U	440.000	ug/kg	C	U
Pesticide Organics/PCBs												
4,4'-DDD	4.200	ug/kg	C	U	4.100	ug/kg	C	U	4.400	ug/kg	C	U
4,4'-DDE	4.200	ug/kg	C	U	4.100	ug/kg	C	U	4.400	ug/kg	C	U
4,4'-DDT	4.200	ug/kg	C	U	4.100	ug/kg	C	U	4.400	ug/kg	C	U
Aldrin	2.200	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	C	U
Aroclor-1016	42.000	ug/kg	C	U	41.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1221	85.000	ug/kg	C	U	83.000	ug/kg	C	U	89.000	ug/kg	C	U
Aroclor-1232	42.000	ug/kg	C	U	41.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1242	42.000	ug/kg	C	U	41.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1248	42.000	ug/kg	C	U	41.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1254	42.000	ug/kg	C	U	41.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1260	42.000	ug/kg	C	U	41.000	ug/kg	C	U	44.000	ug/kg	C	U
Dieldrin	4.200	ug/kg	C	U	4.100	ug/kg	C	U	4.400	ug/kg	C	U
Endosulfan II	4.200	ug/kg	C	U	4.100	ug/kg	C	U	4.400	ug/kg	C	U
Endosulfan sulfate	4.200	ug/kg	C	U	4.100	ug/kg	C	U	4.400	ug/kg	C	U
Endosulfan-I	2.200	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	C	U
Endrin	4.200	ug/kg	C	U	4.100	ug/kg	C	U	4.400	ug/kg	C	U
Endrin aldehyde	4.200	ug/kg	C	U	4.100	ug/kg	C	U	4.400	ug/kg	C	U
Endrin ketone	4.200	ug/kg	C	U	4.100	ug/kg	C	U	4.400	ug/kg	C	U
Heptachlor	2.200	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	C	U
Heptachlor epoxide	2.200	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	C	U
Methoxychlor	22.000	ug/kg	C	U	21.000	ug/kg	C	U	23.000	ug/kg	C	U
Toxaphene	220.000	ug/kg	C	U	210.000	ug/kg	C	U	230.000	ug/kg	C	U
alpha-BHC	2.200	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	C	U
alpha-Chlordane	2.200	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	C	U
beta-BHC	2.200	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	C	U
delta-BHC	2.200	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	C	U
gamma-BHC (Lindane)	2.200	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	C	U
gamma-Chlordane	2.200	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	C	U

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SD-01			AFP-SD-02			AFP-SD-03		
SAMPLE NUMBER	112264			112241			112248		
	0-0.5			0-0.5			0-0.5		
SAMPLING DATE	05/15/93			05/12/93			05/13/93		
CHEMICAL PARAMETERS	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ
Inorganics									
Aluminum	3430.000	mg/kg	C J	9620.000	mg/kg	C -	10400.000	mg/kg	C -
Antimony	1.400	mg/kg	C UJ	1.500	mg/kg	C UJ	1.500	mg/kg	C UJ
Arsenic	37.000	mg/kg	C -	10.400	mg/kg	C -	13.200	mg/kg	C -
Barium	160.000	mg/kg	C -	75.000	mg/kg	C -	82.700	mg/kg	C J
Beryllium	2.000	mg/kg	C -	1.900	mg/kg	C -	1.500	mg/kg	C -
Cadmium	1.400	mg/kg	C U	0.470	mg/kg	C U	0.740	mg/kg	C -
Calcium	5340.000	mg/kg	C J	59800.000	mg/kg	C -	9160.000	mg/kg	C -
Chromium	6.900	mg/kg	C J	13.000	mg/kg	C -	13.400	mg/kg	C -
Cobalt	8.900	mg/kg	C -	10.300	mg/kg	C -	10.200	mg/kg	C -
Copper	40.700	mg/kg	C J	23.600	mg/kg	C -	19.900	mg/kg	C -
Cyanide	0.220	mg/kg	C -	0.120	mg/kg	C R	0.130	mg/kg	C R
Iron	7430.000	mg/kg	C J	16500.000	mg/kg	C -	16000.000	mg/kg	C J
Lead	32.200	mg/kg	C J	23.700	mg/kg	C -	21.600	mg/kg	C -
Magnesium	1180.000	mg/kg	C J	16600.000	mg/kg	C -	3650.000	mg/kg	C -
Manganese	32.500	mg/kg	C -	463.000	mg/kg	C -	302.000	mg/kg	C J
Mercury	0.130	mg/kg	C U	0.120	mg/kg	C U	0.120	mg/kg	C U
Molybdenum	6.300	mg/kg	C -	1.700	mg/kg	C -	2.200	mg/kg	C -
Nickel	19.900	mg/kg	C J	20.100	mg/kg	C -	17.900	mg/kg	C -
Potassium	671.000	mg/kg	C -	1760.000	mg/kg	C -	1330.000	mg/kg	C J
Selenium	9.600	mg/kg	C -	0.930	mg/kg	C UJ	0.940	mg/kg	C UJ
Silicon	410.000	mg/kg	C J	738.000	mg/kg	C J	1250.000	mg/kg	C J
Silver	2.800	mg/kg	C U	0.470	mg/kg	C U	0.510	mg/kg	C U
Sodium	148.000	mg/kg	C -	146.000	mg/kg	C -	92.100	mg/kg	C J
Thallium	1.100	mg/kg	C -	0.240	mg/kg	C -	0.520	mg/kg	C -
Vanadium	27.600	mg/kg	C -	23.900	mg/kg	C -	26.300	mg/kg	C J
Zinc	40.800	mg/kg	C J	60.400	mg/kg	C -	49.600	mg/kg	C J
Volatile Organics									
1,1,1-Trichloroethane	14.000	ug/kg	C UJ	12.000	ug/kg	C UJ	14.000	ug/kg	C UJ
1,1,2,2-Tetrachloroethane	14.000	ug/kg	C UJ	12.000	ug/kg	C UJ	14.000	ug/kg	C UJ
1,1,2-Trichloroethane	14.000	ug/kg	C UJ	12.000	ug/kg	C UJ	14.000	ug/kg	C UJ
1,1-Dichloroethane	14.000	ug/kg	C U	12.000	ug/kg	C U	14.000	ug/kg	C UJ
1,1-Dichloroethene	14.000	ug/kg	C U	12.000	ug/kg	C U	14.000	ug/kg	C UJ
1,2-Dichloroethane	14.000	ug/kg	C U	12.000	ug/kg	C U	14.000	ug/kg	C UJ
1,2-Dichloroethene	14.000	ug/kg	C U	12.000	ug/kg	C U	14.000	ug/kg	C UJ
1,2-Dichloropropane	14.000	ug/kg	C UJ	12.000	ug/kg	C UJ	14.000	ug/kg	C UJ
2-Butanone	14.000	ug/kg	C UJ	12.000	ug/kg	C UJ	14.000	ug/kg	C R
2-Hexanone	14.000	ug/kg	C UJ	12.000	ug/kg	C UJ	14.000	ug/kg	C UJ
4-Methyl-2-pentanone	14.000	ug/kg	C UJ	12.000	ug/kg	C UJ	14.000	ug/kg	C UJ
Acetone	14.000	ug/kg	C U	12.000	ug/kg	C R	110.000	ug/kg	C R
Benzene	14.000	ug/kg	C UJ	12.000	ug/kg	C UJ	14.000	ug/kg	C UJ

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SD-01				AFP-SD-02				AFP-SD-03			
SAMPLE NUMBER	112264				112241				112248			
	0-0.5				0-0.5				0-0.5			
SAMPLING DATE	05/15/93				05/12/93				05/13/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
Bromodichloromethane	14.000	ug/kg	C	UJ	12.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ
Bromoform	14.000	ug/kg	C	UJ	12.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ
Bromomethane	14.000	ug/kg	C	U	12.000	ug/kg	C	U	14.000	ug/kg	C	UJ
Carbon Tetrachloride	14.000	ug/kg	C	UJ	12.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ
Carbon disulfide	14.000	ug/kg	C	U	12.000	ug/kg	C	U	14.000	ug/kg	C	UJ
Chlorobenzene	14.000	ug/kg	C	UJ	12.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ
Chloroethane	14.000	ug/kg	C	U	12.000	ug/kg	C	U	14.000	ug/kg	C	UJ
Chloroform	14.000	ug/kg	C	U	12.000	ug/kg	C	U	14.000	ug/kg	C	UJ
Chloromethane	14.000	ug/kg	C	UJ	12.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ
Dibromochloromethane	14.000	ug/kg	C	UJ	12.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ
Ethylbenzene	14.000	ug/kg	C	UJ	12.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ
Methylene chloride	15.000	ug/kg	C	U	12.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ
Styrene	14.000	ug/kg	C	UJ	12.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ
Tetrachloroethene	14.000	ug/kg	C	UJ	12.000	ug/kg	C	UJ	2.000	ug/kg	C	J
Toluene	4.000	ug/kg	C	J	12.000	ug/kg	C	UJ	10.000	ug/kg	C	UJ
Trichloroethene	14.000	ug/kg	C	UJ	12.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ
Vinyl Acetate	14.000	ug/kg	C	UJ	NA				NA			
Vinyl chloride	14.000	ug/kg	C	U	12.000	ug/kg	C	U	14.000	ug/kg	C	UJ
Xylenes, Total	14.000	ug/kg	C	UJ	12.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ
cis-1,3-Dichloropropene	14.000	ug/kg	C	UJ	12.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ
trans-1,3-Dichloropropene	14.000	ug/kg	C	UJ	12.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ
Semivolatile Organics												
1,2,4-Trichlorobenzene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
1,2-Dichlorobenzene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
1,3-Dichlorobenzene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
1,4-Dichlorobenzene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
2,4,5-Trichlorophenol	1200.000	ug/kg	C	U	980.000	ug/kg	C	U	1100.000	ug/kg	C	U
2,4,6-Trichlorophenol	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
2,4-Dichlorophenol	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
2,4-Dimethylphenol	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
2,4-Dinitrophenol	1200.000	ug/kg	C	U	980.000	ug/kg	C	UJ	1100.000	ug/kg	C	U
2,4-Dinitrotoluene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
2,6-Dinitrotoluene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Chloronaphthalene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Chlorophenol	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Methylnaphthalene	56.000	ug/kg	C	J	400.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Methylphenol	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Nitroaniline	1200.000	ug/kg	C	U	980.000	ug/kg	C	UJ	1100.000	ug/kg	C	U
2-Nitrophenol	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
3,3'-Dichlorobenzidine	490.000	ug/kg	C	UJ	400.000	ug/kg	C	UJ	440.000	ug/kg	C	UJ

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SD-01				AFP-SD-02				AFP-SD-03			
SAMPLE NUMBER	112264				112241				112248			
	0-0.5				0-0.5				0-0.5			
SAMPLING DATE	05/15/93				05/12/93				05/13/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
3-Nitroaniline	1200.000	ug/kg	C	UJ	980.000	ug/kg	C	UJ	1100.000	ug/kg	C	U
4,6-Dinitro-2-methylphenol	1200.000	ug/kg	C	U	980.000	ug/kg	C	UJ	1100.000	ug/kg	C	U
4-Bromophenyl phenyl ether	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
4-Chloro-3-methylphenol	490.000	ug/kg	C	U	400.000	ug/kg	C	UJ	440.000	ug/kg	C	U
4-Chlorophenylphenyl ether	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
4-Methylphenol	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
4-Nitroaniline	1200.000	ug/kg	C	U	980.000	ug/kg	C	UJ	1100.000	ug/kg	C	U
4-Nitrophenol	1200.000	ug/kg	C	U	980.000	ug/kg	C	UJ	1100.000	ug/kg	C	U
Acenaphthene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Acenaphthylene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Anthracene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Benzo(a)anthracene	53.000	ug/kg	C	J	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Benzo(a)pyrene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Benzo(b)fluoranthene	100.000	ug/kg	C	J	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Benzo(g,h,i)perylene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Benzo(k)fluoranthene	54.000	ug/kg	C	J	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Benzoic acid	NA				980.000	ug/kg	C	UJ	2200.000	ug/kg	C	U
Benzyl alcohol	NA				400.000	ug/kg	C	U	440.000	ug/kg	C	U
Butyl benzyl phthalate	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Carbazole	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Chrysene	69.000	ug/kg	C	J	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Di-n-butyl phthalate	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Di-n-octyl phthalate	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Dibenzo(a,h)anthracene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Dibenzofuran	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Diethyl phthalate	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Dimethyl phthalate	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Fluoranthene	130.000	ug/kg	C	J	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Fluorene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Hexachlorobenzene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Hexachlorobutadiene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Hexachlorocyclopentadiene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Hexachloroethane	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Indeno(1,2,3-cd)pyrene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Isophorone	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
N-Nitroso-di-n-propylamine	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
N-Nitrosodiphenylamine	490.000	ug/kg	C	U	400.000	ug/kg	C	UJ	440.000	ug/kg	C	U
Naphthalene	51.000	ug/kg	C	J	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Nitrobenzene	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Pentachlorophenol	1200.000	ug/kg	C	U	980.000	ug/kg	C	U	1100.000	ug/kg	C	U
Phenanthrene	99.000	ug/kg	C	J	400.000	ug/kg	C	U	440.000	ug/kg	C	U
Phenol	490.000	ug/kg	C	U	400.000	ug/kg	C	U	440.000	ug/kg	C	U

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TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SD-01			AFP-SD-02			AFP-SD-03		
SAMPLE NUMBER	112264			112241			112248		
	0-0.5			0-0.5			0-0.5		
SAMPLING DATE	05/15/93			05/12/93			05/13/93		
CHEMICAL PARAMETERS	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ
Semivolatile Organics									
Pyrene	100.000	ug/kg	C J	400.000	ug/kg	C UJ	440.000	ug/kg	C U
bis(2-Chloroethoxy)methane	490.000	ug/kg	C U	400.000	ug/kg	C U	440.000	ug/kg	C U
bis(2-Chloroethyl)ether	490.000	ug/kg	C U	400.000	ug/kg	C U	440.000	ug/kg	C U
bis(2-Chloroisopropyl) ether	490.000	ug/kg	C U	400.000	ug/kg	C U	440.000	ug/kg	C U
bis(2-Ethylhexyl) phthalate	490.000	ug/kg	C U	150.000	ug/kg	C J	440.000	ug/kg	C U
p-Chloroaniline	490.000	ug/kg	C UJ	400.000	ug/kg	C UJ	440.000	ug/kg	C U
Pesticide Organics/PCBs									
4,4'-DDD	4.800	ug/kg	C U	4.000	ug/kg	C U	4.400	ug/kg	C U
4,4'-DDE	4.800	ug/kg	C U	4.000	ug/kg	C U	4.400	ug/kg	C U
4,4'-DDT	4.800	ug/kg	C U	4.000	ug/kg	C U	4.400	ug/kg	C U
Aldrin	2.500	ug/kg	C U	2.100	ug/kg	C U	2.300	ug/kg	C U
Aroclor-1016	48.000	ug/kg	C U	40.000	ug/kg	C U	44.000	ug/kg	C U
Aroclor-1221	98.000	ug/kg	C U	82.000	ug/kg	C U	90.000	ug/kg	C U
Aroclor-1232	48.000	ug/kg	C U	40.000	ug/kg	C U	44.000	ug/kg	C U
Aroclor-1242	48.000	ug/kg	C U	40.000	ug/kg	C U	44.000	ug/kg	C U
Aroclor-1248	48.000	ug/kg	C U	40.000	ug/kg	C U	44.000	ug/kg	C U
Aroclor-1254	48.000	ug/kg	C U	40.000	ug/kg	C U	44.000	ug/kg	C U
Aroclor-1260	48.000	ug/kg	C U	40.000	ug/kg	C U	44.000	ug/kg	C U
Dieldrin	4.800	ug/kg	C U	4.000	ug/kg	C U	4.400	ug/kg	C U
Endosulfan II	4.800	ug/kg	C U	4.000	ug/kg	C U	4.400	ug/kg	C U
Endosulfan sulfate	4.800	ug/kg	C U	4.000	ug/kg	C U	4.400	ug/kg	C U
Endosulfan-I	2.500	ug/kg	C U	2.100	ug/kg	C U	2.300	ug/kg	C U
Endrin	4.800	ug/kg	C U	4.000	ug/kg	C U	4.400	ug/kg	C U
Endrin aldehyde	4.800	ug/kg	C U	4.000	ug/kg	C U	4.400	ug/kg	C U
Endrin ketone	4.800	ug/kg	C U	4.000	ug/kg	C U	4.400	ug/kg	C U
Heptachlor	2.500	ug/kg	C U	2.100	ug/kg	C U	2.300	ug/kg	C U
Heptachlor epoxide	2.500	ug/kg	C U	2.100	ug/kg	C U	2.300	ug/kg	C U
Methoxychlor	25.000	ug/kg	C U	21.000	ug/kg	C U	23.000	ug/kg	C U
Toxaphene	250.000	ug/kg	C U	210.000	ug/kg	C U	230.000	ug/kg	C U
alpha-BHC	2.500	ug/kg	C U	2.100	ug/kg	C U	2.300	ug/kg	C U
alpha-Chlordane	2.500	ug/kg	C U	2.100	ug/kg	C U	2.300	ug/kg	C U
beta-BHC	2.500	ug/kg	C U	2.100	ug/kg	C U	2.300	ug/kg	C U
delta-BHC	2.500	ug/kg	C U	2.100	ug/kg	C U	2.300	ug/kg	C U
gamma-BHC (Lindane)	2.500	ug/kg	C U	2.100	ug/kg	C U	2.300	ug/kg	C U
gamma-Chlordane	2.500	ug/kg	C U	2.100	ug/kg	C U	2.300	ug/kg	C U

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SD-04				AFP-SD-05				AFP-SS-01			
SAMPLE NUMBER	112249				112251				112252			
	0-0.5				0-0.5				0-0.5			
SAMPLING DATE	05/13/93				05/13/93				05/14/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Inorganics												
Aluminum	5850.000	mg/kg	C	-	6020.000	mg/kg	C	-	5950.000	mg/kg	C	J
Antimony	1.500	mg/kg	C	UJ	2.200	mg/kg	C	UJ	1.500	mg/kg	C	J
Arsenic	27.200	mg/kg	C	-	50.400	mg/kg	C	-	64.200	mg/kg	C	-
Barium	109.000	mg/kg	C	J	151.000	mg/kg	C	J	225.000	mg/kg	C	-
Beryllium	2.100	mg/kg	C	-	3.100	mg/kg	C	-	3.000	mg/kg	C	-
Cadmium	0.520	mg/kg	C	U	0.600	mg/kg	C	-	1.100	mg/kg	C	U
Calcium	8910.000	mg/kg	C	-	4620.000	mg/kg	C	-	3420.000	mg/kg	C	J
Chromium	9.000	mg/kg	C	-	11.600	mg/kg	C	-	9.300	mg/kg	C	J
Cobalt	10.600	mg/kg	C	-	14.900	mg/kg	C	-	16.300	mg/kg	C	-
Copper	23.000	mg/kg	C	-	46.000	mg/kg	C	-	91.200	mg/kg	C	J
Cyanide	0.140	mg/kg	C	R	0.150	mg/kg	C	R	0.280	mg/kg	C	-
Iron	9470.000	mg/kg	C	J	7440.000	mg/kg	C	J	4880.000	mg/kg	C	J
Lead	25.500	mg/kg	C	-	41.800	mg/kg	C	-	42.000	mg/kg	C	J
Magnesium	2740.000	mg/kg	C	-	1840.000	mg/kg	C	-	557.000	mg/kg	C	J
Manganese	334.000	mg/kg	C	J	185.000	mg/kg	C	J	42.400	mg/kg	C	-
Mercury	0.140	mg/kg	C	U	0.250	mg/kg	C	-	0.110	mg/kg	C	U
Molybdenum	2.300	mg/kg	C	-	3.600	mg/kg	C	-	4.700	mg/kg	C	-
Nickel	15.300	mg/kg	C	-	23.000	mg/kg	C	-	37.100	mg/kg	C	J
Potassium	714.000	mg/kg	C	J	1080.000	mg/kg	C	J	1080.000	mg/kg	C	-
Selenium	1.900	mg/kg	C	J	3.600	mg/kg	C	J	3.500	mg/kg	C	-
Silicon	917.000	mg/kg	C	J	942.000	mg/kg	C	J	380.000	mg/kg	C	J
Silver	0.520	mg/kg	C	U	0.600	mg/kg	C	U	2.100	mg/kg	C	U
Sodium	99.800	mg/kg	C	J	123.000	mg/kg	C	J	302.000	mg/kg	C	-
Thallium	0.770	mg/kg	C	-	1.900	mg/kg	C	-	2.300	mg/kg	C	-
Vanadium	23.000	mg/kg	C	J	33.800	mg/kg	C	J	40.000	mg/kg	C	-
Zinc	39.600	mg/kg	C	J	48.300	mg/kg	C	J	94.500	mg/kg	C	J
Volatile Organics												
1,1,1-Trichloroethane	14.000	ug/kg	C	U	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
1,1,2,2-Tetrachloroethane	14.000	ug/kg	C	UJ	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
1,1,2-Trichloroethane	14.000	ug/kg	C	U	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
1,1-Dichloroethane	14.000	ug/kg	C	U	15.000	ug/kg	C	U	13.000	ug/kg	C	U
1,1-Dichloroethene	14.000	ug/kg	C	UJ	15.000	ug/kg	C	UJ	13.000	ug/kg	C	U
1,2-Dichloroethane	14.000	ug/kg	C	U	15.000	ug/kg	C	U	13.000	ug/kg	C	U
1,2-Dichloroethene	14.000	ug/kg	C	U	15.000	ug/kg	C	U	13.000	ug/kg	C	U
1,2-Dichloropropane	14.000	ug/kg	C	U	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
2-Butanone	14.000	ug/kg	C	R	15.000	ug/kg	C	R	13.000	ug/kg	C	U
2-Hexanone	14.000	ug/kg	C	UJ	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
4-Methyl-2-pentanone	14.000	ug/kg	C	UJ	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
Acetone	31.000	ug/kg	C	R	57.000	ug/kg	C	R	13.000	ug/kg	C	U
Benzene	14.000	ug/kg	C	U	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SD-04				AFP-SD-05				AFP-SS-01			
SAMPLE NUMBER	112249				112251				112252			
	0-0.5				0-0.5				0-0.5			
SAMPLING DATE	05/13/93				05/13/93				05/14/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
Bromodichloromethane	14.000	ug/kg	C	U	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
Bromoform	14.000	ug/kg	C	U	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
Bromomethane	14.000	ug/kg	C	U	15.000	ug/kg	C	U	13.000	ug/kg	C	U
Carbon Tetrachloride	14.000	ug/kg	C	U	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
Carbon disulfide	14.000	ug/kg	C	U	15.000	ug/kg	C	U	13.000	ug/kg	C	U
Chlorobenzene	14.000	ug/kg	C	UJ	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
Chloroethane	14.000	ug/kg	C	U	15.000	ug/kg	C	U	13.000	ug/kg	C	UJ
Chloroform	14.000	ug/kg	C	U	15.000	ug/kg	C	U	13.000	ug/kg	C	U
Chloromethane	14.000	ug/kg	C	UJ	15.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Dibromochloromethane	14.000	ug/kg	C	U	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
Ethylbenzene	14.000	ug/kg	C	UJ	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
Methylene chloride	14.000	ug/kg	C	UJ	15.000	ug/kg	C	UJ	13.000	ug/kg	C	U
Styrene	14.000	ug/kg	C	UJ	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
Tetrachloroethene	14.000	ug/kg	C	UJ	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
Toluene	10.000	ug/kg	C	UJ	62.000	ug/kg	C	J	21.000	ug/kg	C	J
Trichloroethene	14.000	ug/kg	C	U	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
Vinyl Acetate	NA				NA				13.000	ug/kg	C	R
Vinyl chloride	14.000	ug/kg	C	U	15.000	ug/kg	C	U	13.000	ug/kg	C	U
Xylenes, Total	14.000	ug/kg	C	UJ	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
cis-1,3-Dichloropropene	14.000	ug/kg	C	U	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
trans-1,3-Dichloropropene	14.000	ug/kg	C	U	15.000	ug/kg	C	UJ	13.000	ug/kg	C	R
Semivolatile Organics												
1,2,4-Trichlorobenzene	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
1,2-Dichlorobenzene	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
1,3-Dichlorobenzene	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
1,4-Dichlorobenzene	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
2,4,5-Trichlorophenol	1100.000	ug/kg	C	U	1200.000	ug/kg	C	U	1100.000	ug/kg	C	U
2,4,6-Trichlorophenol	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
2,4-Dichlorophenol	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
2,4-Dimethylphenol	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
2,4-Dinitrophenol	1100.000	ug/kg	C	U	1200.000	ug/kg	C	U	1100.000	ug/kg	C	U
2,4-Dinitrotoluene	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
2,6-Dinitrotoluene	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Chloronaphthalene	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Chlorophenol	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Methylnaphthalene	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Methylphenol	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
2-Nitroaniline	1100.000	ug/kg	C	U	1200.000	ug/kg	C	U	1100.000	ug/kg	C	U
2-Nitrophenol	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
3,3'-Dichlorobenzidine	450.000	ug/kg	C	UJ	480.000	ug/kg	C	UJ	440.000	ug/kg	C	UJ

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SD-04			AFP-SD-05			AFP-SS-01		
SAMPLE NUMBER	112249			112251			112252		
	0-0.5			0-0.5			0-0.5		
SAMPLING DATE	05/13/93			05/13/93			05/14/93		
CHEMICAL PARAMETERS	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ
Semivolatile Organics									
3-Nitroaniline	1100.000	ug/kg	C U	1200.000	ug/kg	C U	1100.000	ug/kg	C UJ
4,6-Dinitro-2-methylphenol	1100.000	ug/kg	C U	1200.000	ug/kg	C U	1100.000	ug/kg	C U
4-Bromophenyl phenyl ether	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
4-Chloro-3-methylphenol	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
4-Chlorophenylphenyl ether	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
4-Methylphenol	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
4-Nitroaniline	1100.000	ug/kg	C U	1200.000	ug/kg	C U	1100.000	ug/kg	C U
4-Nitrophenol	1100.000	ug/kg	C U	1200.000	ug/kg	C U	1100.000	ug/kg	C U
Acenaphthene	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Acenaphthylene	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Anthracene	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Benzo(a)anthracene	110.000	ug/kg	C J	480.000	ug/kg	C U	440.000	ug/kg	C U
Benzo(a)pyrene	120.000	ug/kg	C J	70.000	ug/kg	C J	440.000	ug/kg	C U
Benzo(b)fluoranthene	180.000	ug/kg	C J	100.000	ug/kg	C J	440.000	ug/kg	C U
Benzo(g,h,i)perylene	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Benzo(k)fluoranthene	73.000	ug/kg	C J	480.000	ug/kg	C U	440.000	ug/kg	C U
Benzoic acid	120.000	ug/kg	C J	2400.000	ug/kg	C U	NA		
Benzyl alcohol	450.000	ug/kg	C U	480.000	ug/kg	C U	NA		
Butyl benzyl phthalate	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Carbazole	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Chrysene	150.000	ug/kg	C J	72.000	ug/kg	C J	440.000	ug/kg	C U
Di-n-butyl phthalate	450.000	ug/kg	C U	480.000	ug/kg	C U	98.000	ug/kg	C J
Di-n-octyl phthalate	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Dibenzo(a,h)anthracene	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Dibenzofuran	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Diethyl phthalate	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Dimethyl phthalate	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Fluoranthene	390.000	ug/kg	C J	180.000	ug/kg	C J	440.000	ug/kg	C U
Fluorene	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Hexachlorobenzene	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Hexachlorobutadiene	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Hexachlorocyclopentadiene	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Hexachloroethane	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Indeno(1,2,3-cd)pyrene	74.000	ug/kg	C J	480.000	ug/kg	C U	440.000	ug/kg	C U
Isophorone	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
N-Nitroso-di-n-propylamine	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
N-Nitrosodiphenylamine	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Naphthalene	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Nitrobenzene	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U
Pentachlorophenol	1100.000	ug/kg	C U	1200.000	ug/kg	C U	1100.000	ug/kg	C U
Phenanthrene	210.000	ug/kg	C J	120.000	ug/kg	C J	440.000	ug/kg	C U
Phenol	450.000	ug/kg	C U	480.000	ug/kg	C U	440.000	ug/kg	C U

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SD-04				AFP-SD-05				AFP-SS-01			
SAMPLE NUMBER	112249				112251				112252			
	0-0.5				0-0.5				0-0.5			
SAMPLING DATE	05/13/93				05/13/93				05/14/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
Pyrene	230.000	ug/kg	C	J	120.000	ug/kg	C	J	440.000	ug/kg	C	U
bis(2-Chloroethoxy)methane	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
bis(2-Chloroethyl)ether	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
bis(2-Chloroisopropyl) ether	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	U
bis(2-Ethylhexyl) phthalate	450.000	ug/kg	C	U	1400.000	ug/kg	C	-	440.000	ug/kg	C	U
p-Chloroaniline	450.000	ug/kg	C	U	480.000	ug/kg	C	U	440.000	ug/kg	C	UJ
Pesticide Organics/PCBs												
4,4'-DDD	4.500	ug/kg	C	U	4.800	ug/kg	C	U	4.400	ug/kg	C	UJ
4,4'-DDE	4.500	ug/kg	C	U	4.800	ug/kg	C	U	4.400	ug/kg	C	U
4,4'-DDT	4.500	ug/kg	C	U	4.800	ug/kg	C	U	4.400	ug/kg	C	U
Aldrin	2.300	ug/kg	C	U	2.500	ug/kg	C	U	2.300	ug/kg	C	U
Aroclor-1016	45.000	ug/kg	C	U	48.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1221	92.000	ug/kg	C	U	98.000	ug/kg	C	U	90.000	ug/kg	C	U
Aroclor-1232	45.000	ug/kg	C	U	48.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1242	45.000	ug/kg	C	U	48.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1248	45.000	ug/kg	C	U	48.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1254	45.000	ug/kg	C	U	48.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1260	45.000	ug/kg	C	U	48.000	ug/kg	C	U	44.000	ug/kg	C	U
Dieldrin	4.500	ug/kg	C	U	4.800	ug/kg	C	U	4.400	ug/kg	C	U
Endosulfan II	4.500	ug/kg	C	U	4.800	ug/kg	C	U	4.400	ug/kg	C	U
Endosulfan sulfate	4.500	ug/kg	C	U	4.800	ug/kg	C	U	4.400	ug/kg	C	U
Endosulfan-I	2.300	ug/kg	C	U	2.500	ug/kg	C	U	2.300	ug/kg	C	U
Endrin	4.500	ug/kg	C	U	4.800	ug/kg	C	U	4.400	ug/kg	C	U
Endrin aldehyde	4.500	ug/kg	C	U	4.800	ug/kg	C	U	4.400	ug/kg	C	UJ
Endrin ketone	4.500	ug/kg	C	U	4.800	ug/kg	C	U	4.400	ug/kg	C	U
Heptachlor	2.300	ug/kg	C	U	2.500	ug/kg	C	U	2.300	ug/kg	C	U
Heptachlor epoxide	2.300	ug/kg	C	U	2.500	ug/kg	C	U	2.300	ug/kg	C	U
Methoxychlor	23.000	ug/kg	C	U	25.000	ug/kg	C	U	23.000	ug/kg	C	U
Toxaphene	230.000	ug/kg	C	U	250.000	ug/kg	C	U	230.000	ug/kg	C	U
alpha-BHC	2.300	ug/kg	C	U	2.500	ug/kg	C	U	2.300	ug/kg	C	U
alpha-Chlordane	2.300	ug/kg	C	U	2.500	ug/kg	C	U	2.300	ug/kg	C	U
beta-BHC	2.300	ug/kg	C	U	2.500	ug/kg	C	U	2.300	ug/kg	C	U
delta-BHC	2.300	ug/kg	C	U	2.500	ug/kg	C	U	2.300	ug/kg	C	U
gamma-BHC (Lindane)	2.300	ug/kg	C	U	2.500	ug/kg	C	U	2.300	ug/kg	C	U
gamma-Chlordane	2.300	ug/kg	C	U	2.500	ug/kg	C	U	2.300	ug/kg	C	U

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SS-02				AFP-SS-03				AFP-SS-04			
SAMPLE NUMBER	112254				112255				112257			
	0-0.5				0-0.5				0-0.5			
SAMPLING DATE	05/14/93				05/14/93				05/14/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Inorganics												
Aluminum	7220.000	mg/kg	D	J	11100.000	mg/kg	C	J	5570.000	mg/kg	C	J
Antimony	2.400	mg/kg	D	J	2.000	mg/kg	C	J	1.800	mg/kg	C	J
Arsenic	129.000	mg/kg	D	-	89.400	mg/kg	C	-	69.100	mg/kg	C	-
Barium	286.000	mg/kg	D	-	349.000	mg/kg	C	-	215.000	mg/kg	C	-
Beryllium	4.300	mg/kg	D	-	4.500	mg/kg	C	-	4.300	mg/kg	C	-
Cadmium	1.200	mg/kg	D	U	1.300	mg/kg	C	U	1.200	mg/kg	C	U
Calcium	2910.000	mg/kg	D	J	4770.000	mg/kg	C	J	2570.000	mg/kg	C	J
Chromium	12.700	mg/kg	D	J	14.000	mg/kg	C	J	12.400	mg/kg	C	J
Cobalt	16.500	mg/kg	D	-	19.900	mg/kg	C	-	17.200	mg/kg	C	-
Copper	64.500	mg/kg	D	J	94.000	mg/kg	C	J	92.400	mg/kg	C	J
Cyanide	0.320	mg/kg	D	-	0.470	mg/kg	C	-	0.280	mg/kg	C	-
Iron	10700.000	mg/kg	D	J	7130.000	mg/kg	C	J	4930.000	mg/kg	C	J
Lead	66.000	mg/kg	D	J	49.000	mg/kg	C	J	44.900	mg/kg	C	J
Magnesium	434.000	mg/kg	D	J	783.000	mg/kg	C	J	469.000	mg/kg	C	J
Manganese	47.800	mg/kg	D	-	44.500	mg/kg	C	-	25.200	mg/kg	C	-
Mercury	0.230	mg/kg	D	-	0.160	mg/kg	C	-	0.130	mg/kg	C	U
Molybdenum	11.900	mg/kg	D	-	6.400	mg/kg	C	-	5.800	mg/kg	C	-
Nickel	40.400	mg/kg	D	J	39.900	mg/kg	C	J	33.400	mg/kg	C	J
Potassium	1070.000	mg/kg	D	-	1580.000	mg/kg	C	-	1050.000	mg/kg	C	-
Selenium	7.800	mg/kg	D	-	6.700	mg/kg	C	-	4.400	mg/kg	C	-
Silicon	318.000	mg/kg	D	J	548.000	mg/kg	C	J	476.000	mg/kg	C	J
Silver	3.400	mg/kg	D	-	2.700	mg/kg	C	U	2.400	mg/kg	C	U
Sodium	139.000	mg/kg	D	-	274.000	mg/kg	C	-	197.000	mg/kg	C	-
Thallium	4.100	mg/kg	D	-	1.900	mg/kg	C	-	1.500	mg/kg	C	-
Vanadium	51.300	mg/kg	D	-	52.300	mg/kg	C	-	46.800	mg/kg	C	-
Zinc	73.200	mg/kg	D	J	90.700	mg/kg	C	J	92.200	mg/kg	C	J
Volatile Organics												
1,1,1-Trichloroethane	45.000	ug/kg	D	R	14.000	ug/kg	C	R	13.000	ug/kg	C	R
1,1,2,2-Tetrachloroethane	14.000	ug/kg	D	R	14.000	ug/kg	C	R	13.000	ug/kg	C	R
1,1,2-Trichloroethane	14.000	ug/kg	D	R	14.000	ug/kg	C	R	13.000	ug/kg	C	R
1,1-Dichloroethane	14.000	ug/kg	D	U	14.000	ug/kg	C	U	13.000	ug/kg	C	UJ
1,1-Dichloroethene	14.000	ug/kg	D	U	14.000	ug/kg	C	U	13.000	ug/kg	C	UJ
1,2-Dichloroethane	14.000	ug/kg	D	U	14.000	ug/kg	C	U	13.000	ug/kg	C	UJ
1,2-Dichloroethene	14.000	ug/kg	D	U	14.000	ug/kg	C	U	13.000	ug/kg	C	UJ
1,2-Dichloropropane	14.000	ug/kg	D	R	14.000	ug/kg	C	R	13.000	ug/kg	C	R
2-Butanone	14.000	ug/kg	D	U	14.000	ug/kg	C	R	13.000	ug/kg	C	R
2-Hexanone	14.000	ug/kg	D	R	14.000	ug/kg	C	R	13.000	ug/kg	C	R
4-Methyl-2-pentanone	14.000	ug/kg	D	R	14.000	ug/kg	C	R	13.000	ug/kg	C	R
Acetone	14.000	ug/kg	D	U	14.000	ug/kg	C	U	13.000	ug/kg	C	UJ
Benzene	14.000	ug/kg	D	R	14.000	ug/kg	C	R	13.000	ug/kg	C	R

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SS-02			AFP-SS-03			AFP-SS-04		
SAMPLE NUMBER	112254			112255			112257		
	0-0.5			0-0.5			0-0.5		
SAMPLING DATE	05/14/93			05/14/93			05/14/93		
CHEMICAL PARAMETERS	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ
Volatile Organics									
Bromodichloromethane	14.000	ug/kg	D R	14.000	ug/kg	C R	13.000	ug/kg	C R
Bromoform	14.000	ug/kg	D R	14.000	ug/kg	C R	13.000	ug/kg	C R
Bromomethane	14.000	ug/kg	D UJ	14.000	ug/kg	C U	13.000	ug/kg	C UJ
Carbon Tetrachloride	14.000	ug/kg	D R	14.000	ug/kg	C R	13.000	ug/kg	C R
Carbon disulfide	14.000	ug/kg	D U	14.000	ug/kg	C U	13.000	ug/kg	C UJ
Chlorobenzene	14.000	ug/kg	D R	14.000	ug/kg	C R	13.000	ug/kg	C R
Chloroethane	14.000	ug/kg	D U	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ
Chloroform	14.000	ug/kg	D U	14.000	ug/kg	C U	13.000	ug/kg	C UJ
Chloromethane	14.000	ug/kg	D UJ	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ
Dibromochloromethane	14.000	ug/kg	D R	14.000	ug/kg	C R	13.000	ug/kg	C R
Ethylbenzene	14.000	ug/kg	D R	14.000	ug/kg	C R	13.000	ug/kg	C R
Methylene chloride	65.000	ug/kg	D -	14.000	ug/kg	C U	13.000	ug/kg	C UJ
Styrene	14.000	ug/kg	D R	14.000	ug/kg	C R	13.000	ug/kg	C R
Tetrachloroethene	14.000	ug/kg	D R	14.000	ug/kg	C R	13.000	ug/kg	C R
Toluene	14.000	ug/kg	D R	62.000	ug/kg	C J	88.000	ug/kg	C J
Trichloroethene	14.000	ug/kg	D R	14.000	ug/kg	C R	13.000	ug/kg	C R
Vinyl Acetate	14.000	ug/kg	D R	14.000	ug/kg	C R	13.000	ug/kg	C R
Vinyl chloride	14.000	ug/kg	D U	14.000	ug/kg	C U	13.000	ug/kg	C UJ
Xylenes, Total	14.000	ug/kg	D R	14.000	ug/kg	C R	13.000	ug/kg	C R
cis-1,3-Dichloropropene	14.000	ug/kg	D R	14.000	ug/kg	C R	13.000	ug/kg	C R
trans-1,3-Dichloropropene	14.000	ug/kg	D R	14.000	ug/kg	C R	13.000	ug/kg	C R
Semivolatile Organics									
1,2,4-Trichlorobenzene	490.000	ug/kg	D U	460.000	ug/kg	C U	450.000	ug/kg	C U
1,2-Dichlorobenzene	490.000	ug/kg	D U	460.000	ug/kg	C U	450.000	ug/kg	C U
1,3-Dichlorobenzene	490.000	ug/kg	D U	460.000	ug/kg	C U	450.000	ug/kg	C U
1,4-Dichlorobenzene	490.000	ug/kg	D U	460.000	ug/kg	C U	450.000	ug/kg	C U
2,4,5-Trichlorophenol	1200.000	ug/kg	D U	1100.000	ug/kg	C U	1100.000	ug/kg	C U
2,4,6-Trichlorophenol	490.000	ug/kg	D U	460.000	ug/kg	C U	450.000	ug/kg	C U
2,4-Dichlorophenol	490.000	ug/kg	D U	460.000	ug/kg	C U	450.000	ug/kg	C U
2,4-Dimethylphenol	490.000	ug/kg	D U	460.000	ug/kg	C U	450.000	ug/kg	C U
2,4-Dinitrophenol	1200.000	ug/kg	D U	1100.000	ug/kg	C U	1100.000	ug/kg	C U
2,4-Dinitrotoluene	490.000	ug/kg	D U	460.000	ug/kg	C U	450.000	ug/kg	C U
2,6-Dinitrotoluene	490.000	ug/kg	D U	460.000	ug/kg	C U	450.000	ug/kg	C U
2-Chloronaphthalene	490.000	ug/kg	D U	460.000	ug/kg	C U	450.000	ug/kg	C U
2-Chlorophenol	490.000	ug/kg	D U	460.000	ug/kg	C U	450.000	ug/kg	C U
2-Methylnaphthalene	490.000	ug/kg	D U	55.000	ug/kg	C J	450.000	ug/kg	C U
2-Methylphenol	490.000	ug/kg	D U	460.000	ug/kg	C U	450.000	ug/kg	C U
2-Nitroaniline	1200.000	ug/kg	D U	1100.000	ug/kg	C U	1100.000	ug/kg	C U
2-Nitrophenol	490.000	ug/kg	D U	460.000	ug/kg	C U	450.000	ug/kg	C U
3,3'-Dichlorobenzidine	490.000	ug/kg	D UJ	460.000	ug/kg	C UJ	450.000	ug/kg	C UJ

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SS-02				AFP-SS-03				AFP-SS-04			
SAMPLE NUMBER	112254				112255				112257			
	0-0.5				0-0.5				0-0.5			
SAMPLING DATE	05/14/93				05/14/93				05/14/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
3-Nitroaniline	1200.000	ug/kg	D	UJ	1100.000	ug/kg	C	UJ	1100.000	ug/kg	C	UJ
4,6-Dinitro-2-methylphenol	1200.000	ug/kg	D	U	1100.000	ug/kg	C	U	1100.000	ug/kg	C	U
4-Bromophenyl phenyl ether	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
4-Chloro-3-methylphenol	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
4-Chlorophenylphenyl ether	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
4-Methylphenol	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
4-Nitroaniline	1200.000	ug/kg	D	U	1100.000	ug/kg	C	U	1100.000	ug/kg	C	U
4-Nitrophenol	1200.000	ug/kg	D	U	1100.000	ug/kg	C	U	1100.000	ug/kg	C	U
Acenaphthene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Acenaphthylene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Anthracene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Benzo(a)anthracene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Benzo(a)pyrene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Benzo(b)fluoranthene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Benzo(g,h,i)perylene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Benzo(k)fluoranthene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Butyl benzyl phthalate	490.000	ug/kg	D	U	460.000	ug/kg	C	U	180.000	ug/kg	C	J
Carbazole	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Chrysene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Di-n-butyl phthalate	130.000	ug/kg	D	J	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Di-n-octyl phthalate	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Dibenzo(a,h)anthracene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Dibenzofuran	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Diethyl phthalate	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Dimethyl phthalate	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Fluoranthene	160.000	ug/kg	D	J	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Fluorene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Hexachlorobenzene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Hexachlorobutadiene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Hexachlorocyclopentadiene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Hexachloroethane	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Indeno(1,2,3-cd)pyrene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Isophorone	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
N-Nitroso-di-n-propylamine	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
N-Nitrosodiphenylamine	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Naphthalene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Nitrobenzene	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Pentachlorophenol	1200.000	ug/kg	D	U	1100.000	ug/kg	C	U	1100.000	ug/kg	C	U
Phenanthrene	100.000	ug/kg	D	J	47.000	ug/kg	C	J	450.000	ug/kg	C	U
Phenol	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
Pyrene	120.000	ug/kg	D	J	460.000	ug/kg	C	U	450.000	ug/kg	C	U
bis(2-Chloroethoxy)methane	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SS-02				AFP-SS-03				AFP-SS-04			
SAMPLE NUMBER	112254				112255				112257			
	0-0.5				0-0.5				0-0.5			
SAMPLING DATE	05/14/93				05/14/93				05/14/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
bis(2-Chloroethyl)ether	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
bis(2-Chloroisopropyl) ether	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
bis(2-Ethylhexyl) phthalate	490.000	ug/kg	D	U	460.000	ug/kg	C	U	450.000	ug/kg	C	U
p-Chloroaniline	490.000	ug/kg	D	UJ	460.000	ug/kg	C	UJ	450.000	ug/kg	C	UJ
Pesticide Organics/PCBs												
4,4'-DDD	4.400	ug/kg	D	UJ	4.500	ug/kg	C	U	4.400	ug/kg	C	UJ
4,4'-DDE	4.400	ug/kg	D	U	4.500	ug/kg	C	U	4.400	ug/kg	C	UJ
4,4'-DDT	4.400	ug/kg	D	U	4.500	ug/kg	C	U	4.400	ug/kg	C	UJ
Aldrin	2.300	ug/kg	D	U	2.300	ug/kg	C	U	2.300	ug/kg	C	UJ
Aroclor-1016	44.000	ug/kg	D	U	45.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1221	89.000	ug/kg	D	U	92.000	ug/kg	C	U	90.000	ug/kg	C	U
Aroclor-1232	44.000	ug/kg	D	U	45.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1242	44.000	ug/kg	D	U	45.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1248	44.000	ug/kg	D	U	45.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1254	44.000	ug/kg	D	U	45.000	ug/kg	C	U	44.000	ug/kg	C	U
Aroclor-1260	44.000	ug/kg	D	U	45.000	ug/kg	C	U	44.000	ug/kg	C	U
Dieldrin	4.400	ug/kg	D	U	4.500	ug/kg	C	U	4.400	ug/kg	C	UJ
Endosulfan II	4.400	ug/kg	D	U	4.500	ug/kg	C	U	4.400	ug/kg	C	UJ
Endosulfan sulfate	4.400	ug/kg	D	U	4.500	ug/kg	C	U	4.400	ug/kg	C	UJ
Endosulfan-I	2.300	ug/kg	D	U	2.300	ug/kg	C	U	2.300	ug/kg	C	UJ
Endrin	4.400	ug/kg	D	U	4.500	ug/kg	C	U	4.400	ug/kg	C	UJ
Endrin aldehyde	4.400	ug/kg	D	UJ	4.500	ug/kg	C	U	4.400	ug/kg	C	UJ
Endrin ketone	4.400	ug/kg	D	U	4.500	ug/kg	C	U	4.400	ug/kg	C	UJ
Heptachlor	2.300	ug/kg	D	U	2.300	ug/kg	C	U	2.300	ug/kg	C	UJ
Heptachlor epoxide	2.300	ug/kg	D	U	2.300	ug/kg	C	U	2.300	ug/kg	C	UJ
Methoxychlor	23.000	ug/kg	D	U	23.000	ug/kg	C	U	23.000	ug/kg	C	UJ
Toxaphene	230.000	ug/kg	D	U	230.000	ug/kg	C	U	230.000	ug/kg	C	U
alpha-BHC	2.300	ug/kg	D	U	2.300	ug/kg	C	U	2.300	ug/kg	C	UJ
alpha-Chlordane	2.300	ug/kg	D	U	2.300	ug/kg	C	U	2.300	ug/kg	C	UJ
beta-BHC	2.300	ug/kg	D	U	2.300	ug/kg	C	U	2.300	ug/kg	C	UJ
delta-BHC	2.300	ug/kg	D	U	2.300	ug/kg	C	U	2.300	ug/kg	C	UJ
gamma-BHC (Lindane)	2.300	ug/kg	D	U	2.300	ug/kg	C	U	2.300	ug/kg	C	UJ
gamma-Chlordane	2.300	ug/kg	D	U	2.300	ug/kg	C	U	2.300	ug/kg	C	UJ

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SS-05				AFP-SS-06			
SAMPLE NUMBER	112258				112259			
	0-0.5				0-0.5			
SAMPLING DATE	05/14/93				05/14/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Inorganics								
Aluminum	5890.000	mg/kg	C	J	6210.000	mg/kg	C	J
Antimony	1.500	mg/kg	C	J	2.200	mg/kg	C	J
Arsenic	82.800	mg/kg	C	-	53.100	mg/kg	C	-
Barium	346.000	mg/kg	C	-	139.000	mg/kg	C	-
Beryllium	4.600	mg/kg	C	-	5.700	mg/kg	C	-
Cadmium	1.300	mg/kg	C	U	1.500	mg/kg	C	U
Calcium	2760.000	mg/kg	C	J	1900.000	mg/kg	C	J
Chromium	12.500	mg/kg	C	J	11.300	mg/kg	C	J
Cobalt	19.400	mg/kg	C	-	18.100	mg/kg	C	-
Copper	65.800	mg/kg	C	J	71.200	mg/kg	C	J
Cyanide	0.270	mg/kg	C	-	0.280	mg/kg	C	-
Iron	7410.000	mg/kg	C	J	3940.000	mg/kg	C	J
Lead	54.400	mg/kg	C	J	49.100	mg/kg	C	J
Magnesium	452.000	mg/kg	C	J	376.000	mg/kg	C	J
Manganese	28.000	mg/kg	C	-	15.600	mg/kg	C	-
Mercury	0.140	mg/kg	C	-	0.230	mg/kg	C	-
Molybdenum	8.000	mg/kg	C	-	12.500	mg/kg	C	-
Nickel	41.200	mg/kg	C	J	34.600	mg/kg	C	J
Potassium	961.000	mg/kg	C	-	935.000	mg/kg	C	-
Selenium	4.100	mg/kg	C	-	4.900	mg/kg	C	-
Silicon	427.000	mg/kg	C	J	434.000	mg/kg	C	J
Silver	2.600	mg/kg	C	U	2.900	mg/kg	C	U
Sodium	180.000	mg/kg	C	-	172.000	mg/kg	C	-
Thallium	1.900	mg/kg	C	-	1.900	mg/kg	C	-
Vanadium	51.900	mg/kg	C	-	59.100	mg/kg	C	-
Zinc	65.300	mg/kg	C	J	51.900	mg/kg	C	J
Volatile Organics								
1,1,1-Trichloroethane	13.000	ug/kg	C	R	15.000	ug/kg	C	R
1,1,2,2-Tetrachloroethane	13.000	ug/kg	C	R	15.000	ug/kg	C	R
1,1,2-Trichloroethane	13.000	ug/kg	C	R	15.000	ug/kg	C	R
1,1-Dichloroethane	13.000	ug/kg	C	U	15.000	ug/kg	C	UJ
1,1-Dichloroethene	13.000	ug/kg	C	U	15.000	ug/kg	C	UJ
1,2-Dichloroethane	13.000	ug/kg	C	U	15.000	ug/kg	C	UJ
1,2-Dichloroethene	13.000	ug/kg	C	U	15.000	ug/kg	C	UJ
1,2-Dichloropropane	13.000	ug/kg	C	R	15.000	ug/kg	C	R
2-Butanone	13.000	ug/kg	C	R	15.000	ug/kg	C	R
2-Hexanone	13.000	ug/kg	C	R	15.000	ug/kg	C	R
4-Methyl-2-pentanone	13.000	ug/kg	C	R	15.000	ug/kg	C	R
Acetone	13.000	ug/kg	C	U	15.000	ug/kg	C	UJ
Benzene	13.000	ug/kg	C	R	15.000	ug/kg	C	R

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SS-05				AFP-SS-06			
SAMPLE NUMBER	112258				112259			
	0-0.5				0-0.5			
SAMPLING DATE	05/14/93				05/14/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics								
Bromodichloromethane	13.000	ug/kg	C	R	15.000	ug/kg	C	R
Bromoform	13.000	ug/kg	C	R	15.000	ug/kg	C	R
Bromomethane	13.000	ug/kg	C	U	15.000	ug/kg	C	UJ
Carbon Tetrachloride	13.000	ug/kg	C	R	15.000	ug/kg	C	R
Carbon disulfide	13.000	ug/kg	C	U	15.000	ug/kg	C	UJ
Chlorobenzene	13.000	ug/kg	C	R	15.000	ug/kg	C	R
Chloroethane	13.000	ug/kg	C	U	15.000	ug/kg	C	UJ
Chloroform	13.000	ug/kg	C	U	15.000	ug/kg	C	UJ
Chloromethane	13.000	ug/kg	C	UJ	15.000	ug/kg	C	UJ
Dibromochloromethane	13.000	ug/kg	C	R	15.000	ug/kg	C	R
Ethylbenzene	13.000	ug/kg	C	R	15.000	ug/kg	C	R
Methylene chloride	44.000	ug/kg	C	-	110.000	ug/kg	C	J
Styrene	13.000	ug/kg	C	R	15.000	ug/kg	C	R
Tetrachloroethene	13.000	ug/kg	C	R	15.000	ug/kg	C	R
Toluene	52.000	ug/kg	C	J	15.000	ug/kg	C	R
Trichloroethene	13.000	ug/kg	C	R	15.000	ug/kg	C	R
Vinyl Acetate	13.000	ug/kg	C	R	15.000	ug/kg	C	R
Vinyl chloride	13.000	ug/kg	C	U	15.000	ug/kg	C	UJ
Xylenes, Total	13.000	ug/kg	C	R	15.000	ug/kg	C	R
cis-1,3-Dichloropropene	13.000	ug/kg	C	R	15.000	ug/kg	C	R
trans-1,3-Dichloropropene	13.000	ug/kg	C	R	15.000	ug/kg	C	R
Semivolatile Organics								
1,2,4-Trichlorobenzene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
1,2-Dichlorobenzene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
1,3-Dichlorobenzene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
1,4-Dichlorobenzene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
2,4,5-Trichlorophenol	1100.000	ug/kg	C	U	1200.000	ug/kg	C	U
2,4,6-Trichlorophenol	440.000	ug/kg	C	U	490.000	ug/kg	C	U
2,4-Dichlorophenol	440.000	ug/kg	C	U	490.000	ug/kg	C	U
2,4-Dimethylphenol	440.000	ug/kg	C	U	490.000	ug/kg	C	U
2,4-Dinitrophenol	1100.000	ug/kg	C	U	1200.000	ug/kg	C	U
2,4-Dinitrotoluene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
2,6-Dinitrotoluene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
2-Chloronaphthalene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
2-Chlorophenol	440.000	ug/kg	C	U	490.000	ug/kg	C	U
2-Methylnaphthalene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
2-Methylphenol	440.000	ug/kg	C	U	490.000	ug/kg	C	U
2-Nitroaniline	1100.000	ug/kg	C	U	1200.000	ug/kg	C	R
2-Nitrophenol	440.000	ug/kg	C	U	490.000	ug/kg	C	U
3,3'-Dichlorobenzidine	440.000	ug/kg	C	UJ	490.000	ug/kg	C	R

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SS-05				AFP-SS-06			
SAMPLE NUMBER	112258				112259			
	0-0.5				0-0.5			
SAMPLING DATE	05/14/93				05/14/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics								
3-Nitroaniline	1100.000	ug/kg	C	UJ	1200.000	ug/kg	C	R
4,6-Dinitro-2-methylphenol	1100.000	ug/kg	C	U	1200.000	ug/kg	C	U
4-Bromophenyl phenyl ether	440.000	ug/kg	C	U	490.000	ug/kg	C	R
4-Chloro-3-methylphenol	440.000	ug/kg	C	U	490.000	ug/kg	C	U
4-Chlorophenylphenyl ether	440.000	ug/kg	C	U	490.000	ug/kg	C	R
4-Methylphenol	440.000	ug/kg	C	U	490.000	ug/kg	C	U
4-Nitroaniline	1100.000	ug/kg	C	U	1200.000	ug/kg	C	R
4-Nitrophenol	1100.000	ug/kg	C	U	1200.000	ug/kg	C	U
Acenaphthene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Acenaphthylene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Anthracene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Benzo(a)anthracene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Benzo(a)pyrene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Benzo(b)fluoranthene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Benzo(g,h,i)perylene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Benzo(k)fluoranthene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Butyl benzyl phthalate	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Carbazole	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Chrysene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Di-n-butyl phthalate	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Di-n-octyl phthalate	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Dibenzo(a,h)anthracene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Dibenzofuran	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Diethyl phthalate	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Dimethyl phthalate	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Fluoranthene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Fluorene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Hexachlorobenzene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Hexachlorobutadiene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Hexachlorocyclopentadiene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Hexachloroethane	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Indeno(1,2,3-cd)pyrene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Isophorone	440.000	ug/kg	C	U	490.000	ug/kg	C	R
N-Nitroso-di-n-propylamine	440.000	ug/kg	C	U	490.000	ug/kg	C	R
N-Nitrosodiphenylamine	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Naphthalene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Nitrobenzene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Pentachlorophenol	1100.000	ug/kg	C	U	1200.000	ug/kg	C	U
Phenanthrene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
Phenol	440.000	ug/kg	C	U	490.000	ug/kg	C	U
Pyrene	440.000	ug/kg	C	U	490.000	ug/kg	C	R
bis(2-Chloroethoxy)methane	440.000	ug/kg	C	U	490.000	ug/kg	C	R

TABLE G-3A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SS-05				AFP-SS-06			
SAMPLE NUMBER	112258				112259			
	0-0.5				0-0.5			
SAMPLING DATE	05/14/93				05/14/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics								
bis(2-Chloroethyl)ether	440.000	ug/kg	C	U	490.000	ug/kg	C	R
bis(2-Chloroisopropyl) ether	440.000	ug/kg	C	U	490.000	ug/kg	C	R
bis(2-Ethylhexyl) phthalate	440.000	ug/kg	C	U	490.000	ug/kg	C	R
p-Chloroaniline	440.000	ug/kg	C	UJ	490.000	ug/kg	C	R
Pesticide Organics/PCBs								
4,4'-DDD	4.500	ug/kg	C	U	5.000	ug/kg	C	UJ
4,4'-DDE	4.500	ug/kg	C	U	5.000	ug/kg	C	UJ
4,4'-DDT	4.500	ug/kg	C	U	5.000	ug/kg	C	UJ
Aldrin	2.300	ug/kg	C	U	2.600	ug/kg	C	UJ
Aroclor-1016	45.000	ug/kg	C	U	50.000	ug/kg	C	U
Aroclor-1221	91.000	ug/kg	C	U	100.000	ug/kg	C	U
Aroclor-1232	45.000	ug/kg	C	U	50.000	ug/kg	C	U
Aroclor-1242	45.000	ug/kg	C	U	50.000	ug/kg	C	U
Aroclor-1248	45.000	ug/kg	C	U	50.000	ug/kg	C	U
Aroclor-1254	45.000	ug/kg	C	U	50.000	ug/kg	C	U
Aroclor-1260	45.000	ug/kg	C	U	50.000	ug/kg	C	U
Dieldrin	4.500	ug/kg	C	U	5.000	ug/kg	C	UJ
Endosulfan II	4.500	ug/kg	C	U	5.000	ug/kg	C	UJ
Endosulfan sulfate	4.500	ug/kg	C	U	5.000	ug/kg	C	UJ
Endosulfan-I	2.300	ug/kg	C	U	2.600	ug/kg	C	UJ
Endrin	4.500	ug/kg	C	U	5.000	ug/kg	C	UJ
Endrin aldehyde	4.500	ug/kg	C	U	5.000	ug/kg	C	U
Endrin ketone	4.500	ug/kg	C	U	5.000	ug/kg	C	UJ
Heptachlor	2.300	ug/kg	C	U	2.600	ug/kg	C	UJ
Heptachlor epoxide	2.300	ug/kg	C	U	2.600	ug/kg	C	UJ
Methoxychlor	23.000	ug/kg	C	U	26.000	ug/kg	C	UJ
Toxaphene	230.000	ug/kg	C	U	260.000	ug/kg	C	U
alpha-BHC	2.300	ug/kg	C	U	2.600	ug/kg	C	UJ
alpha-Chlordane	2.300	ug/kg	C	U	2.600	ug/kg	C	UJ
beta-BHC	2.300	ug/kg	C	U	2.600	ug/kg	C	UJ
delta-BHC	2.300	ug/kg	C	U	2.600	ug/kg	C	UJ
gamma-BHC (Lindane)	2.300	ug/kg	C	U	2.600	ug/kg	C	UJ
gamma-Chlordane	2.300	ug/kg	C	U	2.600	ug/kg	C	UJ

TABLE G-3B
ACTIVE FLYASH PILE
TENTATIVELY IDENTIFIED COMPOUNDS
SURFACE SOIL

Sample Number	Sample Location	Parameter	Result	Units
112258	AFP-SS-05	hexanedioic acid, dioctyl es	10000	ug/kg
112258	AFP-SS-05	pentacosane	380	ug/kg
112259	AFP-SS-06	1,2-benzenedicarboxylic acid	550	ug/kg
112259	AFP-SS-06	tetradecane	140	ug/kg
112259	AFP-SS-06	pentacosane	340	ug/kg
112259	AFP-SS-06	pentacosane	580	ug/kg
112259	AFP-SS-06	pentacosane	480	ug/kg
112259	AFP-SS-06	pentacosane	370	ug/kg
112259	AFP-SS-06	methane, trichlorofluoro	22	ug/kg
112259	AFP-SS-06	cyclotrisiloxane, hexamethyl	590	ug/kg
112259	AFP-SS-06	cyclotetrasiloxane, octameth	3200	ug/kg
115350	1988	dodecanoic acid	230	ug/kg
115351	1988	tetracecane	95	ug/kg
115351	1988	pentadecane	330	ug/kg
115351	1988	hexadecane	310	ug/kg
115351	1988	heptadecane	400	ug/kg
115351	1988	nonadecane	270	ug/kg
115351	1988	eicosane	220	ug/kg

TABLE G-3B
ACTIVE FLYASH PILE
TENTATIVELY IDENTIFIED COMPOUNDS
SURFACE SOIL

Sample Number	Sample Location	Parameter	Result	Units
112241	AFP-SD-02	2-cyclohexen-1-ol	180	ug/kg
112241	AFP-SD-02	2,5-furandione, dihydro-3-me	220	ug/kg
112241	AFP-SD-02	glycene, n-methyl-n-(1-oxodo	200	ug/kg
112241	AFP-SD-02	undecane, 2,10-dimethyl-	140	ug/kg
112241	AFP-SD-02	octane, 6-ethyl-2-methyl-	320	ug/kg
112241	AFP-SD-02	decane, 2,3,5-trimethyl-	230	ug/kg
112241	AFP-SD-02	undecane, 2,10-dimethyl-	580	ug/kg
112241	AFP-SD-02	tetradecane, 2-methyl-	2800	ug/kg
112241	AFP-SD-02	1-decanol, 2,2-dimethyl-	3100	ug/kg
112241	AFP-SD-02	undecane, 2,10-dimethyl-	1200	ug/kg
112251	AFP-SD-03	phenol, 4,4'-(1-methylethyli	130	ug/kg
112251	AFP-SD-03	benzeneacetic acid	5100	ug/kg
112251	AFP-SD-03	benzenepropanoic acid	7800	ug/kg
112251	AFP-SD-03	dodecanoic acid	3200	ug/kg
112251	AFP-SD-03	hexadecanoic acid	1600	ug/kg
112251	AFP-SD-03	cholest-5-en-3-ol (3.beta.)-	4000	ug/kg
112252	AFP-SS-01	cyclopentasiloxane, decameth	430	ug/kg
112252	AFP-SS-01	cyclotrisiloxane, hexamethyl	270	ug/kg
112252	AFP-SS-01	cyclotetrasiloxane, octameth	230	ug/kg
112252	AFP-SS-01	pentacosane	620	ug/kg
112252	AFP-SS-01	pentacosane	620	ug/kg
112252	AFP-SS-01	pentacosane	580	ug/kg
112252	AFP-SS-01	pentacosane	460	ug/kg
112252	AFP-SS-01	benzoic acid	140	ug/kg
112254	AFP-SS-02	cyclotetrasiloxane, octameth	3100	ug/kg
112254	AFP-SS-02	octanoic acid	250	ug/kg
112254	AFP-SS-02	dodecnoic acid	390	ug/kg
112254	AFP-SS-02	tetracosane	730	ug/kg
112254	AFP-SS-02	hexanedioic acid, mono(2-eth	520	ug/kg
112254	AFP-SS-02	pentacosane	780	ug/kg
112254	AFP-SS-02	pentacosane	700	ug/kg
112254	AFP-SS-02	pentacosane	520	ug/kg
112254	AFP-SS-02	benzoic acid	140	ug/kg
112255	AFP-SS-03	cyclopentasiloxane, decameth	1400	ug/kg
112255	AFP-SS-03	3-penten-2-one, 4-methyl-	250	ug/kg
112255	AFP-SS-03	dodecanoic acid	250	ug/kg
112255	AFP-SS-03	heptadecane, 2,6-dimethyl-	270	ug/kg
112255	AFP-SS-03	1,2-benzenedicarboxylic acid	530	ug/kg
112255	AFP-SS-03	9-octadecene-1-ol, (z)-	1100	ug/kg
112255	AFP-SS-03	docosane	250	ug/kg
112255	AFP-SS-03	pentacosane	490	ug/kg
112255	AFP-SS-03	pentacosane	660	ug/kg
112255	AFP-SS-03	pentacosane	910	ug/kg
112255	AFP-SS-03	pentacosane	800	ug/kg
112255	AFP-SS-03	pentacosane	610	ug/kg
112255	AFP-SS-03	benzoic acid	130	ug/kg
112257	AFP-SS-04	cyclopropane, 1,1,2,2-tetram	390	ug/kg
112257	AFP-SS-04	1-hexadecyne	1300	ug/kg
112257	AFP-SS-04	pentacosane	1600	ug/kg
112257	AFP-SS-04	hexanedioic acid, dioctyl es	18000	ug/kg
112257	AFP-SS-04	pentacosane	3400	ug/kg
112257	AFP-SS-04	pentacosane	2800	ug/kg
112257	AFP-SS-04	pentacosane	2000	ug/kg
112258	AFP-SS-05	cyclotrisiloxane, hexamethyl	330	ug/kg
112258	AFP-SS-05	heptadecane, 2,6-dimethyl-	220	ug/kg
112258	AFP-SS-05	1,2-benzenedicarboxylic acid	290	ug/kg
112258	AFP-SS-05	1-hexadecyne	620	ug/kg

TABLE G-4

TABLE G-4

ACTIVE FLYASH PILE
CIS SURFACE SOIL RESULTS
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

FEMP ID #	SL25022			SL25014			SL25016			SL25013		
Depth	2-6"			6-12"			2-6"			2-6"		
Date	04/16/87			04/15/87			04/15/87			04/15/87		
Isotope	Activity (pCi/g)	Uncertainty	Validation Qualifier	Activity (pCi/g)	Uncertainity	Validation Qualifier	Activity (pCi/g)	Uncertainty	Validation Qualifier	Activity (pCi/g)	Uncertainty	Validation Qualifier
Cesium-137	0.67	±0.23		0.39	±0.17		0.22	NA[a]	U	0.3	NA	UJ
Neptunium-237	0.04	NA	U	0.04	NA	U	0.03	NA	U	0.04	NA	U
Plutonium-239/240	0.20	NA	U	0.25	NA	U	0.21	NA	U	0.1	NA	UJ
Plutonium-238	0.65	NA	U	0.32	NA	U	0.26	NA	U	0.1	NA	UJ
Ruthenium-106	1.70	NA	U	1.88	±1.35		1.70	NA	U	2.0	NA	UJ
Strontium-90	0.27	NA	U	0.22	NA	U	0.23	NA	U	0.80	NA	U
Technetium-99	1.30	NA	U	1.40	NA	U	1.30	NA	U	1.20	NA	U
Thorium-228	0.26	±0.10	J	3.29	±0.56	J	1.40	±0.26	J	0.2	±0.1	J
Thorium-230	1.31	±0.19	J	14.8	±1.17	J	52.2	±1.55		36	±1	J
Thorium-232	0.22	±0.08	J	1.37	±0.36	J	2.91	±0.37		0.1	±0.1	J
Uranium-234	20.8	±1.23	J	34.9	±1.01	J	16.8	±0.70	J	12	±1	J
Uranium-235	0.81	±0.27	J	2.45	±0.27	J	0.78	±0.15	J	0.4	±0.1	J
Uranium-238	22.1	±1.27	J	148	±2.08	J	18.7	±0.74	J	14	±1	J

[a]Not Applicable

TABLE G-5

TABLE G-5

ACTIVE FLYASH PILE
SURFACE MEDIA ENVIRONMENTAL SURVEY
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Analyte	FEO100WP	FEO101WP	FEO102WP	FEO103WP	FEO104WP	FEO105WP	FEO106WP	FEO107WP
Asbestos	ND	ND	ND	ND	ND	ND	ND	ND
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
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-Trichloroethane	73	<5	<5	<5	190	<5	<5	<5
1,1,2,2-Tetrachlorethane	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	<5	<5	<5	<5	<5	<5	<5	<5
2-Butanone	<10	<10	<10	<10	<10	<10	<10	29
2-Chloroethylvinyl ether	<10	<10	<10	<10	<10	<10	<10	<10
2-Hexanone	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl 2-pentanone	<10	<10	<10	<10	<10	<10	<10	<10
Acetone	940QZ5	770QZ5	580QZ5	280QZ5	170QZ5	420QZ5	110Q25	200QZ5
Benzene	<5	<5	<5	<5	<5	<5	<5	<5

See notes at end of table

TABLE G-5
(Continued)

Analyte	FEO100WP	FEO101WP	FEO102WP	FEO103WP	FEO104WP	FEO105WP	FEO106WP	FEO107WP
VOLATILE ORGANIC COMPOUNDS (μg/kg) (Continued)								
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
Dibromochloromethane	<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
Styrene	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	<5	<5	<5	<5	<5	<5	<5	<5
Toluene	34	19	<5	<5	89	<5	<5	<5
Total xylenes	<5	<5	<5	<5	<5	<5	<5	<5
Trans 1,2-dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5
Trans 1,3-dichloropropene	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl acetate	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl chloride	<10	<10	<10	<10	<10	<10	<10	<10
PCBs (mg/kg)								
Aroclor-1242	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	NA

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
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 G-6

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TABLE G-6A

ACTIVE FLYASH PILE
RI/FS SUBSURFACE SOIL RESULTS
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	1045			1048			1048		
SAMPLE NUMBER	007207			007217			007220		
	7.5 - 9			1.5 - 3			1.5 - 3		
SAMPLING DATE	10/07/87			10/13/87			10/13/87		
							DUPLICATE		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
CS-137	0.200	pci/g	UJ	0.200	pci/g	UJ	0.200	pci/g	UJ
NP-237	0.600	pci/g	UJ	0.600	pci/g	UJ	0.600	pci/g	UJ
PU-238	0.600	pci/g	U	0.600	pci/g	U	0.600	pci/g	U
PU-239/240	0.600	pci/g	U	0.600	pci/g	U	0.600	pci/g	U
RA-226	0.400	pci/g	UJ	0.900	pci/g	J	0.500	pci/g	J
RA-228	0.500	pci/g	R	1.200	pci/g	J	0.600	pci/g	J
RU-106	1.200	pci/g	UJ	1.000	pci/g	UJ	1.000	pci/g	UJ
SR-90	1.200	pci/g	-	0.500	pci/g	R	0.500	pci/g	R
TC-99	2.800	pci/g	NV	0.900	pci/g	NV	0.900	pci/g	NV
TH-228	1.100	pci/g	-	1.600	pci/g	-	1.200	pci/g	-
TH-230	1.800	pci/g	-	1.900	pci/g	-	2.200	pci/g	-
TH-232	1.200	pci/g	-	0.900	pci/g	-	1.000	pci/g	-
U-234	1.000	pci/g	-	1.000	pci/g	J	1.400	pci/g	J
U-235/236	0.600	pci/g	U	0.600	pci/g	UJ	0.600	pci/g	UJ
U-238	0.900	pci/g	-	2.400	pci/g	J	2.800	pci/g	J

000085

TABLE G-6A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	1406			1406			1406		
SAMPLE NUMBER	098010			098011			098012		
	0 - 0.5			1.5 - 2			2 - 2.5		
SAMPLING DATE	05/16/89			05/16/89			05/16/89		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
U-TOTAL	7.000	mg/kg	-	4.000	mg/kg	-	4.000	mg/kg	R

000086

TABLE G-6A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	1406			1406			1406		
SAMPLE NUMBER	098014			098017			098020		
	3.5 - 4			6 - 6.5			9.5 - 10		
SAMPLING DATE	05/16/89			05/16/89			05/16/89		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
U-TOTAL	7.000	mg/kg	-	8.000	mg/kg	-	6.000	mg/kg	R

TABLE G-6A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	1406			1406			1723		
SAMPLE NUMBER	098024			098028			067166		
	13.5 - 14			16.5 - 17			3 - 4.5		
SAMPLING DATE	05/16/89			05/16/89			07/11/91		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
CS-137	NA			NA			0.200	pci/g	UJ
NP-237	NA			NA			0.600	pci/g	U
PU-238	NA			NA			0.600	pci/g	UJ
PU-239/240	NA			NA			0.600	pci/g	R
RA-226	NA			NA			4.120	pci/g	J
RA-228	NA			NA			3.890	pci/g	J
RU-106	NA			NA			1.000	pci/g	UJ
SR-90	NA			NA			1.010	pci/g	J
TC-99	NA			NA			0.900	pci/g	U
TH-228	NA			NA			3.460	pci/g	J
TH-230	NA			NA			3.550	pci/g	J
TH-232	NA			NA			2.840	pci/g	J
TH-TOTAL	NA			NA			25.600	ug/g	J
U-234	NA			NA			4.770	pci/g	J
U-235/236	NA			NA			0.600	pci/g	UJ
U-238	NA			NA			4.920	pci/g	J
U-TOTAL	7.000	mg/kg	-	4.000	mg/kg	-	11.700	mg/kg	J

000088

TABLE G-6A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	1723			1723			1724		
SAMPLE NUMBER	067172			067182			067192		
	12 - 13.5			26 - 27.5			3 - 4.5		
SAMPLING DATE	07/11/91			07/12/91			07/13/91		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
CS-137	0.200	pci/g	UJ	0.200	pci/g	UJ	0.200	pci/g	UJ
NP-237	0.600	pci/g	U	0.600	pci/g	U	0.600	pci/g	U
PU-238	0.600	pci/g	UJ	0.600	pci/g	UJ	0.600	pci/g	UJ
PU-239/240	0.600	pci/g	R	0.600	pci/g	R	0.600	pci/g	R
RA-226	4.050	pci/g	J	0.760	pci/g	J	6.220	pci/g	J
RA-228	2.830	pci/g	J	0.560	pci/g	J	5.320	pci/g	J
RU-106	1.000	pci/g	UJ	1.000	pci/g	UJ	1.000	pci/g	UJ
SR-90	1.090	pci/g	J	0.700	pci/g	J	1.530	pci/g	J
TC-99	0.900	pci/g	U	0.900	pci/g	U	0.900	pci/g	U
TH-228	2.990	pci/g	J	1.760	pci/g	J	5.790	pci/g	J
TH-230	3.020	pci/g	J	0.850	pci/g	J	6.080	pci/g	J
TH-232	1.930	pci/g	J	0.610	pci/g	J	5.080	pci/g	J
TH-TOTAL	17.400	ug/g	J	5.490	ug/g	J	45.800	ug/g	J
U-234	4.340	pci/g	J	0.960	pci/g	J	4.750	pci/g	J
U-235/236	0.600	pci/g	UJ	0.600	pci/g	UJ	0.600	pci/g	UJ
U-238	7.960	pci/g	J	1.050	pci/g	J	4.960	pci/g	J
U-TOTAL	31.300	mg/kg	J	2.720	mg/kg	J	18.400	mg/kg	J

TABLE G-6A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	1724			1724			1726		
SAMPLE NUMBER	067200			067217			067146		
	14.5 - 16			40 - 41.5			4.5 - 6		
SAMPLING DATE	07/14/91			07/16/91			06/29/91		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
CS-137	0.100	pci/g	UJ	0.200	pci/g	UJ	0.200	pci/g	U
GROSS ALPHA	NA			NA			59.200	pci/g	NV
GROSS BETA	NA			NA			37.000	pci/g	NV
NP-237	0.600	pci/g	U	NA			0.600	pci/g	UJ
PB-210	NA			NA			1.520	pci/g	-
PU-238	0.600	pci/g	UJ	0.600	pci/g	UJ	0.600	pci/g	U
PU-239/240	0.600	pci/g	R	0.600	pci/g	U	0.600	pci/g	U
RA-224	NA			NA			3.440	pci/g	-
RA-226	3.600	pci/g	J	1.130	pci/g	J	3.040	pci/g	-
RA-228	2.760	pci/g	J	0.820	pci/g	J	2.910	pci/g	-
RU-106	1.000	pci/g	UJ	1.000	pci/g	UJ	1.300	pci/g	U
SR-90	1.270	pci/g	J	3.610	pci/g	-	0.900	pci/g	U
TC-99	0.900	pci/g	U	0.900	pci/g	U	0.900	pci/g	U
TH-228	3.210	pci/g	J	1.160	pci/g	J	2.910	pci/g	J
TH-230	3.450	pci/g	J	1.330	pci/g	J	5.920	pci/g	J
TH-232	2.420	pci/g	J	0.520	pci/g	-	2.910	pci/g	J
TH-TOTAL	21.900	ug/g	J	4.690	ug/g	-	26.200	ug/g	J
U-234	4.010	pci/g	J	1.270	pci/g	J	17.300	pci/g	-
U-235	NA			NA			0.600	pci/g	J
U-235/236	0.600	pci/g	UJ	0.600	pci/g	UJ	4.120	pci/g	J
U-238	5.530	pci/g	J	2.040	pci/g	-	12.600	pci/g	-
U-TOTAL	16.400	mg/kg	J	7.170	mg/kg	J	28.100	mg/kg	J

000090

TABLE G-6A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	1726			1726			1726		
SAMPLE NUMBER	067148			067153			067154		
	7.5 - 9			15 - 16.5			16.5 - 18		
SAMPLING DATE	07/01/91			07/01/91			07/01/91		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
CS-137	0.200	pci/g	UJ	0.200	pci/g	U	0.200	pci/g	UJ
GROSS ALPHA	NA			51.900	pci/g	NV	NA		
GROSS BETA	NA			47.200	pci/g	NV	NA		
NP-237	NA			0.600	pci/g	UJ	NA		
PB-210	NA			1.630	pci/g	-	NA		
PU-238	0.600	pci/g	UJ	0.600	pci/g	U	0.600	pci/g	UJ
PU-239/240	0.600	pci/g	U	0.600	pci/g	U	0.600	pci/g	U
RA-224	NA			3.740	pci/g	-	NA		
RA-226	4.510	pci/g	J	3.760	pci/g	-	4.520	pci/g	J
RA-228	3.610	pci/g	J	2.850	pci/g	-	3.450	pci/g	J
RU-106	1.000	pci/g	UJ	1.200	pci/g	U	1.000	pci/g	UJ
SR-90	1.370	pci/g	-	0.900	pci/g	U	1.160	pci/g	J
TC-99	0.900	pci/g	U	0.900	pci/g	U	0.900	pci/g	U
TH-228	3.460	pci/g	J	2.930	pci/g	J	4.470	pci/g	J
TH-230	3.700	pci/g	J	3.800	pci/g	J	3.620	pci/g	J
TH-232	2.800	pci/g	-	2.370	pci/g	J	2.800	pci/g	-
TH-TOTAL	25.300	ug/g	-	21.400	ug/g	J	25.300	ug/g	-
U-234	3.900	pci/g	J	12.300	pci/g	-	5.700	pci/g	J
U-235	NA			0.400	pci/g	U	NA		
U-235/236	0.600	pci/g	UJ	3.420	pci/g	-	0.600	pci/g	UJ
U-238	3.770	pci/g	-	9.670	pci/g	-	7.930	pci/g	-
U-TOTAL	18.500	mg/kg	J	27.700	mg/kg	J	28.100	mg/kg	J

TABLE G-6A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	1726			1820			1820		
SAMPLE NUMBER	067156			067503			067505		
	19.5 - 21			1.5 - 3			6 - 7.5		
SAMPLING DATE	07/01/91			10/16/91			10/16/91		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
CS-137	0.200	pci/g	UJ	0.200	pci/g	UJ	0.200	pci/g	UJ
PU-238	0.600	pci/g	UJ	0.600	pci/g	UJ	0.600	pci/g	UJ
PU-239/240	0.600	pci/g	U	0.600	pci/g	R	0.600	pci/g	R
RA-226	1.450	pci/g	J	3.160	pci/g	J	2.530	pci/g	J
RA-228	1.040	pci/g	J	2.700	pci/g	J	2.230	pci/g	J
RU-106	1.000	pci/g	UJ	1.000	pci/g	UJ	1.000	pci/g	UJ
SR-90	1.210	pci/g	J	1.400	pci/g	-	0.500	pci/g	U
TC-99	0.900	pci/g	U	0.900	pci/g	R	0.900	pci/g	R
TH-228	2.090	pci/g	J	3.180	pci/g	J	3.440	pci/g	J
TH-230	1.970	pci/g	J	3.000	pci/g	J	4.010	pci/g	J
TH-232	0.903	pci/g	-	1.890	pci/g	-	2.820	pci/g	-
TH-TOTAL	8.140	ug/g	-	17.000	ug/g	-	25.400	ug/g	-
U-234	0.932	pci/g	J	3.680	pci/g	J	3.080	pci/g	J
U-235/236	0.600	pci/g	UJ	0.600	pci/g	UJ	0.600	pci/g	UJ
U-238	1.110	pci/g	-	3.150	pci/g	-	7.230	pci/g	-
U-TOTAL	3.080	mg/kg	J	9.080	mg/kg	J	20.700	mg/kg	J

000032

TABLE G-6A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	1820			2045			2048		
SAMPLE NUMBER	067506			008948			020498		
	9.5 - 12			35 - 36.5			65 - 66.5		
SAMPLING DATE	10/16/91			12/06/88			11/30/88		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
CS-137	0.200	pci/g	UJ	0.200	pci/g	UJ	0.200	pci/g	R
NP-237	NA			0.600	pci/g	U	0.600	pci/g	U
PU-238	0.600	pci/g	UJ	0.600	pci/g	UJ	0.600	pci/g	UJ
PU-239/240	0.600	pci/g	R	0.600	pci/g	UJ	0.600	pci/g	UJ
RA-226	0.470	pci/g	J	0.400	pci/g	J	0.300	pci/g	R
RA-228	0.740	pci/g	J	0.500	pci/g	UJ	0.600	pci/g	R
RU-106	1.000	pci/g	UJ	1.000	pci/g	UJ	1.000	pci/g	R
SR-90	0.600	pci/g	U	0.500	pci/g	-	0.500	pci/g	U
TC-99	0.900	pci/g	R	0.900	pci/g	U	0.900	pci/g	U
TH-228	0.813	pci/g	J	0.600	pci/g	UJ	0.600	pci/g	U
TH-230	1.120	pci/g	J	0.700	pci/g	J	0.700	pci/g	-
TH-232	0.600	pci/g	U	0.600	pci/g	J	0.600	pci/g	U
TH-TOTAL	3.380	ug/g	-	NA			NA		
U-234	0.920	pci/g	J	0.600	pci/g	U	0.600	pci/g	U
U-235/236	0.600	pci/g	UJ	0.600	pci/g	U	0.600	pci/g	U
U-238	0.970	pci/g	-	0.600	pci/g	U	0.600	pci/g	U
U-TOTAL	3.900	mg/kg	UJ	2.000	mg/kg	J	2.000	mg/kg	R

TABLE G-6A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	3045
SAMPLE NUMBER	032609
	105 - 106.5
SAMPLING DATE	05/09/90

RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ
CS-137	0.200	pci/g	UJ
NP-237	0.600	pci/g	U
PU-238	0.600	pci/g	U
PU-239/240	0.600	pci/g	U
RA-226	0.594	pci/g	J
RA-228	0.537	pci/g	J
RU-106	1.000	pci/g	UJ
SR-90	0.500	pci/g	R
TC-99	1.000	pci/g	U
TH-228	1.190	pci/g	J
TH-230	1.420	pci/g	J
TH-232	0.965	pci/g	J
TH-TOTAL	8.710	ug/g	J
U-234	0.921	pci/g	J
U-235	0.600	pci/g	NV
U-235/236	0.600	pci/g	UJ
U-238	0.754	pci/g	J
U-TOTAL	2.850	mg/kg	J

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1723				1723				1723			
SAMPLE NUMBER	067167				067173				067184			
	4.5-6				13.5-15				29-30.5			
SAMPLING DATE	07/11/91				07/11/91				07/12/91			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Inorganics												
Aluminum	5840.000	mg/kg	D	-	4900.000	mg/kg	D	-	3660.000	mg/kg	D	-
Antimony	7.700	mg/kg	D	R	7.500	mg/kg	D	R	31.100	mg/kg	D	J
Arsenic	51.100	mg/kg	D	-	66.100	mg/kg	D	-	8.400	mg/kg	D	-
Barium	508.000	mg/kg	D	-	116.000	mg/kg	D	-	31.200	mg/kg	D	-
Beryllium	3.900	mg/kg	D	-	4.600	mg/kg	D	-	0.750	mg/kg	D	-
Cadmium	0.520	mg/kg	D	UJ	0.500	mg/kg	D	UJ	5.200	mg/kg	D	J
Calcium	3010.000	mg/kg	D	-	2440.000	mg/kg	D	-	155000.000	mg/kg	D	-
Chromium	11.600	mg/kg	D	-	12.100	mg/kg	D	-	26.800	mg/kg	D	-
Cobalt	14.300	mg/kg	D	-	18.800	mg/kg	D	-	9.600	mg/kg	D	J
Copper	59.400	mg/kg	D	-	66.100	mg/kg	D	-	21.300	mg/kg	D	-
Cyanide	0.140	mg/kg	D	U	0.260	mg/kg	D	-	0.120	mg/kg	D	U
Iron	3830.000	mg/kg	D	-	5200.000	mg/kg	D	-	16400.000	mg/kg	D	-
Lead	42.200	mg/kg	D	-	46.700	mg/kg	D	-	7.900	mg/kg	D	-
Magnesium	484.000	mg/kg	D	-	466.000	mg/kg	D	-	35500.000	mg/kg	D	-
Manganese	45.700	mg/kg	D	-	20.300	mg/kg	D	-	458.000	mg/kg	D	-
Mercury	0.130	mg/kg	D	UJ	0.120	mg/kg	D	UJ	0.120	mg/kg	D	U
Molybdenum	8.600	mg/kg	D	-	12.500	mg/kg	D	-	12.500	mg/kg	D	J
Nickel	29.500	mg/kg	D	-	45.700	mg/kg	D	-	25.700	mg/kg	D	-
Potassium	1230.000	mg/kg	D	-	975.000	mg/kg	D	-	527.000	mg/kg	D	-
Selenium	5.500	mg/kg	D	-	3.400	mg/kg	D	-	0.430	mg/kg	D	U
Silver	2.600	mg/kg	D	UJ	2.500	mg/kg	D	UJ	18.500	mg/kg	D	-
Sodium	312.000	mg/kg	D	-	254.000	mg/kg	D	-	247.000	mg/kg	D	-
Thallium	2.100	mg/kg	D	-	2.000	mg/kg	D	-	0.430	mg/kg	D	U
Vanadium	32.200	mg/kg	D	-	40.300	mg/kg	D	-	22.900	mg/kg	D	J
Zinc	78.200	mg/kg	D	-	117.000	mg/kg	D	-	33.100	mg/kg	D	-
Volatile Organics												
1,1,1-Trichloroethane	80.000	ug/kg	D	J	6.000	ug/kg	D	R	25.000	ug/kg	D	-
1,1,2,2-Tetrachloroethane	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
1,1,2-Trichloroethane	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
1,1-Dichloroethane	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
1,1-Dichloroethene	7.000	ug/kg	D	R	6.000	ug/kg	D	R	2.000	ug/kg	D	J
1,2-Dichloroethane	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
1,2-Dichloroethene	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
1,2-Dichloropropane	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
2-Butanone	14.000	ug/kg	D	R	13.000	ug/kg	D	R	12.000	ug/kg	D	U
2-Hexanone	14.000	ug/kg	D	R	13.000	ug/kg	D	R	12.000	ug/kg	D	U
4-Methyl-2-pentanone	14.000	ug/kg	D	R	13.000	ug/kg	D	R	12.000	ug/kg	D	U
Acetone	14.000	ug/kg	D	R	13.000	ug/kg	D	R	12.000	ug/kg	D	U
Benzene	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
Bromodichloromethane	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1723				1723				1723			
SAMPLE NUMBER	067167				067173				067184			
	4.5-6				13.5-15				29-30.5			
SAMPLING DATE	07/11/91				07/11/91				07/12/91			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
Bromoform	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
Bromomethane	14.000	ug/kg	D	R	13.000	ug/kg	D	R	12.000	ug/kg	D	U
Carbon Tetrachloride	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
Carbon disulfide	7.000	ug/kg	D	R	7.000	ug/kg	D	J	6.000	ug/kg	D	U
Chlorobenzene	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
Chloroethane	14.000	ug/kg	D	R	13.000	ug/kg	D	R	12.000	ug/kg	D	U
Chloroform	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
Chloromethane	14.000	ug/kg	D	R	13.000	ug/kg	D	R	12.000	ug/kg	D	U
Dibromochloromethane	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
Ethylbenzene	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
Methylene chloride	37.000	ug/kg	D	J	65.000	ug/kg	D	J	13.000	ug/kg	D	U
Styrene	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
Tetrachloroethene	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
Toluene	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
Trichloroethene	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
Vinyl Acetate	14.000	ug/kg	D	R	13.000	ug/kg	D	R	12.000	ug/kg	D	U
Vinyl chloride	14.000	ug/kg	D	R	13.000	ug/kg	D	R	12.000	ug/kg	D	U
Xylenes, Total	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
cis-1,3-Dichloropropene	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
trans-1,3-Dichloropropene	7.000	ug/kg	D	R	6.000	ug/kg	D	R	6.000	ug/kg	D	U
Semivolatile Organics												
1,2,4-Trichlorobenzene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
1,2-Dichlorobenzene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
1,3-Dichlorobenzene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
1,4-Dichlorobenzene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
2,4,5-Trichlorophenol	2200.000	ug/kg	D	U	2100.000	ug/kg	D	U	1900.000	ug/kg	D	U
2,4,6-Trichlorophenol	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
2,4-Dichlorophenol	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
2,4-Dimethylphenol	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
2,4-Dinitrophenol	2200.000	ug/kg	D	UJ	2100.000	ug/kg	D	UJ	1900.000	ug/kg	D	UJ
2,4-Dinitrotoluene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
2,6-Dinitrotoluene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
2-Chloronaphthalene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
2-Chlorophenol	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
2-Methylnaphthalene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
2-Methylphenol	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
2-Nitroaniline	2200.000	ug/kg	D	U	2100.000	ug/kg	D	U	1900.000	ug/kg	D	U
2-Nitrophenol	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
3,3'-Dichlorobenzidine	890.000	ug/kg	D	U	870.000	ug/kg	D	U	780.000	ug/kg	D	U
3-Nitroaniline	2200.000	ug/kg	D	U	2100.000	ug/kg	D	U	1900.000	ug/kg	D	UJ

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1723				1723				1723			
SAMPLE NUMBER	067167				067173				067184			
	4.5-6				13.5-15				29-30.5			
SAMPLING DATE	07/11/91				07/11/91				07/12/91			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
4,6-Dinitro-2-methylphenol	2200.000	ug/kg	D	UJ	2100.000	ug/kg	D	UJ	1900.000	ug/kg	D	U
4-Bromophenyl phenyl ether	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
4-Chloro-3-methylphenol	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
4-Chlorophenylphenyl ether	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
4-Methylphenol	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
4-Nitroaniline	2200.000	ug/kg	D	U	2100.000	ug/kg	D	U	1900.000	ug/kg	D	U
4-Nitrophenol	2200.000	ug/kg	D	U	2100.000	ug/kg	D	U	1900.000	ug/kg	D	U
Acenaphthene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Acenaphthylene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Anthracene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Benzo(a)anthracene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Benzo(a)pyrene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Benzo(b)fluoranthene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Benzo(g,h,i)perylene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Benzo(k)fluoranthene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Benzoic acid	2200.000	ug/kg	D	UJ	2100.000	ug/kg	D	UJ	1900.000	ug/kg	D	UJ
Benzyl alcohol	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Butyl benzyl phthalate	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Chrysene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Di-n-butyl phthalate	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Di-n-octyl phthalate	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Dibenzo(a,h)anthracene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Dibenzofuran	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Diethyl phthalate	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Dimethyl phthalate	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Fluoranthene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Fluorene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Hexachlorobenzene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Hexachlorobutadiene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Hexachlorocyclopentadiene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Hexachloroethane	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Indeno(1,2,3-cd)pyrene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Isophorone	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
N-Nitroso-di-n-propylamine	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
N-Nitrosodiphenylamine	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Naphthalene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Nitrobenzene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Pentachlorophenol	2200.000	ug/kg	D	U	2100.000	ug/kg	D	U	1900.000	ug/kg	D	U
Phenanthrene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Phenol	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Pyrene	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
bis(2-Chloroethoxy)methane	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U

6510
000097

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1723				1723				1723			
SAMPLE NUMBER	067167				067173				067184			
	4.5-6				13.5-15				29-30.5			
SAMPLING DATE	07/11/91				07/11/91				07/12/91			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
bis(2-Chloroethyl)ether	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
bis(2-Chloroisopropyl) ether	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
bis(2-Ethylhexyl) phthalate	450.000	ug/kg	D	U	430.000	ug/kg	D	U	42.000	ug/kg	D	J
p-Chloroaniline	450.000	ug/kg	D	U	430.000	ug/kg	D	U	390.000	ug/kg	D	U
Pesticide Organics/PCBs												
4,4'-DDD	22.000	ug/kg	D	U	21.000	ug/kg	D	U	19.000	ug/kg	D	U
4,4'-DDE	22.000	ug/kg	D	U	21.000	ug/kg	D	U	19.000	ug/kg	D	U
4,4'-DDT	22.000	ug/kg	D	U	21.000	ug/kg	D	U	19.000	ug/kg	D	U
Aldrin	11.000	ug/kg	D	U	10.000	ug/kg	D	U	9.600	ug/kg	D	U
Aroclor-1016	110.000	ug/kg	D	U	100.000	ug/kg	D	U	96.000	ug/kg	D	U
Aroclor-1221	110.000	ug/kg	D	U	100.000	ug/kg	D	U	96.000	ug/kg	D	U
Aroclor-1232	110.000	ug/kg	D	U	100.000	ug/kg	D	U	96.000	ug/kg	D	U
Aroclor-1242	110.000	ug/kg	D	U	100.000	ug/kg	D	U	96.000	ug/kg	D	U
Aroclor-1248	110.000	ug/kg	D	U	100.000	ug/kg	D	U	96.000	ug/kg	D	U
Aroclor-1254	220.000	ug/kg	D	U	210.000	ug/kg	D	U	190.000	ug/kg	D	U
Aroclor-1260	220.000	ug/kg	D	U	210.000	ug/kg	D	U	190.000	ug/kg	D	U
Dieldrin	22.000	ug/kg	D	U	21.000	ug/kg	D	U	19.000	ug/kg	D	U
Endosulfan II	22.000	ug/kg	D	U	21.000	ug/kg	D	U	19.000	ug/kg	D	U
Endosulfan sulfate	22.000	ug/kg	D	U	21.000	ug/kg	D	U	19.000	ug/kg	D	U
Endosulfan-I	11.000	ug/kg	D	U	10.000	ug/kg	D	U	9.600	ug/kg	D	U
Endrin	22.000	ug/kg	D	U	21.000	ug/kg	D	U	19.000	ug/kg	D	U
Endrin ketone	22.000	ug/kg	D	U	21.000	ug/kg	D	U	19.000	ug/kg	D	U
Heptachlor	11.000	ug/kg	D	U	10.000	ug/kg	D	U	9.600	ug/kg	D	U
Heptachlor epoxide	11.000	ug/kg	D	U	10.000	ug/kg	D	U	9.600	ug/kg	D	U
Methoxychlor	110.000	ug/kg	D	U	100.000	ug/kg	D	U	96.000	ug/kg	D	U
Toxaphene	220.000	ug/kg	D	U	210.000	ug/kg	D	U	190.000	ug/kg	D	U
alpha-BHC	11.000	ug/kg	D	U	10.000	ug/kg	D	U	9.600	ug/kg	D	U
alpha-Chlordane	110.000	ug/kg	D	U	100.000	ug/kg	D	U	96.000	ug/kg	D	U
beta-BHC	11.000	ug/kg	D	U	10.000	ug/kg	D	U	9.600	ug/kg	D	U
delta-BHC	11.000	ug/kg	D	U	10.000	ug/kg	D	U	9.600	ug/kg	D	U
gamma-BHC (Lindane)	11.000	ug/kg	D	U	10.000	ug/kg	D	U	9.600	ug/kg	D	U
gamma-Chlordane	110.000	ug/kg	D	U	100.000	ug/kg	D	U	96.000	ug/kg	D	U

000058

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1724				1724				1724			
SAMPLE NUMBER	067193				067201				067218			
	4.5-6				16-17.5				41.5-43			
SAMPLING DATE	07/13/91				07/14/91				07/16/91			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Inorganics												
Aluminum	2860.000	mg/kg	D	-	3310.000	mg/kg	D	-	6360.000	mg/kg	D	-
Antimony	7.000	mg/kg	D	R	7.800	mg/kg	D	R	9.000	mg/kg	D	J
Arsenic	19.400	mg/kg	D	-	65.500	mg/kg	D	-	9.100	mg/kg	D	-
Barium	179.000	mg/kg	D	-	254.000	mg/kg	D	-	63.600	mg/kg	D	-
Beryllium	2.400	mg/kg	D	-	3.000	mg/kg	D	-	0.740	mg/kg	D	-
Cadmium	0.470	mg/kg	D	UJ	0.520	mg/kg	D	UJ	1.300	mg/kg	D	J
Calcium	2540.000	mg/kg	D	-	3280.000	mg/kg	D	-	26200.000	mg/kg	D	-
Chromium	7.200	mg/kg	D	-	11.600	mg/kg	D	-	17.600	mg/kg	D	-
Cobalt	5.000	mg/kg	D	-	12.000	mg/kg	D	-	10.200	mg/kg	D	-
Copper	35.600	mg/kg	D	-	57.900	mg/kg	D	-	19.100	mg/kg	D	-
Cyanide	0.170	mg/kg	D	J	0.190	mg/kg	D	J	0.120	mg/kg	D	U
Iron	3190.000	mg/kg	D	-	2710.000	mg/kg	D	-	16700.000	mg/kg	D	-
Lead	21.700	mg/kg	D	-	61.700	mg/kg	D	-	11.300	mg/kg	D	-
Magnesium	341.000	mg/kg	D	-	415.000	mg/kg	D	-	9600.000	mg/kg	D	-
Manganese	34.900	mg/kg	D	-	16.000	mg/kg	D	-	523.000	mg/kg	D	-
Mercury	0.120	mg/kg	D	U	0.140	mg/kg	D	U	0.120	mg/kg	D	UJ
Molybdenum	7.900	mg/kg	D	-	10.300	mg/kg	D	-	13.200	mg/kg	D	-
Nickel	9.800	mg/kg	D	-	23.700	mg/kg	D	-	25.700	mg/kg	D	-
Potassium	453.000	mg/kg	D	-	696.000	mg/kg	D	-	1220.000	mg/kg	D	-
Selenium	1.600	mg/kg	D	-	2.100	mg/kg	D	-	2.300	mg/kg	D	-
Silver	2.300	mg/kg	D	U	2.600	mg/kg	D	U	6.600	mg/kg	D	-
Sodium	149.000	mg/kg	D	-	138.000	mg/kg	D	-	119.000	mg/kg	D	-
Thallium	0.960	mg/kg	D	-	1.900	mg/kg	D	-	0.470	mg/kg	D	U
Vanadium	24.900	mg/kg	D	-	40.000	mg/kg	D	-	24.000	mg/kg	D	-
Zinc	18.900	mg/kg	D	-	74.100	mg/kg	D	-	43.000	mg/kg	D	-
Volatile Organics												
1,1,1-Trichloroethane	1300.000	ug/kg	D	J	40.000	ug/kg	D	J	6.000	ug/kg	D	U
1,1,2,2-Tetrachloroethane	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
1,1,2-Trichloroethane	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
1,1-Dichloroethane	6.000	ug/kg	D	UJ	7.000	ug/kg	D	UJ	6.000	ug/kg	D	U
1,1-Dichloroethene	6.000	ug/kg	D	UJ	7.000	ug/kg	D	UJ	6.000	ug/kg	D	U
1,2-Dichloroethane	6.000	ug/kg	D	UJ	7.000	ug/kg	D	UJ	6.000	ug/kg	D	U
1,2-Dichloroethene	6.000	ug/kg	D	R	7.000	ug/kg	D	UJ	6.000	ug/kg	D	U
1,2-Dichloropropane	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
2-Butanone	12.000	ug/kg	D	R	14.000	ug/kg	D	R	3.000	ug/kg	D	J
2-Hexanone	12.000	ug/kg	D	R	14.000	ug/kg	D	R	12.000	ug/kg	D	U
4-Methyl-2-pentanone	12.000	ug/kg	D	R	11.000	ug/kg	D	J	12.000	ug/kg	D	U
Acetone	19.000	ug/kg	D	UJ	14.000	ug/kg	D	UJ	18.000	ug/kg	D	U
Benzene	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
Bromodichloromethane	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1724				1724				1724			
SAMPLE NUMBER	067193				067201				067218			
	4.5-6				16-17.5				41.5-43			
SAMPLING DATE	07/13/91				07/14/91				07/16/91			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
Bromoform	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
Bromomethane	12.000	ug/kg	D	UJ	14.000	ug/kg	D	UJ	12.000	ug/kg	D	U
Carbon Tetrachloride	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
Carbon disulfide	6.000	ug/kg	D	UJ	7.000	ug/kg	D	UJ	6.000	ug/kg	D	U
Chlorobenzene	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
Chloroethane	12.000	ug/kg	D	UJ	14.000	ug/kg	D	UJ	12.000	ug/kg	D	U
Chloroform	6.000	ug/kg	D	UJ	7.000	ug/kg	D	UJ	6.000	ug/kg	D	U
Chloromethane	12.000	ug/kg	D	UJ	14.000	ug/kg	D	UJ	12.000	ug/kg	D	U
Dibromochloromethane	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
Ethylbenzene	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
Methylene chloride	23.000	ug/kg	D	UJ	34.000	ug/kg	D	J	7.000	ug/kg	D	U
Styrene	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
Tetrachloroethene	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
Toluene	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
Trichloroethene	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
Vinyl Acetate	12.000	ug/kg	D	R	14.000	ug/kg	D	R	12.000	ug/kg	D	U
Vinyl chloride	12.000	ug/kg	D	UJ	14.000	ug/kg	D	UJ	12.000	ug/kg	D	U
Xylenes, Total	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
cis-1,3-Dichloropropene	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
trans-1,3-Dichloropropene	6.000	ug/kg	D	R	7.000	ug/kg	D	R	6.000	ug/kg	D	U
Semivolatile Organics												
1,2,4-Trichlorobenzene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
1,2-Dichlorobenzene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
1,3-Dichlorobenzene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
1,4-Dichlorobenzene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
2,4,5-Trichlorophenol	2000.000	ug/kg	D	U	2200.000	ug/kg	D	U	1900.000	ug/kg	D	U
2,4,6-Trichlorophenol	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
2,4-Dichlorophenol	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
2,4-Dimethylphenol	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
2,4-Dinitrophenol	2000.000	ug/kg	D	UJ	2200.000	ug/kg	D	UJ	1900.000	ug/kg	D	UJ
2,4-Dinitrotoluene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
2,6-Dinitrotoluene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
2-Chloronaphthalene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
2-Chlorophenol	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
2-Methylnaphthalene	160.000	ug/kg	D	J	450.000	ug/kg	D	U	400.000	ug/kg	D	U
2-Methylphenol	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
2-Nitroaniline	2000.000	ug/kg	D	U	2200.000	ug/kg	D	U	1900.000	ug/kg	D	U
2-Nitrophenol	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
3,3'-Dichlorobenzidine	820.000	ug/kg	D	U	900.000	ug/kg	D	U	800.000	ug/kg	D	UJ
3-Nitroaniline	2000.000	ug/kg	D	UJ	2200.000	ug/kg	D	UJ	1900.000	ug/kg	D	UJ

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1724				1724				1724			
SAMPLE NUMBER	067193				067201				067218			
	4.5-6				16-17.5				41.5-43			
SAMPLING DATE	07/13/91				07/14/91				07/16/91			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
4,6-Dinitro-2-methylphenol	2000.000	ug/kg	D	U	2200.000	ug/kg	D	U	1900.000	ug/kg	D	UJ
4-Bromophenyl phenyl ether	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
4-Chloro-3-methylphenol	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
4-Chlorophenylphenyl ether	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
4-Methylphenol	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
4-Nitroaniline	2000.000	ug/kg	D	U	2200.000	ug/kg	D	U	1900.000	ug/kg	D	R
4-Nitrophenol	2000.000	ug/kg	D	U	2200.000	ug/kg	D	U	1900.000	ug/kg	D	U
Acenaphthene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Acenaphthylene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Anthracene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Benzo(a)anthracene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Benzo(a)pyrene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Benzo(b)fluoranthene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Benzo(g,h,i)perylene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Benzo(k)fluoranthene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Benzoic acid	52.000	ug/kg	D	J	2200.000	ug/kg	D	UJ	1900.000	ug/kg	D	UJ
Benzyl alcohol	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Butyl benzyl phthalate	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Chrysene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Di-n-butyl phthalate	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Di-n-octyl phthalate	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Dibenzo(a,h)anthracene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Dibenzofuran	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Diethyl phthalate	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Dimethyl phthalate	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Fluoranthene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Fluorene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Hexachlorobenzene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Hexachlorobutadiene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Hexachlorocyclopentadiene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Hexachloroethane	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	UJ
Indeno(1,2,3-cd)pyrene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Isophorone	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
N-Nitroso-di-n-propylamine	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
N-Nitrosodiphenylamine	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Naphthalene	82.000	ug/kg	D	J	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Nitrobenzene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Pentachlorophenol	2000.000	ug/kg	D	U	2200.000	ug/kg	D	U	1900.000	ug/kg	D	U
Phenanthrene	72.000	ug/kg	D	J	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Phenol	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
Pyrene	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U
bis(2-Chloroethoxy)methane	410.000	ug/kg	D	U	450.000	ug/kg	D	U	400.000	ug/kg	D	U

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1724			1724			1724		
SAMPLE NUMBER	067193			067201			067218		
	4.5-6			16-17.5			41.5-43		
SAMPLING DATE	07/13/91			07/14/91			07/16/91		
CHEMICAL PARAMETERS	RESULTS	UNITS L	VQ	RESULTS	UNITS L	VQ	RESULTS	UNITS L	VQ
Semivolatile Organics									
bis(2-Chloroethyl)ether	410.000	ug/kg D	U	450.000	ug/kg D	U	400.000	ug/kg D	U
bis(2-Chloroisopropyl) ether	410.000	ug/kg D	U	450.000	ug/kg D	U	400.000	ug/kg D	UJ
bis(2-Ethylhexyl) phthalate	410.000	ug/kg D	U	450.000	ug/kg D	U	400.000	ug/kg D	U
p-Chloroaniline	410.000	ug/kg D	U	450.000	ug/kg D	U	400.000	ug/kg D	U
Pesticide Organics/PCBs									
4,4'-DDD	20.000	ug/kg D	U	22.000	ug/kg D	U	19.000	ug/kg D	U
4,4'-DDE	20.000	ug/kg D	U	22.000	ug/kg D	U	19.000	ug/kg D	U
4,4'-DDT	20.000	ug/kg D	U	22.000	ug/kg D	U	19.000	ug/kg D	U
Aldrin	10.000	ug/kg D	U	11.000	ug/kg D	U	9.700	ug/kg D	U
Aroclor-1016	100.000	ug/kg D	U	110.000	ug/kg D	U	97.000	ug/kg D	U
Aroclor-1221	100.000	ug/kg D	U	110.000	ug/kg D	U	97.000	ug/kg D	U
Aroclor-1232	100.000	ug/kg D	U	110.000	ug/kg D	U	97.000	ug/kg D	U
Aroclor-1242	100.000	ug/kg D	U	110.000	ug/kg D	U	97.000	ug/kg D	U
Aroclor-1248	100.000	ug/kg D	U	110.000	ug/kg D	U	97.000	ug/kg D	U
Aroclor-1254	200.000	ug/kg D	U	220.000	ug/kg D	U	190.000	ug/kg D	U
Aroclor-1260	200.000	ug/kg D	U	220.000	ug/kg D	U	190.000	ug/kg D	U
Dieldrin	20.000	ug/kg D	U	22.000	ug/kg D	U	19.000	ug/kg D	U
Endosulfan II	20.000	ug/kg D	U	22.000	ug/kg D	U	19.000	ug/kg D	U
Endosulfan sulfate	20.000	ug/kg D	U	22.000	ug/kg D	U	19.000	ug/kg D	U
Endosulfan-I	10.000	ug/kg D	U	11.000	ug/kg D	U	9.700	ug/kg D	U
Endrin	20.000	ug/kg D	U	22.000	ug/kg D	U	19.000	ug/kg D	U
Endrin ketone	20.000	ug/kg D	U	22.000	ug/kg D	U	19.000	ug/kg D	U
Heptachlor	10.000	ug/kg D	U	11.000	ug/kg D	U	9.700	ug/kg D	U
Heptachlor epoxide	10.000	ug/kg D	U	11.000	ug/kg D	U	9.700	ug/kg D	U
Methoxychlor	100.000	ug/kg D	U	110.000	ug/kg D	U	97.000	ug/kg D	U
Toxaphene	200.000	ug/kg D	U	220.000	ug/kg D	U	190.000	ug/kg D	U
alpha-BHC	10.000	ug/kg D	U	11.000	ug/kg D	U	9.700	ug/kg D	U
alpha-Chlordane	100.000	ug/kg D	U	110.000	ug/kg D	U	97.000	ug/kg D	U
beta-BHC	10.000	ug/kg D	U	11.000	ug/kg D	U	9.700	ug/kg D	U
delta-BHC	10.000	ug/kg D	U	11.000	ug/kg D	U	9.700	ug/kg D	U
gamma-BHC (Lindane)	10.000	ug/kg D	U	11.000	ug/kg D	U	9.700	ug/kg D	U
gamma-Chlordane	100.000	ug/kg D	U	110.000	ug/kg D	U	97.000	ug/kg D	U

000102

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1726				1726				1820			
SAMPLE NUMBER	067149				067155				067503			
	9-10.5				18-19.5				1.5-3			
SAMPLING DATE	07/01/91				07/01/91				10/16/91			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Inorganics												
Aluminum	4500.000	mg/kg	D	-	17900.000	mg/kg	D	-	3160.000	mg/kg	D	-
Antimony	8.400	mg/kg	D	R	7.000	mg/kg	D	R	7.600	mg/kg	D	R
Arsenic	66.500	mg/kg	D	-	9.100	mg/kg	D	-	64.700	mg/kg	D	-
Barium	203.000	mg/kg	D	-	132.000	mg/kg	D	-	243.000	mg/kg	D	-
Beryllium	2.800	mg/kg	D	-	1.200	mg/kg	D	-	2.600	mg/kg	D	-
Cadmium	0.560	mg/kg	D	UJ	0.470	mg/kg	D	UJ	0.510	mg/kg	D	U
Calcium	1790.000	mg/kg	D	-	2250.000	mg/kg	D	-	4000.000	mg/kg	D	-
Chromium	17.000	mg/kg	D	-	25.800	mg/kg	D	-	7.800	mg/kg	D	-
Cobalt	11.500	mg/kg	D	-	18.200	mg/kg	D	-	10.900	mg/kg	D	-
Copper	57.200	mg/kg	D	-	24.000	mg/kg	D	-	39.300	mg/kg	D	-
Cyanide	0.690	mg/kg	D	J	0.120	mg/kg	D	UJ	0.350	mg/kg	D	-
Iron	5220.000	mg/kg	D	-	31100.000	mg/kg	D	-	2260.000	mg/kg	D	-
Lead	38.000	mg/kg	D	-	21.400	mg/kg	D	-	38.300	mg/kg	D	-
Magnesium	393.000	mg/kg	D	-	4380.000	mg/kg	D	-	565.000	mg/kg	D	-
Manganese	27.200	mg/kg	D	-	340.000	mg/kg	D	-	25.700	mg/kg	D	-
Mercury	0.160	mg/kg	D	J	0.120	mg/kg	D	UJ	0.130	mg/kg	D	UJ
Molybdenum	18.800	mg/kg	D	-	17.900	mg/kg	D	-	6.500	mg/kg	D	-
Nickel	29.700	mg/kg	D	-	26.500	mg/kg	D	-	18.100	mg/kg	D	-
Potassium	934.000	mg/kg	D	-	1010.000	mg/kg	D	-	686.000	mg/kg	D	-
Selenium	10.200	mg/kg	D	J	0.470	mg/kg	D	UJ	2.300	mg/kg	D	J
Silver	2.800	mg/kg	D	UJ	2.300	mg/kg	D	UJ	2.500	mg/kg	D	UJ
Sodium	186.000	mg/kg	D	-	109.000	mg/kg	D	-	119.000	mg/kg	D	-
Thallium	1.900	mg/kg	D	-	0.470	mg/kg	D	U	1.500	mg/kg	D	J
Vanadium	35.500	mg/kg	D	-	32.700	mg/kg	D	-	31.600	mg/kg	D	-
Zinc	47.700	mg/kg	D	-	65.300	mg/kg	D	-	58.800	mg/kg	D	J
Volatile Organics												
1,1,1-Trichloroethane	69.000	ug/kg	D	J	6.000	ug/kg	D	U	28.000	ug/kg	D	J
1,1,2,2-Tetrachloroethane	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
1,1,2-Trichloroethane	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
1,1-Dichloroethane	7.000	ug/kg	D	UJ	6.000	ug/kg	D	U	6.000	ug/kg	D	R
1,1-Dichloroethene	7.000	ug/kg	D	UJ	6.000	ug/kg	D	U	6.000	ug/kg	D	R
1,2-Dichloroethane	7.000	ug/kg	D	UJ	6.000	ug/kg	D	U	6.000	ug/kg	D	R
1,2-Dichloroethene	7.000	ug/kg	D	UJ	6.000	ug/kg	D	U	6.000	ug/kg	D	R
1,2-Dichloropropane	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
2-Butanone	15.000	ug/kg	D	UJ	4.000	ug/kg	D	J	13.000	ug/kg	D	R
2-Hexanone	15.000	ug/kg	D	R	12.000	ug/kg	D	U	13.000	ug/kg	D	R
4-Methyl-2-pentanone	15.000	ug/kg	D	R	12.000	ug/kg	D	U	13.000	ug/kg	D	R
Acetone	15.000	ug/kg	D	UJ	17.000	ug/kg	D	UJ	13.000	ug/kg	D	R
Benzene	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Bromodichloromethane	7.000	ug/kg	D	R	6.000	ug/kg	D	UJ	6.000	ug/kg	D	R

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1726				1726				1820			
SAMPLE NUMBER	067149				067155				067503			
	9-10.5				18-19.5				1.5-3			
SAMPLING DATE	07/01/91				07/01/91				10/16/91			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
Bromoform	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Bromomethane	15.000	ug/kg	D	UJ	12.000	ug/kg	D	U	13.000	ug/kg	D	R
Carbon Tetrachloride	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Carbon disulfide	7.000	ug/kg	D	UJ	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Chlorobenzene	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Chloroethane	15.000	ug/kg	D	UJ	12.000	ug/kg	D	U	13.000	ug/kg	D	R
Chloroform	7.000	ug/kg	D	UJ	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Chloromethane	15.000	ug/kg	D	UJ	12.000	ug/kg	D	U	13.000	ug/kg	D	R
Dibromochloromethane	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Ethylbenzene	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Methylene chloride	73.000	ug/kg	D	J	6.000	ug/kg	D	U	41.000	ug/kg	D	R
Styrene	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Tetrachloroethene	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Toluene	13.000	ug/kg	D	J	6.000	ug/kg	D	U	13.000	ug/kg	D	J
Trichloroethene	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Vinyl Acetate	15.000	ug/kg	D	R	12.000	ug/kg	D	U	13.000	ug/kg	D	R
Vinyl chloride	15.000	ug/kg	D	UJ	12.000	ug/kg	D	U	13.000	ug/kg	D	R
Xylenes, Total	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
cis-1,3-Dichloropropene	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
trans-1,3-Dichloropropene	7.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Semivolatile Organics												
1,2,4-Trichlorobenzene	500.000	ug/kg	D	UJ	420.000	ug/kg	D	UJ	430.000	ug/kg	D	U
1,2-Dichlorobenzene	500.000	ug/kg	D	UJ	420.000	ug/kg	D	UJ	430.000	ug/kg	D	U
1,3-Dichlorobenzene	500.000	ug/kg	D	UJ	420.000	ug/kg	D	UJ	430.000	ug/kg	D	U
1,4-Dichlorobenzene	500.000	ug/kg	D	UJ	420.000	ug/kg	D	UJ	430.000	ug/kg	D	U
2,4,5-Trichlorophenol	2400.000	ug/kg	D	UJ	2000.000	ug/kg	D	UJ	2100.000	ug/kg	D	U
2,4,6-Trichlorophenol	500.000	ug/kg	D	UJ	420.000	ug/kg	D	UJ	430.000	ug/kg	D	U
2,4-Dichlorophenol	500.000	ug/kg	D	UJ	420.000	ug/kg	D	UJ	430.000	ug/kg	D	U
2,4-Dimethylphenol	500.000	ug/kg	D	UJ	420.000	ug/kg	D	UJ	430.000	ug/kg	D	U
2,4-Dinitrophenol	2400.000	ug/kg	D	UJ	2000.000	ug/kg	D	UJ	2100.000	ug/kg	D	U
2,4-Dinitrotoluene	500.000	ug/kg	D	UJ	420.000	ug/kg	D	UJ	430.000	ug/kg	D	U
2,6-Dinitrotoluene	500.000	ug/kg	D	UJ	420.000	ug/kg	D	UJ	430.000	ug/kg	D	U
2-Chloronaphthalene	500.000	ug/kg	D	UJ	420.000	ug/kg	D	UJ	430.000	ug/kg	D	U
2-Chlorophenol	500.000	ug/kg	D	UJ	48.000	ug/kg	D	J	430.000	ug/kg	D	U
2-Methylnaphthalene	500.000	ug/kg	D	UJ	420.000	ug/kg	D	UJ	430.000	ug/kg	D	U
2-Methylphenol	500.000	ug/kg	D	UJ	420.000	ug/kg	D	UJ	430.000	ug/kg	D	U
2-Nitroaniline	2400.000	ug/kg	D	UJ	2000.000	ug/kg	D	UJ	2100.000	ug/kg	D	U
2-Nitrophenol	500.000	ug/kg	D	UJ	420.000	ug/kg	D	UJ	430.000	ug/kg	D	U
3,3'-Dichlorobenzidine	990.000	ug/kg	D	UJ	840.000	ug/kg	D	UJ	850.000	ug/kg	D	U
3-Nitroaniline	2400.000	ug/kg	D	UJ	2000.000	ug/kg	D	UJ	2100.000	ug/kg	D	R

000104

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1726			1726			1820		
SAMPLE NUMBER	067149			067155			067503		
	9-10.5			18-19.5			1.5-3		
SAMPLING DATE	07/01/91			07/01/91			10/16/91		
CHEMICAL PARAMETERS	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ
Semivolatile Organics									
4,6-Dinitro-2-methylphenol	2400.000	ug/kg	D UJ	2000.000	ug/kg	D UJ	2100.000	ug/kg	D U
4-Bromophenyl phenyl ether	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
4-Chloro-3-methylphenol	500.000	ug/kg	D UJ	58.000	ug/kg	D J	430.000	ug/kg	D U
4-Chlorophenylphenyl ether	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
4-Methylphenol	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
4-Nitroaniline	2400.000	ug/kg	D UJ	2000.000	ug/kg	D UJ	2100.000	ug/kg	D U
4-Nitrophenol	2400.000	ug/kg	D UJ	48.000	ug/kg	D J	2100.000	ug/kg	D U
Acenaphthene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Acenaphthylene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Anthracene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Benzo(a)anthracene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Benzo(a)pyrene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Benzo(b)fluoranthene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Benzo(g,h,i)perylene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Benzo(k)fluoranthene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Benzoic acid	2400.000	ug/kg	D UJ	73.000	ug/kg	D J	2100.000	ug/kg	D U
Benzyl alcohol	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Butyl benzyl phthalate	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Chrysene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Di-n-butyl phthalate	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	49.000	ug/kg	D J
Di-n-octyl phthalate	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Dibenzo(a,h)anthracene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Dibenzofuran	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Diethyl phthalate	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Dimethyl phthalate	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Fluoranthene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Fluorene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Hexachlorobenzene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Hexachlorobutadiene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Hexachlorocyclopentadiene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D UJ
Hexachloroethane	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Indeno(1,2,3-cd)pyrene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Isophorone	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
N-Nitroso-di-n-propylamine	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
N-Nitrosodiphenylamine	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Naphthalene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Nitrobenzene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
Pentachlorophenol	2400.000	ug/kg	D UJ	2000.000	ug/kg	D UJ	2100.000	ug/kg	D U
Phenanthrene	500.000	ug/kg	D UJ	48.000	ug/kg	D J	430.000	ug/kg	D U
Phenol	500.000	ug/kg	D UJ	58.000	ug/kg	D J	430.000	ug/kg	D U
Pyrene	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
bis(2-Chloroethoxy)methane	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1726			1726			1820		
SAMPLE NUMBER	067149			067155			067503		
	9-10.5			18-19.5			1.5-3		
SAMPLING DATE	07/01/91			07/01/91			10/16/91		
CHEMICAL PARAMETERS	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ
Semivolatile Organics									
bis(2-Chloroethyl)ether	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
bis(2-Chloroisopropyl) ether	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D U
bis(2-Ethylhexyl) phthalate	480.000	ug/kg	D J	2700.000	ug/kg	D J	430.000	ug/kg	D U
p-Chloroaniline	500.000	ug/kg	D UJ	420.000	ug/kg	D UJ	430.000	ug/kg	D UJ
Pesticide Organics/PCBs									
4,4'-DDD	25.000	ug/kg	D UJ	20.000	ug/kg	D UJ	21.000	ug/kg	D U
4,4'-DDE	25.000	ug/kg	D UJ	20.000	ug/kg	D UJ	21.000	ug/kg	D U
4,4'-DDT	25.000	ug/kg	D UJ	20.000	ug/kg	D UJ	21.000	ug/kg	D U
Aldrin	12.000	ug/kg	D UJ	10.000	ug/kg	D UJ	10.000	ug/kg	D U
Aroclor-1016	120.000	ug/kg	D UJ	100.000	ug/kg	D UJ	100.000	ug/kg	D U
Aroclor-1221	120.000	ug/kg	D UJ	100.000	ug/kg	D UJ	100.000	ug/kg	D U
Aroclor-1232	120.000	ug/kg	D UJ	100.000	ug/kg	D UJ	100.000	ug/kg	D U
Aroclor-1242	120.000	ug/kg	D UJ	100.000	ug/kg	D UJ	100.000	ug/kg	D U
Aroclor-1248	120.000	ug/kg	D UJ	100.000	ug/kg	D UJ	100.000	ug/kg	D U
Aroclor-1254	250.000	ug/kg	D UJ	200.000	ug/kg	D UJ	210.000	ug/kg	D U
Aroclor-1260	250.000	ug/kg	D UJ	200.000	ug/kg	D UJ	210.000	ug/kg	D U
Dieldrin	25.000	ug/kg	D UJ	20.000	ug/kg	D UJ	21.000	ug/kg	D U
Endosulfan II	25.000	ug/kg	D UJ	20.000	ug/kg	D UJ	21.000	ug/kg	D U
Endosulfan sulfate	25.000	ug/kg	D UJ	20.000	ug/kg	D UJ	21.000	ug/kg	D U
Endosulfan-I	12.000	ug/kg	D UJ	10.000	ug/kg	D UJ	10.000	ug/kg	D U
Endrin	25.000	ug/kg	D UJ	20.000	ug/kg	D UJ	21.000	ug/kg	D U
Endrin ketone	25.000	ug/kg	D UJ	20.000	ug/kg	D UJ	21.000	ug/kg	D U
Heptachlor	12.000	ug/kg	D UJ	10.000	ug/kg	D UJ	10.000	ug/kg	D U
Heptachlor epoxide	12.000	ug/kg	D UJ	10.000	ug/kg	D UJ	10.000	ug/kg	D U
Methoxychlor	120.000	ug/kg	D UJ	100.000	ug/kg	D UJ	100.000	ug/kg	D U
Toxaphene	250.000	ug/kg	D UJ	200.000	ug/kg	D UJ	210.000	ug/kg	D U
alpha-BHC	12.000	ug/kg	D UJ	10.000	ug/kg	D UJ	10.000	ug/kg	D U
alpha-Chlordane	120.000	ug/kg	D UJ	100.000	ug/kg	D UJ	100.000	ug/kg	D U
beta-BHC	12.000	ug/kg	D UJ	10.000	ug/kg	D UJ	10.000	ug/kg	D U
delta-BHC	12.000	ug/kg	D UJ	10.000	ug/kg	D UJ	10.000	ug/kg	D U
gamma-BHC (Lindane)	12.000	ug/kg	D UJ	10.000	ug/kg	D UJ	10.000	ug/kg	D U
gamma-Chlordane	120.000	ug/kg	D UJ	100.000	ug/kg	D UJ	100.000	ug/kg	D U
General Chemistry									
Total Organic Carbon	NA			NA			117400.000	mg/kg	C -

000106

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1820				1820				1846			
SAMPLE NUMBER	067505				067506				067706			
	6-7.5				9.5-12				6-7.5			
SAMPLING DATE	10/16/91				10/16/91				02/22/92			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Inorganics												
Aluminum	1570.000	mg/kg	D	-	2440.000	mg/kg	D	-	NA			
Antimony	7.500	mg/kg	D	R	21.700	mg/kg	D	J	NA			
Arsenic	51.000	mg/kg	D	-	4.600	mg/kg	D	-	NA			
Barium	56.600	mg/kg	D	-	16.700	mg/kg	D	-	NA			
Beryllium	0.650	mg/kg	D	-	0.470	mg/kg	D	-	NA			
Cadmium	0.500	mg/kg	D	U	5.100	mg/kg	D	J	NA			
Calcium	826.000	mg/kg	D	-	112000.000	mg/kg	D	-	NA			
Chromium	4.400	mg/kg	D	-	17.400	mg/kg	D	-	NA			
Cobalt	2.500	mg/kg	D	U	6.100	mg/kg	D	J	NA			
Copper	25.700	mg/kg	D	-	14.300	mg/kg	D	-	NA			
Cyanide	0.200	mg/kg	D	-	0.120	mg/kg	D	U	NA			
Iron	3970.000	mg/kg	D	-	9840.000	mg/kg	D	-	NA			
Lead	19.700	mg/kg	D	-	5.800	mg/kg	D	-	NA			
Magnesium	150.000	mg/kg	D	-	37200.000	mg/kg	D	-	NA			
Manganese	8.200	mg/kg	D	-	223.000	mg/kg	D	-	NA			
Mercury	0.130	mg/kg	D	UJ	0.120	mg/kg	D	UJ	NA			
Molybdenum	4.300	mg/kg	D	-	8.700	mg/kg	D	J	NA			
Nickel	6.200	mg/kg	D	-	13.900	mg/kg	D	-	NA			
Potassium	326.000	mg/kg	D	-	242.000	mg/kg	D	-	NA			
Selenium	0.850	mg/kg	D	J	0.330	mg/kg	D	UJ	NA			
Silver	2.500	mg/kg	D	UJ	11.900	mg/kg	D	-	NA			
Sodium	92.700	mg/kg	D	-	143.000	mg/kg	D	-	NA			
Thallium	0.500	mg/kg	D	UJ	0.330	mg/kg	D	UJ	NA			
Vanadium	15.000	mg/kg	D	-	16.800	mg/kg	D	-	NA			
Zinc	87.300	mg/kg	D	J	25.300	mg/kg	D	J	NA			
Volatile Organics												
1,1,1-Trichloroethane	32.000	ug/kg	D	J	6.000	ug/kg	D	U	610.000	ug/kg	D	R
1,1,2,2-Tetrachloroethane	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
1,1,2-Trichloroethane	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
1,1-Dichloroethane	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
1,1-Dichloroethene	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
1,2-Dichloroethane	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
1,2-Dichloroethene	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
1,2-Dichloropropane	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
2-Butanone	13.000	ug/kg	D	R	6.000	ug/kg	D	U	13.000	ug/kg	D	R
2-Hexanone	13.000	ug/kg	D	R	12.000	ug/kg	D	U	13.000	ug/kg	D	R
4-Methyl-2-pentanone	13.000	ug/kg	D	R	12.000	ug/kg	D	UJ	13.000	ug/kg	D	R
Acetone	13.000	ug/kg	D	R	15.000	ug/kg	D	U	13.000	ug/kg	D	R
Benzene	6.000	ug/kg	D	R	6.000	ug/kg	D	U	2.000	ug/kg	D	J
Bromodichloromethane	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1820				1820				1846			
SAMPLE NUMBER	067505				067506				067706			
	6-7.5				9.5-12				6-7.5			
SAMPLING DATE	10/16/91				10/16/91				02/22/92			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
Bromoform	6.000	ug/kg	D	R	6.000	ug/kg	D	UJ	6.000	ug/kg	D	R
Bromomethane	13.000	ug/kg	D	R	12.000	ug/kg	D	UJ	13.000	ug/kg	D	R
Carbon Tetrachloride	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Carbon disulfide	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Chlorobenzene	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Chloroethane	13.000	ug/kg	D	R	12.000	ug/kg	D	U	13.000	ug/kg	D	R
Chloroform	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Chloromethane	13.000	ug/kg	D	R	12.000	ug/kg	D	U	13.000	ug/kg	D	R
Dibromochloromethane	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Ethylbenzene	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Methylene chloride	44.000	ug/kg	D	R	22.000	ug/kg	D	U	19.000	ug/kg	D	R
Styrene	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Tetrachloroethene	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Toluene	21.000	ug/kg	D	J	6.000	ug/kg	D	U	130.000	ug/kg	D	J
Trichloroethene	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Vinyl Acetate	13.000	ug/kg	D	R	12.000	ug/kg	D	U	13.000	ug/kg	D	R
Vinyl chloride	13.000	ug/kg	D	R	12.000	ug/kg	D	U	13.000	ug/kg	D	R
Xylenes, Total	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
cis-1,3-Dichloropropene	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
trans-1,3-Dichloropropene	6.000	ug/kg	D	R	6.000	ug/kg	D	U	6.000	ug/kg	D	R
Semivolatile Organics												
1,2,4-Trichlorobenzene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
1,2-Dichlorobenzene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
1,3-Dichlorobenzene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
1,4-Dichlorobenzene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
2,4,5-Trichlorophenol	2000.000	ug/kg	D	U	2000.000	ug/kg	D	U	2100.000	ug/kg	D	U
2,4,6-Trichlorophenol	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
2,4-Dichlorophenol	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
2,4-Dimethylphenol	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
2,4-Dinitrophenol	2000.000	ug/kg	D	U	2000.000	ug/kg	D	U	2100.000	ug/kg	D	UJ
2,4-Dinitrotoluene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
2,6-Dinitrotoluene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
2-Chloronaphthalene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
2-Chlorophenol	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
2-Methylnaphthalene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	94.000	ug/kg	D	J
2-Methylphenol	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
2-Nitroaniline	2000.000	ug/kg	D	U	2000.000	ug/kg	D	U	2100.000	ug/kg	D	U
2-Nitrophenol	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	UJ
3,3'-Dichlorobenzidine	840.000	ug/kg	D	U	820.000	ug/kg	D	U	850.000	ug/kg	D	UJ
3-Nitroaniline	2000.000	ug/kg	D	R	2000.000	ug/kg	D	R	2100.000	ug/kg	D	U

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1820				1820				1846			
SAMPLE NUMBER	067505				067506				067706			
	6-7.5				9.5-12				6-7.5			
SAMPLING DATE	10/16/91				10/16/91				02/22/92			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
4,6-Dinitro-2-methylphenol	2000.000	ug/kg	D	U	2000.000	ug/kg	D	U	2100.000	ug/kg	D	UJ
4-Bromophenyl phenyl ether	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
4-Chloro-3-methylphenol	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
4-Chlorophenylphenyl ether	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
4-Methylphenol	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
4-Nitroaniline	2000.000	ug/kg	D	U	2000.000	ug/kg	D	U	2100.000	ug/kg	D	U
4-Nitrophenol	2000.000	ug/kg	D	U	2000.000	ug/kg	D	U	2100.000	ug/kg	D	U
Acenaphthene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Acenaphthylene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Anthracene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Benzo(a)anthracene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Benzo(a)pyrene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Benzo(b)fluoranthene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Benzo(g,h,i)perylene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Benzo(k)fluoranthene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Benzoic acid	2000.000	ug/kg	D	U	2000.000	ug/kg	D	U	62.000	ug/kg	D	J
Benzyl alcohol	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	UJ
Butyl benzyl phthalate	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Chrysene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Di-n-butyl phthalate	420.000	ug/kg	D	U	410.000	ug/kg	D	U	69.000	ug/kg	D	J
Di-n-octyl phthalate	3000.000	ug/kg	D	-	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Dibenzo(a,h)anthracene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Dibenzofuran	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Diethyl phthalate	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Dimethyl phthalate	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Fluoranthene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Fluorene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Hexachlorobenzene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Hexachlorobutadiene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Hexachlorocyclopentadiene	420.000	ug/kg	D	UJ	410.000	ug/kg	D	UJ	430.000	ug/kg	D	UJ
Hexachloroethane	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Indeno(1,2,3-cd)pyrene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Isophorone	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
N-Nitroso-di-n-propylamine	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	UJ
N-Nitrosodiphenylamine	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Naphthalene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	52.000	ug/kg	D	J
Nitrobenzene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Pentachlorophenol	2000.000	ug/kg	D	U	2000.000	ug/kg	D	U	2100.000	ug/kg	D	U
Phenanthrene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Phenol	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
Pyrene	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U
bis(2-Chloroethoxy)methane	420.000	ug/kg	D	U	410.000	ug/kg	D	U	430.000	ug/kg	D	U

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000409

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1820			1820			1846		
SAMPLE NUMBER	067505			067506			067706		
	6-7.5			9.5-12			6-7.5		
SAMPLING DATE	10/16/91			10/16/91			02/22/92		
CHEMICAL PARAMETERS	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ
Semivolatile Organics									
bis(2-Chloroethyl)ether	420.000	ug/kg	D U	410.000	ug/kg	D U	430.000	ug/kg	D U
bis(2-Chloroisopropyl) ether	420.000	ug/kg	D U	410.000	ug/kg	D U	430.000	ug/kg	D U
bis(2-Ethylhexyl) phthalate	420.000	ug/kg	D U	410.000	ug/kg	D U	120.000	ug/kg	D J
p-Chloroaniline	420.000	ug/kg	D UJ	410.000	ug/kg	D UJ	430.000	ug/kg	D U
Pesticide Organics/PCBs									
4,4'-DDD	20.000	ug/kg	D U	20.000	ug/kg	D U	NA		
4,4'-DDE	20.000	ug/kg	D U	20.000	ug/kg	D U	NA		
4,4'-DDT	20.000	ug/kg	D U	20.000	ug/kg	D U	NA		
Aldrin	10.000	ug/kg	D U	10.000	ug/kg	D U	NA		
Aroclor-1016	100.000	ug/kg	D U	100.000	ug/kg	D U	NA		
Aroclor-1221	100.000	ug/kg	D U	100.000	ug/kg	D U	NA		
Aroclor-1232	100.000	ug/kg	D U	100.000	ug/kg	D U	NA		
Aroclor-1242	100.000	ug/kg	D U	100.000	ug/kg	D U	NA		
Aroclor-1248	100.000	ug/kg	D U	100.000	ug/kg	D U	NA		
Aroclor-1254	200.000	ug/kg	D U	200.000	ug/kg	D U	NA		
Aroclor-1260	200.000	ug/kg	D U	200.000	ug/kg	D U	NA		
Dieldrin	20.000	ug/kg	D U	20.000	ug/kg	D U	NA		
Endosulfan II	20.000	ug/kg	D U	20.000	ug/kg	D U	NA		
Endosulfan sulfate	20.000	ug/kg	D U	20.000	ug/kg	D U	NA		
Endosulfan-I	10.000	ug/kg	D U	10.000	ug/kg	D U	NA		
Endrin	20.000	ug/kg	D U	20.000	ug/kg	D U	NA		
Endrin ketone	20.000	ug/kg	D U	20.000	ug/kg	D U	NA		
Heptachlor	10.000	ug/kg	D U	10.000	ug/kg	D U	NA		
Heptachlor epoxide	10.000	ug/kg	D U	10.000	ug/kg	D U	NA		
Methoxychlor	100.000	ug/kg	D U	100.000	ug/kg	D U	NA		
Toxaphene	200.000	ug/kg	D U	200.000	ug/kg	D U	NA		
alpha-BHC	10.000	ug/kg	D U	10.000	ug/kg	D U	NA		
alpha-Chlordane	100.000	ug/kg	D U	100.000	ug/kg	D U	NA		
beta-BHC	10.000	ug/kg	D U	10.000	ug/kg	D U	NA		
delta-BHC	10.000	ug/kg	D U	10.000	ug/kg	D U	NA		
gamma-BHC (Lindane)	10.000	ug/kg	D U	10.000	ug/kg	D U	NA		
gamma-Chlordane	100.000	ug/kg	D U	100.000	ug/kg	D U	NA		
General Chemistry									
Total Organic Carbon	420620.000	mg/kg	C -	12331.000	mg/kg	C -	72154.000	mg/kg	C -

001110

6510

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1846			
SAMPLE NUMBER	067711			
	13.5-15			
SAMPLING DATE	02/22/92			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ
Volatile Organics				
1,1,1-Trichloroethane	120.000	ug/kg	D	J
1,1,2,2-Tetrachloroethane	6.000	ug/kg	D	R
1,1,2-Trichloroethane	6.000	ug/kg	D	R
1,1-Dichloroethane	6.000	ug/kg	D	R
1,1-Dichloroethene	6.000	ug/kg	D	R
1,2-Dichloroethane	6.000	ug/kg	D	R
1,2-Dichloroethene	6.000	ug/kg	D	R
1,2-Dichloropropane	6.000	ug/kg	D	R
2-Butanone	13.000	ug/kg	D	R
2-Hexanone	13.000	ug/kg	D	R
4-Methyl-2-pentanone	25.000	ug/kg	D	J
Acetone	13.000	ug/kg	D	R
Benzene	6.000	ug/kg	D	R
Bromodichloromethane	6.000	ug/kg	D	R
Bromoform	6.000	ug/kg	D	R
Bromomethane	13.000	ug/kg	D	R
Carbon Tetrachloride	6.000	ug/kg	D	R
Carbon disulfide	6.000	ug/kg	D	R
Chlorobenzene	6.000	ug/kg	D	R
Chloroethane	13.000	ug/kg	D	R
Chloroform	6.000	ug/kg	D	R
Chloromethane	13.000	ug/kg	D	R
Dibromochloromethane	6.000	ug/kg	D	R
Ethylbenzene	6.000	ug/kg	D	R
Methylene chloride	27.000	ug/kg	D	R
Styrene	6.000	ug/kg	D	R
Tetrachloroethene	6.000	ug/kg	D	R
Toluene	110.000	ug/kg	D	J
Trichloroethene	6.000	ug/kg	D	R
Vinyl Acetate	13.000	ug/kg	D	R
Vinyl chloride	13.000	ug/kg	D	R
Xylenes, Total	6.000	ug/kg	D	R
cis-1,3-Dichloropropene	6.000	ug/kg	D	R
trans-1,3-Dichloropropene	6.000	ug/kg	D	R
Semivolatile Organics				
1,2,4-Trichlorobenzene	420.000	ug/kg	D	U
1,2-Dichlorobenzene	420.000	ug/kg	D	U
1,3-Dichlorobenzene	420.000	ug/kg	D	U
1,4-Dichlorobenzene	420.000	ug/kg	D	U
2,4,5-Trichlorophenol	2000.000	ug/kg	D	U

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1846			
SAMPLE NUMBER	067711			
	13.5-15			
SAMPLING DATE	02/22/92			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ
Semivolatile Organics				
2,4,6-Trichlorophenol	420.000	ug/kg	D	U
2,4-Dichlorophenol	420.000	ug/kg	D	U
2,4-Dimethylphenol	420.000	ug/kg	D	U
2,4-Dinitrophenol	2000.000	ug/kg	D	U
2,4-Dinitrotoluene	420.000	ug/kg	D	U
2,6-Dinitrotoluene	420.000	ug/kg	D	U
2-Chloronaphthalene	420.000	ug/kg	D	U
2-Chlorophenol	420.000	ug/kg	D	U
2-Methylnaphthalene	49.000	ug/kg	D	J
2-Methylphenol	420.000	ug/kg	D	U
2-Nitroaniline	2000.000	ug/kg	D	U
2-Nitrophenol	420.000	ug/kg	D	UJ
3,3'-Dichlorobenzidine	840.000	ug/kg	D	U
3-Nitroaniline	2000.000	ug/kg	D	U
4,6-Dinitro-2-methylphenol	2000.000	ug/kg	D	U
4-Bromophenyl phenyl ether	420.000	ug/kg	D	U
4-Chloro-3-methylphenol	420.000	ug/kg	D	U
4-Chlorophenylphenyl ether	420.000	ug/kg	D	U
4-Methylphenol	420.000	ug/kg	D	U
4-Nitroaniline	2000.000	ug/kg	D	U
4-Nitrophenol	2000.000	ug/kg	D	UJ
Acenaphthene	420.000	ug/kg	D	U
Acenaphthylene	420.000	ug/kg	D	U
Anthracene	420.000	ug/kg	D	U
Benzo(a)anthracene	420.000	ug/kg	D	U
Benzo(a)pyrene	420.000	ug/kg	D	U
Benzo(b)fluoranthene	420.000	ug/kg	D	U
Benzo(g,h,i)perylene	420.000	ug/kg	D	U
Benzo(k)fluoranthene	420.000	ug/kg	D	U
Benzoic acid	68.000	ug/kg	D	J
Benzyl alcohol	420.000	ug/kg	D	U
Butyl benzyl phthalate	420.000	ug/kg	D	U
Chrysene	420.000	ug/kg	D	U
Di-n-butyl phthalate	47.000	ug/kg	D	J
Di-n-octyl phthalate	420.000	ug/kg	D	U
Dibenzo(a,h)anthracene	420.000	ug/kg	D	U
Dibenzofuran	420.000	ug/kg	D	U
Diethyl phthalate	420.000	ug/kg	D	U
Dimethyl phthalate	420.000	ug/kg	D	U
Fluoranthene	420.000	ug/kg	D	U
Fluorene	420.000	ug/kg	D	U
Hexachlorobenzene	420.000	ug/kg	D	U

TABLE G-6A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1846			
SAMPLE NUMBER	067711			
	13.5-15			
SAMPLING DATE	02/22/92			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ
Semivolatile Organics				
Hexachlorobutadiene	420.000	ug/kg	D	U
Hexachlorocyclopentadiene	420.000	ug/kg	D	U
Hexachloroethane	420.000	ug/kg	D	U
Indeno(1,2,3-cd)pyrene	420.000	ug/kg	D	U
Isophorone	420.000	ug/kg	D	U
N-Nitroso-di-n-propylamine	420.000	ug/kg	D	U
N-Nitrosodiphenylamine	420.000	ug/kg	D	U
Naphthalene	420.000	ug/kg	D	U
Nitrobenzene	420.000	ug/kg	D	U
Pentachlorophenol	2000.000	ug/kg	D	U
Phenanthrene	43.000	ug/kg	D	J
Phenol	420.000	ug/kg	D	U
Pyrene	420.000	ug/kg	D	U
bis(2-Chloroethoxy)methane	420.000	ug/kg	D	U
bis(2-Chloroethyl)ether	420.000	ug/kg	D	U
bis(2-Chloroisopropyl) ether	420.000	ug/kg	D	U
bis(2-Ethylhexyl) phthalate	420.000	ug/kg	D	U
p-Chloroaniline	420.000	ug/kg	D	U
General Chemistry				
Total Organic Carbon	63907.000	mg/kg	C	-

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TABLE G-6A
(Continued)

PHASE II - RADIOLOGICAL PARAMETERS

BORING NUMBER	1979			1979			1979		
SAMPLE NUMBER	112092			112117			112123		
SAMPLING DEPTH (Feet)	2 - 4			20 - 22			25.5 - 27.5		
SAMPLING DATE	05/10/93			05/10/93			05/11/93		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VAL QUAL	RESULTS	UNITS	VAL QUAL	RESULTS	UNITS	VAL QUAL
CS-137	0.08	pci/g	UJ	0.10	pci/g	UJ	0.10	pci/g	UJ
GROSS ALPHA	43.50	pci/g	J	62.00	pci/g	J	20.30	pci/g	J
GROSS BETA	45.60	pci/g	J	45.30	pci/g	J	30.40	pci/g	J
NP-237	0.12	pci/g	N	0.06	pci/g	N	0.15	pci/g	N
PU-238	0.08	pci/g	J	0.06	pci/g	J	0.09	pci/g	J
PU-239/240	0.03	pci/g	UJ	0.02	pci/g	J	0.03	pci/g	J
RA-226	3.51	pci/g	-	4.02	pci/g	-	0.96	pci/g	-
RA-228	2.91	pci/g	-	3.69	pci/g	-	0.80	pci/g	-
RU-106	0.73	pci/g	UJ	0.85	pci/g	UJ	0.76	pci/g	UJ
SR-90	0.70	pci/g	-	0.25	pci/g	UJ	0.18	pci/g	UJ
TC-99	0.51	pci/g	UJ	0.52	pci/g	UJ	0.52	pci/g	UJ
TH-228	3.20	pci/g	-	2.88	pci/g	-	0.87	pci/g	-
TH-230	3.30	pci/g	-	3.52	pci/g	-	1.01	pci/g	-
TH-232	2.90	pci/g	-	3.14	pci/g	-	0.69	pci/g	-
TH-TOTAL	26.70	ug/g	-	28.90	ug/g	-	6.30	ug/g	-
U-234	3.08	pci/g	-	5.02	pci/g	-	0.77	pci/g	-
U-235/236	0.13	pci/g	J	0.33	pci/g	J	0.04	pci/g	J
U-238	3.27	pci/g	-	7.12	pci/g	-	0.93	pci/g	-
U-TOTAL	9.34	mg/kg	-	22.10	mg/kg	-	4.49	mg/kg	-

TABLE G-6A
(Continued)

PHASE II - RADIOLOGICAL PARAMETERS

BORING NUMBER	1979			1980			1980		
SAMPLE NUMBER	112126			112130			112145		
SAMPLING DEPTH (Feet)	29.5 - 31.5			2 - 4			13 - 15		
SAMPLING DATE	05/11/93			05/12/93			05/12/93		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VAL QUAL	RESULTS	UNITS	VAL QUAL	RESULTS	UNITS	VAL QUAL
CS-137	0.06	pci/g	UJ	0.12	pci/g	UJ	0.08	pci/g	UJ
GROSS ALPHA	15.90	pci/g	J	37.00	pci/g	-	36.20	pci/g	-
GROSS BETA	21.30	pci/g	J	30.10	pci/g	-	38.70	pci/g	-
NP-237	0.19	pci/g	N	0.11	pci/g	N	0.98	pci/g	R
PU-238	0.05	pci/g	UJ	0.08	pci/g	J	0.12	pci/g	J
PU-239/240	0.06	pci/g	J	0.05	pci/g	J	0.05	pci/g	UJ
RA-226	0.91	pci/g	-	3.97	pci/g	-	2.96	pci/g	-
RA-228	0.75	pci/g	-	2.84	pci/g	-	2.23	pci/g	-
RU-106	0.54	pci/g	UJ	0.85	pci/g	UJ	0.64	pci/g	UJ
SR-90	0.20	pci/g	UJ	0.20	pci/g	UJ	0.17	pci/g	UJ
TC-99	0.50	pci/g	UJ	0.43	pci/g	UJ	0.45	pci/g	UJ
TH-228	0.63	pci/g	-	2.44	pci/g	J	1.80	pci/g	J
TH-230	1.04	pci/g	-	3.32	pci/g	J	2.40	pci/g	J
TH-232	0.68	pci/g	-	2.36	pci/g	J	2.05	pci/g	J
TH-TOTAL	6.23	ug/g	-	21.70	ug/g	J	18.90	ug/g	J
U-234	0.96	pci/g	-	3.58	pci/g	-	3.04	pci/g	-
U-235/236	0.03	pci/g	J	0.19	pci/g	J	0.18	pci/g	J
U-238	0.88	pci/g	-	3.46	pci/g	-	3.94	pci/g	-
U-TOTAL	4.27	mg/kg	-	12.90	mg/kg	-	13.00	mg/kg	-

TABLE G-6A
(Continued)

PHASE II - RADIOLOGICAL PARAMETERS

BORING NUMBER	1980			1980			1981		
SAMPLE NUMBER	112153			112157			112161		
SAMPLING DEPTH (Feet)	20 - 22			24 - 26			2 - 4		
SAMPLING DATE	05/12/93			05/13/92			05/13/93		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VAL QUAL	RESULTS	UNITS	VAL QUAL	RESULTS	UNITS	VAL QUAL
CS-137	0.10	pci/g	UJ	0.08	pci/g	UJ	0.12	pci/g	UJ
GROSS ALPHA	9.43	pci/g	-	19.70	pci/g	-	38.40	pci/g	-
GROSS BETA	33.50	pci/g	-	22.30	pci/g	-	36.40	pci/g	-
NP-237	0.15	pci/g	N	0.05	pci/g	N	0.30	pci/g	N
PU-238	0.04	pci/g	J	0.03	pci/g	J	0.47	pci/g	-
PU-239/240	0.02	pci/g	UJ	0.03	pci/g	UJ	0.86	pci/g	-
RA-226	1.15	pci/g	-	1.07	pci/g	-	3.55	pci/g	-
RA-228	1.07	pci/g	-	1.06	pci/g	-	3.07	pci/g	-
RU-106	0.84	pci/g	UJ	0.79	pci/g	UJ	1.02	pci/g	UJ
SR-90	0.16	pci/g	UJ	0.17	pci/g	UJ	0.65	pci/g	J
TC-99	0.39	pci/g	UJ	0.34	pci/g	UJ	0.41	pci/g	UJ
TH-228	0.96	pci/g	J	0.85	pci/g	-	3.27	pci/g	-
TH-230	1.25	pci/g	J	1.11	pci/g	-	5.52	pci/g	-
TH-232	1.01	pci/g	J	0.89	pci/g	-	3.12	pci/g	-
TH-TOTAL	9.29	ug/g	J	8.13	ug/g	-	28.40	ug/g	-
U-234	0.92	pci/g	-	0.95	pci/g	-	3.43	pci/g	-
U-235/236	0.04	pci/g	J	0.07	pci/g	J	0.12	pci/g	-
U-238	1.19	pci/g	-	1.21	pci/g	-	3.32	pci/g	-
U-TOTAL	3.34	mg/kg	J	4.53	mg/kg	-	14.10	mg/kg	-

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TABLE G-6A
(Continued)

PHASE II - RADIOLOGICAL PARAMETERS

BORING NUMBER	1981			1981			1981		
SAMPLE NUMBER	112167			112180			112181		
SAMPLING DEPTH (Feet)	8 - 10			17 - 19			19 - 21		
SAMPLING DATE	05/13/93			05/14/93			05/14/93		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VAL QUAL	RESULTS	UNITS	VAL QUAL	RESULTS	UNITS	VAL QUAL
CS-137	0.10	pci/g	UJ	0.08	pci/g	UJ	0.10	pci/g	UJ
GROSS ALPHA	35.70	pci/g	-	11.80	pci/g	-	16.20	pci/g	-
GROSS BETA	31.80	pci/g	-	22.70	pci/g	-	20.70	pci/g	-
NP-237	0.45	pci/g	N	0.40	pci/g	N	0.12	pci/g	N
PU-238	0.32	pci/g	-	0.30	pci/g	UJ	0.05	pci/g	U
PU-239/240	0.11	pci/g	J	0.30	pci/g	UJ	0.02	pci/g	UJ
RA-226	3.27	pci/g	-	1.73	pci/g	-	1.14	pci/g	-
RA-228	2.42	pci/g	-	1.33	pci/g	-	0.90	pci/g	-
RU-106	0.93	pci/g	UJ	0.74	pci/g	UJ	0.88	pci/g	UJ
SR-90	0.18	pci/g	UJ	0.40	pci/g	UJ	0.21	pci/g	UJ
TC-99	0.38	pci/g	UJ	0.40	pci/g	UJ	0.37	pci/g	UJ
TH-228	3.12	pci/g	-	1.37	pci/g	-	0.87	pci/g	-
TH-230	5.01	pci/g	-	3.60	pci/g	-	2.67	pci/g	-
TH-232	2.17	pci/g	-	1.35	pci/g	-	0.72	pci/g	-
TH-TOTAL	20.00	ug/g	-	12.40	ug/g	-	6.62	ug/g	-
U-234	3.23	pci/g	-	1.01	pci/g	-	0.87	pci/g	-
U-235/236	0.22	pci/g	-	0.05	pci/g	-	0.03	pci/g	J
U-238	3.58	pci/g	-	1.20	pci/g	-	0.80	pci/g	-
U-TOTAL	15.70	mg/kg	-	4.15	mg/kg	-	3.30	mg/kg	-

TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1979			1979			1979		
SAMPLE NUMBER	112092			112117			112123		
SAMPLING DEPTH (Feet)	2-4			20-22			25.5-27.5		
SAMPLING DATE	05/10/93			05/10/93			05/11/93		
CHEMICAL PARAMETERS	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ
Inorganics									
Aluminum	4370.000	mg/kg	C -	7090.000	mg/kg	C -	11900.000	mg/kg	C -
Antimony	1.500	mg/kg	C UJ	2.900	mg/kg	C UJ	0.350	mg/kg	C UJ
Arsenic	23.200	mg/kg	C -	87.800	mg/kg	C -	11.000	mg/kg	C -
Barium	190.000	mg/kg	C J	385.000	mg/kg	C J	67.700	mg/kg	C J
Beryllium	2.400	mg/kg	C -	2.500	mg/kg	C -	0.550	mg/kg	C -
Cadmium	0.500	mg/kg	C U	0.790	mg/kg	C -	0.980	mg/kg	C -
Calcium	2230.000	mg/kg	C -	6680.000	mg/kg	C -	6130.000	mg/kg	C -
Chromium	11.600	mg/kg	C -	15.100	mg/kg	C -	15.800	mg/kg	C -
Cobalt	11.800	mg/kg	C -	16.300	mg/kg	C -	9.800	mg/kg	C -
Copper	48.700	mg/kg	C J	59.800	mg/kg	C J	19.300	mg/kg	C J
Cyanide	0.130	mg/kg	C U	0.140	mg/kg	C U	0.120	mg/kg	C U
Iron	3930.000	mg/kg	C J	5310.000	mg/kg	C J	21300.000	mg/kg	C J
Lead	30.300	mg/kg	C -	68.200	mg/kg	C -	18.900	mg/kg	C -
Magnesium	432.000	mg/kg	C -	1730.000	mg/kg	C -	4280.000	mg/kg	C -
Manganese	20.100	mg/kg	C J	107.000	mg/kg	C J	258.000	mg/kg	C J
Mercury	0.120	mg/kg	C U	0.140	mg/kg	C U	0.120	mg/kg	C U
Molybdenum	3.300	mg/kg	C U	4.700	mg/kg	C U	1.900	mg/kg	C U
Nickel	20.100	mg/kg	C -	33.000	mg/kg	C -	20.400	mg/kg	C -
Potassium	1040.000	mg/kg	C J	1230.000	mg/kg	C J	2030.000	mg/kg	C J
Selenium	2.700	mg/kg	C -	3.200	mg/kg	C -	3.700	mg/kg	C -
Silicon	642.000	mg/kg	C J	964.000	mg/kg	C J	1210.000	mg/kg	C J
Silver	0.500	mg/kg	C U	0.550	mg/kg	C U	0.460	mg/kg	C U
Sodium	174.000	mg/kg	C J	231.000	mg/kg	C J	128.000	mg/kg	C J
Thallium	1.200	mg/kg	C -	3.100	mg/kg	C -	0.360	mg/kg	C -
Vanadium	36.800	mg/kg	C J	42.600	mg/kg	C J	26.900	mg/kg	C J
Zinc	33.100	mg/kg	C J	120.000	mg/kg	C J	52.600	mg/kg	C J
Volatile Organics									
1,1,1-Trichloroethane	13.000	ug/kg	C UJ	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ
1,1,2,2-Tetrachloroethane	13.000	ug/kg	C UJ	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ
1,1,2-Trichloroethane	13.000	ug/kg	C UJ	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ
1,1-Dichloroethane	13.000	ug/kg	C UJ	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ
1,1-Dichloroethene	13.000	ug/kg	C UJ	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ
1,2-Dichloroethane	13.000	ug/kg	C UJ	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ
1,2-Dichloroethene	13.000	ug/kg	C UJ	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ
1,2-Dichloropropane	13.000	ug/kg	C UJ	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ
2-Butanone	13.000	ug/kg	C UJ	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ
2-Hexanone	13.000	ug/kg	C UJ	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ
4-Methyl-2-pentanone	13.000	ug/kg	C UJ	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ
Acetone	13.000	ug/kg	C UJ	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ
Benzene	13.000	ug/kg	C UJ	14.000	ug/kg	C UJ	13.000	ug/kg	C UJ

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TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1979				1979				1979			
SAMPLE NUMBER	112092				112117				112123			
SAMPLING DEPTH (Feet)	2-4				20-22				25.5-27.5			
SAMPLING DATE	05/10/93				05/10/93				05/11/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
Bromodichloromethane	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Bromoform	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Bromomethane	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Carbon Tetrachloride	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Carbon disulfide	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Chlorobenzene	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Chloroethane	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Chloroform	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Chloromethane	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Dibromochloromethane	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Ethylbenzene	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Methylene chloride	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Styrene	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Tetrachloroethene	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Toluene	12.000	ug/kg	C	UJ	140.000	ug/kg	C	J	13.000	ug/kg	C	UJ
Trichloroethene	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Vinyl Acetate	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Vinyl chloride	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Xylenes, Total	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
cis-1,3-Dichloropropene	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
trans-1,3-Dichloropropene	13.000	ug/kg	C	UJ	14.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Semivolatile Organics												
1,2,4-Trichlorobenzene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
1,2-Dichlorobenzene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
1,3-Dichlorobenzene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
1,4-Dichlorobenzene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
2,4,5-Trichlorophenol	970.000	ug/kg	C	U	1100.000	ug/kg	C	U	910.000	ug/kg	C	U
2,4,6-Trichlorophenol	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
2,4-Dichlorophenol	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
2,4-Dimethylphenol	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
2,4-Dinitrophenol	970.000	ug/kg	C	U	1100.000	ug/kg	C	U	910.000	ug/kg	C	U
2,4-Dinitrotoluene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
2,6-Dinitrotoluene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
2-Chloronaphthalene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
2-Chlorophenol	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
2-Methylnaphthalene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
2-Methylphenol	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
2-Nitroaniline	970.000	ug/kg	C	U	1100.000	ug/kg	C	U	910.000	ug/kg	C	U
2-Nitrophenol	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
3,3'-Dichlorobenzidine	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U

000129

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TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1979				1979				1979			
SAMPLE NUMBER	112092				112117				112123			
SAMPLING DEPTH (Feet)	2-4				20-22				25.5-27.5			
SAMPLING DATE	05/10/93				05/10/93				05/11/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
3-Nitroaniline	970.000	ug/kg	C	U	1100.000	ug/kg	C	U	910.000	ug/kg	C	U
4,6-Dinitro-2-methylphenol	970.000	ug/kg	C	U	1100.000	ug/kg	C	U	910.000	ug/kg	C	U
4-Bromophenyl phenyl ether	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
4-Chloro-3-methylphenol	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
4-Chlorophenylphenyl ether	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
4-Methylphenol	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
4-Nitroaniline	970.000	ug/kg	C	U	1100.000	ug/kg	C	U	910.000	ug/kg	C	U
4-Nitrophenol	970.000	ug/kg	C	U	1100.000	ug/kg	C	U	910.000	ug/kg	C	U
Acenaphthene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Acenaphthylene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Anthracene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Benzo(a)anthracene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Benzo(a)pyrene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Benzo(b)fluoranthene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Benzo(g,h,i)perylene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Benzo(k)fluoranthene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Benzoic acid	1900.000	ug/kg	C	U	95.000	ug/kg	C	J	1800.000	ug/kg	C	U
Benzyl alcohol	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Butyl benzyl phthalate	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Carbazole	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Chrysene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Di-n-butyl phthalate	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Di-n-octyl phthalate	400.000	ug/kg	C	U	450.000	ug/kg	C	U	46.000	ug/kg	C	J
Dibenzo(a,h)anthracene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Dibenzofuran	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Diethyl phthalate	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Dimethyl phthalate	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Fluoranthene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Fluorene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Hexachlorobenzene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Hexachlorobutadiene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Hexachlorocyclopentadiene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Hexachloroethane	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Indeno(1,2,3-cd)pyrene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Isophorone	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
N-Nitroso-di-n-propylamine	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
N-Nitrosodiphenylamine	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Naphthalene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Nitrobenzene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Pentachlorophenol	56.000	ug/kg	C	J	1100.000	ug/kg	C	U	910.000	ug/kg	C	U
Phenanthrene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Phenol	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U

000120

TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1979				1979				1979			
SAMPLE NUMBER	112092				112117				112123			
SAMPLING DEPTH (Feet)	2-4				20-22				25.5-27.5			
SAMPLING DATE	05/10/93				05/10/93				05/11/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
Pyrene	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
bis(2-Chloroethoxy)methane	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
bis(2-Chloroethyl)ether	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
bis(2-Chloroisopropyl) ether	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
bis(2-Ethylhexyl) phthalate	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
p-Chloroaniline	400.000	ug/kg	C	U	450.000	ug/kg	C	U	380.000	ug/kg	C	U
Pesticide Organics/PCBs												
4,4'-DDD	4.000	ug/kg	C	UJ	4.400	ug/kg	C	U	3.800	ug/kg	C	U
4,4'-DDE	4.000	ug/kg	C	UJ	4.400	ug/kg	C	U	3.800	ug/kg	C	U
4,4'-DDT	4.000	ug/kg	C	UJ	4.400	ug/kg	C	U	3.800	ug/kg	C	U
Aldrin	2.100	ug/kg	C	UJ	2.300	ug/kg	C	U	1.900	ug/kg	C	U
Aroclor-1016	40.000	ug/kg	C	UJ	44.000	ug/kg	C	U	38.000	ug/kg	C	U
Aroclor-1221	81.000	ug/kg	C	UJ	90.000	ug/kg	C	U	77.000	ug/kg	C	U
Aroclor-1232	40.000	ug/kg	C	UJ	44.000	ug/kg	C	U	38.000	ug/kg	C	U
Aroclor-1242	40.000	ug/kg	C	UJ	44.000	ug/kg	C	U	38.000	ug/kg	C	U
Aroclor-1248	40.000	ug/kg	C	UJ	44.000	ug/kg	C	U	38.000	ug/kg	C	U
Aroclor-1254	40.000	ug/kg	C	UJ	44.000	ug/kg	C	U	38.000	ug/kg	C	U
Aroclor-1260	40.000	ug/kg	C	UJ	44.000	ug/kg	C	U	38.000	ug/kg	C	U
Dieldrin	4.000	ug/kg	C	UJ	4.400	ug/kg	C	U	3.800	ug/kg	C	U
Endosulfan II	4.000	ug/kg	C	UJ	4.400	ug/kg	C	U	3.800	ug/kg	C	U
Endosulfan sulfate	4.000	ug/kg	C	UJ	4.400	ug/kg	C	U	3.800	ug/kg	C	U
Endosulfan-I	2.100	ug/kg	C	UJ	2.300	ug/kg	C	U	1.900	ug/kg	C	U
Endrin	4.000	ug/kg	C	UJ	4.400	ug/kg	C	U	3.800	ug/kg	C	U
Endrin aldehyde	4.000	ug/kg	C	UJ	4.400	ug/kg	C	U	3.800	ug/kg	C	U
Endrin ketone	4.000	ug/kg	C	UJ	4.400	ug/kg	C	U	3.800	ug/kg	C	U
Heptachlor	2.100	ug/kg	C	UJ	2.300	ug/kg	C	U	1.900	ug/kg	C	U
Heptachlor epoxide	2.100	ug/kg	C	UJ	2.300	ug/kg	C	U	1.900	ug/kg	C	U
Methoxychlor	21.000	ug/kg	C	UJ	23.000	ug/kg	C	U	19.000	ug/kg	C	U
Toxaphene	210.000	ug/kg	C	UJ	230.000	ug/kg	C	U	190.000	ug/kg	C	U
alpha-BHC	2.100	ug/kg	C	UJ	2.300	ug/kg	C	U	1.900	ug/kg	C	U
alpha-Chlordane	2.100	ug/kg	C	UJ	2.300	ug/kg	C	U	1.900	ug/kg	C	U
beta-BHC	2.100	ug/kg	C	UJ	2.300	ug/kg	C	U	1.900	ug/kg	C	U
delta-BHC	2.100	ug/kg	C	UJ	2.300	ug/kg	C	U	1.900	ug/kg	C	U
gamma-BHC (Lindane)	2.100	ug/kg	C	UJ	2.300	ug/kg	C	U	1.900	ug/kg	C	U
gamma-Chlordane	2.100	ug/kg	C	UJ	2.300	ug/kg	C	U	1.900	ug/kg	C	U

TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1979			1980			1980		
SAMPLE NUMBER	112126			112130			112145		
SAMPLING DEPTH (Feet)	29.5-31.5			2-4			13-15		
SAMPLING DATE	05/11/93			05/12/93			05/12/93		
CHEMICAL PARAMETERS	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ
Inorganics									
Aluminum	7610.000	mg/kg	C -	5240.000	mg/kg	C -	4010.000	mg/kg	D -
Antimony	0.410	mg/kg	C UJ	3.000	mg/kg	C UJ	3.100	mg/kg	D UJ
Arsenic	4.100	mg/kg	C -	79.300	mg/kg	C -	75.900	mg/kg	D -
Barium	62.100	mg/kg	C J	216.000	mg/kg	C J	147.000	mg/kg	D J
Beryllium	0.640	mg/kg	C -	3.900	mg/kg	C -	3.900	mg/kg	D -
Cadmium	0.920	mg/kg	C -	0.490	mg/kg	C U	0.570	mg/kg	D U
Calcium	102000.000	mg/kg	C -	4550.000	mg/kg	C -	6220.000	mg/kg	D -
Chromium	11.000	mg/kg	C -	9.800	mg/kg	C -	9.400	mg/kg	D -
Cobalt	7.000	mg/kg	C -	21.800	mg/kg	C -	12.800	mg/kg	D -
Copper	14.900	mg/kg	C J	51.900	mg/kg	C -	46.800	mg/kg	D -
Cyanide	0.110	mg/kg	C U	0.120	mg/kg	C R	0.140	mg/kg	D R
Iron	15500.000	mg/kg	C J	5170.000	mg/kg	C J	3850.000	mg/kg	D J
Lead	8.600	mg/kg	C -	40.500	mg/kg	C -	42.600	mg/kg	D -
Magnesium	22800.000	mg/kg	C -	428.000	mg/kg	C -	1190.000	mg/kg	D -
Manganese	459.000	mg/kg	C J	25.300	mg/kg	C J	34.900	mg/kg	D J
Mercury	0.100	mg/kg	C U	0.120	mg/kg	C U	0.130	mg/kg	D U
Molybdenum	1.400	mg/kg	C U	5.200	mg/kg	C -	6.300	mg/kg	D -
Nickel	16.800	mg/kg	C -	34.600	mg/kg	C -	25.800	mg/kg	D -
Potassium	1520.000	mg/kg	C J	986.000	mg/kg	C J	809.000	mg/kg	D J
Selenium	0.220	mg/kg	C UJ	2.500	mg/kg	C J	3.300	mg/kg	D J
Silicon	978.000	mg/kg	C J	827.000	mg/kg	C J	373.000	mg/kg	D J
Silver	0.430	mg/kg	C U	0.490	mg/kg	C U	0.570	mg/kg	D U
Sodium	201.000	mg/kg	C J	187.000	mg/kg	C J	174.000	mg/kg	D J
Thallium	0.220	mg/kg	C U	2.500	mg/kg	C -	3.000	mg/kg	D -
Vanadium	18.000	mg/kg	C J	38.200	mg/kg	C J	34.600	mg/kg	D J
Zinc	42.700	mg/kg	C J	88.600	mg/kg	C J	51.600	mg/kg	D J
Volatile Organics									
1,1,1-Trichloroethane	11.000	ug/kg	C UJ	12.000	ug/kg	C J	600.000	ug/kg	D J
1,1,2,2-Tetrachloroethane	11.000	ug/kg	C UJ	62.000	ug/kg	C R	68.000	ug/kg	D R
1,1,2-Trichloroethane	11.000	ug/kg	C UJ	62.000	ug/kg	C UJ	68.000	ug/kg	D R
1,1-Dichloroethane	11.000	ug/kg	C UJ	62.000	ug/kg	C UJ	68.000	ug/kg	D U
1,1-Dichloroethene	11.000	ug/kg	C UJ	62.000	ug/kg	C UJ	68.000	ug/kg	D UJ
1,2-Dichloroethane	11.000	ug/kg	C UJ	62.000	ug/kg	C UJ	68.000	ug/kg	D R
1,2-Dichloroethene	11.000	ug/kg	C UJ	62.000	ug/kg	C UJ	68.000	ug/kg	D U
1,2-Dichloropropane	11.000	ug/kg	C UJ	62.000	ug/kg	C UJ	68.000	ug/kg	D R
2-Butanone	11.000	ug/kg	C UJ	62.000	ug/kg	C UJ	68.000	ug/kg	D R
2-Hexanone	11.000	ug/kg	C UJ	62.000	ug/kg	C UJ	68.000	ug/kg	D R
4-Methyl-2-pentanone	11.000	ug/kg	C UJ	62.000	ug/kg	C UJ	68.000	ug/kg	D R
Acetone	11.000	ug/kg	C UJ	270.000	ug/kg	C R	290.000	ug/kg	D UJ
Benzene	11.000	ug/kg	C UJ	62.000	ug/kg	C UJ	68.000	ug/kg	D R

000122

TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1979				1980				1980			
SAMPLE NUMBER	112126				112130				112145			
SAMPLING DEPTH (Feet)	29.5-31.5				2-4				13-15			
SAMPLING DATE	05/11/93				05/12/93				05/12/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
Bromodichloromethane	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	R
Bromoform	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	R
Bromomethane	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	U
Carbon Tetrachloride	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	R
Carbon disulfide	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	U
Chlorobenzene	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	R
Chloroethane	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	U
Chloroform	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	R
Chloromethane	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	UJ
Dibromochloromethane	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	R
Ethylbenzene	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	R
Methylene chloride	11.000	ug/kg	C	UJ	62.000	ug/kg	C	U	52.000	ug/kg	D	UJ
Styrene	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	R
Tetrachloroethene	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	R
Toluene	11.000	ug/kg	C	UJ	12.000	ug/kg	C	J	440.000	ug/kg	D	J
Trichloroethene	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	R
Vinyl Acetate	11.000	ug/kg	C	UJ								
Vinyl chloride	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	U
Xylenes, Total	11.000	ug/kg	C	UJ	53.000	ug/kg	C	J	68.000	ug/kg	D	R
cis-1,3-Dichloropropene	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	R
trans-1,3-Dichloropropene	11.000	ug/kg	C	UJ	62.000	ug/kg	C	UJ	68.000	ug/kg	D	R
Semivolatile Organics												
1,2,4-Trichlorobenzene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
1,2-Dichlorobenzene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
1,3-Dichlorobenzene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
1,4-Dichlorobenzene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
2,4,5-Trichlorophenol	890.000	ug/kg	C	U	1000.000	ug/kg	C	U	1100.000	ug/kg	D	U
2,4,6-Trichlorophenol	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
2,4-Dichlorophenol	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
2,4-Dimethylphenol	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
2,4-Dinitrophenol	890.000	ug/kg	C	U	1000.000	ug/kg	C	U	1100.000	ug/kg	D	U
2,4-Dinitrotoluene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
2,6-Dinitrotoluene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
2-Chloronaphthalene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
2-Chlorophenol	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
2-Methylnaphthalene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
2-Methylphenol	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
2-Nitroaniline	890.000	ug/kg	C	U	1000.000	ug/kg	C	U	1100.000	ug/kg	D	U
2-Nitrophenol	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
3,3'-Dichlorobenzidine	370.000	ug/kg	C	U	410.000	ug/kg	C	UJ	450.000	ug/kg	D	UJ

TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1979				1980				1980			
SAMPLE NUMBER	112126				112130				112145			
SAMPLING DEPTH (Feet)	29.5-31.5				2-4				13-15			
SAMPLING DATE	05/11/93				05/12/93				05/12/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
3-Nitroaniline	890.000	ug/kg	C	U	1000.000	ug/kg	C	U	1100.000	ug/kg	D	U
4,6-Dinitro-2-methylphenol	890.000	ug/kg	C	U	1000.000	ug/kg	C	U	1100.000	ug/kg	D	U
4-Bromophenyl phenyl ether	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
4-Chloro-3-methylphenol	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
4-Chlorophenylphenyl ether	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
4-Methylphenol	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
4-Nitroaniline	890.000	ug/kg	C	U	1000.000	ug/kg	C	U	1100.000	ug/kg	D	U
4-Nitrophenol	890.000	ug/kg	C	U	1000.000	ug/kg	C	U	1100.000	ug/kg	D	U
Acenaphthene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Acenaphthylene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Anthracene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Benzo(a)anthracene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Benzo(a)pyrene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Benzo(b)fluoranthene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Benzo(g,h,i)perylene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Benzo(k)fluoranthene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Benzoic acid	1800.000	ug/kg	C	U	2000.000	ug/kg	C	UJ	2200.000	ug/kg	D	UJ
Benzyl alcohol	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Butyl benzyl phthalate	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Carbazole	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Chrysene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Di-n-butyl phthalate	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Di-n-octyl phthalate	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Dibenzo(a,h)anthracene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Dibenzofuran	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Diethyl phthalate	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Dimethyl phthalate	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Fluoranthene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Fluorene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Hexachlorobenzene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Hexachlorobutadiene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Hexachlorocyclopentadiene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Hexachloroethane	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Indeno(1,2,3-cd)pyrene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Isophorone	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
N-Nitroso-di-n-propylamine	370.000	ug/kg	C	U	410.000	ug/kg	C	UJ	450.000	ug/kg	D	UJ
N-Nitrosodiphenylamine	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Naphthalene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Nitrobenzene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Pentachlorophenol	890.000	ug/kg	C	U	1000.000	ug/kg	C	U	1100.000	ug/kg	D	U
Phenanthrene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Phenol	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U

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TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1979				1980				1980			
SAMPLE NUMBER	112126				112130				112145			
SAMPLING DEPTH (Feet)	29.5-31.5				2-4				13-15			
SAMPLING DATE	05/11/93				05/12/93				05/12/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
Pyrene	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
bis(2-Chloroethoxy)methane	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
bis(2-Chloroethyl)ether	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
bis(2-Chloroisopropyl) ether	370.000	ug/kg	C	U	410.000	ug/kg	C	UJ	450.000	ug/kg	D	UJ
bis(2-Ethylhexyl) phthalate	370.000	ug/kg	C	U	300.000	ug/kg	C	J	780.000	ug/kg	D	-
p-Chloroaniline	370.000	ug/kg	C	U	410.000	ug/kg	C	U	450.000	ug/kg	D	U
Pesticide Organics/PCBs												
4,4'-DDD	3.700	ug/kg	C	U	4.100	ug/kg	C	U	4.500	ug/kg	D	U
4,4'-DDE	3.700	ug/kg	C	U	4.100	ug/kg	C	U	4.500	ug/kg	D	U
4,4'-DDT	3.700	ug/kg	C	U	4.100	ug/kg	C	U	4.500	ug/kg	D	U
Aldrin	1.900	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	D	U
Aroclor-1016	37.000	ug/kg	C	U	41.000	ug/kg	C	U	45.000	ug/kg	D	U
Aroclor-1221	74.000	ug/kg	C	U	83.000	ug/kg	C	U	91.000	ug/kg	D	U
Aroclor-1232	37.000	ug/kg	C	U	41.000	ug/kg	C	U	45.000	ug/kg	D	U
Aroclor-1242	37.000	ug/kg	C	U	41.000	ug/kg	C	U	45.000	ug/kg	D	U
Aroclor-1248	37.000	ug/kg	C	U	41.000	ug/kg	C	U	45.000	ug/kg	D	U
Aroclor-1254	37.000	ug/kg	C	U	41.000	ug/kg	C	U	45.000	ug/kg	D	U
Aroclor-1260	37.000	ug/kg	C	U	41.000	ug/kg	C	U	45.000	ug/kg	D	U
Dieldrin	3.700	ug/kg	C	U	4.100	ug/kg	C	U	4.500	ug/kg	D	U
Endosulfan II	3.700	ug/kg	C	U	4.100	ug/kg	C	U	4.500	ug/kg	D	U
Endosulfan sulfate	3.700	ug/kg	C	U	4.100	ug/kg	C	U	4.500	ug/kg	D	U
Endosulfan-I	1.900	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	D	U
Endrin	3.700	ug/kg	C	U	4.100	ug/kg	C	U	4.500	ug/kg	D	U
Endrin aldehyde	3.700	ug/kg	C	U	4.100	ug/kg	C	U	4.500	ug/kg	D	U
Endrin ketone	3.700	ug/kg	C	U	4.100	ug/kg	C	U	4.500	ug/kg	D	U
Heptachlor	1.900	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	D	U
Heptachlor epoxide	1.900	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	D	U
Methoxychlor	19.000	ug/kg	C	U	21.000	ug/kg	C	U	23.000	ug/kg	D	U
Toxaphene	190.000	ug/kg	C	U	210.000	ug/kg	C	U	230.000	ug/kg	D	U
alpha-BHC	1.900	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	D	U
alpha-Chlordane	1.900	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	D	U
beta-BHC	1.900	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	D	U
delta-BHC	1.900	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	D	U
gamma-BHC (Lindane)	1.900	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	D	U
gamma-Chlordane	1.900	ug/kg	C	U	2.100	ug/kg	C	U	2.300	ug/kg	D	U

000525

6510

TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1980			1980			1981		
SAMPLE NUMBER	112153			112157			112161		
SAMPLING DEPTH (Feet)	20-22			24-26			2-4		
SAMPLING DATE	05/12/93			05/13/92			05/13/93		
CHEMICAL PARAMETERS	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ
Inorganics									
Aluminum	15600.000	mg/kg	C -	8720.000	mg/kg	C -	3570.000	mg/kg	C J
Antimony	1.300	mg/kg	C UJ	1.000	mg/kg	C UJ	1.300	mg/kg	C UJ
Arsenic	7.900	mg/kg	C -	10.600	mg/kg	C -	16.900	mg/kg	C J
Barium	115.000	mg/kg	C J	119.000	mg/kg	C J	106.000	mg/kg	C J
Beryllium	1.400	mg/kg	C -	1.400	mg/kg	C -	2.300	mg/kg	C -
Cadmium	1.200	mg/kg	C -	0.800	mg/kg	C -	1.300	mg/kg	C U
Calcium	59500.000	mg/kg	C -	106000.000	mg/kg	C -	2790.000	mg/kg	C J
Chromium	19.900	mg/kg	C -	12.200	mg/kg	C -	8.400	mg/kg	C J
Cobalt	12.200	mg/kg	C -	9.700	mg/kg	C -	11.600	mg/kg	C -
Copper	22.300	mg/kg	C -	18.300	mg/kg	C -	40.000	mg/kg	C J
Cyanide	0.120	mg/kg	C R	0.120	mg/kg	C R	0.340	mg/kg	C -
Iron	26800.000	mg/kg	C J	18200.000	mg/kg	C J	2480.000	mg/kg	C J
Lead	11.700	mg/kg	C -	11.300	mg/kg	C -	31.900	mg/kg	C J
Magnesium	25400.000	mg/kg	C -	23700.000	mg/kg	C -	504.000	mg/kg	C J
Manganese	351.000	mg/kg	C J	275.000	mg/kg	C J	16.500	mg/kg	C -
Mercury	0.120	mg/kg	C U	0.120	mg/kg	C U	0.110	mg/kg	C U
Molybdenum	2.000	mg/kg	C -	1.300	mg/kg	C -	2.500	mg/kg	C U
Nickel	28.200	mg/kg	C -	19.000	mg/kg	C -	18.800	mg/kg	C J
Potassium	1950.000	mg/kg	C J	935.000	mg/kg	C J	766.000	mg/kg	C -
Selenium	0.230	mg/kg	C UJ	0.400	mg/kg	C UJ	2.200	mg/kg	C U
Silicon	828.000	mg/kg	C J	661.000	mg/kg	C J	302.000	mg/kg	C J
Silver	0.480	mg/kg	C U	0.480	mg/kg	C U	2.500	mg/kg	C UJ
Sodium	203.000	mg/kg	C J	178.000	mg/kg	C J	157.000	mg/kg	C -
Thallium	0.280	mg/kg	C -	0.470	mg/kg	C -	0.750	mg/kg	C -
Vanadium	30.700	mg/kg	C J	22.700	mg/kg	C J	30.500	mg/kg	C -
Zinc	70.000	mg/kg	C J	47.500	mg/kg	C J	33.900	mg/kg	C J
Volatile Organics									
1,1,1-Trichloroethane	4.000	ug/kg	C J	5600.000	ug/kg	C -	19.000	ug/kg	C UJ
1,1,2,2-Tetrachloroethane	12.000	ug/kg	C R	1500.000	ug/kg	C U	13.000	ug/kg	C R
1,1,2-Trichloroethane	12.000	ug/kg	C U	1500.000	ug/kg	C U	13.000	ug/kg	C R
1,1-Dichloroethane	12.000	ug/kg	C UJ	1500.000	ug/kg	C U	13.000	ug/kg	C UJ
1,1-Dichloroethene	12.000	ug/kg	C U	1500.000	ug/kg	C UJ	13.000	ug/kg	C UJ
1,2-Dichloroethane	12.000	ug/kg	C U	1500.000	ug/kg	C U	13.000	ug/kg	C UJ
1,2-Dichloroethene	12.000	ug/kg	C U	1500.000	ug/kg	C U	13.000	ug/kg	C UJ
1,2-Dichloropropane	12.000	ug/kg	C U	1500.000	ug/kg	C U	13.000	ug/kg	C R
2-Butanone	12.000	ug/kg	C UJ	1500.000	ug/kg	C R	13.000	ug/kg	C UJ
2-Hexanone	12.000	ug/kg	C U	1500.000	ug/kg	C UJ	13.000	ug/kg	C R
4-Methyl-2-pentanone	12.000	ug/kg	C U	1500.000	ug/kg	C U	13.000	ug/kg	C R
Acetone	34.000	ug/kg	C R	3200.000	ug/kg	C R	13.000	ug/kg	C UJ
Benzene	12.000	ug/kg	C U	1500.000	ug/kg	C U	13.000	ug/kg	C R

TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1980				1980				1981			
SAMPLE NUMBER	112153				112157				112161			
SAMPLING DEPTH (Feet)	20-22				24-26				2-4			
SAMPLING DATE	05/12/93				05/13/92				05/13/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
Bromodichloromethane	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	R
Bromoform	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	R
Bromomethane	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	UJ
Carbon Tetrachloride	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	R
Carbon disulfide	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	UJ
Chlorobenzene	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	R
Chloroethane	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	UJ
Chloroform	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	UJ
Chloromethane	12.000	ug/kg	C	UJ	1500.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ
Dibromochloromethane	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	R
Ethylbenzene	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	R
Methylene chloride	12.000	ug/kg	C	UJ	1600.000	ug/kg	C	U	13.000	ug/kg	C	UJ
Styrene	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	R
Tetrachloroethene	12.000	ug/kg	C	UJ	1500.000	ug/kg	C	UJ	13.000	ug/kg	C	R
Toluene	2.000	ug/kg	C	J	1500.000	ug/kg	C	U	130.000	ug/kg	C	J
Trichloroethene	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	R
Vinyl Acetate									13.000	ug/kg	C	R
Vinyl chloride	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	UJ
Xylenes, Total	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	R
cis-1,3-Dichloropropene	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	R
trans-1,3-Dichloropropene	12.000	ug/kg	C	U	1500.000	ug/kg	C	U	13.000	ug/kg	C	R
Semivolatile Organics												
1,2,4-Trichlorobenzene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
1,2-Dichlorobenzene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
1,3-Dichlorobenzene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
1,4-Dichlorobenzene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
2,4,5-Trichlorophenol	960.000	ug/kg	C	U	980.000	ug/kg	C	U	1000.000	ug/kg	C	U
2,4,6-Trichlorophenol	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
2,4-Dichlorophenol	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
2,4-Dimethylphenol	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
2,4-Dinitrophenol	960.000	ug/kg	C	U	980.000	ug/kg	C	U	1000.000	ug/kg	C	UJ
2,4-Dinitrotoluene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
2,6-Dinitrotoluene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
2-Benzyl-4-chlorophenol									420.000	ug/kg	C	U
2-Chloronaphthalene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
2-Chlorophenol	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
2-Methylnaphthalene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
2-Methylphenol	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
2-Nitroaniline	960.000	ug/kg	C	U	980.000	ug/kg	C	U	1000.000	ug/kg	C	U
2-Nitrophenol	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U

TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1980				1980				1981			
SAMPLE NUMBER	112153				112157				112161			
SAMPLING DEPTH (Feet)	20-22				24-26				2-4			
SAMPLING DATE	05/12/93				05/13/92				05/13/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
3,3'-Dichlorobenzidine	390.000	ug/kg	C	UJ	410.000	ug/kg	C	UJ	420.000	ug/kg	C	U
3-Nitroaniline	960.000	ug/kg	C	U	980.000	ug/kg	C	U	1000.000	ug/kg	C	U
4,6-Dinitro-2-methylphenol	960.000	ug/kg	C	U	980.000	ug/kg	C	U	1000.000	ug/kg	C	U
4-Bromophenyl phenyl ether	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
4-Chloro-3-methylphenol	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
4-Chlorophenylphenyl ether	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
4-Methylphenol	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
4-Nitroaniline	960.000	ug/kg	C	U	980.000	ug/kg	C	U	1000.000	ug/kg	C	U
4-Nitrophenol	960.000	ug/kg	C	U	980.000	ug/kg	C	U	1000.000	ug/kg	C	U
Acenaphthene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Acenaphthylene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Anthracene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Benzo(a)anthracene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Benzo(a)pyrene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Benzo(b)fluoranthene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Benzo(g,h,i)perylene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Benzo(k)fluoranthene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Benzoic acid	1900.000	ug/kg	C	UJ	2000.000	ug/kg	C	U	2.000	ug/kg	C	J
Benzyl alcohol	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	R
Butyl benzyl phthalate	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Carbazole	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Chrysene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Di-n-butyl phthalate	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Di-n-octyl phthalate	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Dibenzo(a,h)anthracene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Dibenzofuran	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Diethyl phthalate	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Dimethyl phthalate	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Fluoranthene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Fluorene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Hexachlorobenzene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Hexachlorobutadiene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Hexachlorocyclopentadiene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Hexachloroethane	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Indeno(1,2,3-cd)pyrene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Isophorone	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
N-Nitroso-di-n-propylamine	390.000	ug/kg	C	UJ	410.000	ug/kg	C	U	420.000	ug/kg	C	U
N-Nitrosodimethylamine									420.000	ug/kg	C	U
N-Nitrosodiphenylamine	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Naphthalene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Nitrobenzene	390.000	ug/kg	C	U	410.000	ug/kg	C	U	420.000	ug/kg	C	U
Pentachlorophenol	960.000	ug/kg	C	U	980.000	ug/kg	C	U	1000.000	ug/kg	C	U

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TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1980			1980			1981		
SAMPLE NUMBER	112153			112157			112161		
SAMPLING DEPTH (Feet)	20-22			24-26			2-4		
SAMPLING DATE	05/12/93			05/13/92			05/13/93		
CHEMICAL PARAMETERS	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ
Semivolatile Organics									
Phenanthrene	390.000	ug/kg	C U	410.000	ug/kg	C U	420.000	ug/kg	C U
Phenol	390.000	ug/kg	C U	410.000	ug/kg	C U	420.000	ug/kg	C U
Pyrene	390.000	ug/kg	C U	410.000	ug/kg	C U	420.000	ug/kg	C U
Tributyl phosphate							420.000	ug/kg	C U
bis(2-Chloroethoxy)methane	390.000	ug/kg	C U	410.000	ug/kg	C U	420.000	ug/kg	C U
bis(2-Chloroethyl)ether	390.000	ug/kg	C U	410.000	ug/kg	C U	420.000	ug/kg	C U
bis(2-Chloroisopropyl) ether	390.000	ug/kg	C UJ	410.000	ug/kg	C U	420.000	ug/kg	C U
bis(2-Ethylhexyl) phthalate	4200.000	ug/kg	C -	98.000	ug/kg	C J	420.000	ug/kg	C U
p-Chloroaniline	390.000	ug/kg	C U	410.000	ug/kg	C U	420.000	ug/kg	C U
Pesticide Organics/PCBs									
4,4'-DDD	3.900	ug/kg	C U	4.100	ug/kg	C U	4.200	ug/kg	C U
4,4'-DDE	3.900	ug/kg	C U	4.100	ug/kg	C U	4.200	ug/kg	C U
4,4'-DDT	3.900	ug/kg	C U	4.100	ug/kg	C U	4.200	ug/kg	C U
Aldrin	2.000	ug/kg	C U	2.100	ug/kg	C U	2.200	ug/kg	C U
Aroclor-1016	39.000	ug/kg	C U	41.000	ug/kg	C U	42.000	ug/kg	C U
Aroclor-1221	80.000	ug/kg	C U	83.000	ug/kg	C U	86.000	ug/kg	C U
Aroclor-1232	39.000	ug/kg	C U	41.000	ug/kg	C U	42.000	ug/kg	C U
Aroclor-1242	39.000	ug/kg	C U	41.000	ug/kg	C U	42.000	ug/kg	C U
Aroclor-1248	39.000	ug/kg	C U	41.000	ug/kg	C U	42.000	ug/kg	C U
Aroclor-1254	39.000	ug/kg	C U	41.000	ug/kg	C U	42.000	ug/kg	C U
Aroclor-1260	39.000	ug/kg	C U	41.000	ug/kg	C U	42.000	ug/kg	C U
Dieldrin	3.900	ug/kg	C U	4.100	ug/kg	C U	4.200	ug/kg	C U
Endosulfan II	3.900	ug/kg	C U	4.100	ug/kg	C U	4.200	ug/kg	C U
Endosulfan sulfate	3.900	ug/kg	C U	4.100	ug/kg	C U	4.200	ug/kg	C U
Endosulfan-I	2.000	ug/kg	C U	2.100	ug/kg	C U	2.200	ug/kg	C U
Endrin	3.900	ug/kg	C U	4.100	ug/kg	C U	4.200	ug/kg	C U
Endrin aldehyde	3.900	ug/kg	C U	4.100	ug/kg	C U	4.200	ug/kg	C U
Endrin ketone	3.900	ug/kg	C U	4.100	ug/kg	C U	4.200	ug/kg	C U
Heptachlor	2.000	ug/kg	C U	2.100	ug/kg	C U	2.200	ug/kg	C U
Heptachlor epoxide	2.000	ug/kg	C U	2.100	ug/kg	C U	2.200	ug/kg	C U
Methoxychlor	20.000	ug/kg	C U	21.000	ug/kg	C U	22.000	ug/kg	C U
Toxaphene	200.000	ug/kg	C U	210.000	ug/kg	C U	220.000	ug/kg	C U
alpha-BHC	2.000	ug/kg	C U	2.100	ug/kg	C U	2.200	ug/kg	C U
alpha-Chlordane	2.000	ug/kg	C U	2.100	ug/kg	C U	2.200	ug/kg	C U
beta-BHC	2.000	ug/kg	C U	2.100	ug/kg	C U	2.200	ug/kg	C U
delta-BHC	2.000	ug/kg	C U	2.100	ug/kg	C U	2.200	ug/kg	C U
gamma-BHC (Lindane)	2.000	ug/kg	C U	2.100	ug/kg	C U	2.200	ug/kg	C U
gamma-Chlordane	2.000	ug/kg	C U	2.100	ug/kg	C U	2.200	ug/kg	C U

TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1981			1981			1981		
SAMPLE NUMBER	112167			112180			112181		
SAMPLING DEPTH (Feet)	8-10			17-19			19-21		
SAMPLING DATE	05/13/93			05/14/93			05/14/93		
CHEMICAL PARAMETERS	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ	RESULTS	UNITS	L VQ
Inorganics									
Aluminum	4410.000	mg/kg	C J	22400.000	mg/kg	C J	25500.000	mg/kg	D J
Antimony	2.000	mg/kg	C J	1.200	mg/kg	C UJ	0.960	mg/kg	D UJ
Arsenic	55.600	mg/kg	C J	18.700	mg/kg	C J	14.000	mg/kg	D J
Barium	171.000	mg/kg	C J	144.000	mg/kg	C J	195.000	mg/kg	D J
Beryllium	3.800	mg/kg	C -	1.100	mg/kg	C -	1.100	mg/kg	D -
Cadmium	1.400	mg/kg	C U	1.200	mg/kg	C U	0.960	mg/kg	D U
Calcium	2330.000	mg/kg	C J	5870.000	mg/kg	C J	17400.000	mg/kg	D J
Chromium	9.800	mg/kg	C J	23.200	mg/kg	C J	26.100	mg/kg	D J
Cobalt	10.700	mg/kg	C -	13.700	mg/kg	C -	10.400	mg/kg	D -
Copper	50.800	mg/kg	C J	22.900	mg/kg	C J	32.300	mg/kg	D J
Cyanide	0.330	mg/kg	C -	0.130	mg/kg	C U	0.130	mg/kg	D U
Iron	2960.000	mg/kg	C J	33600.000	mg/kg	C J	44800.000	mg/kg	D J
Lead	38.700	mg/kg	C J	31.100	mg/kg	C J	21.200	mg/kg	D J
Magnesium	335.000	mg/kg	C J	4190.000	mg/kg	C J	6720.000	mg/kg	D J
Manganese	27.100	mg/kg	C -	1070.000	mg/kg	C -	1900.000	mg/kg	D -
Mercury	0.190	mg/kg	C -	0.120	mg/kg	C U	0.120	mg/kg	D U
Molybdenum	9.700	mg/kg	C -	9.600	mg/kg	C -	13.500	mg/kg	D -
Nickel	20.600	mg/kg	C J	25.200	mg/kg	C J	36.700	mg/kg	D J
Potassium	601.000	mg/kg	C -	2100.000	mg/kg	C J	2380.000	mg/kg	D -
Selenium	11.400	mg/kg	C -	0.380	mg/kg	C U	0.360	mg/kg	D U
Silicon	342.000	mg/kg	C J	609.000	mg/kg	C J	788.000	mg/kg	D J
Silver	2.700	mg/kg	C UJ	10.700	mg/kg	C J	14.100	mg/kg	D J
Sodium	132.000	mg/kg	C -	136.000	mg/kg	C -	227.000	mg/kg	D -
Thallium	1.800	mg/kg	C -	0.380	mg/kg	C U	0.360	mg/kg	D UJ
Vanadium	40.400	mg/kg	C -	54.800	mg/kg	C -	64.500	mg/kg	D -
Zinc	23.400	mg/kg	C J	71.300	mg/kg	C J	89.900	mg/kg	D J
Volatile Organics									
1,1,1-Trichloroethane	740.000	ug/kg	C J	13.000	ug/kg	C U	13.000	ug/kg	D U
1,1,2,2-Tetrachloroethane	14.000	ug/kg	C R	13.000	ug/kg	C U	13.000	ug/kg	D U
1,1,2-Trichloroethane	14.000	ug/kg	C R	13.000	ug/kg	C U	13.000	ug/kg	D U
1,1-Dichloroethane	68.000	ug/kg	C U	13.000	ug/kg	C U	13.000	ug/kg	D U
1,1-Dichloroethene	68.000	ug/kg	C U	13.000	ug/kg	C U	13.000	ug/kg	D U
1,2-Dichloroethane	68.000	ug/kg	C U	13.000	ug/kg	C U	13.000	ug/kg	D U
1,2-Dichloroethene	68.000	ug/kg	C U	13.000	ug/kg	C U	13.000	ug/kg	D U
1,2-Dichloropropane	68.000	ug/kg	C R	13.000	ug/kg	C UJ	13.000	ug/kg	D U
2-Butanone	68.000	ug/kg	C U	13.000	ug/kg	C U	13.000	ug/kg	D U
2-Hexanone	10.000	ug/kg	C J	13.000	ug/kg	C U	13.000	ug/kg	D U
4-Methyl-2-pentanone				13.000	ug/kg	C U	13.000	ug/kg	D U
Acetone	37.000	ug/kg	C J	13.000	ug/kg	C U	13.000	ug/kg	D U
Benzene	14.000	ug/kg	C R	13.000	ug/kg	C U	13.000	ug/kg	D U

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TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1981				1981				1981			
SAMPLE NUMBER	112167				112180				112181			
SAMPLING DEPTH (Feet)	8-10				17-19				19-21			
SAMPLING DATE	05/13/93				05/14/93				05/14/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
Bromodichloromethane	68.000	ug/kg	C	R	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Bromoform	14.000	ug/kg	C	R	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Bromomethane	68.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ	13.000	ug/kg	D	U
Carbon Tetrachloride	68.000	ug/kg	C	R	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Carbon disulfide	68.000	ug/kg	C	U	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Chlorobenzene	14.000	ug/kg	C	R	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Chloroethane	68.000	ug/kg	C	U	13.000	ug/kg	C	U	13.000	ug/kg	D	UJ
Chloroform	68.000	ug/kg	C	U	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Chloromethane	68.000	ug/kg	C	UJ	13.000	ug/kg	C	UJ	13.000	ug/kg	D	UJ
Dibromochloromethane	14.000	ug/kg	C	R	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Ethylbenzene	14.000	ug/kg	C	R	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Methylene chloride	200.000	ug/kg	C	U	25.000	ug/kg	C	-	13.000	ug/kg	D	U
Styrene	14.000	ug/kg	C	R	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Tetrachloroethene	14.000	ug/kg	C	R	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Toluene	76.000	ug/kg	C	J	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Trichloroethene	68.000	ug/kg	C	R	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Vinyl Acetate	68.000	ug/kg	C	R	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Vinyl chloride	68.000	ug/kg	C	U	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Xylenes, Total	14.000	ug/kg	C	R	13.000	ug/kg	C	U	13.000	ug/kg	D	U
cis-1,3-Dichloropropene	68.000	ug/kg	C	R	13.000	ug/kg	C	U	13.000	ug/kg	D	U
trans-1,3-Dichloropropene	14.000	ug/kg	C	R	13.000	ug/kg	C	U	13.000	ug/kg	D	U
Semivolatile Organics												
1,2,4-Trichlorobenzene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
1,2-Dichlorobenzene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
1,3-Dichlorobenzene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
1,4-Dichlorobenzene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
2,4,5-Trichlorophenol	1080.000	ug/kg	C	U	1040.000	ug/kg	C	U	1000.000	ug/kg	D	U
2,4,6-Trichlorophenol	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
2,4-Dichlorophenol	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
2,4-Dimethylphenol	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
2,4-Dinitrophenol	1080.000	ug/kg	C	UJ	1040.000	ug/kg	C	UJ	1000.000	ug/kg	D	UJ
2,4-Dinitrotoluene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
2,6-Dinitrotoluene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
2-Benzyl-4-chlorophenol	440.000	ug/kg	C	UJ	430.000	ug/kg	C	U	420.000	ug/kg	D	U
2-Chloronaphthalene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
2-Chlorophenol	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
2-Methylnaphthalene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
2-Methylphenol	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
2-Nitroaniline	1080.000	ug/kg	C	U	1040.000	ug/kg	C	U	1000.000	ug/kg	D	U
2-Nitrophenol	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U

TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1981				1981				1981			
SAMPLE NUMBER	112167				112180				112181			
SAMPLING DEPTH (Feet)	8-10				17-19				19-21			
SAMPLING DATE	05/13/93				05/14/93				05/14/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
3,3'-Dichlorobenzidine	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
3-Nitroaniline	1080.000	ug/kg	C	U	1040.000	ug/kg	C	U	1000.000	ug/kg	D	U
4,6-Dinitro-2-methylphenol	1080.000	ug/kg	C	U	1040.000	ug/kg	C	U	1000.000	ug/kg	D	U
4-Bromophenyl phenyl ether	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
4-Chloro-3-methylphenol	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
4-Chlorophenylphenyl ether	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
4-Methylphenol	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
4-Nitroaniline	1080.000	ug/kg	C	U	1040.000	ug/kg	C	U	1000.000	ug/kg	D	U
4-Nitrophenol	1080.000	ug/kg	C	U	1040.000	ug/kg	C	U	1000.000	ug/kg	D	U
Acenaphthene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Acenaphthylene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Anthracene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Benzo(a)anthracene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Benzo(a)pyrene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Benzo(b)fluoranthene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Benzo(g,h,i)perylene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Benzo(k)fluoranthene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Benzoic acid	100.000	ug/kg	C	J	57.000	ug/kg	C	UJ	56.000	ug/kg	D	J
Benzyl alcohol	440.000	ug/kg	C	R	430.000	ug/kg	C	R	420.000	ug/kg	D	R
Butyl benzyl phthalate	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Carbazole	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Chrysene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Di-n-butyl phthalate	86.000	ug/kg	C	J	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Di-n-octyl phthalate	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Dibenzo(a,h)anthracene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Dibenzofuran	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Diethyl phthalate	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Dimethyl phthalate	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Fluoranthene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Fluorene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Hexachlorobenzene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Hexachlorobutadiene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Hexachlorocyclopentadiene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Hexachloroethane	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Indeno(1,2,3-cd)pyrene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Isophorone	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
N-Nitroso-di-n-propylamine	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
N-Nitrosodimethylamine	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
N-Nitrosodiphenylamine	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Naphthalene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Nitrobenzene	440.000	ug/kg	C	U	430.000	ug/kg	C	U	420.000	ug/kg	D	U
Pentachlorophenol	1080.000	ug/kg	C	U	1040.000	ug/kg	C	U	1000.000	ug/kg	D	U

TABLE G-6A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1981			1981			1981		
SAMPLE NUMBER	112167			112180			112181		
SAMPLING DEPTH (Feet)	8-10			17-19			19-21		
SAMPLING DATE	05/13/93			05/14/93			05/14/93		
CHEMICAL PARAMETERS	RESULTS	UNITS L	VQ	RESULTS	UNITS L	VQ	RESULTS	UNITS L	VQ
Semivolatile Organics									
Phenanthrene	440.000	ug/kg C	U	430.000	ug/kg C	U	420.000	ug/kg D	U
Phenol	440.000	ug/kg C	U	430.000	ug/kg C	U	420.000	ug/kg D	U
Pyrene	440.000	ug/kg C	U	430.000	ug/kg C	U	420.000	ug/kg D	U
Tributyl phosphate	440.000	ug/kg C	U	430.000	ug/kg C	U	420.000	ug/kg D	U
bis(2-Chloroethoxy)methane	440.000	ug/kg C	U	430.000	ug/kg C	U	420.000	ug/kg D	U
bis(2-Chloroethyl)ether	440.000	ug/kg C	U	430.000	ug/kg C	U	420.000	ug/kg D	U
bis(2-Chloroisopropyl) ether	440.000	ug/kg C	U	430.000	ug/kg C	U	420.000	ug/kg D	U
bis(2-Ethylhexyl) phthalate	48.000	ug/kg C	J	430.000	ug/kg C	U	420.000	ug/kg D	U
p-Chloroaniline	440.000	ug/kg C	U	430.000	ug/kg C	U	420.000	ug/kg D	U
Pesticide Organics/PCBs									
4,4'-DDD	4.600	ug/kg C	UJ	4.300	ug/kg C	U	4.200	ug/kg D	UJ
4,4'-DDE	4.600	ug/kg C	UJ	4.300	ug/kg C	U	4.200	ug/kg D	UJ
4,4'-DDT	4.600	ug/kg C	UJ	4.300	ug/kg C	U	4.200	ug/kg D	UJ
Aldrin	2.400	ug/kg C	UJ	2.200	ug/kg C	U	2.200	ug/kg D	UJ
Aroclor-1016	46.000	ug/kg C	U	43.000	ug/kg C	U	42.000	ug/kg D	U
Aroclor-1221	93.000	ug/kg C	U	87.000	ug/kg C	U	86.000	ug/kg D	U
Aroclor-1232	46.000	ug/kg C	U	43.000	ug/kg C	U	42.000	ug/kg D	U
Aroclor-1242	46.000	ug/kg C	U	43.000	ug/kg C	U	42.000	ug/kg D	U
Aroclor-1248	46.000	ug/kg C	U	43.000	ug/kg C	U	42.000	ug/kg D	U
Aroclor-1254	46.000	ug/kg C	U	43.000	ug/kg C	U	42.000	ug/kg D	U
Aroclor-1260	46.000	ug/kg C	U	43.000	ug/kg C	U	42.000	ug/kg D	U
Dieldrin	4.600	ug/kg C	UJ	4.300	ug/kg C	U	4.200	ug/kg D	UJ
Endosulfan II	4.600	ug/kg C	UJ	4.300	ug/kg C	U	4.200	ug/kg D	UJ
Endosulfan sulfate	4.600	ug/kg C	UJ	4.300	ug/kg C	U	4.200	ug/kg D	UJ
Endosulfan-I	2.400	ug/kg C	UJ	2.200	ug/kg C	U	2.200	ug/kg D	UJ
Endrin	4.600	ug/kg C	UJ	4.300	ug/kg C	U	4.200	ug/kg D	UJ
Endrin aldehyde	4.600	ug/kg C	UJ	4.300	ug/kg C	U	4.200	ug/kg D	UJ
Endrin ketone	4.600	ug/kg C	UJ	4.300	ug/kg C	U	4.200	ug/kg D	UJ
Heptachlor	2.400	ug/kg C	UJ	2.200	ug/kg C	U	2.200	ug/kg D	UJ
Heptachlor epoxide	2.400	ug/kg C	UJ	2.200	ug/kg C	U	2.200	ug/kg D	UJ
Methoxychlor	24.000	ug/kg C	UJ	22.000	ug/kg C	U	22.000	ug/kg D	UJ
Toxaphene	240.000	ug/kg C	U	220.000	ug/kg C	U	220.000	ug/kg D	U
alpha-BHC	2.400	ug/kg C	UJ	2.200	ug/kg C	U	2.200	ug/kg D	UJ
alpha-Chlordane	2.400	ug/kg C	UJ	2.200	ug/kg C	U	2.200	ug/kg D	UJ
beta-BHC	2.400	ug/kg C	UJ	2.200	ug/kg C	U	2.200	ug/kg D	UJ
delta-BHC	2.400	ug/kg C	UJ	2.200	ug/kg C	U	2.200	ug/kg D	UJ
gamma-BHC (Lindane)	2.400	ug/kg C	UJ	2.200	ug/kg C	U	2.200	ug/kg D	UJ
gamma-Chlordane	2.400	ug/kg C	UJ	2.200	ug/kg C	U	2.200	ug/kg D	UJ

TABLE G-6B
ACTIVE FLYASH PILE
TENTATIVELY IDENTIFIED COMPOUNDS
SEDIMENT AND SUBSURFACE SOIL

Sample Number	Sample Location	Media	Parameter	Result	Units
112264	AFP-SD-01	SD	3-penten-2-one, 4-methyl-	380	ug/kg
112264	AFP-SD-01	SD	heptadecane, 2,6-dimethyl	240	ug/kg
112264	AFP-SD-01	SD	1,2-benzenedicarboxylic acid	490	ug/kg
112264	AFP-SD-01	SD	1-hexadecyne	250	ug/kg
112264	AFP-SD-01	SD	hexanedioic acid, dioctyl es	6100	ug/kg
112264	AFP-SD-01	SD	pentacosane	660	ug/kg
112264	AFP-SD-01	SD	pentacosane	440	ug/kg
112264	AFP-SD-01	SD	pentacosane	1000	ug/kg
112264	AFP-SD-01	SD	pentacosane	930	ug/kg
112091	1979	SB	dodecanoic acid	980	ug/kg
112092	1979	SB	dodecanoic acid	130	ug/kg
112117	1979	SB	dodecanoic acid	920	ug/kg
112161	1981	SB	cyclotetrasiloxane, octameth	2800	ug/kg
112161	1981	SB	cyclotrisiloxane, hexamethyl	250	ug/kg
112167	1981	SB	methane, trichlorofluoro-	12	ug/kg
112167	1981	SB	cyclotetrasiloxane, octameth	3000	ug/kg
112181	1981	SB	cyclopentasiloxane, decameth	7	ug/kg
112160	1981	SB	2h-pyran-2,3-diol, tetrahydr	370	ug/kg
112160	1981	SB	propanoic acid, 2-methyl-,	120	ug/kg
112160	1981	SB	heptadecane, 2,6,10,15-tetra	150	ug/kg
112160	1981	SB	tetratetracontane	98	ug/kg
112160	1981	SB	heptacosane	150	ug/kg
112160	1981	SB	hexanedioic acid, mono(2-eth	150	ug/kg
112160	1981	SB	tetratetracontane	110	ug/kg
112160	1981	SB	tetratetracontane	96	ug/kg
112161	1981	SB	2h-pyran-2,3-diol, tetrahydr	14	ug/kg
112161	1981	SB	propanoic acid, 2-methyl-,	3	ug/kg
112161	1981	SB	pentanamide, 4-methyl-	7	ug/kg
112167	1981	SB	2h-pyran-2,3-diol, tetrahydr	230	ug/kg
112167	1981	SB	heptanal	120	ug/kg
112167	1981	SB	cyclopentasiloxane, decameth	98	ug/kg
112167	1981	SB	propanoic acid, 2-methyl-,	150	ug/kg
112167	1981	SB	octadecanoic acid	120	ug/kg
112167	1981	SB	hexanedioic acid, mono(2-eth	100	ug/kg
112180	1981	SB	2h-pyran-2,3-diol, tetrahydr	540	ug/kg

SD - sediment
SB - soil boring

TABLE G-7

TABLE G-7A

ACTIVE FLYASH PILE
CIS SUBSURFACE SOIL RESULTS
NON-RADIOLOGICAL DATA
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

	Sample No. PS-25-009	
Analyte	Result	Validation Qualifier
INORGANICS (mg/kg)		
Aluminum	7030	
Antimony	0.3	UJ
Arsenic	4.6	J
Barium	19	J
Beryllium	0.2	J
Cadmium	3.2	
Calcium	88200	J
Chromium	13	
Cobalt	9.5	J
Copper	8.6	
Cyanide	0.6	U
Iron	14900	J
Lead	9.3	J
Magnesium	32000	
Manganese	463	J
Mercury	0.2	J
Nickel	13	
Potassium	631	
Selenium	0.4	J
Silver	1.4	UJ
Sodium	65	U
Thallium	0.2	J
Vanadium	20	
Zinc	42	
PCBs PESTICIDES (μg/kg)		
4,4-dde	18	U
Aldrin	9.2	U
Alpha-bhc	9.2	U
Aroclor-1016	92	U
Aroclor-1221	92	U
Aroclor-1232	92	U
Aroclor-1242	92	U

TABLE G-7A
(Continued)

Analyte	Sample No. PS-25-009 Result	Validation Qualifier
PCBs PESTICIDES (μg/kg) (Continued)		
Aroclor-1248	92	U
Aroclor-1254	180	U
Aroclor-1260	85	J
Beta-bhc	9.2	U
Chlordane	92	U
Delta-bhc	9.2	U
Dieldrin	18	U
Endosulfan I	9.2	U
Endosulfan II	18	U
Endosulfan sulfate	18	U
Endrin	18	U
Endrin ketone	18	U
Heptachlor	9.2	U
Heptachlor epoxide	9.2	U
Methoxychlor	92	U
Toxaphene	180	U

TABLE G-7B

ACTIVE FLYASH PILE
CIS SUBSURFACE SOIL RESULTS
ANALYSIS OF COMPOSITE SAMPLES
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Radionuclide[a]	Qualifier[b]	Activity Concentration (pCi/g, dry)	Uncertainty (pCi/g, dry)
		BOREHOLE NUMBER 25-01	
Cesium-137		NOT ANALYZED	
Lead-210		4.00	1.00
Neptunium-237		NOT ANALYZED	
Plutonium-238		NOT ANALYZED	
Plutonium-239-240		NOT ANALYZED	
Radium-226		2.40	0.50
Radium-228		1.70	0.40
Ruthenium-106		NOT ANALYZED	
Strontium-90		NOT ANALYZED	
Technetium-99		NOT ANALYZED	
Thorium-228	<	0.10	NA
Thorium-230		5.30	0.40
Thorium-232	<	0.10	
Uranium-234		4.50	0.30
Uranium-235		0.10	0.06
Uranium-238		5.10	0.30

[a]RA-226 and RA-228, when reported, were measured by gamma spectrometry and reported on a dry weight basis.
[b]Qualifiers are from the laboratory. No validation qualifiers were available. < = less than.
NA = Not Applicable

TABLE G-8

TABLE G-8

ACTIVE FLYASH PILE
SUBSURFACE MEDIA ENVIRONMENTAL SURVEY
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Analyte	FEO601WP	FEO602WP	FEO603WP
asbestos	ND	ND	ND
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
TCLP METALS (mg/L)			
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
lead	<0.3	<0.3	<0.3
mercury	<0.001	<0.001	<0.001
selenium	<0.5	<0.5	<0.5
silver	<0.1	<0.1	<0.1
VOLATILE ORGANIC COMPOUNDS (μg/kg)			
1,1,1-trichloroethane	140	420	<5
1,1,2,2-tetrachlorethane	<5	<5	<5
1,1,2-trichloroethane	<5	<5	<5
1,1-dichloroethane	<5	<5	<5
1,2-dichloroethane	<5	<5	<5
1,2-dichloropropane	<5	<5	<5
2-butanone	<10	<10	<10
2-chloroethylvinyl ether	<10	<10	<10
2-hexanone	<10	<10	<10
4-methyl 2-pentanone	<10	<10	<10
acetone	63	140	37B
benzene	<5	<5	<5
bromodichloromethane	<5	<5	<5

See notes at end of table

TABLE G-8
(Continued)

Analyte	FEO601WP	FEO602WP	FEO603WP
VOLATILE ORGANIC COMPOUNDS (μg/kg) (continued)			
bromoform	<5	<5	<5
bromomethane	<10	<10	<10
carbon disulfide	<5	<5	<5
carbon tetrachloride	<5	<5	<5
chlorobenzene	<5	<5	<5
chloroethane	<10	<10	<10
chloroform	<5	<5	11
chloroethane	<10	<10	<10
cis 1,3-dichloropropene	<5	<5	<5
dibromochloromethane	<5	<5	<5
ethyl benzene	<5	<5	<5
methylene chloride	160	200	<5
styrene	<5	<5	<5
tetrachloroethene	<5	<5	<5
toluene	<5	<5	<5
total xylenes	<5	<5	<5
trans 1,2-dichloroethene	<5	<5	<5
trans 1,3-dichloropropene	<5	<5	<5
trichloroethene	<5	<5	<5
vinyl acetate	<10	<10	<10
vinyl chloride	<10	<10	<10
PCBs (mg/kg)			
aroclor-1242	NA	NA	NA
aroclor-1248	NA	NA	NA
aroclor-1254	NA	NA	NA
aroclor-1260	NA	NA	NA

NA = Not Analyzed
ND = None Detected
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.

TABLE G-9

TABLE G-9

ACTIVE FLYASH PILE
RI/FS SEDIMENT RESULTS
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	ASIT-004			ASIT-005			ASIT-006		
SAMPLE NUMBER	009044			009045			009046		
SAMPLING DATE	06/27/88			06/27/88			06/27/88		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
GROSS ALPHA	14.000	pci/g	NV	41.000	pci/g	NV	15.000	pci/g	NV
GROSS BETA	36.000	pci/g	NV	109.000	pci/g	NV	24.000	pci/g	NV
RA-226	1.240	pci/g	J	2.890	pci/g	R	0.644	pci/g	R
RA-228	1.080	pci/g	J	2.770	pci/g	R	0.846	pci/g	R
U-TOTAL	38.900	mg/kg	J	51.800	mg/kg	J	22.900	mg/kg	J

000140

TABLE G-9
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	ASIT-007		
SAMPLE NUMBER	009047		
SAMPLING DATE	06/28/88		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ
GROSS ALPHA	11.000	pci/g	NV
GROSS BETA	21.000	pci/g	NV
RA-226	0.637	pci/g	J
RA-228	0.703	pci/g	J
U-TOTAL	4.530	mg/kg	J

6510

TABLE G-9
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	ASIT-007			
SAMPLE NUMBER	009047			
SAMPLING DATE	06/28/88			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ
Inorganics				
Aluminum	8830.000	mg/kg	D	R
Antimony	0.100	mg/kg	D	U
Arsenic	5.400	mg/kg	D	R
Barium	56.700	mg/kg	D	R
Beryllium	0.400	mg/kg	D	R
Cadmium	0.200	mg/kg	D	UJ
Calcium	63200.000	mg/kg	D	R
Chromium	12.500	mg/kg	D	R
Cobalt	8.100	mg/kg	D	R
Copper	16.100	mg/kg	D	R
Cyanide	0.900	mg/kg	D	UJ
Iron	19000.000	mg/kg	D	R
Lead	12.000	mg/kg	D	J
Magnesium	21600.000	mg/kg	D	R
Manganese	399.000	mg/kg	D	R
Mercury	1.300	mg/kg	D	R
Molybdenum	2.000	mg/kg	D	UJ
Nickel	19.100	mg/kg	D	R
Potassium	871.000	mg/kg	D	J
Selenium	0.300	mg/kg	D	UJ
Silver	0.100	mg/kg	D	R
Sodium	130.000	mg/kg	D	R
Thallium	0.100	mg/kg	D	UJ
Vanadium	14.400	mg/kg	D	R
Zinc	47.600	mg/kg	D	R
Volatile Organics				
1,1,1-Trichloroethane	6.000	ug/kg	C	U
1,1,2,2-Tetrachloroethane	6.000	ug/kg	C	U
1,1,2-Trichloroethane	6.000	ug/kg	C	U
1,1-Dichloroethane	6.000	ug/kg	C	U
1,1-Dichloroethene	6.000	ug/kg	C	U
1,2-Dichloroethane	6.000	ug/kg	C	U
1,2-Dichloroethene	6.000	ug/kg	C	U
1,2-Dichloropropane	6.000	ug/kg	C	U
2-Butanone	12.000	ug/kg	C	U
2-Hexanone	12.000	ug/kg	C	U
4-Methyl-2-pentanone	12.000	ug/kg	C	U
Acetone	55.000	ug/kg	C	U
Benzene	6.000	ug/kg	C	UJ
Bromodichloromethane	6.000	ug/kg	C	U

TABLE G-9
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	ASIT-007			
SAMPLE NUMBER	009047			
SAMPLING DATE	06/28/88			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ
Volatile Organics				
Bromoform	6.000	ug/kg	C	U
Bromomethane	12.000	ug/kg	C	U
Carbon Tetrachloride	6.000	ug/kg	C	U
Carbon disulfide	6.000	ug/kg	C	U
Chlorobenzene	6.000	ug/kg	C	UJ
Chloroethane	12.000	ug/kg	C	U
Chloroform	6.000	ug/kg	C	U
Chloromethane	12.000	ug/kg	C	U
Dibromochloromethane	6.000	ug/kg	C	U
Ethylbenzene	6.000	ug/kg	C	UJ
Methylene chloride	16.000	ug/kg	C	U
Styrene	6.000	ug/kg	C	UJ
Tetrachloroethene	6.000	ug/kg	C	U
Toluene	6.000	ug/kg	C	UJ
Trichloroethene	6.000	ug/kg	C	U
Vinyl Acetate	12.000	ug/kg	C	U
Vinyl chloride	12.000	ug/kg	C	U
Xylenes, Total	6.000	ug/kg	C	UJ
cis-1,3-Dichloropropene	6.000	ug/kg	C	U
trans-1,3-Dichloropropene	6.000	ug/kg	C	U
Semivolatile Organics				
1,2,4-Trichlorobenzene	400.000	ug/kg	C	UJ
1,2-Dichlorobenzene	400.000	ug/kg	C	UJ
1,3-Dichlorobenzene	400.000	ug/kg	C	UJ
1,4-Dichlorobenzene	400.000	ug/kg	C	UJ
2,4,5-Trichlorophenol	2000.000	ug/kg	C	UJ
2,4,6-Trichlorophenol	400.000	ug/kg	C	UJ
2,4-Dichlorophenol	400.000	ug/kg	C	UJ
2,4-Dimethylphenol	400.000	ug/kg	C	UJ
2,4-Dinitrophenol	2000.000	ug/kg	C	UJ
2,4-Dinitrotoluene	400.000	ug/kg	C	UJ
2,6-Dinitrotoluene	400.000	ug/kg	C	UJ
2-Chloronaphthalene	400.000	ug/kg	C	UJ
2-Chlorophenol	400.000	ug/kg	C	UJ
2-Methylnaphthalene	400.000	ug/kg	C	UJ
2-Methylphenol	400.000	ug/kg	C	UJ
2-Nitroaniline	2000.000	ug/kg	C	UJ
2-Nitrophenol	400.000	ug/kg	C	UJ
3,3'-Dichlorobenzidine	810.000	ug/kg	C	UJ
3-Nitroaniline	2000.000	ug/kg	C	UJ

000143

TABLE G-9
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	ASIT-007			
SAMPLE NUMBER	009047			
SAMPLING DATE	06/28/88			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ
Semivolatile Organics				
4,6-Dinitro-2-methylphenol	2000.000	ug/kg	C	UJ
4-Bromophenyl phenyl ether	400.000	ug/kg	C	UJ
4-Chloro-3-methylphenol	400.000	ug/kg	C	UJ
4-Chlorophenylphenyl ether	400.000	ug/kg	C	UJ
4-Methylphenol	400.000	ug/kg	C	UJ
4-Nitroaniline	2000.000	ug/kg	C	UJ
4-Nitrophenol	2000.000	ug/kg	C	UJ
Acenaphthene	400.000	ug/kg	C	UJ
Acenaphthylene	400.000	ug/kg	C	UJ
Anthracene	400.000	ug/kg	C	UJ
Benzo(a)anthracene	400.000	ug/kg	C	UJ
Benzo(a)pyrene	400.000	ug/kg	C	UJ
Benzo(b)fluoranthene	400.000	ug/kg	C	UJ
Benzo(g,h,i)perylene	400.000	ug/kg	C	UJ
Benzo(k)fluoranthene	400.000	ug/kg	C	UJ
Benzoic acid	2000.000	ug/kg	C	UJ
Benzyl alcohol	400.000	ug/kg	C	UJ
Butyl benzyl phthalate	400.000	ug/kg	C	UJ
Chrysene	400.000	ug/kg	C	UJ
Di-n-butyl phthalate	400.000	ug/kg	C	UJ
Di-n-octyl phthalate	400.000	ug/kg	C	UJ
Dibenzo(a,h)anthracene	400.000	ug/kg	C	UJ
Dibenzofuran	400.000	ug/kg	C	UJ
Diethyl phthalate	400.000	ug/kg	C	UJ
Dimethyl phthalate	400.000	ug/kg	C	UJ
Fluoranthene	400.000	ug/kg	C	UJ
Fluorene	400.000	ug/kg	C	UJ
Hexachlorobenzene	400.000	ug/kg	C	UJ
Hexachlorobutadiene	400.000	ug/kg	C	UJ
Hexachlorocyclopentadiene	400.000	ug/kg	C	UJ
Hexachloroethane	400.000	ug/kg	C	UJ
Indeno(1,2,3-cd)pyrene	400.000	ug/kg	C	UJ
Isophorone	400.000	ug/kg	C	UJ
Methyl parathion	50.000	ug/kg	C	UJ
N-Nitroso-di-n-propylamine	400.000	ug/kg	C	UJ
N-Nitrosodiphenylamine	400.000	ug/kg	C	UJ
Naphthalene	400.000	ug/kg	C	UJ
Nitrobenzene	400.000	ug/kg	C	UJ
Parathion	50.000	ug/kg	C	UJ
Pentachlorophenol	2000.000	ug/kg	C	UJ
Phenanthrene	400.000	ug/kg	C	UJ
Phenol	400.000	ug/kg	C	UJ

TABLE G-9
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	ASIT-007		
SAMPLE NUMBER	009047		
SAMPLING DATE	06/28/88		
CHEMICAL PARAMETERS	RESULTS	UNITS L	VQ
Semivolatile Organics			
Pyrene	400.000	ug/kg C	UJ
bis(2-Chloroethoxy)methane	400.000	ug/kg C	UJ
bis(2-Chloroethyl)ether	400.000	ug/kg C	UJ
bis(2-Chloroisopropyl) ether	400.000	ug/kg C	UJ
bis(2-Ethylhexyl) phthalate	400.000	ug/kg C	UJ
p-Chloroaniline	400.000	ug/kg C	UJ
Pesticide Organics/PCBs			
4,4'-DDD	19.000	ug/kg C	U
4,4'-DDE	19.000	ug/kg C	U
4,4'-DDT	19.000	ug/kg C	U
Aldrin	9.700	ug/kg C	U
Aroclor-1016	97.000	ug/kg C	U
Aroclor-1221	97.000	ug/kg C	U
Aroclor-1232	97.000	ug/kg C	U
Aroclor-1242	97.000	ug/kg C	U
Aroclor-1248	97.000	ug/kg C	U
Aroclor-1254	190.000	ug/kg C	U
Aroclor-1260	190.000	ug/kg C	U
Azinphosmethyl	500.000	ug/kg C	UJ
Demeton	50.000	ug/kg C	UJ
Diazinon	50.000	ug/kg C	UJ
Dieldrin	19.000	ug/kg C	U
Disulfoton	50.000	ug/kg C	UJ
Endosulfan II	19.000	ug/kg C	U
Endosulfan sulfate	19.000	ug/kg C	U
Endosulfan-I	9.700	ug/kg C	U
Endrin	19.000	ug/kg C	U
Endrin ketone	19.000	ug/kg C	U
Ethion	50.000	ug/kg C	UJ
Heptachlor	9.700	ug/kg C	U
Heptachlor epoxide	9.700	ug/kg C	U
Malathion	50.000	ug/kg C	UJ
Methoxychlor	97.000	ug/kg C	U
Toxaphene	190.000	ug/kg C	U
alpha-BHC	9.700	ug/kg C	U
alpha-Chlordane	97.000	ug/kg C	U
beta-BHC	9.700	ug/kg C	U
delta-BHC	9.700	ug/kg C	U
gamma-BHC (Lindane)	9.700	ug/kg C	U
gamma-Chlordane	97.000	ug/kg C	U

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TABLE G-9
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	ASIT-007			
SAMPLE NUMBER	009047			
SAMPLING DATE	06/28/88			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ
General Chemistry				
Ammonia	50.400	mg/kg	C	-
Chloride	230.000	mg/kg	C	-
Fluoride	7.580	mg/kg	C	-
Nitrate	2.760	mg/kg	C	J
Phenols	0.500	mg/kg	C	U
Phosphorus	37.400	mg/kg	C	-
Sulfate	697.000	mg/kg	C	-
Total Organic Nitrogen	355.000	mg/kg	C	-

TABLE G-9
(Continued)

PHASE II - RADIOLOGICAL PARAMETERS

BORING NUMBER	AFP-SD-06		
SAMPLE NUMBER	112246		
	0 - 0.5		
SAMPLING DATE	05/13/93		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ
CS-137	0.086	pci/g	J
GROSS ALPHA	20.700	pci/g	-
GROSS BETA	31.500	pci/g	-
NP-237	0.038	pci/g	N
PU-238	0.024	pci/g	J
PU-239/240	0.049	pci/g	J
RA-226	1.320	pci/g	-
RA-228	0.908	pci/g	-
RU-106	0.719	pci/g	UJ
SR-90	0.141	pci/g	UJ
TC-99	0.299	pci/g	UJ
TH-228	0.824	pci/g	-
TH-230	1.470	pci/g	-
TH-232	0.883	pci/g	-
TH-TOTAL	8.040	mg/kg	-
U-234	2.770	pci/g	-
U-235/236	0.163	pci/g	J
U-238	2.900	pci/g	-
U-TOTAL	11.300	mg/kg	-

000147

TABLE G-9
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SD-06			
SAMPLE NUMBER	112246			
	0-0.5			
SAMPLING DATE	05/13/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ
Inorganics				
Aluminum	7630.000	mg/kg	C	-
Antimony	1.600	mg/kg	C	UJ
Arsenic	10.900	mg/kg	C	-
Barium	71.100	mg/kg	C	J
Beryllium	1.400	mg/kg	C	-
Cadmium	0.750	mg/kg	C	-
Calcium	49200.000	mg/kg	C	-
Chromium	11.600	mg/kg	C	-
Cobalt	9.700	mg/kg	C	-
Copper	22.200	mg/kg	C	-
Cyanide	0.160	mg/kg	C	R
Iron	15600.000	mg/kg	C	J
Lead	15.700	mg/kg	C	-
Magnesium	16100.000	mg/kg	C	-
Manganese	433.000	mg/kg	C	J
Mercury	0.150	mg/kg	C	U
Molybdenum	1.700	mg/kg	C	-
Nickel	18.400	mg/kg	C	-
Potassium	1120.000	mg/kg	C	J
Selenium	0.480	mg/kg	C	UJ
Silicon	1090.000	mg/kg	C	J
Silver	0.630	mg/kg	C	U
Sodium	140.000	mg/kg	C	J
Thallium	0.320	mg/kg	C	-
Vanadium	21.500	mg/kg	C	J
Zinc	53.100	mg/kg	C	J
Volatile Organics				
1,1,1-Trichloroethane	19.000	ug/kg	C	U
1,1,2,2-Tetrachloroethane	19.000	ug/kg	C	U
1,1,2-Trichloroethane	19.000	ug/kg	C	U
1,1-Dichloroethane	19.000	ug/kg	C	U
1,1-Dichloroethene	19.000	ug/kg	C	UJ
1,2-Dichloroethane	19.000	ug/kg	C	U
1,2-Dichloroethene	19.000	ug/kg	C	U
1,2-Dichloropropane	19.000	ug/kg	C	U
2-Butanone	19.000	ug/kg	C	R
2-Hexanone	19.000	ug/kg	C	UJ
4-Methyl-2-pentanone	19.000	ug/kg	C	UJ
Acetone	51.000	ug/kg	C	R
Benzene	19.000	ug/kg	C	U

TABLE G-9
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SD-06		
SAMPLE NUMBER	112246		
	0-0.5		
SAMPLING DATE	05/13/93		
CHEMICAL PARAMETERS	RESULTS	UNITS L	VQ
Volatile Organics			
Bromodichloromethane	19.000	ug/kg C	U
Bromoform	19.000	ug/kg C	U
Bromomethane	19.000	ug/kg C	U
Carbon Tetrachloride	19.000	ug/kg C	U
Carbon disulfide	19.000	ug/kg C	U
Chlorobenzene	19.000	ug/kg C	U
Chloroethane	19.000	ug/kg C	U
Chloroform	19.000	ug/kg C	U
Chloromethane	19.000	ug/kg C	UJ
Dibromochloromethane	19.000	ug/kg C	U
Ethylbenzene	19.000	ug/kg C	U
Methylene chloride	19.000	ug/kg C	UJ
Styrene	19.000	ug/kg C	U
Tetrachloroethene	19.000	ug/kg C	U
Toluene	19.000	ug/kg C	U
Trichloroethene	19.000	ug/kg C	U
Vinyl chloride	19.000	ug/kg C	U
Xylenes, Total	19.000	ug/kg C	U
cis-1,3-Dichloropropene	19.000	ug/kg C	U
trans-1,3-Dichloropropene	19.000	ug/kg C	U
Semivolatile Organics			
1,2,4-Trichlorobenzene	600.000	ug/kg C	U
1,2-Dichlorobenzene	600.000	ug/kg C	U
1,3-Dichlorobenzene	600.000	ug/kg C	U
1,4-Dichlorobenzene	600.000	ug/kg C	U
2,4,5-Trichlorophenol	1500.000	ug/kg C	U
2,4,6-Trichlorophenol	600.000	ug/kg C	U
2,4-Dichlorophenol	600.000	ug/kg C	U
2,4-Dimethylphenol	600.000	ug/kg C	U
2,4-Dinitrophenol	1500.000	ug/kg C	U
2,4-Dinitrotoluene	600.000	ug/kg C	U
2,6-Dinitrotoluene	600.000	ug/kg C	U
2-Chloronaphthalene	600.000	ug/kg C	U
2-Chlorophenol	600.000	ug/kg C	U
2-Methylnaphthalene	600.000	ug/kg C	U
2-Methylphenol	600.000	ug/kg C	U
2-Nitroaniline	1500.000	ug/kg C	U
2-Nitrophenol	600.000	ug/kg C	U
3,3'-Dichlorobenzidine	600.000	ug/kg C	UJ
3-Nitroaniline	1500.000	ug/kg C	U

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TABLE G-9
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SD-06			
SAMPLE NUMBER	112246			
	0-0.5			
SAMPLING DATE	05/13/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ
Semivolatile Organics				
4,6-Dinitro-2-methylphenol	1500.000	ug/kg	C	U
4-Bromophenyl phenyl ether	600.000	ug/kg	C	U
4-Chloro-3-methylphenol	600.000	ug/kg	C	U
4-Chlorophenylphenyl ether	600.000	ug/kg	C	U
4-Methylphenol	1700.000	ug/kg	C	-
4-Nitroaniline	1500.000	ug/kg	C	U
4-Nitrophenol	1500.000	ug/kg	C	U
Acenaphthene	600.000	ug/kg	C	U
Acenaphthylene	600.000	ug/kg	C	U
Anthracene	600.000	ug/kg	C	U
Benzo(a)anthracene	600.000	ug/kg	C	U
Benzo(a)pyrene	600.000	ug/kg	C	U
Benzo(b)fluoranthene	600.000	ug/kg	C	U
Benzo(g,h,i)perylene	600.000	ug/kg	C	U
Benzo(k)fluoranthene	600.000	ug/kg	C	U
Benzoic acid	680.000	ug/kg	C	J
Benzyl alcohol	600.000	ug/kg	C	U
Butyl benzyl phthalate	600.000	ug/kg	C	U
Carbazole	600.000	ug/kg	C	U
Chrysene	600.000	ug/kg	C	U
Di-n-butyl phthalate	64.000	ug/kg	C	J
Di-n-octyl phthalate	600.000	ug/kg	C	U
Dibenzo(a,h)anthracene	600.000	ug/kg	C	U
Dibenzofuran	600.000	ug/kg	C	U
Diethyl phthalate	600.000	ug/kg	C	U
Dimethyl phthalate	600.000	ug/kg	C	U
Fluoranthene	600.000	ug/kg	C	U
Fluorene	600.000	ug/kg	C	U
Hexachlorobenzene	600.000	ug/kg	C	U
Hexachlorobutadiene	600.000	ug/kg	C	U
Hexachlorocyclopentadiene	600.000	ug/kg	C	U
Hexachloroethane	600.000	ug/kg	C	U
Indeno(1,2,3-cd)pyrene	600.000	ug/kg	C	U
Isophorone	600.000	ug/kg	C	U
N-Nitroso-di-n-propylamine	600.000	ug/kg	C	U
N-Nitrosodiphenylamine	600.000	ug/kg	C	U
Naphthalene	600.000	ug/kg	C	U
Nitrobenzene	600.000	ug/kg	C	U
Pentachlorophenol	1500.000	ug/kg	C	U
Phenanthrene	600.000	ug/kg	C	U
Phenol	230.000	ug/kg	C	J
Pyrene	600.000	ug/kg	C	U

TABLE G-9
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	AFP-SD-06
SAMPLE NUMBER	112246
	0-0.5
SAMPLING DATE	05/13/93

CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ
Semivolatile Organics				
bis(2-Chloroethoxy)methane	600.000	ug/kg	C	U
bis(2-Chloroethyl)ether	600.000	ug/kg	C	U
bis(2-Chloroisopropyl) ether	600.000	ug/kg	C	U
bis(2-Ethylhexyl) phthalate	600.000	ug/kg	C	U
p-Chloroaniline	600.000	ug/kg	C	U
Pesticide Organics/PCBs				
4,4'-DDD	6.100	ug/kg	C	U
4,4'-DDE	6.100	ug/kg	C	U
4,4'-DDT	6.100	ug/kg	C	U
Aldrin	3.100	ug/kg	C	U
Aroclor-1016	61.000	ug/kg	C	U
Aroclor-1221	120.000	ug/kg	C	U
Aroclor-1232	61.000	ug/kg	C	U
Aroclor-1242	61.000	ug/kg	C	U
Aroclor-1248	61.000	ug/kg	C	U
Aroclor-1254	61.000	ug/kg	C	U
Aroclor-1260	61.000	ug/kg	C	U
Dieldrin	6.100	ug/kg	C	U
Endosulfan II	6.100	ug/kg	C	U
Endosulfan sulfate	6.100	ug/kg	C	U
Endosulfan-I	3.100	ug/kg	C	U
Endrin	6.100	ug/kg	C	U
Endrin aldehyde	6.100	ug/kg	C	U
Endrin ketone	6.100	ug/kg	C	U
Heptachlor	3.100	ug/kg	C	U
Heptachlor epoxide	3.100	ug/kg	C	U
Methoxychlor	31.000	ug/kg	C	U
Toxaphene	310.000	ug/kg	C	U
alpha-BHC	3.100	ug/kg	C	U
alpha-Chlordane	3.100	ug/kg	C	U
beta-BHC	3.100	ug/kg	C	U
delta-BHC	3.100	ug/kg	C	U
gamma-BHC (Lindane)	3.100	ug/kg	C	U
gamma-Chlordane	3.100	ug/kg	C	U

000451

TABLE G-10

TABLE G-10

ACTIVE FLYASH PILE
RI/FS SURFACE WATER RESULTS
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER		ASIT-004				ASIT-004				ASIT-004		
SAMPLE NUMBER		001127				001128				001222		
SAMPLING DATE		03/21/89				03/21/89				11/07/89		
RADIOLOGICAL PARAMETERS	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137		NA				NA			UNKN	20.000	pci/L	R
GROSS ALPHA	FILT	284.000	pci/L	NV		NA				NA		
GROSS ALPHA		NA			UNKN	450.000	pci/L	NV		NA		
GROSS BETA	FILT	51.000	pci/L	NV		NA				NA		
GROSS BETA		NA			UNKN	61.000	pci/L	NV		NA		
NP-237		NA				NA			UNKN	1.000	pci/L	UJ
PU-238		NA				NA			UNKN	1.000	pci/L	UJ
PU-239/240		NA				NA			UNKN	1.000	pci/L	UJ
RA-226	FILT	1.000	pci/L	U		NA				NA		
RA-226		NA			UNKN	1.000	pci/L	R	UNKN	1.000	pci/L	NV
RA-228	FILT	3.000	pci/L	UJ		NA				NA		
RA-228		NA			UNKN	3.000	pci/L	UJ	UNKN	3.000	pci/L	R
RU-106		NA				NA			UNKN	150.000	pci/L	R
SR-90		NA				NA			UNKN	5.000	pci/L	R
TC-99		NA				NA			UNKN	30.000	pci/L	R
TH-228		NA				NA			UNKN	1.000	pci/L	U
TH-230		NA				NA			UNKN	1.000	pci/L	U
TH-232		NA				NA			UNKN	1.000	pci/L	U
TH-TOTAL		NA				NA			UNKN	3.930	ug/L	-
U-234		NA				NA			UNKN	26.000	pci/L	-
U-235/236		NA				NA			UNKN	1.940	pci/L	-
U-238		NA				NA			UNKN	43.300	pci/L	-
U-TOTAL	FILT	318.000	ug/L	-		NA				NA		
U-TOTAL		NA			UNKN	1692.000	ug/L	-	UNKN	107.000	ug/L	-

000152

TABLE G-10
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	ASIT-004				ASIT-005				ASIT-005			
SAMPLE NUMBER	001223				001129				001130			
	DUPLICATE											
SAMPLING DATE	11/07/89				03/21/89				03/21/89			
RADIOLOGICAL PARAMETERS	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137	UNKN	20.000	pci/L	R		NA				NA		
GROSS ALPHA		NA			FILT	572.000	pci/L	NV		NA		
GROSS ALPHA		NA				NA			UNKN	150.000	pci/L	NV
GROSS BETA		NA			FILT	106.000	pci/L	NV		NA		
GROSS BETA		NA				NA			UNKN	58.000	pci/L	NV
NP-237	UNKN	1.000	pci/L	UJ		NA				NA		
PU-238	UNKN	1.000	pci/L	UJ		NA				NA		
PU-239/240	UNKN	1.000	pci/L	UJ		NA				NA		
RA-226		NA			FILT	1.000	pci/L	U		NA		
RA-226	UNKN	1.000	pci/L	NV		NA			UNKN	1.500	pci/L	R
RA-228		NA			FILT	3.000	pci/L	UJ		NA		
RA-228	UNKN	3.000	pci/L	R		NA			UNKN	3.000	pci/L	UJ
RU-106	UNKN	150.000	pci/L	R		NA				NA		
SR-90	UNKN	5.000	pci/L	R		NA				NA		
TC-99	UNKN	30.000	pci/L	R		NA				NA		
TH-228	UNKN	1.000	pci/L	U		NA				NA		
TH-230	UNKN	1.000	pci/L	U		NA				NA		
TH-232	UNKN	1.000	pci/L	U		NA				NA		
TH-TOTAL	UNKN	4.720	ug/L	U		NA				NA		
U-234	UNKN	28.900	pci/L	-		NA				NA		
U-235/236	UNKN	1.710	pci/L	-		NA				NA		
U-238	UNKN	45.900	pci/L	-		NA				NA		
U-TOTAL		NA			FILT	1829.000	ug/L	-		NA		
U-TOTAL	UNKN	98.000	ug/L	-		NA			UNKN	499.000	ug/L	-

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TABLE G-10
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER		ASIT-005				ASIT-005				ASIT-006		
SAMPLE NUMBER		001224				001225 DUPLICATE				001137		
SAMPLING DATE		11/07/89				11/07/89				03/30/89		
RADIOLOGICAL PARAMETERS	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137	UNKN	20.000	pci/L	R	UNKN	20.000	pci/L	R		NA		
GROSS ALPHA		NA				NA			UNFI	8.000	pci/L	NV
GROSS BETA		NA				NA			UNFI	9.000	pci/L	NV
NP-237	UNKN	1.000	pci/L	UJ	UNKN	4.120	pci/L	J		NA		
PU-238	UNKN	1.000	pci/L	U	UNKN	1.000	pci/L	UJ		NA		
PU-239/240	UNKN	1.000	pci/L	UJ	UNKN	1.000	pci/L	UJ		NA		
RA-226		NA				NA			UNFI	1.000	pci/L	U
RA-226	UNKN	1.000	pci/L	NV	UNKN	1.000	pci/L	NV		NA		
RA-228		NA				NA			UNFI	3.000	pci/L	UJ
RA-228	UNKN	3.000	pci/L	R	UNKN	3.000	pci/L	R		NA		
RU-106	UNKN	150.000	pci/L	R	UNKN	150.000	pci/L	R		NA		
SR-90	UNKN	5.000	pci/L	R	UNKN	5.000	pci/L	R		NA		
TC-99	UNKN	30.000	pci/L	R	UNKN	30.000	pci/L	R		NA		
TH-228	UNKN	1.000	pci/L	U	UNKN	1.000	pci/L	U		NA		
TH-230	UNKN	1.000	pci/L	U	UNKN	1.000	pci/L	U		NA		
TH-232	UNKN	1.000	pci/L	U	UNKN	1.000	pci/L	U		NA		
TH-TOTAL	UNKN	2.340	ug/L	U	UNKN	5.320	ug/L	U		NA		
U-234	UNKN	89.000	pci/L	J	UNKN	99.000	pci/L	J		NA		
U-235/236	UNKN	4.980	pci/L	-	UNKN	4.940	pci/L	J		NA		
U-238	UNKN	102.000	pci/L	-	UNKN	111.000	pci/L	J		NA		
U-TOTAL		NA				NA			UNFI	14.000	ug/L	-
U-TOTAL	UNKN	274.000	ug/L	-	UNKN	260.000	ug/L	-		NA		

TABLE G-10
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER		ASIT-006				ASIT-007				ASIT-007		
SAMPLE NUMBER		001138				001139				001169		
SAMPLING DATE		03/30/89				03/30/89				03/30/89		
RADIOLOGICAL PARAMETERS	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
GROSS ALPHA	FILT	10.000	pci/L	NV		NA			FILT	11.000	pci/L	NV
GROSS ALPHA		NA			UNFI	17.000	pci/L	NV		NA		
GROSS BETA	FILT	6.000	pci/L	NV		NA			FILT	8.000	pci/L	NV
GROSS BETA		NA			UNFI	15.000	pci/L	NV		NA		
RA-226	FILT	1.000	pci/L	U		NA			FILT	1.000	pci/L	U
RA-226		NA			UNFI	1.000	pci/L	U		NA		
RA-228	FILT	3.000	pci/L	UJ		NA			FILT	3.000	pci/L	UJ
RA-228		NA			UNFI	3.000	pci/L	UJ		NA		
U-TOTAL	FILT	14.000	ug/L	-		NA			FILT	24.000	ug/L	-
U-TOTAL		NA			UNFI	24.000	ug/L	-		NA		

000155

TABLE G-10
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		ASIT-004					ASIT-005				
SAMPLE NUMBER		001128					001130				
SAMPLING DATE		03/21/89					03/21/89				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ		FLTD	RESULTS	UNITS	L	VQ
Inorganics											
Arsenic	UNKN	0.007	mg/L	3	U		UNKN	0.045	mg/L	3	-
Barium	UNKN	0.043	mg/L	3	-		UNKN	0.063	mg/L	3	-
Cadmium	UNKN	0.001	mg/L	3	U		UNKN	0.001	mg/L	3	U
Calcium	UNKN	73.000	mg/L	3	-		UNKN	80.800	mg/L	3	-
Chromium	UNKN	0.015	mg/L	3	-		UNKN	0.022	mg/L	3	-
Copper	UNKN	0.022	mg/L	3	U		UNKN	0.016	mg/L	3	U
Iron	UNKN	0.262	mg/L	3	-		UNKN	0.047	mg/L	3	-
Lead	UNKN	0.002	mg/L	3	U		UNKN	0.036	mg/L	3	-
Magnesium	UNKN	155.000	mg/L	3	-		UNKN	268.000	mg/L	3	-
Manganese	UNKN	0.158	mg/L	3	-		UNKN	0.002	mg/L	3	-
Mercury	UNKN	0.001	mg/L	3	-		UNKN	0.000	mg/L	3	J
Molybdenum	UNKN	0.006	mg/L	3	-		UNKN	0.018	mg/L	3	-
Nickel	UNKN	0.015	mg/L	3	-		UNKN	0.012	mg/L	3	-
Potassium	UNKN	2.420	mg/L	3	-		UNKN	2.420	mg/L	3	J
Selenium	UNKN	0.004	mg/L	3	R		UNKN	0.029	mg/L	3	R
Silver	UNKN	0.001	mg/L	3	U		UNKN	0.001	mg/L	3	U
Sodium	UNKN	87.800	mg/L	3	-		UNKN	69.400	mg/L	3	-
General Chemistry											
Ammonia	UNFI	0.188	mg/L	3	-		UNFI	0.152	mg/L	3	-
Chloride	UNFI	8.000	mg/L	3	-		UNFI	15.000	mg/L	3	-
Fluoride	UNFI	0.680	mg/L	3	-		UNFI	0.800	mg/L	3	-
Nitrate	UNFI	0.120	mg/L	3	J		UNFI	0.440	mg/L	3	J
Phenols	UNFI	0.010	mg/L	3	U		UNFI	0.010	mg/L	3	U
Phosphorus	UNFI	0.827	mg/L	3	-		UNFI	1.100	mg/L	3	-
Sulfate	UNFI	253.000	mg/L	3	J		UNFI	327.000	mg/L	3	J
Total Kjeldahl Nitrogen	UNFI	1.910	mg/L	3	-		UNFI	2.030	mg/L	3	-
Total Organic Halides	UNFI	0.050	mg/L	3	U		UNFI	0.050	mg/L	3	U
Total Organic Nitrogen	UNFI	1.720	mg/L	3	-		UNFI	1.880	mg/L	3	-

TABLE G-10
(Continued)

PHASE II - RADIOLOGICAL PARAMETERS

BORING NUMBER	AFP-SW-02			
SAMPLE NUMBER	112243			
SAMPLING DEPTH (Feet)				
SAMPLING DATE	05/13/93			
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	FLTD	VAL QUAL
CS-137	16.20	pci/L	UNFI	UJ
GROSS ALPHA	3.90	pci/L	UNFI	J
GROSS BETA	6.22	pci/L	UNFI	J
NP-237	0.26	pci/L	UNFI	N
PU-238	0.11	pci/L	UNFI	J
PU-239/240	0.22	pci/L	UNFI	UJ
RA-226	0.17	pci/L	UNFI	UJ
RA-228	1.70	pci/L	UNFI	J
RU-106	133.00	pci/L	UNFI	UJ
SR-90	0.69	pci/L	UNFI	UJ
TC-99	8.40	pci/L	UNFI	UJ
TH-228	0.48	pci/L	UNFI	UJ
TH-230	0.32	pci/L	UNFI	UJ
TH-232	0.11	pci/L	UNFI	UJ
TH-TOTAL	1.04	ug/L	UNFI	UJ
U-234	1.50	pci/L	UNFI	-
U-235/236	0.10	pci/L	UNFI	J
U-238	1.69	pci/L	UNFI	-
U-TOTAL	4.18	ug/L	UNFI	-

000457

TABLE G-10
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER		AFP-SW-02			
SAMPLE NUMBER		112243			
SAMPLING DATE		05/13/93			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ
Inorganics					
Aluminum	UNFI	0.041	mg/L	C	U
Antimony	UNFI	0.006	mg/L	C	UJ
Arsenic	UNFI	0.005	mg/L	C	-
Barium	UNFI	0.027	mg/L	C	-
Beryllium	UNFI	0.001	mg/L	C	U
Cadmium	UNFI	0.002	mg/L	C	U
Calcium	UNFI	43.300	mg/L	C	-
Chromium	UNFI	0.004	mg/L	C	U
Cobalt	UNFI	0.003	mg/L	C	U
Copper	UNFI	0.008	mg/L	C	U
Cyanide	UNFI	0.001	mg/L	C	R
Iron	UNFI	0.082	mg/L	C	-
Lead	UNFI	0.001	mg/L	C	U
Magnesium	UNFI	6.910	mg/L	C	-
Manganese	UNFI	0.005	mg/L	C	-
Mercury	UNFI	0.000	mg/L	C	U
Molybdenum	UNFI	0.003	mg/L	C	U
Nickel	UNFI	0.003	mg/L	C	U
Potassium	UNFI	4.650	mg/L	C	-
Selenium	UNFI	0.001	mg/L	C	-
Silicon	UNFI	4.120	mg/L	C	-
Silver	UNFI	0.002	mg/L	C	U
Sodium	UNFI	0.795	mg/L	C	-
Thallium	UNFI	0.001	mg/L	C	UJ
Vanadium	UNFI	0.003	mg/L	C	U
Zinc	UNFI	0.004	mg/L	C	U
Volatile Organics					
1,1,1-Trichloroethane	UNFI	10.000	ug/L	C	U
1,1,2,2-Tetrachloroethane	UNFI	10.000	ug/L	C	U
1,1,2-Trichloroethane	UNFI	10.000	ug/L	C	U
1,1-Dichloroethane	UNFI	10.000	ug/L	C	U
1,1-Dichloroethene	UNFI	10.000	ug/L	C	U
1,2-Dichloroethane	UNFI	10.000	ug/L	C	U
1,2-Dichloroethene	UNFI	10.000	ug/L	C	U
1,2-Dichloropropane	UNFI	10.000	ug/L	C	U
2-Butanone	UNFI	10.000	ug/L	C	UJ
2-Hexanone	UNFI	10.000	ug/L	C	UJ
4-Methyl-2-pentanone	UNFI	10.000	ug/L	C	U
Acetone	UNFI	5.000	ug/L	C	R
Benzene	UNFI	10.000	ug/L	C	U

TABLE G-10
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER		AFP-SW-02			
SAMPLE NUMBER		112243			
SAMPLING DATE		05/13/93			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ
Volatile Organics					
Bromodichloromethane	UNFI	10.000	ug/L	C	U
Bromoform	UNFI	10.000	ug/L	C	U
Bromomethane	UNFI	10.000	ug/L	C	U
Carbon Tetrachloride	UNFI	10.000	ug/L	C	U
Carbon disulfide	UNFI	10.000	ug/L	C	U
Chlorobenzene	UNFI	10.000	ug/L	C	U
Chloroethane	UNFI	10.000	ug/L	C	U
Chloroform	UNFI	10.000	ug/L	C	U
Chloromethane	UNFI	10.000	ug/L	C	U
Dibromochloromethane	UNFI	10.000	ug/L	C	U
Ethylbenzene	UNFI	10.000	ug/L	C	U
Methylene chloride	UNFI	10.000	ug/L	C	U
Styrene	UNFI	10.000	ug/L	C	U
Tetrachloroethene	UNFI	10.000	ug/L	C	U
Toluene	UNFI	10.000	ug/L	C	U
Trichloroethene	UNFI	10.000	ug/L	C	U
Vinyl chloride	UNFI	10.000	ug/L	C	U
Xylenes, Total	UNFI	10.000	ug/L	C	U
cis-1,3-Dichloropropene	UNFI	10.000	ug/L	C	U
trans-1,3-Dichloropropene	UNFI	10.000	ug/L	C	U
Semivolatile Organics					
1,2,4-Trichlorobenzene	UNFI	10.000	ug/L	C	U
1,2-Dichlorobenzene	UNFI	10.000	ug/L	C	U
1,3-Dichlorobenzene	UNFI	10.000	ug/L	C	U
1,4-Dichlorobenzene	UNFI	10.000	ug/L	C	U
2,4,5-Trichlorophenol	UNFI	25.000	ug/L	C	U
2,4,6-Trichlorophenol	UNFI	10.000	ug/L	C	U
2,4-Dichlorophenol	UNFI	10.000	ug/L	C	U
2,4-Dimethylphenol	UNFI	10.000	ug/L	C	U
2,4-Dinitrophenol	UNFI	25.000	ug/L	C	U
2,4-Dinitrotoluene	UNFI	10.000	ug/L	C	U
2,6-Dinitrotoluene	UNFI	10.000	ug/L	C	U
2-Chloronaphthalene	UNFI	10.000	ug/L	C	U
2-Chlorophenol	UNFI	10.000	ug/L	C	U
2-Methylnaphthalene	UNFI	10.000	ug/L	C	U
2-Methylphenol	UNFI	10.000	ug/L	C	U
2-Nitroaniline	UNFI	25.000	ug/L	C	U
2-Nitrophenol	UNFI	10.000	ug/L	C	U
3,3'-Dichlorobenzidine	UNFI	10.000	ug/L	C	U
3-Nitroaniline	UNFI	25.000	ug/L	C	U

TABLE G-10
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER		AFP-SW-02			
SAMPLE NUMBER		112243			
SAMPLING DATE		05/13/93			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ
Semivolatile Organics					
4,6-Dinitro-2-methylphenol	UNFI	25.000	ug/L	C	R
4-Bromophenyl phenyl ether	UNFI	10.000	ug/L	C	U
4-Chloro-3-methylphenol	UNFI	10.000	ug/L	C	U
4-Chlorophenylphenyl ether	UNFI	10.000	ug/L	C	U
4-Methylphenol	UNFI	10.000	ug/L	C	U
4-Nitroaniline	UNFI	25.000	ug/L	C	R
4-Nitrophenol	UNFI	25.000	ug/L	C	U
Acenaphthene	UNFI	10.000	ug/L	C	U
Acenaphthylene	UNFI	10.000	ug/L	C	U
Anthracene	UNFI	10.000	ug/L	C	U
Benzo(a)anthracene	UNFI	10.000	ug/L	C	U
Benzo(a)pyrene	UNFI	10.000	ug/L	C	U
Benzo(b)fluoranthene	UNFI	10.000	ug/L	C	U
Benzo(g,h,i)perylene	UNFI	10.000	ug/L	C	U
Benzo(k)fluoranthene	UNFI	10.000	ug/L	C	U
Benzoic acid	UNFI	50.000	ug/L	C	U
Benzyl alcohol	UNFI	10.000	ug/L	C	U
Butyl benzyl phthalate	UNFI	10.000	ug/L	C	U
Carbazole	UNFI	10.000	ug/L	C	U
Chrysene	UNFI	10.000	ug/L	C	U
Di-n-butyl phthalate	UNFI	10.000	ug/L	C	U
Di-n-octyl phthalate	UNFI	10.000	ug/L	C	U
Dibenzo(a,h)anthracene	UNFI	10.000	ug/L	C	U
Dibenzofuran	UNFI	10.000	ug/L	C	U
Diethyl phthalate	UNFI	10.000	ug/L	C	U
Dimethyl phthalate	UNFI	10.000	ug/L	C	U
Fluoranthene	UNFI	10.000	ug/L	C	U
Fluorene	UNFI	10.000	ug/L	C	U
Hexachlorobenzene	UNFI	10.000	ug/L	C	U
Hexachlorobutadiene	UNFI	10.000	ug/L	C	U
Hexachlorocyclopentadiene	UNFI	10.000	ug/L	C	U
Hexachloroethane	UNFI	10.000	ug/L	C	U
Indeno(1,2,3-cd)pyrene	UNFI	10.000	ug/L	C	U
Isophorone	UNFI	10.000	ug/L	C	U
N-Nitroso-di-n-propylamine	UNFI	10.000	ug/L	C	U
N-Nitrosodiphenylamine	UNFI	10.000	ug/L	C	U
Naphthalene	UNFI	10.000	ug/L	C	U
Nitrobenzene	UNFI	10.000	ug/L	C	U
Pentachlorophenol	UNFI	25.000	ug/L	C	U
Phenanthrene	UNFI	10.000	ug/L	C	U
Phenol	UNFI	10.000	ug/L	C	U
Pyrene	UNFI	10.000	ug/L	C	U

TABLE G-10
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER		AFP-SW-02			
SAMPLE NUMBER		112243			
SAMPLING DATE		05/13/93			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ
Semivolatile Organics					
bis(2-Chloroethoxy)methane	UNFI	10.000	ug/L	C	U
bis(2-Chloroethyl)ether	UNFI	10.000	ug/L	C	U
bis(2-Chloroisopropyl) ether	UNFI	10.000	ug/L	C	UJ
bis(2-Ethylhexyl) phthalate	UNFI	10.000	ug/L	C	U
p-Chloroaniline	UNFI	10.000	ug/L	C	U
Pesticide Organics/PCBs					
4,4'-DDD	UNFI	0.100	ug/L	C	U
4,4'-DDE	UNFI	0.100	ug/L	C	U
4,4'-DDT	UNFI	0.100	ug/L	C	U
Aldrin	UNFI	0.050	ug/L	C	U
Aroclor-1016	UNFI	1.000	ug/L	C	U
Aroclor-1221	UNFI	2.000	ug/L	C	U
Aroclor-1232	UNFI	1.000	ug/L	C	U
Aroclor-1242	UNFI	1.000	ug/L	C	U
Aroclor-1248	UNFI	1.000	ug/L	C	U
Aroclor-1254	UNFI	1.000	ug/L	C	U
Aroclor-1260	UNFI	1.000	ug/L	C	U
Dieldrin	UNFI	0.100	ug/L	C	U
Endosulfan II	UNFI	0.100	ug/L	C	U
Endosulfan sulfate	UNFI	0.100	ug/L	C	U
Endosulfan-I	UNFI	0.050	ug/L	C	U
Endrin	UNFI	0.100	ug/L	C	U
Endrin aldehyde	UNFI	0.100	ug/L	C	U
Endrin ketone	UNFI	0.100	ug/L	C	U
Heptachlor	UNFI	0.050	ug/L	C	U
Heptachlor epoxide	UNFI	0.050	ug/L	C	U
Methoxychlor	UNFI	0.500	ug/L	C	U
Toxaphene	UNFI	5.000	ug/L	C	U
alpha-BHC	UNFI	0.050	ug/L	C	U
alpha-Chlordane	UNFI	0.050	ug/L	C	U
beta-BHC	UNFI	0.050	ug/L	C	U
delta-BHC	UNFI	0.050	ug/L	C	U
gamma-BHC (Lindane)	UNFI	0.050	ug/L	C	U
gamma-Chlordane	UNFI	0.050	ug/L	C	U
General Chemistry					
Alkalinity	UNFI	114.000	mg/L	B	-
Ammonia	UNFI	0.150	mg/L	B	-
Chloride	UNFI	1.500	mg/L	B	-

TABLE G-10
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER		AFP-SW-02			
SAMPLE NUMBER		112243			
SAMPLING DATE		05/13/93			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ
General Chemistry					
Fluoride	UNFI	0.200	mg/L	B	-
Nitrate	UNFI	0.100	mg/L	B	R
Phenols	UNFI	0.010	mg/L	B	-
Sulfate	UNFI	30.400	mg/L	B	-
Sulfide	UNFI	1.000	mg/L	B	-
Total Kjeldahl Nitrogen	UNFI	0.500	mg/L	B	-
Total Organic Carbon	UNFI	9.060	mg/L	B	-
Total Organic Halides	UNFI	0.021	mg/L	B	-
Total Organic Nitrogen	UNFI	0.850	mg/L	B	-
Total Phosphorous	UNFI	0.200	mg/L	B	-

000182

TABLE G-11

TABLE G-11A

ACTIVE FLYASH PILE
RI/FS GROUNDWATER RESULTS
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	1045				1048				1048			
SAMPLE NUMBER	066828				003132				003368			
SAMPLING DATE	12/13/89				04/27/88				07/24/88			
RADIOLOGICAL PARAMETER	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137		NA			*U	20.00	pci/L	R	*U	20.00	pci/L	R
GROSS ALPHA		NA				NA				NA		
GROSS BETA		NA				NA				NA		
NP-237		NA			*U	1.00	pci/L	R	*U	1.00	pci/L	UJ
PU-238		NA			*U	1.00	pci/L	R	*U	1.00	pci/L	UJ
PU-239/240		NA			*U	1.00	pci/L	R	*U	1.00	pci/L	UJ
RA-226		NA			*U	1.00	pci/L	R	*U	1.00	pci/L	UJ
RA-228		NA			*U	3.00	pci/L	R	*U	3.00	pci/L	UJ
RU-106		NA			*U	150.00	pci/L	R	*U	150.00	pci/L	R
SR-90		NA			*U	5.00	pci/L	R	*U	5.00	pci/L	U
TC-99	UNKN	30.00	pci/L	U	*U	30.00	pci/L	R	*U	30.00	pci/L	U
TH-228	UNKN	1.00	pci/L	U	*U	1.00	pci/L	R	*U	1.00	pci/L	UJ
TH-230	UNKN	1.00	pci/L	U	*U	1.00	pci/L	R	*U	1.00	pci/L	UJ
TH-232		NA			*U	1.00	pci/L	R	*U	1.00	pci/L	UJ
TH-TOTAL		NA				NA			*U	4.00	ug/L	UJ
U-234	UNKN	1.72	pci/L	-	*U	6.80	pci/L	R	*U	5.40	pci/L	J
U-235/236		NA			*U	1.00	pci/L	R	*U	1.00	pci/L	UJ
U-238	UNKN	2.15	pci/L	-	*U	5.60	pci/L	R	*U	5.30	pci/L	J
U-TOTAL	UNKN	10.10	ug/L	-	*U	19.00	ug/L	R	*U	17.00	ug/L	-

000363

6510

TABLE G-11A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	1048				1048				1048			
SAMPLE NUMBER	003647				003856				066831			
SAMPLING DATE	10/23/88				01/22/89				12/16/89			
RADIOLOGICAL PARAMETER	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137	*U	20.00	pci/L	R	UNKN	20.00	pci/L	R		NA		
GROSS ALPHA		NA				NA				NA		
GROSS BETA		NA				NA				NA		
NP-237	*U	1.00	pci/L	UJ	UNKN	1.00	pci/L	U		NA		
PU-238	*U	1.00	pci/L	UJ	UNKN	1.00	pci/L	UJ		NA		
PU-239/240	*U	1.00	pci/L	UJ	UNKN	1.00	pci/L	UJ		NA		
RA-226	*U	1.00	pci/L	U	UNKN	1.00	pci/L	U		NA		
RA-228	*U	3.00	pci/L	U	UNKN	3.00	pci/L	UJ		NA		
RU-106	*U	150.00	pci/L	R	UNKN	150.00	pci/L	R		NA		
SR-90	*U	5.00	pci/L	U	UNKN	5.00	pci/L	U		NA		
TC-99	*U	30.00	pci/L	U	UNKN	30.00	pci/L	U	UNKN	30.00	pci/L	U
TH-228	*U	1.00	pci/L	UJ	UNKN	1.00	pci/L	U	UNKN	2.93	pci/L	-
TH-230	*U	1.00	pci/L	UJ	UNKN	1.00	pci/L	U	UNKN	2.78	pci/L	-
TH-232	*U	1.00	pci/L	UJ	UNKN	1.00	pci/L	U		NA		
TH-TOTAL	*U	5.00	ug/L	J	UNKN	4.00	ug/L	-		NA		
U-234	*U	4.50	pci/L	J	UNKN	6.60	pci/L	-	UNKN	14.20	pci/L	-
U-235/236	*U	1.00	pci/L	UJ	UNKN	1.00	pci/L	U		NA		
U-238	*U	4.00	pci/L	J	UNKN	6.90	pci/L	-	UNKN	15.00	pci/L	-
U-TOTAL	*U	15.00	ug/L	-	UNKN	21.00	ug/L	-	UNKN	52.60	ug/L	-

TABLE G-11A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	2045				2045				2045			
SAMPLE NUMBER	003993				004092				004129 DUPLICATE			
SAMPLING DATE	01/23/89				05/01/89				05/01/89			
RADIOLOGICAL PARAMETER	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137	*U	20.00	pci/L	R	*U	20.00	pci/L	R	*U	20.00	pci/L	R
GROSS ALPHA		NA				NA				NA		
GROSS BETA		NA				NA				NA		
NP-237	*U	1.00	pci/L	U	*U	1.00	pci/L	UJ	*U	1.00	pci/L	UJ
PU-238	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
PU-239/240	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
RA-226	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
RA-228	*U	3.00	pci/L	U	*U	3.00	pci/L	UJ	*U	3.00	pci/L	UJ
RU-106	*U	150.00	pci/L	R	*U	150.00	pci/L	R	*U	150.00	pci/L	R
SR-90	*U	5.00	pci/L	U	*U	5.00	pci/L	U	*U	5.00	pci/L	U
TC-99	*U	30.00	pci/L	U	*U	30.00	pci/L	U	*U	30.00	pci/L	U
TH-228	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
TH-230	*U	1.20	pci/L	J	*U	1.00	pci/L	U	*U	1.00	pci/L	U
TH-232	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
TH-TOTAL	*U	5.00	ug/L	-	*U	3.00	ug/L	U	*U	5.00	ug/L	U
U-234	*U	78.90	pci/L	-	*U	74.70	pci/L	-	*U	77.60	pci/L	-
U-235/236	*U	3.50	pci/L	-	*U	4.40	pci/L	-	*U	3.20	pci/L	-
U-238	*U	92.30	pci/L	-	*U	85.50	pci/L	-	*U	87.50	pci/L	-
U-TOTAL	*U	283.00	ug/L	-	*U	265.00	ug/L	-	*U	291.00	ug/L	-

TABLE G-11A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	2045				2045				2045			
SAMPLE NUMBER	004158				004218				004266			
SAMPLING DATE	07/25/89				04/01/90				04/01/90			
RADIOLOGICAL PARAMETER	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137	*U	20.00	pci/L	R	*U	20.00	pci/L	R	*U	20.00	pci/L	R
GROSS ALPHA		NA				NA				NA		
GROSS BETA		NA				NA				NA		
NP-237	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
PU-238	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
PU-239/240	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
RA-226	*U	1.00	pci/L	UJ	*U	1.00	pci/L	UJ	*U	1.19	pci/L	J
RA-228	*U	3.00	pci/L	UJ	*U	3.00	pci/L	UJ	*U	3.00	pci/L	UJ
RU-106	*U	150.00	pci/L	R	*U	150.00	pci/L	R	*U	150.00	pci/L	R
SR-90	*U	5.00	pci/L	U	*U	5.00	pci/L	UJ	*U	5.00	pci/L	R
TC-99	*U	30.00	pci/L	U	*U	30.00	pci/L	UJ	*U	30.00	pci/L	UJ
TH-228	*U	1.00	pci/L	UJ	*U	1.00	pci/L	U	*U	1.00	pci/L	U
TH-230	*U	1.00	pci/L	UJ	*U	1.00	pci/L	U	*U	1.00	pci/L	U
TH-232	*U	1.00	pci/L	UJ	*U	1.00	pci/L	U	*U	1.05	pci/L	-
TH-TOTAL	*U	5.00	ug/L	UJ	*U	4.30	ug/L	U	*U	9.47	ug/L	-
U-234	*U	104.00	pci/L	-	*U	97.00	pci/L	J	*U	95.30	pci/L	J
U-235/236	*U	4.70	pci/L	-	*U	3.56	pci/L	J	*U	4.55	pci/L	J
U-238	*U	119.00	pci/L	-	*U	104.00	pci/L	J	*U	103.00	pci/L	J
U-TOTAL	*U	341.00	ug/L	-	*U	462.00	ug/L	-	*U	461.00	ug/L	-

000166

TABLE G-11A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	2048				2048				2048			
SAMPLE NUMBER	003994				004100				004162			
SAMPLING DATE	02/09/89				05/02/89				07/26/89			
RADIOLOGICAL PARAMETER	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137	*U	20.00	pci/L	R	*U	20.00	pci/L	U	*U	20.00	pci/L	UJ
GROSS ALPHA		NA				NA				NA		
GROSS BETA		NA				NA				NA		
NP-237	*U	1.00	pci/L	U	*U	1.00	pci/L	UJ	*U	1.00	pci/L	U
PU-238	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
PU-239/240	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
RA-226	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	UJ
RA-228	*U	3.00	pci/L	UJ	*U	3.00	pci/L	UJ	*U	3.00	pci/L	U
RU-106	*U	150.00	pci/L	R	*U	150.00	pci/L	U	*U	150.00	pci/L	UJ
SR-90	*U	5.00	pci/L	UJ	*U	5.00	pci/L	U	*U	5.00	pci/L	U
TC-99	*U	30.00	pci/L	U	*U	30.00	pci/L	U	*U	30.00	pci/L	U
TH-228	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	UJ
TH-230	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	UJ
TH-232	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	UJ
TH-TOTAL	*U	2.00	ug/L	U	*U	3.00	ug/L	U	*U	6.00	ug/L	UJ
U-234	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
U-235/236	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
U-238	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
U-TOTAL	*U	1.00	ug/L	UJ	*U	1.00	ug/L	U	*U	1.00	ug/L	U

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TABLE G-11A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	2048				2049				2049			
SAMPLE NUMBER	004221				003085				003436			
SAMPLING DATE	04/01/90				04/08/88				08/03/88			
RADIOLOGICAL PARAMETER	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137	*U	20.00	pci/L	R	*U	20.00	pci/L	R	*U	20.00	pci/L	R
GROSS ALPHA		NA				NA				NA		
GROSS BETA		NA				NA				NA		
NP-237	*U	1.00	pci/L	U	*U	1.00	pci/L	UJ	*U	1.00	pci/L	U
PU-238	*U	1.00	pci/L	U	*U	1.00	pci/L	UJ	*U	1.00	pci/L	UJ
PU-239/240	*U	1.00	pci/L	U	*U	1.00	pci/L	UJ	*U	1.00	pci/L	UJ
RA-226	*U	1.00	pci/L	UJ	*U	1.00	pci/L	R	*U	1.00	pci/L	U
RA-228	*U	3.00	pci/L	UJ	*U	3.00	pci/L	U	*U	3.00	pci/L	UJ
RU-106	*U	150.00	pci/L	R	*U	150.00	pci/L	R	*U	150.00	pci/L	R
SR-90	*U	5.00	pci/L	UJ	*U	5.00	pci/L	U	*U	5.00	pci/L	U
TC-99	*U	30.00	pci/L	UJ	*U	30.00	pci/L	U	*U	30.00	pci/L	U
TH-228	*U	1.00	pci/L	U	*U	1.50	pci/L	J	*U	1.00	pci/L	UJ
TH-230	*U	1.00	pci/L	U	*U	1.00	pci/L	UJ	*U	1.00	pci/L	UJ
TH-232	*U	1.00	pci/L	U	*U	1.60	pci/L	J	*U	1.00	pci/L	UJ
TH-TOTAL	*U	4.30	ug/L	U		NA			*U	3.00	ug/L	UJ
U-234	*U	3.40	pci/L	J	*U	50.80	pci/L	J	*U	3.10	pci/L	J
U-235/236	*U	1.00	pci/L	UJ	*U	2.30	pci/L	J	*U	1.00	pci/L	UJ
U-238	*U	3.02	pci/L	J	*U	51.40	pci/L	J	*U	2.80	pci/L	J
U-TOTAL	*U	2.07	ug/L	-	*U	130.00	ug/L	J	*U	8.00	ug/L	-

000168

TABLE G-11A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	2049				2049				2049			
SAMPLE NUMBER	003470 DUPLICATE				003687				003885			
SAMPLING DATE	12/06/88				12/06/88				02/07/89			
RADIOLOGICAL PARAMETER	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137	*U	20.00	pci/L	R	*U	20.00	pci/L	R	*U	20.00	pci/L	R
GROSS ALPHA		NA				NA				NA		
GROSS BETA		NA				NA				NA		
NP-237	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
PU-238	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
PU-239/240	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
RA-226	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
RA-228	*U	3.00	pci/L	U	*U	3.00	pci/L	U	*U	3.00	pci/L	UJ
RU-106	*U	150.00	pci/L	R	*U	150.00	pci/L	R	*U	150.00	pci/L	R
SR-90	*U	5.00	pci/L	U	*U	5.00	pci/L	U	*U	5.00	pci/L	U
TC-99	*U	30.00	pci/L	U	*U	30.00	pci/L	U	*U	30.00	pci/L	U
TH-228	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
TH-230	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
TH-232	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
TH-TOTAL	*U	3.00	ug/L	U	*U	5.00	ug/L	U	*U	2.00	ug/L	U
U-234	*U	1.30	pci/L	-	*U	1.00	pci/L	-	*U	2.30	pci/L	-
U-235/236	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
U-238	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	2.10	pci/L	-
U-TOTAL	*U	3.00	ug/L	-	*U	2.00	ug/L	-	*U	6.00	ug/L	J

TABLE G-11A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	2049				2049				2049			
SAMPLE NUMBER	004134				004164				004222			
SAMPLING DATE	05/10/89				07/30/89				04/03/90			
RADIOLOGICAL PARAMETER	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137	UNKN	20.00	pci/L	U	*U	20.00	pci/L	R	*U	20.00	pci/L	R
GROSS ALPHA		NA				NA				NA		
GROSS BETA		NA				NA				NA		
NP-237	UNKN	1.00	pci/L	UJ	*U	1.00	pci/L	U	*U	1.00	pci/L	U
PU-238	UNKN	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
PU-239/240	UNKN	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
RA-226	UNKN	1.00	pci/L	U	*U	1.00	pci/L	UJ	*U	1.19	pci/L	R
RA-228	UNKN	3.00	pci/L	UJ	*U	3.00	pci/L	U	*U	3.00	pci/L	UJ
RU-106	UNKN	150.00	pci/L	U	*U	150.00	pci/L	R	*U	150.00	pci/L	R
SR-90	UNKN	5.00	pci/L	U	*U	5.00	pci/L	U	*U	5.00	pci/L	R
TC-99	UNKN	37.20	pci/L	UJ	*U	30.00	pci/L	U	*U	30.00	pci/L	R
TH-228	UNKN	1.00	pci/L	U	*U	1.10	pci/L	J	*U	2.30	pci/L	R
TH-230	UNKN	1.00	pci/L	U	*U	1.00	pci/L	UJ	*U	1.27	pci/L	R
TH-232	UNKN	1.00	pci/L	U	*U	1.00	pci/L	UJ	*U	2.30	pci/L	R
TH-TOTAL	UNKN	3.00	ug/L	U	*U	4.00	ug/L	UJ	*U	20.80	ug/L	R
U-234	UNKN	42.90	pci/L	-	*U	83.20	pci/L	-		NA		
U-235/236	UNKN	1.80	pci/L	-	*U	1.40	pci/L	-		NA		
U-238	UNKN	47.50	pci/L	-	*U	89.90	pci/L	-		NA		
U-TOTAL	UNKN	175.00	ug/L	-	*U	147.00	ug/L	-	*U	43.30	ug/L	-

000170

TABLE G-11A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	3045				3045				3049			
SAMPLE NUMBER	004198				004319				003992			
SAMPLING DATE	05/23/90				08/09/90				01/31/89			
RADIOLOGICAL PARAMETER	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137	*U	20.00	pci/L	R	*U	20.00	pci/L	R	*U	20.00	pci/L	R
GROSS ALPHA		NA				NA				NA		
GROSS BETA		NA				NA				NA		
NP-237	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
PU-238	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	UJ
PU-239/240	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	UJ
RA-226	*U	1.00	pci/L	NV	*U	1.00	pci/L	U	*U	1.00	pci/L	U
RA-228	*U	3.00	pci/L	U	*U	3.00	pci/L	U	*U	3.40	pci/L	UJ
RU-106	*U	150.00	pci/L	R	*U	150.00	pci/L	R	*U	150.00	pci/L	R
SR-90	*U	5.00	pci/L	U	*U	5.00	pci/L	U	*U	5.00	pci/L	U
TC-99	*U	30.00	pci/L	U	*U	30.00	pci/L	U	*U	30.00	pci/L	U
TH-228	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
TH-230	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
TH-232	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
TH-TOTAL	*U	6.70	ug/L	U	*U	1.80	ug/L	U	*U	3.00	ug/L	U
U-234	*U	1.00	pci/L	U	*U	4.63	pci/L	-	*U	1.00	pci/L	U
U-235/236	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
U-238	*U	1.00	pci/L	U	*U	5.06	pci/L	-	*U	1.00	pci/L	U
U-TOTAL	*U	6.02	ug/L	-	*U	15.20	ug/L	-	*U	1.00	ug/L	UJ

TABLE G-11A
(Continued)

PHASE I - RADIOLOGICAL PARAMETERS

BORING NUMBER	3049				3049				3049			
SAMPLE NUMBER	004091				004246				004271 DUPLICATE			
SAMPLING DATE	05/01/89				04/26/90				04/26/90			
RADIOLOGICAL PARAMETER	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137	*U	20.00	pci/L	R	*U	20.00	pci/L	R	*U	20.00	pci/L	R
GROSS ALPHA		NA				NA				NA		
GROSS BETA		NA				NA				NA		
NP-237	*U	1.00	pci/L	UJ	*U	1.00	pci/L	U	*U	1.00	pci/L	U
PU-238	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
PU-239/240	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
RA-226	*U	1.00	pci/L	U	*U	1.00	pci/L	R	*U	1.00	pci/L	UJ
RA-228	*U	3.00	pci/L	UJ	*U	3.00	pci/L	UJ	*U	3.00	pci/L	UJ
RU-106	*U	150.00	pci/L	R	*U	150.00	pci/L	R	*U	150.00	pci/L	R
SR-90	*U	5.00	pci/L	U	*U	5.00	pci/L	U	*U	5.00	pci/L	U
TC-99	*U	30.00	pci/L	U	*U	30.00	pci/L	U	*U	30.00	pci/L	U
TH-228	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
TH-230	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
TH-232	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
TH-TOTAL	*U	7.00	ug/L	U	*U	3.60	ug/L	U	*U	3.10	ug/L	U
U-234	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	5.96	pci/L	-
U-235/236	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
U-238	*U	1.00	pci/L	U	*U	1.00	pci/L	U	*U	1.00	pci/L	U
U-TOTAL	*U	1.00	ug/L	U	*U	1.00	ug/L	U	*U	1.17	ug/L	J

0001272

TABLE G-11A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		1048					1048					1048			
SAMPLE NUMBER		003132					003368					003647			
SAMPLING DATE		04/27/88					07/24/88					10/23/88			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Arsenic		NA				*F	0.010	mg/L	C	U		NA			
Arsenic	FILT	0.200	mg/L	C	U		NA				FILT	0.002	mg/L	C	U
Barium		NA				*F	0.500	mg/L	C	U		NA			
Barium	FILT	0.112	mg/L	C	-		NA				FILT	0.101	mg/L	C	-
Cadmium		NA				*F	0.005	mg/L	C	U		NA			
Cadmium	FILT	0.007	mg/L	C	-		NA				FILT	0.002	mg/L	C	U
Calcium		NA				*F	110.000	mg/L	C	-		NA			
Calcium	FILT	114.000	mg/L	C	-		NA				FILT	103.000	mg/L	C	-
Chromium		NA				*F	0.010	mg/L	C	U		NA			
Chromium	FILT	0.020	mg/L	C	U		NA				FILT	0.020	mg/L	C	U
Copper		NA				*F	0.010	mg/L	C	U		NA			
Copper	FILT	0.010	mg/L	C	U		NA				FILT	0.010	mg/L	C	U
Iron		NA				*F	0.100	mg/L	C	U		NA			
Iron	FILT	0.050	mg/L	C	U		NA				FILT	0.061	mg/L	C	-
Lead		NA				*F	0.005	mg/L	C	U		NA			
Lead	FILT	0.060	mg/L	C	-		NA				FILT	0.004	mg/L	C	J
Magnesium		NA				*F	63.000	mg/L	C	-		NA			
Magnesium	FILT	80.200	mg/L	C	-		NA				FILT	48.300	mg/L	C	-
Manganese		NA				*F	0.020	mg/L	C	-		NA			
Manganese	FILT	0.187	mg/L	C	-		NA				FILT	0.003	mg/L	C	-
Mercury		NA				*F	0.000	mg/L	C	U		NA			
Mercury	FILT	0.000	mg/L	C	U		NA				FILT	0.000	mg/L	C	UJ
Molybdenum		NA				*F	0.050	mg/L	C	U		NA			
Molybdenum	FILT	0.020	mg/L	C	U		NA				FILT	0.020	mg/L	C	U
Nickel		NA				*F	0.030	mg/L	C	U		NA			
Nickel	FILT	0.020	mg/L	C	U		NA				FILT	0.020	mg/L	C	U
Potassium		NA				*F	4.500	mg/L	C	-		NA			
Potassium	FILT	1.680	mg/L	C	-		NA				FILT	3.420	mg/L	C	-
Selenium		NA				*F	0.005	mg/L	C	UJ		NA			
Selenium	FILT	0.200	mg/L	C	U		NA				FILT	0.002	mg/L	C	UJ
Silver		NA				*F	0.010	mg/L	C	U		NA			
Silver	FILT	0.077	mg/L	C	U		NA				FILT	0.001	mg/L	C	U
Sodium		NA				*F	31.000	mg/L	C	-		NA			
Sodium	FILT	18.210	mg/L	C	-		NA				FILT	22.500	mg/L	C	-
General Chemistry															
Ammonia	UNFI	0.100	mg/L	C	UJ	UNFI	0.020	mg/L	C	U	UNFI	0.100	mg/L	C	U
Chloride	UNFI	45.600	mg/L	C	-	UNFI	16.000	mg/L	C	J	UNFI	12.500	mg/L	C	-
Fluoride	UNFI	0.190	mg/L	C	-	UNFI	0.410	mg/L	C	J	UNFI	0.500	mg/L	C	-
Nitrate	UNFI	0.140	mg/L	C	-	UNFI	0.410	mg/L	C	J	UNFI	0.338	mg/L	C	J
Phenols	UNFI	0.010	mg/L	C	U	UNFI	0.002	mg/L	C	U	UNFI	0.010	mg/L	C	UJ

TABLE G-11A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1048				1048				1048			
SAMPLE NUMBER	003132				003368				003647			
SAMPLING DATE	04/27/88				07/24/88				10/23/88			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L VQ	FLTD	RESULTS	UNITS	L VQ	FLTD	RESULTS	UNITS	L VQ
General Chemistry												
Phosphorus	UNFI	0.440	mg/L	C -	UNFI	0.210	mg/L	C -	UNFI	0.220	mg/L	C -
Sulfate	UNFI	99.000	mg/L	C -	UNFI	93.000	mg/L	C -	UNFI	69.000	mg/L	C J
Total Kjeldahl Nitrogen		NA				NA			UNFI	0.360	mg/L	C UJ
Total Organic Halides		NA				NA			UNFI	0.050	mg/L	C U
Total Organic Nitrogen	UNFI	0.100	mg/L	C J	UNFI	0.050	mg/L	C R		NA		
Total Organic Nitrogen		NA				NA			UNKN	0.360	mg/L	C -

000124

TABLE G-11A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		1048				2045				2045			
SAMPLE NUMBER		003856				003993				004092			
SAMPLING DATE		01/22/89				01/23/89				05/01/89			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Arsenic		NA				FILT	0.002	mg/L	C	UJ	FILT	0.002	mg/L	C	U
Arsenic	UNKN	0.002	mg/L	C	U		NA					NA			
Barium		NA				FILT	0.044	mg/L	C	J	FILT	0.042	mg/L	C	-
Barium	UNKN	0.071	mg/L	C	-		NA					NA			
Cadmium		NA				FILT	0.004	mg/L	C	J	FILT	0.003	mg/L	C	-
Cadmium	UNKN	0.003	mg/L	C	-		NA					NA			
Calcium		NA				FILT	108.000	mg/L	C	J	FILT	103.000	mg/L	C	-
Calcium	UNKN	51.800	mg/L	C	-		NA					NA			
Chromium		NA				FILT	0.025	mg/L	C	J	FILT	0.015	mg/L	C	U
Chromium	UNKN	0.015	mg/L	C	-		NA					NA			
Copper		NA				FILT	0.012	mg/L	C	J	FILT	0.011	mg/L	C	-
Copper	UNKN	0.011	mg/L	C	-		NA					NA			
Iron		NA				FILT	0.043	mg/L	C	J	FILT	0.043	mg/L	C	U
Iron	UNKN	0.153	mg/L	C	-		NA					NA			
Lead		NA				FILT	0.002	mg/L	C	UJ	FILT	0.002	mg/L	C	R
Lead	UNKN	0.002	mg/L	C	UJ		NA					NA			
Magnesium		NA				FILT	25.700	mg/L	C	J	FILT	23.400	mg/L	C	-
Magnesium	UNKN	15.400	mg/L	C	-		NA					NA			
Manganese		NA				FILT	0.012	mg/L	C	J	FILT	0.008	mg/L	C	-
Manganese	UNKN	0.005	mg/L	C	-		NA					NA			
Mercury		NA				FILT	0.001	mg/L	C	J	FILT	0.000	mg/L	C	U
Mercury	UNKN	0.000	mg/L	C	U		NA					NA			
Molybdenum		NA				FILT	0.020	mg/L	C	UJ	FILT	0.010	mg/L	C	U
Molybdenum	UNKN	0.020	mg/L	C	U		NA					NA			
Nickel		NA				FILT	0.020	mg/L	C	UJ	FILT	0.020	mg/L	C	U
Nickel	UNKN	0.020	mg/L	C	U		NA					NA			
Potassium		NA				FILT	2.100	mg/L	C	J	FILT	2.160	mg/L	C	-
Potassium	UNKN	5.430	mg/L	C	-		NA					NA			
Selenium		NA				FILT	0.002	mg/L	C	UJ	FILT	0.002	mg/L	C	R
Selenium	UNKN	0.002	mg/L	C	U		NA					NA			
Silver		NA				FILT	0.001	mg/L	C	UJ	FILT	0.001	mg/L	C	U
Silver	UNKN	0.001	mg/L	C	U		NA					NA			
Sodium		NA				FILT	9.120	mg/L	C	J	FILT	9.700	mg/L	C	-
Sodium	UNKN	9.850	mg/L	D	-		NA					NA			
General Chemistry															
Ammonia	UNFI	0.100	mg/L	C	U	UNFI	0.100	mg/L	C	UJ	UNFI	0.100	mg/L	C	U
Chloride	UNFI	3.500	mg/L	C	U	UNFI	15.000	mg/L	C	J	UNFI	23.000	mg/L	C	-
Fluoride	UNFI	0.300	mg/L	C	-	UNFI	0.170	mg/L	C	J	UNFI	0.370	mg/L	C	-
Nitrate	UNFI	0.050	mg/L	C	R	UNFI	1.970	mg/L	C	J	UNFI	2.190	mg/L	C	J
Phenols	UNFI	0.010	mg/L	C	U	UNFI	0.020	mg/L	C	J	UNFI	0.010	mg/L	C	U

TABLE G-11A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		1048					2045					2045			
SAMPLE NUMBER		003856					003993					004092			
SAMPLING DATE		01/22/89					01/23/89					05/01/89			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
General Chemistry															
Phosphorus	UNFI	0.600	mg/L	C	-		NA				UNFI	1.140	mg/L	C	-
Sulfate	UNFI	59.000	mg/L	C	-	UNFI	54.200	mg/L	C	J	UNFI	64.800	mg/L	C	J
Total Kjeldahl Nitrogen	UNFI	0.500	mg/L	C	-	UNFI	0.273	mg/L	C	J	UNFI	0.600	mg/L	C	-
Total Organic Halides	UNFI	0.010	mg/L	C	U	UNFI	0.010	mg/L	C	U	UNFI	0.010	mg/L	C	-
Total Organic Nitrogen	UNFI	0.500	mg/L	C	-	UNFI	0.273	mg/L	C	J	UNFI	0.600	mg/L	C	J

TABLE G-11A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		2045					2045					2045			
SAMPLE NUMBER		004158					004218					004266			
SAMPLING DATE		07/25/89					04/01/90					04/01/90			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Aluminum	FILT	0.219	mg/L	C	-	FILT	0.163	mg/L	C	-	FILT	0.160	mg/L	C	-
Arsenic	FILT	0.002	mg/L	C	UJ	FILT	0.002	mg/L	C	UJ	FILT	0.002	mg/L	C	UJ
Barium	FILT	0.040	mg/L	C	-	FILT	0.044	mg/L	C	-	FILT	0.046	mg/L	C	-
Cadmium	FILT	0.006	mg/L	C	-	FILT	0.004	mg/L	C	-	FILT	0.004	mg/L	C	-
Calcium	FILT	107.000	mg/L	C	-	FILT	118.000	mg/L	C	-	FILT	120.000	mg/L	C	-
Chromium	FILT	0.040	mg/L	C	-	FILT	0.037	mg/L	C	-	FILT	0.035	mg/L	C	-
Copper	FILT	0.013	mg/L	C	-	FILT	0.010	mg/L	C	U	FILT	0.010	mg/L	C	U
Iron	FILT	0.095	mg/L	C	-	FILT	0.128	mg/L	C	U	FILT	0.083	mg/L	C	U
Lead	FILT	0.012	mg/L	C	-	FILT	0.005	mg/L	C	U	FILT	0.003	mg/L	C	U
Magnesium	FILT	24.400	mg/L	C	-	FILT	28.600	mg/L	C	-	FILT	29.100	mg/L	C	-
Manganese	FILT	0.012	mg/L	C	-	FILT	0.012	mg/L	C	-	FILT	0.011	mg/L	C	-
Mercury	FILT	0.000	mg/L	C	U	FILT	0.000	mg/L	C	U	FILT	0.000	mg/L	C	U
Molybdenum	FILT	0.010	mg/L	C	U	FILT	0.010	mg/L	C	UJ	FILT	0.010	mg/L	C	UJ
Nickel	FILT	0.020	mg/L	C	U	FILT	0.020	mg/L	C	U	FILT	0.020	mg/L	C	U
Potassium	FILT	1.520	mg/L	C	-	FILT	2.340	mg/L	C	-	FILT	2.370	mg/L	C	-
Selenium	FILT	0.005	mg/L	C	-	FILT	0.004	mg/L	C	-	FILT	0.002	mg/L	C	-
Silicon	FILT	4.850	mg/L	C	-	FILT	5.470	mg/L	C	-	FILT	5.530	mg/L	C	-
Silver	FILT	0.011	mg/L	C	-	FILT	0.013	mg/L	C	-	FILT	0.013	mg/L	C	-
Sodium	FILT	4.680	mg/L	C	-	FILT	7.300	mg/L	C	-	FILT	7.600	mg/L	C	-
Vanadium	FILT	0.017	mg/L	C	-	FILT	0.021	mg/L	C	-	FILT	0.022	mg/L	C	-
General Chemistry															
Ammonia	UNFI	0.100	mg/L	C	U	UNFI	0.100	mg/L	C	U	UNFI	0.100	mg/L	C	U
Chloride	UNFI	4.750	mg/L	C	-	UNFI	6.940	mg/L	C	-	UNFI	7.000	mg/L	C	-
Fluoride	UNFI	0.330	mg/L	C	-	UNFI	0.330	mg/L	C	-	UNFI	0.320	mg/L	C	-
Nitrate		NA				UNFI	1.170	mg/L	C	J	UNFI	1.320	mg/L	C	J
Nitrate	UNKN	0.733	mg/L	C	-		NA					NA			
Phenols	UNFI	0.010	mg/L	C	U	UNFI	0.013	mg/L	C	-	UNFI	0.010	mg/L	C	U
Phosphorus	UNFI	0.190	mg/L	C	-	UNFI	0.350	mg/L	C	-	UNFI	0.300	mg/L	C	-
Sulfate	UNFI	57.200	mg/L	C	-	UNFI	58.500	mg/L	C	-	UNFI	59.200	mg/L	C	-
Sulfide	UNFI	0.500	mg/L	C	UJ	UNFI	0.500	mg/L	C	U	UNFI	0.500	mg/L	C	U
Total Kjeldahl Nitrogen	UNFI	0.231	mg/L	C	-		NA					NA			
Total Organic Carbon	UNFI	2.240	mg/L	C	-	UNFI	2.500	mg/L	C	J	UNFI	2.450	mg/L	C	J
Total Organic Halides	UNFI	0.010	mg/L	C	UJ	UNFI	0.010	mg/L	C	R	UNFI	0.010	mg/L	C	R
Total Organic Nitrogen	UNFI	0.231	mg/L	C	-	UNFI	0.240	mg/L	C	-	UNFI	0.220	mg/L	C	-

TABLE G-11A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		2045					2048					2048				
SAMPLE NUMBER		004129 DUPLICATE					003994					004100				
SAMPLING DATE		05/01/89					02/09/89					05/02/89				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ		FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics																
Aluminum		NA						NA				FILT	0.122	mg/L	C	-
Arsenic	FILT	0.002	mg/L	C	U		FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	C	U
Barium	FILT	0.042	mg/L	C	-		FILT	0.042	mg/L	C	-	FILT	0.039	mg/L	C	-
Cadmium	FILT	0.004	mg/L	C	-		FILT	0.008	mg/L	C	U	FILT	0.003	mg/L	C	-
Calcium	FILT	102.000	mg/L	C	-		FILT	97.000	mg/L	C	-	FILT	102.000	mg/L	C	-
Chromium	FILT	0.017	mg/L	C	U		FILT	0.031	mg/L	C	-	FILT	0.014	mg/L	C	-
Copper	FILT	0.011	mg/L	C	-		FILT	0.017	mg/L	C	-	FILT	0.010	mg/L	C	-
Iron	FILT	0.028	mg/L	C	U		FILT	0.115	mg/L	C	-	FILT	0.067	mg/L	C	-
Lead	FILT	0.007	mg/L	C	R		FILT	0.002	mg/L	C	UJ	FILT	0.003	mg/L	C	J
Magnesium	FILT	23.200	mg/L	C	-		FILT	24.600	mg/L	C	-	FILT	29.100	mg/L	C	-
Manganese	FILT	0.009	mg/L	C	-		FILT	0.013	mg/L	C	-	FILT	0.014	mg/L	C	-
Mercury	FILT	0.000	mg/L	C	U		FILT	0.000	mg/L	C	J	FILT	0.200	mg/L	C	UJ
Molybdenum	FILT	0.010	mg/L	C	U		FILT	0.008	mg/L	C	-	FILT	0.010	mg/L	C	U
Nickel	FILT	0.020	mg/L	C	U		FILT	0.020	mg/L	C	-	FILT	0.020	mg/L	C	U
Potassium	FILT	2.100	mg/L	C	-		FILT	2.030	mg/L	C	-	FILT	1.820	mg/L	C	-
Selenium	FILT	0.002	mg/L	C	R		FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	C	UJ
Silicon		NA						NA				FILT	4.530	mg/L	C	-
Silver	FILT	0.001	mg/L	C	U		FILT	0.001	mg/L	C	UJ	FILT	0.001	mg/L	C	U
Sodium	FILT	9.650	mg/L	C	-		FILT	8.030	mg/L	C	-	FILT	6.650	mg/L	C	-
Vanadium		NA						NA				FILT	0.011	mg/L	C	-
General Chemistry																
Ammonia	UNFI	0.100	mg/L	C	U		UNFI	0.100	mg/L	C	UJ	UNFI	0.100	mg/L	C	U
Chloride	UNFI	22.500	mg/L	C	-		UNFI	1.000	mg/L	C	U	UNFI	17.300	mg/L	C	-
Fluoride	UNFI	0.340	mg/L	C	-		UNFI	0.120	mg/L	C	-	UNFI	0.100	mg/L	C	-
Nitrate	UNFI	1.950	mg/L	C	J		UNFI	1.830	mg/L	C	J	UNFI	1.190	mg/L	C	J
Phenols	UNFI	0.010	mg/L	C	U		UNFI	0.010	mg/L	C	UJ	UNFI	0.019	mg/L	C	-
Phosphorus	UNFI	0.235	mg/L	C	-		UNFI	0.960	mg/L	C	J	UNFI	1.291	mg/L	C	-
Sulfate	UNFI	45.300	mg/L	C	J		UNFI	59.000	mg/L	C	-	UNFI	56.500	mg/L	C	J
Sulfide		NA						NA				UNFI	37.800	mg/L	C	J
Total Kjeldahl Nitrogen	UNFI	0.590	mg/L	C	-		UNFI	0.441	mg/L	C	J	UNFI	0.725	mg/L	C	-
Total Organic Carbon		NA						NA				UNFI	1.000	mg/L	C	UJ
Total Organic Halides	UNFI	0.010	mg/L	C	U		UNFI	0.010	mg/L	C	UJ	UNFI	0.010	mg/L	C	U
Total Organic Nitrogen	UNFI	0.590	mg/L	C	J		UNFI	0.441	mg/L	C	J	UNFI	0.725	mg/L	C	-

TABLE G-11A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	2048					2048					2049				
SAMPLE NUMBER	004162					004221					003085				
SAMPLING DATE	07/26/89					04/01/90					04/08/88				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Aluminum	FILT	0.119	mg/L	C	-	FILT	0.143	mg/L	C	-		NA			
Arsenic	FILT	0.002	mg/L	C	UJ	FILT	0.002	mg/L	C	UJ	FILT	0.200	mg/L	C	UJ
Barium	FILT	0.040	mg/L	C	-	FILT	0.035	mg/L	C	-	FILT	0.018	mg/L	C	R
Cadmium	FILT	0.006	mg/L	C	-	FILT	0.005	mg/L	C	-	FILT	0.002	mg/L	C	U
Calcium	FILT	119.000	mg/L	C	-	FILT	108.000	mg/L	C	-	FILT	96.200	mg/L	C	J
Chromium	FILT	0.038	mg/L	C	-	FILT	0.035	mg/L	C	-	FILT	0.020	mg/L	C	U
Copper	FILT	0.015	mg/L	C	-	FILT	0.010	mg/L	C	U	FILT	0.010	mg/L	C	U
Iron	FILT	0.046	mg/L	C	-	FILT	0.065	mg/L	C	U	FILT	0.005	mg/L	C	U
Lead	FILT	0.002	mg/L	C	U	FILT	0.004	mg/L	C	U	FILT	0.050	mg/L	C	UJ
Magnesium	FILT	33.900	mg/L	C	-	FILT	33.000	mg/L	C	-	FILT	19.770	mg/L	C	J
Manganese	FILT	0.012	mg/L	C	-	FILT	0.009	mg/L	C	-	FILT	0.001	mg/L	C	U
Mercury	FILT	0.000	mg/L	C	U	FILT	0.000	mg/L	C	U	FILT	0.000	mg/L	C	UJ
Molybdenum	FILT	0.010	mg/L	C	U	FILT	0.010	mg/L	C	UJ	FILT	0.020	mg/L	C	UJ
Nickel	FILT	0.020	mg/L	C	U	FILT	0.020	mg/L	C	U	FILT	0.020	mg/L	C	U
Potassium	FILT	1.770	mg/L	C	-	FILT	2.100	mg/L	C	-	FILT	2.600	mg/L	C	J
Selenium	FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	C	U	FILT	0.200	mg/L	C	UJ
Silicon	FILT	4.760	mg/L	C	-	FILT	4.860	mg/L	C	-		NA			
Silver	FILT	0.010	mg/L	C	-	FILT	0.013	mg/L	C	-	FILT	0.010	mg/L	C	UJ
Sodium	FILT	6.390	mg/L	C	-	FILT	7.420	mg/L	C	-	FILT	8.850	mg/L	C	-
Vanadium	FILT	0.018	mg/L	C	-	FILT	0.020	mg/L	C	-		NA			
General Chemistry															
Ammonia	UNFI	0.100	mg/L	C	U	UNFI	0.100	mg/L	C	U		NA			
Ammonia		NA					NA				UNKN	0.100	mg/L	C	UJ
Chloride	UNFI	12.800	mg/L	C	-	UNFI	5.690	mg/L	C	-	UNFI	23.700	mg/L	C	-
Fluoride	UNFI	0.140	mg/L	C	-	UNFI	0.140	mg/L	C	-	UNFI	0.350	mg/L	C	-
Nitrate	UNFI	1.100	mg/L	C	J		NA				UNFI	0.100	mg/L	C	U
Nitrate		NA				UNKN	0.530	mg/L	C	J		NA			
Phenols	UNFI	0.010	mg/L	C	U	UNFI	0.340	mg/L	C	-	UNFI	0.020	mg/L	C	J
Phosphorus	UNFI	0.366	mg/L	C	-	UNFI	0.120	mg/L	C	-	UNFI	0.050	mg/L	C	UJ
Sulfate	UNFI	54.100	mg/L	C	-	UNFI	56.000	mg/L	C	-	UNFI	70.000	mg/L	C	-
Sulfide	UNFI	0.500	mg/L	C	UJ	UNFI	0.500	mg/L	C	U		NA			
Total Kjeldahl Nitrogen	UNFI	0.623	mg/L	C	U		NA					NA			
Total Organic Carbon	UNFI	2.220	mg/L	C	-	UNFI	2.720	mg/L	C	J		NA			
Total Organic Halides	UNFI	0.010	mg/L	C	UJ	UNFI	0.032	mg/L	C	R		NA			
Total Organic Nitrogen	UNFI	0.295	mg/L	C	-	UNFI	0.100	mg/L	C	-	UNFI	0.100	mg/L	C	U

TABLE G-11A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		2049					2049					2049			
SAMPLE NUMBER		003436					003687					003885			
SAMPLING DATE		08/03/88					12/06/88					02/07/89			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Arsenic	*F	0.010	mg/L	C	U		NA					NA			
Arsenic		NA				FILT	0.002	mg/L	C	UJ	FILT	0.002	mg/L	C	U
Barium	*F	0.200	mg/L	C	U		NA					NA			
Barium		NA				FILT	0.039	mg/L	C	U	FILT	0.042	mg/L	C	-
Cadmium	*F	0.005	mg/L	C	U		NA					NA			
Cadmium		NA				FILT	0.002	mg/L	C	U	FILT	0.006	mg/L	C	-
Calcium	*F	120.000	mg/L	C	J		NA					NA			
Calcium		NA				FILT	116.000	mg/L	C	-	FILT	119.000	mg/L	C	-
Chromium	*F	0.010	mg/L	C	U		NA					NA			
Chromium		NA				FILT	0.020	mg/L	C	U	FILT	0.033	mg/L	C	-
Copper	*F	0.030	mg/L	C	U		NA					NA			
Copper		NA				FILT	0.010	mg/L	C	U	FILT	0.013	mg/L	C	-
Iron	*F	0.100	mg/L	C	U		NA					NA			
Iron		NA				FILT	0.011	mg/L	C	U	FILT	0.032	mg/L	C	-
Lead	*F	0.005	mg/L	C	U		NA					NA			
Lead		NA				FILT	0.006	mg/L	C	UJ	FILT	0.002	mg/L	C	U
Magnesium	*F	24.000	mg/L	C	J		NA					NA			
Magnesium		NA				FILT	25.700	mg/L	C	-	FILT	26.900	mg/L	C	-
Manganese	*F	0.020	mg/L	C	U		NA					NA			
Manganese		NA				FILT	0.001	mg/L	C	U	FILT	0.005	mg/L	C	-
Mercury	*F	0.000	mg/L	C	U		NA					NA			
Mercury		NA				FILT	0.000	mg/L	C	J	FILT	0.000	mg/L	C	UJ
Molybdenum	*F	0.050	mg/L	C	U		NA					NA			
Molybdenum		NA				FILT	0.020	mg/L	C	U	FILT	0.020	mg/L	C	U
Nickel	*F	0.040	mg/L	C	U		NA					NA			
Nickel		NA				FILT	0.020	mg/L	C	U	FILT	0.020	mg/L	C	U
Potassium	*F	5.000	mg/L	C	UJ		NA					NA			
Potassium		NA				FILT	2.230	mg/L	C	-	FILT	2.130	mg/L	C	-
Selenium	*F	0.005	mg/L	C	U		NA					NA			
Selenium		NA				FILT	0.002	mg/L	C	UJ	FILT	0.002	mg/L	C	J
Silver	*F	0.010	mg/L	C	U		NA					NA			
Silver		NA				FILT	0.020	mg/L	C	U	FILT	0.001	mg/L	C	U
Sodium	*F	9.000	mg/L	C	J		NA					NA			
Sodium		NA				FILT	8.410	mg/L	C	-	FILT	15.200	mg/L	C	-
General Chemistry															
Ammonia	UNFI	0.100	mg/L	C	UJ	UNFI	0.100	mg/L	C	UJ	UNFI	0.100	mg/L	C	U
Chloride	UNFI	18.000	mg/L	C	J	UNFI	6.000	mg/L	C	U	UNFI	15.000	mg/L	C	-
Fluoride	UNFI	0.910	mg/L	C	J	UNFI	0.210	mg/L	C	-	UNFI	0.230	mg/L	C	J
Nitrate	UNFI	3.300	mg/L	C	J	UNFI	8.950	mg/L	C	J	UNFI	2.210	mg/L	C	J
Phenols	UNFI	0.050	mg/L	C	U	UNFI	0.010	mg/L	C	U	UNFI	0.010	mg/L	C	R

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TABLE G-11A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		2049				2049				2049			
SAMPLE NUMBER		003436				003687				003885			
SAMPLING DATE		08/03/88				12/06/88				02/07/89			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
General Chemistry															
Phosphorus	UNFI	0.100	mg/L	C	J	UNFI	0.907	mg/L	C	-	UNFI	0.800	mg/L	C	-
Sulfate	UNFI	54.000	mg/L	C	J	UNFI	43.800	mg/L	C	-	UNFI	49.400	mg/L	C	J
Total Kjeldahl Nitrogen		NA				UNFI	0.430	mg/L	C	UJ	UNFI	0.370	mg/L	C	J
Total Organic Halides		NA				UNFI	0.050	mg/L	C	U	UNFI	0.050	mg/L	C	U
Total Organic Nitrogen	UNFI	0.100	mg/L	C	UJ	UNFI	0.430	mg/L	C	UJ	UNFI	0.370	mg/L	C	J

TABLE G-11A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		2049					2049					2049			
SAMPLE NUMBER		004164					004222					003470 DUPLICATE			
SAMPLING DATE		07/30/89					04/03/90					12/06/88			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Aluminum	FILT	0.133	mg/L	C	-	FILT	0.154	mg/L	C	-		NA			
Arsenic	FILT	0.002	mg/L	C	UJ	FILT	0.002	mg/L	C	UJ	FILT	0.002	mg/L	C	UJ
Barium	FILT	0.025	mg/L	C	-	FILT	0.028	mg/L	C	-	FILT	0.039	mg/L	C	U
Cadmium	FILT	0.004	mg/L	C	-	FILT	0.004	mg/L	C	-	FILT	0.002	mg/L	C	U
Calcium	FILT	106.000	mg/L	C	-	FILT	124.000	mg/L	C	-	FILT	116.000	mg/L	C	-
Chromium	FILT	0.044	mg/L	C	-	FILT	0.037	mg/L	C	-	FILT	0.020	mg/L	C	U
Copper	FILT	0.010	mg/L	C	U	FILT	0.010	mg/L	C	U	FILT	0.010	mg/L	C	U
Iron	FILT	0.034	mg/L	C	-	FILT	0.066	mg/L	C	U	FILT	0.015	mg/L	C	U
Lead	FILT	0.003	mg/L	C	-	FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	C	UJ
Magnesium	FILT	21.400	mg/L	C	-	FILT	27.300	mg/L	C	-	FILT	26.200	mg/L	C	-
Manganese	FILT	0.008	mg/L	C	-	FILT	0.009	mg/L	C	-	FILT	0.002	mg/L	C	U
Mercury	FILT	0.000	mg/L	C	UJ	FILT	0.000	mg/L	C	U	FILT	0.000	mg/L	D	U
Molybdenum	FILT	0.010	mg/L	C	U	FILT	0.010	mg/L	C	UJ	FILT	0.020	mg/L	C	U
Nickel	FILT	0.020	mg/L	C	U	FILT	0.020	mg/L	C	-	FILT	0.020	mg/L	C	U
Potassium	FILT	2.090	mg/L	C	-	FILT	3.450	mg/L	C	J	FILT	2.340	mg/L	C	-
Selenium	FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	C	UJ
Silicon	FILT	4.460	mg/L	C	-	FILT	4.550	mg/L	C	-		NA			
Silver	FILT	0.010	mg/L	C	-	FILT	0.013	mg/L	C	-	FILT	0.020	mg/L	C	U
Sodium	FILT	5.890	mg/L	C	-	FILT	17.900	mg/L	C	-	FILT	8.370	mg/L	C	-
Vanadium	FILT	0.016	mg/L	C	-	FILT	0.020	mg/L	C	-		NA			
General Chemistry															
Ammonia	UNFI	0.100	mg/L	C	U	UNFI	0.100	mg/L	C	U	UNFI	0.100	mg/L	C	UJ
Chloride	UNFI	6.500	mg/L	C	-	UNFI	9.510	mg/L	C	-	UNFI	1.500	mg/L	C	U
Fluoride	UNFI	0.360	mg/L	C	-	UNFI	0.420	mg/L	C	-	UNFI	0.190	mg/L	C	-
Nitrate	UNFI	0.685	mg/L	C	J	UNFI	4.060	mg/L	C	R	UNFI	9.040	mg/L	C	J
Phenols		NA				UNFI	0.010	mg/L	C	U	UNFI	0.010	mg/L	C	U
Phenols	UNKN	0.010	mg/L	C	U		NA					NA			
Phosphorus	UNFI	0.306	mg/L	C	-	UNFI	2.710	mg/L	C	-	UNFI	1.420	mg/L	C	-
Sulfate	UNFI	43.200	mg/L	C	-	UNFI	51.300	mg/L	C	-	UNFI	41.400	mg/L	C	-
Sulfide	UNFI	0.500	mg/L	C	UJ	UNFI	0.500	mg/L	C	U		NA			
Total Kjeldahl Nitrogen	UNFI	0.245	mg/L	C	-		NA				UNFI	0.440	mg/L	C	UJ
Total Organic Carbon	UNFI	1.980	mg/L	C	-	UNFI	0.254	mg/L	C	U		NA			
Total Organic Halides	UNFI	0.010	mg/L	C	U	UNFI	0.010	mg/L	C	R	UNFI	0.050	mg/L	D	U
Total Organic Nitrogen	UNFI	0.245	mg/L	C	-	UNFI	1.640	mg/L	C	-	UNFI	0.440	mg/L	C	UJ

000182

TABLE G-11A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		3045					3045					3049			
SAMPLE NUMBER		004198					004319					003992			
SAMPLING DATE		05/23/90					08/09/90					01/31/89			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Aluminum	FILT	0.039	mg/L	C	-	FILT	0.081	mg/L	C	-		NA			
Arsenic	FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	C	UJ
Barium	FILT	0.047	mg/L	C	-	FILT	0.045	mg/L	C	-	FILT	0.023	mg/L	C	J
Cadmium	FILT	0.001	mg/L	C	-	FILT	0.002	mg/L	C	-	FILT	0.020	mg/L	C	UJ
Calcium	FILT	88.900	mg/L	C	-	FILT	94.000	mg/L	C	-	FILT	53.200	mg/L	C	J
Chromium	FILT	0.004	mg/L	C	-	FILT	0.021	mg/L	C	-	FILT	0.016	mg/L	C	J
Copper	FILT	0.007	mg/L	C	U	FILT	0.010	mg/L	C	U	FILT	0.010	mg/L	C	UJ
Iron	FILT	0.128	mg/L	C	U	FILT	0.087	mg/L	C	J	FILT	0.150	mg/L	C	J
Lead	FILT	0.001	mg/L	C	U	FILT	0.002	mg/L	C	UJ	FILT	0.002	mg/L	C	UJ
Magnesium	FILT	22.500	mg/L	C	-	FILT	23.100	mg/L	C	-	FILT	28.200	mg/L	C	J
Manganese	FILT	0.088	mg/L	C	-	FILT	0.057	mg/L	C	-	FILT	0.053	mg/L	C	J
Mercury	FILT	0.000	mg/L	C	U	FILT	0.000	mg/L	C	U	FILT	0.001	mg/L	C	J
Molybdenum	FILT	0.007	mg/L	C	-	FILT	0.010	mg/L	C	U	FILT	0.037	mg/L	C	J
Nickel	FILT	0.005	mg/L	C	-	FILT	0.020	mg/L	C	U	FILT	0.021	mg/L	C	UJ
Potassium	FILT	2.600	mg/L	C	-	FILT	2.600	mg/L	C	-	FILT	4.920	mg/L	C	J
Selenium	FILT	0.003	mg/L	C	U	FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	C	UJ
Silicon	FILT	1.900	mg/L	C	-	FILT	3.980	mg/L	C	-		NA			
Silver	FILT	0.003	mg/L	C	U	FILT	0.013	mg/L	C	-	FILT	0.001	mg/L	C	UJ
Sodium	FILT	10.200	mg/L	C	-	FILT	10.600	mg/L	C	-	FILT	34.000	mg/L	C	J
Vanadium	FILT	0.006	mg/L	C	-	FILT	0.010	mg/L	C	U		NA			
General Chemistry															
Ammonia	UNFI	0.200	mg/L	C	-	UNFI	0.100	mg/L	C	U	UNFI	0.100	mg/L	C	UJ
Chloride	UNFI	21.000	mg/L	C	-	UNFI	12.300	mg/L	C	-	UNFI	32.000	mg/L	C	J
Fluoride	UNFI	0.100	mg/L	C	-	UNFI	0.130	mg/L	C	-	UNFI	0.110	mg/L	C	J
Nitrate	UNFI	0.900	mg/L	C	J	UNFI	1.280	mg/L	C	J		NA			
Nitrate		NA					NA				UNKN	0.190	mg/L	C	J
Phenols	UNFI	0.017	mg/L	C	-	UNFI	0.010	mg/L	C	-	UNFI	0.010	mg/L	C	UJ
Phosphorus		NA				UNFI	0.030	mg/L	C	-	UNFI	0.540	mg/L	C	J
Sulfate	UNFI	72.000	mg/L	C	-	UNFI	75.400	mg/L	C	-	UNFI	115.000	mg/L	C	J
Sulfide	UNFI	2.000	mg/L	C	J	UNFI	0.500	mg/L	C	U		NA			
Total Kjeldahl Nitrogen		NA					NA				UNFI	0.338	mg/L	C	J
Total Organic Carbon	UNFI	2.000	mg/L	C	J	UNFI	1.070	mg/L	C	-		NA			
Total Organic Halides	UNFI	0.050	mg/L	C	U	UNFI	0.010	mg/L	C	UJ	UNFI	0.021	mg/L	C	-
Total Organic Nitrogen	UNFI	0.000	mg/L	C	J	UNFI	0.100	mg/L	C	U	UNFI	0.338	mg/L	C	J

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TABLE G-11A
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		3049					3049					3049			
SAMPLE NUMBER		004091					004246					004271 DUPLICATE			
SAMPLING DATE		05/01/89					04/26/90					04/26/90			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Aluminum		NA				FILT	0.060	mg/L	C	U	FILT	0.060	mg/L	C	U
Arsenic	FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	C	UJ	FILT	0.002	mg/L	C	UJ
Barium	FILT	0.043	mg/L	C	-	FILT	0.044	mg/L	C	-	FILT	0.044	mg/L	C	-
Cadmium	FILT	0.003	mg/L	C	-	FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	C	U
Calcium	FILT	84.000	mg/L	C	-	FILT	84.300	mg/L	C	-	FILT	83.100	mg/L	C	-
Chromium	FILT	0.014	mg/L	C	U	FILT	0.010	mg/L	C	U	FILT	0.010	mg/L	C	U
Copper	FILT	0.010	mg/L	C	-	FILT	0.010	mg/L	C	U	FILT	0.010	mg/L	C	U
Iron	FILT	0.027	mg/L	C	U	FILT	0.056	mg/L	C	U	FILT	0.050	mg/L	C	U
Lead	FILT	0.002	mg/L	C	R	FILT	0.002	mg/L	C	UJ	FILT	0.002	mg/L	C	UJ
Magnesium	FILT	21.900	mg/L	C	-	FILT	21.900	mg/L	C	-	FILT	21.600	mg/L	C	-
Manganese	FILT	0.082	mg/L	C	-	FILT	0.088	mg/L	C	-	FILT	0.087	mg/L	C	-
Mercury	FILT	0.000	mg/L	C	U	FILT	0.000	mg/L	C	UJ	FILT	0.000	mg/L	C	UJ
Molybdenum	FILT	0.010	mg/L	C	U	FILT	0.010	mg/L	C	U	FILT	0.010	mg/L	C	U
Nickel	FILT	0.020	mg/L	C	U	FILT	0.020	mg/L	C	U	FILT	0.020	mg/L	C	U
Potassium	FILT	2.450	mg/L	C	-	FILT	2.760	mg/L	C	-	FILT	2.740	mg/L	C	-
Selenium	FILT	0.002	mg/L	C	R	FILT	0.003	mg/L	C	UJ	FILT	0.003	mg/L	C	UJ
Silicon		NA				FILT	2.000	mg/L	C	-	FILT	2.300	mg/L	C	-
Silver	FILT	0.001	mg/L	C	U	FILT	0.010	mg/L	C	U	FILT	0.010	mg/L	C	U
Sodium	FILT	10.400	mg/L	C	-	FILT	10.600	mg/L	C	-	FILT	10.400	mg/L	C	-
Vanadium		NA				FILT	0.010	mg/L	C	U	FILT	0.010	mg/L	C	U
General Chemistry															
Ammonia	UNFI	0.100	mg/L	C	U	UNFI	0.100	mg/L	C	UJ	UNFI	0.100	mg/L	C	UJ
Chloride	UNFI	24.000	mg/L	C	-	UNFI	28.000	mg/L	C	-	UNFI	24.000	mg/L	C	-
Fluoride	UNFI	0.170	mg/L	C	-	UNFI	0.200	mg/L	C	-	UNFI	0.200	mg/L	C	-
Nitrate	UNFI	1.620	mg/L	C	J	UNFI	1.600	mg/L	C	R	UNFI	1.700	mg/L	C	R
Phenols	UNFI	0.010	mg/L	C	U	UNFI	0.011	mg/L	C	-	UNFI	0.022	mg/L	C	-
Phosphorus	UNFI	0.070	mg/L	C	-	UNFI	0.030	mg/L	C	-	UNFI	0.030	mg/L	C	-
Sulfate	UNFI	62.500	mg/L	C	J	UNFI	59.400	mg/L	C	-	UNFI	60.100	mg/L	C	-
Sulfide		NA				UNFI	0.500	mg/L	C	U	UNFI	0.500	mg/L	C	U
Total Kjeldahl Nitrogen	UNFI	0.152	mg/L	C	-		NA					NA			
Total Organic Carbon		NA				UNFI	1.000	mg/L	C	UJ	UNFI	1.000	mg/L	C	UJ
Total Organic Halides	UNFI	0.010	mg/L	C	U		NA					NA			
Total Organic Nitrogen	UNFI	0.152	mg/L	C	J	UNFI	0.200	mg/L	C	J	UNFI	0.100	mg/L	C	J

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TABLE G-11A
(Continued)

PHASE II - RADIOLOGICAL PARAMETERS

BORING NUMBER	1045				1048				2045			
SAMPLE NUMBER	112000				110900				112003			
SAMPLING DATE	04/29/93				04/28/93				04/28/93			
RADIOLOGICAL PARAMETERS	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137	FILT	17.700	pci/L	UJ		NA			FILT	15.000	pci/L	UJ
CS-137	UNFI	15.700	pci/L	UJ	UNFI	18.000	pci/L	UJ		NA		
GROSS ALPHA	FILT	4.020	pci/L	UJ		NA			FILT	148.000	pci/L	J
GROSS ALPHA	UNFI	4.020	pci/L	UJ	UNFI	20.000	pci/L	UJ		NA		
GROSS BETA	FILT	7.040	pci/L	J		NA			FILT	98.800	pci/L	J
GROSS BETA	UNFI	4.350	pci/L	J	UNFI	14.100	pci/L	J		NA		
NP-237	FILT	0.490	pci/L	N		NA			FILT	0.314	pci/L	N
NP-237	UNFI	0.480	pci/L	N	UNFI	0.184	pci/L	U		NA		
PU-238	FILT	0.290	pci/L	J		NA			FILT	0.207	pci/L	J
PU-238	UNFI	0.170	pci/L	J	UNFI	0.122	pci/L	J		NA		
PU-239/240	FILT	0.130	pci/L	U		NA			FILT	0.065	pci/L	UJ
PU-239/240	UNFI	0.200	pci/L	J	UNFI	0.104	pci/L	UJ		NA		
RA-226	FILT	0.250	pci/L	J		NA			FILT	0.172	pci/L	J
RA-226	UNFI	0.160	pci/L	UJ	UNFI	0.141	pci/L	UJ		NA		
RA-228	FILT	1.480	pci/L	UJ		NA			FILT	2.000	pci/L	UJ
RA-228	UNFI	1.460	pci/L	UJ	UNFI	0.879	pci/L	UJ		NA		
RU-106	FILT	129.000	pci/L	UJ		NA			FILT	98.000	pci/L	UJ
RU-106	UNFI	154.000	pci/L	UJ	UNFI	127.000	pci/L	UJ		NA		
SR-90	FILT	0.820	pci/L	UJ		NA			FILT	0.811	pci/L	UJ
SR-90	UNFI	0.818	pci/L	UJ	UNFI	1.190	pci/L	J		NA		
TC-99	FILT	8.300	pci/L	UJ		NA			FILT	10.200	pci/L	UJ
TC-99	UNFI	9.000	pci/L	UJ	UNFI	9.700	pci/L	UJ		NA		
TH-228	FILT	0.048	pci/L	J		NA			FILT	0.218	pci/L	UJ
TH-228	UNFI	0.130	pci/L	J	UNFI	0.115	pci/L	UJ		NA		
TH-230	FILT	0.072	pci/L	UJ		NA			FILT	0.166	pci/L	J
TH-230	UNFI	0.240	pci/L	J	UNFI	0.138	pci/L	U		NA		
TH-232	FILT	0.072	pci/L	UJ		NA			FILT	0.148	pci/L	UJ
TH-232	UNFI	0.032	pci/L	J	UNFI	0.100	pci/L	UJ		NA		
TH-TOTAL	FILT	0.660	ug/L	UJ		NA			FILT	1.360	ug/L	UJ
TH-TOTAL	UNFI	0.290	ug/L	J	UNFI	0.920	ug/L	UJ		NA		
U-234	FILT	0.044	pci/L	UJ		NA			FILT	131.000	pci/L	-
U-234	UNFI	1.160	pci/L	-	UNFI	11.400	pci/L	-		NA		
U-235/236	FILT	0.160	pci/L	UJ		NA			FILT	5.460	pci/L	-
U-235/236	UNFI	0.051	pci/L	UJ	UNFI	0.560	pci/L	J		NA		
U-238	FILT	0.930	pci/L	J		NA			FILT	144.000	pci/L	-
U-238	UNFI	1.190	pci/L	-	UNFI	12.500	pci/L	-		NA		
U-TOTAL	FILT	2.470	ug/L	-		NA			FILT	364.000	ug/L	-
U-TOTAL	UNFI	2.910	ug/L	-	UNFI	31.100	ug/L	-		NA		

TABLE G-11A
(Continued)

PHASE II - RADIOLOGICAL PARAMETERS

BORING NUMBER		2048				2049				21033		
SAMPLE NUMBER		110897				113305				116970		
SAMPLING DATE		04/27/93				05/10/93				06/17/93		
RADIOLOGICAL PARAMETERS	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ	FLTD	RESULTS	UNITS	VQ
CS-137		NA				NA			FILT	13.000	pci/L	UJ
CS-137	UNFI	18.000	pci/L	UJ	UNFI	9.610	pci/L	UJ	UNFI	14.000	pci/L	UJ
GROSS ALPHA		NA				NA			FILT	17.900	pci/L	J
GROSS ALPHA	UNFI	6.780	pci/L	UJ	UNFI	59.900	pci/L	J	UNFI	22.800	pci/L	J
GROSS BETA		NA				NA			FILT	16.800	pci/L	J
GROSS BETA	UNFI	4.130	pci/L	UJ	UNFI	25.800	pci/L	J	UNFI	12.100	pci/L	J
NP-237		NA				NA			FILT	0.375	pci/L	U
NP-237	UNFI	0.130	pci/L	U	UNFI	0.737	pci/L	UJ	UNFI	0.492	pci/L	U
PU-238		NA				NA			FILT	0.281	pci/L	J
PU-238	UNFI	0.135	pci/L	J	UNFI	0.151	pci/L	UJ	UNFI	0.482	pci/L	U
PU-239/240		NA				NA			FILT	0.114	pci/L	UJ
PU-239/240	UNFI	0.041	pci/L	UJ	UNFI	0.435	pci/L	UJ	UNFI	0.166	pci/L	U
RA-226		NA				NA			FILT	0.502	pci/L	J
RA-226	UNFI	0.159	pci/L	UJ	UNFI	1.000	pci/L	R	UNFI	0.264	pci/L	J
RA-228		NA				NA			FILT	1.660	pci/L	U
RA-228	UNFI	2.190	pci/L	UJ	UNFI	3.000	pci/L	R	UNFI	1.410	pci/L	U
RU-106		NA				NA			FILT	129.000	pci/L	UJ
RU-106	UNFI	129.000	pci/L	UJ	UNFI	93.300	pci/L	UJ	UNFI	117.000	pci/L	UJ
SR-90		NA				NA			FILT	0.783	pci/L	UJ
SR-90	UNFI	0.819	pci/L	UJ	UNFI	0.742	pci/L	UJ	UNFI	0.773	pci/L	UJ
TC-99		NA				NA			FILT	10.500	pci/L	UJ
TC-99	UNFI	9.700	pci/L	UJ	UNFI	9.500	pci/L	UJ	UNFI	10.800	pci/L	UJ
TH-228		NA				NA			FILT	0.319	pci/L	UJ
TH-228	UNFI	0.162	pci/L	UJ	UNFI	0.368	pci/L	UJ	UNFI	0.259	pci/L	UJ
TH-230		NA				NA			FILT	1.620	pci/L	J
TH-230	UNFI	0.134	pci/L	U	UNFI	0.281	pci/L	J	UNFI	1.270	pci/L	J
TH-232		NA				NA			FILT	0.100	pci/L	UJ
TH-232	UNFI	0.112	pci/L	UJ	UNFI	0.198	pci/L	UJ	UNFI	0.170	pci/L	UJ
TH-TOTAL		NA				NA			FILT	0.920	ug/L	UJ
TH-TOTAL	UNFI	1.030	ug/L	UJ	UNFI	1.820	ug/L	UJ	UNFI	1.550	ug/L	UJ
U-234		NA				NA			FILT	12.800	pci/L	-
U-234	UNFI	0.682	pci/L	J	UNFI	41.500	pci/L	-	UNFI	13.100	pci/L	-
U-235/236		NA				NA			FILT	0.673	pci/L	J
U-235/236	UNFI	0.064	pci/L	UJ	UNFI	1.860	pci/L	-	UNFI	0.666	pci/L	J
U-238		NA				NA			FILT	15.600	pci/L	-
U-238	UNFI	0.338	pci/L	J	UNFI	46.400	pci/L	-	UNFI	16.100	pci/L	-
U-TOTAL		NA				NA			FILT	41.200	ug/L	-
U-TOTAL	UNFI	1.000	ug/L	U	UNFI	111.000	ug/L	-	UNFI	43.200	ug/L	-

TABLE G-11A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1045					1048					2045				
SAMPLE NUMBER	112000					110900					112003				
SAMPLING DATE	04/29/93					04/28/93					04/28/93				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Aluminum	FILT	0.056	mg/L	C	-	FILT	0.163	mg/L	C	-	FILT	0.082	mg/L	D	U
Aluminum	UNFI	0.543	mg/L	C	-		NA					NA			
Antimony	FILT	0.003	mg/L	C	UJ	FILT	0.001	mg/L	C	U	FILT	0.001	mg/L	D	U
Antimony	UNFI	0.003	mg/L	C	UJ		NA					NA			
Arsenic	FILT	0.003	mg/L	C	-	FILT	0.001	mg/L	C	U	FILT	0.001	mg/L	D	U
Arsenic	UNFI	0.003	mg/L	C	-		NA					NA			
Barium	FILT	0.048	mg/L	C	J	FILT	0.201	mg/L	C	-	FILT	0.051	mg/L	D	-
Barium	UNFI	0.072	mg/L	C	J		NA					NA			
Beryllium	FILT	0.001	mg/L	C	U	FILT	0.004	mg/L	C	U	FILT	0.004	mg/L	D	U
Beryllium	UNFI	0.002	mg/L	C	U		NA					NA			
Cadmium	FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	D	U
Cadmium	UNFI	0.002	mg/L	C	U		NA					NA			
Calcium	FILT	53.400	mg/L	C	-	FILT	153.000	mg/L	C	-	FILT	124.000	mg/L	D	-
Calcium	UNFI	56.000	mg/L	C	-		NA					NA			
Chromium	FILT	0.004	mg/L	C	U	FILT	0.004	mg/L	C	U	FILT	0.004	mg/L	D	U
Chromium	UNFI	0.014	mg/L	C	U		NA					NA			
Cobalt	FILT	0.003	mg/L	C	U	FILT	0.003	mg/L	C	U	FILT	0.003	mg/L	D	U
Cobalt	UNFI	0.003	mg/L	C	U		NA					NA			
Copper	FILT	0.013	mg/L	C	U	FILT	0.005	mg/L	C	U	FILT	0.009	mg/L	D	U
Copper	UNFI	0.021	mg/L	C	U		NA					NA			
Cyanide	UNFI	0.001	mg/L	C	U	UNFI	0.001	mg/L	C	U	UNFI	0.001	mg/L	D	U
Iron	FILT	0.021	mg/L	C	U	FILT	0.051	mg/L	C	U	FILT	0.028	mg/L	D	U
Iron	UNFI	0.958	mg/L	C	-		NA					NA			
Lead	FILT	0.001	mg/L	C	U	FILT	0.001	mg/L	C	U	FILT	0.001	mg/L	D	U
Lead	UNFI	0.002	mg/L	C	-		NA					NA			
Magnesium	FILT	16.300	mg/L	C	-	FILT	139.000	mg/L	C	-	FILT	27.400	mg/L	D	-
Magnesium	UNFI	18.000	mg/L	C	-		NA					NA			
Manganese	FILT	0.004	mg/L	C	-	FILT	0.378	mg/L	C	-	FILT	0.002	mg/L	D	U
Manganese	UNFI	0.033	mg/L	C	-		NA					NA			
Mercury	FILT	0.000	mg/L	C	U	FILT	0.000	mg/L	C	U	FILT	0.000	mg/L	D	U
Mercury	UNFI	0.000	mg/L	C	U		NA					NA			
Molybdenum	FILT	0.019	mg/L	C	U	FILT	0.004	mg/L	C	-	FILT	0.003	mg/L	D	U
Molybdenum	UNFI	0.018	mg/L	C	U		NA					NA			
Nickel	FILT	0.003	mg/L	C	U	FILT	0.005	mg/L	C	-	FILT	0.003	mg/L	D	U
Nickel	UNFI	0.010	mg/L	C	-		NA					NA			
Potassium	FILT	5.980	mg/L	C	-	FILT	1.400	mg/L	C	-	FILT	2.970	mg/L	D	-
Potassium	UNFI	4.720	mg/L	C	-		NA					NA			
Selenium	FILT	0.018	mg/L	C	-	FILT	0.001	mg/L	C	UJ	FILT	0.004	mg/L	D	-
Selenium	UNFI	0.020	mg/L	C	-		NA					NA			
Silicon	FILT	10.800	mg/L	C	-	FILT	10.700	mg/L	C	-	FILT	5.240	mg/L	D	-
Silicon	UNFI	10.800	mg/L	C	-		NA					NA			
Silver	FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	C	U	FILT	0.002	mg/L	D	U

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TABLE G-11A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER		1045					1048					2045			
SAMPLE NUMBER		112000					110900					112003			
SAMPLING DATE		04/29/93					04/28/93					04/28/93			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Silver	UNFI	0.002	mg/L	C	U		NA					NA			
Sodium	FILT	14.900	mg/L	C	-	FILT	28.300	mg/L	C	-	FILT	9.460	mg/L	D	-
Sodium	UNFI	15.600	mg/L	C	-		NA					NA			
Thallium	FILT	0.001	mg/L	C	U	FILT	0.001	mg/L	C	U	FILT	0.001	mg/L	D	U
Thallium	UNFI	0.001	mg/L	C	U		NA					NA			
Vanadium	FILT	0.018	mg/L	C	U	FILT	0.016	mg/L	C	U	FILT	0.011	mg/L	D	U
Vanadium	UNFI	0.017	mg/L	C	-		NA					NA			
Zinc	FILT	0.006	mg/L	C	U	FILT	0.004	mg/L	C	-	FILT	0.007	mg/L	D	-
Zinc	UNFI	0.006	mg/L	C	U		NA					NA			
Volatile Organics															
1,1,1-Trichloroethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
1,1,2,2-Tetrachloroethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
1,1,2-Trichloroethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
1,1-Dichloroethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
1,1-Dichloroethene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
1,2-Dichloroethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
1,2-Dichloroethene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
1,2-Dichloropropane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
2-Butanone	UNFI	10.000	ug/L	C	U	UNFI	1.000	ug/L	C	J	UNFI	10.000	ug/L	D	U
2-Hexanone	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	D	UJ
4-Methyl-2-pentanone	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Acetone	UNFI	10.000	ug/L	C	U	UNFI	3.000	ug/L	C	U	UNFI	3.000	ug/L	D	J
Benzene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Bromodichloromethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Bromoform	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Bromomethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Carbon Tetrachloride	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Carbon disulfide	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Chlorobenzene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Chloroethane	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Chloroform	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Chloromethane	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	D	UJ
Dibromochloromethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Ethylbenzene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Methylene chloride	UNFI	11.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	D	UJ
Styrene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Tetrachloroethene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Toluene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Trichloroethene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Vinyl Acetate	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U

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TABLE G-11A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1045					1048					2045				
SAMPLE NUMBER	112000					110900					112003				
SAMPLING DATE	04/29/93					04/28/93					04/28/93				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Volatile Organics															
Vinyl chloride	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	D	UJ
Xylenes, Total	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
cis-1,3-Dichloropropene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
trans-1,3-Dichloropropene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Semivolatile Organics															
1,2,4-Trichlorobenzene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
1,2-Dichlorobenzene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
1,3-Dichlorobenzene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
1,4-Dichlorobenzene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
2,4,5-Trichlorophenol		NA				UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	D	U
2,4,6-Trichlorophenol		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
2,4-Dichlorophenol		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
2,4-Dimethylphenol		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
2,4-Dinitrophenol		NA				UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	D	U
2,4-Dinitrotoluene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
2,6-Dinitrotoluene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
2-Chloronaphthalene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
2-Chlorophenol		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
2-Methylnaphthalene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
2-Methylphenol		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
2-Nitroaniline		NA				UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	D	U
2-Nitrophenol		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
3,3'-Dichlorobenzidine		NA				UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	D	UJ
3-Nitroaniline		NA				UNFI	25.000	ug/L	C	UJ	UNFI	25.000	ug/L	D	UJ
4,6-Dinitro-2-methylphenol		NA				UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	D	U
4-Bromophenyl phenyl ether		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
4-Chloro-3-methylphenol		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
4-Chlorophenylphenyl ether		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
4-Methylphenol		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
4-Nitroaniline		NA				UNFI	25.000	ug/L	C	R	UNFI	25.000	ug/L	D	R
4-Nitrophenol		NA				UNFI	25.000	ug/L	C	R	UNFI	25.000	ug/L	D	R
Acenaphthene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Acenaphthylene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Anthracene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Benzo(a)anthracene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Benzo(a)pyrene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Benzo(b)fluoranthene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Benzo(g,h,i)perylene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Benzo(k)fluoranthene		NA				UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	D	UJ
Benzoic acid		NA				UNFI	50.000	ug/L	C	U	UNFI	50.000	ug/L	D	U

TABLE G-11A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER		1045					1048					2045				
SAMPLE NUMBER		112000					110900					112003				
SAMPLING DATE		04/29/93					04/28/93					04/28/93				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Semivolatile Organics															
Benzyl alcohol		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Butyl benzyl phthalate		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Carbazole		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Chrysene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Di-n-butyl phthalate		NA				UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	D	UJ
Di-n-octyl phthalate		NA				UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	D	UJ
Dibenzo(a,h)anthracene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Dibenzofuran		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Diethyl phthalate		NA				UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	D	UJ
Dimethyl phthalate		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Fluoranthene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Fluorene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Hexachlorobenzene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Hexachlorobutadiene		NA				UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	D	UJ
Hexachlorocyclopentadiene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Hexachloroethane		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Indeno(1,2,3-cd)pyrene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Isophorone		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
N-Nitroso-di-n-propylamine		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
N-Nitrosodiphenylamine		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Naphthalene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Nitrobenzene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Pentachlorophenol		NA				UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	D	U
Phenanthrene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Phenol		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
Pyrene		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
bis(2-Chloroethoxy)methane		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
bis(2-Chloroethyl)ether		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
bis(2-Chloroisopropyl) ether		NA				UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	D	UJ
bis(2-Ethylhexyl) phthalate		NA				UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	D	U
p-Chloroaniline		NA				UNFI	10.000	ug/L	C	R	UNFI	10.000	ug/L	D	R
Pesticide Organics/PCBs															
4,4'-DDD		NA				UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	D	U
4,4'-DDE		NA				UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	D	U
4,4'-DDT		NA				UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	D	U
Aldrin		NA				UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	D	U
Aroclor-1016		NA				UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	D	U
Aroclor-1221		NA				UNFI	2.000	ug/L	C	U	UNFI	2.000	ug/L	D	U
Aroclor-1232		NA				UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	D	U
Aroclor-1242		NA				UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	D	U

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TABLE G-11A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER		1045				1048				2045			
SAMPLE NUMBER		112000				110900				112003			
SAMPLING DATE		04/29/93				04/28/93				04/28/93			
CHEMICAL PARAMETERS	FLTD	RESULTS •	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Pesticide Organics/PCBs															
Aroclor-1248		NA				UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	D	U
Aroclor-1254		NA				UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	D	U
Aroclor-1260		NA				UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	D	U
Dieldrin		NA				UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	D	U
Endosulfan II		NA				UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	D	U
Endosulfan sulfate		NA				UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	D	U
Endosulfan-I		NA				UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	D	U
Endrin		NA				UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	D	U
Endrin aldehyde		NA				UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	D	U
Endrin ketone		NA				UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	D	U
Heptachlor		NA				UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	D	U
Heptachlor epoxide		NA				UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	D	U
Methoxychlor		NA				UNFI	0.500	ug/L	C	U	UNFI	0.500	ug/L	D	U
Toxaphene		NA				UNFI	5.000	ug/L	C	U	UNFI	5.000	ug/L	D	U
alpha-BHC		NA				UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	D	U
alpha-Chlordane		NA				UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	D	U
beta-BHC		NA				UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	D	U
delta-BHC		NA				UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	D	U
gamma-BHC (Lindane)		NA				UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	D	U
gamma-Chlordane		NA				UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	D	U
General Chemistry															
Alkalinity as CaCO3		NA				UNFI	790.000	mg/L	B	-	UNFI	320.000	mg/L	B	-
Ammonia		NA				UNFI	0.100	mg/L	B	U	UNFI	0.100	mg/L	B	U
Chloride		NA				UNFI	7.310	mg/L	B	-	UNFI	15.820	mg/L	B	-
Fluoride		NA				UNFI	0.350	mg/L	B	-	UNFI	0.270	mg/L	B	-
Nitrate		NA				UNFI	0.100	mg/L	B	R	UNFI	1.430	mg/L	B	J
Phenols		NA				UNFI	0.010	mg/L	B	U	UNFI	0.010	mg/L	B	U
Phosphorus		NA				UNFI	0.080	mg/L	B	-	UNFI	0.050	mg/L	B	-
Sulfate		NA				UNFI	110.400	mg/L	B	-	UNFI	64.800	mg/L	B	-
Sulfide		NA				UNFI	0.500	mg/L	B	U	UNFI	0.500	mg/L	B	U
Total Kjeldahl Nitrogen		NA				UNFI	0.230	mg/L	B	-	UNFI	0.160	mg/L	B	-
Total Organic Carbon		NA				UNFI	2.940	mg/L	B	-	UNFI	1.140	mg/L	B	-
Total Organic Halides		NA				UNFI	62.300	mg/L	B	-	UNFI	10.000	mg/L	B	U
Total Organic Nitrogen		NA				UNFI	0.230	mg/L	B	-	UNFI	0.160	mg/L	B	-

TABLE G-11A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	2048					2049					21033				
SAMPLE NUMBER	110897					113305					116970				
SAMPLING DATE	04/27/93					05/10/93					06/17/93				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Aluminum	FILT	0.071	mg/L	C	U		NA				FILT	0.258	mg/L	C	U
Aluminum		NA				UNFI	0.096	mg/L	C	-	UNFI	0.350	mg/L	C	-
Antimony	FILT	0.001	mg/L	C	U		NA				FILT	0.005	mg/L	C	U
Antimony		NA				UNFI	0.001	mg/L	C	UJ	UNFI	0.005	mg/L	C	U
Arsenic	FILT	0.001	mg/L	C	U		NA				FILT	0.002	mg/L	C	UJ
Arsenic		NA				UNFI	0.001	mg/L	C	U	UNFI	0.002	mg/L	C	U
Barium	FILT	0.044	mg/L	C	-		NA				FILT	0.099	mg/L	C	-
Barium		NA				UNFI	0.047	mg/L	C	-	UNFI	0.101	mg/L	C	-
Beryllium	FILT	0.003	mg/L	C	U		NA				FILT	0.002	mg/L	C	U
Beryllium		NA				UNFI	0.001	mg/L	C	U	UNFI	0.002	mg/L	C	U
Cadmium	FILT	0.002	mg/L	C	U		NA				FILT	0.005	mg/L	C	U
Cadmium		NA				UNFI	0.002	mg/L	C	U	UNFI	0.005	mg/L	C	U
Calcium	FILT	103.000	mg/L	C	-		NA				FILT	171.000	mg/L	C	-
Calcium		NA				UNFI	135.000	mg/L	C	-	UNFI	173.000	mg/L	C	-
Chromium	FILT	0.004	mg/L	C	U		NA				FILT	0.010	mg/L	C	U
Chromium		NA				UNFI	0.004	mg/L	C	U	UNFI	0.010	mg/L	C	U
Cobalt	FILT	0.003	mg/L	C	U		NA				FILT	0.010	mg/L	C	U
Cobalt		NA				UNFI	0.003	mg/L	C	U	UNFI	0.010	mg/L	C	U
Copper	FILT	0.005	mg/L	C	U		NA				FILT	0.010	mg/L	C	U
Copper		NA				UNFI	0.003	mg/L	C	U	UNFI	0.010	mg/L	C	U
Cyanide	UNFI	0.001	mg/L	C	U	UNFI	0.001	mg/L	C	U	UNFI	0.002	mg/L	C	U
Iron	FILT	0.128	mg/L	C	-		NA				FILT	0.020	mg/L	C	U
Iron		NA				UNFI	0.169	mg/L	C	-	UNFI	0.398	mg/L	C	-
Lead	FILT	0.001	mg/L	C	U		NA				FILT	0.002	mg/L	C	UJ
Lead		NA				UNFI	0.001	mg/L	C	U	UNFI	0.002	mg/L	C	-
Magnesium	FILT	29.900	mg/L	C	-		NA				FILT	45.300	mg/L	C	-
Magnesium		NA				UNFI	31.400	mg/L	C	-	UNFI	46.000	mg/L	C	-
Manganese	FILT	0.002	mg/L	C	U		NA				FILT	0.078	mg/L	C	-
Manganese		NA				UNFI	0.012	mg/L	C	-	UNFI	0.083	mg/L	C	-
Mercury	FILT	0.000	mg/L	C	U		NA				FILT	0.000	mg/L	C	U
Mercury		NA				UNFI	0.000	mg/L	C	U	UNFI	0.000	mg/L	C	U
Molybdenum	FILT	0.003	mg/L	C	U		NA				FILT	0.010	mg/L	C	U
Molybdenum		NA				UNFI	0.003	mg/L	C	U	UNFI	0.010	mg/L	C	U
Nickel	FILT	0.003	mg/L	C	U		NA				FILT	0.020	mg/L	C	U
Nickel		NA				UNFI	0.003	mg/L	C	U	UNFI	0.020	mg/L	C	U
Potassium	FILT	2.310	mg/L	C	-		NA				FILT	7.370	mg/L	C	-
Potassium		NA				UNFI	2.750	mg/L	C	-	UNFI	7.460	mg/L	C	-
Selenium	FILT	0.002	mg/L	C	J		NA				FILT	0.002	mg/L	C	UJ
Selenium		NA				UNFI	0.001	mg/L	C	J	UNFI	0.002	mg/L	C	UJ
Silicon	FILT	4.580	mg/L	C	-		NA				FILT	5.830	mg/L	C	-
Silicon		NA				UNFI	4.860	mg/L	C	-	UNFI	5.990	mg/L	C	-
Silver	FILT	0.002	mg/L	C	U		NA				FILT	0.010	mg/L	C	U

TABLE G-11A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER		2048					2049					21033			
SAMPLE NUMBER		110897					113305					116970			
SAMPLING DATE		04/27/93					05/10/93					06/17/93			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Silver		NA				UNFI	0.002	mg/L	C	U	UNFI	0.010	mg/L	C	U
Sodium	FILT	7.300	mg/L	C	-		NA				FILT	15.900	mg/L	C	-
Sodium		NA				UNFI	9.710	mg/L	C	-	UNFI	16.100	mg/L	C	-
Thallium	FILT	0.001	mg/L	C	U		NA				FILT	0.002	mg/L	C	U
Thallium		NA				UNFI	0.001	mg/L	C	U	UNFI	0.002	mg/L	C	U
Vanadium	FILT	0.011	mg/L	C	U		NA				FILT	0.010	mg/L	C	U
Vanadium		NA				UNFI	0.008	mg/L	C	U	UNFI	0.010	mg/L	C	U
Zinc	FILT	0.015	mg/L	C	-		NA				FILT	0.005	mg/L	C	U
Zinc		NA				UNFI	0.005	mg/L	C	U	UNFI	0.008	mg/L	C	U
Volatile Organics															
1,1,1-Trichloroethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
1,1,2,2-Tetrachloroethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
1,1,2-Trichloroethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
1,1-Dichloroethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
1,1-Dichloroethene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
1,2-Dichloroethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
1,2-Dichloroethene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
1,2-Dichloropropane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
2-Butanone	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	UJ
2-Hexanone	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	R
4-Methyl-2-pentanone	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	R
Acetone	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	R
Benzene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Bromodichloromethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Bromoform	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Bromomethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Carbon Tetrachloride	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Carbon disulfide	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	R
Chlorobenzene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Chloroethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	UJ
Chloroform	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Chloromethane	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Dibromochloromethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Ethylbenzene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Methylene chloride	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	U	UNFI	12.000	ug/L	C	UJ
Styrene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	U
Tetrachloroethene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Toluene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Trichloroethene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Vinyl Acetate	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U		NA			

TABLE G-11A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	2048					2049					21033				
SAMPLE NUMBER	110897					113305					116970				
SAMPLING DATE	04/27/93					05/10/93					06/17/93				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Volatile Organics															
Vinyl chloride	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Xylenes, Total	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
cis-1,3-Dichloropropene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
trans-1,3-Dichloropropene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Semivolatile Organics															
1,2,4-Trichlorobenzene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
1,2-Dichlorobenzene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
1,3-Dichlorobenzene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
1,4-Dichlorobenzene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
2,4,5-Trichlorophenol	UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	C	U
2,4,6-Trichlorophenol	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
2,4-Dichlorophenol	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
2,4-Dimethylphenol	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
2,4-Dinitrophenol	UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	C	R
2,4-Dinitrotoluene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
2,6-Dinitrotoluene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
2-Benzyl-4-chlorophenol		NA					NA				UNFI	10.000	ug/L	C	U
2-Chloronaphthalene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
2-Chlorophenol	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
2-Methylnaphthalene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
2-Methylphenol	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
2-Nitroaniline	UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	C	U
2-Nitrophenol	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
3,3'-Dichlorobenzidine	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
3-Nitroaniline	UNFI	25.000	ug/L	C	UJ	UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	C	U
4,6-Dinitro-2-methylphenol	UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	C	R	UNFI	25.000	ug/L	C	U
4-Bromophenyl phenyl ether	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
4-Chloro-3-methylphenol	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
4-Chlorophenylphenyl ether	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
4-Methylphenol	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
4-Nitroaniline	UNFI	25.000	ug/L	C	R	UNFI	25.000	ug/L	C	R	UNFI	25.000	ug/L	C	U
4-Nitrophenol	UNFI	25.000	ug/L	C	R	UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	C	U
Acenaphthene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Acenaphthylene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Anthracene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Benzo(a)anthracene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Benzo(a)pyrene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Benzo(b)fluoranthene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Benzo(g,h,i)perylene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Benzo(k)fluoranthene	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U

TABLE G-11A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	2048					2049					21033				
SAMPLE NUMBER	110897					113305					116970				
SAMPLING DATE	04/27/93					05/10/93					06/17/93				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Semivolatile Organics															
Benzoic acid	UNFI	50.000	ug/L	C	U	UNFI	50.000	ug/L	C	U	UNFI	50.000	ug/L	C	U
Benzyl alcohol	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Butyl benzyl phthalate	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Carbazole	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Chrysene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Di-n-butyl phthalate	UNFI	10.000	ug/L	C	UJ	UNFI	19.000	ug/L	C	-	UNFI	10.000	ug/L	C	U
Di-n-octyl phthalate	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Dibenzo(a,h)anthracene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Dibenzofuran	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Diethyl phthalate	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Dimethyl phthalate	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Fluoranthene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Fluorene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Hexachlorobenzene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Hexachlorobutadiene	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Hexachlorocyclopentadiene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Hexachloroethane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Indeno(1,2,3-cd)pyrene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	UJ
Isophorone	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
N-Nitroso-di-n-propylamine	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
N-Nitrosodimethylamine		NA					NA				UNFI	10.000	ug/L	C	U
N-Nitrosodiphenylamine	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Naphthalene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Nitrobenzene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Pentachlorophenol	UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	C	U	UNFI	25.000	ug/L	C	U
Phenanthrene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Phenol	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Pyrene	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Tributyl phosphate		NA					NA				UNFI	10.000	ug/L	C	U
bis(2-Chloroethoxy)methane	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
bis(2-Chloroethyl)ether	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
bis(2-Chloroisopropyl) ether	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	UJ	UNFI	10.000	ug/L	C	U
bis(2-Ethylhexyl) phthalate	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
p-Chloroaniline	UNFI	10.000	ug/L	C	R	UNFI	10.000	ug/L	C	U	UNFI	10.000	ug/L	C	U
Pesticide Organics/PCBs															
4,4'-DDD	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U
4,4'-DDE	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U
4,4'-DDT	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U
Aldrin	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U
Aroclor-1016	UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	C	U

TABLE G-11A
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	2048					2049					21033				
SAMPLE NUMBER	110897					113305					116970				
SAMPLING DATE	04/27/93					05/10/93					06/17/93				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Pesticide Organics/PCBs															
Aroclor-1221	UNFI	2.000	ug/L	C	U	UNFI	2.000	ug/L	C	U	UNFI	2.000	ug/L	C	U
Aroclor-1232	UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	C	U
Aroclor-1242	UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	C	U
Aroclor-1248	UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	C	U
Aroclor-1254	UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	C	U
Aroclor-1260	UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	C	U	UNFI	1.000	ug/L	C	U
Dieldrin	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U
Endosulfan II	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U
Endosulfan sulfate	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U
Endosulfan-I	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U
Endrin	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U
Endrin aldehyde	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U
Endrin ketone	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U	UNFI	0.100	ug/L	C	U
Heptachlor	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U
Heptachlor epoxide	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U
Methoxychlor	UNFI	0.500	ug/L	C	U	UNFI	0.500	ug/L	C	U	UNFI	0.500	ug/L	C	U
Toxaphene	UNFI	5.000	ug/L	C	U	UNFI	5.000	ug/L	C	U	UNFI	5.000	ug/L	C	U
alpha-BHC	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U
alpha-Chlordane	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U
beta-BHC	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U
delta-BHC	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U
gamma-BHC (Lindane)	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U
gamma-Chlordane	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U	UNFI	0.050	ug/L	C	U
General Chemistry															
Alkalinity		NA				UNFI	400.000	mg/L	B	-	UNFI	380.000	mg/L	B	-
Alkalinity as CaCO3	UNFI	320.000	mg/L	B	-		NA					NA			
Ammonia	UNFI	0.100	mg/L	B	U	UNFI	0.120	mg/L	B	-	UNFI	0.100	mg/L	B	U
Chloride	UNFI	9.230	mg/L	B	-	UNFI	16.900	mg/L	B	-	UNFI	17.200	mg/L	B	-
Fluoride	UNFI	0.130	mg/L	B	-	UNFI	0.240	mg/L	B	-	UNFI	0.130	mg/L	B	-
Nitrate	UNFI	1.150	mg/L	B	J	UNFI	1.590	mg/L	B	J	UNFI	1.800	mg/L	B	J
Phenols	UNFI	0.010	mg/L	B	U	UNFI	0.010	mg/L	B	U	UNFI	0.010	mg/L	B	U
Phosphorus	UNFI	0.080	mg/L	B	-		NA					NA			
Sulfate	UNFI	60.600	mg/L	B	-	UNFI	49.200	mg/L	B	-	UNFI	237.500	mg/L	B	-
Sulfide	UNFI	0.500	mg/L	B	U	UNFI	0.500	mg/L	B	U	UNFI	0.500	mg/L	B	U
Total Kjeldahl Nitrogen	UNFI	0.150	mg/L	B	-	UNFI	0.120	mg/L	B	-	UNFI	0.130	mg/L	B	-
Total Organic Carbon	UNFI	1.000	mg/L	B	U	UNFI	1.000	mg/L	B	U	UNFI	1.000	mg/L	B	U
Total Organic Halides	UNFI	10.000	mg/L	B	U		NA				UNFI	0.010	mg/L	B	U
Total Organic Nitrogen	UNFI	0.150	mg/L	B	-	UNFI	0.100	mg/L	B	U	UNFI	0.130	mg/L	B	-
Total Phosphorous		NA				UNFI	0.120	mg/L	B	-	UNFI	0.070	mg/L	B	-

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TABLE G-11B
ACTIVE FLYASH PILE
TENTATIVELY IDENTIFIED COMPOUNDS
WATER

Sample Number	Sample Location	Media	Parameter	Result	Units
110900	TRIP BLANK	TB	dichloroiodomethane	3	ug/L
112262	RINSATE	R	heptanal	4	ug/L
116970	20133	GW	heptane, 2,2,4,6,6-pentameth	8	ug/L
116970	20133	GW	1-hexanol, 2-ethyl-	66	ug/L
116970	20133	GW	nonane, 2,3-dimethyl-	230	ug/L
116970	20133	GW	phenol, 2,6-bis(1,1-dimethyl	2	ug/L
116970	20133	GW	decane, 6-ethyl-2-methyl-	2	ug/L
116970	20133	GW	propanoic acid, 2-methyl-,	3	ug/L
116970	20133	GW	octane, 1,1'-oxybis-	5	ug/L
116970	20133	GW	cyclotrisiloxane, hexamethyl	2	ug/L
116970	20133	GW	cyclotrisiloxane, hexamethyl	4	ug/L
116970	20133	GW	cyclotrisiloxane, hexamethyl	4	ug/L
116970	20133	GW	cyclotrisiloxane, hexamethyl	4	ug/L
116970	20133	GW	cyclotrisiloxane, hexamethyl	8	ug/L
116970	20133	GW	cyclotrisiloxane, hexamethyl	5	ug/L
116970	20133	GW	cyclotrisiloxane, hexamethyl	10	ug/L
116970	20133	GW	arsenous acid, tris (trimethy	6	ug/L
116970	20133	GW	arsenous acid, tris (trimethy	5	ug/L
116970	20133	GW	arsenous acid, tris (trimethy	5	ug/L
116970	20133	GW	cyclotrisiloxane, hexamethyl	9	ug/L
116970	20133	GW	arsenous acid, tris (trimethy	4	ug/L
116970	20133	GW	cyclotrisiloxane, hexamethyl	16	ug/L
116970	20133	GW	cyclotrisiloxane, hexamethyl	25	ug/L
116970	20133	GW	cyclotrisiloxane, hexamethyl	21	ug/L
116970	20133	GW	cyclotrisiloxane, hexamethyl	17	ug/L
116973	RINSATE	R	propanoic acid, 2-methyl-,	3	ug/L
116973	RINSATE	R	phenol, 4-(2,2,3,3-tetrameth	3	ug/L
116973	RINSATE	R	2-nonylphenol	4	ug/L
116973	RINSATE	R	2-nonylphenol	4	ug/L
116973	RINSATE	R	phenol, 4-(2,2,3,3-tetrameth	3	ug/L

TB- trip blank
R - rinsate
GW - groundwater

TABLE G-12

TABLE G-12

ACTIVE FLYASH PILE
RI/FS TCLP RESULTS
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1723					1723					1723				
SAMPLE NUMBER	067170					067171					067186				
SAMPLING DATE	07/11/91					07/11/91					07/12/91				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Arsenic	UNKN	0.250	mg/L	C	U	UNKN	0.050	mg/L	C	U	UNKN	0.250	mg/L	C	UJ
Barium	UNKN	0.674	mg/L	C	-	UNKN	0.174	mg/L	C	JB	UNKN	0.539	mg/L	C	-
Cadmium	UNKN	0.026	mg/L	C	-	UNKN	0.002	mg/L	C	JB	UNKN	0.010	mg/L	C	U
Chromium	UNKN	0.218	mg/L	C	-	UNKN	0.011	mg/L	C	JB	UNKN	0.189	mg/L	C	-
Lead	UNKN	0.200	mg/L	C	U	UNKN	0.040	mg/L	C	U	UNKN	0.200	mg/L	C	U
Mercury		NA				UNKN	0.000	mg/L	C	U		NA			
Selenium	UNKN	0.400	mg/L	C	U	UNKN	0.080	mg/L	C	U	UNKN	0.400	mg/L	C	UJ
Silver	UNKN	0.205	mg/L	C	J	UNKN	0.010	mg/L	C	U	UNKN	0.181	mg/L	C	-
Volatile Organics															
1,1-Dichloroethene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
1,2-Dichloroethane	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
2-Butanone	UNKN	10.000	ug/L	C	J		NA				UNKN	40.000	ug/L	C	U
Benzene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
Carbon Tetrachloride	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
Chlorobenzene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
Chloroform	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
Pyridine	UNKN	20.000	ug/L	C	R		NA				UNKN	20.000	ug/L	C	UJ
Tetrachloroethene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
Trichloroethene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
Vinyl chloride	UNKN	40.000	ug/L	C	U		NA				UNKN	40.000	ug/L	C	U
Semivolatile Organics															
1,4-Dichlorobenzene	UNKN	20.000	ug/L	C	R		NA				UNKN	20.000	ug/L	C	UJ
2,4,5-Trichlorophenol	UNKN	100.000	ug/L	C	R		NA				UNKN	100.000	ug/L	C	UJ
2,4,6-Trichlorophenol	UNKN	20.000	ug/L	C	R		NA				UNKN	20.000	ug/L	C	U
2,4-Dinitrotoluene	UNKN	20.000	ug/L	C	R		NA				UNKN	20.000	ug/L	C	U
2-Methylphenol	UNKN	20.000	ug/L	C	R		NA				UNKN	20.000	ug/L	C	UJ
3-Methylphenol	UNKN	20.000	ug/L	C	R		NA				UNKN	20.000	ug/L	C	UJ
4-Methylphenol	UNKN	20.000	ug/L	C	R		NA				UNKN	20.000	ug/L	C	UJ
Hexachlorobenzene	UNKN	20.000	ug/L	C	R		NA				UNKN	20.000	ug/L	C	UJ
Hexachlorobutadiene	UNKN	20.000	ug/L	C	R		NA				UNKN	20.000	ug/L	C	UJ
Hexachloroethane	UNKN	20.000	ug/L	C	R		NA				UNKN	20.000	ug/L	C	UJ
Nitrobenzene	UNKN	20.000	ug/L	C	R		NA				UNKN	20.000	ug/L	C	UJ
Pentachlorophenol	UNKN	100.000	ug/L	C	R		NA				UNKN	100.000	ug/L	C	UJ
Herbicide Organics															
2,4,5-TP (Silvex)	UNKN	1.800	ug/L	C	U	UNKN	1.800	ug/L	C	UJ	UNKN	1.800	ug/L	C	U
2,4-D	UNKN	10.000	ug/L	C	U	UNKN	10.000	ug/L	C	UJ	UNKN	10.000	ug/L	C	U

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TABLE G-12
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		1723					1723					1723			
SAMPLE NUMBER		067170					067171					067186			
SAMPLING DATE		07/11/91					07/11/91					07/12/91			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Pesticide Organics/PCBs															
Endrin	UNKN	0.100	ug/L	C	U	UNKN	0.100	ug/L	C	UJ	UNKN	0.100	ug/L	C	U
Heptachlor	UNKN	0.050	ug/L	C	U	UNKN	0.050	ug/L	C	UJ	UNKN	0.050	ug/L	C	U
Heptachlor epoxide	UNKN	0.050	ug/L	C	U	UNKN	0.050	ug/L	C	UJ	UNKN	0.050	ug/L	C	U
Methoxychlor	UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	UJ	UNKN	0.500	ug/L	C	U
Toxaphene	UNKN	1.000	ug/L	C	U	UNKN	1.000	ug/L	C	UJ	UNKN	1.000	ug/L	C	U
alpha-Chlordane	UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	UJ	UNKN	0.500	ug/L	C	U
gamma-BHC (Lindane)	UNKN	0.050	ug/L	C	U	UNKN	0.050	ug/L	C	UJ	UNKN	0.050	ug/L	C	U
gamma-Chlordane	UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	UJ	UNKN	0.500	ug/L	C	U

TABLE G-12
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1723					1724					1724				
SAMPLE NUMBER	067189					067196					067197				
SAMPLING DATE	07/14/91					07/13/91					07/13/91				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Arsenic	UNKN	0.093	mg/L	C	-	UNKN	0.050	mg/L	C	U	UNKN	0.086	mg/L	C	JB
Barium	UNKN	0.432	mg/L	C	-	UNKN	0.070	mg/L	C	U	UNKN	0.329	mg/L	C	-
Cadmium	UNKN	0.008	mg/L	C	J	UNKN	0.002	mg/L	C	U	UNKN	0.007	mg/L	C	-
Chromium	UNKN	0.031	mg/L	C	-	UNKN	0.023	mg/L	C	JB	UNKN	0.040	mg/L	C	-
Lead	UNKN	0.040	mg/L	C	U	UNKN	0.046	mg/L	C	JB	UNKN	0.060	mg/L	C	-
Mercury	UNKN	0.200	mg/L	C	U	UNKN	0.000	mg/L	C	U		NA			
Selenium	UNKN	0.083	mg/L	C	-	UNKN	0.080	mg/L	C	U	UNKN	0.110	mg/L	C	JB
Silver	UNKN	0.029	mg/L	C	-	UNKN	0.011	mg/L	C	JB	UNKN	0.034	mg/L	C	-
Volatile Organics															
1,1-Dichloroethene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
1,2-Dichloroethane	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
2-Butanone	UNKN	40.000	ug/L	C	U		NA				UNKN	7.000	ug/L	C	U
Benzene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
Carbon Tetrachloride	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
Chlorobenzene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
Chloroform	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
Pyridine	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
Tetrachloroethene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
Trichloroethene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
Vinyl chloride	UNKN	40.000	ug/L	C	U		NA				UNKN	40.000	ug/L	C	U
Semivolatile Organics															
1,4-Dichlorobenzene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	R
2,4,5-Trichlorophenol	UNKN	100.000	ug/L	C	U		NA				UNKN	100.000	ug/L	C	R
2,4,6-Trichlorophenol	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
2,4-Dinitrotoluene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
2-Methylphenol	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	R
3-Methylphenol	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
4-Methylphenol	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	R
Hexachlorobenzene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	U
Hexachlorobutadiene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	R
Hexachloroethane	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	R
Nitrobenzene	UNKN	20.000	ug/L	C	U		NA				UNKN	20.000	ug/L	C	R
Pentachlorophenol	UNKN	100.000	ug/L	C	U		NA				UNKN	100.000	ug/L	C	U
Herbicide Organics															
2,4,5-TP (Silvex)	UNKN	1.800	ug/L	C	U	UNKN	1.800	ug/L	C	U	UNKN	1.800	ug/L	C	U
2,4-D	UNKN	10.000	ug/L	C	U	UNKN	10.000	ug/L	C	U	UNKN	10.000	ug/L	C	U

TABLE G-12
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		1723					1724					1724				
SAMPLE NUMBER		067189					067196					067197				
SAMPLING DATE		07/14/91					07/13/91					07/13/91				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ		FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Pesticide Organics/PCBs																
Endrin	UNKN	0.100	ug/L	C	U		UNKN	0.100	ug/L	C	U	UNKN	0.100	ug/L	C	U
Heptachlor	UNKN	0.050	ug/L	C	U		UNKN	0.050	ug/L	C	U	UNKN	0.050	ug/L	C	U
Heptachlor epoxide	UNKN	0.050	ug/L	C	U		UNKN	0.050	ug/L	C	U	UNKN	0.050	ug/L	C	U
Methoxychlor	UNKN	0.500	ug/L	C	U		UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	U
Toxaphene	UNKN	1.000	ug/L	C	U		UNKN	1.000	ug/L	C	U	UNKN	1.000	ug/L	C	U
alpha-Chlordane	UNKN	0.500	ug/L	C	U		UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	U
gamma-BHC (Lindane)	UNKN	0.050	ug/L	C	U		UNKN	0.050	ug/L	C	U	UNKN	0.050	ug/L	C	U
gamma-Chlordane	UNKN	0.500	ug/L	C	U		UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	U

TABLE G-12
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		1724					1724					1726			
SAMPLE NUMBER		067224					067225					067150			
SAMPLING DATE		07/16/91					07/16/91					07/01/91			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Arsenic	UNKN	0.079	mg/L	C	R	UNKN	0.075	mg/L	C	R	UNKN	0.050	mg/L	C	U
Barium	UNKN	0.391	mg/L	C	R	UNKN	0.331	mg/L	C	R	UNKN	0.320	mg/L	C	-
Cadmium	UNKN	0.015	mg/L	C	R	UNKN	0.003	mg/L	C	R	UNKN	0.007	mg/L	C	-
Chromium	UNKN	0.049	mg/L	C	-	UNKN	0.031	mg/L	C	-	UNKN	0.045	mg/L	C	-
Lead	UNKN	0.099	mg/L	C	R	UNKN	0.040	mg/L	C	R	UNKN	0.040	mg/L	C	U
Mercury	UNKN	0.000	mg/L	C	R	UNKN	0.000	mg/L	C	R	UNKN	0.000	mg/L	C	U
Selenium	UNKN	0.145	mg/L	C	R	UNKN	0.080	mg/L	C	R	UNKN	0.083	mg/L	C	-
Silver	UNKN	0.048	mg/L	C	R	UNKN	0.027	mg/L	C	R	UNKN	0.041	mg/L	C	-
Volatile Organics															
1,1-Dichloroethene	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
1,2-Dichloroethane	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
2-Butanone	UNKN	40.000	ug/L	C	U	UNKN	40.000	ug/L	C	U	UNKN	40.000	ug/L	C	U
Benzene	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
Carbon Tetrachloride	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
Chlorobenzene	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
Chloroform	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
Pyridine	UNKN	20:000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
Tetrachloroethene	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
Trichloroethene	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
Vinyl chloride	UNKN	40.000	ug/L	C	U	UNKN	40.000	ug/L	C	U	UNKN	40.000	ug/L	C	U
Semivolatile Organics															
1,4-Dichlorobenzene	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
2,4,5-Trichlorophenol	UNKN	100.000	ug/L	C	UJ	UNKN	100.000	ug/L	C	UJ	UNKN	100.000	ug/L	C	UJ
2,4,6-Trichlorophenol	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
2,4-Dinitrotoluene	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	UJ
2-Methylphenol	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
3-Methylphenol	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
4-Methylphenol	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
Hexachlorobenzene	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
Hexachlorobutadiene	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
Hexachloroethane	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
Nitrobenzene	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
Pentachlorophenol	UNKN	100.000	ug/L	C	UJ	UNKN	100.000	ug/L	C	UJ	UNKN	100.000	ug/L	C	UJ
Herbicide Organics															
2,4,5-TP (Silvex)	UNKN	1.800	ug/L	C	U	UNKN	1.800	ug/L	C	U	UNKN	1.800	ug/L	C	U
2,4-D	UNKN	10.000	ug/L	C	U	UNKN	10.000	ug/L	C	U	UNKN	10.000	ug/L	C	U

TABLE G-12
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER	1724					1724					1726				
SAMPLE NUMBER	067224					067225					067150				
SAMPLING DATE	07/16/91					07/16/91					07/01/91				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Pesticide Organics/PCBs															
Endrin	UNKN	0.100	ug/L	C	UJ	UNKN	0.100	ug/L	C	UJ	UNKN	0.100	ug/L	C	U
Heptachlor	UNKN	0.050	ug/L	C	UJ	UNKN	0.050	ug/L	C	UJ	UNKN	0.050	ug/L	C	U
Heptachlor epoxide	UNKN	0.050	ug/L	C	U	UNKN	0.050	ug/L	C	U	UNKN	0.050	ug/L	C	U
Methoxychlor	UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	U
Toxaphene	UNKN	1.000	ug/L	C	U	UNKN	1.000	ug/L	C	U	UNKN	1.000	ug/L	C	U
alpha-Chlordane	UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	U
gamma-BHC (Lindane)	UNKN	0.050	ug/L	C	UJ	UNKN	0.050	ug/L	C	UJ	UNKN	0.050	ug/L	C	U
gamma-Chlordane	UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	U

TABLE G-12
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		1726				1726				1726			
SAMPLE NUMBER		067151				067157				067162			
SAMPLING DATE		07/01/91				07/01/91				07/01/91			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Arsenic	UNKN	0.050	mg/L	C	UJ	UNKN	0.070	mg/L	C	-	UNKN	0.119	mg/L	C	-
Barium	UNKN	0.332	mg/L	C	JB	UNKN	0.547	mg/L	C	-	UNKN	0.393	mg/L	C	-
Cadmium	UNKN	0.002	mg/L	C	UJ	UNKN	0.012	mg/L	C	-	UNKN	0.004	mg/L	C	-
Chromium	UNKN	0.012	mg/L	C	J	UNKN	0.054	mg/L	C	-	UNKN	0.029	mg/L	C	-
Lead	UNKN	0.040	mg/L	C	UJ	UNKN	0.075	mg/L	C	-	UNKN	0.040	mg/L	C	U
Mercury	UNKN	0.000	mg/L	C	U	UNKN	0.000	mg/L	C	U	UNKN	0.000	mg/L	C	U
Selenium	UNKN	0.080	mg/L	C	UJ	UNKN	0.111	mg/L	C	-	UNKN	0.115	mg/L	C	-
Silver	UNKN	0.010	mg/L	C	UJ	UNKN	0.049	mg/L	C	-	UNKN	0.027	mg/L	C	-
Volatile Organics															
1,1-Dichloroethene		NA				UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
1,2-Dichloroethane		NA				UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
2-Butanone		NA				UNKN	9.000	ug/L	C	U	UNKN	40.000	ug/L	C	U
Benzene		NA				UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
Carbon Tetrachloride		NA				UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
Chlorobenzene		NA				UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
Chloroform		NA				UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
Pyridine		NA				UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
Tetrachloroethene		NA				UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
Trichloroethene		NA				UNKN	20.000	ug/L	C	U	UNKN	20.000	ug/L	C	U
Vinyl chloride		NA				UNKN	40.000	ug/L	C	U	UNKN	40.000	ug/L	C	U
Semivolatile Organics															
1,4-Dichlorobenzene		NA				UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
2,4,5-Trichlorophenol		NA				UNKN	100.000	ug/L	C	UJ	UNKN	100.000	ug/L	C	UJ
2,4,6-Trichlorophenol		NA				UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
2,4-Dinitrotoluene		NA				UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
2-Methylphenol		NA				UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
3-Methylphenol		NA				UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
4-Methylphenol		NA				UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
Hexachlorobenzene		NA				UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
Hexachlorobutadiene		NA				UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
Hexachloroethane		NA				UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
Nitrobenzene		NA				UNKN	20.000	ug/L	C	UJ	UNKN	20.000	ug/L	C	UJ
Pentachlorophenol		NA				UNKN	100.000	ug/L	C	U	UNKN	100.000	ug/L	C	U
Herbicide Organics															
2,4,5-TP (Silvex)		NA				UNKN	1.800	ug/L	C	U	UNKN	1.800	ug/L	C	U
2,4-D		NA				UNKN	10.000	ug/L	C	U	UNKN	10.000	ug/L	C	U

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TABLE G-12
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		1726				1726				1726			
SAMPLE NUMBER		067151				067157				067162			
SAMPLING DATE		07/01/91				07/01/91				07/01/91			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Pesticide Organics/PCBs															
Endrin		NA				UNKN	0.100	ug/L	C	U	UNKN	0.100	ug/L	C	U
Heptachlor		NA				UNKN	0.050	ug/L	C	U	UNKN	0.050	ug/L	C	U
Heptachlor epoxide		NA				UNKN	0.050	ug/L	C	U	UNKN	0.050	ug/L	C	U
Methoxychlor		NA				UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	U
Toxaphene		NA				UNKN	1.000	ug/L	C	U	UNKN	1.000	ug/L	C	U
alpha-Chlordane		NA				UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	U
gamma-BHC (Lindane)		NA				UNKN	0.050	ug/L	C	U	UNKN	0.050	ug/L	C	U
gamma-Chlordane		NA				UNKN	0.500	ug/L	C	U	UNKN	0.500	ug/L	C	U

TABLE G-12
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		1820					1820			
SAMPLE NUMBER		067504					067507			
SAMPLING DATE		10/16/91					10/16/91			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics										
Aluminum		NA				UNKN	0.060	mg/L	C	U
Antimony		NA				UNKN	0.030	mg/L	C	U
Arsenic		NA				UNKN	0.050	mg/L	C	U
Barium		NA				UNKN	0.777	mg/L	C	-
Beryllium		NA				UNKN	0.002	mg/L	C	U
Boron		NA				UNKN	0.387	mg/L	C	U
Cadmium		NA				UNKN	0.003	mg/L	C	-
Calcium		NA				UNKN	12.900	mg/L	C	-
Chromium		NA				UNKN	0.017	mg/L	C	-
Cobalt		NA				UNKN	0.010	mg/L	C	U
Copper		NA				UNKN	0.018	mg/L	C	-
Iron		NA				UNKN	0.017	mg/L	C	U
Lead		NA				UNKN	0.040	mg/L	C	U
Magnesium		NA				UNKN	2.460	mg/L	C	-
Manganese		NA				UNKN	0.002	mg/L	C	U
Mercury		NA				UNKN	0.000	mg/L	C	U
Molybdenum		NA				UNKN	0.034	mg/L	C	-
Nickel		NA				UNKN	0.020	mg/L	C	U
Potassium		NA				UNKN	4.350	mg/L	C	-
Selenium		NA				UNKN	0.080	mg/L	C	U
Silicon		NA				UNKN	2.500	mg/L	C	-
Silver		NA				UNKN	0.035	mg/L	C	-
Sodium		NA				UNKN	1.210	mg/L	C	U
Thallium		NA				UNKN	0.002	mg/L	C	U
Vanadium		NA				UNKN	0.024	mg/L	C	-
Zinc		NA				UNKN	0.107	mg/L	C	U
Volatile Organics										
1,1-Dichloroethene	UNKN	5.000	ug/L	C	U		NA			
1,2-Dichloroethane	UNKN	5.000	ug/L	C	U		NA			
2-Butanone	UNKN	3.000	ug/L	C	J		NA			
Benzene	UNKN	5.000	ug/L	C	U		NA			
Carbon Tetrachloride	UNKN	5.000	ug/L	C	U		NA			
Chlorobenzene	UNKN	5.000	ug/L	C	U		NA			
Chloroform	UNKN	5.000	ug/L	C	U		NA			
Pyridine	UNKN	20.000	ug/L	C	U		NA			
Tetrachloroethene	UNKN	5.000	ug/L	C	U		NA			
Trichloroethene	UNKN	5.000	ug/L	C	U		NA			
Vinyl chloride	UNKN	10.000	ug/L	C	U		NA			
Semivolatile Organics										
1,4-Dichlorobenzene	UNKN	20.000	ug/L	C	U		NA			

TABLE G-12
(Continued)

PHASE I - CHEMICAL PARAMETERS

BORING NUMBER		1820					1820			
SAMPLE NUMBER		067504					067507			
SAMPLING DATE		10/16/91					10/16/91			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Semivolatile Organics										
2,4,5-Trichlorophenol	UNKN	100.000	ug/L	C	U		NA			
2,4,6-Trichlorophenol	UNKN	20.000	ug/L	C	U		NA			
2,4-Dinitrotoluene	UNKN	20.000	ug/L	C	U		NA			
2-Methylphenol	UNKN	20.000	ug/L	C	U		NA			
3-Methylphenol	UNKN	20.000	ug/L	C	U		NA			
4-Methylphenol	UNKN	20.000	ug/L	C	U		NA			
Hexachlorobenzene	UNKN	20.000	ug/L	C	U		NA			
Hexachlorobutadiene	UNKN	20.000	ug/L	C	U		NA			
Hexachloroethane	UNKN	20.000	ug/L	C	U		NA			
Nitrobenzene	UNKN	20.000	ug/L	C	U		NA			
Pentachlorophenol	UNKN	100.000	ug/L	C	U		NA			
Herbicide Organics										
2,4,5-TP (Silvex)		NA				UNKN	1.800	ug/L	C	U
2,4-D		NA				UNKN	10.000	ug/L	C	U
Pesticide Organics/PCBs										
Chlordane		NA				UNKN	0.500	ug/L	C	U
Endrin		NA				UNKN	0.100	ug/L	C	U
Heptachlor		NA				UNKN	0.050	ug/L	C	U
Heptachlor epoxide		NA				UNKN	0.050	ug/L	C	U
Methoxychlor		NA				UNKN	0.500	ug/L	C	U
Toxaphene		NA				UNKN	1.000	ug/L	C	U
alpha-Chlordane		NA				UNKN	0.500	ug/L	C	U
gamma-BHC (Lindane)		NA				UNKN	0.050	ug/L	C	U
gamma-Chlordane		NA				UNKN	0.500	ug/L	C	U
General Chemistry										
Alkalinity as CaCO3		NA				UNKN	28.000	mg/L	C	-
Ammonia		NA				UNKN	0.100	mg/L	C	U
Chloride		NA				UNKN	0.500	mg/L	C	UJ
Fluoride		NA				UNKN	0.299	mg/L	C	J
Ignitability		NA				UNKN	110.000	degre	C	U
Nitrate		NA				UNKN	148.000	mg/L	C	J
Oxidation-Reduction Potential of Water		NA				UNKN	350.000	mg/L	C	-
Phosphate		NA				UNKN	0.125	mg/L	C	J
Sulfate		NA				UNKN	30.300	mg/L	C	J
Sulfide		NA				UNKN	6.120	mg/kg	C	-
pH		NA				UNKN	6.890	stand	C	-

TABLE G-12
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER	1979					1980					1980				
SAMPLE NUMBER	112093					112131					112146				
SAMPLING DATE	05/10/93					05/12/93					05/12/93				
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Inorganics															
Arsenic	UNKN	0.100	mg/L	C	R	UNKN	0.098	mg/L	C	UJ	UNKN	0.071	mg/L	C	UJ
Barium	UNKN	1.250	mg/L	C	-	UNKN	0.563	mg/L	C	-	UNKN	0.046	mg/L	C	U
Cadmium	UNKN	0.002	mg/L	C	U	UNKN	0.002	mg/L	C	U	UNKN	0.002	mg/L	C	U
Chromium	UNKN	0.003	mg/L	C	U	UNKN	0.003	mg/L	C	U	UNKN	0.003	mg/L	C	U
Copper	UNKN	0.010	mg/L	C	U	UNKN	0.021	mg/L	C	U	UNKN	0.002	mg/L	C	U
Iron	UNKN	0.002	mg/L	C	U	UNKN	0.051	mg/L	C	U	UNKN	0.025	mg/L	C	U
Lead	UNKN	0.050	mg/L	C	R	UNKN	0.015	mg/L	C	UJ	UNKN	0.015	mg/L	C	UJ
Manganese	UNKN	0.020	mg/L	C	J	UNKN	0.067	mg/L	C	J	UNKN	0.263	mg/L	C	J
Mercury	UNKN	0.000	mg/L	C	UJ	UNKN	0.000	mg/L	C	UJ	UNKN	0.000	mg/L	C	UJ
Selenium	UNKN	0.050	mg/L	C	R	UNKN	0.030	mg/L	C	UJ	UNKN	0.030	mg/L	C	UJ
Silver	UNKN	0.002	mg/L	C	UJ	UNKN	0.002	mg/L	C	UJ	UNKN	0.002	mg/L	C	UJ
Zinc	UNKN	0.361	mg/L	C	R	UNKN	1.330	mg/L	C	-	UNKN	0.304	mg/L	C	R
Volatile Organics															
1,1-Dichloroethane	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U
1,2-Dichloroethane	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U
2-Butanone	UNKN	10.000	ug/L	C	UJ	UNKN	10.000	ug/L	C	UJ	UNKN	10.000	ug/L	C	UJ
Benzene	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U
Carbon Tetrachloride	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U
Chlorobenzene	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U
Chloroform	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U
Pyridine	UNKN	250.000	ug/L	C	U	UNKN	250.000	ug/L	C	U	UNKN	250.000	ug/L	C	U
Tetrachloroethene	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U
Trichloroethene	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U	UNKN	5.000	ug/L	C	U
Vinyl chloride	UNKN	10.000	ug/L	C	U	UNKN	10.000	ug/L	C	U	UNKN	10.000	ug/L	C	U
Semivolatile Organics															
1,4-Dichlorobenzene	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U
2,4,5-Trichlorophenol	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U
2,4,6-Trichlorophenol	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U
2,4-Dinitrotoluene	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U
Hexachlorobenzene	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U
Hexachlorobutadiene	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U
Hexachloroethane	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U
Nitrobenzene	UNKN	50.000	ug/L	C	UJ	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U
Pentachlorophenol	UNKN	250.000	ug/L	C	U	UNKN	250.000	ug/L	C	U	UNKN	250.000	ug/L	C	U
Total Methylphenol	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U	UNKN	50.000	ug/L	C	U
Herbicide Organics															
2,4,5-TP (Silvex)	UNKN	17.000	ug/L	C	U	UNKN	17.000	ug/L	C	U	UNKN	17.000	ug/L	C	U

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TABLE G-12
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER		1979					1980					1980			
SAMPLE NUMBER		112093					112131					112146			
SAMPLING DATE		05/10/93					05/12/93					05/12/93			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ	FLTD	RESULTS	UNITS	L	VQ
Herbicide Organics															
2,4-D	UNKN	120.000	ug/L	C	U	UNKN	120.000	ug/L	C	U	UNKN	120.000	ug/L	C	U
Pesticide Organics/PCBs															
Chlordane	UNKN	1.400	ug/L	C	U	UNKN	1.400	ug/L	C	U	UNKN	1.400	ug/L	C	U
Endrin	UNKN	0.600	ug/L	C	U	UNKN	0.600	ug/L	C	U	UNKN	0.600	ug/L	C	U
Heptachlor	UNKN	0.300	ug/L	C	U	UNKN	0.300	ug/L	C	U	UNKN	0.300	ug/L	C	U
Heptachlor epoxide	UNKN	8.300	ug/L	C	U	UNKN	8.300	ug/L	C	U	UNKN	8.300	ug/L	C	U
Methoxychlor	UNKN	18.000	ug/L	C	U	UNKN	18.000	ug/L	C	U	UNKN	18.000	ug/L	C	U
Toxaphene	UNKN	24.000	ug/L	C	U	UNKN	24.000	ug/L	C	U	UNKN	24.000	ug/L	C	U
gamma-BHC (Lindane)	UNKN	0.400	ug/L	C	U	UNKN	0.400	ug/L	C	U	UNKN	0.400	ug/L	C	U

TABLE G-12
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER		1981			
SAMPLE NUMBER		112168			
SAMPLING DATE		05/13/93			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ
Inorganics					
Arsenic	UNKN	0.050	mg/L	C	UJ
Barium	UNKN	0.299	mg/L	C	-
Cadmium	UNKN	0.005	mg/L	C	U
Chromium	UNKN	0.010	mg/L	C	U
Copper	UNKN	0.010	mg/L	C	U
Iron	UNKN	0.056	mg/L	C	U
Lead	UNKN	0.040	mg/L	C	UJ
Manganese	UNKN	0.013	mg/L	C	-
Mercury	UNKN	0.000	mg/L	C	U
Selenium	UNKN	0.080	mg/L	C	U
Silver	UNKN	0.010	mg/L	C	R
Zinc	UNKN	0.184	mg/L	C	-
Volatile Organics					
1,1-Dichloroethene	UNKN	5.000	ug/L	C	U
1,2-Dichloroethane	UNKN	5.000	ug/L	C	U
2-Butanone	UNKN	10.000	ug/L	C	U
Benzene	UNKN	5.000	ug/L	C	U
Carbon Tetrachloride	UNKN	5.000	ug/L	C	U
Chlorobenzene	UNKN	5.000	ug/L	C	U
Chloroform	UNKN	5.000	ug/L	C	U
Pyridine	UNKN	200.000	ug/L	C	U
Tetrachloroethene	UNKN	5.000	ug/L	C	U
Trichloroethene	UNKN	5.000	ug/L	C	U
Vinyl chloride	UNKN	10.000	ug/L	C	U
Semivolatile Organics					
1,4-Dichlorobenzene	UNKN	20.000	ug/L	C	U
2,4,5-Trichlorophenol	UNKN	100.000	ug/L	C	U
2,4,6-Trichlorophenol	UNKN	20.000	ug/L	C	U
2,4-Dinitrotoluene	UNKN	20.000	ug/L	C	U
Hexachlorobenzene	UNKN	20.000	ug/L	C	U
Hexachlorobutadiene	UNKN	20.000	ug/L	C	U
Hexachloroethane	UNKN	20.000	ug/L	C	U
Nitrobenzene	UNKN	20.000	ug/L	C	U
Pentachlorophenol	UNKN	100.000	ug/L	C	U
Total Methylphenol	UNKN	20.000	ug/L	C	U
Herbicide Organics					
2,4,5-TP (Silvex)	UNKN	1.800	ug/L	C	U

TABLE G-12
(Continued)

PHASE II - CHEMICAL PARAMETERS

BORING NUMBER		1981			
SAMPLE NUMBER		112168			
SAMPLING DATE		05/13/93			
CHEMICAL PARAMETERS	FLTD	RESULTS	UNITS	L	VQ
Herbicide Organics					
2,4-D	UNKN	10.000	ug/L	C	U
Pesticide Organics/PCBs					
Endrin	UNKN	0.100	ug/L	C	U
Heptachlor	UNKN	0.050	ug/L	C	U
Heptachlor epoxide	UNKN	0.050	ug/L	C	U
Methoxychlor	UNKN	0.500	ug/L	C	U
Toxaphene	UNKN	1.000	ug/L	C	U
alpha-Chlordane	UNKN	0.500	ug/L	C	U
gamma-BHC (Lindane)	UNKN	0.050	ug/L	C	U
gamma-Chlordane	UNKN	0.500	ug/L	C	U

TABLE G-13

TABLE G-13

ACTIVE FLYASH PILE
RI/FS QUALITY CONTROL SAMPLE RESULTS
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

PHASE I - RADIOLOGICAL PARAMETERS

QC TYPE	RINSATE			RINSATE		
SAMPLE NUMBER	007215			007231		
ASSOCIATED SAMPLES	007207			007217		
SAMPLING DATE	10/07/87			10/14/87		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
CS-137	20.000	pci/L	R	20.000	pci/L	R
NP-237	1.000	pci/L	R	1.000	pci/L	R
PU-238	1.000	pci/L	R	1.000	pci/L	R
PU-239/240	1.000	pci/L	R	1.000	pci/L	R
RA-226	1.000	pci/L	U	1.000	pci/L	U
RA-228	3.000	pci/L	U	3.000	pci/L	U
RU-106	150.000	pci/L	R	150.000	pci/L	R
SR-90	5.000	pci/L	UJ	5.000	pci/L	UJ
TC-99	30.000	pci/L	U	30.000	pci/L	U
TH-228	1.000	pci/L	R	1.000	pci/L	R
TH-230	1.500	pci/L	R	2.000	pci/L	R
TH-232	0.900	pci/L	R	0.700	pci/L	R
U-234	1.100	pci/L	UJ	1.000	pci/L	UJ
U-235/236	1.100	pci/L	UJ	1.000	pci/L	UJ
U-238	1.100	pci/L	UJ	1.000	pci/L	UJ
U-TOTAL	5.000	ug/L	R	1.000	ug/L	R

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TABLE G-13
(Continued)

PHASE I - CHEMICAL PARAMETERS

QC TYPE	RINSATE				RINSATE				FIELD BLANK			
SAMPLE NUMBER	007215				007231				067180			
ASSOCIATED SAMPLES	007207				007217				067184, 067167, 067173			
SAMPLING DATE	10/07/87				10/14/87				07/11/91			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Inorganics												
Arsenic	0.200	mg/L	3	U	0.200	mg/L	3	U	NA			
Barium	0.008	mg/L	3	U	0.017	mg/L	3	U	NA			
Cadmium	0.014	mg/L	3	J	0.007	mg/L	3	J	NA			
Chromium	0.020	mg/L	3	U	0.020	mg/L	3	U	NA			
Copper	0.170	mg/L	3	-	0.170	mg/L	3	-	NA			
Iron	0.843	mg/L	3	U	0.008	mg/L	3	U	NA			
Lead	0.050	mg/L	3	U	0.080	mg/L	3	-	NA			
Manganese	1.147	mg/L	3	-	1.667	mg/L	3	-	NA			
Mercury	0.000	mg/L	3	UJ	0.000	mg/L	3	UJ	NA			
Molybdenum	0.020	mg/L	3	U	0.020	mg/L	3	U	NA			
Nickel	0.020	mg/L	3	U	0.020	mg/L	3	U	NA			
Selenium	0.200	mg/L	3	U	0.200	mg/L	3	U	NA			
Silver	0.051	mg/L	3	U	0.022	mg/L	3	U	NA			
Sodium	6.330	mg/L	3	-	4.890	mg/L	3	U	NA			
Volatile Organics												
1,1,1-Trichloroethane	NA				NA				0.005	mg/kg	4	U
1,1,2,2-Tetrachloroethane	NA				NA				0.005	mg/kg	4	U
1,1,2-Trichloroethane	NA				NA				0.005	mg/kg	4	U
1,1-Dichloroethane	NA				NA				0.005	mg/kg	4	U
1,1-Dichloroethene	NA				NA				0.005	mg/kg	4	U
1,2-Dichloroethane	NA				NA				0.005	mg/kg	4	U
1,2-Dichloroethene	NA				NA				0.005	mg/kg	4	U
1,2-Dichloropropane	NA				NA				0.005	mg/kg	4	U
2-Butanone	NA				NA				0.010	mg/kg	4	R
2-Hexanone	NA				NA				0.010	mg/kg	4	UJ
4-Methyl-2-pentanone	NA				NA				0.010	mg/kg	4	UJ
Acetone	NA				NA				0.010	mg/kg	4	UJ
Benzene	NA				NA				0.005	mg/kg	4	U
Bromodichloromethane	NA				NA				0.005	mg/kg	4	U
Bromoform	NA				NA				0.005	mg/kg	4	U
Bromomethane	NA				NA				0.010	mg/kg	4	UJ
Carbon Tetrachloride	NA				NA				0.005	mg/kg	4	U
Carbon disulfide	NA				NA				0.005	mg/kg	4	U
Chlorobenzene	NA				NA				0.005	mg/kg	4	U
Chloroethane	NA				NA				0.010	mg/kg	4	U
Chloroform	NA				NA				0.005	mg/kg	4	U
Chloromethane	NA				NA				0.010	mg/kg	4	U
Dibromochloromethane	NA				NA				0.005	mg/kg	4	U
Ethylbenzene	NA				NA				0.005	mg/kg	4	U
Methylene chloride	NA				NA				0.001	mg/kg	4	J

TABLE G-13
(Continued)

PHASE I - CHEMICAL PARAMETERS

QC TYPE	RINSATE				RINSATE				FIELD BLANK			
SAMPLE NUMBER	007215				007231				067180			
ASSOCIATED SAMPLES	007207				007217				067184, 067167, 067173			
SAMPLING DATE	10/07/87				10/14/87				07/11/91			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
Styrene	NA				NA				0.005	mg/kg	4	U
Tetrachloroethene	NA				NA				0.005	mg/kg	4	U
Toluene	NA				NA				0.005	mg/kg	4	U
Trichloroethene	NA				NA				0.005	mg/kg	4	U
Vinyl Acetate	NA				NA				0.010	mg/kg	4	U
Vinyl chloride	NA				NA				0.010	mg/kg	4	U
Xylenes, Total	NA				NA				0.005	mg/kg	4	U
cis-1,3-Dichloropropene	NA				NA				0.005	mg/kg	4	UJ
trans-1,3-Dichloropropene	NA				NA				0.005	mg/kg	4	UJ
General Chemistry												
Chloride	0.500	mg/L	3	UJ	0.500	mg/L	3	UJ	NA			
Fluoride	0.100	mg/L	3	U	0.100	mg/L	3	U	NA			
Hexavalent Chromium	0.010	mg/L	3	UJ	0.010	mg/L	3	UJ	NA			
Nitrate	0.100	mg/L	3	U	0.100	mg/L	3	U	NA			
Phenols	0.010	mg/L	3	UJ	0.010	mg/L	3	J	NA			
Sulfate	3.400	mg/L	3	J	2.000	mg/L	3	U	NA			

TABLE G-13
(Continued)

PHASE I - CHEMICAL PARAMETERS

QC TYPE	FIELD BLANK				FIELD BLANK				FIELD BLANK			
SAMPLE NUMBER	067198				067163				067508			
ASSOCIATED SAMPLES	067201, 067218, 067193				067149, 067155				067503, 067505, 067506			
SAMPLING DATE	07/13/91				07/01/91				10/16/91			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
1,1,1-Trichloroethane	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
1,1,2,2-Tetrachloroethane	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
1,1,2-Trichloroethane	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
1,1-Dichloroethane	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
1,1-Dichloroethene	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
1,2-Dichloroethane	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
1,2-Dichloroethene	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
1,2-Dichloropropane	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
2-Butanone	0.010	mg/kg	4	R	0.010	mg/kg	4	UJ	0.010	mg/kg	4	U
2-Hexanone	0.010	mg/kg	4	U	0.010	mg/kg	4	U	0.010	mg/kg	4	UJ
4-Methyl-2-pentanone	0.010	mg/kg	4	U	0.010	mg/kg	4	U	0.010	mg/kg	4	UJ
Acetone	0.007	mg/kg	4	J	0.002	mg/kg	4	J	0.010	mg/kg	4	-
Benzene	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
Bromodichloromethane	0.005	mg/kg	4	U	0.002	mg/kg	4	J	0.005	mg/kg	4	U
Bromoform	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
Bromomethane	0.010	mg/kg	4	UJ	0.010	mg/kg	4	U	0.010	mg/kg	4	UJ
Carbon Tetrachloride	0.005	mg/kg	4	U	0.005	mg/kg	4	UJ	0.005	mg/kg	4	U
Carbon disulfide	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
Chlorobenzene	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
Chloroethane	0.010	mg/kg	4	U	0.010	mg/kg	4	U	0.010	mg/kg	4	U
Chloroform	0.004	mg/kg	4	J	0.013	mg/kg	4	-	0.005	mg/kg	4	U
Chloromethane	0.010	mg/kg	4	UJ	0.010	mg/kg	4	U	0.010	mg/kg	4	U
Dibromochloromethane	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
Ethylbenzene	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
Methylene chloride	0.005	mg/kg	4	J	0.001	mg/kg	4	J	0.001	mg/kg	4	J
Styrene	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
Tetrachloroethene	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
Toluene	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
Trichloroethene	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
Vinyl Acetate	0.010	mg/kg	4	U	0.010	mg/kg	4	U	0.010	mg/kg	4	U
Vinyl chloride	0.010	mg/kg	4	U	0.010	mg/kg	4	U	0.010	mg/kg	4	U
Xylenes, Total	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
cis-1,3-Dichloropropene	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U
trans-1,3-Dichloropropene	0.005	mg/kg	4	U	0.005	mg/kg	4	U	0.005	mg/kg	4	U

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TABLE G-13
(Continued)

PHASE I - CHEMICAL PARAMETERS

QC TYPE	TRIP/FIELD BLANK				RINSATE			
SAMPLE NUMBER	067712				067713			
ASSOCIATED SAMPLES	067706, 067711				067706, 067711			
SAMPLING DATE	02/22/92				02/22/92			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics								
1,1,1-Trichloroethane	0.005	mg/L	4	UJ	0.005	mg/L	4	UJ
1,1,2,2-Tetrachloroethane	0.005	mg/L	4	U	0.005	mg/L	4	U
1,1,2-Trichloroethane	0.005	mg/L	4	U	0.005	mg/L	4	U
1,1-Dichloroethane	0.005	mg/L	4	U	0.005	mg/L	4	U
1,1-Dichloroethene	0.005	mg/L	4	U	0.005	mg/L	4	U
1,2-Dichloroethane	0.005	mg/L	4	U	0.005	mg/L	4	U
1,2-Dichloroethene	0.005	mg/L	4	U	0.005	mg/L	4	U
1,2-Dichloropropane	0.005	mg/L	4	U	0.005	mg/L	4	U
2-Butanone	0.010	mg/L	4	UJ	0.010	mg/L	4	UJ
2-Hexanone	0.010	mg/L	4	UJ	0.010	mg/L	4	UJ
4-Methyl-2-pentanone	0.010	mg/L	4	U	0.010	mg/L	4	U
Acetone	0.010	mg/L	4	UJ	0.007	mg/L	4	J
Benzene	0.005	mg/L	4	U	0.005	mg/L	4	U
Bromodichloromethane	0.001	mg/L	4	J	0.005	mg/L	4	U
Bromoform	0.005	mg/L	4	UJ	0.005	mg/L	4	UJ
Bromomethane	0.010	mg/L	4	UJ	0.010	mg/L	4	UJ
Carbon Tetrachloride	0.005	mg/L	4	U	0.005	mg/L	4	U
Carbon disulfide	0.005	mg/L	4	U	0.005	mg/L	4	U
Chlorobenzene	0.005	mg/L	4	U	0.005	mg/L	4	U
Chloroethane	0.010	mg/L	4	U	0.010	mg/L	4	U
Chloroform	0.005	mg/L	4	-	0.003	mg/L	4	J
Chloromethane	0.010	mg/L	4	U	0.010	mg/L	4	U
Dibromochloromethane	0.005	mg/L	4	U	0.005	mg/L	4	U
Ethylbenzene	0.005	mg/L	4	U	0.005	mg/L	4	U
Methylene chloride	0.002	mg/L	4	J	0.005	mg/L	4	UJ
Styrene	0.005	mg/L	4	U	0.005	mg/L	4	U
Tetrachloroethene	0.005	mg/L	4	U	0.005	mg/L	4	U
Toluene	0.005	mg/L	4	U	0.005	mg/L	4	U
Trichloroethene	0.005	mg/L	4	U	0.005	mg/L	4	U
Vinyl Acetate	0.010	mg/L	4	U	0.010	mg/L	4	U
Vinyl chloride	0.010	mg/L	4	U	0.010	mg/L	4	U
Xylenes, Total	0.005	mg/L	4	U	0.005	mg/L	4	U
cis-1,3-Dichloropropene	0.005	mg/L	4	UJ	0.005	mg/L	4	UJ
trans-1,3-Dichloropropene	0.005	mg/L	4	UJ	0.005	mg/L	4	UJ
Semivolatile Organics								
1,2,4-Trichlorobenzene	NA				0.010	mg/L	4	U
1,2-Dichlorobenzene	NA				0.010	mg/L	4	U
1,3-Dichlorobenzene	NA				0.010	mg/L	4	U
1,4-Dichlorobenzene	NA				0.010	mg/L	4	U
2,4,5-Trichlorophenol	NA				0.050	mg/L	4	U

TABLE G-13
(Continued)

PHASE I - CHEMICAL PARAMETERS

QC TYPE	TRIP/FIELD BLANK				RINSATE			
SAMPLE NUMBER	067712				067713			
ASSOCIATED SAMPLES	067706, 067711				067706, 067711			
SAMPLING DATE	02/22/92				02/22/92			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics								
2,4,6-Trichlorophenol	NA				0.010	mg/L	4	U
2,4-Dichlorophenol	NA				0.010	mg/L	4	U
2,4-Dimethylphenol	NA				0.010	mg/L	4	U
2,4-Dinitrophenol	NA				0.050	mg/L	4	U
2,4-Dinitrotoluene	NA				0.010	mg/L	4	U
2,6-Dinitrotoluene	NA				0.010	mg/L	4	U
2-Chloronaphthalene	NA				0.010	mg/L	4	U
2-Chlorophenol	NA				0.010	mg/L	4	U
2-Methylnaphthalene	NA				0.010	mg/L	4	U
2-Methylphenol	NA				0.010	mg/L	4	U
2-Nitroaniline	NA				0.050	mg/L	4	U
2-Nitrophenol	NA				0.010	mg/L	4	UJ
3,3'-Dichlorobenzidine	NA				0.020	mg/L	4	U
3-Nitroaniline	NA				0.050	mg/L	4	U
4,6-Dinitro-2-methylphenol	NA				0.050	mg/L	4	U
4-Bromophenyl phenyl ether	NA				0.010	mg/L	4	U
4-Chloro-3-methylphenol	NA				0.010	mg/L	4	U
4-Chlorophenylphenyl ether	NA				0.010	mg/L	4	U
4-Methylphenol	NA				0.010	mg/L	4	U
4-Nitroaniline	NA				0.050	mg/L	4	U
4-Nitrophenol	NA				0.050	mg/L	4	UJ
Acenaphthene	NA				0.010	mg/L	4	U
Acenaphthylene	NA				0.010	mg/L	4	U
Anthracene	NA				0.010	mg/L	4	U
Benzo(a)anthracene	NA				0.010	mg/L	4	U
Benzo(a)pyrene	NA				0.010	mg/L	4	U
Benzo(b)fluoranthene	NA				0.010	mg/L	4	U
Benzo(g,h,i)perylene	NA				0.010	mg/L	4	U
Benzo(k)fluoranthene	NA				0.010	mg/L	4	U
Benzoic acid	NA				0.050	mg/L	4	U
Benzyl alcohol	NA				0.010	mg/L	4	U
Butyl benzyl phthalate	NA				0.010	mg/L	4	U
Chrysene	NA				0.010	mg/L	4	U
Di-n-butyl phthalate	NA				0.010	mg/L	4	U
Di-n-octyl phthalate	NA				0.010	mg/L	4	U
Dibenzo(a,h)anthracene	NA				0.010	mg/L	4	U
Dibenzofuran	NA				0.010	mg/L	4	U
Diethyl phthalate	NA				0.010	mg/L	4	U
Dimethyl phthalate	NA				0.010	mg/L	4	U
Fluoranthene	NA				0.010	mg/L	4	U
Fluorene	NA				0.010	mg/L	4	U
Hexachlorobenzene	NA				0.010	mg/L	4	U

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TABLE G-13
(Continued)

PHASE I - CHEMICAL PARAMETERS

QC TYPE	TRIP/FIELD BLANK				RINSATE			
SAMPLE NUMBER	067712				067713			
ASSOCIATED SAMPLES	067706, 067711				067711, 067706			
SAMPLING DATE	02/22/92				02/22/92			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics								
Hexachlorobutadiene	NA				0.010	mg/L	4	U
Hexachlorocyclopentadiene	NA				0.010	mg/L	4	U
Hexachloroethane	NA				0.010	mg/L	4	U
Indeno(1,2,3-cd)pyrene	NA				0.010	mg/L	4	U
Isophorone	NA				0.010	mg/L	4	U
N-Nitroso-di-n-propylamine	NA				0.010	mg/L	4	U
N-Nitrosodiphenylamine	NA				0.010	mg/L	4	U
Naphthalene	NA				0.010	mg/L	4	U
Nitrobenzene	NA				0.010	mg/L	4	U
Pentachlorophenol	NA				0.050	mg/L	4	U
Phenanthrene	NA				0.010	mg/L	4	U
Phenol	NA				0.010	mg/L	4	U
Pyrene	NA				0.010	mg/L	4	U
bis(2-Chloroethoxy)methane	NA				0.010	mg/L	4	U
bis(2-Chloroethyl)ether	NA				0.010	mg/L	4	U
bis(2-Chloroisopropyl) ether	NA				0.010	mg/L	4	U
bis(2-Ethylhexyl) phthalate	NA				0.010	mg/L	4	U
p-Chloroaniline	NA				0.010	mg/L	4	U
General Chemistry								
Total Organic Carbon	NA				1.000	mg/L	3	U

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TABLE G-13
(Continued)

PHASE II - RADIOLOGICAL PARAMETERS

QC TYPE	RINSATE			FIELD BLANK			RINSTATE		
SAMPLE NUMBER	116973			112261			112262		
ASSOCIATED SAMPLES	116970			112264, 112265			112264		
SAMPLING DATE	06/17/93			05/15/93			05/15/93		
RADIOLOGICAL PARAMETERS	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ	RESULTS	UNITS	VQ
CS-137	14.000	pci/L	UJ	16.400	pci/L	UJ	14.400	pci/L	UJ
GROSS ALPHA	0.560	ug/L	UJ	0.468	pci/L	UJ	0.460	pci/L	UJ
GROSS BETA	0.950	ug/L	UJ	1.040	pci/L	UJ	0.967	pci/L	UJ
NP-237	0.652	pci/L	N	0.246	pci/L	R	0.144	pci/L	R
PU-238	2.430	pci/L	-	0.044	pci/L	UJ	0.085	pci/L	UJ
PU-239/240	0.250	pci/L	J	0.043	pci/L	UJ	0.041	pci/L	UJ
RA-226	0.104	pci/L	UJ	0.131	pci/L	UJ	0.075	pci/L	UJ
RA-228	1.520	pci/L	UJ	3.330	pci/L	UJ	3.080	pci/L	UJ
RU-106	134.000	pci/L	UJ	109.000	pci/L	UJ	101.000	pci/L	UJ
SR-90	0.765	pci/L	UJ	0.698	pci/L	UJ	0.673	pci/L	UJ
TC-99	10.700	pci/L	UJ	8.400	pci/L	UJ	8.800	pci/L	UJ
TH-228	0.195	pci/L	UJ	0.248	pci/L	UJ	0.262	pci/L	UJ
TH-230	1.210	pci/L	J	0.115	pci/L	J	0.415	pci/L	J
TH-232	0.180	pci/L	UJ	0.078	pci/L	UJ	0.083	pci/L	UJ
TH-TOTAL	1.630	ug/L	UJ	0.718	ug/L	UJ	0.764	ug/L	UJ
U-234	0.168	pci/L	UJ	0.373	pci/L	U	0.282	pci/L	UJ
U-235/236	0.126	pci/L	UJ	0.239	pci/L	J	0.472	pci/L	UJ
U-238	0.072	pci/L	J	0.019	pci/L	J	0.383	pci/L	UJ
U-TOTAL	1.000	ug/L	U	1.000	ug/L	UJ	1.000	ug/L	UJ

TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	RINSATE				FIELD BLANK				FIELD BLANK			
SAMPLE NUMBER	116973				112250				112261			
ASSOCIATED SAMPLES	116970				112249, 112251				112264, 112265			
SAMPLING DATE	06/17/93				05/13/93				05/15/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Inorganics												
Aluminum	0.064	mg/L	C	U	NA				0.030	mg/L	C	U
Antimony	0.005	mg/L	C	U	NA				0.005	mg/L	C	U
Arsenic	0.002	mg/L	C	U	NA				0.002	mg/L	C	U
Barium	0.002	mg/L	C	U	NA				0.002	mg/L	C	U
Beryllium	0.002	mg/L	C	U	NA				0.002	mg/L	C	U
Cadmium	0.005	mg/L	C	U	NA				0.005	mg/L	C	U
Calcium	0.255	mg/L	C	-	NA				0.040	mg/L	C	-
Chromium	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Cobalt	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Copper	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Cyanide	0.002	mg/L	C	U	NA				0.002	mg/L	C	U
Iron	0.029	mg/L	C	-	NA				0.020	mg/L	C	U
Lead	0.002	mg/L	C	U	NA				0.002	mg/L	C	U
Magnesium	0.069	mg/L	C	-	NA				0.050	mg/L	C	U
Manganese	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Mercury	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
Molybdenum	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Nickel	0.020	mg/L	C	U	NA				0.020	mg/L	C	U
Potassium	0.100	mg/L	C	U	NA				0.100	mg/L	C	U
Selenium	0.002	mg/L	C	U	NA				0.002	mg/L	C	UJ
Silicon	0.069	mg/L	C	U	NA				0.100	mg/L	C	U
Silver	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Sodium	0.684	mg/L	C	-	NA				0.100	mg/L	C	U
Thallium	0.002	mg/L	C	U	NA				0.002	mg/L	C	U
Vanadium	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Zinc	0.010	mg/L	C	-	NA				0.017	mg/L	C	-
Volatile Organics												
1,1,1-Trichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1,2,2-Tetrachloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1,2-Trichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1-Dichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1-Dichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	UJ	0.010	mg/L	C	U
1,2-Dichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloropropane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
2-Butanone	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ
2-Hexanone	0.010	mg/L	C	R	0.010	mg/L	C	UJ	0.010	mg/L	C	U
4-Methyl-2-pentanone	0.010	mg/L	C	R	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ
Acetone	0.010	mg/L	C	R	0.010	mg/L	C	R	0.010	mg/L	C	UJ
Benzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U

TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	RINSATE				FIELD BLANK				FIELD BLANK			
SAMPLE NUMBER	116973				112250				112261			
ASSOCIATED SAMPLES	116970				112249, 112251				112264, 112265			
SAMPLING DATE	06/17/93				05/13/93				05/15/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
Bromodichloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromoform	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromomethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Carbon Tetrachloride	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Carbon disulfide	0.010	mg/L	C	R	0.010	mg/L	C	U	0.010	mg/L	C	U
Chlorobenzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloroethane	0.010	mg/L	C	UJ	0.010	mg/L	C	U	0.010	mg/L	C	UJ
Chloroform	0.001	mg/L	C	J	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloromethane	0.010	mg/L	C	U	0.010	mg/L	C	UJ	0.010	mg/L	C	U
Dibromochloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Ethylbenzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Methylene chloride	0.010	mg/L	C	UJ	0.011	mg/L	C	UJ	0.010	mg/L	C	UJ
Styrene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Tetrachloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Toluene	0.010	mg/L	C	U	0.002	mg/L	C	J	0.010	mg/L	C	U
Trichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Vinyl Acetate	NA				NA				0.010	mg/L	C	UJ
Vinyl chloride	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	UJ
Xylenes, Total	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
cis-1,3-Dichloropropene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
trans-1,3-Dichloropropene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Semivolatile Organics												
1,2,4-Trichlorobenzene	0.010	mg/L	C	U	NA				0.010	mg/L	C	UJ
1,2-Dichlorobenzene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
1,3-Dichlorobenzene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
1,4-Dichlorobenzene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
2,4,5-Trichlorophenol	0.025	mg/L	C	U	NA				0.025	mg/L	C	U
2,4,6-Trichlorophenol	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
2,4-Dichlorophenol	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
2,4-Dimethylphenol	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
2,4-Dinitrophenol	0.025	mg/L	C	R	NA				0.050	mg/L	C	R
2,4-Dinitrotoluene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
2,6-Dinitrotoluene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
2-Benzyl-4-chlorophenol	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
2-Chloronaphthalene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
2-Chlorophenol	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
2-Methylnaphthalene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
2-Methylphenol	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
2-Nitroaniline	0.025	mg/L	C	U	NA				0.025	mg/L	C	U
2-Nitrophenol	0.010	mg/L	C	U	NA				0.010	mg/L	C	U

TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	RINSATE				FIELD BLANK				FIELD BLANK			
SAMPLE NUMBER	116973				112250				112261			
ASSOCIATED SAMPLES	116970				112249, 112251				112264, 112265			
SAMPLING DATE	06/17/93				05/13/93				05/15/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
3,3'-Dichlorobenzidine	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
3-Nitroaniline	0.025	mg/L	C	U	NA				0.025	mg/L	C	U
4,6-Dinitro-2-methylphenol	0.025	mg/L	C	U	NA				0.025	mg/L	C	UJ
4-Bromophenyl phenyl ether	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
4-Chloro-3-methylphenol	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
4-Chlorophenylphenyl ether	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
4-Methylphenol	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
4-Nitroaniline	0.025	mg/L	C	U	NA				0.025	mg/L	C	U
4-Nitrophenol	0.025	mg/L	C	U	NA				0.025	mg/L	C	UJ
Acenaphthene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Acenaphthylene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Anthracene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Benzo(a)anthracene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Benzo(a)pyrene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Benzo(b)fluoranthene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Benzo(g,h,i)perylene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Benzo(k)fluoranthene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Benzoic acid	0.050	mg/L	C	U	NA				0.050	mg/L	C	UJ
Benzyl alcohol	0.010	mg/L	C	U	NA				0.010	mg/L	C	UJ
Butyl benzyl phthalate	0.002	mg/L	C	J	NA				0.010	mg/L	C	U
Carbazole	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Chrysene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Di-n-butyl phthalate	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Di-n-octyl phthalate	0.010	mg/L	C	U	NA				0.010	mg/L	C	UJ
Dibenzo(a,h)anthracene	0.010	mg/L	C	U	NA				0.010	mg/L	C	UJ
Dibenzofuran	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Diethyl phthalate	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Dimethyl phthalate	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Fluoranthene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Fluorene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Hexachlorobenzene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Hexachlorobutadiene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Hexachlorocyclopentadiene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Hexachloroethane	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Indeno(1,2,3-cd)pyrene	0.010	mg/L	C	UJ	NA				0.010	mg/L	C	U
Isophorone	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
N-Nitroso-di-n-propylamine	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
N-Nitrosodimethylamine	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
N-Nitrosodiphenylamine	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Naphthalene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Nitrobenzene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Pentachlorophenol	0.025	mg/L	C	U	NA				0.025	mg/L	C	U

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TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	RINSATE				FIELD BLANK				FIELD BLANK			
SAMPLE NUMBER	116973				112250				112261			
ASSOCIATED SAMPLES	116920				112249, 112251				112264, 112265			
SAMPLING DATE	06/17/93				05/13/93				05/15/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
Phenanthrene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Phenol	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Pyrene	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Tributyl phosphate	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
bis(2-Chloroethoxy)methane	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
bis(2-Chloroethyl)ether	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
bis(2-Chloroisopropyl) ether	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
bis(2-Ethylhexyl) phthalate	0.010	mg/L	C	U	NA				0.010	mg/L	C	UJ
p-Chloroaniline	0.010	mg/L	C	U	NA				0.010	mg/L	C	U
Pesticide Organics/PCBs												
4,4'-DDD	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
4,4'-DDE	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
4,4'-DDT	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
Aldrin	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
Aroclor-1016	0.001	mg/L	C	U	NA				0.001	mg/L	C	U
Aroclor-1221	0.002	mg/L	C	U	NA				0.002	mg/L	C	U
Aroclor-1232	0.001	mg/L	C	U	NA				0.001	mg/L	C	U
Aroclor-1242	0.001	mg/L	C	U	NA				0.001	mg/L	C	U
Aroclor-1248	0.001	mg/L	C	U	NA				0.001	mg/L	C	U
Aroclor-1254	0.001	mg/L	C	U	NA				0.001	mg/L	C	U
Aroclor-1260	0.001	mg/L	C	U	NA				0.001	mg/L	C	U
Dieldrin	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
Endosulfan II	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
Endosulfan sulfate	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
Endosulfan-I	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
Endrin	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
Endrin aldehyde	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
Endrin ketone	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
Heptachlor	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
Heptachlor epoxide	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
Methoxychlor	0.001	mg/L	C	U	NA				0.001	mg/L	C	U
Toxaphene	0.005	mg/L	C	U	NA				0.005	mg/L	C	U
alpha-BHC	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
alpha-Chlordane	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
beta-BHC	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
delta-BHC	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
gamma-BHC (Lindane)	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
gamma-Chlordane	0.000	mg/L	C	U	NA				0.000	mg/L	C	U
General Chemistry												
Alkalinity	2.500	mg/L	B	-	NA				3.000	mg/kg	B	-

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TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	RINSATE				FIELD BLANK				FIELD BLANK			
SAMPLE NUMBER	116973				112250				112261			
ASSOCIATED SAMPLES	116970				112249, 112251				112264, 112265			
SAMPLING DATE	06/17/93				05/13/93				05/15/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
General Chemistry												
Ammonia	0.100	mg/L	B	U	NA				0.100	mg/kg	B	U
Chloride	0.500	mg/L	B	U	NA				0.500	mg/kg	B	U
Fluoride	0.050	mg/L	B	U	NA				0.050	mg/kg	B	U
Nitrate	0.100	mg/L	B	R	NA				0.100	mg/kg	B	R
Phenols	0.010	mg/L	B	U	NA				0.010	mg/kg	B	U
Phosphorus	NA				NA				0.020	mg/kg	B	U
Sulfate	2.000	mg/L	B	U	NA				2.000	mg/kg	B	U
Sulfide	0.500	mg/L	B	U	NA				0.500	mg/kg	B	U
Total Kjeldahl Nitrogen	0.100	mg/L	B	U	NA				0.100	mg/kg	B	U
Total Organic Carbon	1.000	mg/L	B	U	NA				1.000	mg/kg	B	U
Total Organic Halides	0.010	mg/L	B	U	NA				10.000	mg/kg	B	U
Total Organic Nitrogen	0.100	mg/L	B	U	NA				0.100	mg/kg	B	U
Total Phosphorous	0.020	mg/L	B	U	NA				NA			

TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	RINSATE				TRIP BLANK				TRIP BLANK			
SAMPLE NUMBER	112262				110896				110899			
ASSOCIATED SAMPLES	112264				110897				110900			
SAMPLING DATE	05/15/93				04/27/93				04/28/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Inorganics												
Aluminum	0.030	mg/L	C	U	NA				NA			
Antimony	0.005	mg/L	C	U	NA				NA			
Arsenic	0.002	mg/L	C	U	NA				NA			
Barium	0.002	mg/L	C	U	NA				NA			
Beryllium	0.002	mg/L	C	U	NA				NA			
Cadmium	0.005	mg/L	C	U	NA				NA			
Calcium	0.020	mg/L	C	U	NA				NA			
Chromium	0.010	mg/L	C	U	NA				NA			
Cobalt	0.010	mg/L	C	U	NA				NA			
Copper	0.010	mg/L	C	U	NA				NA			
Cyanide	0.002	mg/L	C	U	NA				NA			
Iron	0.021	mg/L	C	-	NA				NA			
Lead	0.002	mg/L	C	U	NA				NA			
Magnesium	0.050	mg/L	C	U	NA				NA			
Manganese	0.010	mg/L	C	U	NA				NA			
Mercury	0.000	mg/L	C	U	NA				NA			
Molybdenum	0.010	mg/L	C	U	NA				NA			
Nickel	0.020	mg/L	C	U	NA				NA			
Potassium	0.100	mg/L	C	U	NA				NA			
Selenium	0.002	mg/L	C	UJ	NA				NA			
Silicon	0.116	mg/L	C	-	NA				NA			
Silver	0.010	mg/L	C	U	NA				NA			
Sodium	0.100	mg/L	C	U	NA				NA			
Thallium	0.002	mg/L	C	U	NA				NA			
Vanadium	0.010	mg/L	C	U	NA				NA			
Zinc	0.005	mg/L	C	-	NA				NA			
Volatile Organics												
1,1,1-Trichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1,2,2-Tetrachloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1,2-Trichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1-Dichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1-Dichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloropropane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
2-Butanone	0.010	mg/L	C	UJ	0.010	mg/L	C	U	0.010	mg/L	C	U
2-Hexanone	0.010	mg/L	C	U	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ
4-Methyl-2-pentanone	0.010	mg/L	C	UJ	0.010	mg/L	C	U	0.010	mg/L	C	U
Acetone	0.010	mg/L	C	UJ	0.010	mg/L	C	U	0.005	mg/L	C	U
Benzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U

TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	RINSATE				TRIP BLANK				TRIP BLANK			
SAMPLE NUMBER	112262				110896				110899			
ASSOCIATED SAMPLES	112264				110897				110900			
SAMPLING DATE	05/15/93				04/27/93				04/28/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
Bromodichloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromoform	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromomethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Carbon Tetrachloride	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Carbon disulfide	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chlorobenzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloroethane	0.010	mg/L	C	UJ	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloroform	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloromethane	0.010	mg/L	C	U	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ
Dibromochloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Ethylbenzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Methylene chloride	0.011	mg/L	C	UJ	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ
Styrene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Tetrachloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Toluene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Trichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Vinyl Acetate	0.010	mg/L	C	UJ	0.010	mg/L	C	U	0.010	mg/L	C	U
Vinyl chloride	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ
Xylenes, Total	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
cis-1,3-Dichloropropene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
trans-1,3-Dichloropropene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Semivolatile Organics												
1,2,4-Trichlorobenzene	0.010	mg/L	C	UJ	NA				NA			
1,2-Dichlorobenzene	0.010	mg/L	C	U	NA				NA			
1,3-Dichlorobenzene	0.010	mg/L	C	U	NA				NA			
1,4-Dichlorobenzene	0.010	mg/L	C	U	NA				NA			
2,4,5-Trichlorophenol	0.025	mg/L	C	U	NA				NA			
2,4,6-Trichlorophenol	0.010	mg/L	C	U	NA				NA			
2,4-Dichlorophenol	0.010	mg/L	C	U	NA				NA			
2,4-Dimethylphenol	0.010	mg/L	C	U	NA				NA			
2,4-Dinitrophenol	0.050	mg/L	C	R	NA				NA			
2,4-Dinitrotoluene	0.010	mg/L	C	U	NA				NA			
2,6-Dinitrotoluene	0.010	mg/L	C	U	NA				NA			
2-Benzyl-4-chlorophenol	0.010	mg/L	C	U	NA				NA			
2-Chloronaphthalene	0.010	mg/L	C	U	NA				NA			
2-Chlorophenol	0.010	mg/L	C	U	NA				NA			
2-Methylnaphthalene	0.010	mg/L	C	U	NA				NA			
2-Methylphenol	0.010	mg/L	C	U	NA				NA			
2-Nitroaniline	0.025	mg/L	C	U	NA				NA			
2-Nitrophenol	0.010	mg/L	C	U	NA				NA			

TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	RINSATE				TRIP BLANK				TRIP BLANK			
SAMPLE NUMBER	112262				110896				110899			
ASSOCIATED SAMPLES	112264				110897				110900			
SAMPLING DATE	05/15/93				04/27/93				04/28/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
3,3'-Dichlorobenzidine	0.010	mg/L	C	U	NA				NA			
3-Nitroaniline	0.025	mg/L	C	U	NA				NA			
4,6-Dinitro-2-methylphenol	0.025	mg/L	C	UJ	NA				NA			
4-Bromophenyl phenyl ether	0.010	mg/L	C	U	NA				NA			
4-Chloro-3-methylphenol	0.010	mg/L	C	U	NA				NA			
4-Chlorophenylphenyl ether	0.010	mg/L	C	U	NA				NA			
4-Methylphenol	0.010	mg/L	C	U	NA				NA			
4-Nitroaniline	0.025	mg/L	C	U	NA				NA			
4-Nitrophenol	0.025	mg/L	C	UJ	NA				NA			
Acenaphthene	0.010	mg/L	C	U	NA				NA			
Acenaphthylene	0.010	mg/L	C	U	NA				NA			
Anthracene	0.010	mg/L	C	U	NA				NA			
Benzo(a)anthracene	0.010	mg/L	C	U	NA				NA			
Benzo(a)pyrene	0.010	mg/L	C	U	NA				NA			
Benzo(b)fluoranthene	0.010	mg/L	C	U	NA				NA			
Benzo(g,h,i)perylene	0.010	mg/L	C	U	NA				NA			
Benzo(k)fluoranthene	0.010	mg/L	C	U	NA				NA			
Benzoic acid	0.050	mg/L	C	UJ	NA				NA			
Benzyl alcohol	0.010	mg/L	C	UJ	NA				NA			
Butyl benzyl phthalate	0.010	mg/L	C	U	NA				NA			
Carbazole	0.010	mg/L	C	U	NA				NA			
Chrysene	0.010	mg/L	C	U	NA				NA			
Di-n-butyl phthalate	0.010	mg/L	C	U	NA				NA			
Di-n-octyl phthalate	0.010	mg/L	C	UJ	NA				NA			
Dibenzo(a,h)anthracene	0.010	mg/L	C	UJ	NA				NA			
Dibenzofuran	0.010	mg/L	C	U	NA				NA			
Diethyl phthalate	0.010	mg/L	C	U	NA				NA			
Dimethyl phthalate	0.010	mg/L	C	U	NA				NA			
Fluoranthene	0.010	mg/L	C	U	NA				NA			
Fluorene	0.010	mg/L	C	U	NA				NA			
Hexachlorobenzene	0.010	mg/L	C	U	NA				NA			
Hexachlorobutadiene	0.010	mg/L	C	U	NA				NA			
Hexachlorocyclopentadiene	0.010	mg/L	C	U	NA				NA			
Hexachloroethane	0.010	mg/L	C	U	NA				NA			
Indeno(1,2,3-cd)pyrene	0.010	mg/L	C	U	NA				NA			
Isophorone	0.010	mg/L	C	U	NA				NA			
N-Nitroso-di-n-propylamine	0.010	mg/L	C	U	NA				NA			
N-Nitrosodimethylamine	0.010	mg/L	C	U	NA				NA			
N-Nitrosodiphenylamine	0.010	mg/L	C	U	NA				NA			
Naphthalene	0.010	mg/L	C	U	NA				NA			
Nitrobenzene	0.010	mg/L	C	U	NA				NA			
Pentachlorophenol	0.025	mg/L	C	U	NA				NA			

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TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	RINSATE				TRIP BLANK				TRIP BLANK			
SAMPLE NUMBER	112262				110896				110899			
ASSOCIATED SAMPLES	112264				110897				110900			
SAMPLING DATE	05/15/93				04/27/93				04/28/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Semivolatile Organics												
Phenanthrene	0.010	mg/L	C	U	NA				NA			
Phenol	0.010	mg/L	C	U	NA				NA			
Pyrene	0.010	mg/L	C	U	NA				NA			
Tributyl phosphate	0.010	mg/L	C	U	NA				NA			
bis(2-Chloroethoxy)methane	0.010	mg/L	C	U	NA				NA			
bis(2-Chloroethyl)ether	0.010	mg/L	C	U	NA				NA			
bis(2-Chloroisopropyl) ether	0.010	mg/L	C	U	NA				NA			
bis(2-Ethylhexyl) phthalate	0.010	mg/L	C	UJ	NA				NA			
p-Chloroaniline	0.010	mg/L	C	U	NA				NA			
Pesticide Organics/PCBs												
4,4'-DDD	0.000	mg/L	C	U	NA				NA			
4,4'-DDE	0.000	mg/L	C	U	NA				NA			
4,4'-DDT	0.000	mg/L	C	U	NA				NA			
Aldrin	0.000	mg/L	C	U	NA				NA			
Aroclor-1016	0.001	mg/L	C	U	NA				NA			
Aroclor-1221	0.002	mg/L	C	U	NA				NA			
Aroclor-1232	0.001	mg/L	C	U	NA				NA			
Aroclor-1242	0.001	mg/L	C	U	NA				NA			
Aroclor-1248	0.001	mg/L	C	U	NA				NA			
Aroclor-1254	0.001	mg/L	C	U	NA				NA			
Aroclor-1260	0.001	mg/L	C	U	NA				NA			
Dieldrin	0.000	mg/L	C	U	NA				NA			
Endosulfan II	0.000	mg/L	C	U	NA				NA			
Endosulfan sulfate	0.000	mg/L	C	U	NA				NA			
Endosulfan-I	0.000	mg/L	C	U	NA				NA			
Endrin	0.000	mg/L	C	U	NA				NA			
Endrin aldehyde	0.000	mg/L	C	U	NA				NA			
Endrin ketone	0.000	mg/L	C	U	NA				NA			
Heptachlor	0.000	mg/L	C	U	NA				NA			
Heptachlor epoxide	0.000	mg/L	C	U	NA				NA			
Methoxychlor	0.001	mg/L	C	U	NA				NA			
Toxaphene	0.005	mg/L	C	U	NA				NA			
alpha-BHC	0.000	mg/L	C	U	NA				NA			
alpha-Chlordane	0.000	mg/L	C	U	NA				NA			
beta-BHC	0.000	mg/L	C	U	NA				NA			
delta-BHC	0.000	mg/L	C	U	NA				NA			
gamma-BHC (Lindane)	0.000	mg/L	C	U	NA				NA			
gamma-Chlordane	0.000	mg/L	C	U	NA				NA			

TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	TRIP BLANK				TRIP BLANK				TRIP BLANK			
SAMPLE NUMBER	111995				112002				112127			
ASSOCIATED SAMPLES	112000				112003				112123, 112124, 112126			
SAMPLING DATE	04/29/93				04/28/93				05/11/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
1,1,1-Trichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1,2,2-Tetrachloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1,2-Trichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1-Dichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1-Dichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloropropane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
2-Butanone	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
2-Hexanone	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ	0.010	mg/L	C	U
4-Methyl-2-pentanone	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Acetone	0.010	mg/L	C	U	0.006	mg/L	C	U	0.010	mg/L	C	U
Benzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromodichloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromoform	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromomethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Carbon Tetrachloride	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Carbon disulfide	0.010	mg/L	C	UJ	0.010	mg/L	C	U	0.010	mg/L	C	U
Chlorobenzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloroethane	0.010	mg/L	C	UJ	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloroform	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloromethane	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ	0.010	mg/L	C	U
Dibromochloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Ethylbenzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Methylene chloride	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ	0.010	mg/L	C	U
Styrene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Tetrachloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Toluene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Trichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Vinyl Acetate	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Vinyl chloride	0.010	mg/L	C	U	0.010	mg/L	C	UJ	0.010	mg/L	C	U
Xylenes, Total	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
cis-1,3-Dichloropropene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
trans-1,3-Dichloropropene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U

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TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	TRIP BLANK				TRIP BLANK				TRIP BLANK			
SAMPLE NUMBER	112128				112154				112155			
ASSOCIATED SAMPLES	112117, 112091, 112092, 112093				112129, 112130, 112131				112129, 112130, 112131 112145, 112146, 112158			
SAMPLING DATE	05/10/93				05/12/93				05/12/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
1,1,1-Trichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1,2,2-Tetrachloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1,2-Trichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1-Dichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1-Dichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloropropane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
2-Butanone	0.010	mg/L	C	U	0.010	mg/L	C	U	0.002	mg/L	C	J
2-Hexanone	0.010	mg/L	C	U	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ
4-Methyl-2-pentanone	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Acetone	0.010	mg/L	C	U	0.010	mg/L	C	R	0.010	mg/L	C	R
Benzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromodichloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromoform	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromomethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Carbon Tetrachloride	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Carbon disulfide	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chlorobenzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloroform	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Dibromochloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Ethylbenzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Methylene chloride	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Styrene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Tetrachloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Toluene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Trichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Vinyl Acetate	0.010	mg/L	C	U	NA				NA			
Vinyl chloride	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Xylenes, Total	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
cis-1,3-Dichloropropene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
trans-1,3-Dichloropropene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U

TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	TRIP BLANK				TRIP BLANK				TRIP BLANK			
SAMPLE NUMBER	112158				112174				112182			
ASSOCIATED SAMPLES	112157				112160, 112161, 112167, 112168				112180, 112181			
SAMPLING DATE	05/13/93				05/13/93				05/14/93			
CHEMICAL PARAMETERS	TRIP BLANK RESULTS	UNITS	L	VQ	TRIP BLANK RESULTS	UNITS	L	VQ	TRIP BLANK RESULTS	UNITS	L	VQ
Volatile Organics												
1,1,1-Trichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1,2,2-Tetrachloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1,2-Trichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1-Dichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1-Dichloroethene	0.010	mg/L	C	UJ	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloropropane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
2-Butanone	0.010	mg/L	C	UJ	0.002	mg/L	C	J	0.002	mg/L	C	J
2-Hexanone	0.010	mg/L	C	UJ	0.010	mg/L	C	U	0.010	mg/L	C	U
4-Methyl-2-pentanone	0.010	mg/L	C	UJ	0.010	mg/L	C	U	0.010	mg/L	C	UJ
Acetone	0.010	mg/L	C	R	0.010	mg/L	C	U	0.010	mg/L	C	UJ
Benzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.011	mg/L	C	-
Bromodichloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromoform	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromomethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Carbon Tetrachloride	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Carbon disulfide	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chlorobenzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	UJ
Chloroform	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloromethane	0.010	mg/L	C	UJ	0.010	mg/L	C	U	0.010	mg/L	C	U
Dibromochloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Ethylbenzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Methylene chloride	0.010	mg/L	C	UJ	0.010	mg/L	C	U	0.012	mg/L	C	UJ
Styrene	0.010	mg/L	C	U	0.010	mg/L	C	UJ	0.010	mg/L	C	U
Tetrachloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Toluene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Trichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Vinyl Acetate	NA				0.010	mg/L	C	U	0.010	mg/L	C	UJ
Vinyl chloride	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	UJ
Xylenes, Total	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
cis-1,3-Dichloropropene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
trans-1,3-Dichloropropene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U

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TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	TRIP BLANK				TRIP BLANK				TRIP BLANK			
SAMPLE NUMBER	112242				112247				112253			
ASSOCIATED SAMPLES	112241				112246, 112248				112252, 112254			
SAMPLING DATE	05/12/93				05/13/93				05/14/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
1,1,1-Trichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1,2,2-Tetrachloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1,2-Trichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1-Dichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1-Dichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	UJ	0.010	mg/L	C	U
1,2-Dichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloropropane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
2-Butanone	0.010	mg/L	C	U	0.002	mg/L	C	J	0.003	mg/L	C	J
2-Hexanone	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ	0.010	mg/L	C	U
4-Methyl-2-pentanone	0.010	mg/L	C	U	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ
Acetone	0.004	mg/L	C	R	0.010	mg/L	C	R	0.010	mg/L	C	UJ
Benzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.009	mg/L	C	J
Bromodichloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromoform	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromomethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Carbon Tetrachloride	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Carbon disulfide	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chlorobenzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	UJ
Chloroform	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloromethane	0.010	mg/L	C	U	0.010	mg/L	C	UJ	0.010	mg/L	C	U
Dibromochloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Ethylbenzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Methylene chloride	0.010	mg/L	C	U	0.010	mg/L	C	UJ	0.012	mg/L	C	UJ
Styrene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Tetrachloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Toluene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Trichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Vinyl Acetate	NA				NA				0.010	mg/L	C	UJ
Vinyl chloride	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	UJ
Xylenes, Total	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
cis-1,3-Dichloropropene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
trans-1,3-Dichloropropene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U

TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	TRIP BLANK				TRIP BLANK				TRIP BLANK			
SAMPLE NUMBER	112256				112266				113302			
ASSOCIATED SAMPLES	112255, 112257, 112258, 112259				112264, 112265				113305			
SAMPLING DATE	05/14/93				05/15/93				05/10/93			
CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ	RESULTS	UNITS	L	VQ
Volatile Organics												
1,1,1-Trichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1,2,2-Tetrachloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1,2-Trichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1-Dichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,1-Dichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloroethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
1,2-Dichloropropane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
2-Butanone	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ	0.002	mg/L	C	J
2-Hexanone	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
4-Methyl-2-pentanone	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ	0.010	mg/L	C	U
Acetone	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Benzene	0.012	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromodichloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromoform	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Bromomethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Carbon Tetrachloride	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Carbon disulfide	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chlorobenzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloroethane	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ	0.010	mg/L	C	U
Chloroform	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Chloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Dibromochloromethane	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Ethylbenzene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Methylene chloride	0.010	mg/L	C	UJ	0.011	mg/L	C	U	0.010	mg/L	C	U
Styrene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	UJ
Tetrachloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Toluene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Trichloroethene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
Vinyl Acetate	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ	0.010	mg/L	C	U
Vinyl chloride	0.010	mg/L	C	UJ	0.010	mg/L	C	UJ	0.010	mg/L	C	U
Xylenes, Total	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
cis-1,3-Dichloropropene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U
trans-1,3-Dichloropropene	0.010	mg/L	C	U	0.010	mg/L	C	U	0.010	mg/L	C	U

TABLE G-13
(Continued)

PHASE II - CHEMICAL PARAMETERS

QC TYPE	TRIP BLANK
SAMPLE NUMBER	116971
ASSOCIATED SAMPLES	116970
SAMPLING DATE	06/17/93

CHEMICAL PARAMETERS	RESULTS	UNITS	L	VQ
Volatile Organics				
1,1,1-Trichloroethane	0.010	mg/L	C	U
1,1,2,2-Tetrachloroethane	0.010	mg/L	C	U
1,1,2-Trichloroethane	0.010	mg/L	C	U
1,1-Dichloroethane	0.010	mg/L	C	U
1,1-Dichloroethene	0.010	mg/L	C	U
1,2-Dichloroethane	0.010	mg/L	C	U
1,2-Dichloroethene	0.010	mg/L	C	U
1,2-Dichloropropane	0.010	mg/L	C	U
2-Butanone	0.010	mg/L	C	UJ
2-Hexanone	0.010	mg/L	C	R
4-Methyl-2-pentanone	0.010	mg/L	C	R
Acetone	0.010	mg/L	C	R
Benzene	0.010	mg/L	C	U
Bromodichloromethane	0.010	mg/L	C	U
Bromoform	0.010	mg/L	C	U
Bromomethane	0.010	mg/L	C	U
Carbon Tetrachloride	0.010	mg/L	C	U
Carbon disulfide	0.010	mg/L	C	R
Chlorobenzene	0.010	mg/L	C	U
Chloroethane	0.010	mg/L	C	UJ
Chloroform	0.010	mg/L	C	U
Chloromethane	0.010	mg/L	C	U
Dibromochloromethane	0.010	mg/L	C	U
Ethylbenzene	0.010	mg/L	C	U
Methylene chloride	0.010	mg/L	C	UJ
Styrene	0.010	mg/L	C	U
Tetrachloroethene	0.010	mg/L	C	U
Toluene	0.010	mg/L	C	U
Trichloroethene	0.010	mg/L	C	U
Vinyl chloride	0.010	mg/L	C	U
Xylenes, Total	0.010	mg/L	C	U
cis-1,3-Dichloropropene	0.010	mg/L	C	U
trans-1,3-Dichloropropene	0.010	mg/L	C	U

TABLE G-14

TABLE G-14

ACTIVE FLYASH PILE
ON-SITE LABORATORY SCREENING RESULTS
PHASE II FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION

SURFACE WATER SCREENING SAMPLES

Location	Sample No.	Description	Date Collected	Total U (μg/L)
AFP-SW-02	112245	Surface Water	5/13/93	3.4

GROUNDWATER SCREENING SAMPLES

Well/Boring	Sample No.	Description	Date Collected	Total U (μg/L)
1045	112001	Existing Monitoring Well	4/29/93	2.8
1045	112005	Existing Monitoring Well	4/29/93	3.0
1048	111997	Existing Monitoring Well	4/28/93	34
2045	112004	Existing Monitoring Well	4/28/93	400
2048	110898	Existing Monitoring Well	4/27/93	1.3
2049	113307	Existing Monitoring Well	5/10/93	120
21033	116972	New Monitoring Well	6/17/93	43

TABLE G-15

TABLE G-15A

ACTIVE FLYASH PILE
FEMP LABORATORY SCREENING DATA RESULTS
ACTIVITY CONCENTRATIONS OF CIS PROFILE SAMPLES
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Begin - End Depth (feet)	Radionuclide	Qualifier[a]	Activity Concentrations (pCi/g)	Uncertainty Value (pCi/g)
		BOREHOLE 25-01		
0 - 2	Radium-226		4.30	0.90
0 - 2	Thorium-232	<[b]	1.80	NA[c]
0 - 2	Uranium-238	<	8.10	NA
2 - 3	Radium-226		3.00	0.40
2 - 3	Thorium-232	<	1.10	NA
2 - 3	Uranium-238	<	6.60	NA
3 - 4	Radium-226		0.50	0.40
3 - 4	Thorium-232	<	1.80	NA
3 - 4	Uranium-238	<	3.80	NA
4 - 5	Radium-226	<	0.80	NA
4 - 5	Thorium-232		0.40	0.30
4 - 5	Uranium-238	<	2.50	NA
5 - 6	Radium-226	<	0.40	NA
5 - 6	Thorium-232		0.50	0.20
5 - 6	Uranium-238	<	5.10	NA
6 - 7	Radium-226	<	0.50	NA
6 - 7	Thorium-232	<	1.20	NA
6 - 7	Uranium-238	<	5.70	NA
7 - 8	Radium-226	<	0.80	NA
7 - 8	Thorium-232		0.80	0.50
7 - 8	Uranium-238	<	7.00	NA

[a]Laboratory Qualifiers, no data validation was performed on screening data.
[b]< = Less than
[c]NA - Not Applicable

TABLE G-15B

ACTIVE FLYASH PILE
CIS FIDLER SURFACE READINGS
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Coordinates		
North	East	Reading (CPM)
477147.84	1379675.50	4110.00
477197.81	1379676.88	2958.00
477347.75	1379681.00	4461.00
477397.75	1379682.38	3901.00
477447.72	1379683.75	4162.00
477497.72	1379685.13	3904.00
477547.69	1379686.50	4410.00
477597.66	1379687.88	4317.00
477146.47	1379725.50	13847.00
477146.47	1379725.50	14036.00
477152.72	1379725.63	14151.00
477158.97	1379725.88	14337.00
477165.22	1379726.00	14029.00
477171.47	1379726.13	10192.00
477196.44	1379726.88	7808.00
477071.31	1379729.63	9199.00
477077.56	1379729.88	9951.00
477083.81	1379730.00	10910.00
477090.06	1379730.25	10939.00
477096.31	1379730.38	11939.00
477146.31	1379731.75	13453.00
477152.53	1379731.88	16757.00
477158.78	1379732.13	14085.00
477165.03	1379732.25	9217.00
477171.28	1379732.38	8619.00
477496.34	1379735.00	4134.00
477071.16	1379735.88	9694.00
477077.41	1379736.13	10381.00
477083.66	1379736.25	11321.00
477546.31	1379736.38	4261.00
477089.91	1379736.50	13304.00
477096.16	1379736.63	12346.00
477596.31	1379737.75	3363.00

TABLE G-15B
(Continued)

Coordinates		
North	East	Reading (CPM)
477146.13	1379738.00	14852.00
477152.38	1379738.13	15707.00
477158.63	1379738.38	13453.00
477164.88	1379738.50	12606.00
477171.13	1379738.63	11462.00
477071.00	1379742.13	11364.00
477077.22	1379742.38	11451.00
477083.47	1379742.50	12904.00
477089.72	1379742.75	13978.00
477095.97	1379742.88	12686.00
477145.97	1379744.25	15278.00
477152.22	1379744.38	14899.00
477158.44	1379744.63	14335.00
477164.69	1379744.75	13994.00
477170.94	1379744.88	10773.00
477071.50	1379723.38	9885.00
477077.75	1379723.63	9199.00
477084.00	1379723.75	10409.00
477090.25	1379724.00	11030.00
477096.50	1379724.13	9662.00
477096.50	1379724.13	10158.00
477070.81	1379748.38	12171.00
477077.06	1379748.63	12321.00
477083.31	1379748.75	12858.00
477089.56	1379748.88	13762.00
477095.81	1379749.13	12998.00
477145.78	1379750.50	14768.00
477152.03	1379750.63	15504.00
477158.28	1379750.88	12935.00
477164.53	1379751.00	13216.00
477170.78	1379751.13	10001.00
477177.03	1379751.38	8421.00
477183.28	1379751.50	8487.00
477189.53	1379751.63	9688.00
477170.59	1379757.38	12220.00
477176.84	1379757.63	10990.00
477183.09	1379757.75	10527.00

TABLE G-15B
(Continued)

Coordinates		
North	East	Reading (CPM)
477170.44	1379763.63	11698.00
477176.69	1379763.88	10910.00
477182.94	1379764.00	12391.00
477170.25	1379769.88	12296.00
477176.50	1379770.13	13044.00
477182.75	1379770.25	14025.00
477045.13	1379772.75	11923.00
477095.13	1379774.13	12228.00
477095.13	1379774.13	12245.00
477107.63	1379774.50	13794.00
477113.88	1379774.63	13857.00
477120.13	1379774.75	13393.00
477145.09	1379775.50	13772.00
477170.09	1379776.13	13044.00
477176.34	1379776.38	13168.00
477094.94	1379780.38	11868.00
477101.19	1379780.50	12025.00
477107.44	1379780.63	13637.00
477113.69	1379780.88	14151.00
477119.94	1379781.00	13762.00
477094.78	1379786.63	14609.00
477101.03	1379786.75	13762.00
477107.28	1379786.88	15425.00
477113.53	1379787.13	12321.00
477119.78	1379787.25	13016.00
477094.59	1379792.88	12876.00
477100.84	1379793.00	13762.00
477107.09	1379793.13	13187.00
477113.34	1379793.38	11742.00
477119.59	1379793.50	13304.00
477094.44	1379799.13	12501.00
477100.69	1379799.25	13825.00
477106.94	1379799.38	13484.00
477113.19	1379799.63	15048.00
477119.44	1379799.75	14789.00
477144.41	1379800.50	14789.00
477150.66	1379800.63	16086.00

TABLE G-15B
(Continued)

Coordinates		
North	East	Reading (CPM)
477156.91	1379800.75	15707.00
477163.16	1379801.00	15464.00
477169.41	1379801.13	13857.00
477144.25	1379806.75	14706.00
477150.50	1379806.88	14609.00
477156.75	1379807.00	14122.00
477163.00	1379807.25	12998.00
477169.25	1379807.38	13514.00
477144.06	1379813.00	9662.00
477150.31	1379813.13	11174.00
477156.56	1379813.25	10249.00
477162.81	1379813.50	8087.00
477169.06	1379813.63	10453.00
477143.91	1379819.25	7128.00
477150.16	1379819.38	8231.00
477156.41	1379819.50	8646.00
477162.66	1379819.75	9616.00
477168.91	1379819.88	9934.00
477018.78	1379822.00	11153.00
477025.03	1379822.25	9346.00
477031.28	1379822.38	11835.00
477037.53	1379822.50	8719.00
477043.78	1379822.75	9173.00
477043.78	1379822.75	9434.00
477068.75	1379823.38	10792.00
477075.00	1379823.63	12296.00
477081.25	1379823.75	11439.00
477087.50	1379823.88	10545.00
477093.75	1379824.13	10096.00
477093.75	1379824.13	9984.00
477143.72	1379825.50	6719.00
477143.72	1379825.50	7002.00
477149.97	1379825.63	8276.00
477156.22	1379825.75	7510.00
477162.47	1379826.00	9853.00
477168.72	1379826.13	9858.00
477018.63	1379828.25	10453.00

TABLE G-15B
(Continued)

Coordinates		
North	East	Reading (CPM)
477024.84	1379828.50	8120.00
477031.09	1379828.63	8760.00
477037.34	1379828.75	9175.00
477043.59	1379829.00	10435.00
477068.59	1379829.63	11549.00
477074.84	1379829.88	11561.00
477081.09	1379830.00	10959.00
477087.34	1379830.13	8087.00
477093.59	1379830.38	9741.00
477143.56	1379831.75	6536.00
477149.81	1379831.88	6452.00
477156.06	1379832.00	9213.00
477162.31	1379832.25	10811.00
477018.44	1379834.50	10187.00
477024.69	1379834.75	8022.00
477030.94	1379834.88	7076.00
477037.19	1379835.00	7248.00
477493.59	1379835.00	8051.00
477043.44	1379835.25	8621.00
477068.41	1379835.88	11195.00
477074.66	1379836.00	10870.00
477080.91	1379836.25	8309.00
477087.16	1379836.38	9662.00
477093.41	1379836.63	9199.00
477143.41	1379838.00	6648.00
477149.63	1379838.13	6404.00
477155.88	1379838.25	8449.00
477162.13	1379838.50	9649.00
477018.28	1379840.75	9757.00
477024.50	1379841.00	11473.00
477030.75	1379841.13	12904.00
477037.00	1379841.25	9105.00
477043.25	1379841.50	10102.00
477068.25	1379842.13	11407.00
477074.50	1379842.25	9984.00
477080.75	1379842.50	7916.00
477087.00	1379842.63	10051.00

TABLE G-15B
(Continued)

Coordinates		
North	East	Reading (CPM)
477093.25	1379842.88	9023.00
477143.22	1379844.25	7084.00
477149.47	1379844.38	6623.00
477155.72	1379844.50	7548.00
477161.97	1379844.75	9023.00
477018.09	1379847.00	12073.00
477024.34	1379847.25	12501.00
477030.59	1379847.38	11268.00
477036.84	1379847.50	12501.00
477043.09	1379847.75	9464.00
477068.06	1379848.38	10274.00
477074.31	1379848.50	8942.00
477080.56	1379848.75	9555.00
477086.81	1379848.88	9646.00
477093.06	1379849.13	10136.00
477105.56	1379849.38	11606.00
477111.81	1379849.63	7979.00
477118.06	1379849.75	8119.00
477143.06	1379850.38	8684.00
477149.31	1379850.63	9489.00
477155.53	1379850.75	8621.00
477105.41	1379855.63	9984.00
477111.66	1379855.88	8824.00
477117.88	1379856.00	8142.00
477092.72	1379861.63	11584.00
477098.97	1379861.75	12059.00
477105.22	1379861.88	10753.00
477111.47	1379862.13	11364.00
477117.72	1379862.25	10601.00
477092.56	1379867.75	11549.00
477098.81	1379868.00	11407.00
477105.06	1379868.13	11343.00
477111.31	1379868.38	11451.00
477117.53	1379868.50	11112.00
477042.41	1379872.75	7499.00
477092.38	1379874.00	11835.00
477092.38	1379874.00	11733.00

TABLE G-15B
(Continued)

Coordinates		
North	East	Reading (CPM)
477098.63	1379874.25	11236.00
477104.88	1379874.38	11939.00
477111.13	1379874.63	12821.00
477117.38	1379874.75	12606.00
477142.38	1379875.38	10851.00
477492.25	1379885.00	8003.00
477004.22	1379896.63	8242.00
477010.47	1379896.88	7634.00
477016.72	1379897.00	6704.00
477022.97	1379897.13	12932.00
477029.22	1379897.38	6727.00
477035.47	1379897.50	7409.00
477041.72	1379897.63	9246.00
477091.69	1379899.00	11195.00
477097.94	1379899.25	11050.00
477104.19	1379899.38	11868.00
477110.44	1379899.63	12296.00
477116.69	1379899.75	12932.00
477122.94	1379899.88	13334.00
477129.19	1379900.13	12220.00
477135.44	1379900.25	13216.00
477141.69	1379900.38	14229.00
477147.94	1379900.63	14899.00
477154.19	1379900.75	13954.00
477160.44	1379900.88	15076.00
477010.31	1379903.13	9376.00
477016.56	1379903.25	13453.00
477022.81	1379903.38	13072.00
477029.06	1379903.63	7539.00
477035.31	1379903.75	8558.00
477041.56	1379903.88	7078.00
477091.53	1379905.25	10601.00
477097.78	1379905.50	9967.00
477104.03	1379905.63	12475.00
477110.28	1379905.75	11517.00
477116.53	1379906.00	11549.00
477122.78	1379906.13	13514.00

TABLE G-15B
(Continued)

Coordinates		
North	East	Reading (CPM)
477129.03	1379906.38	11407.00
477135.25	1379906.50	13393.00
477141.50	1379906.63	13453.00
477147.75	1379906.88	14706.00
477154.00	1379907.00	13606.00
477160.25	1379907.13	13606.00
477003.91	1379909.13	9010.00
477010.13	1379909.38	8808.00
477016.38	1379909.50	14151.00
477022.63	1379909.63	10831.00
477028.88	1379909.88	7372.00
477035.13	1379910.00	9459.00
477041.38	1379910.13	6750.00
477091.34	1379911.50	7854.00
477097.59	1379911.75	8511.00
477103.84	1379911.88	8824.00
477110.09	1379912.00	10129.00
477116.34	1379912.25	10870.00
477122.59	1379912.38	9464.00
477128.84	1379912.63	11364.00
477135.09	1379912.75	14564.00
477141.34	1379912.88	13393.00
477147.59	1379913.13	13334.00
477153.84	1379913.25	14538.00
477160.09	1379913.38	13762.00
477003.72	1379915.38	10338.00
477009.97	1379915.63	13334.00
477016.22	1379915.75	17658.00
477022.47	1379915.88	7372.00
477028.72	1379916.13	6773.00
477034.97	1379916.25	8903.00
477041.22	1379916.38	7793.00
477091.19	1379917.75	7328.00
477097.44	1379918.00	7916.00
477103.69	1379918.13	7958.00
477109.94	1379918.25	9549.00
477116.19	1379918.50	9879.00

TABLE G-15B
(Continued)

Coordinates		
North	East	Reading (CPM)
477122.44	1379918.63	9083.00
477134.91	1379919.00	10715.00
477141.16	1379919.13	10381.00
477147.41	1379919.38	13168.00
477153.66	1379919.50	12220.00
477159.91	1379919.63	13275.00
477003.56	1379921.63	14365.00
477009.81	1379921.88	11798.00
477016.03	1379922.00	12632.00
477022.28	1379922.13	7409.00
477028.53	1379922.38	7906.00
477034.78	1379922.50	7454.00
477041.03	1379922.63	6765.00
477041.03	1379922.63	7203.00
477091.03	1379924.00	6588.00
477091.03	1379924.00	6750.00
477097.25	1379924.25	7539.00
477103.50	1379924.38	8379.00
477109.75	1379924.50	10085.00
477116.00	1379924.75	9837.00
477122.25	1379924.88	9951.00
477128.50	1379925.13	8572.00
477134.75	1379925.25	9274.00
477141.00	1379925.38	9555.00
477141.00	1379925.38	9716.00
477147.25	1379925.63	8850.00
477153.50	1379925.75	10527.00
477159.75	1379925.88	13987.00
477003.38	1379927.88	12632.00
477009.63	1379928.13	17008.00
477015.88	1379928.25	9303.00
477440.88	1379933.63	16714.00
477440.88	1379933.63	15944.00
477447.13	1379933.75	13857.00
477453.38	1379934.00	8634.00
477003.22	1379934.13	30770.00
477459.63	1379934.13	7844.00

TABLE G-15B
(Continued)

Coordinates		
North	East	Reading (CPM)
477465.88	1379934.25	8671.00
477009.47	1379934.38	13731.00
477015.69	1379934.50	7300.00
477490.88	1379935.00	8669.00
477440.72	1379939.88	15152.00
477446.97	1379940.00	13334.00
477453.22	1379940.25	8451.00
477003.03	1379940.38	23448.00
477459.47	1379940.38	8197.00
477009.28	1379940.50	11439.00
477465.72	1379940.50	8463.00
477015.53	1379940.75	7875.00
477440.53	1379946.13	14706.00
477446.78	1379946.25	10187.00
477453.03	1379946.50	8721.00
477002.88	1379946.63	12459.00
477459.28	1379946.63	8619.00
477009.13	1379946.75	8824.00
477465.53	1379946.75	7937.00
477015.38	1379947.00	7472.00
477440.38	1379952.38	10257.00
477446.63	1379952.50	10453.00
477452.88	1379952.75	8511.00
477002.69	1379952.88	11953.00
477459.13	1379952.88	9050.00
477008.94	1379953.00	9555.00
477465.38	1379953.00	8416.00
477015.19	1379953.25	8345.00
477433.97	1379958.38	10939.00
477440.19	1379958.63	9050.00
477446.44	1379958.75	9023.00
476996.28	1379959.00	9161.00
477452.69	1379959.00	9274.00
477002.53	1379959.13	9489.00
477458.94	1379959.13	9129.00
477008.78	1379959.25	9570.00
477465.19	1379959.25	9317.00

TABLE G-15B
(Continued)

Coordinates		
North	East	Reading (CPM)
477015.03	1379959.50	9037.00
477427.53	1379964.50	1169.00
477433.78	1379964.63	9376.00
477440.03	1379964.88	10085.00
477002.34	1379965.38	10129.00
477008.59	1379965.50	9010.00
477014.84	1379965.75	8916.00
477427.38	1379970.75	11407.00
477433.63	1379970.88	9489.00
477439.88	1379977.13	9585.00
477002.19	1379971.63	11112.00
477008.44	1379971.75	9037.00
477014.69	1379972.00	8671.00
477039.66	1379972.63	10145.00
477089.66	1379974.00	8171.00
477139.63	1379975.38	7595.00
477420.94	1379976.88	13575.00
477427.19	1379977.00	10696.00
477433.44	1379977.13	10274.00
477439.69	1379977.38	9885.00
477420.78	1379983.13	14286.00
477427.03	1379983.25	10345.00
477433.28	1379983.38	10959.00
477439.53	1379983.63	10017.00
477439.53	1379983.63	10140.00
477489.50	1379985.00	7957.00
477420.59	1379989.38	15874.00
477426.84	1379989.50	12073.00
477433.09	1379989.63	10910.00
477439.34	1379989.88	9741.00
477414.19	1379995.38	15385.00
477420.44	1379995.63	13987.00
477426.69	1379995.75	10564.00
477432.94	1379995.88	10187.00
477439.19	1379996.13	9231.00
477414.00	1380001.63	16359.00
477420.25	1380001.88	10102.00

TABLE G-15B
(Continued)

Coordinates		
North	East	Reading (CPM)
477426.50	1380002.00	10792.00
477432.75	1380002.13	9647.00
477439.00	1380002.38	10310.00
477413.84	1380007.88	14670.00
477420.09	1380008.13	11321.00
477426.34	1380008.25	10409.00
477432.59	1380008.38	9494.00
477438.84	1380008.63	9984.00
477038.31	1380022.63	8795.00
477088.28	1380024.00	9238.00
477138.25	1380025.38	6951.00
477438.16	1380033.63	9431.00
477488.13	1380035.00	9743.00
477012.63	1380047.00	10472.00
477018.88	1380047.13	10583.00
477025.13	1380047.25	10051.00
477031.38	1380047.50	9601.00
477037.63	1380047.63	8696.00
477012.47	1380053.25	9967.00
477018.69	1380053.38	11584.00
477024.94	1380053.50	13575.00
477031.19	1380053.75	9199.00
477037.44	1380053.88	8379.00
477012.28	1380059.38	11905.00
477018.53	1380059.63	11300.00
477024.78	1380059.75	10205.00
477031.03	1380060.00	9902.00
477037.28	1380060.13	9798.00
477012.13	1380065.63	11549.00
477018.38	1380065.88	10649.00
477024.59	1380066.00	11289.00
477030.84	1380066.25	10671.00
477037.09	1380066.38	9688.00
477011.94	1380071.88	12321.00
477018.19	1380072.13	11132.00
477024.44	1380072.25	11439.00
477030.69	1380072.50	10257.00

TABLE G-15B
(Continued)

Coordinates		
North	East	Reading (CPM)
477036.94	1380072.63	9837.00
477086.91	1380074.00	8480.00
477136.91	1380075.38	7814.00
477186.88	1380076.75	10331.00
477386.81	1380082.25	10080.00
477436.78	1380083.50	10214.00
477386.13	1380107.13	9010.00
477392.38	1380107.38	9694.00
477398.63	1380107.50	9773.00
477404.88	1380107.75	9346.00
477411.09	1380107.88	8979.00
477385.94	1380113.38	9725.00
477392.19	1380113.63	9459.00
477398.44	1380113.75	9934.00
477404.69	1380114.00	9631.00
477410.94	1380114.13	9303.00
477385.78	1380119.63	9928.00
477392.03	1380119.88	9757.00
477398.28	1380120.00	9694.00
477398.28	1380120.00	9694.00
477404.53	1380120.25	9885.00
477410.75	1380120.38	10564.00
477085.53	1380124.00	7738.00
477135.53	1380125.38	8573.00
477385.59	1380125.88	9719.00
477391.84	1380126.13	9902.00
477398.09	1380126.25	9688.00
477404.34	1380126.50	10490.00
477410.59	1380126.63	10518.00
477185.50	1380126.75	10688.00
477235.50	1380128.13	10525.00
477235.50	1380128.13	11473.00
477241.75	1380128.25	10811.00
477335.44	1380130.75	9930.00
477385.44	1380132.13	9037.00
477385.44	1380132.13	9037.00
477391.69	1380132.38	9376.00

TABLE G-15B
(Continued)

Coordinates		
North	East	Reading (CPM)
477397.94	1380132.50	11742.00
477404.19	1380132.63	13187.00
477410.44	1380132.88	10959.00
477235.31	1380134.38	10222.00
477241.56	1380134.50	10187.00
477247.81	1380134.63	10601.00
477254.06	1380134.88	10417.00
477260.31	1380135.00	10034.00
477266.56	1380135.13	10850.00
477272.81	1380135.38	10858.00
477385.25	1380138.38	9037.00
477391.50	1380138.63	9524.00
477397.75	1380138.75	10792.00
477404.00	1380138.88	13364.00
477410.25	1380139.13	14468.00
477235.16	1380140.63	9820.00
477241.41	1380140.75	9729.00
477247.66	1380140.88	10792.00
477253.88	1380141.13	10696.00
477260.13	1380141.25	10831.00
477266.38	1380141.38	10102.00
477272.63	1380141.63	10850.00
477278.88	1380141.75	10696.00
477285.13	1380141.88	11132.00
477391.34	1380144.88	9798.00
477397.59	1380145.00	9376.00
477234.97	1380146.88	9820.00
477241.22	1380147.00	9725.00
477247.47	1380147.13	10620.00
477253.72	1380147.38	9298.00
477259.97	1380147.50	10696.00
477266.22	1380147.63	10363.00
477272.47	1380147.88	10435.00
477278.72	1380148.00	10677.00
477284.97	1380148.13	9303.00
477234.81	1380153.00	10292.00
477241.06	1380153.25	10292.00

TABLE G-15B
(Continued)

Coordinates		
North	East	Reading (CPM)
477247.31	1380153.38	10338.00
477253.56	1380153.63	10734.00
477259.78	1380153.75	10338.00
477266.03	1380153.88	8996.00
477272.28	1380154.13	10310.00
477278.53	1380154.25	9928.00
477284.78	1380154.38	9129.00
477234.13	1380178.00	10285.00

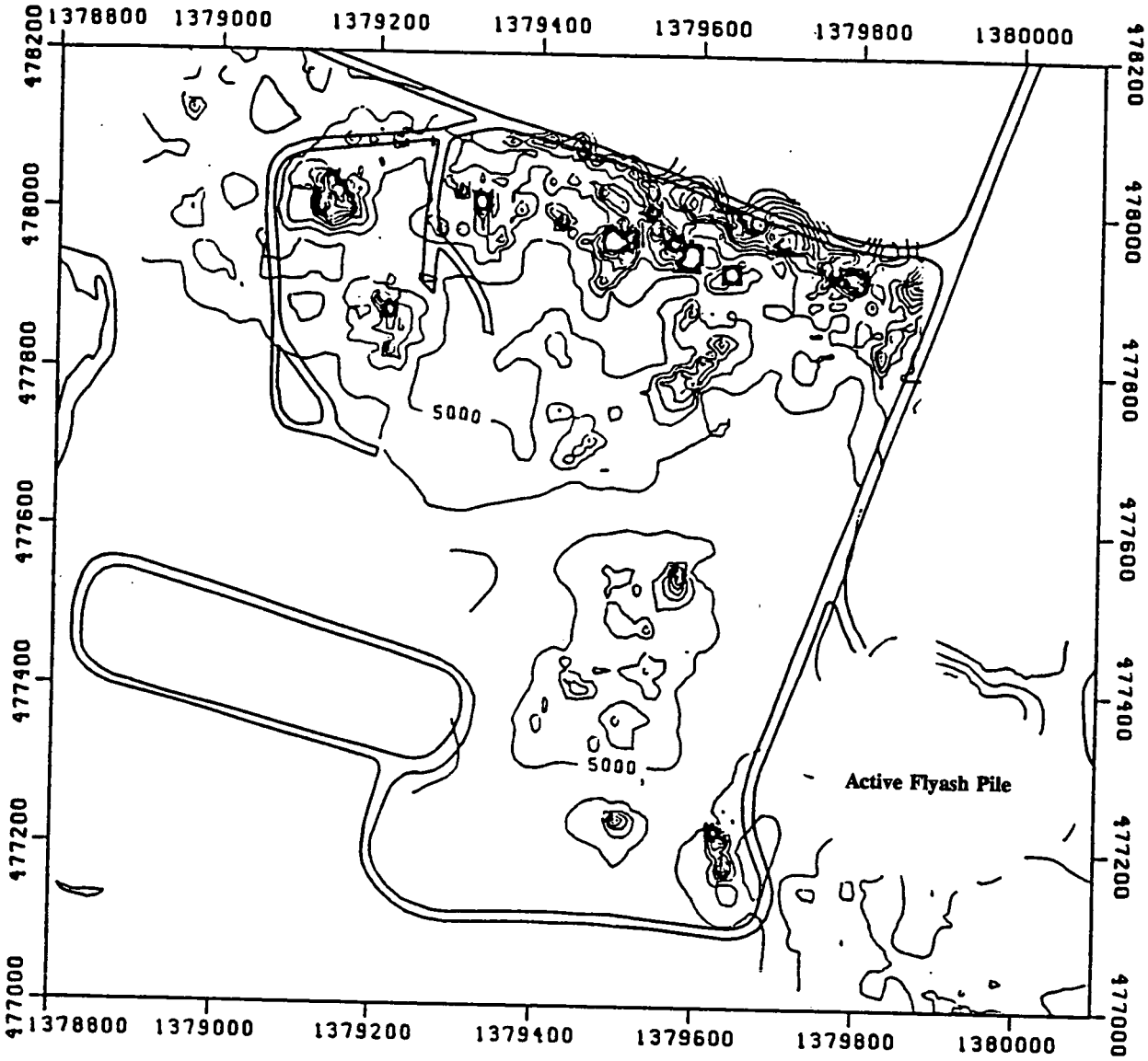
TABLE G-15C

ACTIVE FLYASH PILE
CIS EXPOSURE RATE SURFACE MEASUREMENTS
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Coordinates		
North	East	Reading (microR/HR)
477293.69	1379829.50	14.00
477293.69	1379829.50	15.00
477493.59	1379835.00	13.86
477093.75	1379824.13	14.34
477288.22	1380029.50	15.57

FIGURE G-15A

CIS FIDLER MEASUREMENT CONTOURS

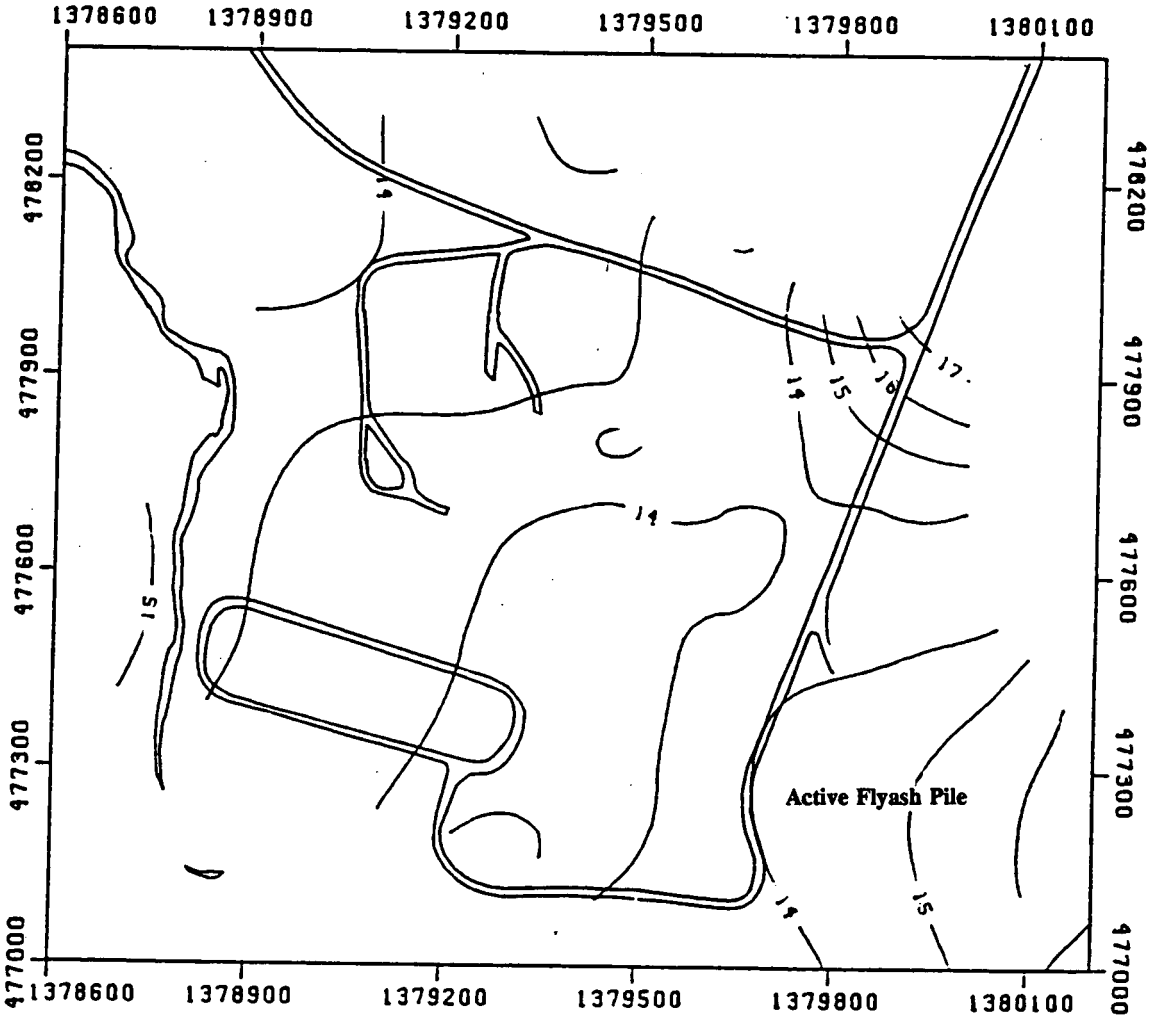


STATE PLANE COORDINATE SYSTEM

OHIO SOUTH ZONE

1 INCH = 225 FEET

FIGURE G-15B
CIS EXPOSURE RATE CONTOURS



STATE PLANE

COORDINATE SYSTEM

OHIO SOUTH ZONE

1 INCH = 300 FEET

TABLE G-16

TABLE G-16A

GEOTECHNICAL ANALYSIS
ACTIVE FLYASH PILE
PHASE I FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION

SURFACE SAMPLES

Location	Wet Density (pcf)[a]	Dry Density (pcf)	Moisture Content (%)
#1	74.3	65.8	13.0
#2	51.7	49.0	5.5
#3	68.8	65.5	5.1

SUBSURFACE SAMPLES

Analysis	Grain Size (mm)	Samples From Location 1724	
		67199	67220
Moisture Conent (%)		24.9	29.8
Specific Gravity		2.2488	2.2316
Percent Passing by Sieve Analysis	75	100	100
	37.5	100	100
	19	100	100
	9.5	92.6	99.5
	4.75	87.9	93.3
	2.0	77.9	84.2
	0.85	64.1	73.5
	0.425	53.5	65.2
	0.25	45.3	58.3
	0.106	32.7	46.0
	0.075	28.8	41.8
Percent Passing by Hydrometer Analysis	0.0648	40.5	45.3
	0.0480	35.0	-[b]
	0.0349	29.5	-
	0.0345	-	33.1
	0.0224	24.1	-
	0.0189	-	26.5
	0.0135	15.3	-

See footnotes at end of table

TABLE G-16A
(Continued)

SUBSURFACE SAMPLES
(Continued)

Analysis	Grain Size (mm)	Samples From Location 1724	
		67199	67220
Percent Passing by Hydrometer Analysis (Continued)	0.0133	-	19.9
	0.0098	9.8	-
	0.0097	-	14.3
	0.0070	6.6	-
	0.0069	-	9.9
	0.0049	4.4	6.6
	0.0035	1.1	3.3
	0.0015	-	0.0
	0.0014	0.0	-

[a]pounds per cubic foot

[b]Not analyzed for that grain size

TABLE G-16B

ACTIVE FLYASH PILE
GEOTECHNICAL ANALYSIS
PHASE II FIELD INVESTIGATION
OPERBLE UNIT 2 REMEDIAL INVESTIGATION

Location	Sample No.	Date Sampled	Sample Interval (ft)[a]	Specific Gravity	Moisture Content (%)	Bulk Density Unit Weight (pcf)[b]	Dry Density (pcf)	Atterberg Limits			Permeability (cm/s)[c]	Wet Density (pcf)
								Liquid Limit	Plastic Limit	Plasticity Index		
AFP-SS-01	112260	5/14/93	0.0-0.5	-[d]	29.2	-	-	-	-	-	-	-
1979	112094	5/10/93	4.0-6.0	-	-	63.6	49.4	-	-	-	-	-
	112095	5/10/93	6.0-8.0	-	35.7	-	-	-	-	-	-	-
	112122	5/10/93	24.0-25.5	-	34.4	-	-	-	-	-	-	-
	112125	5/11/93	27.5-29.5	2.7395	10.4	-	-	24	13	11	-	-
1980	112142	5/12/93	9.0-11.0	-	-	74.1	55.6	-	-	-	-	-
	112144	5/12/93	13.0-15.0	-	30.2	-	-	-	-	-	-	-
	112156	5/13/93	22.0-24.0	2.3079	21.7	-	-	25	18	7	-	-
1981	112162	5/13/93	4.0-6.0	-	-	57.4	48.5	-	-	-	-	-
	112179	5/14/93	16.0-17.0	-	48.4	-	-	-	-	-	-	-

[a]The sample interval is depth, in feet, below the ground surface.

[b]pound per cubic foot

[c]centimeters per second

[d]The sample was not analyzed for this parameter.

FER\CRU2RI\JLG\TABG-16B\January 4, 1995 6:20pm

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TABLE G-16C

ACTIVE FLYASH PILE
SIEVE ANALYSIS - ASTM D 422
PHASE II FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION

Location	Sample No.	Date Sampled	Sample Depth (ft)	Classification[a]	Sieve Analysis (% Passing Sieve No.)											
					3"	1.5"	0.75"	0.375"	#4	#10	#20	#40	#60	#100	#140	#200
AFP-SS-01	112260	5/14/93	0.0-0.5	SM or SC	100	100	100	100	97.8	91.1	72.1	58.8	50.1	41.5	36.5	32.4
AFP-SS-01	112263	5/15/93	NDD[b]	SM or SC	100	100	100	100	98.4	90.7	71.8	58.2	48.5	39.6	34.7	31.2
1979	112095	5/10/93	6.0-8.0	SM or SC	100	100	100	100	99.6	96.3	77.2	65.2	56.9	49.6	44.8	40.4
	112122	5/10/93	24.0-25.5	SM or SC	100	100	100	100	98.1	91.2	74.9	63.5	55.8	48.5	44.4	41.0
	112125	5/11/93	27.5-29.5	CL	100	100	95.1	90.6	87.4	82.8	78.5	73.8	69.3	65.0	62.5	60.3
1980	112144	5/12/93	13.0-15.0	SM or SC	100	100	100	100	99.3	94.2	72.4	60.4	52.1	45.0	40.4	36.1
	112156	5/13/93	22.0-24.0	CL-ML	100	100	100	100	100	99.3	98.0	96.4	95.1	93.3	92.1	90.9
1981	112179	5/14/93	16.0-17.0	SM or SC	100	100	100	100	99.5	96.0	76.1	60.2	49.4	41.1	36.2	32.0

[a]Unified Soil Classification System (USCS)
SM = silty sands, sand-silt mixtures
SC = clayey sands, sand-clay mixtures
ML = inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity
CL = inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays

[b]NDD - No Depth Designated

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TABLE G-16D

ACTIVE FLYASH PILE
HYDROMETER ANALYSIS - ASTM D 422
PHASE II FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION

LOCATION: AFP-SS-01 SAMPLE NO.: 112260 DEPTH: 0.0-0.5 ft.

Particle Diameter (mm)	0.04747	0.03422	0.02205	0.01291	0.00932	0.00666	0.00469	0.00322	0.00136
Percent Finer	26.8	21.8	16.7	10.9	6.7	3.3	0.8	0.0	0.0

LOCATION: AFP-SD-01 SAMPLE NO.: 112263 DEPTH: None Designated

Particle Diameter (mm)	0.04803	0.03428	0.02205	0.01291	0.00932	0.00664	0.00496	0.00322	0.00136
Percent Finer	25.3	22.6	18.1	11.7	7.2	4.5	1.8	0.0	0.0

LOCATION: 1979 SAMPLE NO.: 112095 DEPTH: 6.0-8.0 ft.

Particle Diameter (mm)	0.04690	0.03389	0.02189	0.01305	0.00936	0.00661	0.00470	0.00322	0.00136
Percent Finer	34.1	27.5	20.9	10.4	5.7	2.8	0.0	0.0	0.0

LOCATION: 1979 SAMPLE NO.: 112122 DEPTH: 24.0-25.5 ft.

Particle Diameter (mm)	0.06248	0.04537	0.03290	0.02123	0.01275	0.00916	0.00647	0.00463	0.00319	0.00136
Percent Finer	39.7	33.7	28.5	24.0	14.2	10.5	7.5	4.5	3.0	0.7

TABLE G-16D
(Continued)

LOCATION: 1979 SAMPLE NO.: 112125 DEPTH: 27.5-29.5 ft.

Particle Diameter (mm)	0.05764	0.04086	0.02977	0.02132	0.01290	0.00908	0.00644	0.00457	0.00315	0.00133
Percent Finer	53.2	52.4	47.0	20.0	7.7	6.2	4.6	3.9	2.3	1.5

LOCATION: 1980 SAMPLE NO.: 112144 DEPTH: 13.0-15.0 ft.

Particle Diameter (mm)	0.04709	0.03549	0.02292	0.01341	0.00950	0.00673	0.00470	0.00322	0.00136
Percent Finer	27.0	11.1	4.8	1.6	0.8	0.0	0.0	0.0	0.0

LOCATION: 1980 SAMPLE NO.: 112156 DEPTH: 22.0-24.0 ft.

Particle Diameter (mm)	0.03880	0.02845	0.02178	0.01390	0.01024	0.00729	0.00515	0.00355	0.00154
Percent Finer	95.6	90.1	54.1	28.8	16.2	14.4	10.8	9.0	8.1

LOCATION: 1981 SAMPLE NO.: 112179 DEPTH: 16.0-17.0 ft.

Particle Diameter (mm)	0.04803	0.03448	0.02205	0.01305	0.00934	0.00666	0.00469	0.00322	0.00136
Percent Finer	26.5	21.7	18.9	10.4	6.6	3.8	1.9	0.0	0.0

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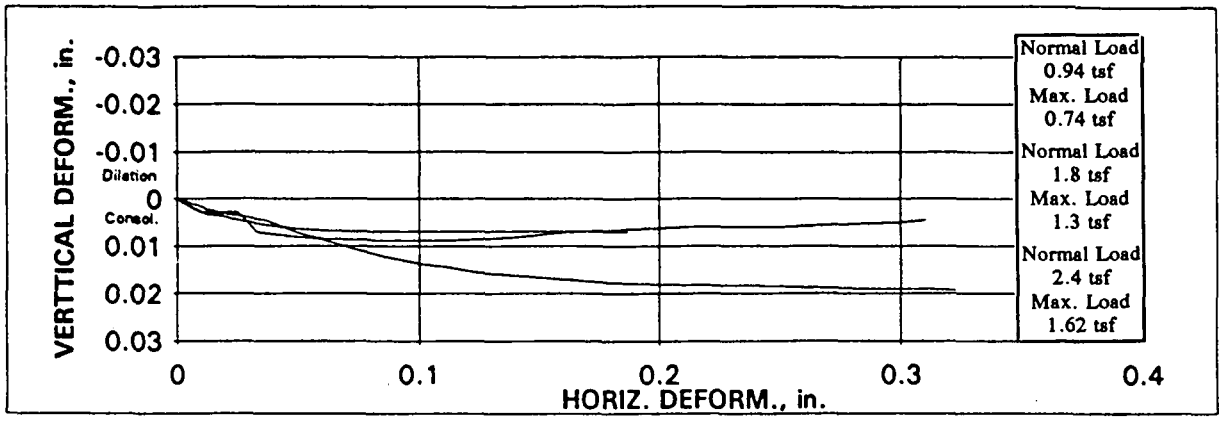
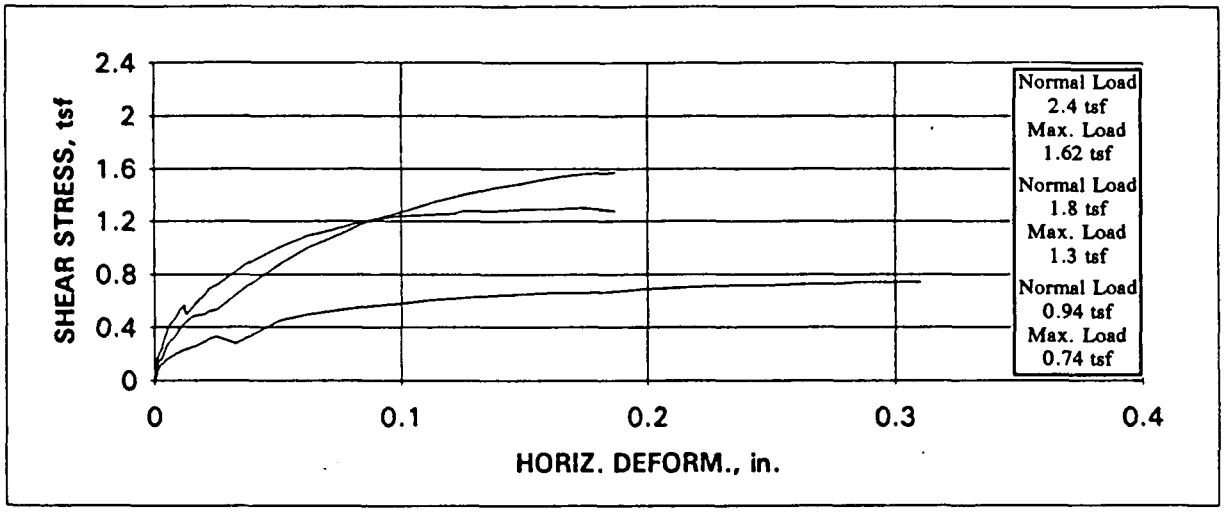
TABLE G-16E

ACTIVE FLYASH PILE
DIRECT SHEAR STRENGTH ANALYSIS - ASTM D 3080
PHASE II FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION

LOCATION 1979 SAMPLE NO. 112096 DEPTH 8.0-10.0 ft.
LENGTH .075 in. DIAMETER 2.4885 in. WEIGHT 56.7 g





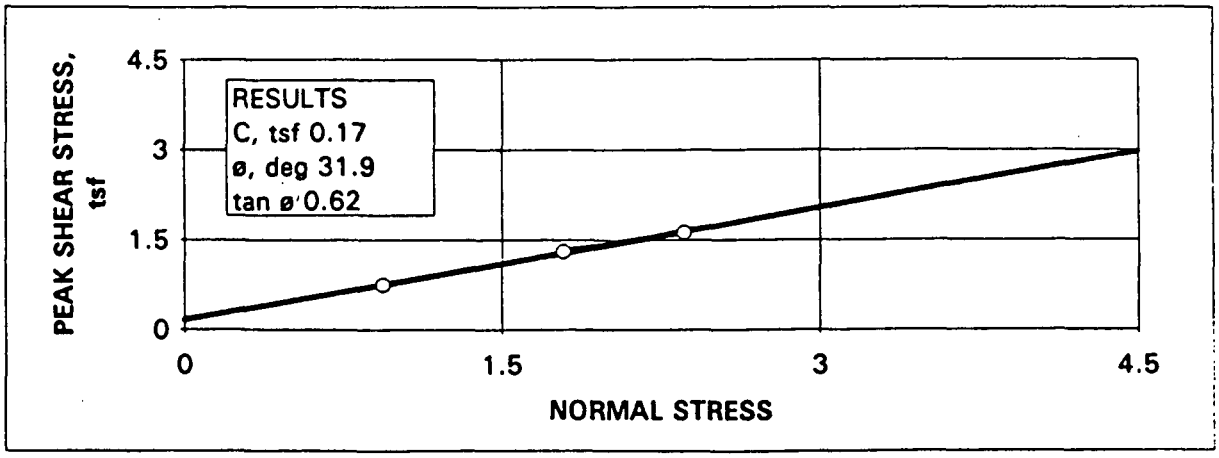
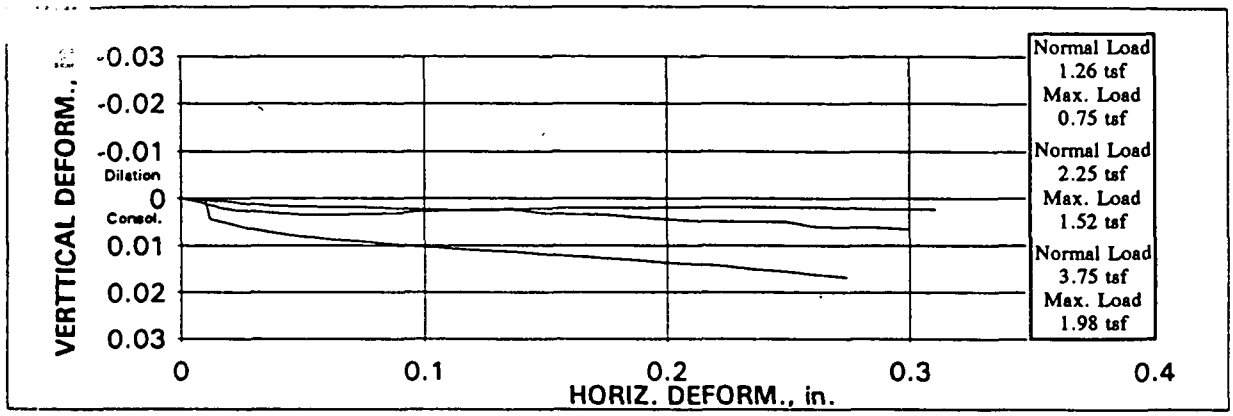
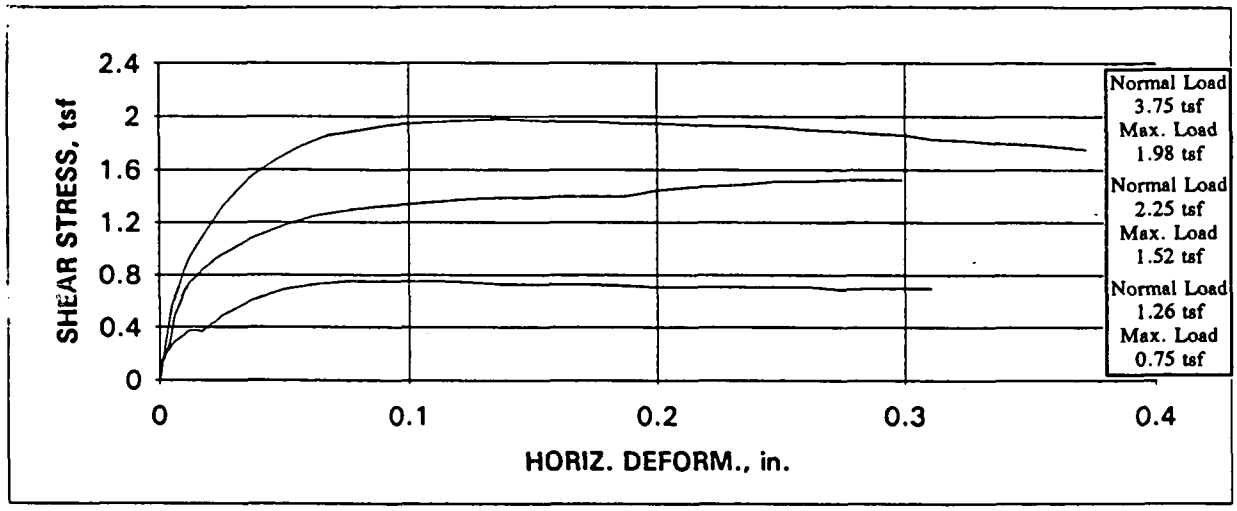
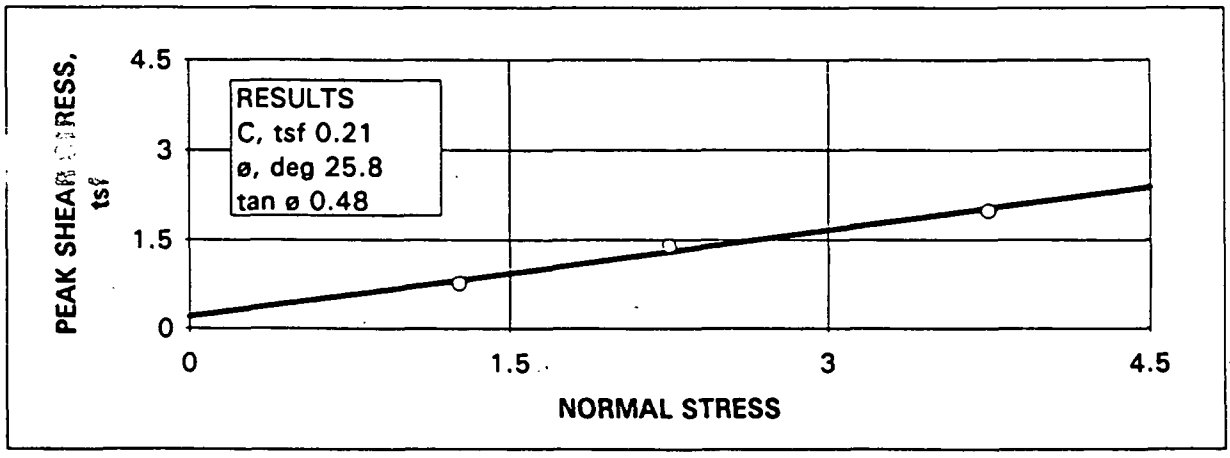


TABLE G-16E
(Continued)

LOCATION 1980 SAMPLE NO. 112143 DEPTH 11.0-13.0 ft.
LENGTH 0.75 in. DIAMETER 2.4885 in. WEIGHT 121.9 g





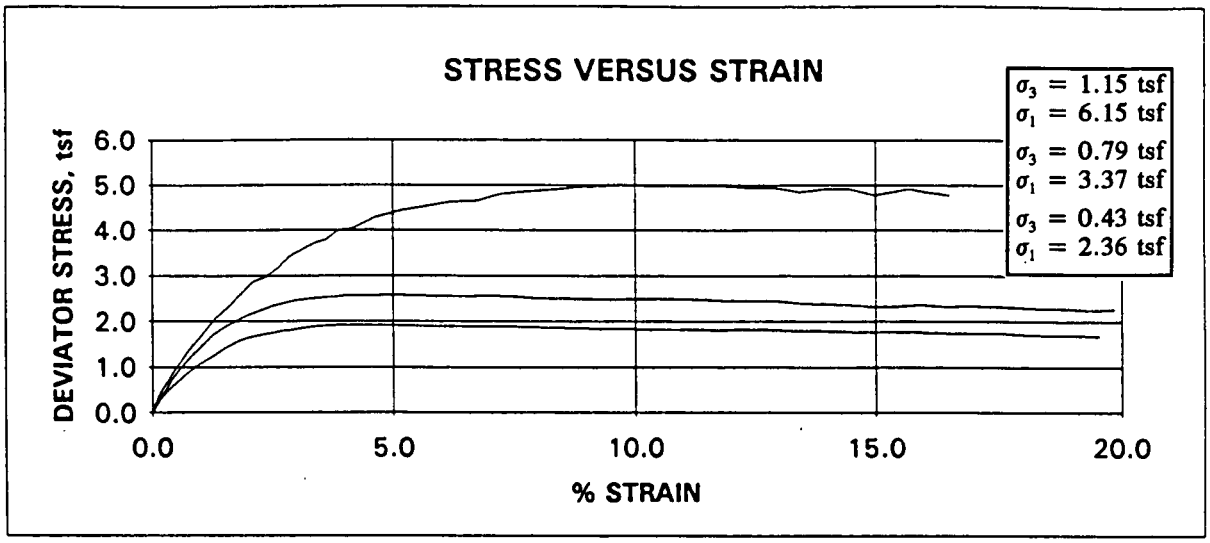


tsf = tons per square foot

TABLE G-16F

ACTIVE FLYASH PILE
CONSOLIDATED DRAINED TRIAXIAL TEST RESULTS - EM-1110-1906
PHASE II FIELD INVESTIGATION
OPERABLE UNIT 2 REMEDIAL INVESTIGATION

LOCATION 1981 SAMPLE NO. 112173 DEPTH 12.0-14.0 ft.
LENGTH 5.6563 in. DIAMETER 2.8492 in. WEIGHT 703.6 g σ_3 0.79 tsf σ_1 3.37 tsf
LENGTH 5.6692 in. DIAMETER 2.8330 in. WEIGHT 722.6 g σ_3 1.15 tsf σ_1 6.15 tsf
LENGTH 5.6177 in. DIAMETER 2.8623 in. WEIGHT 788.4 g σ_3 0.43 tsf σ_1 2.36 tsf



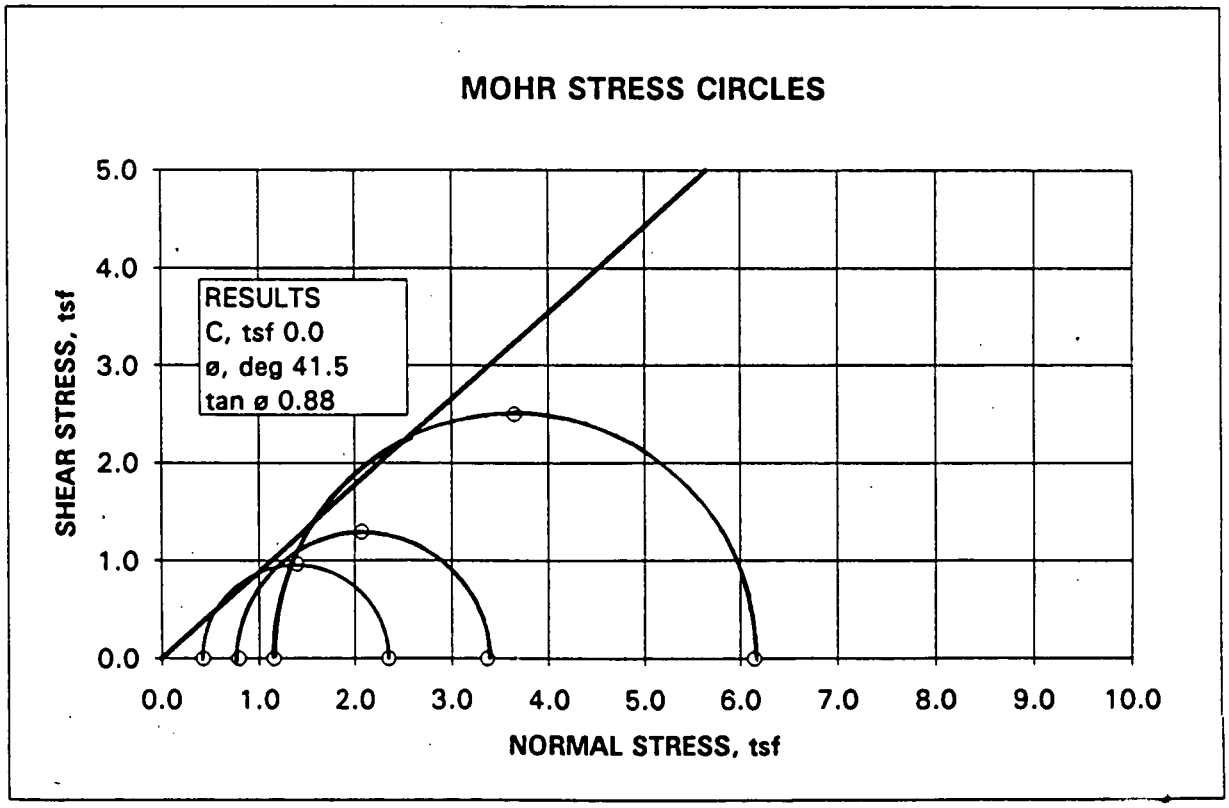


TABLE G-17

TABLE G-17

ACTIVE FLYASH PILE
CIS GEOPHYSICAL ANALYSIS
EM 34-3 READINGS
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

State Plane Coordinates			
Northing (ft)	Easting (ft)	Horizontal Dipole (Edited)	Vertical Dipole (Edited)
477443.629	1379833.656	34.00	19.00
477442.262	1379883.641	84.00	30.00
477393.654	1379832.281	97.00	17.00
477392.277	1379882.266	99.00	75.00
477390.910	1379932.250	76.00	21.50
477389.539	1379982.219	40.00	5.00
477388.172	1380032.203	17.50	27.00
477338.191	1380030.844	19.00	30.00
477339.559	1379980.859	80.00	24.00
477340.930	1379930.891	25.00	36.00
477342.297	1379880.906	110.00	12.50
477343.664	1379830.922	105.00	3.20
477293.684	1379829.547	140.00	-100.00
477292.316	1379879.531	150.00	27.00
477290.949	1379929.516	120.00	48.00
477289.578	1379979.484	150.00	-100.00
477288.211	1380029.469	100.00	40.00
477286.844	1380079.453	60.00	13.00
477236.863	1380078.094	55.00	-100.00
477238.230	1380028.109	95.00	15.00
477239.598	1379978.125	100.00	8.00
477240.969	1379928.156	135.00	66.00
477242.336	1379878.172	125.00	49.00
477243.703	1379828.188	120.00	.00
477093.758	1379824.078	17.00	1.50
477493.609	1379835.016	21.00	18.50
477490.875	1379934.984	21.50	18.50
477385.438	1380132.172	16.00	3.00
477488.137	1380034.938	15.00	14.50
477485.402	1380134.906	18.50	9.50

Figure G-17A

CIS EM 34-3 Apparent Conductivity Contour Map

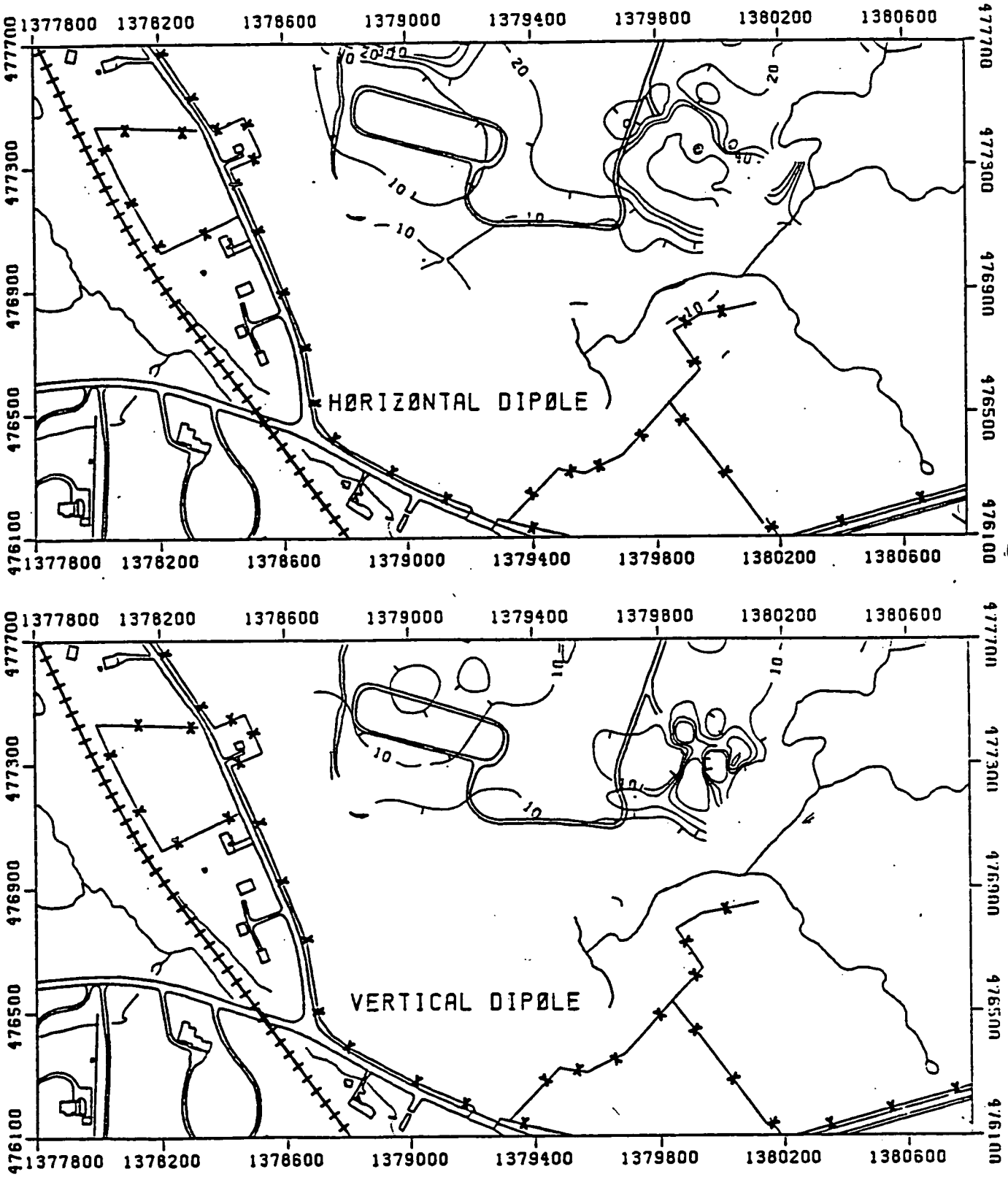


TABLE G-18

005000

02/01/94 18:37

PROJECT NUMBER: 602 3.2	PROJECT NAME: CRU2 RI PHASE I FIELD INVESTIGATION	
BORING NUMBER: 1045	COORDINATES: NORTH 477134.70 EAST 1379751.55	DATE:06-OCT-87
GROUND ELEVATION: 545.7	GWL: Depth Date/Time	DATE STARTED: 06-OCT-87
ENGINEER/GEOLOGIST: D. OAKLEY	Depth Date/Time	DATE COMPLETE: 09-OCT-87
DRILLING METHOD: CABLE-TOOL DRILLING		

DEPTH	SAMPLE DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	007201 10/06/87 17:00	2 3 2	10	MEDIUM STIFF, VERY DARK GRAY SILT AND SAND SIZED FLY ASH - DRY. BLACK SILT AND SAND SIZED FLY ASH, DRY.	ML ML	.10	PID=0 ppm α=0 ppm βΓ=40-80 cpm
3.0	007202 10/06/87 17:10	1 3 7	11	BLACK SILT AND SAND SIZED FLY ASH - DRY. STIFF BLACK SILT AND SAND SIZED FLY ASH - DRY. YELLOWISH BROWN CLAY, SOME SILT, TRACE SAND - DRY.	ML ML	N/A .10	PID=0 ppm α=0 ppm βΓ=40-80 cpm
4.5	007203 10/06/87 17:14	20 16 21	18	HARD YELLOWISH BROWN CLAY, SOME SILT, TRACE SAND - DRY.	CL	4.5+	PID=0 ppm α=0 ppm βΓ=40-80 cpm
6.0	007204 10/06/87 17:18	26 31 39	13	STIFF YELLOWISH BROWN CLAY, TRACE SILT AND SAND - DRY.	CL	4.5	PID=0 ppm α=0 ppm βΓ=40-80 cpm
7.5	007205 10/06/87 17:20	18 19 21	11	HARD YELLOWISH BROWN CLAY, TRACE SILT AND SAND - DRY.	CL	3.5	PID=0 ppm α=0 ppm βΓ=40-80 cpm
9.0	007207 10/07/87 09:20	6 13 18	14	STIFF DARK YELLOWISH BROWN CLAY, TRACE SILT AND SAND - DRY.	CL	3.5	PID=0 ppm α=0 ppm βΓ=40-80 cpm
10.5	007208 10/07/87 09:40	2 4 6	10	SOFT DARK YELLOWISH BROWN CLAY, SOME SILT, TRACE SAND - DRY.	CL	1.0	PID=0 ppm α=0 ppm βΓ=40-80 cpm
12.0	007209 10/07/87 10:56	1 2 1	10	VERY SOFT DARK YELLOWISH BROWN CLAY AND SAND - DRY. SAND COARSER AT BOTTOM OF SPOON.	CL	.20	PID=0 ppm α=0 ppm βΓ=40-80 cpm
12.5	007210 10/07/86 10:30	1 2 1	10	VERY SOFT DARK YELLOWISH BROWN CLAY AND SAND -DRY . SAND COARSER AT BOTTOM OF SPOON.	CL	.2	PID=0 ppm α=0 ppm βΓ=40-80 cpm
13.5	007211 10/07/86 11:08	7 9 9	3	MEDIUM DENSE YELLOWISH BROWN COARSE SAND AND GRAVEL, SOME CLAY, DRY.	SW	.20	PID=0 ppm α=0 ppm βΓ=40-80 cpm
15.0	007212 10/07/86 11:20	10 12 10	10	BROWNISH YELLOW COARSE SAND AND GRAVEL, TRACE CLAY.	SW	.2	PID=0 ppm α=0 ppm βΓ=40-80 cpm
16.5	007213 10/07/86 11:50	15 11 8	11	MEDIUM DENSE BROWNISH YELLOW COARSE SAND AND GRAVEL - DRY.	SW	.2	PID=0 ppm α=0 ppm βΓ=40-80 cpm
18.0	007214 10/07/86 12:00	7 9 4	10	MEDIUM DENSE YELLOWISH BROWN COARSE SAND AND GRAVEL.	SW	.2	PID=0 ppm α=0 ppm βΓ=0 cpm

NOTES:

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 602 3.2	PROJECT NAME: CRU2 RI PHASE I FIELD INVESTIGATION	
BORING NUMBER: 1048	COORDINATES: NORTH 477477.45 EAST 1379877.21	DATE:13-OCT-87
GROUND ELEVATION: 571.3	GWL: Depth Date/Time	DATE STARTED: 13-OCT-87
ENGINEER/GEOLOGIST: WILL KEGLEY	Depth Date/Time	DATE COMPLETE: 14-OCT-87
DRILLING METHOD: CABLE-TOOL DRILLING		

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS
1.5	007216	10/13/87 09:58	4 17 22		14		HARD YELLOWISH BROWN SILT - DRY.	ML	4.5	PID=0 ppm α=0 ppm BΓ=40-80 cpm
3.0	007220	10/13/87 15:45	12 29 50		11		HARD, VERY PALE, BROWN SILT, TRACE SAND - DRY.	ML	4.5+	PID=0 ppm α=0 ppm BΓ=40-80 cpm
3.0	007217	10/13/87 10:58	12 29 50		11		HARD, VERY PALE BROWN SILT, TRACE SAND - DRY.	ML	4.5+	PID=0 ppm α=0 ppm BΓ=40-80 cpm
4.5	007218	10/13/87 11:15	27 33 50		15		HARD, LIGHT YELLOWISH BROWN SILT, SOME CLAY, TRACE SAND - DRY.	ML	4.5+	PID=0 ppm α=0 ppm BΓ=40-80 cpm
7.5	007221	10/13/87 17:50	5 22 27		13		VERY STIFF, BROWNISH YELLOW CLAY, TRACE SILT - DRY. DENSE, BROWN FINE SAND, CLAY, AND SILT, SOME GRAVEL - DRY.	CL GM	2.5 2.5	PID=0 ppm α=0 ppm BΓ=40-80 cpm
9.0	007222	10/13/87 18:05	15 20 21		17		DENSE, YELLOWISH BROWN, FINE SAND AND SILT - DRY.	SM	1.00	PID=0 ppm α=0 ppm BΓ=40-80 cpm
12.0	007225	10/14/87 10:35	12 9 8		11		MEDIUM DENSE, YELLOWISH BROWN SAND AND GRAVEL, SOME SILT - MOIST.	GM	.5	PID=0 ppm α=0 ppm BΓ=40-80 cpm
13.5	007226	10/14/87 10:55	6 10 14		10		VERY STIFF, GRAY SILT, SOME GRAVEL SOME CLAY - DRY.	ML	3.0	PID=0 ppm α=0 ppm BΓ=40-80 cpm
15.0	007227	10/14/87 11:15	7 16 20		13		VERY STIFF GREY SILT, SOME GRAVEL, SOME SAND - DRY	ML	3.00	PID=0 ppm α=0 ppm BΓ=40-80 cpm
16.5	007228	10/14/87 11:38	16 22 30		15		VERY STIFF SILT, SOME GRAVEL SOME SAND - DRY.	ML	3.5	PID=0 ppm α=0 ppm BΓ=40-80 cpm
18.0	007229	10/14/87 13:50	7 16 25		11		MEDIUM STIFF, GRAY SILT, SOME GRAVEL -DRY. DENSE, BROWNISH, YELLOW FINE SAND AND SILT, SOME CLAY.	ML SM	1.0 3.5	PID=0 ppm α=0 ppm BΓ=40-80 cpm
19.5	007230	10/14/87 14:15	23 36 41		15		VERY DENSE, BROWNISH, YELLOW SAND, SOME GRAVEL - DRY. BOTTOM OF BORING.	GW	2.0	PID=0 ppm α=0 ppm BΓ=40-80 cpm

NOTES:

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 11031	COORDINATES: NORTH 477278.12 EAST 1380175.03	DATE:07-JUN-93
GROUND ELEVATION: 573.8	GWL: Depth Date/Time	DATE STARTED: 07-JUN-93
ENGINEER/GEOLOGIST: A COMO	Depth Date/Time	DATE COMPLETE: 07-JUN-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS	SYMBOL	TSF	REMARKS
.5	116920 116921 06/07/93 10:10	6	6	VERY STIFF, (2.5Y, 5/6) LIGHT OLIVE BROWN, SILTY CLAY, LOW PLASTICITY, ORGANIC MATERIAL, DRY	CL		2.5	PID=.7 ppm BΓ=40-80 cpm
.5 1.0	116920 116921 06/07/93 10:10	6	6	SAA	CL		2.5	PID=.7 ppm BΓ=40-80 cpm
1.0 1.5	06/07/93 10:10	6	0	NO RECOVERY	N/A		N/A	PID=.7 ppm BΓ=40-80 cpm
1.5 2.0	116922 116923 06/07/93 10:15	4	6	VERY STIFF, (2.5Y, 5/6) LIGHT OLIVE BROWN, SILTY CLAY, LOW PLASTLICITY, DRY	CL		3.5	PID=.7 ppm BΓ=40-80 cpm
2.0 2.5	116922 116933 06/07/93 10:15	8	6	SAA	CL		3.5	PID=.7 ppm BΓ=40-80 cpm
2.5 3.0	06/07/93 10:15	8	0	NO RECOVERY	N/A		N/A	PID=.7 ppm BΓ=40-80 cpm
3.0 3.5	116924 116953 116925 06/07/93 10:30	17	6	SAA	CL		3.5	PID=.7 ppm BΓ=40-80 cpm
3.5 4.0	116924 116925 116953 06/07/93 10:30	18	6	DENSE, (2.5Y 6/6) OLIVE YELLOW CLAYEY SILT, THIN (5Y, 7/1) LIGHT GRAY SILT LENSES, NO PLASTICITY, DRY	ML		N/A	PID=.7 ppm BΓ=40-80 cpm
4.0 4.5	116924 116925 116953 06/07/93 10:30	21	2	SAA	ML		N/A	PID=.7 ppm BΓ=40-80 cpm
4.5 5.0	116926 116928 116927 06/07/93 10:50	14	6	SAA	ML		N/A	PID=.7 ppm BΓ=40-80 cpm

NOTES:
DRILLED/SAMPLED TO 19.5 FT. NO WATER WAS ENCOUNTERED.
BACKGROUND: MT = .7 PPM BETA/GAMMA = 40 - 80 CPM

Boring Contractor: PENNSYLVANIA DRILLING CO
Driller: MIKE BENTLEY

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 11031	COORDINATES: NORTH 477278.12 EAST 1380175.03	DATE:07-JUN-93
GROUND ELEVATION: 573.8	GWL: Depth Date/Time	DATE STARTED: 07-JUN-93
ENGINEER/GEOLOGIST: A COMO	Depth Date/Time	DATE COMPLETE: 07-JUN-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
5.0 5.5	116926 116927 116928	06/07/93 10:50	20	6	SAA	ML	N/A	PID=.7 ppm BΓ=40-80 cpm
5.5 6.0	116926 116927 116928	06/07/93 10:50	28	6	SAA	ML	N/A	PID=.7 ppm BΓ=40-80 cpm
6.0 6.5	116929 116931 116930	06/07/93 11:00	10	6	SAA	ML	N/A	PID=.7 ppm BΓ=40-80 cpm
6.5 7.0	116929 116931 116930	06/07/93 11:00	10	6	SAA	ML	N/A	PID=.7 ppm BΓ=40-80 cpm
7.0 7.5	116929 116930 116931	06/07/93 11:00	19	6	SAA	ML	N/A	PID=.7 ppm BΓ=40-80 cpm
7.5 8.0	116932 116933 116934	06/07/93 11:10	4	6	SAA	ML	N/A	PID=.7 ppm BΓ=40-80 cpm
8.0 8.5	116932 116934 116933	06/07/93 11:10	10	6	SAA	ML	N/A	PID=.7 ppm BΓ=40-80 cpm
8.5 9.0	116932 116933 116934	06/07/93 11:10	14	6	SAA	ML	N/A	PID=.7 ppm BΓ=40-80 cpm
9.0 9.5	116935 116936 116937	06/07/93 13:05	4	6	DENSE, (2.5Y 5/6) LIGHT OLIVE BROWN, CLAYEY SILT, DRY, THIN (5Y, 7/1) LIGHT GRAY CLAYEY SILT, LENSES	ML	N/A	PID=.7 ppm BΓ=40-80 cpm

NOTES:
DRILLED/SAMPLED TO 19.5 FT. NO WATER WAS ENCOUNTERED.
BACKGROUND: MT = .7 PPM BETA/GAMMA = 40 - 80 CPM

Boring Contractor: PENNSYLVANIA DRILLING CO
Driller: MIKE BENTLEY

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 11031	COORDINATES: NORTH 477278.12 EAST 1380175.03	DATE:07-JUN-93
GROUND ELEVATION: 573.8	GWL: Depth Date/Time	DATE STARTED: 07-JUN-93
ENGINEER/GEOLOGIST: A COMO	Depth Date/Time	DATE COMPLETE: 07-JUN-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
9.5 10.0	116935 116936 116937	06/07/93 13:05	16	6	SAA	ML	N/A	PID=0.7 ppm BΓ=40-80 cpm
10.0 10.5	116935 116936 116937	06/07/93 13:05	15	6	DENSE, (2.5Y, 5/6) LIGHT OLIVE BROWN, SILT, DRY	ML	N/A	PID=.7 ppm BΓ=40-80 cpm
10.5 11.0	116938 116939 116940	06/07/93 13:15	6	6	SAA	ML	N/A	PID=.7 ppm BΓ=40-80 cpm
11.0 11.5	116938 116939 116940	06/07/93 13:15	8	6	SAA	ML	N/A	PID=0.7 ppm BΓ=40-80 cpm
11.5 12.0	116938 116940 116939	06/07/93 13:15	9	6	MEDIUM DENSE, (2.5Y 5/6) LIGHT OLIVE BROWN AND (10YR, 3/2) VERY DARK GRAYISH BROWN, CLAYEY SILT, DRY	ML	N/A	PID=0.7 ppm BΓ=40-80 cpm
12.0 12.5	116941 116942 116943	06/07/93 13:25	4	6	SAA	ML	N/A	PID=0.7 ppm BΓ=40-80 cpm
12.5 13.0	116941 116943 116942	06/07/93 13:25	8	6	MEDIUM DENSE, (2.5Y 6/4) LIGHT YELLOWISH BROWN, SILT, DRY	ML	N/A	PID=0.7 ppm BΓ=40-80 cpm
13.0 13.5	116941 116942 116943	06/07/93 13:25	10	6	SAA	ML	N/A	PID=0.7 ppm BΓ=40-80 cpm
13.5 14.0	116944 116946 116945	06/07/93 13:35	4	6	MEDIUM DENSE, (2.5Y 6/4) LIGHT YELLOWISH BROWN, CLAYEY SILT, DRY	ML	N/A	PID=0.7 ppm BΓ=40-80 cpm

NOTES:
DRILLED/SAMPLED TO 19.5 FT. NO WATER WAS ENCOUNTERED.
BACKGROUND: MT = .7 PPM BETA/GAMMA = 40 - 80 CPM

Boring Contractor: PENNSYLVANIA DRILLING CO
Driller: MIKE BENTLEY

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 11031	COORDINATES: NORTH 477278.12 EAST 1380175.03	DATE:07-JUN-93
GROUND ELEVATION: 573.8	GWL: Depth Date/Time	DATE STARTED: 07-JUN-93
ENGINEER/GEOLOGIST: A COMO	Depth Date/Time	DATE COMPLETE: 07-JUN-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS
14.0 14.5	116944 116945 116946	06/07/93 13:35	9		6		SAA	ML		N/A	PID=0.7 ppm BГ=40-80 cpm
14.5 15.0	116944 116945 116946	06/07/93 13:35	11		6		HARD, (5Y, 5/1) GRAY AND (2.5Y, 5/3) LIGHT OLIVE BROWN, SILTY CLAY, LOW PLASTICITY, FEW SMALL GRAVEL, IRON STAINING, DRY	CL		4.5	PID=0.7 ppm BГ=40-80 cpm
15.0 15.5	116947 116948 116949	06/07/93 13:45	8		6		SAA	CL		4.0	PID=0.7 ppm BГ=40-80 cpm
15.5 16.0	116947 116948 116949	06/07/93 13:45	10		6		HARD, (5Y, 5/1) GRAY, SILTY CLAY WITH SOME (5Y, 5/2) OLIVE GRAY, SILTY CLAY, LOW PLASTICITY, SMALL GRAVEL, IRON STAINING, DRY	CL		4.5	PID=0.7 ppm BГ=4.5 cpm
16.0 16.5	116947 116948 116949	06/07/93 13:45	13		6		SAA	CL		4.5	PID=0.7 ppm BГ=40-80 cpm
16.5 17.0	116950 116952 116951	06/07/93 13:55	9		6		VERY STIFF, (5Y, 5/2) OLIVE GRAY, SILTY CLAY WITH SOME (5Y, 2.5Y, 5/6) LIGHT OLIVE BROWN, SILTY CLAY, LOW PLASTICITY, FEW VERY SMALL GRAVEL, DRY	CL		2.0	PID=0.7 ppm BГ=40-80 cpm
17.0 17.5	116950 116951 116952	06/07/93 13:55	17		6		SAA	CL		2.0	PID=0.7 ppm BГ=40-80 cpm
17.5 18.0	116950 116952 116951	06/07/93 13:55	17		6		HARD, (5Y, 5/1) GRAY AND (2.5Y, 5/4) LIGHT OLIVE BROWN, SILTY CLAY, LOW PLASTICITY, GRAVEL, DRY	CL		4.5	PID=0.7 ppm BГ=40-80 cpm
18.0 18.5	116954 116955 116956	06/07/93 14:10	8		6		HARD, (5Y, 5/1) GRAY AND (5Y, 5/4) LIGHT OLIVE BROWN, SILTY CLAY, LOW PLASTICITY, SMALL PIECES OF GRAVEL, DRY	CL		4.0	PID=0.7 ppm BГ=40-80 cpm

NOTES:
DRILLED/SAMPLED TO 19.5 FT. NO WATER WAS ENCOUNTERED.
BACKGROUND: MT = .7 PPM BETA/GAMMA = 40 - 80 CPM

Boring Contractor: PENNSYLVANIA DRILLING CO
Driller: MIKE BENTLEY

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 11031	COORDINATES: NORTH 477278.12 EAST 1380175.03	DATE:07-JUN-93
GROUND ELEVATION: 573.8	GWL: Depth Date/Time	DATE STARTED: 07-JUN-93
ENGINEER/GEOLOGIST: A COMO	Depth Date/Time	DATE COMPLETE: 07-JUN-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
18.5 19.0	116954 116955 116956	06/07/93 14:10	11	6	SAA	CL	4.0	PID=0.7 ppm BΓ=40-80 cpm
19.0 19.5	116954 116955 116956	06/07/93 14:10	24	6	SAA	CL	4.0	PID=0.7 ppm BΓ=40-80 cpm
19.5		06/07/93 00:00	N/A	N/A	BOTTOM OF BORING 19.5 FEET	N/A	N/A	

NOTES:
DRILLED/SAMPLED TO 19.5 FT. NO WATER WAS ENCOUNTERED.
BACKGROUND: MT = .7 PPM BETA/GAMMA = 40 - 80 CPM

Boring Contractor: PENNSYLVANIA DRILLING CO
Driller: MIKE BENTLEY

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 602 3.7	PROJECT NAME: CRU2 PHASE I FIELD INVESTIGATION	
BORING NUMBER: 1723	COORDINATES: NORTH 477243.17 EAST 1379955.88	DATE:11-JUL-91
GROUND ELEVATION: 588.8	GWL: Depth Date/Time	DATE STARTED: 11-JUL-91
ENGINEER/GEOLOGIST: J. LEAR	Depth Date/Time	DATE COMPLETE: 12-JUL-91
DRILLING METHOD: AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	067164	07/11/91 09:45	1 5 5	18	LOOSE, BLACK (2.5Y, 2/) SILT, SOME SAND TRACE GRAVEL, SL. MOIST.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
3.0	067165	07/11/91 09:50	8 14 15	18	LOOSE, BLACK (2.5Y, 2/) SILT, SOME SAND TRACE GRAVEL, SL. MOIST, MED DENSE.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
4.5	067166	07/11/91 09:55	10 11 12	18	LOOSE, BLACK (2.5Y, 2/) SILT, SOME SAND TRACE GRAVEL, SL. MOIST, MED DENSE, TRACE CLAY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
6.0	067167	07/11/91 10:00	10 10 10	18	MED DENSE, BLACK, (2.5Y, 2/) SILT, TRACE SAND TRACE GRAVEL SL. MOIST.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
7.5	067168	07/11/91 10:25	8 10 11	18	MED DENSE, BLACK, (2.5Y, 2/) SILT, TRACE SAND TRACE GRAVEL SL. MOIST.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
9.0	067169	07/11/91 10:30	11 12 15	18	MED DENSE, BLACK, (2.5Y, 2/) SILT, TRACE SAND TRACE GRAVEL SL. MOIST.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
10.5	067170	07/11/91 10:35	15 15 16	18	MED DENSE, BLACK, (2.5Y, 2/) SILT, TRACE SAND TRACE GRAVEL SL. MOIST, DENSE.	ML CL	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
12.0	067171	07/11/91 10:40	16 16 13	18	MED DENSE, BLACK (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL, SL. MOIST.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
13.5	067172	07/11/91 13:30	14 18 22	14	MED DENSE, BLACK (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL, SL. MOIST, DENSE.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
15.0	067173	07/11/91 13:35	11 12 15	16	MED DENSE, BLACK (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL, SL. MOIST, TRACE COBBLES.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
16.5	067174	07/11/91 13:40	10 12 14	18	MED DENSE, BLACK (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL, SL. MOIST, DENSE, TRACE COBBLES.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
18.0	067175	07/11/91 13:45	8 5 5	18	MED DENSE, BLACK (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL, SL. MOIST, LOOSE, NO COBBLES.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
19.5	067176	07/11/91 14:40	3 3 4	18	MED DENSE, BLACK (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL, SL. MOIST, LOOSE, NO COBBLES.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm

NOTES:

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 602 3.7	PROJECT NAME: CRU2 PHASE I FIELD INVESTIGATION	
BORING NUMBER: 1723	COORDINATES: NORTH 477243.17 EAST 1379955.88	DATE:11-JUL-91
GROUND ELEVATION: 588.8	GWL: Depth Date/Time	DATE STARTED: 11-JUL-91
ENGINEER/GEOLOGIST: J. LEAR	Depth Date/Time	DATE COMPLETE: 12-JUL-91
DRILLING METHOD: AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
19.5 21.0	067177 07/11/91 14:45		2 3 3	18	MED DENSE, BLACK (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL, SL. MOIST, LOOSE, NO COBBLES.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
21.0 22.5	067178 07/11/91 14:50		2 3 3	10	LOOSE BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL MOIST, LOOSE YELLOWISH BROWN (10YR. 4/6) SILTY CLAY, TRACE SAND, LOW PLASTICITY, MOIST.	ML CL	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
22.5 24.5	067179 07/11/91 14:55		4 6 9	18	M. DENSE, YELLOWISH BROWN, (10YR, 4/6) SILTY CLAY, TRACE SAND, LOW PLASTICITY, MOIST, M. DENSE, BLACK (2.5Y, 2/) SILT TRACE SAND, TRACE GRAVEL, V. MOIST.	CL ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
24.5 26.0	067181 07/12/91 10:00		10 10 15	0	NO RECOVERY	N/A	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
26.0 27.5	067182 07/12/91 10:05		15 11 7	18	HARD, DARK YELLOWISH BROWN, (10YR, 4/6) SILTY CLAY, SOME SAND, LOW PLAST., MOIST.	CL	2.5	PID=0 ppm α=80-100 ppm βΓ=0 cpm
27.5 29.0	067183 07/12/91 10:10		3 5 11	0	NO RECOVERY	N/A	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
29.0 30.5	067184 07/12/91 10:15		11 17 16	18	HARD, DARK YELLOWISH BROWN, (10YR, 4/6) SANDY CLAY, TRACE GRAVEL, MED PLAST., MOIST.	CL	2.75	PID=0 ppm α=80-100 ppm βΓ=0 cpm

NOTES:

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N/A = Not Applicable

PROJECT NUMBER: 602 3.7	PROJECT NAME: CRU2 PHASE I FIELD INVESTIGATION	
BORING NUMBER: 1724	COORDINATES: NORTH 477239.70 EAST 1379830.96	DATE:12-JUL-91
GROUND ELEVATION: 586.8	GWL: Depth Date/Time	DATE STARTED: 12-JUL-91
ENGINEER/GEOLOGIST: J. LEAR	Depth Date/Time	DATE COMPLETE: 16-JUL-91
DRILLING METHOD: AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS
1.5	067190	07/13/91 14:30	2 4 6		18		LOOSE, BLACK (2.5Y, 2/) SILT, TRACE SAND TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
3.0	067191	07/13/91 14:35	6 6 9		18		LOOSE, BLACK (2.5Y, 2/) SILT, TRACE SAND TRACE GRAVEL, DRY MED DENSE.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
4.5	067192	07/13/91 14:40	9 7 7		18		MED. DENSE, BLACK, TO VERY DARK GRAY, (2.5Y, 2/) TO 10YR. 3/1) SOME SAND, SOME GRAVEL, DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
6.0	067193	07/13/91 14:45	15 15 13		18		MED. DENSE, BLACK, (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
7.5	067194	07/13/91 15:20	14 14 13		18		MED. DENSE, BLACK, (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
9.0	067195	07/13/91 15:25	10 8 10		18		MED. DENSE, BLACK, (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
10.5	067196	07/13/91 15:30	7 8 8		18		MED. DENSE, BLACK, (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
12.0	067197	07/13/91 15:35	6 6 6		14		MED. DENSE, BLACK, (2.5Y, 2/) SILT, TRACE SAND & GRAVEL, TRACE BROWN (10YR. 5/3) CLAYEY SILT.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
16.0	067200	07/14/91 09:35	8 5 3		16		LOOSE, BLACK, (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
17.5	067201	07/14/91 09:40	7 4 4		17		LOOSE, BLACK, (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
19.0	067202	07/14/91 09:45	3 3 3		18		LOOSE, BLACK, (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
20.5	067203	07/14/91 09:50	2 4 4		18		LOOSE, BLACK, (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
22.0	067204	07/15/91 09:15	3 3 5		18		LOOSE, BLACK, (2.5Y, 2/) SILT, TRACE SAND, TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm

NOTES:

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 602 3.7	PROJECT NAME: CRU2 PHASE I FIELD INVESTIGATION	
BORING NUMBER: 1724	COORDINATES: NORTH 477239.70 EAST 1379830.96	DATE:12-JUL-91
GROUND ELEVATION: 586.8	GWL: Depth Date/Time	DATE STARTED: 12-JUL-91
ENGINEER/GEOLOGIST: J. LEAR	Depth Date/Time	DATE COMPLETE: 16-JUL-91
DRILLING METHOD: AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
22.0 23.5	067205 07/15/91 09:20		4 4 4	18	LOOSE, BLACK, (2.5Y, 2/) SILT, SOME SAND TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
23.5 25.0	067206 07/15/91 09:25		3 4 3	18	LOOSE, BLACK, (2.5Y, 2/) SILT, SOME SAND TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
25.0 26.5	067207 07/15/91 09:30		5 4 7	18	MEDIUM DENSE, (2.5Y, 2/) SILT, TRACE SAND TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
26.5 28.0	067208 07/15/91 10:00		6 3 2	18	MEDIUM DENSE, (2.5Y, 2/) SILT, TRACE SAND TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
28.0 29.5	067209 07/15/91 10:05		5 2 2	18	MEDIUM DENSE, (2.5Y, 2/) SILT, TRACE SAND TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
29.5 31.0	067210 07/15/91 10:10		3 4 4	16	MEDIUM DENSE, (2.5Y, 2/) SILT, TRACE SAND TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
31.0 32.5	067211 07/15/91 10:15		2 2 5	16	MEDIUM DENSE, (2.5Y, 2/) SILT, TRACE SAND TRACE GRAVEL, DRY TRACE ORGANICS, SL. MOIST.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
32.5 34.0	067212 07/15/91 10:45		10 10 11	16	MEDIUM DENSE, (2.5Y, 2/) SILT, TRACE SAND TRACE GRAVEL, DRY TRACE ORGANICS, SL. MOIST.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
34.0 35.5	067213 07/15/91 10:50		6 6 7	16	MEDIUM DENSE, (2.5Y, 2/) SILT, TRACE SAND TRACE GRAVEL, DRY TRACE ORGANICS, SL. MOIST.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
35.5 37.0	067214 07/15/91 10:55		4 4 3	14	LOOSE, BLACK (2.5Y, 2/) SILT, ALTERNATING WITH BROWN, (10YR. 5/3) CLAYEY SILT, TRACE SAND & GRAVEL, SL. MOIST.	ML	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
37.0 38.5	067215 07/15/91 11:00		2 2 3	0	NO RECOVERY	N/A	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
38.5 40.0	067216 07/16/91 09:00		7 10 8	0	NO RECOVERY	N/A	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm
40.0 41.5	067217 07/16/91 09:05		5 5 8	10	FIRM, DARK YELLOWISH BROWN, (10YR, 4/6) SANDY CLAY TRACE GRAVEL, MED PLAST. MOIST.	CL	.75	PID=0 ppm α=80-100 ppm βΓ=0 cpm

NOTES:

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 602 3.7	PROJECT NAME: CRU2 PHASE I FIELD INVESTIGATION	
BORING NUMBER: 1724	COORDINATES: NORTH 477239.70 EAST 1379830.96	DATE:12-JUL-91
GROUND ELEVATION: 586.8	GWL: Depth Date/Time	DATE STARTED: 12-JUL-91
ENGINEER/GEOLOGIST: J. LEAR	Depth Date/Time	DATE COMPLETE: 16-JUL-91
DRILLING METHOD: AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
41.5 43.0	067218 07/16/91 09:10		9 13 13	14	FIRM, DARK YELLOWISH BROWN, (10YR, 4/6) SANDY CLAY TRACE GRAVEL, MED PLAST. MOIST.	CL	.75	PID=0 ppm α=80-100 ppm βΓ=0 cpm
43.0 44.5	067219 07/16/91 09:15		12 10 13	0	NO RECOVERY	N/A	N/A	PID=0 ppm α=80-100 ppm βΓ=0 cpm

NOTES:

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 602 3.7	PROJECT NAME: CRU2 PHASE I FIELD INVESTIGATION	
BORING NUMBER: 1726	COORDINATES: NORTH 477317.49 EAST 1380039.59	DATE:29-JUN-91
GROUND ELEVATION: 591.2	GWL: Depth Date/Time	DATE STARTED: 29-JUN-91
ENGINEER/GEOLOGIST: J. LEAR	Depth Date/Time	DATE COMPLETE: 02-JUL-91
DRILLING METHOD: AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	067143	06/29/91 15:30	1 4 11	18	MEDIUM DENSE, BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=60-110 ppm BΓ=0 cpm
1.5 3.0	067144	06/29/91 15:35	10 11 11	18	MEDIUM DENSE, BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=60-110 ppm BΓ=0 cpm
3.0 4.5	067145	06/29/91 15:40	7 7 7	18	MEDIUM DENSE, BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=60-110 ppm BΓ=0 cpm
4.5 6.0	067146	06/29/91 15:45	11 11 11	18	MEDIUM DENSE, BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL, DRY.	ML	N/A	PID=0 ppm α=60-110 ppm BΓ=0 cpm
6.0 7.5	067147	07/01/91 08:45	11 13 13	18	MEDIUM DENSE, BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL, DRY, SOME GRAVEL.	ML	N/A	PID=0 ppm α=60-110 ppm BΓ=0 cpm
7.5 9.0	067148	07/01/91 08:50	7 7 7	18	MEDIUM DENSE, BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL, DRY, SOME GRAVEL.	ML	N/A	PID=0 ppm α=60-110 ppm BΓ=0 cpm
9.0 10.5	067149	07/01/91 08:55	4 5 9	18	MEDIUM DENSE, BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL, DRY, SOME GRAVEL.	ML	N/A	PID=0 ppm α=60-110 ppm BΓ=0 cpm
10.5 12.0	067150	07/01/91 09:00	6 6 10	18	MEDIUM DENSE, BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL, DRY, SOME GRAVEL.	ML	N/A	PID=0 ppm α=60-110 ppm BΓ=0 cpm
12.0 13.5	067151	07/01/91 09:05	20 25 15	18	MEDIUM DENSE, BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL, DRY, SOME GRAVEL.	ML	N/A	PID=0 ppm α=60-110 ppm BΓ=0 cpm
13.5 15.0	067152	07/01/91 09:10	10 10 10	18	MEDIUM DENSE, BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL, DRY, SOME GRAVEL.	ML	N/A	PID=0 ppm α=60-110 ppm BΓ=0 cpm
15.0 16.5	067153	07/01/91 09:30	5 5 5	18	MEDIUM DENSE, BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL, DRY, SOME GRAVEL.	ML	N/A	PID=0 ppm α=60-110 ppm BΓ=0 cpm
16.5 18.0	067154	07/01/91 09:35	2 3 3	18	MEDIUM DENSE, BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL, DRY, SOME GRAVEL, MOIST.	ML	N/A	PID=0 ppm α=60-110 ppm BΓ=0 cpm
18.0 19.5	067155	07/01/91 09:40	10 8 15	18	MEDIUM DENSE, BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL, DRY, SOME GRAVEL, MOIST, WET, FIRM YELLOWISH BROWN (10YR, 5/8) SILTY CLAY, TRACE ORGANICS, LOW PLASTICITY, MOIST.	CL	1.5	PID=0 ppm α=60-110 ppm BΓ=0 cpm

NOTES:

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 602 3.7	PROJECT NAME: CRU2 PHASE I FIELD INVESTIGATION	
BORING NUMBER: 1726	COORDINATES: NORTH 477317.49 EAST 1380039.59	DATE:29-JUN-91
GROUND ELEVATION: 591.2	GWL: Depth Date/Time	DATE STARTED: 29-JUN-91
ENGINEER/GEOLOGIST: J. LEAR	Depth Date/Time	DATE COMPLETE: 02-JUL-91
DRILLING METHOD: AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
19.5 21.0	067156	07/01/91 09:45	14 20 25	18	MEDIUM DENSE, BLACK (2.5Y, 2/) SILT, SOME SAND, TRACE GRAVEL, DRY, SOME GRAVEL, MOIST, WET, FIRM YELLOWISH BROWN (10YR, 5/8) SILTY CLAY, TRACE ORGANICS, LOW PLASTICITY, MOIST.	CL	2.0	PID=0 ppm α=60-110 ppm BΓ=0 cpm

NOTES:

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PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 602.3.16	PROJECT NAME: CRU2 PHASE I FIELD INVESTIGATION	
BORING NUMBER: 1820	COORDINATES: NORTH 477414.33 EAST 1379888.20	DATE:16-OCT-91
GROUND ELEVATION: 576.5	GWL: Depth Date/Time	DATE STARTED: 16-OCT-91
ENGINEER/GEOLOGIST: G. MARSHALL	Depth Date/Time	DATE COMPLETE: 16-OCT-91
DRILLING METHOD: AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS
1.5 3.0	067503	10/16/91 16:00	15 18 23		18		BLACK (2.5YR/0) SILT, SOME SAND, SOME GRAVEL, DRY, TRACES OF BRICK.	ML		N/A	PID=0 ppm α=0 ppm BΓ=50 cpm
3.0 4.5	067504	10/16/91 16:10	15 25 29		18		BLACK (2.5YR/0) SILT, SOME SAND, SOME GRAVEL, DRY.	ML		N/A	PID=0 ppm α=0 ppm BΓ=50-90 cpm
6.0 7.5	067505	10/16/91 16:20	15 14 9		17		BLACK (2.5YR/0) SILT, SOME SAND, SOME GRAVEL, DRY, TRACE OF BRICK.	ML		N/A	PID=0 ppm α=0 ppm BΓ=50-90 cpm
9.5 12.0	067506	10/16/91 16:30	13 18 19		14		LIGHT YELLOWISH BRN. (2.5Y 6/4) SILTY CLAY TRACE OF SAND LOW PLASTICITY, MOIST, V. STIFF.	CL		2.5	PID=0 ppm α=0 ppm BΓ=50-90 cpm

NOTES:

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 602 3.7	PROJECT NAME: CRU2 PHASE I FIELD INVESTIGATION	
BORING NUMBER: 1846.	COORDINATES: NORTH 477221.45 EAST 1379953.49	DATE:22-FEB-92
GROUND ELEVATION: 590.2	GWL: Depth Date/Time	DATE STARTED: 22-FEB-92
ENGINEER/GEOLOGIST: KEN MARION	Depth Date/Time	DATE COMPLETE: 22-FEB-92
DRILLING METHOD: AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	067701	02/22/92 10:50	2 4 5	16	LOOSE BLACK (2.5Y, 2/0) SILT (FLY/ASH) WITH SLAG FRAGMENTS (THE SLAGE FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), SLIGHTLY MOIST	ML	N/A	PID=0 ppm α=0 ppm BΓ=20 cpm
1.5 3.0	067702	02/22/92 10:58	5 7 7	18	MEDIUM DENSE BLACK (2.5Y, 2/0) SILT (FLY/ASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), DRY	ML	N/A	PID=0 ppm α=0 ppm BΓ=20 cpm
3.0 4.5	067703	02/22/92 11:10	7 10 9	7	MEDIUM DENSE BLACK (2.5Y, 2/0) SILT (FLY/ASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), DRY	ML	N/A	PID=0 ppm α=0 ppm BΓ=20 cpm
4.5 6.0	067704	02/22/92 12:53	7 7 6	13	MEDIUM DENSE BLACK (2.5Y, 2/0) SILT (FLY/ASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), DRY	ML	N/A	PID=0 ppm α=0 ppm BΓ=20 cpm
6.0 7.5	067705	02/22/92 13:02	5 6 7	18	MEDIUM DENSE BLACK (2.5Y, 2/0) SILT (FLY/ASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), ONE GRAVEL SIZE PIECE OF COAL, DRY	ML	N/A	PID=0 ppm α=0 ppm BΓ=20 cpm
7.5 9.0	067707	02/22/92 13:25	6 8 8	18	MEDIUM DENSE BLACK (2.5Y, 2/0) SILT (FLY/ASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), DRY	ML	N/A	PID=0 ppm α=0 ppm BΓ=20 cpm
9.0 10.5	067708	02/22/92 14:25	26 12 8	18	MEDIUM DENSE BLACK (2.5Y, 2/0) SILT (FLY/ASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), DRY	ML	N/A	PID=0 ppm α=0 ppm BΓ=20 cpm
10.5 12.0	067709	02/22/92 14:35	6 7 12	18	MEDIUM DENSE BLACK (2.5Y, 2/0) SILT (FLY/ASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), DRY	ML	N/A	PID=0 ppm α=0 ppm BΓ=20 cpm
12.0 13.5	067710	02/22/92 14:40	10 12 17	18	MEDIUM DENSE BLACK (2.5Y, 2/0) SILT (FLY/ASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), DRY	ML	N/A	PID=0 ppm α=0 ppm BΓ=20 cpm
13.5 15.0	067711	02/22/92 14:45	10 12 8	18	MEDIUM DENSE BLACK (2.5Y, 2/0) SILT (FLY/ASH) WITH SLAG FRAGMENTS (THE SLAG FRAGMENTS RANGE FROM SILT AND SAND TO TRACE AMOUNTS OF GRAVEL), TRACE BRICK FRAGMENTS, DRY	ML	N/A	PID=0 ppm α=0 ppm BΓ=20 cpm

NOTES:

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 1979	COORDINATES: NORTH 477241.54 EAST 1379893.36	DATE:10-MAY-93
GROUND ELEVATION: 588.1	GWL: Depth Date/Time	DATE STARTED: 10-MAY-93
ENGINEER/GEOLOGIST: B E MUELLER	Depth Date/Time	DATE COMPLETE: 11-MAY-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
.5	112091	05/10/93 13:22	2	6	MEDIUM DENSE, (2.5YR 10) BLACK FLYASH, DRY	N/A	N/A	PID=0 ppm BΓ=70 cpm
1.0	112091	05/10/93 13:22	2	6	SAA, DAMP	N/A	N/A	PID=0 ppm BΓ=70 cpm
1.5	112091	05/10/93 13:22	4	5	SAA	N/A	N/A	PID=0 ppm BΓ=70 cpm
2.0		05/10/93 00:00	10	0	NO RECOVERY	N/A	N/A	
2.5	112092 112093	05/10/93 13:25	10	6	MEDIUM DENSE, SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
3.0		05/10/93 13:25	7	6	SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
3.5		05/10/93 13:25	8	6	SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
4.0		05/10/93 13:25	11	6	MEDIUM DENSE, SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
4.5	112094	05/10/93 14:00	N/A	6	SHELBY	N/A	N/A	PID=0 ppm BΓ=80 cpm
5.0	112094	05/10/93 14:00	N/A	6	SHELBY	N/A	N/A	PID=0 ppm BΓ=80 cpm
5.5	112094	05/10/93 14:00	N/A	6	SHELBY	N/A	N/A	PID=0 ppm BΓ=80 cpm
6.0	112094	05/10/93 14:00	N/A	6	SAA, SHELBY	N/A	N/A	PID=0 ppm BΓ=80 cpm
6.5	112095	05/10/93 14:16	1	6	LOOSE, SAA	N/A	N/A	PID=0 ppm BΓ=60 cpm

NOTES:
ABANDONED BORING AS PER PLAN.
BACKGROUND READINGS:
PAGE 1-4: MICROTIP=0 PPM; BETA/GAMMA=50 CPM,
PAGE 5: MICROTIP=3 PPM; BETA/GAMMA=50 CPM

Boring Contractor: PENN DRILLING
Driller: DAN JAMESON, DON ARTHUR
Drilling Equipment: MOBILE B 80

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 1979	COORDINATES: NORTH 477241.54 EAST 1379893.36	DATE:10-MAY-93
GROUND ELEVATION: 588.1	GWL: Depth Date/Time	DATE STARTED: 10-MAY-93
ENGINEER/GEOLOGIST: B E MUELLER	Depth Date/Time	DATE COMPLETE: 11-MAY-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS
6.5 7.0	112095	05/10/93 14:16	1		6		SAA	N/A		N/A	PID=0 ppm BΓ=60 cpm
7.0 7.5	112095	05/10/93 14:16	2		6		SAA	N/A		N/A	PID=0 ppm BΓ=60 cpm
7.5 8.0	112095	05/10/93 14:16	4		6		VERY LOOSE, (2.5YR, 10) BLACK FLYASH, MOIST	N/A		N/A	PID=0 ppm BΓ=60 cpm
8.0 8.5	112096	05/10/93 14:28	N/A		6		SHELBY	N/A		N/A	PID=0 ppm BΓ=70 cpm
8.5 9.0	112096	05/10/93 14:28	N/A		6		SHELBY	N/A		N/A	PID=0 ppm BΓ=70 cpm
9.0 9.5	112096	05/10/93 14:28	N/A		6		SHELBY	N/A		N/A	PID=0 ppm BΓ=70 cpm
9.5 10.0	112096	05/10/93 14:28	N/A		6		SAA, SHELBY	N/A		N/A	PID=0 ppm BΓ=70 cpm
10.0 10.5	112097	05/10/93 15:15	6		6		MEDIUM DENSE, SAA	N/A		N/A	PID=0 ppm BΓ=90 cpm
10.5 11.0	112098	05/10/93 15:15	7		6		SAA	N/A		N/A	PID=0 ppm BΓ=90 cpm
11.0 11.5	112099	05/10/93 15:15	8		6		MEDIUM DENSE, SAA	N/A		N/A	PID=0 ppm BΓ=90 cpm
11.5 12.0	112100	05/10/93 15:15	12		6		SAA, MEDIUM DENSE	N/A		N/A	PID=0 ppm BΓ=90 cpm
12.0 12.5	112101	05/10/93 15:27	9		6		MEDIUM DENSE, SAA	N/A		N/A	PID=0 ppm BΓ=80 cpm
12.5 13.0	112102	05/10/93 15:27	11		6		MEDIUM DENSE, SAA	N/A		N/A	PID=0 ppm BΓ=80 cpm

NOTES:
ABANDONED BORING AS PER PLAN.
BACKGROUND READINGS:
PAGE 1-4: MICROTIP=0 PPM; BETA/GAMMA=50 CPM,
PAGE 5: MICROTIP=3 PPM; BETA/GAMMA=50 CPM

Boring Contractor: PENN DRILLING
Driller: DAN JAMESON, DON ARTHUR
Drilling Equipment: MOBILE B 80

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 1979	COORDINATES: NORTH 477241.54 EAST 1379893.36	DATE:10-MAY-93
GROUND ELEVATION: 588.1	GWL: Depth Date/Time	DATE STARTED: 10-MAY-93
ENGINEER/GEOLOGIST: B E MUELLER	Depth Date/Time	DATE COMPLETE: 11-MAY-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
13.0 13.5	112103	05/10/93 15:27	7	6	MEDIUM DENSE, SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
13.5 14.0	112104	05/10/93 15:27	16	6	MEDIUM DENSE, SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
14.0 14.5	112105	05/10/93 15:35	11	6	SAA	N/A	N/A	PID=0 ppm BΓ=100 cpm
14.5 15.0	112106	05/10/93 15:35	12	6	SAA	N/A	N/A	PID=0 ppm BΓ=100 cpm
15.0 15.5	112107	05/10/93 15:35	10	6	MEDIUM DENSE, (2.5YR,10) BLACK FLYASH, MOIST	N/A	N/A	PID=0 ppm BΓ=100 cpm
15.5 16.0	112108	05/10/93 15:35	9	6	SAA	N/A	N/A	PID=0 ppm BΓ=100 cpm
16.0 16.5	112109	05/10/93 15:48	2	6	LOOSE, SAA	N/A	N/A	PID=0 ppm BΓ=100 cpm
16.5 17.0	112110	05/10/93 15:48	2	6	SAA	N/A	N/A	PID=0 ppm BΓ=100 cpm
17.0 17.5	112111	05/10/93 15:48	2	6	SAA	N/A	N/A	PID=0 ppm BΓ=100 cpm
17.5 18.0	112112	05/10/93 15:48	3	6	SAA	N/A	N/A	PID=0 ppm BΓ=100 cpm
18.0 18.5	112113	05/10/93 15:56	1	6	SAA	N/A	N/A	PID=0 ppm BΓ=70 cpm
18.5 19.0	112114	05/10/93 15:56	1	6	SAA	N/A	N/A	PID=0 ppm BΓ=70 cpm
19.0 19.5	112115	05/10/93 15:56	1	6	SAA	N/A	N/A	PID=0 ppm BΓ=70 cpm

NOTES:
ABANDONED BORING AS PER PLAN.
BACKGROUND READINGS:
PAGE 1-4: MICROTIP=0 PPM; BETA/GAMMA=50 CPM,
PAGE 5: MICROTIP=3 PPM; BETA/GAMMA=50 CPM

Boring Contractor: PENN DRILLING
Driller: DAN JAMESON, DON ARTHUR
Drilling Equipment: MOBILE B 80

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 1979	COORDINATES: NORTH 477241.54 EAST 1379893.36	DATE:10-MAY-93
GROUND ELEVATION: 588.1	GWL: Depth Date/Time	DATE STARTED: 10-MAY-93
ENGINEER/GEOLOGIST: B E MUELLER	Depth Date/Time	DATE COMPLETE: 11-MAY-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
19.5 20.0	112116 05/10/93 15:56		1	3	SAA	N/A	N/A	PID=0 ppm BΓ=70 cpm
20.0 20.5	112117 05/10/93 16:05		1	6	SAA	N/A	N/A	PID=0 ppm BΓ=90 cpm
20.5 21.0	112117 05/10/93 16:05		1	6	SAA	N/A	N/A	PID=0 ppm BΓ=90 cpm
21.0 21.5	112117 05/10/93 16:05		1	5	SAA	N/A	N/A	PID=0 ppm BΓ=90 cpm
21.5 22.0		05/10/93 00:00	1	0	NO RECOVERY	N/A	N/A	
22.0 22.5	112118 05/10/93 16:11		1	6	MEDIUM DENSE, (2.5YR, 10) BLACK FLYASH, MOIST	N/A	N/A	PID=0 ppm BΓ=110 cpm
22.5 23.0	112119 05/10/93 16:11		1	6	SAA, VERY LOOSE	N/A	N/A	PID=0 ppm BΓ=110 cpm
23.0 23.5	112120 05/10/93 16:11		1	6	SAA	N/A	N/A	PID=0 ppm BΓ=110 cpm
23.5 24.0	112121 05/10/93 16:11		1	6	SAA	N/A	N/A	PID=0 ppm BΓ=110 cpm
24.0 24.5	112122 05/10/93 16:20		1	6	SAA	N/A	N/A	PID=0 ppm BΓ=90-110 cpm
24.5 25.0	112122 05/10/93 16:20		1	6	SAA	N/A	N/A	PID=0 ppm BΓ=90-110 cpm
25.0 25.5	112122 05/10/93 16:20		1	6	SAA	N/A	N/A	PID=0 ppm BΓ=90-110 cpm
25.5 26.0	112123 05/10/93 16:20		3	6	VERY STIFF, (5Y 5/6) OLIVE SILTY CLAY, VERY MOIST	CL	2.5	PID=0 ppm BΓ=90-110 cpm

NOTES:
ABANDONED BORING AS PER PLAN.
BACKGROUND READINGS:
PAGE 1-4: MICROTIP=0 PPM; BETA/GAMMA=50 CPM,
PAGE 5: MICROTIP=3 PPM; BETA/GAMMA=50 CPM

Boring Contractor: PENN DRILLING
Driller: DAN JAMESON, DON ARTHUR
Drilling Equipment: MOBILE B 80

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

000285

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 1979	COORDINATES: NORTH 477241.54 EAST 1379893.36	DATE:10-MAY-93
GROUND ELEVATION: 588.1	GWL: Depth Date/Time	DATE STARTED: 10-MAY-93
ENGINEER/GEOLOGIST: B E MUELLER	Depth Date/Time	DATE COMPLETE: 11-MAY-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
26.0 26.5	112123	05/11/93 09:00	24	6	VERY STIFF, (2.5Y 5/6) LIGHT OLIVE BROWN, TRACE GRAY MOTTLES SILTY CLAY, MOIST, TRACE GRAVEL, LOW PLASTICITY	CL	2.75	PID=0.2 ppm BΓ=60 cpm
26.5 27.0	112123	05/11/93 09:00	34	6	HARD, SAA	CL	4.5	PID=0.2 ppm BΓ=60 cpm
27.0 27.5	112123	05/11/93 09:00	47	6	SAA	CL	74.5	PID=0.2 ppm BΓ=60 cpm
27.5 28.0	112124	05/11/93 09:29	24	6	SAA	CL	74.5	PID=0.7 ppm BΓ=80 cpm
28.0 28.5	112125	05/11/93 09:29	37	6	HARD, (5Y 4/1) DARK GRAY, SILTY CLAY, TRACE GRAVEL, MOIST	CL	74.5	PID=0.7 ppm BΓ=80 cpm
28.5 29.0	112125	05/11/93 09:29	26	6	SAA, TRACE COBBLE	CL	74.5	PID=0.7 ppm BΓ=80 cpm
29.0 29.5		05/11/93 00:00	50/4"	0	NO RECOVERY	N/A	N/A	
29.5 30.0	112126	05/11/93 09:45	7	6	SAA, WITH TRACE BROWN MOTTLES	CL	3	PID=0.6 ppm BΓ=9 cpm
30.0 30.5	112126	05/11/93 09:45	12	6	HARD, (5Y 4/1) DARK GRAY, SILTY CLAY, TRACE FINE GRAVEL, MOIST, BROWN MOTTLING, LOW PLASTICITY	CL	3.5	PID=0.6 ppm BΓ=9 cpm
30.5 31.0	112126	05/11/93 09:45	21	6	SAA	CL	4.5	PID=0.6 ppm BΓ=9 cpm
31.0 31.5	112126	05/11/93 09:45	28	2	SAA	CL	3.5	PID=0.6 ppm BΓ=9 cpm
31.5		05/11/93 00:00	N/A	N/A	BOTTOM OF BORING 31.5 FEET	N/A	N/A	

NOTES:
ABANDONED BORING AS PER PLAN.
BACKGROUND READINGS:
PAGE 1-4: MICROTIP=0 PPM; BETA/GAMMA=50 CPM,
PAGE 5: MICROTIP=3 PPM; BETA/GAMMA=50 CPM

Boring Contractor: PENN DRILLING
Driller: DAN JAMESON, DON ARTHUR
Drilling Equipment: MOBILE B 80

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 1980	COORDINATES: NORTH 477280.38 EAST 1379997.79	DATE:13-MAY-93
GROUND ELEVATION: 591.1	GWL: Depth Date/Time	DATE STARTED: 12-MAY-93
ENGINEER/GEOLOGIST: B E MULLER	Depth Date/Time	DATE COMPLETE: 13-MAY-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
.5	112129	05/12/93 08:35	3	6	MEDIUM DENSE, (2.5YR,10) BLACK FLYASH, DAMP	N/A	N/A	PID=2.4 ppm BΓ=80 cpm
1.0	112129	05/12/93 08:35	4	6	SAA	N/A	N/A	PID=2.4 ppm BΓ=80 cpm
1.5	112129	05/12/93 08:35	5	6	SAA	N/A	N/A	PID=2.4 ppm BΓ=80 cpm
2.0	112129	05/12/93 08:35	5	6	SAA	N/A	N/A	PID=2.4 ppm BΓ=80 cpm
2.5	112130 112131	05/12/93 08:40	10	6	SAA	N/A	N/A	PID=1.0 ppm BΓ=80 cpm
3.0	112130 112131	05/12/93 08:40	11	6	SAA	N/A	N/A	PID=1.0 ppm BΓ=80 cpm
3.5	112130 112131	05/12/93 08:40	9	6	SAA	N/A	N/A	PID=1.0 ppm BΓ=80 cpm
4.0	112130 112131	05/12/93 08:40	8	6	SAA	N/A	N/A	PID=1.0 ppm BΓ=80 cpm
4.5	112132	05/12/93 09:10	6	6	SAA	N/A	N/A	PID=0 ppm BΓ=90 cpm
5.0	112133	05/12/93 09:10	6	6	SAA	N/A	N/A	PID=0 ppm BΓ=90 cpm
5.5	112134	05/12/93 09:10	8	6	SAA	N/A	N/A	PID=0 ppm BΓ=90 cpm
6.0	112135	05/12/93 19:18	7	6	SAA	N/A	N/A	PID=0 ppm BΓ=70 cpm

NOTES:
FLYASH COLLAPSED INTO HOLE AFTER AUGERS REMOVED, TO AN ELEVATION OF 16 FEET BELOW SURFACE.
BACKGROUND READINGS
PAGE 1-2: MICROTIP=0 PPM, BETA/GAMMA=50 CPM,
PAGE 3: MICROTIP=1.8 PPM, BETA/GAMMA=50 CPM,
PAGE 4: MICROTIP=1.0-7.0 PPM, BETA/GAMMA=50 CPM

Boring Contractor: PENN DRILL
Driller: DAN JAMISON, DON ARTHOR
Drilling Equipment: MOBIL 1380

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 1980	COORDINATES: NORTH 477280.38 EAST 1379997.79	DATE:13-MAY-93
GROUND ELEVATION: 591.1	GWL: Depth Date/Time	DATE STARTED: 12-MAY-93
ENGINEER/GEOLOGIST: B E MULLER	Depth Date/Time	DATE COMPLETE: 13-MAY-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
6.0 6.5	112136 05/12/93 09:18		7	6	SAA	N/A	N/A	PID=0 ppm βΓ=70 cpm
6.5 7.0	112137 05/12/93 09:18		11	3	SAA	N/A	N/A	PID=0 ppm βΓ=70 cpm
7.0 7.5	112138 05/12/93 09:24		4	6	SAA	N/A	N/A	PID=0 ppm βΓ=70 cpm
7.5 8.0	112139 05/12/93 09:24		7	6	MEDIUM DENSE, (2.5YR,10) BLACK FLYASH, MOIST, LOW PLASTICITY	N/A	N/A	PID=0 ppm βΓ=70 cpm
8.0 8.5	112140 05/12/93 09:24		10	6	SAA	N/A	N/A	PID=0 ppm βΓ=70 cpm
8.5 9.0	112141 05/12/93 09:24		6	6	SAA	N/A	N/A	PID=0 ppm βΓ=70 cpm
9.0 11.0	112142 05/12/93 09:32		N/A	N/A	SAA, SHELBY	N/A	N/A	PID=0 ppm βΓ=50 cpm
11.0 13.0	112143 05/12/93 09:47		N/A	N/A	SHELBY-TUBE SLIGHTLY BENT AT BOTTOM	N/A	N/A	PID=0 ppm βΓ=70 cpm
13.0 13.5	112144 112145 05/12/93 10:00		6	6	SAA	N/A	N/A	PID=0 ppm βΓ=70 cpm
13.5 14.0	112144 112145 05/12/93 10:00		12	6	SAA & SOME CLAY MIXED	N/A	N/A	PID=0 ppm βΓ=70 cpm
14.0 14.5	112144 112145 05/12/93 10:00		9	6	SAA, NO CLAY	N/A	N/A	PID=0 ppm βΓ=70 cpm
14.5 15.0	112144 112145 05/12/93 10:00		20	6	SAA	N/A	N/A	PID=0 ppm βΓ=70 cpm

NOTES:
FLYASH COLLAPSED INTO HOLE AFTER AUGERS REMOVED, TO AN ELEVATION OF 16 FEET BELOW SURFACE.
BACKGROUND READINGS
PAGE 1-2: MICROTIP=0 PPM, BETA/GAMMA=50 CPM,
PAGE 3: MICROTIP=1.8 PPM, BETA/GAMMA=50 CPM,
PAGE 4: MICROTIP=1.0-7.0 PPM, BETA/GAMMA=50 CPM

Boring Contractor: PENN DRILL
Driller: DAN JAMISON, DON ARTHOR
Drilling Equipment: MOBIL 1380

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 1980	COORDINATES: NORTH 477280.38 EAST 1379997.79	DATE:13-MAY-93
GROUND ELEVATION: 591.1	GWL: Depth Date/Time	DATE STARTED: 12-MAY-93
ENGINEER/GEOLOGIST: B E MULLER	Depth Date/Time	DATE COMPLETE: 13-MAY-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS SYMBOL	TSF	REMARKS
15.0 15.5	112146 05/12/93 10:15		6		6		MEDIUM DENSE, (2.5YR,10) BLACK FLYASH, LOW PLASTICITY, MOIST	N/A	N/A	PID=0 ppm BΓ=70 cpm
15.5 16.0	112146 05/12/93 10:15		6		6		SAA	N/A	N/A	PID=0 ppm BΓ=70 cpm
16.0 16.5	112146 05/12/93 10:15		6		6		SAA	N/A	N/A	PID=0 ppm BΓ=70 cpm
16.5 17.0	112146 05/12/93 10:15		4		6		SAA	N/A	N/A	PID=0 ppm BΓ=70 cpm
17.0 17.5	112147 05/12/93 10:25		3		6		SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
17.5 18.0	112148 05/12/93 10:25		3		6		SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
18.0 18.5	112149 05/12/93 10:25		3		6		SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
18.5 19.0	112150 05/12/93 10:25		4		6		SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
19.0 19.5	112151 05/12/93 10:36		1		6		SAA	N/A	N/A	PID=0 ppm BΓ=50-70 cpm
19.5 20.0	112152 05/12/93 10:36		1		6		SAA, WET	N/A	N/A	PID=0 ppm BΓ=50-70 cpm
20.0 20.5	112153 05/12/93 10:36		4		6		MEDIUM STIFF, (2.5Y,6/6) OLIVE YELLOW, SILTY CLAY, TRACE BLACK AND YELLOW MOTTLES, LOW PLASTICITY, MOIST	CL	.75	PID=0 ppm BΓ=50-70 cpm
20.5 21.0	112153 05/12/93 13:23		7		6		SAA	CL	.75	PID=0 ppm BΓ=50-70 cpm
21.0 21.5	112153 05/12/93 13:23		21		6		SAA	N/A CL	N/A 74.	PID=0 ppm BΓ=50-70 cpm

NOTES:
FLYASH COLLAPSED INTO HOLE AFTER AUGERS REMOVED, TO AN ELEVATION OF 16 FEET BELOW SURFACE.
BACKGROUND READINGS
PAGE 1-2: MICROTIP=0 PPM, BETA/GAMMA=50 CPM,
PAGE 3: MICROTIP=1.8 PPM, BETA/GAMMA=50 CPM,
PAGE 4: MICROTIP=1.0-7.0 PPM, BETA/GAMMA=50 CPM

Boring Contractor: PENN DRILL
Driller: DAN JAMISON, DON ARTHOR
Drilling Equipment: MOBIL 1380

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 1980	COORDINATES: NORTH 477280.38 EAST 1379997.79	DATE:13-MAY-93
GROUND ELEVATION: 591.1	GWL: Depth Date/Time	DATE STARTED: 12-MAY-93
ENGINEER/GEOLOGIST: B E MULLER	Depth Date/Time	DATE COMPLETE: 13-MAY-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS	SYMBOL	TSF	REMARKS
21.5 22.0	112153	05/12/93 13:23	23	6	SAA, SOME FLYASH	CL		74.5	PID=0 ppm BΓ=50-70 cpm
22.0 22.5	112156	05/13/93 08:23	10	6	SAA, POCKET OF FLYASH	CL		2.75	PID=2.4 ppm BΓ=50-100 cpm
22.5 23.0	112156	05/13/93 08:23	20	6	HARD, (2.5Y,6/6) OLIVE YELLOW, SILTY CLAY, LOW PLASTICITY, MOIST	CL		74.5	PID=2.4 ppm BΓ=50-100 cpm
23.0 23.5	112156	05/13/93 08:23	31	6	VERY STIFF, (2.5Y,5/6) LIGHT OLIVE BROWN, CLAYEY SANDY SILT, LOW PLASTICITY, VERY MOIST	CL		2.5	PID=2.4 ppm BΓ=50-100 cpm
23.5 24.0	112156	05/13/93 08:23	40	6	SAA	CL		.75	PID=2.4 ppm BΓ=50-100 cpm
24.0 24.5	112157	05/13/93 08:45	9	6	SOFT, (2.5Y,6/8) OLIVE YELLOW, SILTY CLAY, BLACK MOTTLES, LOW PLASTICITY, VERY MOIST	CL		.25	PID=10.3 ppm BΓ=70 cpm
24.5 25.0	112157	05/13/93 08:45	18	6	SAA-INCREASED SILT AT SOME HORIZONS	CL		.25	PID=10.3 ppm BΓ=70 cpm
25.0 25.5	112157	05/13/93 08:45	21	6	SAA	CL		3	PID=10.3 ppm BΓ=70 cpm
25.5 26.0	112157	05/13/93 08:45	25	6	SAA-REDUCED SILT CONTENT-MOIST	CL		2	PID=10.3 ppm BΓ=70 cpm
26.0		05/13/93 00:00	N/A	N/A	BOTTOM OF BORING 26 FEET	N/A		N/A	

NOTES:
FLYASH COLLAPSED INTO HOLE AFTER AUGERS REMOVED, TO AN ELEVATION OF 16 FEET BELOW SURFACE.
BACKGROUND READINGS
PAGE 1-2: MICROTIP=0 PPM, BETA/GAMMA=50 CPM,
PAGE 3: MICROTIP=1.8 PPM, BETA/GAMMA=50 CPM,
PAGE 4: MICROTIP=1.0-7.0 PPM, BETA/GAMMA=50 CPM

Boring Contractor: PENN DRILL
Driller: DAN JAMISON, DON ARTHOR
Drilling Equipment: MOBIL 1380

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 1981	COORDINATES: NORTH 477366.17 EAST 1379964.33	DATE:13-MAY-93
GROUND ELEVATION: 587.6	GWL: Depth Date/Time	DATE STARTED: 13-MAY-93
ENGINEER/GEOLOGIST: B E MULLER	Depth Date/Time	DATE COMPLETE: 14-MAY-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
.5	112160	05/13/93 14:30	3		6	LOOSE (2.5Y, /0) BLACK FLY ASH, SLIGHTLY MOIST	N/A	N/A	PID=0 ppm BΓ=100 cpm
1.0	112160	05/13/93 14:30	5		6	SAA	N/A	N/A	PID=0 ppm BΓ=100 cpm
1.5	112160	05/13/93 14:30	5		6	SAA	N/A	N/A	PID=0 ppm BΓ=100 cpm
2.0	112160	05/13/93 14:30	5		3	SAA	N/A	N/A	PID=0 ppm BΓ=100 cpm
2.5	112161	05/13/93 14:35	7		6	SAA	N/A	N/A	PID=0 ppm BΓ=70 cpm
3.0	112161	05/13/93 14:35	9		6	SAA	N/A	N/A	PID=0 ppm BΓ=70 cpm
3.5	112161	05/13/93 14:35	12		6	SAA	N/A	N/A	PID=0 ppm BΓ=70 cpm
4.0	112161	05/13/93 14:35	14		3	SAA	N/A	N/A	PID=0 ppm BΓ=70 cpm
4.5	112162	05/13/93 15:05	N/A		6	SAA	N/A	N/A	PID=0 ppm BΓ=60 cpm
5.0	112162	05/13/93 15:05	N/A		6	SAA	N/A	N/A	PID=0 ppm BΓ=60 cpm
5.5	112162	05/13/93 15:05	N/A		6	SAA	N/A	N/A	PID=0 ppm BΓ=60 cpm
6.0	112162	05/13/93 15:05	N/A		6	SAA	N/A	N/A	PID=0 ppm BΓ=60 cpm
6.5	112163	05/13/93 15:14	6		6	SAA	N/A	N/A	PID=0 ppm BΓ=60 cpm

NOTES:
FLYASH COLLAPSED INTO HOLE AFTER AUGERS REMOVED, TO AN ELEVATION OF 11 FEET BELOW SURFACE.
BACKGROUND READINGS:
PAGE 1-2: MICROTIP=0 PPM, BETA/GAMMA=50 CPM,
PAGE 3: MICROTIP=0 PPM, BETA/GAMMA=60 CPM

Boring Contractor: PENN DRILL
Driller: DAM JAMISON, DON ARTHUR
Drilling Equipment: MODIL B80

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 1981	COORDINATES: NORTH 477366.17 EAST 1379964.33	DATE:13-MAY-93
GROUND ELEVATION: 587.6	GWL: Depth Date/Time	DATE STARTED: 13-MAY-93
ENGINEER/GEOLOGIST: B E MULLER	Depth Date/Time	DATE COMPLETE: 14-MAY-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
6.5 7.0	112164 05/13/93 15:14		7	6	SAA	N/A	N/A	PID=0 ppm BΓ=60 cpm
7.0 7.5	112165 05/13/93 15:14		9	6	SAA	N/A	N/A	PID=0 ppm BΓ=60 cpm
7.5 8.0	112166 05/13/93 15:14		9	6	MEDIUM DENSE, (2.5YR /0) BLACK FLYASH, VERY LOW PLASTICITY, SLIGHTLY MOIST	N/A	N/A	PID=0 ppm BΓ=60 cpm
8.0 8.5	112167 112168 05/13/93 15:23		5	6	SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
8.5 9.0	112167 112168 05/13/93 15:23		7	6	SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
9.0 9.5	112167 112168 05/13/93 15:23		4	6	SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
9.5 10.0	112167 112168 05/13/93 15:23		10	6	SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
10.0 10.5	112169 05/13/93 15:46		6	6	SAA	N/A	N/A	PID=0 ppm BΓ=60 cpm
10.5 11.0	112170 05/13/93 15:46		12	6	SAA	N/A	N/A	PID=0 ppm BΓ=60 cpm
11.0 11.5	112171 05/13/93 15:46		12	6	SAA	N/A	N/A	PID=0 ppm BΓ=60 cpm
11.5 12.0	112172 05/13/93 15:46		12	6	SAA	N/A	N/A	PID=0 ppm BΓ=60 cpm
12.0 14.0	112173 05/13/93 15:53		N/A	N/A	SAA, SHELBY	N/A	N/A	PID=0 ppm BΓ=50 cpm

NOTES:
FLYASH COLLAPSED INTO HOLE AFTER AUGERS REMOVED, TO AN ELEVATION OF 11 FEET BELOW SURFACE.
BACKGROUND READINGS:
PAGE 1-2: MICROTIP=0 PPM, BETA/GAMMA=50 CPM,
PAGE 3: MICROTIP=0 PPM, BETA/GAMMA=60 CPM

Boring Contractor: PENN DRILL
Driller: DAM JAMISON, DON ARTHUR
Drilling Equipment: MODIL 880

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 1981	COORDINATES: NORTH 477366.17 EAST 1379964.33	DATE:13-MAY-93
GROUND ELEVATION: 587.6	GWL: Depth Date/Time	DATE STARTED: 13-MAY-93
ENGINEER/GEOLOGIST: B E MULLER	Depth Date/Time	DATE COMPLETE: 14-MAY-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
14.0 14.5	112175 05/14/93 08:56		3	6	SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
14.5 15.0	112176 05/14/93 08:56		2	6	SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
15.0 15.5	112177 05/14/93 08:56		3	6	LOOSE, (2.5Y /0) BLACK FLY ASH, VERY LOW PLASTICITY, SLIGHTLY MOIST	N/A	N/A	PID=0 ppm BΓ=80 cpm
15.5 16.0	112178 05/14/93 08:56		5	6	SAA	N/A	N/A	PID=0 ppm BΓ=80 cpm
16.0 16.5	112179 05/14/93 09:25		4	6	SAA	N/A	N/A	PID=0 ppm BΓ=60 cpm
16.5 17.0	112179 05/14/93 09:25		4	6	SAA, WET	N/A	N/A	PID=0 ppm BΓ=60 cpm
17.0 17.5	112180 05/14/93 09:25		10	6	STIFF, (10YR 5/6) YELLOWISH BROWN, SILTY CLAY, HIGH PLASTICITY, MOIST	CL	1	PID=0 ppm BΓ=60 cpm
17.5 18.0	112180 05/14/93 09:25		12	6	SAA	CL	1.5	PID=0 ppm BΓ=60 cpm
18.0 18.5	112180 05/14/93 09:52		5	6	MEDIUM STIFF, SAA	CL	0.75	PID=0 ppm BΓ=80 cpm
18.5 19.0	112180 05/14/93 09:52		12	6	VERY SOFT, SAA AND COARSE SAND, FINE GRAVEL	CL	0.25	PID=0 ppm BΓ=80 cpm
19.0 19.5	112181 05/14/93 09:52		14	6	STIFF, SAA	CL	1.25	PID=0 ppm BΓ=80 cpm
19.5 20.0	112181 05/14/93 09:52		22	0	NO RECOVERY	N/A	N/A	
20.0 20.5	112181 05/14/93 10:04		4	6	VERY STIFF, SAA-LOW PLASTICITY, MOIST AND INCREASED GRAVEL	CL	2	PID=0 ppm BΓ=60 cpm

NOTES:
FLYASH COLLAPSED INTO HOLE AFTER AUGERS REMOVED, TO AN ELEVATION OF 11 FEET BELOW SURFACE.
BACKGROUND READINGS:
PAGE 1-2: MICROTIP=0 PPM, BETA/GAMMA=50 CPM,
PAGE 3: MICROTIP=0 PPM, BETA/GAMMA=60 CPM

Boring Contractor: PENN DRILL
Driller: DAM JAMISON, DON ARTHUR
Drilling Equipment: MODIL B80

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 1981	COORDINATES: NORTH 477366.17 EAST 1379964.33	DATE:13-MAY-93
GROUND ELEVATION: 587.6	GWL: Depth Date/Time	DATE STARTED: 13-MAY-93
ENGINEER/GEOLOGIST: B E MULLER	Depth Date/Time	DATE COMPLETE: 14-MAY-93
DRILLING METHOD: HOLLOW STEM AUGER		

DEPTH	SAMPLE	DATE TIME	BLOWS ON	SAMPLE	RECOVERY	INCHES		USCS	SYMBOL	TSF	REMARKS
20.5 21.0	112181	05/14/93 10:04	4		0		NO RECOVERY	N/A		N/A	PID=0 ppm BΓ=60 cpm
21.0 21.5		05/14/93 10:04	8		0		NO RECOVERY	N/A		N/A	PID=0 ppm BΓ=60 cpm
21.5		05/14/93 00:00	N/A		N/A		BOTTOM OF BORING 21.5 FEET	N/A		N/A	

NOTES:
FLYASH COLLAPSED INTO HOLE AFTER AUGERS REMOVED, TO AN ELEVATION OF 11 FEET BELOW SURFACE.
BACKGROUND READINGS:
PAGE 1-2: MICROTIP=0 PPM, BETA/GAMMA=50 CPM,
PAGE 3: MICROTIP=0 PPM, BETA/GAMMA=60 CPM

Boring Contractor: PENN DRILL
Driller: DAM JAMISON, DON ARTHUR
Drilling Equipment: MODIL B80

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 602 3.2	PROJECT NAME: CRU2 RI PHASE I FIELD INVESTIGATION	
BORING NUMBER: 2045	COORDINATES: NORTH 477129.91 EAST 1379760.54	DATE:05-DEC-88
GROUND ELEVATION: 545.4	GWL: Depth Date/Time	DATE STARTED: 05-DEC-88
ENGINEER/GEOLOGIST: W.A. HERTEL	Depth Date/Time	DATE COMPLETE: 08-DEC-88
DRILLING METHOD: CABLE-TOOL DRILLING		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
20.0 21.5	008945	12/05/88 16:17	11 15 77	18	VERY DENSE GRAY (10 YR 5/1) SILTY SAND W/GRAVELS, DRY, APP. 20% GRAVEL	SW	N/A	PID=0 ppm BΓ=40-80 cpm
25.0 26.5	008946	12/06/88 07:55	29 48 52	12	VERY DENSE, GRAY (10 YR 3-2) GRADES TO YELLOWISH BROWN (10 YR 5-6) SILTY SAND WITH APPROX. 10% GRAVEL	SW	N/A	PID=0 ppm BΓ=40-80 cpm
30.0 31.5	008947	12/06/88 10:20	38 61 74	12	VERY DENSE, BROWN (2.5 Y 5/6) WELL GRADED GRAVELLY SAND, CLEAN SAND WITH LESS THAN 10 % GRAVEL M-CGR SAND SUBRNDD TO RNDD	SW	N/A	PID=0 ppm BΓ=60-80 cpm
35.0 36.5	008948	12/06/88 11:15	16 24 37	12	VERY DENSE, BROWN (10 YR 5/6) MITO CGR SAND, SUBANGULAR TO ROUNDED, POORLY GRADED GRAVELLY SAND	SP	N/A	PID=0 ppm BΓ=60-80 cpm
40.0 41.5	008949	12/06/88 14:50	24 28 46	12	VERY DENSE, GRAYISH BROWN (10 YR 5/2) FINE GRAVEL AND SAND	SW	N/A	PID=0 ppm BΓ=60-80 cpm

NOTES:

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 602 3.2	PROJECT NAME: CRU2 RI PHASE I FIELD INVESTIGATION	
BORING NUMBER: 2048	COORDINATES: NORTH 477480.23 EAST 1379866.55	DATE:20-NOV-88
GROUND ELEVATION: 571.5	GWL: Depth Date/Time	DATE STARTED: 20-NOV-88
ENGINEER/GEOLOGIST: D. HOEKSTRA	Depth Date/Time	DATE COMPLETE: 03-DEC-88
DRILLING METHOD: CABLE-TOOL DRILLING		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS	SYMBOL	TSF	REMARKS
25.0 26.5	020490 11/20/88 16:40		15 41 50	8	DENSE, YELLOWISH BROWN (10 YR 5/3) POORLY GRADED FINE SAND WITH SOME 1/4" GRAVEL, DRY	SP		N/A	PID=0 ppm α=0 ppm BΓ=60 cpm
30.0 31.5	020491 11/21/88 14:40		11 17 21	9	DENSE, YELLOWISH BROWN (10 YR 5/3) POORLY GRADED FINE SAND, NO LINES, MAXIMUM SIZE 1/16", DRY TO MOIST	SP		N/A	PID=0 ppm α=0 ppm BΓ=60 cpm
40.0 41.5	020493 11/21/88 16:30		23 38 41	6	VERY DENSE, YELLOWISH BROWN (10 YR 5/3) WELL GRADED SAND, FINE SAND TO 1/4" GRAVEL. DRY TO MOIST	SW		N/A	PID=0 ppm α=0 ppm BΓ=60 cpm
50.0 51.5	020495 11/22/88 09:30		14 25 33	8	VERY DENSE, YELLOWISH BROWN (10 YR 4/3) POORLY GRADED MEDIUM SAND, SOME COARSE SAND AND 1/4" GRAVEL, MOIST	SP		N/A	PID=0 ppm α=0 ppm BΓ=50 cpm
55.0 56.5	020496 11/22/88 10:30		27 49 57	N/A	VERY DENSE, YELLOWISH BROWN (10 YR 4/3) WELL GRADED SAND (FINE SAND TO 1/4" 0) WET	SW		N/A	PID=0 ppm α=0 ppm BΓ=50 cpm
60.0 61.5	020497 11/22/88 00:00		12 41 45	11	VERY DENSE, GREY-BROWN (10 YR 5/2) MED - COARSE SAND SOME ROUND FINE - COURSE GRAVEL, TRACE SILT, POORLY SORTED, POORLY GRADED, WET.	SW		N/A	PID=0 ppm α=0-5 ppm BΓ=120-140 cpm
65.0 66.5	020498 11/30/88 11:23		3 8 15	12	MEDIUM DENSE, GRAY BROWN (10 YR 5/2) WELL GRADED SAND, WET.	SW		N/A	PID=0 ppm α=0-5 ppm BΓ=120-140 cpm

NOTES:

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 21033	COORDINATES: NORTH 477278.10 EAST 1380181.18	DATE:10-MAY-93
GROUND ELEVATION: 573.08	GWL: Depth 52 Date/Time 14-May-93 13:30	DATE STARTED: 10-MAY-93
ENGINEER/GEOLOGIST: KEN GEIGER	Depth 51.1 Date/Time 19-May-93 11:10	DATE COMPLETE: 17-MAY-93
DRILLING METHOD: CABLE TOOL		

DEPTH	SAMPLE / DATE / TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
1.5	116870 05/10/93 10:40	2 3 4	7	STIFF, DARK YELLOWISH BROWN, (10YR, 4/4), SILTY CLAY WITH SOME ROOTS, MEDIUM PLASTICSITY, SLIGHTLY MOIST	CL	1.5	PID=.2 ppm α=0 ppm BΓ=40 cpm
1.5 3.0	116871 05/10/93 10:45	4 7 12	11	MEDIUM STIFF, DARK YELLOWISH BROWN (10YR, 4/4), SILTY CLAY WITH SOME GRAVEL, MEDIUM PLASTICITY, SLIGHTLY MOIST	CL	1.0	PID=.2 ppm α=0 ppm BΓ=40 cpm
3.0 4.5	116872 05/10/93 10:50	13 20 25	12	MEDIUM STIFF, DARK YELLOWISH BROWN (10YR, 4/4), SANDY SILTY CLAY WITH SOME GRAVEL, LOW PLASTICITY, SLIGHTLY MOIST	CL	1.0	PID=.2 ppm α=0 ppm BΓ=40 cpm
4.5 6.0	116873 05/10/93 11:00	28 50 50/3"	8	VERY SOFT, YELLOWISH BROWN (10YR, 5/6), SANDY SILTY CLAY WITH SOME GRAVEL, LOW PLASTICITY, SLIGHTLY MOIST	CL	.25	PID=.2 ppm α=0 ppm BΓ=40 cpm
6.0 7.5	116874 05/10/93 13:15	50/6"	5	VERY DENSE, YELLOWISH BROWN (10YR, 5/4) WELL GRADED SAND WITH A TRACE OF GRAVEL AND CLAY, DRY	SW	N/A	PID=.2 ppm α=0 ppm BΓ=40 cpm
7.5 8.0	116875 05/11/93 09:30	38 38 42	18	VERY STIFF, YELLOWISH BROWN (10YR, 5/4), SILTY CLAY WITH A TRACE OF SAND AND GRAVEL, LOW PLASTICITY, SLIGHTLY MOIST	CL	3.25	PID=.4 ppm α=0 ppm BΓ=40 cpm
9.0 10.5	116876 05/11/93 09:45	38 28 19	18	VERY STIFF, YELLOWISH BROWN (10YR, 5/6), SILTY CLAY WITH A TRACE OF SAND AND GRAVEL, LOW PLASTICITY, SLIGHTLY MOIST	CL	2.25	PID=.4 ppm α=0 ppm BΓ=40 cpm
10.5 12.0	116877 05/11/93 10:25	6 9 15	12	VERY STIFF, DARK GRAY (2.5Y, 4/1), SANDY SILTY CLAY WITH SOME GRAVEL, MEDIUM PLASTICITY, SLIGHTLY MOIST	CL	2.5	PID=.4 ppm α=0 ppm BΓ=40 cpm
12.0 13.5	116878 05/11/93 10:35	5 9 12	10	SOFT, DARK GRAY (2.5Y, 4/1) SANDY SILTY CLAY WITH SOME GRAVEL, MEDIUM PLASTICITY, SLIGLHTLY MOIST	CL	.5	PID=.3 ppm α=0 ppm BΓ=40 cpm
13.5 15.0	116879 05/11/93 10:45	6 10 17	13	STIFF, DARK GRAY (2.5Y, 4/1), SANDY SILTY CLAY WITH SOME GRAVEL, MEDIUM PLASTICITY, SLIGHTLY MOIST	CL	1.25	PID=.3 ppm α=0 ppm BΓ=40 cpm
15.0 16.5	116880 05/11/93 11:00	8 18 27	14	VERY STIFF, DARK GRAY (2.5Y, 4/1), SANDY SILTY CLAY WITH SOME GRAVEL, MEDIUM PLASTICITY, SLIGHTLY MOIST	CL	3.25	PID=.4 ppm α=0 ppm BΓ=40 cpm
16.5 18.0	116881 05/11/93 13:45	11 28 27	12	SAA	CL	3.25	PID=.3 ppm α=0 ppm BΓ=40-60 cpm
18.0 19.5	116882 05/11/93 14:00	11 15 25	17	VERY STIFF, DARK GRAY (2.5Y, 4/1), SILTY CLAY WITH SOME SAND AND GRAVEL, MEDIUM PLASTICITY, SLIGHTLY MOIST	CL CL CL	3.25 3.2 3.2	PID=.4 ppm α=0 ppm BΓ=40-60 cpm

NOTES:
BACKGROUND LEVELS:
(5/10/93) HNU=.2PPM, BETA GAMMA=40-60CPM, ALPHA=0CPM
(05/11/93) HNU=.4PPM, BETA GAMMA=40-60CPM, ALPHA=0CPM
(05/12/93) HNU=.2PPM, BETA GAMMA=40-60CPM, ALPHA=0CPM
(05/13/93) HNU=.4PPM, BETA GAMMA=40-60CPM, ALPHA=0CPM

Boring Contractor: PENNSYLVANIA DRILLING
Driller: DAVID NEWMAN

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 21033	COORDINATES: NORTH 477278.10 EAST 1380181.18	DATE:10-MAY-93
GROUND ELEVATION: 573.08	GWL: Depth 52 Date/Time 14-May-93 13:30	DATE STARTED: 10-MAY-93
ENGINEER/GEOLOGIST: KEN GEIGER	Depth 51.1 Date/Time 19-May-93 11:10	DATE COMPLETE: 17-MAY-93
DRILLING METHOD: CABLE TOOL		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
19.5 20.5	116883	05/12/93 08:30	13 32	12	VERY STIFF, YELLOWISH BROWN (105Y,5/6), SILTY CLAY WITH SOME SAND AND GRAVEL, MEDIUM PLASTICITY, SLIGHTLY MOIST	CL	4.0	PID=.2 ppm α=0 ppm βΓ=40-60 cpm
20.5 21.0	116883	05/12/93 08:30	41	6	VERY DENSE, (10YR, 5/4) YELLOWISH BROWN, POORLY GRADED SAND WITH SOME GRAVEL, DRY	SP	N/A	PID=.2 ppm βΓ=40-60 cpm
21.0 25.0		05/12/93 00:00	N/A	N/A	NO SAMPLES TAKEN. SAMPLES TO BE TAKEN EVERY 5' STARTING AT 25.0'	N/A	N/A	
25.0 26.5	116884	05/12/93 09:05	30 41 50	15	VERY DENSE, YELLOWISH BROWN (10YR, 5/4), POORLY GRADED SAND WITH SOME GRAVEL, DRY	SP	N/A	PID=.2 ppm α=0 ppm βΓ=40-60 cpm
30.0 31.5	116885	05/12/93 10:25	34 50	8	VERY DENSE, YELLOWISH BROWN (10YR, 5/4) POORLY GRADED SAND WITH SOME GRAVEL, DRY	SP	N/A	PID=.2 ppm α=0 ppm βΓ=40 cpm
35.0 36.5	116886	05/13/93 09:45	48 50	8	VERY DENSE, YELLOWISH BROWN (10YR, 5/4), POORLY GRADED SAND WITH SOME GRAVEL, DRY	SP	N/A	PID=.4 ppm α=0 ppm βΓ=40-60 cpm
40.0 41.5	116887	05/13/93 10:45	43 31 30	12	VERY DENSE, LIGHT YELLOWISH BROWN (10YR, 6/4), POORLY GRADED SAND WITH SOME GRAVEL, DRY	SP	N/A	PID=.4 ppm α=0 ppm βΓ=40-60 cpm
45.0 46.5	116888	05/13/93 14:40	50/4"	4	VERY DENSE, LIGHT YELLOWISH BROWN (10YR, 6/4), WELL GRADED SAND WITH SOME GRAVEL, DRY	SW	N/A	PID=.4 ppm α=0 ppm βΓ=40-60 cpm
46.5 48.0	116889	05/13/93 15:30	50/3"	3	VERY DENSE, YELLOWISH BROWN (10YR, 5/6), POORLY GRADED GRAVELLY SAND WITH ROCK FRAGMENTS, MOIST	SP	N/A	PID=.4 ppm α=0 ppm βΓ=40-60 cpm
48.0 49.5	116890	05/13/93 15:55	25 50/3"	6	VERY DENSE, YELLOWISH BROWN (10YR,5/6), POORLY GRADED SAND WITH SOME GRAVEL, DRY	SP	N/A	PID=.6 ppm α=0 ppm βΓ=40-60 cpm
49.5 51.0	116891	05/13/93 16:10	15 31 32	14	VERY DENSE, YELLOWISH BROWN (10YR,5/6), POORLY GRADED SAND WITH SOME GRAVEL, DRY	SP	N/A	PID=.4 ppm α=0 ppm βΓ=40-60 cpm
51.0 52.5	116892	05/13/93 16:25	12 18 28	12	DENSE, DARK YELLOWISH BROWN (10YR,4/4), POORLY GRADED SAND WITH SOME GRAVEL, WET	SP	N/A	PID=.5 ppm α=0 ppm βΓ=40-60 cpm
52.5 54.0	116893	05/14/93 09:30	28 50/3"	9	VERY DENSE, DARK YELLOWISH BROWN (10YR,4/4), POORLY GRADED SAND, WITH SOME GRAVEL, WET	SP	N/A	PID=.1 ppm α=0 ppm βΓ=40-60 cpm

NOTES:
BACKGROUND LEVELS:
(5/10/93) HNU=.2PPM, BETA GAMMA=40-60CPM, ALPHA=0CPM
(05/11/93) HNU=.4PPM, BETA GAMMA=40-60CPM, ALPHA=0CPM
(05/12/93) HNU=.2PPM, BETA GAMMA=40-60CPM, ALPHA=0CPM
(05/13/93) HNU=.4PPM, BETA GAMMA=40-60CPM, ALPHA=0CPM

Boring Contractor: PENNSYLVANIA DRILLING
Driller: DAVID NEWMAN

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 20.03.05	PROJECT NAME: CRU2 RI PHASE II FIELD INVESTIGATION	
BORING NUMBER: 21033	COORDINATES: NORTH 477278.10 EAST 1380181.18	DATE:10-MAY-93
GROUND ELEVATION: 573.08	GWL: Depth 52 Date/Time 14-May-93 13:30	DATE STARTED: 10-MAY-93
ENGINEER/GEOLOGIST: KEN GEIGER	Depth 51.1 Date/Time 19-May-93 11:10	DATE COMPLETE: 17-MAY-93
DRILLING METHOD: CABLE TOOL		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
54.0 55.5	116894	05/14/93 09:45	12 32 35	12	SAA	SP	N/A	PID=0 ppm α=0 ppm BΓ=40-60 cpm
55.5 57.0	116895	05/14/93 10:10	17 24 18	10	DENSE, DARK YELLOWISH BROWN, (10YR,4/4), POORLY GRADED SAND WITH SOME GRAVEL, WET	SP	N/A	PID=.3 ppm α=0 ppm BΓ=40-60 cpm
57.0 58.5	116896	05/14/93 10:35	8 18 20	10	DENSE, DARK YELLOWISH BROWN (10YR, 4/4), WELL GRADED SAND WITH SOME GRAVEL, WET	SW	N/A	PID=.6 ppm α=0 ppm BΓ=40-60 cpm
58.5 60.0	116897	05/14/93 10:50	12 20 22	8	SAA, POORLY GRADED	SP	N/A	PID=.5 ppm α=0 ppm BΓ=40-60 cpm
60.0 65.0		05/14/93 00:00	N/A	N/A	SPLIT SPOON SAMPLED TO 60'. BOTTOM OF BORING AT 65'	N/A	N/A	

NOTES:
BACKGROUND LEVELS:
(5/10/93) HNU=.2PPM, BETA GAMMA=40-60CPM, ALPHA=0CPM
(05/11/93) HNU=.4PPM, BETA GAMMA=40-60CPM, ALPHA=0CPM
(05/12/93) HNU=.2PPM, BETA GAMMA=40-60CPM, ALPHA=0CPM
(05/13/93) HNU=.4PPM, BETA GAMMA=40-60CPM, ALPHA=0CPM

Boring Contractor: PENNSYLVANIA DRILLING
Driller: DAVID NEWMAN

SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

PROJECT NUMBER: 602 3.2	PROJECT NAME: CRU2 RI PHASE I FIELD INVESTIGATION	
BORING NUMBER: 3045	COORDINATES: NORTH 477139.87 EAST 1379742.30	DATE:07-MAY-90
GROUND ELEVATION: 545.73	GWL: Depth Date/Time	DATE STARTED: 07-MAY-90
ENGINEER/GEOLOGIST: M. GARMAN	Depth Date/Time	DATE COMPLETE: 07-MAY-90
DRILLING METHOD: CABLE-TOOL DRILLING		

DEPTH	SAMPLE	DATE TIME	BLOWS ON SAMPLE	RECOVERY INCHES		USCS SYMBOL	TSF	REMARKS
45.0 46.5	032597	05/07/90 10:50	4 16 23	18	DENSE (10 YR, 4/2) DARK GRAYISH BROWN WELL GRADED SAND, SOME SILT, WET.	SW	N/A	PID=0 ppm α=0 ppm BΓ=60 cpm
50.0 51.5	032598	05/07/90 11:17	6 6 6	14	MEDIUM DENSE (10 YR, 5/3) BROWN WELL GRADED SAND, TRACE SILT, WET.	SW	N/A	PID=0 ppm α=0 ppm BΓ=80 cpm
55.0 56.5	032599	05/07/90 13:40	11 14 15	17	MEDIUM DENSE (10 YR, 4/3) BROWN WELL GRADED SAND, SOME SILT, TRACE GRAVEL, WET.	SW	N/A	PID=0 ppm α=0 ppm BΓ=80 cpm
60.0 61.5	032600	05/07/90 14:05	6 15 8	15	MEDIUM DESE (10 YR, 5/3) BROWN WELL, GRADED SAND, SOME FINE GRAVEL, TRACE SILT, WET.	SW	N/A	PID=0 ppm α=0 ppm BΓ=60 cpm
65.0 66.5	032601	05/07/90 15:30	24 20 25	18	DENSE (10 YR, 5/3) BROWN WELL GRADED SAND, SOME SILT (9 IN) WET, GRADING TO (10 YR, 5/3) FINE SAND WITH SOME SILT, WET. (9 IN)	SW SP	N/A	PID=0 ppm α=0 ppm BΓ=80 cpm
70.0 71.5	032602	05/08/90 08:55	5 5 7	12	MEDIUM DENSE (10 YR, 5/3) BROWN GRAVELLY WELL GRADED SAND, TRACE SILT, WET.	SW	N/A	PID=0 ppm α=0 ppm BΓ=70 cpm
75.0 76.5	032603	05/08/90 10:50	26 37 35	18	VERY DENSE (10 YR, 4/2) DARK GRAYISH BROWN GRAVELLY WELL GRADED SAND, SOME SILT, WET	SW	N/A	PID=0 ppm α=0 ppm BΓ=50 cpm
80.0 81.5	032604	05/08/90 11:27	16 16 16	18	DENSE (10 YR, 5/3) BROWN WELL GRADED SAND, TRACE SILT, WET.	SW	N/A	PID=0 ppm α=0 ppm BΓ=80 cpm
85.0 86.5	032605	05/08/90 14:47	12 13 13	16	MEDIUM DENSE (10 YR, 4/2) DARK GRAYISH BROWN WELL GRADED SAND, TRACE GRAVEL, TRACE SILT, WET.	SW	N/A	PID=0 ppm α=0 ppm BΓ=60 cpm
90.0 91.5	032606	05/08/90 15:50	3 4 6	N/A	NO RECOVERY - IN BLOW SAND, 2ND ATTEMPT	N/A	N/A	
95.0 96.5	032607	05/08/90 17:10	31 39 40	18	VERY DENSE (10 YR, 4/1) DARK GRAY WELL GRADED SAND, SOME SILT, TRACE GRAVEL, WET.	SW	N/A	PID=0 ppm α=0 ppm BΓ=80 cpm
100.0 101.5	032608	05/09/90 08:40	14 17 18	12	DENSE (5 Y, 4/1) DARK GRAY SILT, GRADING FROM SANDY SILT TO A SILT WITH SOME CLAY AT 101.5 FT., WET	ML	N/A	PID=0 ppm α=0 ppm BΓ=70 cpm

NOTES:

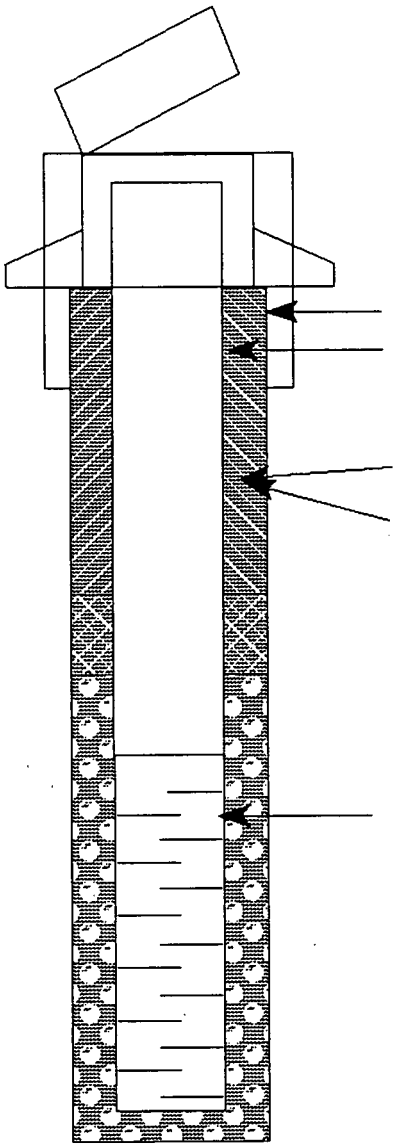
SAA = Same as Above
PID = Photoionization Detector
N/A = Not Applicable

TABLE G-19

TABLE G-19

MONITORING WELL INSTALLATION RECORD

PROJECT NAME: Fernald Environmental Management Project	**PROJECT LOCATION:** Fernald
BORING ID NO: 1045	**COUNTY:** Hamilton
PROJECT ID: NA	**STATE:** Ohio
DATE INSTALLED: October 9, 1987	**CONTRACTOR:** NA
FIELD ENG./GEOL.: D. Oakley	**DRILLED BY:** NA
TYPE OF SEAL: Bentonite	**DRILLING METHOD:** Cable-Tool Drilling
DEVELOPEMENT METHOD: NA	**TYPE OF BIT:** Flat Head Hammer
SURVEY DATUM	**SAND PACK TYPE:** NA
	WATER LEVEL/DATE: NA



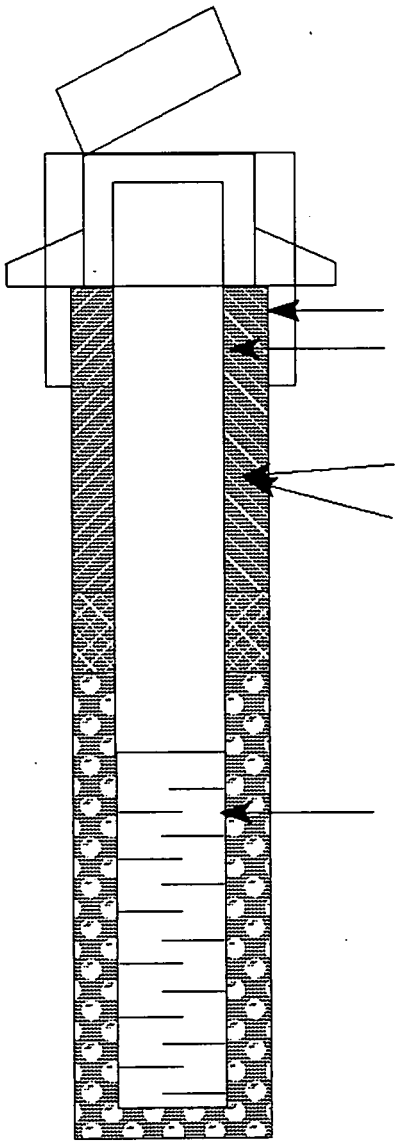
548.15 ft, Top of Casing (Protective pipe)
547.59 ft, Top of Well
546.2 ft, Concrete Elevation
545.7 ft, Ground Elevation
10 3/8 in, Boring Diameter
4 in, Casing Diameter
-2.5 Bottom Protective Pipe
S. S. Casing Material
Grout
Other Bentonite
0 ft, Top of Bentonite
1.5 ft, Bottom of Bentonite
2.5 ft, Top of Screen
Well Screen
4 ID in, Diameter
.01 in, Slot
5.4 Length (ft)
S. S. Material
7.9 ft, Bottom of Screen
18 ft, Bottom of Boring

Note: Elevations in feet above mean sea level.

TABLE G-19

MONITORING WELL INSTALLATION RECORD

PROJECT NAME: Fernald Environmental Management Project	**PROJECT LOCATION:** Fernald
BORING ID NO: 1048	**COUNTY:** Hamilton
PROJECT ID: NA	**STATE:** Ohio
DATE INSTALLED: October 14, 1987	**CONTRACTOR:** NA
FIELD ENG./GEOL.: W. Kegley	**DRILLED BY:** NA
TYPE OF SEAL: Bentonite	**DRILLING METHOD:** Cable-Tool Drilling
DEVELOPEMENT METHOD: NA	**TYPE OF BIT:** Flat Head Hammer
SURVEY DATUM	**SAND PACK TYPE:** NA
	WATER LEVEL/DATE: NA



573.64 ft, Top of Casing (Protective pipe)
573.17 ft, Top of Well
571.8 ft, Concrete Elevation
571.3 ft, Ground Elevation
10 3/8 in, Boring Diameter
4 in, Casing Diameter
-2.5 Bottom Protective Pipe
S. S. Casing Material
Grout
Other Bentontie
0 ft, Top of Bentonite
3.5 ft, Bottom of Bentonite
5.5 ft, Top of Screen
Well Screen
4 ID in, Diameter
.01 in, Slot
10 Length (ft)
S. S. Material
15.5 ft, Bottom of Screen
19.5 ft, Bottom of Boring

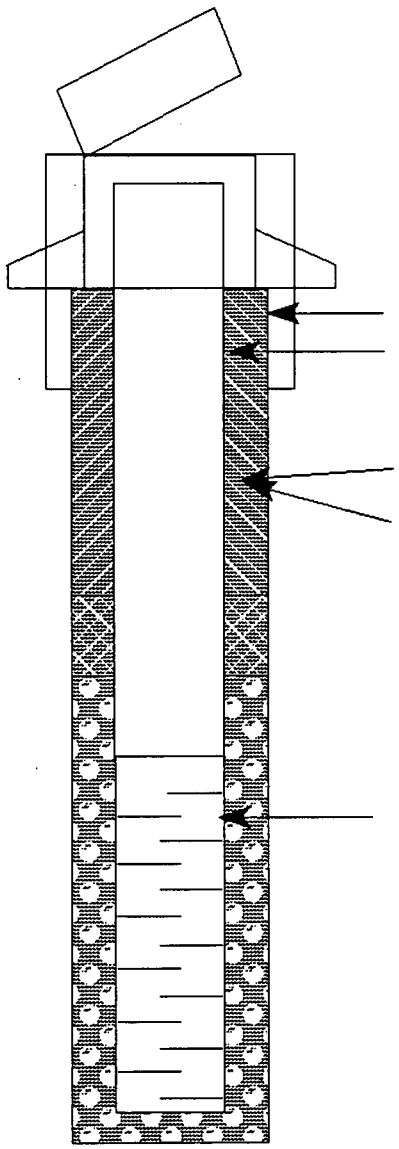
Note: Elevations in feet above mean sea level.

000202

TABLE G-19

MONITORING WELL INSTALLATION RECORD

PROJECT NAME: Fernald Environmental Management Project	**PROJECT LOCATION:** Fernald
BORING ID NO: 2045	**COUNTY:** Hamilton
PROJECT ID: NA	**STATE:** Ohio
DATE INSTALLED: December 7, 1988	**CONTRACTOR:** NA
FIELD ENG./GEOL.: W. Hertel	**DRILLED BY:** NA
TYPE OF SEAL: Bentonite	**DRILLING METHOD:** Cable-Tool Drilling
DEVELOPEMENT METHOD: NA	**TYPE OF BIT:** Flat Head Hammer
SURVEY DATUM	**SAND PACK TYPE:** NA
	WATER LEVEL/DATE: NA



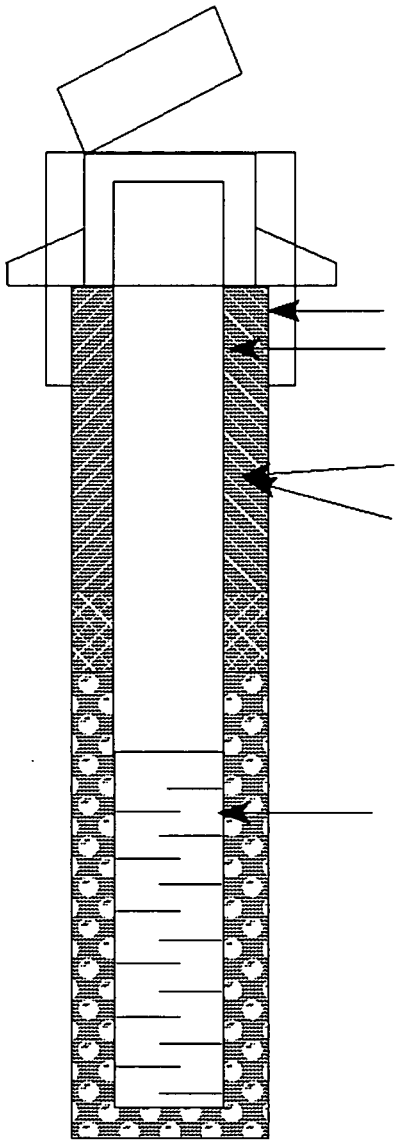
547.89 ft, Top of Casing (Protective pipe)
547.34 ft, Top of Well
NA ft, Concrete Elevation
545.4 ft, Ground Elevation
10 3/8 in, Boring Diameter
4 in, Casing Diameter
2.4 Bottom Protective Pipe
S. S. Casing Material
■ Grout
□ Other _____
14 ft, Top of Bentonite
19 ft, Bottom of Bentonite
23 ft, Top of Screen
Well Screen
4 ID in, Diameter
.01 in, Slot
15 Length (ft)
S. S. Material
38 ft, Bottom of Screen
45 ft, Bottom of Boring

Note: Elevations in feet above mean sea level.

TABLE G-19

MONITORING WELL INSTALLATION RECORD

PROJECT NAME: Fernald Environmental Management Project	**PROJECT LOCATION:** Fernald
BORING ID NO: 2048	**COUNTY:** Hamilton
PROJECT ID: NA	**STATE:** Ohio
DATE INSTALLED: November 30, 1988	**CONTRACTOR:** NA
FIELD ENG./GEOL.: B. Hertel	**DRILLED BY:** NA
TYPE OF SEAL: Bentonite	**DRILLING METHOD:** Cable-Tool Drilling
DEVELOPEMENT METHOD: NA	**TYPE OF BIT:** Flat Head Hammer
SURVEY DATUM	**SAND PACK TYPE:** NA
	WATER LEVEL/DATE: NA



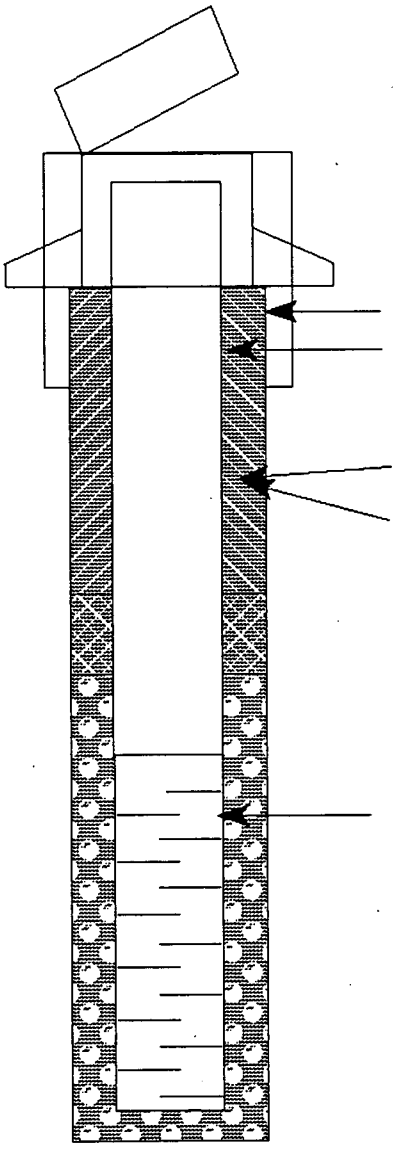
574.02 ft, Top of Casing (Protective pipe)
573.56 ft, Top of Well
NA ft, Concrete Elevation
571.5 ft, Ground Elevation
10 3/8 in, Boring Diameter
4 in, Casing Diameter
2.5 Bottom Protective Pipe
S. S. Casing Material
■ Grout
□ Other _____
39 ft, Top of Bentonite
45 ft, Bottom of Bentonite
50 ft, Top of Screen
Well Screen
4 ID in, Diameter
.01 in, Slot
15 Length (ft)
S. S. Material
65 ft, Bottom of Screen
68 ft, Bottom of Boring

Note: Elevations in feet above mean sea level.

TABLE G-19

MONITORING WELL INSTALLATION RECORD

PROJECT NAME: Fernald Environmental Management Project	**PROJECT LOCATION:** Fernald
BORING ID NO: 2049	**COUNTY:** Hamilton
PROJECT ID: NA	**STATE:** Ohio
DATE INSTALLED: October 14, 1987	**CONTRACTOR:** NA
FIELD ENG./GEOL.: L Wille	**DRILLED BY:** NA
TYPE OF SEAL: Bentonite	**DRILLING METHOD:** Cable-Tool Drilling
DEVELOPEMENT METHOD: NA	**TYPE OF BIT:** Flat Head Hammer
SURVEY DATUM	**SAND PACK TYPE:** NA
	WATER LEVEL/DATE: NA



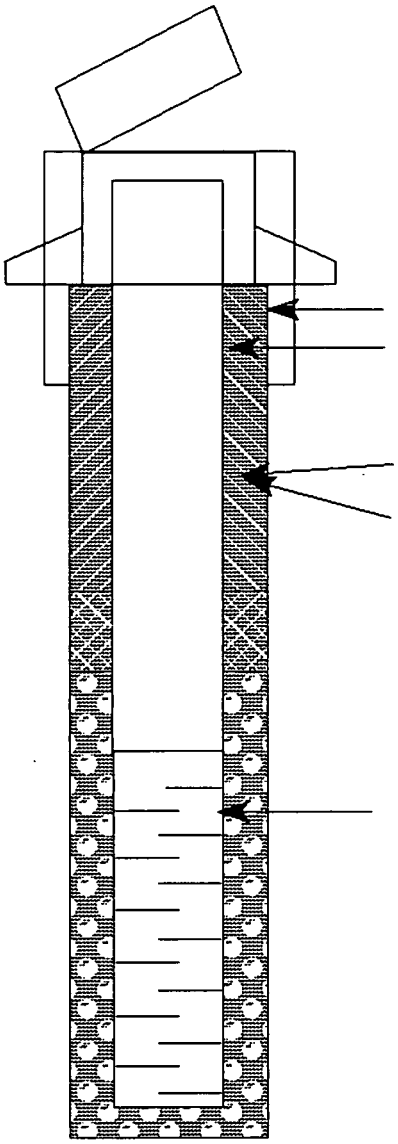
543.13 ft, Top of Casing (Protective pipe)
542.71 ft, Top of Well
541.2 ft, Concrete Elevation
540.7 ft, Ground Elevation
10 3/8 in, Boring Diameter
4 in, Casing Diameter
2.5 Bottom Protective Pipe
S. S. Casing Material
■ Grout
□ Other _____
11 ft, Top of Bentonite
16 ft, Bottom of Bentonite
18 ft, Top of Screen
Well Screen
4 ID in, Diameter
.01 in, Slot
15 Length (ft)
S. S. Material
33 ft, Bottom of Screen
41.5 ft, Bottom of Boring

Note: Elevations in feet above mean sea level.

TABLE G-19

MONITORING WELL INSTALLATION RECORD

PROJECT NAME: Fernald Environmental Management Project	**PROJECT LOCATION:** Fernald
BORING ID NO: 21033	**COUNTY:** Hamilton
PROJECT ID: 20.03.05	**STATE:** Ohio
DATE INSTALLED: May 17, 1993	**CONTRACTOR:** Pennsylvania Drilling
FIELD ENG./GEOL.: Ken Geiger	**DRILLED BY:** David Newman
TYPE OF SEAL: Grout/Slurry	**DRILLING METHOD:** Cable Tool
DEVELOPEMENT METHOD: Bail-Surge-Bail	**TYPE OF BIT:** Hammer Percussion Bit
SURVEY DATUM	**SAND PACK TYPE:** 10/20 Silica
	WATER LEVEL/DATE: 521.90/6-2-93



576.15 ft, Top of Casing (Protective pipe)
575.6 ft, Top of Well
573.58 ft, Concrete Elevation
573.08 ft, Ground Elevation
10 3/8 in, Boring Diameter
4 in, Casing Diameter
2.5 Bottom Protective Pipe
S. S. Casing Material
■ Grout
□ Other _____
1 ft, Top of Bentonite
37 ft, Bottom of Bentonite
47 ft, Top of Screen
Well Screen
4 in, Diameter
.01 in, Slot
15 Length (ft)
S. S. Material
62 ft, Bottom of Screen
65 ft, Bottom of Boring

Note: Elevations in feet above mean sea level.

TABLE G-20

TABLE G-20A

ACTIVE FLYASH PILE
GROUNDWATER ELEVATION DATA[a], 1988 - 1992
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Year	Well No.	January	February	March	April	May	June	July	August	September	October	November	December
1988	1048	563.00	566.02	569.00	568.58	566.17	564.89	563.57	563.12	562.49	561.99	562.12	563.32
1988	2045	NMT[b]	NMT	NMT	NMT	NMT	NMT	NMT	NMT	NMT	NMT	NMT	517.43
1988	2048	NMT	NMT	NMT	NMT	NMT	NMT	NMT	NMT	NMT	NMT	NMT	517.31
1988	2049	518.71	519.58	520.97	521.30	520.68	520.02	519.33	518.81	518.22	517.78	517.41	517.19
1989	2045	518.51	518.85	520.46	NMT	523.54	524.04	522.94	522.04	521.56	519.50	521.00	520.37
1989	2048	518.10	518.71	520.00	522.08	523.33	523.66	523.00	521.87	521.58	519.52	520.85	520.39
1989	2049	518.19	518.52	520.16	522.09	523.30	523.92	522.80	521.89	521.40	519.36	520.77	520.34
1990	1045	543.04	542.61	542.49	542.41	543.23	542.07	541.54	539.26	540.75	540.42	542.55	542.41
1990	1048	567.99	568.92	568.17	567.87	543.57	567.71	566.86	566.66	564.51	567.26	567.14	567.62
1990	2045	520.94	522.10	523.38	523.65	524.95	524.44	524.26	522.92	522.15	522.94	522.92	523.11
1990	2048	520.72	521.84	523.17	523.43	524.48	520.58	523.79	523.00	522.19	522.64	522.84	516.98
1990	2049	520.66	521.71	523.01	523.24	524.51	524.13	523.61	522.73	521.92	522.58	522.58	522.78
1991	1045	542.61	543.19	543.16	NMT	541.68	NMT	539.99	540.41	540.06	539.22	538.89	538.44
1991	1048	570.05	569.70	569.47	NMT	566.69	NMT	564.37	563.98	563.89	563.14	562.70	562.79
1991	2045	524.97	524.98	524.93	NMT	524.22	NMT	522.35	521.69	521.34	520.32	519.83	519.20
1991	2048	524.85	524.84	524.86	NMT	524.32	NMT	522.44	521.71	521.30	520.43	519.77	519.11
1991	2049	524.88	524.58	524.67	NMT	523.95	NMT	NMT	NMT	521.00	520.00	519.51	518.89
1992	1045	542.24	542.68	542.42	542.44	NMT	541.82	542.50	541.98	541.51	542.71	542.55	542.51
1992	1048	565.05	565.55	566.00	567.36	NMT	NMT	567.16	565.84	564.93	565.13	566.05	567.45
1992	2045	521.42	519.46	519.21	519.93	NMT	519.36	520.13	519.99	519.68	519.64	519.74	520.58
1992	2048	519.20	519.25	519.00	519.55	NMT	NMT	519.90	519.97	519.72	519.56	519.60	520.42

See footnotes at end of table

FER\CRU2RI\TLC\TABG-20A\January 5, 1995 8:11am

TABLE G-20A
(Continued)

Year	Well No.	January	February	March	April	May	June	July	August	September	October	November	December
1992	2049	519.06	519.06	518.81	519.45	NMT	519.11	519.83	519.81	NMT	NMT	NMT	NMT
MISCELLANEOUS GROUNDWATER ELEVATION													
1988	1025	NMT	569.82	570.33	570.04	561.54	568.34	570.85	571.07	571.16	570.88	570.75	570.63
1988	1064	NMT	NMT	NMT	NMT	NMT	NMT	NMT	NMT	NMT	NMT	NMT	559.92
1988	1080	NMT	NMT	NMT	NMT	560.15	567.24	567.55	560.89	567.71	567.83	567.73	568.18
1988	1081	575.10	575.95	576.69	576.89	575.49	575.35	575.05	575.04	574.95	574.71	574.68	575.05
1988	2068	517.88	518.34	519.34	520.10	520.17	519.75	518.81	518.17	517.52	517.13	516.50	516.58
1989	1025	570.34	563.52	570.48	569.89	571.37	571.73	571.75	571.95	DRY	570.27	571.62	570.84
1989	1064	566.90	577.59	577.35	577.55	577.06	574.76	573.94	NMT	573.44	571.12	573.28	572.46
1989	1080	568.61	568.40	567.77	NMT	568.95	568.74	568.06	568.05	566.85	566.62	568.66	NMT
1989	1081	575.73	575.87	576.69	576.65	576.72	575.25	575.64	570.27	575.51	575.35	575.53	575.10
1989	2068	516.43	517.38	518.45	520.65	522.20	523.52	522.80	521.94	521.14	519.17	519.98	519.75
1989	2106	NMT	518.78	520.45	522.23	523.09	523.43	522.40	521.51	NMT	519.07	520.35	519.97
1990	1025	570.63	NMT	NMT	570.95	570.38	571.63	571.84	567.72	572.08	572.27	569.76	571.57
1990	1064	573.71	576.65	NMT	575.50	575.41	574.95	NMT	573.03	572.98	565.36	574.30	576.57
1990	1080	567.98	568.72	NMT	568.72	564.65	568.64	NMT	568.37	568.69	567.36	NMT	569.46
1990	1081	575.63	563.32	NMT	576.00	577.49	576.13	576.07	575.79	575.71	577.05	575.75	NMT
1990	2068	519.49	520.14	NMT	522.23	522.74	523.68	523.02	522.66	521.59	521.59	521.85	521.85
1990	2106	520.57	521.75	522.81	523.05	524.29	523.65	523.20	522.32	521.84	522.66	522.35	522.62
1990	2385	NMT	NMT	NMT	NMT	524.11	519.57	523.73	523.07	522.22	522.46	522.73	522.83
1990	2397	NMT	NMT	NMT	NMT	NMT	NMT	NMT	522.61	521.93	521.99	521.99	522.21
1991	1025	571.37	566.77	NMT	NMT	NMT	570.50	571.58	571.89	NMT	572.11	572.19	571.59
1991	1032	NMT	NMT	NMT	NMT	NMT	NMT	NMT	NMT	NMT	559.11	559.10	559.49
1991	1064	579.80	579.37	579.57	NMT	NMT	575.18	NMT	573.24	NMT	NMT	NMT	NMT

See footnotes at end of table

FER\CRU2RI\TLC\TABG-20A\January 5, 1995 8:11am

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TABLE G-20A
(Continued)

Year	Well No.	January	February	March	April	May	June	July	August	September	October	November	December
MISCELLANEOUS GROUNDWATER ELEVATION (continued)													
1991	1080	569.21	568.91	NMT	NMT	NMT	565.70	564.22	NMT	NMT	NMT	NMT	NMT
1991	1081	NMT	NMT	NMT	NMT	NMT	576.54	NMT	NMT	NMT	NMT	NMT	NMT
1991	1907	NMT	NMT	NMT	NMT	NMT	NMT	DRY	NMT	NMT	NMT	NMT	NMT
1991	2068	524.12	524.08	524.14	NMT	NMT	523.41	521.98	520.74	NMT	519.36	518.68	517.85
1991	2106	524.05	522.99	524.35	NMT	NMT	523.34	NMT	521.21	520.90	NMT	NMT	NMT
1991	2385	524.71	524.10	524.73	NMT	524.34	NMT	522.45	521.71	521.28	520.40	519.74	519.00
1991	2397	524.46	524.38	524.26	NMT	NMT	523.38	521.97	521.20	520.62	519.79	519.08	518.27
1992	1025	572.19	568.27	NMT	NMT	NMT	570.89	565.54	572.03	572.39	571.88	571.64	571.29
1992	1032	561.02	559.05	559.09	559.50	NMT	560.49	561.05	559.17	559.46	560.17	560.88	559.16
1992	2068	517.60	517.60	517.44	517.56	NMT	517.29	518.63	519.52	519.07	518.71	518.68	519.37
1992	2385	518.98	519.05	518.89	519.23	NMT	519.20	NMT	519.91	519.87	519.47	519.49	520.25
1992	2397	517.99	518.07	517.95	518.18	NMT	518.63	518.91	NMT	519.33	519.01	519.00	519.63

[a]Feet above Mean Sea Level

[b]No measurement taken

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TABLE G-20B

ACTIVE FLYASH PILE
GROUNDWATER ELEVATION DATA[a], 1993
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Well No.	3/18/93	3/23/93	4/09/93	4/19/93	5/07/93	5/19/93	6/02/93	6/21/93	7/08/93	7/19/93	8/02/93	8/16/93
1045	542.85	543.26	542.24	542.53	539.06	542.61	541.91	542.23	541.85	539.46	539.38	539.27
1048	569.69	569.84	568.27	569.40	567.99	567.86	566.85	566.71	565.75	565.33	564.67	565.10
2045	522.40	522.55	522.78	522.96	523.03	523.02	522.22	522.30	521.84	521.54	521.36	521.04
2048	522.14	522.31	522.62	522.75	522.86	522.92	522.22	522.27	521.86	521.58	521.44	521.06
2049	522.03	522.41	522.69	522.65	522.70	NMT	522.04	NMT	521.63	521.36	521.18	520.88
21033	NMT	NMT	NMT	NMT	NMT	NMT	521.90	521.94	521.58	521.28	521.17	520.79

[a]Feet above Mean Sea Level

[b]No Measurement Taken

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Appendix H
Hydraulic Testing

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H.0 HYDRAULIC TESTING

This appendix describes the analysis procedures used to interpret slug tests that were conducted to obtain measurements of hydraulic conductivity of the glacial till/vadose zone. These values were used in fate and transport modeling. Rising and falling head tests (slug tests) were attempted on nine wells installed during Phase II activities and nine existing 1000-series monitoring wells installed during Phase I at Operable Unit 2 subunits. Slug tests were conducted in accordance with the procedures outlined in the Fernald Environmental Management Project (FEMP) Glacial Till/Vadose Zone Hydraulic Investigation Work Plan (1993). Water levels were recorded using HERMIT™ data loggers and pressure transducers (manufactured by In-Situ Inc.).

Slug tests were completed on 17 wells screened in the perched water from June to July 1993. Tests could not be completed in Well No. 1711 because of insufficient water present in the well casing at the time of testing. Out of 17 wells where slug tests were conducted, Wells 1433 and 1941 did not have sufficient water levels to conduct a falling head test. In these two wells, a bail-down (rising head) test was conducted. A discussion of methodologies used for analysis is included in Section H.1. Section H.2 presents the results of the analysis along with the field notes and well completion diagrams.

H.1 SLUG TEST ANALYSIS PROCEDURE

A review of the well boring logs and water levels at the time of testing indicated that some monitoring wells selected for testing were under confining conditions. That is, sand lenses sandwiched between two layers of clay were modeled as confined aquifers, while well screens surrounded mostly by clays and silts were modeled as unconfined aquifers. For the fully penetrating wells screened in the confined portion of the aquifer, the data were analyzed using the Ramey et al. (1975) method which is an extension of the Cooper et al. (1967) method. The Bouwer and Rice (1976) method was used to analyze data from wells screened in the unconfined portion of the aquifer.

The static water level was determined in the field and was used in conjunction with well construction information to determine if the water level was rising or falling during the test in the screened portion of the well. Effective well casing radius for this condition, as proposed by Bouwer (1989), was calculated as necessary. An effective porosity of 30 percent was assumed for the sand pack.

Fully Penetrating Confined Aquifer Tests

The following assumptions were used in the analysis of data from tests of confined conditions:

- The saturated thickness is defined as the distance between the lower and upper aquitard.
- The effective screen length is defined as the portion of the sand pack which lies between the lower and upper aquitard.
- Clay is considered an aquitard when it lies above or below a more permeable material (e.g., sand).

For fully penetrating wells screened in the confined portion of the aquifer, slug test data was analyzed using the Ramey et al. (1975) method, which is an extension of the Cooper et al. (1967) method. Test starting time was selected from the raw data to coincide with the time when the slug was completely in or out of the water. Initial head (H_o), and static water levels were determined by plotting the data on a semi-log scale. Initial oscillations in the data were not considered for selecting H_o. Slug test data were then analyzed using STEP-MATCH™ software, which uses the Ramey et al. method for the analysis (Bumb and Ramesh 1992).

The Ramey et al. (1975) method also calculates skin factor based on the input value of the storage coefficient. Skin factor is a measure of permeability in the immediate vicinity of the wellbore as compared to permeability of the aquifer. High positive skin factors indicate significant wellbore damage from the drilling activity, while negative skin factors indicate increased permeability near the wellbore.

Data were analyzed by the Ramey et al. method as well as the Bouwer and Rice method to gain confidence in the results when slug test data were of poor quality. While the Ramey et al. method uses the full data set, the Bouwer and Rice method requires only early time data.

Unconfined Aquifer

The following definitions were used in the analysis of data from tests of unconfined conditions (see Figure H-1):

- The effective aquifer thickness (H) is defined as the distance between the bottom of the aquifer and the static water level.
- The effective saturated thickness in the well (L_w) is defined as the distance between the bottom of the sand pack or the bottom of the aquifer (whichever is higher) and the static water level.

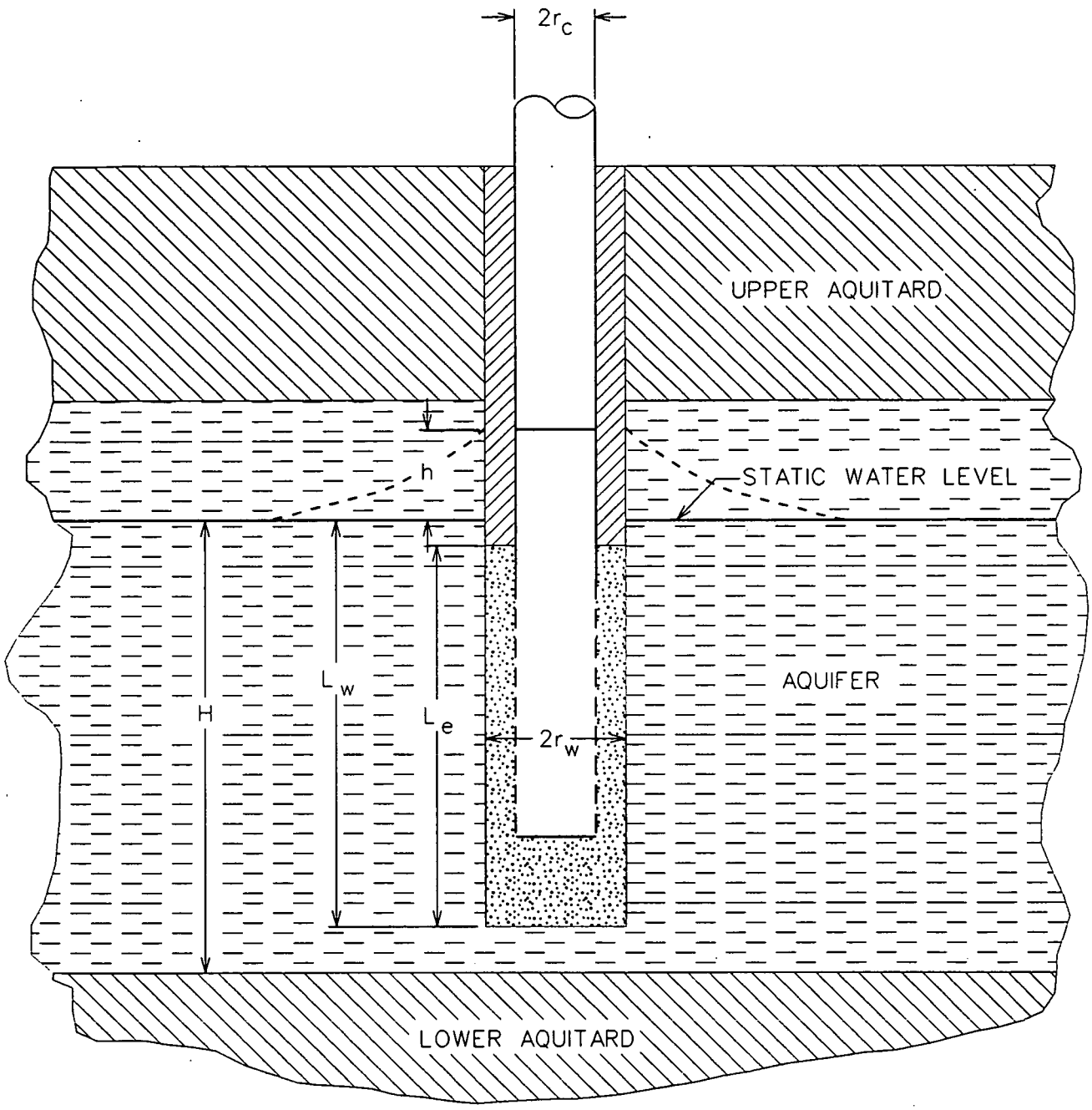

FIGURE H-1
SCHEMATIC OF SLUG TEST
IN UNCONFINED AQUIFER

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- The effective screen length (L_e) is defined as the distance between the bottom of the aquifer or the bottom of the sand pack (whichever is higher) and the top of the sand pack or the static water level (whichever is lower).

The Bouwer and Rice (1976) method was used to analyze the slug test data from wells screened in the unconfined aquifer. After determining static water level and starting time for the test, water level data were plotted on semi-log paper, with elapsed time on the linear scale and height of the water column on the log cycle.

The effects of the water level rising in the sand pack in the well is depicted by the "double straight line" observed when plotting the data with the Bouwer and Rice method. The first straight line has a greater slope and represents flow of water through the highly permeable sand pack. The second curve is less steep and more accurately represents the flow of water through the less permeable aquifer. In all cases, the slope of the second straight line was used in calculating the hydraulic conductivity of the aquifer.

H.2 SLUG TEST RESULTS

Information pertaining to slug tests from well construction and boring logs is summarized in Table H-1. Lithologic information from boring logs and static water level measurements taken before the slug tests was used to determine whether the confined or unconfined conditions best represents the aquifer in the neighborhood of each test well. Table H-1 also presents the effective aquifer thickness. Well No. 1046 was a unique case since it appeared to have three sand layers under confined conditions. The combined thickness of sand was 2.1 feet, so an effective aquifer thickness of 2.1 feet was used in the analysis for this well.

Static water level, as determined in the field, was used in conjunction with the well construction information to determine if the water level was rising or falling in the screened portion of the well or sand pack. If water level was rising or falling in the sand pack, effective radius of casing was calculated as proposed by Bouwer (1989). Table H-2 shows calculations of effective radius of casing for slug tests.

TABLE H-1

SUMMARY OF AQUIFER AND WELL CONDITIONS FOR SLUG TESTS
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Well	Test	Ground Surface Elevation (ft MSL)[a]	Top of Casing Elevation (ft MSL)	Riser Pipe Height (ft)	Bottom of Aquifer (ft BGS)[b]	Bottom of Sand Pack (ft BGS)	Top of Aquifer (ft BGS)	Top of Sand Pack (ft BGS)	Depth to Water (ft)		Effective Saturated Column in Well (ft)	Effective Screen Length (ft)	Effective Aquifer Thickness (ft)	Confined or Unconfined Aquifer?
									TOC[c] (ft)	BGS (ft)				
ACTIVE FLYASH PILE														
1048	Falling	571.3[d]	573.17	1.87	16.2	16.2	7.0	3.5	8.77	6.90	9.20	9.20	9.20	Confined
	Rising								8.78	6.91	9.20	9.20	9.20	Confined
SOUTH FIELD														
1046	Falling	576.5	579.13	2.63	18.0	22.0	12.2	7.0	13.22	10.59	2.10[e]	2.10[e]	2.10[e]	Confined
	Rising								13.21	10.58	2.10[e]	2.10[e]	2.10[e]	Confined
1433	Rising	566.7	569.69	2.99	12.5	12.5	0.0	5.5	11.78	8.79	3.71	3.71	3.71	Unconfined
1941	Rising	578.8	581.19	2.39	12.5	13.5	10.5	3.5	12.69	10.30	2.00	2.00	2.00	Confined
1942	Falling	576.5	577.77	1.27	14.0	16.0	12.0	4.0	13.79	12.52	1.48	1.48	1.48	Unconfined
	Rising								13.82	12.55	1.45	1.45	1.45	Unconfined
1954	Falling	574.95[d]	577.08	2.13	20.0	20.0	8.0-9.0	7.0	14.51	12.38	7.62	7.62	7.62	Unconfined
	Rising								14.57	12.44	7.56	7.56	7.56	Unconfined
11085	Falling	577.6	579.52	1.92	15.0	16.5	12.0	5.5	8.01	6.09	3.00	3.00	3.00	Confined
	Rising								8.01	6.09	3.00	3.00	3.00	Confined
SOLID WASTE LANDFILL														
1035	Falling	584.3[d]	586.19	1.89	26.0	27.0	24.0	9.0	9.33	7.44	2.00	2.00	2.00	Confined
	Rising								9.18	7.29	2.00	2.00	2.00	Confined
1038	Falling	581.9[d]	584.09	2.19	23.8	28.5	17.9	14.2	13.74	11.55	5.90	5.90	5.90	Confined
	Rising								13.51	11.32	5.90	5.90	5.90	Confined
1947	Falling	590.2	591.88	1.68	20.5	20.5	f	8.5	11.64	9.96	10.54	10.54	10.54	Unconfined
	Rising								11.71	10.03	10.47	10.47	10.47	Unconfined
1950	Falling	582.39[d]	584.34	1.95	16.0	20.0	10.0	7.0	7.18	5.23	6.00	6.00	6.00	Confined
	Rising								7.42	5.47	6.00	6.00	6.00	Confined
1952	Falling	588.01[d]	590.02	2.01	20.0	20.0	f	7.0	10.83	8.82	11.18	11.18	11.18	Unconfined
	Rising								10.88	8.87	11.13	11.13	11.13	Unconfined

See footnotes at end of table

TABLE H-1
(Continued)

Well	Test	Ground Surface Elevation (ft MSL)[a]	Top of Casing Elevation (ft MSL)	Riser Pipe Height (ft)	Bottom of Aquifer (ft BGS)[b]	Bottom of Sand Pack (ft BGS)	Top of Aquifer (ft BGS)	Top of Sand Pack (ft BGS)	Depth to Water (ft)		Effective Saturated Column in Well (ft)	Effective Screen Length (ft)	Effective Aquifer Thickness (ft)	Confined or Unconfined Aquifer?
									TOC[c] (ft)	BGS (ft)				
LIME SLUDGE PONDS														
1039	Falling-1	577.4	579.27	1.87	23.5	27.0	18.0	8.0	5.98	4.11	5.50	5.50	5.50	Confined
	Falling-2								5.99	4.12	5.50	5.50	5.50	Confined
	Rising								5.98	4.11	5.50	5.50	5.50	Confined
1041	Falling	581.3	583.13	1.83	22.5	22.5	f	5.0	9.46	7.63	14.87	14.87	14.87	Unconfined
	Rising								9.24	7.41	15.09	15.09	15.09	Unconfined
1042	Falling-1	574.9[d]	576.46	1.56	20.5	21.0	10.5	5.0	5.48	3.92	10.00	10.00	10.00	Confined
	Falling-2								5.48	3.92	10.00	10.00	10.00	Confined
	Rising								5.48	3.92	10.00	10.00	10.00	Confined
1934	Falling	577.81[d]	579.57	1.76	21.0	21.0	f	7.5	7.37	5.61	15.39	13.50	15.39	Unconfined
	Rising								7.38	5.62	15.38	13.50	15.38	Unconfined
1937	Falling	576.81[d]	578.99	2.18	20.5	20.5	12.5	6.5	5.63	3.45	8.00	8.00	8.00	Confined
	Rising								5.88	3.70	8.00	8.00	8.00	Confined

[a]MSL - Above Mean Sea Level

[b]BGS - Below Ground Surface

[c]TOC - Top of Casing

[d]Estimated by subtracting 6 inches from the top of concrete elevations.

[e]Three sand layers with combined thickness of 2.1 feet.

[f]Top of aquifer is undetermined.

TABLE H-2

EFFECTIVE RADIUS OF CASING AND SLUG SIZE
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Well No.	Borehole Diameter (inch)	Casing Diameter (inch)	Top of Water Table in Sand Pack?	Effective Radius of Casing (inch)	Slug Diameter (inch)	Slug Length (feet)	Slug Volume ($feet^3$)	Calculated Slug Head (feet)
ACTIVE FLYASH PILE								
1048	10.0	4.0	Yes	3.21	2.375	3.00	0.092	0.411
SOUTH FIELD								
1046	10.0	4.0	Yes	3.21	2.375	3.00	0.092	0.411
1433	10.0	4.0	Yes	3.21	NA	NA	0.484	2.152
1941	8.0	2.0	Yes	2.35	NA	NA	0.211	1.762
1942	10.0	2.0	Yes	2.86	1.315	3.10	0.029	0.163
1954	8.0	2.0	Yes	2.35	1.315	5.05	0.048	0.397
11085	8.0	2.0	Yes	2.35	1.315	5.99	0.056	0.471
SOLID WASTE LANDFILL								
1035	10.0	4.0	No	2.00	2.375	Unknown	Unknown	Unknown
1038	10.0	4.0	No	2.00	2.375	4.35	0.134	1.534
1947	8.5	2.0	Yes	2.47	1.315	4.00	0.038	0.283
1950	8.5	2.0	No	1.00	1.315	4.00	0.038	1.729
1952	8.5	2.0	Yes	2.47	1.315	5.99	0.056	0.423
LIME SLUDGE PONDS								
1039	10.0	4.0	No	2.00	2.375	3.06	0.094	1.079
1041	10.0	4.0	Yes	3.21	2.375	4.34	0.134	0.594
1042	10.0	4.0	No	2.00	2.375	4.35	0.134	1.534
1934	8.0	2.0	No	1.00	1.315	5.99	0.056	2.590
1937	8.0	2.0	No	1.00	1.315	5.99	0.056	2.590

NA - Not applicable.

Rising and falling head tests were analyzed by the Ramey et al. (1975) and/or the Bouwer and Rice (1976) method as described in Section H.1. Results of slug test analysis are presented in Table H-3, and calculations and field notes are attached. When multiple slug tests are conducted in a well, a geometric average is considered a representative value of the hydraulic conductivity. When a slug test was analyzed by the Ramey et al. method as well as the Bouwer and Rice method, values of hydraulic conductivity from these two methods were in agreement with each other. A plot of slug test data for the first Falling Head Test No. 1 for Well No. 1042 of the Lime Sludge Ponds shows scatter and, therefore, the results are questionable. A high positive skin factor for Well No. 1042 indicates that wellbore damage may have occurred during the drilling or this well was underdeveloped.

TABLE H-3

SUMMARY OF SLUG TEST RESULTS
OPERABLE UNIT 2 REMEDIAL INVESTIGATION
FERNALD ENVIRONMENTAL MANAGEMENT PROGRAM

Well	Test	Test Interval (ft)	Starting Time (min)	Initial Head (ft)	Static Water Level (ft)	Skin Factor	Storage[a] Coefficient	Transmissivity (cm^2/sec)	Hydraulic Conductivity	USTM Soil Type
ACTIVE FLYASH PILE										
1048	Falling	9.20	0.0500	0.42	-0.010	-2.86	1.00E-04	5.1E-02	1.8E-04	SM-GM-ML
	Rising	9.20	0.0250	0.42	-6.485	-3.14	1.00E-04	5.6E-02	2.0E-04[b]	
SOUTH FIELD										
1046	Falling	2.10	0.0500	0.025	0.000	-2.36	1.00E-04	4.1E-02	6.4E-04	SM-CL
	Rising	2.10	0.0500	-[c]	0.031	-	-	-	5.2E-04[d]	
1433	Rising	3.71	0.0416	-	0.000	-	-	-	1.1E-04	CL-GM (Fill)
1941	Falling	2.00	-0.7000	-	6.000	-	-	-	1.2E-04	SC
1942	Falling	1.48	0.0250	-	0.100	-	-	-	6.3E-05	SM
	Rising	1.45	0.0166	-	0.000	-	-	-	5.5E-05	
1954	Falling	7.62	0.0333	-	0.000	-	-	-	1.5E-04	SM-?
	Rising	7.56	0.0416	-	0.000	-	-	-	1.3E-04	
11085	Falling	3.00	0.0250	0.47	-0.040	-2.39	1.00E-04	5.2E-02	5.6E-04	SW
	Rising	3.00	0.0416	0.30	0.000	-4.11	1.00E-04	4.9E-02	5.4E-04[b]	

See footnotes at end of table

FER\CRU2RI\KDG\APP-H\TABH-3\January 4, 1995 5:52pm

TABLE H-3
(Continued)

Well	Test	Test Interval (ft)	Starting Time (min)	Initial Head (ft)	Static Water Level (ft)	Skin Factor	Storage[a] Coefficient	Transmissivity (cm^2/sec)	Hydraulic Conductivity	USTM Soil Type
SOLID WASTE LANDFILL										
1035	Falling	2.25	0.0000	0.88	0.000	-0.15	1.00E-04	8.6E-03	1.2E-04	GW
	Rising	2.25	0.0000	0.88	-5.010	-1.02	1.00E-04	3.7E-03	5.4E-05	
1038	Falling	5.90	0.0000	1.30	-0.200	-2.74	1.00E-04	1.9E-02	1.0E-04	SM
	Rising	5.90	0.0000	1.50	0.100	-3.52	1.00E-04	7.6E-03	4.2E-05	
1947	Falling	10.54	0.0000	-	0.150	-	-	-	1.4E-04	CL
	Rising	10.47	0.0000	-	0.000	-	-	-	1.5E-04	(weathered)
1950	Falling	6.00	0.0233	0.55	0.000	-2.02	1.00E-04	1.3E-03	7.3E-06	ML-SP
	Rising	6.00	0.0070	0.37	0.200	-0.80	1.00E-04	7.4E-04	4.1E-06	
1952	Falling	11.18	0.0500	-	0.044	-	-	-	2.4E-05	CL
	Rising	11.13	0.0500	-	0.000	-	-	-	2.4E-05	
LIME SLUDGE PONDS										
1039	Falling-1	5.50	0.0000	0.67	0.000	0.31	1.00E-04	7.0E-01	4.2E-03	SW-GC
	Falling-2	5.50	0.0700	0.91	-0.006	-0.68	1.00E-04	7.0E-01	4.2E-03	
	Rising	5.50	0.0230	0.91	0.000	-0.10	1.00E-04	7.8E-01	4.7E-03	
1041	Falling	14.87	0.0750	-	-0.080	-	-	-	5.1E-04	CL
	Rising	15.09	0.0333	-	-0.010	-	-	-	4.9E-04	

See footnotes at end of table

FER\CRU2RI\KDG\APP-H\TABH-3\January 4, 1995 5:52pm

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6510

TABLE H-3
(Continued)

Well	Test	Test Interval (ft)	Starting Time (min)	Initial Head (ft)	Static Water Level (ft)	Skin Factor	Storage[a] Coefficient	Transmissivity (cm^2/sec)	Hydraulic Conductivity	USTM Soil Type
LIME SLUDGE PONDS (continued)										
1042	Falling-1	9.75	0.0580	1.42	0.000	4.50	1.00E-04	1.4E+00	4.8E-03[e]	SM-SW-SP
	Falling-2	9.75	0.0667	1.40	0.000	6.05	1.00E-04	1.3E+00	4.4E-03	
	Rising	9.75	0.0333	1.51	0.000	9.20	1.00E-04	1.2E+00	4.1E-03	
1934	Falling	15.39	0.1000	-	-	-	-	-	2.9E-05	CL
	Rising	15.38	0.0666	-	-	-	-	-	2.9E-05	
1937	Falling	8.00	0.0833	1.50	0.000	-2.03	1.00E-04	1.2E-02	5.0E-05	SM-ML
	Rising	8.00	0.0833	1.50	-0.670	-1.96	1.00E-04	5.0E-03	2.0E-05	(very dense)

[a]Assumed value of storage coefficient for confined conditions.

[b]Data is erratic. Ramey et al. result is in agreement with Bouwer & Rice Method results.

[c]Not applicable for Bouwer & Rice method.

[d]Data is erratic. Bouwer & Rice method is used to analyze the data.

[e]Plotted data is erratic. Low confidence in results.

000124

References

PSC000

REFERENCES

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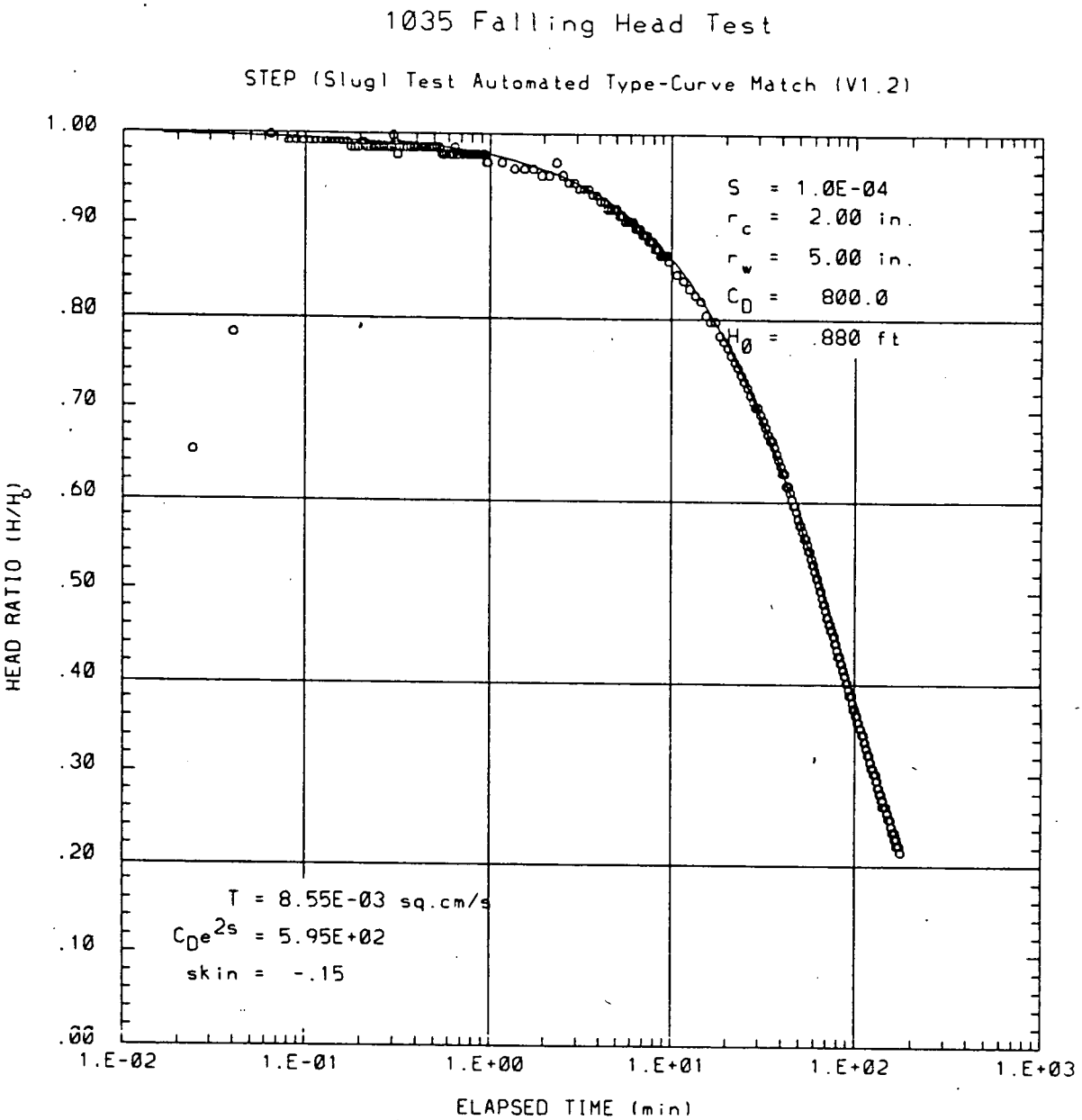
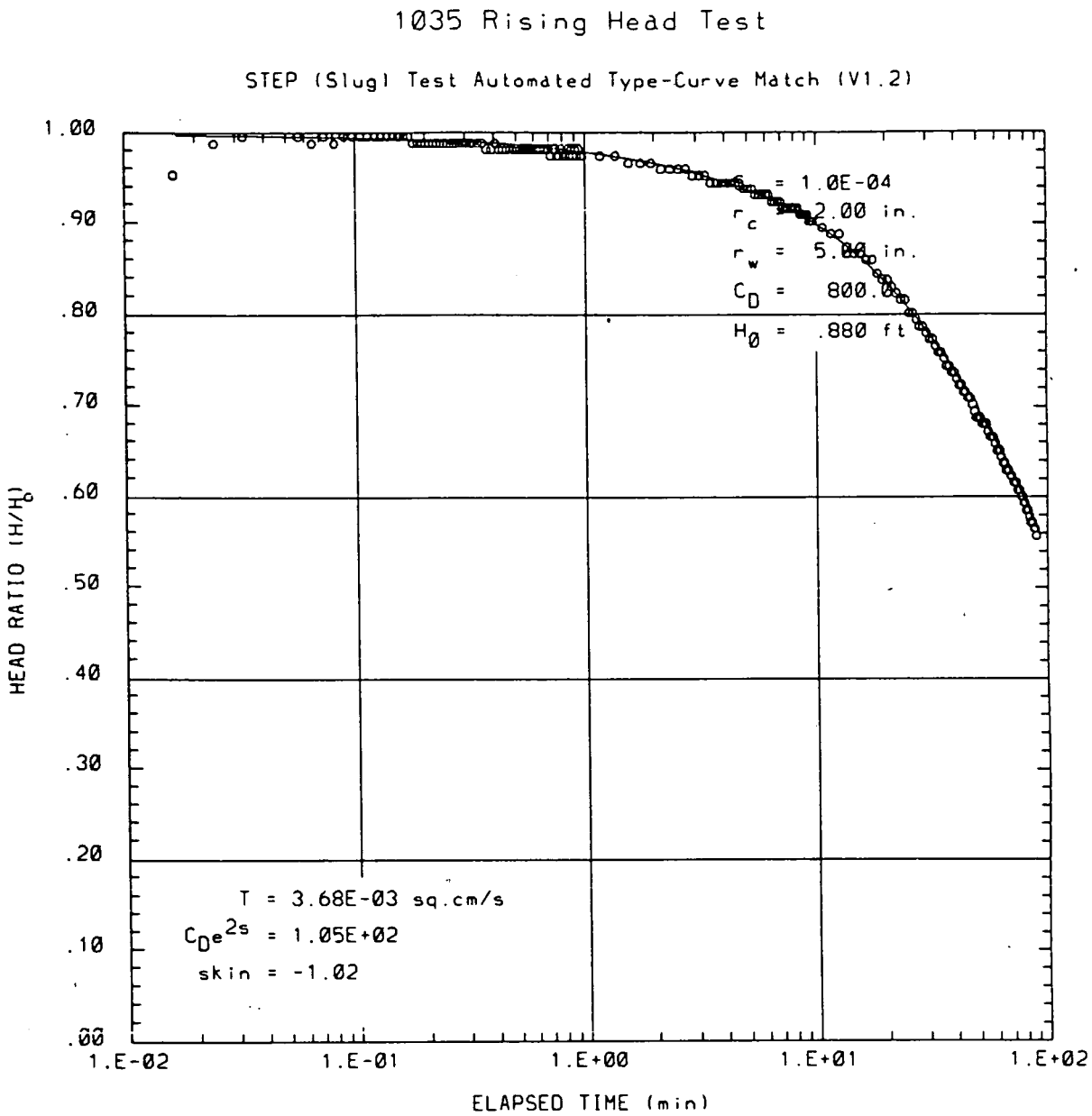
Cooper, H.H., Jr., J.D. Bredshoeft, and I.S. Papadopulios, 1967, "Response of a Finite-Diameter Well to an Instantaneous Charge of Water," Water Resources Research, Volume 3, No. 1, pp. 263-69.

Parsons, 1993, FEMP Glacial Till/Vadose Zone Hydraulic Investigations Work Plan, Operable Unit 5, Project Order 37, Subcontract No. 2-21487.

Ramey, H.J., Jr., R.G. Agarwal, and J. Martin, 1975, "Analysis of 'Slug Test' or DST Flow Period Data," J. Can Petrol Technology, July-September, pp. 37-47.

Hydraulic Testing
Field Data


1035 Falling Head Test
STEP (Slug) Test Automated Type-Curve Match (V1.2)
S = 1.0E-04
r_c = 2.00 in.
r_w = 5.00 in.
C_D = 800.0
H_0 = .880 ft
T = 8.55E-03 sq.cm/s
C_De^{2s} = 5.95E+02
skin = -.15
HEAD RATIO (H/H_0)
1.00
.90
.80
.70
.60
.50
.40
.30
.20
.10
.00
1.E-02
1.E-01
1.E+00
1.E+01
1.E+02
1.E+03
ELAPSED TIME (min)


1035 Rising Head Test
STEP (Slug) Test Automated Type-Curve Match (V1.2)
1.00
.90
.80
.70
.60
.50
.40
.30
.20
.10
.00
HEAD RATIO (H/H0)
1.E-02
1.E-01
1.E+00
1.E+01
1.E+02
ELAPSED TIME (min)
= 1.0E-04
rc 2.00 in.
rw = 5.00 in.
CD = 800.0
H0 = .880 ft
T = 3.68E-03 sq.cm/s
CDe2s = 1.05E+02
skin = -1.02

0000327

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	7	24	93
NO.			
SHEET	1	OF 2	

PROJECT NAME

PROJECT NO. [illegible]

FIELD ACTIVITY SUBJECT: SLUG TESTING

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

0600 ARRIVE ON SITE DETERMINE WHICH WELLS TO TEST

0730 WILL ATTEMPT TO COMPLETE 1934; 1081, 1082, 1084

0800 ARRIVE ON B STREET AGREED W/R McGORMLEY TO COMPLETE 1081, 1082, 1084

0830 1081 & 1082 HAVE WATER WIZARDS.
1084 IS BEING SAMPLED BY T. SMITH. 1084 SHOULD GO DRY

0900 WILL TEST 1035. W.L = 9.41 BOW = 27.90 PER R. McGORMLEY HEALTH & SAFETY MEETING; PREPARE TO MOBILIZE ONLY NECESSARY EQUIPMENT FROM 1038 TO 1035

0925 DP [illegible] MW-1035. Microtip readings. Background = 0.0 ppm. Downhole = 0.0 ppm B/B readings = 40-60 cpm (background)

0945 TRANSDUCER IN WELL. W.L = 9.33'

0955 START FALLING HEAD SLUG TEST (TEST 7) AT 1035

1030 LEAVE TEST 7 TO FIND 1606, 1608, 1149, 1778

1130 4" WELLS IN CONTAMINATED AREAS. LEAVE FOR LUNCH. REMAINING

1245 RETURN TO 1035

1303 START RISING HEAD SLUG TEST (TEST 8) AT 1035

1345 LEAVE TEST 8 TO GO TO 1033 AND CHECK FOR WELL WIZARD.

W.L = 8.27 BOW = 22.96'

1500 DEMOBED @ 1033 LEFT TRANSDUCER IN 1033 FOR 7/25 AM TEST

1510 ARRIVE AT PLANT 6 TO DISCUSS SITE ACCESS TO 1606, 1608, 1149, 1778.

1520 NO PERSONNEL AVAILABLE.

1550 RETURN TO 1038 SET UP DECON FOR TRANSDUCER

1084 D.P.
~~1086~~ W.L. = 26.34
BOW = 34.92
Screen 15.5–26.5
Sand/gravel – 11.5–29.5

mTip S.N. PA930082
B/R S.N.: 96112

mTip ~~[illegible]~~ CALIBRATED BY M DEBES
ON 7/24/93
USING ISOBUTYLENE
LOT # 11[illegible]

VISITORS ON SITE:

NONE

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.

TRANSDUCER CABLE UNKNOWINGLY UNPLUGGED AND REPLUGGED @ HERMIT 93 MINUTES INTO RISING HEAD TEST

WEATHER CONDITIONS:

89°, 28.99 Hg
SUNNY HUMID, PARTLY CLOUDY AND OVERCAST

IMPORTANT TELEPHONE CALLS:

NONE

PERSONNEL ON SITE: D Pollen, M Debes

SUPERVISOR: David S. Pollen

DATE: 7-24-93

FERN...
RI/FS

DAILY LOG			
DATE	7	24	93
NO.			
SHEET	2	OF	2

FIELD ACTIVITY DAILY LOG

PROJECT NAME

PROJECT NO. 20 03 05

FIELD ACTIVITY SUBJECT: SLUG TESTING 1035

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

1600 DISCOVER THAT TRANSDUCER CABLE WAS UNPLUGGED FROM AND REPLUGGED INTO HERMIT 93 MUNITES INTO RISING HEAD TEST 8 AND DURING 90 MINUTED WATER LEVEL MEASUREMENT

1602 STOP ~~FALLING~~ DP RISING HEAD SLUG TEST (TEST 8) AT 1035.

1625 WATER QUALITY READING

1650 RETURN TO LOCKERS, DRESS OUT.

D.G.P
7.24.93

mTip S.N: PA93002
B/8 S.N. 86112

mTip ~~[illegible]~~ CALIBRATED BY
M. DEBES
ON 7/24/93
USING ISOBUTYLENE
LOT # 110591-5

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
NONE	NONE
WEATHER CONDITIONS:	IMPORTANT TELEPHONE CALLS:
SEE PAGE 1 OF 1	NONE

PERSONNEL ON SITE: D. POLEV, M. DEBES

SUPERVISOR: David G. Poley

DATE: 7/24/93

MONITORING WELL INSTALLATION RECORD

08/24/92

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

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

BOREHOLE DRILLING

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

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

WELL DESCRIPTION

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

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

RISER JOINING METHOD: SCREW TYPE FLUSH JOINT THREADS

PROTECTION SYSTEM

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

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE		ELEVATION MSL	
TOP OF RISER PIPE	2.5 Ft.		586.19	
GROUND SURFACE	0.0		N/A	
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.			
BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0.0	9.0	N/A	N/A
Sand	19.0	27.0	N/A	N/A
Gravel	9.0	19.0	N/A	N/A
PERFORATED SECTION	13.0	24.0	N/A	N/A
WELL TIP	26.5		N/A	
BOTTOM OF BOREHOLE	27.0		N/A	
GWL AFTER INSTALLATION	N/A		N/A	

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

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

			FALLING	RISING
• Test#			7	8
• Rate			MINUTES	MINUTES
• Log			LOG	LOG
# of XDs			1	1
Type	[Level]		LEVEL	LEVEL
• ID (Well ID)	[Well #]	[FH/RH]	1035	1035
• Reference	[0]		0	0
• Quad Coefficient	(serial #)		~~[illegible]~~	
• Linearity	(serial #)		0.1159	0.1159
• Scale	(serial #)		19.9614	19.9614
• Offset	(serial #)		0.0269	0.0269

More > Delay – 50 m/s (check default values)
S Gravity – 1 (check default values)
Units – feet (check default values)
Mode – TOC (check default values)

Recheck Reference Level	Enter [0]	0	0
• Manual Water Level		9.18	
• Slug Measurements	Diameter	2"	2"
	Length		

• Transducer Placement	26.08	26.08

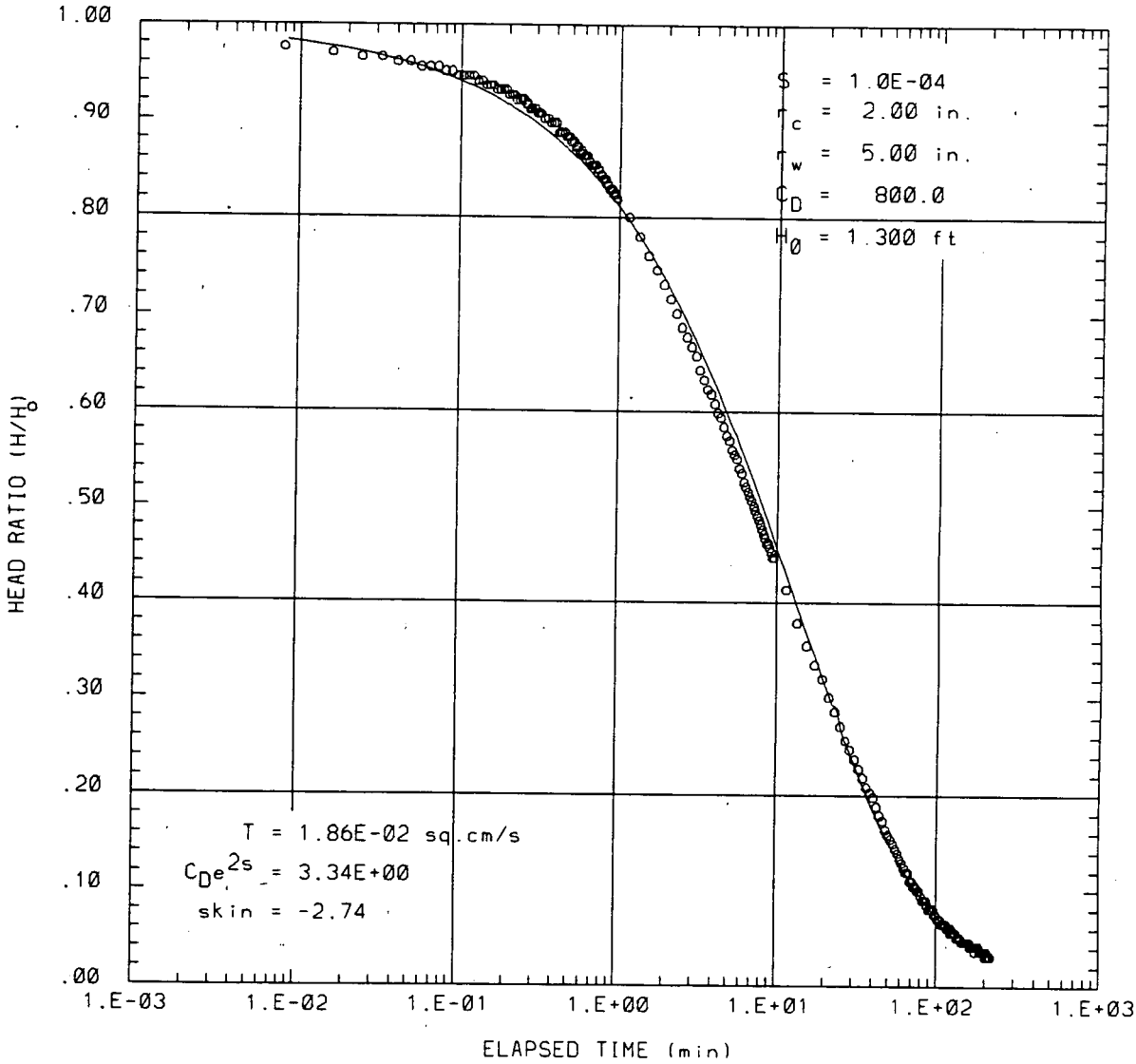
Date of Test

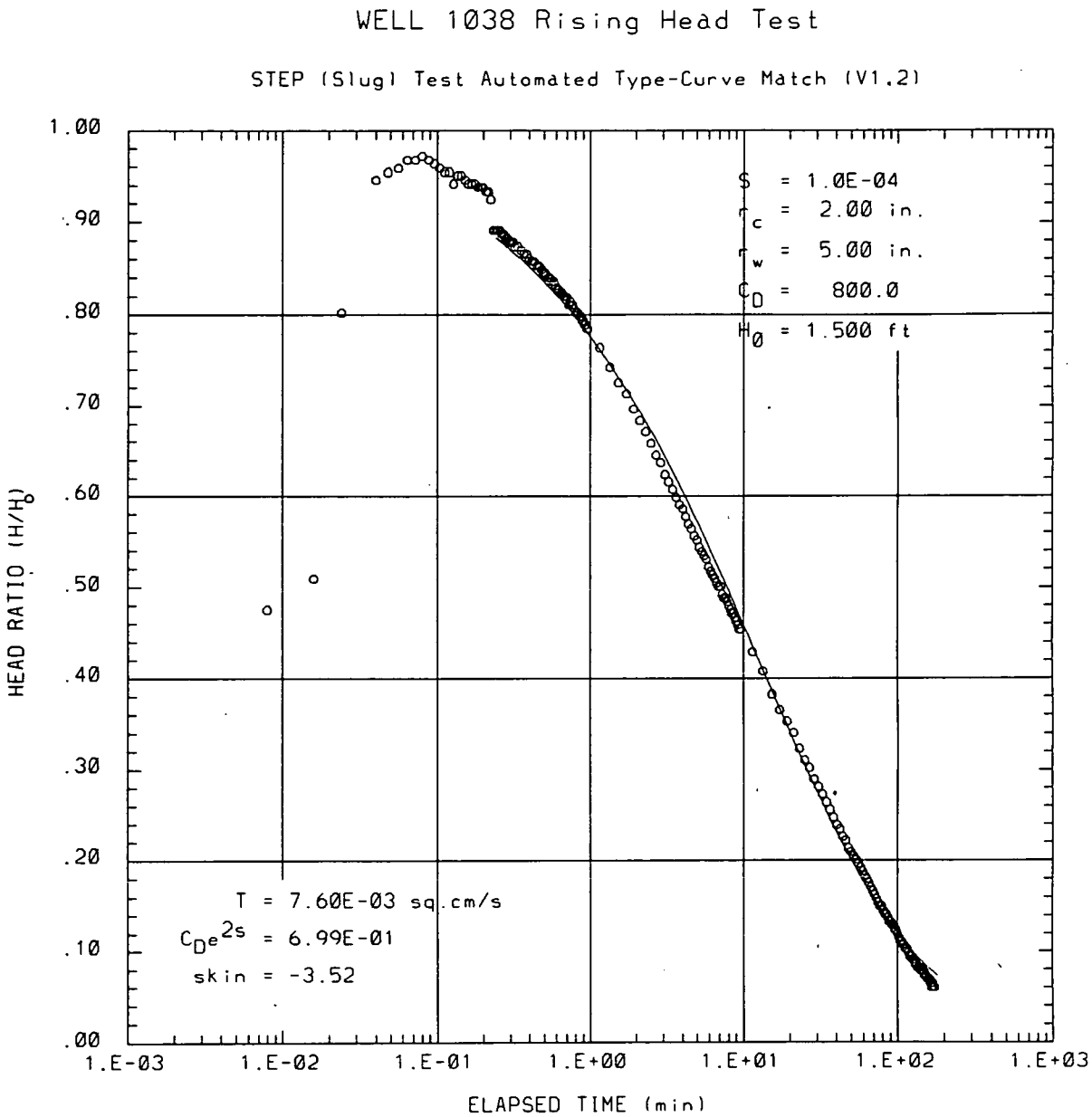
Start time (minutes and seconds)	0955	1303
End time	1257	1602

Datalogger File Name: _____

1038 Falling Head Test

STEP (Slug) Test Automated Type-Curve Match (V1.2)




WELL 1038 Rising Head Test
STEP (Slug) Test Automated Type-Curve Match (V1.2)
S = 1.0E-04
rc = 2.00 in.
rw = 5.00 in.
CD = 800.0
H0 = 1.500 ft
T = 7.60E-03 sq.cm/s
CDe2s = 6.99E-01
skin = -3.52
HEAD RATIO (H/H0)
1.00
.90
.80
.70
.60
.50
.40
.30
.20
.10
.00
1.E-03
1.E-02
1.E-01
1.E+00
1.E+01
1.E+02
1.E+03
ELAPSED TIME (min)

FERNALD
RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG NO. 7161
SHEET 1 OF 1

PROJECT NAME CRUE TOPOGRAPHIC SURVEY | PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: SLUG TESTING @ 1038

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. DA93000992
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 86071

0530 ARRIVE AT SITE TRAILHOS
0700 ARRIVE AT WELL 1038.
TAILGATE SAFETY MEETING
T.D 29.88' W.L. 14.31' REMOVED WIZARD, WHICH WAS WRAPPED AND TAPED WITH PLASTIC.
0730 STARTED STATIC HEAD CHECK (TEST 15).
0950 W.L = 13.74 STOP STATIC HEAD CHECK (TEST 15)
1000 START FALLING HEAD TEST (TEST 16)
1345 STOP FALLING HEAD TEST (TEST 16)
W.L. = 13.51'
1400 START RISING HEAD TEST (TEST 17)
1700 STOP RISING HEAD TEST (TEST 17)
W.L. 13.69"
1800 COPY FADLS FOR T. ANDERSON, ETAL.
1830 LEAVE FOR DAY

Sands (TOC)
19.9 – 25.8
Screen - 18 - 28
Sand pack - 16.2 - 30.5

D.G.P.

MICROTIP CALIBRATED BY
R. McGORMLEY
ON 7/16/93
USING ISOBUTYLENE
LOT # 101642-2

VISITORS ON SITE	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
NONE	NONE
WEATHER CONDITIONS:	**IMPORTANT TELEPHONE CALLS:**
OVERCAST, 77°F 29.07" Hg	NONE

PERSONNEL ON SITE: D. POLEY, R. McGORMLEY

SUPERVISOR: David G. Poley DATE 7/16/93

Field Permeability Tests
Rising/Falling Head* (Sheet 2 of 2)

Date: 7/16/93

Observers/Participants: D. DOLEY, R. McGORMLEY

Datalogger Output File Name:

Weather: OVERCAST, 77°F

Comments:

- 7' BERM IMMEDIATELY NORTH OF WELL
- APPROXIMATE 5 SECOND DELAY ~~UPON~~ FOR START OF FALLING HEAD TEST UPON ADDITION OF SLUG. (POWER SAVE INTERNALLY ACTIVATED)

MONITORING WELL INSTALLATION RECORD

08/24/92

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

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

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

BOREHOLE DRILLING

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

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

WELL DESCRIPTION

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

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

RISER JOINING METHOD: THREADED COUPLE (FLUSH JOINT THREADED)

PROTECTION SYSTEM

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

OTHER PROTECTION (* NOTED BELOW)

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

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

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

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

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test#				16	17
• Rate				MINUTES	MINUTES
• Log				LOG	LOG
# of XDs				1	1
Type	[Level]			LEVEL	LEVEL
• ID	(Well ID)	[Well #]	[FH/RH]	1038	1038
• Reference	[0]			0	0
• Quad Coefficient	(serial #)			N/A	N/A
• Linearity	(serial #)			0.1078	0.1078
• Scale	(serial #)			20.0943	20.0943
• Offset	(serial #)			0.0352	0.0352

More >	Delay – 50 m/s	(check default values)	
	S Gravity – 1	(check default values)	
	Units – feet	(check default values)	
	Mode – TOC	(check default values)	

Recheck Reference Level	Enter [0]	0	0
• Manual Water Level		13.26	13.67
• Slug Measurements	Diameter	≈ 2"	≈ 2"
	Length	4.35'	4.35'
	VOLUME	0.15ft³	0.15ft³
• Transducer Placement		18.10'	18.10'

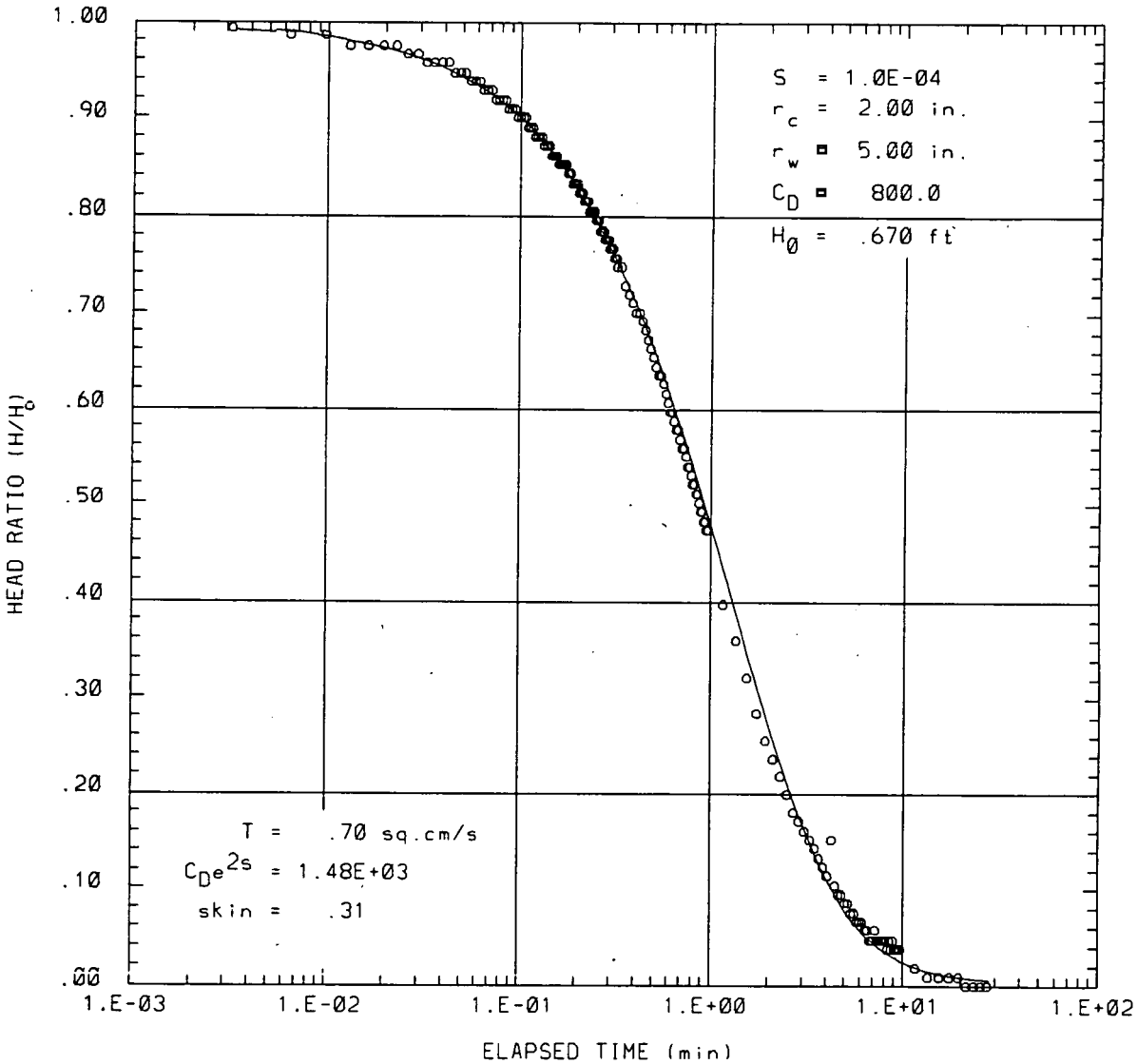
Date of Test

Start time (minutes and seconds)	1000	1400
End time	1345	1700

Datalogger File Name: _____

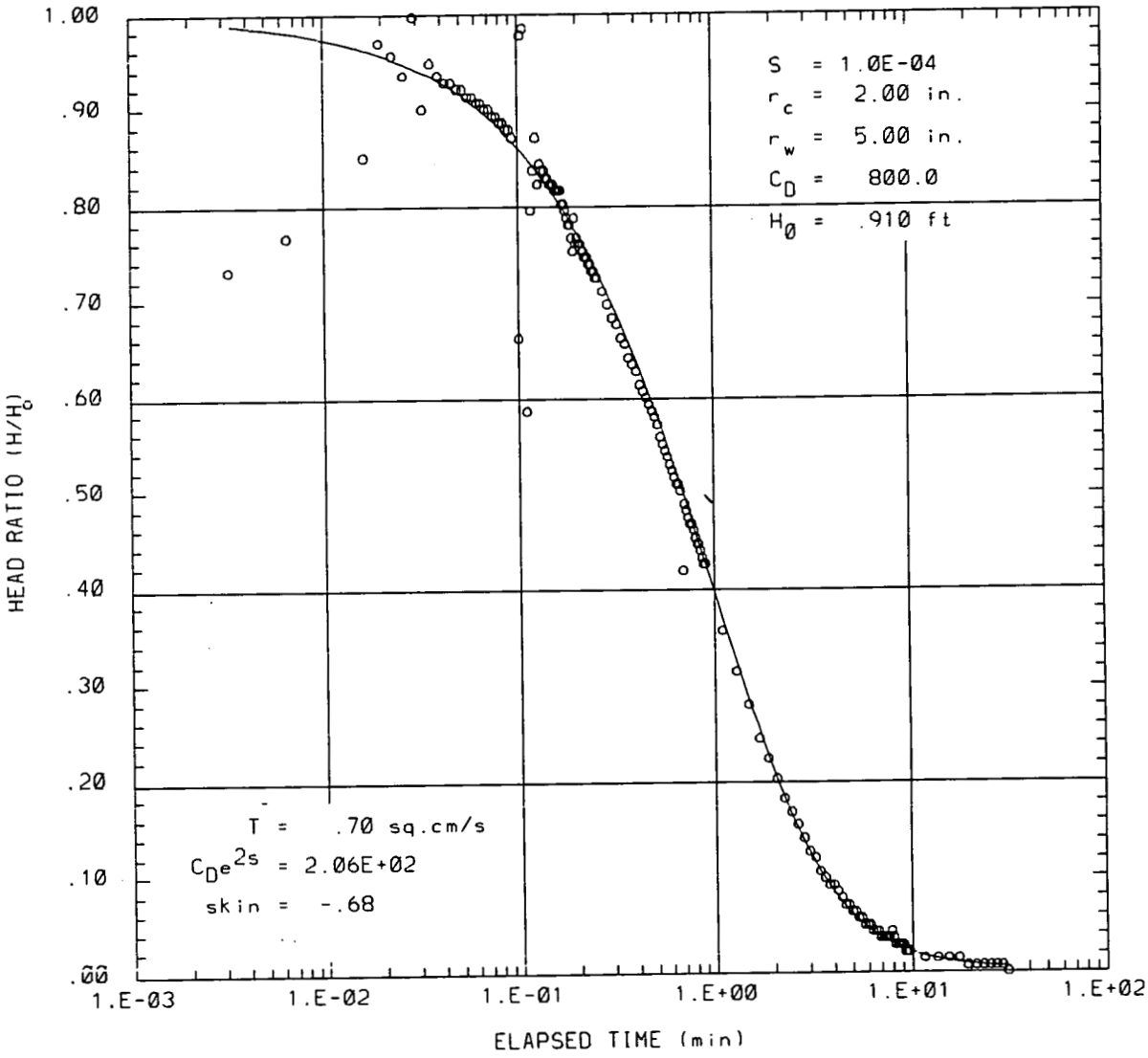
WELL 1039 Falling Head Test # 1

STEP (Slug) Test Automated Type-Curve Match (V1.2)



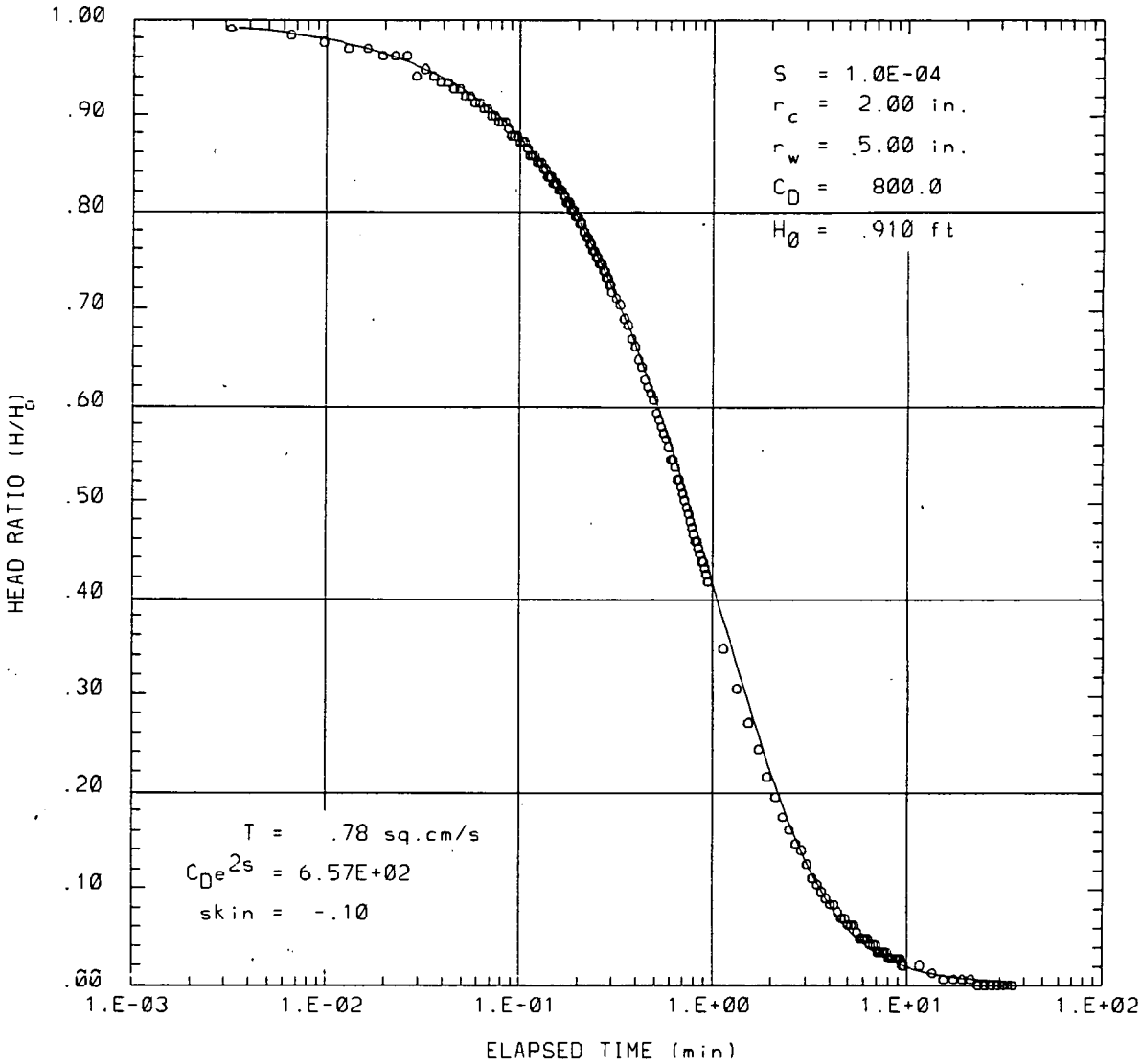
WELL 1039 Falling Head Test # 2

STEP (Slug) Test Automated Type-Curve Match (V1.2)



WELL 1039 Rising Head Test

STEP (Slug) Test Automated Type-Curve Match (V1.2)



FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	7	27	93
NO.			
SHEET	1	OF	1

PROJECT NAME: GLACIAL TILL/VADOSE ZONE HYDRO/MST — PROJECT NO. 50.03.24

FIELD ACTIVITY SUBJECT: SLUG TEST OF 1039

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930082
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 86112

0900 ARRIVE AT 1039. MT=40-60ppm MTip=0 ppm bkgrd MTip 5.2 downhole

1025 START FALLING HEAD SLUG TEST (TEST 5) AT 1039. APPROXIMATE 20 SECOND DECAY BETWEEN SLUG INPUT AND HERMIT 1000 START.

Screen = 15-26
Sand layer = 20-25.5
Sand pack = 10-29

1053 STOP FALLING HEAD SLUG TEST (TEST 5) AT 1039.

1105 START RISING HEAD SLUG TEST (TEST 6) AT 1039.

1141 STOP RISING HEAD SLUG TEST (TEST 6) AT 1039.

1145 START FALLING HEAD SLUG TEST (TEST 7) AT 1039.

1218 STOP FALLING HEAD SLUG TEST (TEST 7) AT 1039.

1235 WATER QUALITY AT 1039.

1330 DONE WITH DECON OF SLUGS AND BAILERS

1400 GIVE T. ANDERSON HERMIT 2000 FOR DOWNLOAD

1430 DRESSED OF GIVE T. ANDERSON HERMIT 1000 FOR DOWNLOAD. PAPER WORK CONDUCTED AT SITE TRAILERS. MADE PLANS FOR WORK EXTENSION UNTIL 8/31/93.

1700 LEAVE FEMP FOR DAY.

MICROTIP CALIBRATED BY M. DEBES
ON 7-27-93
USING ISOBUTYLENE
LOT # 101692-3

VISITORS ON SITE: NONE

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS. SEE 7-27-93 FAOL FOR 1145 FOR FIELD ACTIVITIES PRIOR TO 0900

WEATHER CONDITIONS: SUNNY, HOT, HUMID MID ~90's

IMPORTANT TELEPHONE CALLS: NONE

PERSONNEL ON SITE: D. POLEY, M. DEBES

000341

SUPERVISOR: [signature] DATE: 7-27-93

Field Permeability Tests
Rising/Falling Head* (Sheet 2 of 2)

Date: 7.27.93

Observers/Participants: D. POLEY, MIKE DEBES

Datalogger Output File Name:

Weather: SUNNY, HOT, HUMMID, MID-90'S

Comments:

- WATER WIZARD PULLED BY ERA ON 7/26/93

- TRANSDUCER READING @ STORVEY START WAS EQUAL TO 20.10'

D.P
~~19.85~~
~~+5.98~~
~~25.83~~

5.98'
20.10
26.08'

- NEGLECTED TO REREFERENCE TRANSDUCER UPON ADJUSTMENT PRIOR TO TEST 5. SUBTRACT 0.26 FROM DATA SET. ≈20 SECOND DELAY BETWEEN START OF TEST (SLUG IN) AND START OF HERMIT
- END OF TEST 5 TRANSDUCER READING EQUAL TO 20.10

*** - REREFERENCED TRANSDUCER TO ZERO AND TEST 5 DATA READS CORRECTLY. APPARENTLY NO DATA CORRECTION NEEDED FOR TEST 5.

- REDID FALLING HEAD TEST DUE TO TIME DELAY AND QUESTION CONCERNING REFERENCE LEVEL

MONITORING WELL INSTALLATION RECORD
08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1039
WELL NUMBER: 1039

FIELD ENG./GEO.: M. SLUSARSKI DATE: 04/09/88
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 480729.12, 1379659.0
DATE OF INSTAL.: 04/09/88

BOREHOLE DRILLING

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

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

WELL DESCRIPTION

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

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

RISER JOINING METHOD: SCREW TYPE FLUSH JOINT THREADED

PROTECTION SYSTEM

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

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	2.5 Ft.	579.27
GROUND SURFACE	0.0	577.4
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0.0	8.0	N/A	N/A
Sand	8.0	27.0	N/A	N/A
PERFORATED SECTION	13.0	24.0	N/A	N/A

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

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

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On			FALLING	RISING	FAL
• Test#			5	6	
• Rate			MINUTES	MINUTES	
• Log			LOG	LOG	LO
# of XDs			1	1	1
Type	[Level]		LEVEL	LEVEL	LE
• ID (Well ID)	[Well #]	[FH/RH]	1039	1039	1
• Reference	[0]		0	0	
• Quad Coefficient	(serial #)				
• Linearity	(serial #)		0.1176	0.1176	
• Scale	(serial #)		20.0051	20.0051	2
• Offset	(serial #)		-0.0055	-0.0055	-

More >	Delay – 50 m/s	(check default values)	
	S Gravity – 1	(check default values)	
	Units – feet	(check default values)	
	Mode – TOC	(check default values)	

Recheck Reference Level	Enter [0]	0.0	0.0	0.
• Manual Water Level		5.98	5.99	5.
• Slug Measurements	Diameter	2 3/8"	2 3/8"	2
	Length	3' 3/4"	3' 3/4"	3' 3/4

• Transducer Placement	26.08	26.08	2
Date of Test	7/27/93	7/27/93	7/
Start time (minutes and seconds)	1025	1105	114
End time	1053	1141	121

Datalogger File Name: _____

Well 1041

Falling Head

$L_e = L_w = H = 14.87$ ft

$r_w = 5$ inch

$$\frac{L_e}{r_w} = \frac{14.87}{5/12} = 35.69$$

$\Rightarrow C = 2.3$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln \frac{L_w}{r_w}} + \frac{C}{L_e/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln 35.69} + \frac{2.3}{35.69} \right]^{-1}$$

$$= 2.69$$

$$K = \frac{r_c^2 \ln \frac{R_e}{r_w}}{2 L_e} \frac{1}{t} \ln \frac{Y_0}{Y_t}$$

$$= \frac{(3.21 \times 2.54)^2 \times 2.69}{2 \times 14.87 \times 30.48} \times \frac{0.154}{60}$$

$$= 5.1 \times 10^{-4} \text{ cm/sec}$$

CLIENT DOE		DEPARTMENT	
PROJECT FEMP CRU-2		ORIGINATED BY Amar Bumb	DATE 10/17/93
ENG. COMM. NO. 2ARN1	PROJECT NO.	CHECKED BY	DATE 10-29-93
AREA Slug Tests - RI		REVISION NUMBER	DATE
SUBJECT		REVISED BY	

Form E53-2 (2-90)

000345

Well 1041

Rising Head

$$L_e = L_w = H = 15.09 \text{ ft}$$

$$r_w = 5 \text{ inch}$$

$$\frac{L_e}{r_w} = \frac{15.09}{5/12} = 36.22$$

$$\Rightarrow C = 2.3$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln \frac{L_w}{r_w}} + \frac{C}{L_e/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln 36.22} + \frac{2.3}{36.22} \right]^{-1}$$

$$= 2.70$$

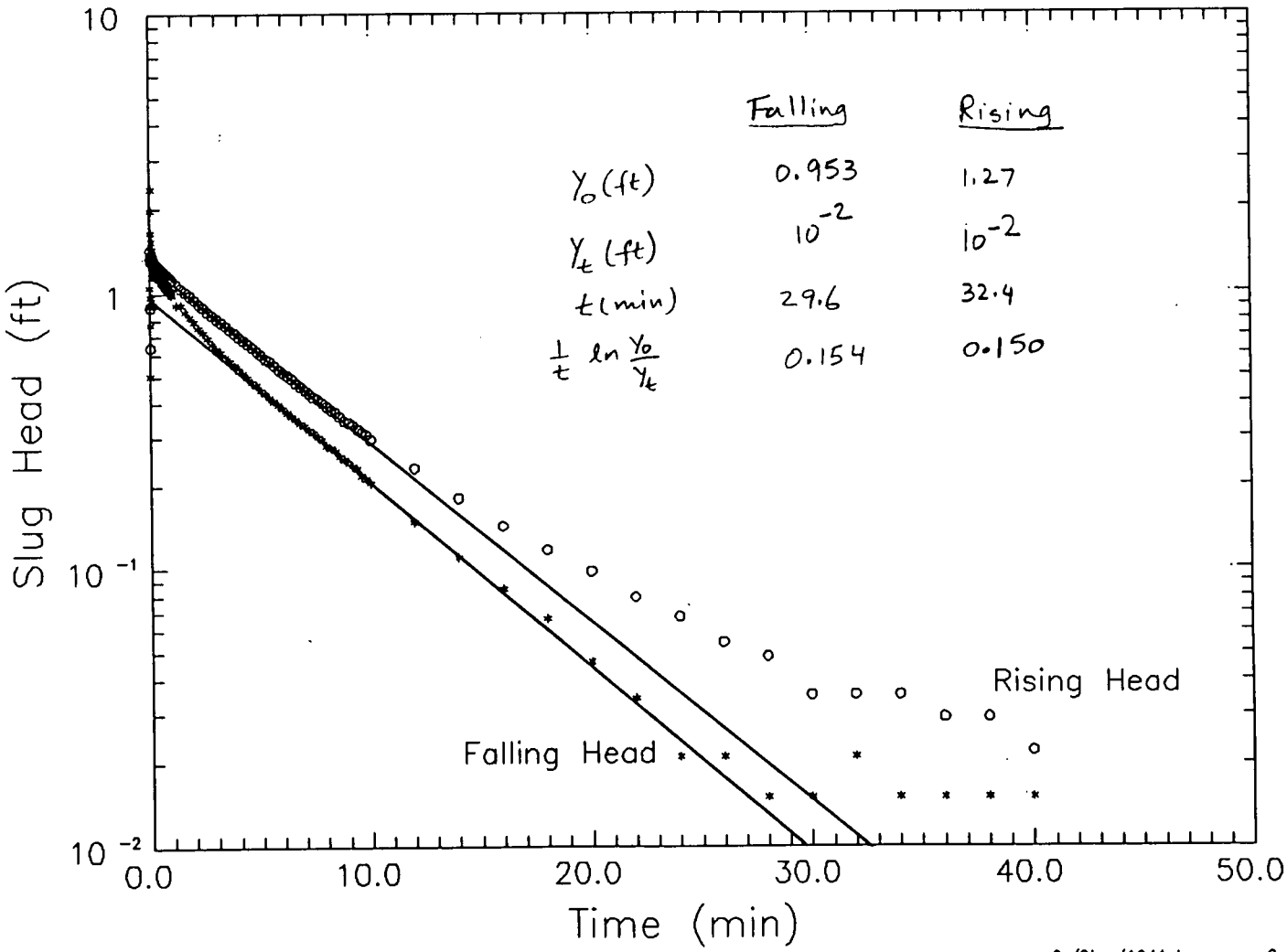
$$K = \frac{r_c^2 \ln \frac{R_e}{r_w}}{2 L_e} \frac{1}{t} \ln \frac{Y_0}{Y_t}$$

$$= \frac{(3.21 \times 2.54)^2 \times 2.70}{2 \times 15.09 \times 30.48} \times \frac{0.150}{60}$$

$$= 4.9 \times 10^{-4} \text{ cm/sec}$$

CLIENT DOE		DEPARTMENT	
PROJECT FEMP CRU-2		ORIGINATED BY Amar Bumb	DATE 10/17/93
ENG. COMM. NO. 2ARN1	PROJECT NO.	CHECKED BY John Bonds	DATE 10-29-93
AREA Slug Tests - RI		REVISION NUMBER	DATE
SUBJECT		REVISED BY	

1041 Slug Tests – Bower & Rice Analysis



	Falling	Rising
Y_o (ft)	0.953	1.27
Y_t (ft)	10^{-2}	10^{-2}
t (min)	29.6	32.4
$\frac{1}{t} \ln \frac{Y_o}{Y_t}$	0.154	0.150

C:/Slug/1041slug October 17, 1993

000287

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	7	14	93
NO.			
SHEET	1	OF	2

PROJECT NAME: GLACIAL TILL/IADOSIS ZONE HYDRAULIC INVESTIGATION — PROJECT NO. 50.03.24

FIELD ACTIVITY SUBJECT: SLUG TESTING 1041

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930098
ALPHA METER S.N.
BETA GAMMA METER S.N. 77166

Screen (TOC) = 12 - 22
Sand pack = 7 - 24.5
Sand layer = all clay

0530 ARRIVE ON SITE AND HAVE WEEKLY MEETING

0550 ESTIMIMATED/CALCULATED NEW SLUG VOLUMES VIA LOTUS 1-2-3 SPREADSHEET FILE SLUGVOL.WK3 ON SAMPLE COORDINATION COMPUTER.

0630 SLUG VOLUME = 0.148 ⇒ 0.15 ft³ @ WELLS 1024, 1047, 1733.
SLUG VOLUME = 0.112 ⇒ 0.11 ft³ @ WELL 1020.

CLEAN/PACKED VEHICLE FOR MOVING INTO CONTROLED AREA.

0745 GIVEN CRUZ WELLS TO SLUG TEST PER TOM ANDERSON HEALTH & SAFETY MEETING

0900 1039 HAS WATER WIZARD INSTALLED
T.O.R = 5.70' T.D. = 27.96'
T.O.C = 6.16 T.Z. = 28.42'

1041 W.L = 9.46' T.D. = 24.88'

1042 T.O.R = 5.46' T.D. = 22.89
T.O.C = 6.20 T.D. = 23.66

1038 T.O.R = 13.59' 27.70'
T.O.C = 14.90' 30.13'

1015 START FALLING HEAD SLUG TEST @ 1041 (TEST 9)
SLUG LENTH = 4.34'

1120 STOP FALLING HEAD SLUG TEST @ 1041 (TEST 9)

1125 START RISING HEAD SLUG TEST @ 1041 (TEST 10)

1215 STOP RISING HEAD SLUG TEST @ 1041 (TEST 10)

1220 WATER QUALITY @ 1041

1240 DRESS OUT FOR LUNCH

MICROTIP CALIBRATED BY R. McGORMLEY
ON 7/14/93
USING ISOBUTYLENE
LOT # 110592-4

VISITORS ON SITE: NONE

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
TRANSDUCER MOVED FROM JUST ABOVE WELL BOTTOM TO BOTTOM OF SCREEN PER T. ANDERSON WELL 1041 PART OF CRUZ 20.03.05

WEATHER CONDITIONS: HUMID, OVERCAST, 79°

IMPORTANT TELEPHONE CALLS: T. ANDERSON

PERSONNEL ON SITE: D. POLEY R. McGORMLEY

SUPERVISOR: [signature] 000348 DATE: 7/14/93

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	7	14	93
NO.			
SHEET	2	OF	2

PROJECT NAME Glacial Till/Vadose Zone Hydraulic Investigation PROJECT NO. 50.03.24/20.03.05

FIELD ACTIVITY SUBJECT: Slug Testing

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. DA930098
ALPHA METER S.N.
BETA GAMMA METER S.N. 77166

1315 LUNCH

1415 RETURN TO TRAILERS, DO PAPERWORK, REVIEW DATA

1600 MEETING

1630 LEVE FERMCO

D GP
7.14.93

MICROTIP CALIBRATED BY
R McGormley
ON 7/14/93
USING ISOBUTYLENE
LOT # 110592-4

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
NONE	NONE
WEATHER CONDITIONS:	IMPORTANT TELEPHONE CALLS:
HUMID, OVERCAST 79°	NONE

PERSONNEL ON SITE: D. Poley, R. McGormley

SUPERVISOR: David Poley DATE: 7/14/93

000349

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1041
WELL NUMBER: 1041

FIELD ENG./GEO.: M. SLUSARSKI DATE: 04/11/88
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 480550.15, 1379798.6
DATE OF INSTAL.: 04/11/88

BOREHOLE DRILLING

DRILLING METHOD: Cable Tool
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 0.0TO: 22.5
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING WELL
CASING DIAM.: 4 In. ID
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0.0 TO: 22.5
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

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

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

RISER JOINING METHOD: SCREW TYPE FLUSH JOINT THREADED

PROTECTION SYSTEM

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

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE	ELEVATION MSL
TOP OF RISER PIPE	3.5 Ft.	583.13
GROUND SURFACE	0.0	581.3
BOTTOM OF PROTECTIVE PIPE	1.5 Ft.	

BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0.0	5.0	N/A	N/A
Sand	5.0	22.5	N/A	N/A
PERFORATED SECTION	10.0	20.0	N/A	N/A

WELL TIP	22.5	N/A
BOTTOM OF BOREHOLE	22.5	N/A
GWL AFTER INSTALLATION	N/A	N/A

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

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On				FALLING HEAD	RISING HEAD
• Test#				9	10
• Rate				MINUTES	MINUTES
• Log				LOG	~~LOG~~
# of XDs				1	1
Type	[Level]			LEVEL	LEVEL
• ID (Well ID)	[Well #]	[FH/RH]		1041	1041
• Reference	[0]			0	0
• Quad Coefficient	(serial #)			[illegible]	
• Linearity	(serial #)			0.1073	0.107%
• Scale	(serial #)			20.0943	20.0943
• Offset	(serial #)			0.0352	0.0352

More >	Delay – 50 m/s	(check default values)	
	S Gravity – 1	(check default values)	
	Units – feet	(check default values)	
	Mode – TOC	(check default values)	

Recheck Reference Level	Enter [0]	0	0
• Manual Water Level		9.24	9.23
• Slug Measurements	Diameter	~2"	~2"
	Length	4.34'	4.34'
	VOLUME	0.15 ft³	0.15 ft³

• Transducer Placement

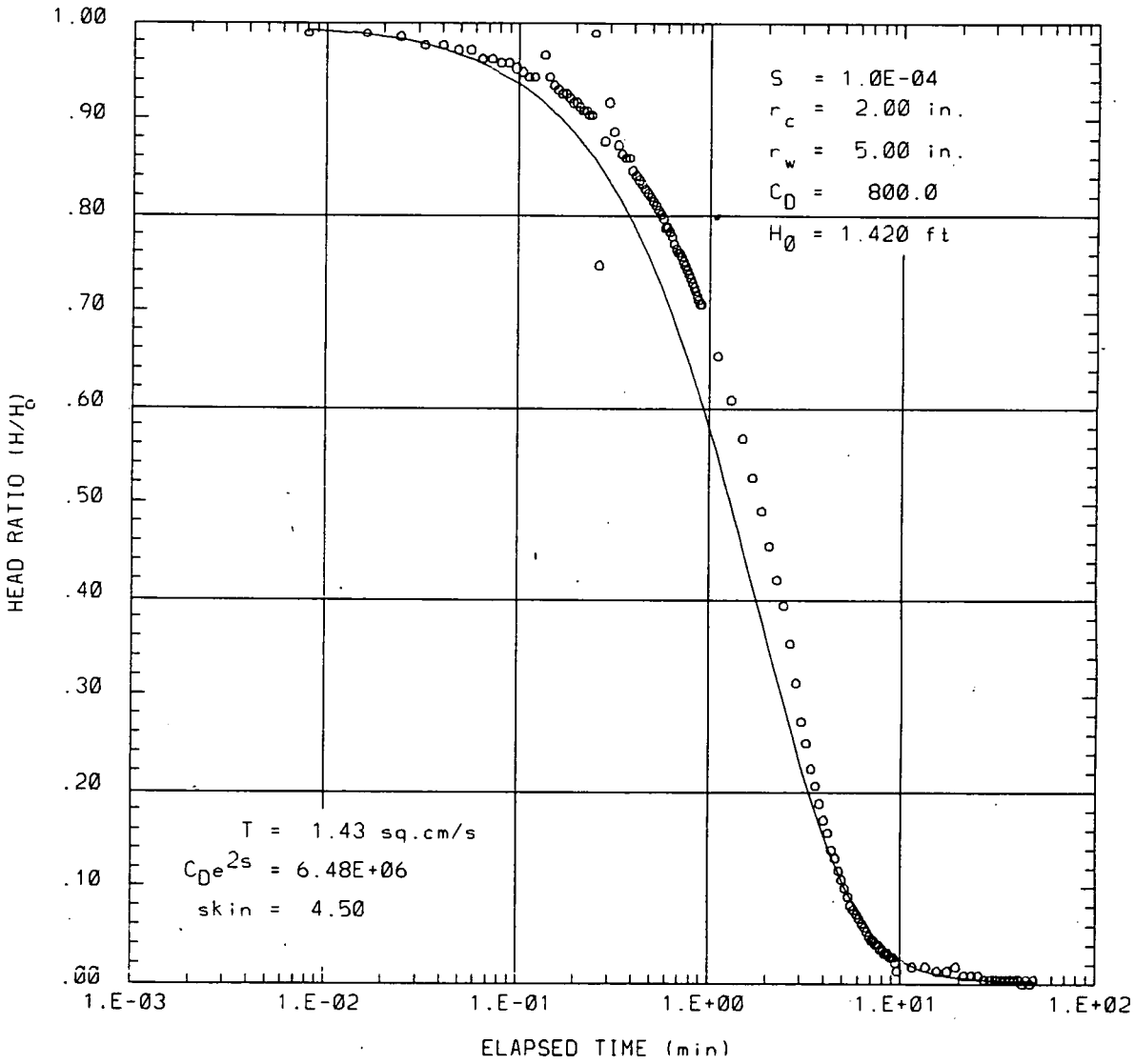
Date of Test

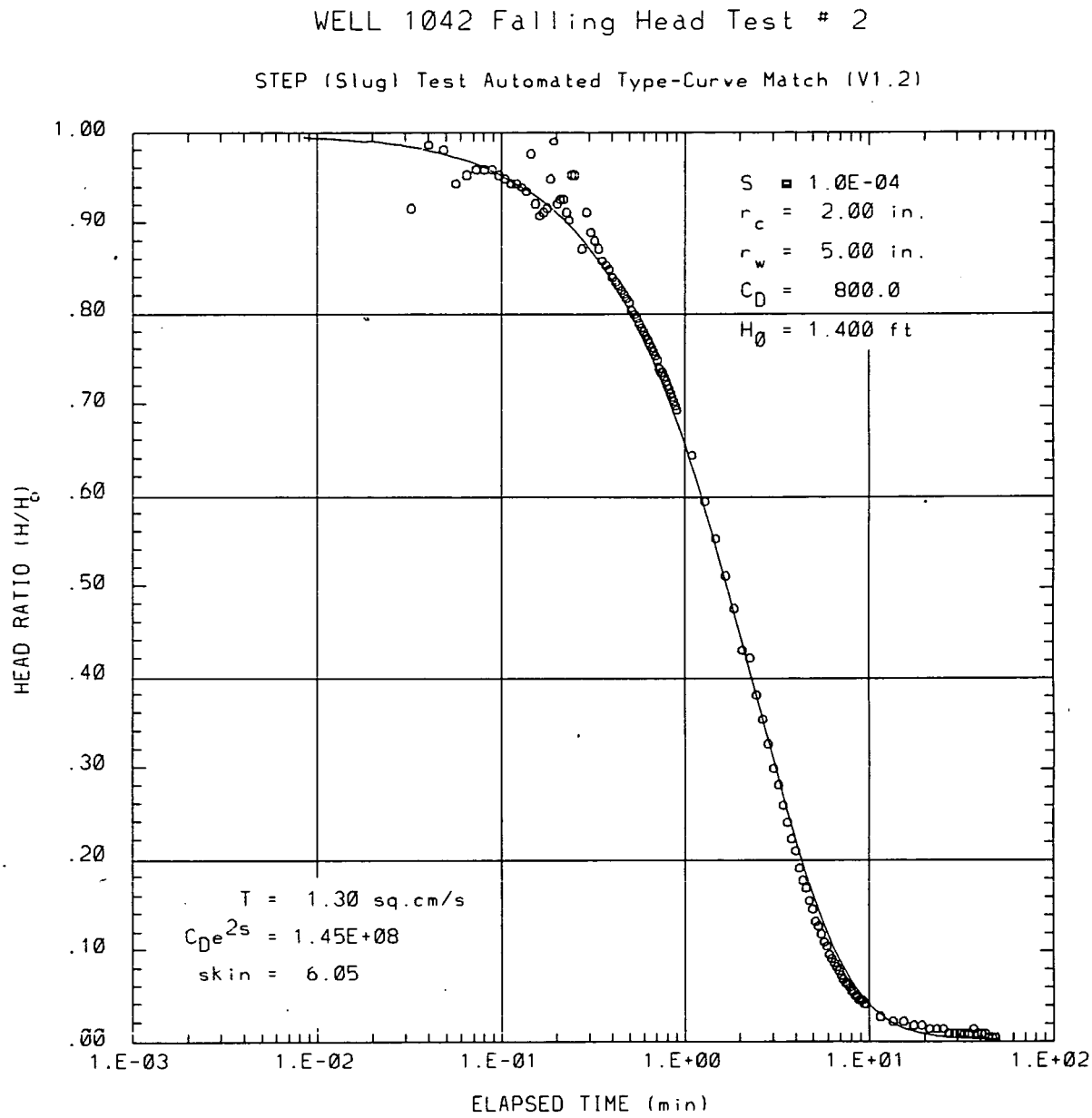
Start time (minutes and seconds)	10:5	11:25
End time	11:25	12:15

Datalogger File Name: _____

WELL 1042 Falling Head Test # 1

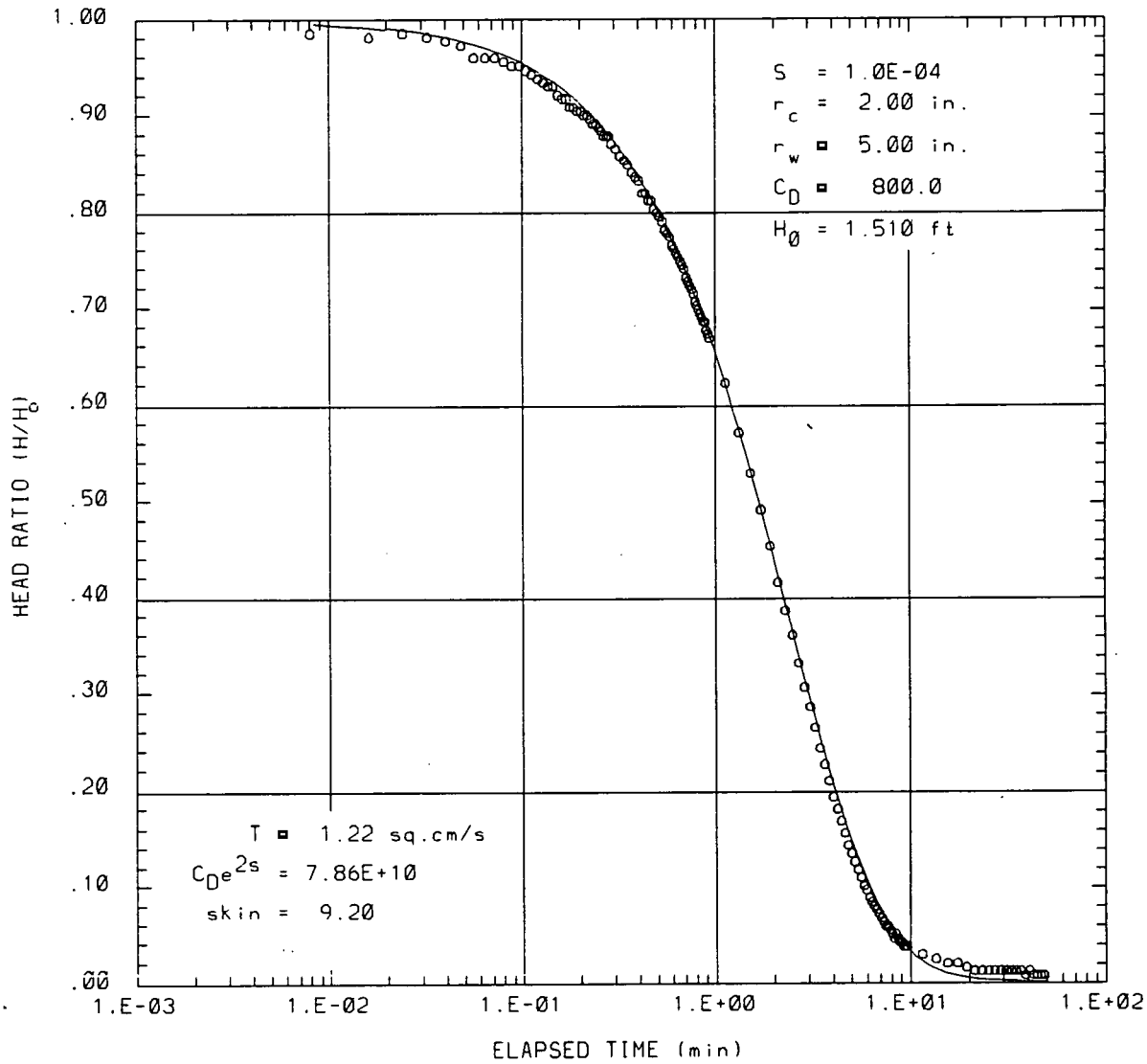
STEP (Slug) Test Automated Type-Curve Match (V1.2)




WELL 1042 Falling Head Test # 2
STEP (Slug) Test Automated Type-Curve Match (V1.2)
S = 1.0E-04
r_c = 2.00 in.
r_w = 5.00 in.
C_D = 800.0
H_0 = 1.400 ft
T = 1.30 sq.cm/s
C_De^{2s} = 1.45E+08
skin = 6.05
HEAD RATIO (H/H_0)
1.00
.90
.80
.70
.60
.50
.40
.30
.20
.10
.00
1.E-03
1.E-02
1.E-01
1.E+00
1.E+01
1.E+02
ELAPSED TIME (min)

WELL 1042 Rising Head Test

STEP (Slug) Test Automated Type-Curve Match (V1.2)



FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	7	15	93
NO.	7	[illegible]	
SHEET	1	OF	

PROJECT NAME Glacial Till/Vadose Zone Hydraulic Investigation — PROJECT NO. 20-03-05

FIELD ACTIVITY SUBJECT: Slug Testing 1042

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930098
ALPHA METER S.N.
BETA GAMMA METER S.N. 771[illegible]

Screen (TOC) = 11-21
Sand pack = 7-23
Sand layer = 14-18
19.5-20

0530 Arrive at Fermco field trailers.
0600 Dress out.
0630 Clean/Decon bailers.
0720 Arrive at 1042 Tailgate safety meeting. Call T Anderson for screen interval, leave message.
0740 Pull water wizard & wait for static head (Test 11)
0755 Call C. Brier → screen interval for 1042 9-19'
0805 1042 W.L. = ~~5.08~~ D.P. (5.42) Tranducer @ 19'
0830 Start falling head slug test (Test 12)
0910 Stop falling head slug test (Test 12)
Slug ≈4" above surface will drop slug further and wait for static W.L.
0915 Start test 13 for static WL. Monitoring head static for 10 minutes, erased file
0935 Start rising head slug test (Test 13)
1025 Stop rising head slug test (Test 13)
1035 Start ~~Rish~~ D.P. falling head slug test (Test 14)
1125 Stop falling head slug test (Test 14)
1145 Water quality.
1155 Got gas. Empties decon H_2O into tank trucks, dressed out.
1330 Leave for lunch 1400 return, paperwork until 1630

MICROTIP CALIBRATED BY R. McGormley
ON 7/15/93
USING isobutylene
LOT # 110592-4

VISITORS ON SITE: None

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
Will obtain measuring tape and knot rope at appropriate length/depth.

WEATHER CONDITIONS: Overcast, 74°F 30.12" Hg

IMPORTANT TELEPHONE CALLS: None

PERSONNEL ON SITE: D. Poley, R. McGormley

SUPERVISOR: David Poley — DATE: 7/15/93

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	7	24	93
NO.			
SHEET	1	OF	1

PROJECT NAME: CRU-2 SLUG TESTING — PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: FALLING HEAD TEST ON MW-1950

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930089
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 73941

1300 RETURN FROM LUNCH
· DRESS OUT + GO TO MW-1950

1315 · ARRIVE AT MW-1950 + CONDUCT INITIAL MEASUREMENTS
WATER LEVEL = 7.18 FT, WELL DEPTH = 21.11 FT
MICROTIP = BACKGROUND, BREATHING ZONE, DOWNHOLE = 0.0 ppm
BETA-GAMMA = 60-80 CPM

Sand layer: 16-18
Sand pack: 9-22
Screen: 11-21

1325 · SET UP TRANDUCER + HERMIT
· PUT SLUG IN PLACE

1331 · START FALLING HEAD TEST FILE # 1950FH
· WELL APPEARS TO RECOVER SLOWLY

1608 · END FALLING HEAD TEST
· WELL RECOVERED MORE THAN 90% IN 2½ HOURS
· LEAVE TRANSDUCER + SLUG IN WELL TO CONDUCT RISING HEAD TEST THE FOLLOWING MORNING

1630 · CLEAN UP AREA
· LEAVE PLANT

1700 · EXIT THE FEMP

MICROTIP CALIBRATED BY [signature]
ON 7-24-93
USING Isobutylene
LOT # 110592-

VISITORS ON SITE: NONE

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: NONE

WEATHER CONDITIONS: HOT, HUMID, CLOUDY
TEMP = 89°F

IMPORTANT TELEPHONE CALLS: NONE

PERSONNEL ON SITE: D. BOSWELL, D. MACDOUGALL

SUPERVISOR: [signature] DATE: 7-24-93

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	7	25	93
NO.			
SHEET	1	OF	1

PROJECT NAME: RU 2 SLUG TESTING | PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: RISING HEAD TEST ON MW-1950

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930089
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 73941

0600 • ARRIVE AT THE FEMP
• MEET W/ DICK SHEPEK
• GET EQUIPMENT FOR DAY OF TESTING

0730 • ENTER PLANT – ANOTHER SAMPLE TEAM MISTAKENLY TOOK THE KEYS TO OUR TRUCK. TOOK 45 MINUTES TO CLEAR UP SITUATION

0815 • ARRIVE AT MW-1950 + CONDUCT INITIAL MEASUREMENTS
WATER LEVEL = 7.42 FT WELL DEPTH = 21.11 FT
• WATER LEVEL FELL OVERNIGHT, DO NOT KNOW WHY
• MICROTIP: DOWNHOLE, BACKGROUND, + BREATHING ZONE ALL 0.0 PPM
BETA-GAMMA = 80 CPM: SAME AS PREVIOUS DAY

~~0813~~ 0842 • CONDUCT RISING HEAD TEST FILE # 1950 RH
• WELL RECOVERS VERY SLOWLY
• CHECK READINGS PERIODICALLY

1142 • END TEST + CLEAN UP SITE
• LOOK FOR WELL KEYS + HORIBA. FAIL TO DO SO

1230 • GO TO LUNCH
1330 • RETURN FROM LUNCH W/ KEYS + HORIBA
1415 • TAKE WATER QUALITY READINGS
• CLEAN UP AREA + LEAVE
1500 • TAKE WATER LEVEL READINGS ON PLANT 1 AREA FOR REST OF DAY
1700 • EXIT THE FEMP

MICROTIP CALIBRATED BY [signature]
ON 7-25-93
USING ISOBUTYLENE
LOT # 110592-4

VISITORS ON SITE: NONE

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: NONE

WEATHER CONDITIONS: HOT, HUMID, HAZY
TEMP = 89°F - 95°F

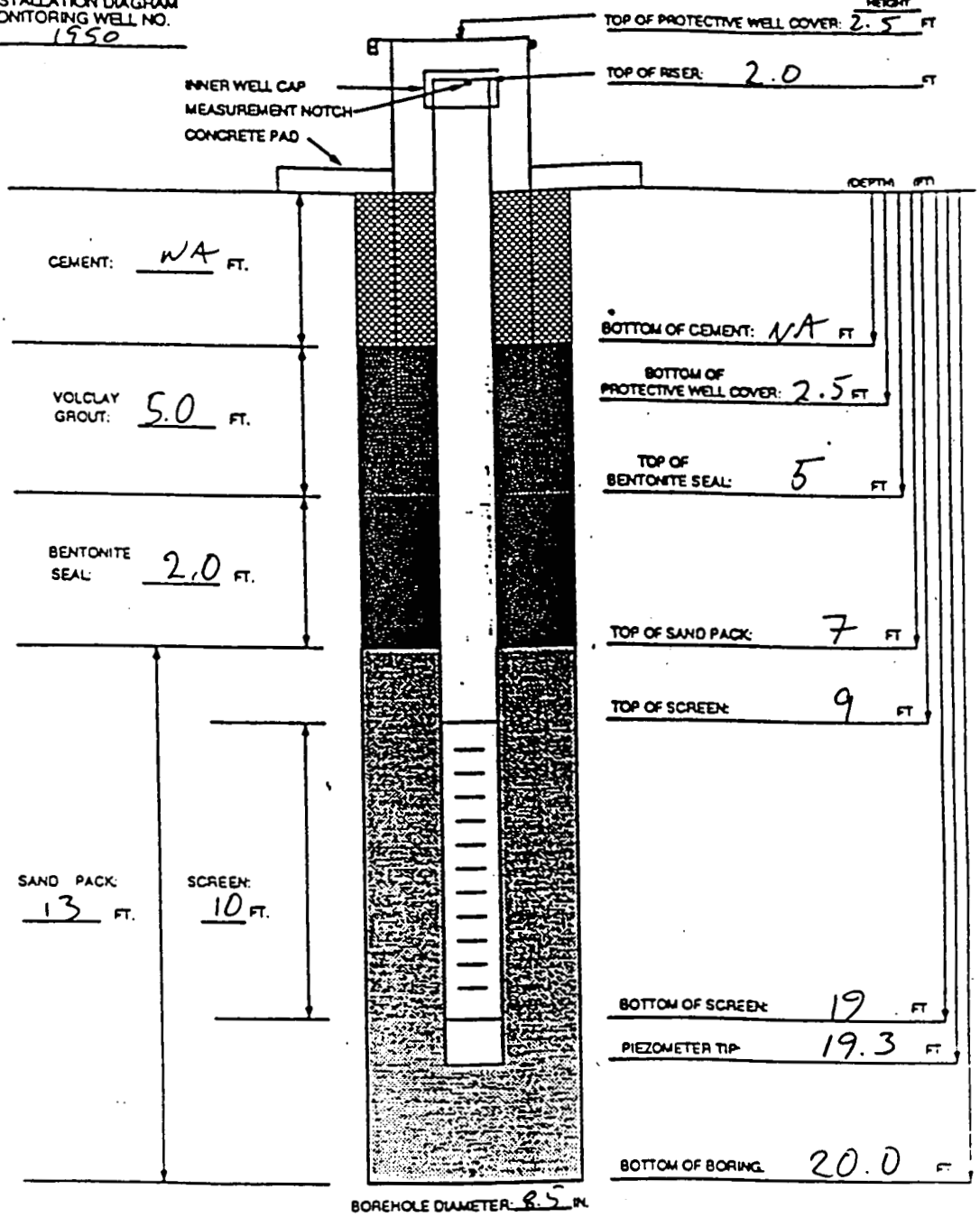
IMPORTANT TELEPHONE CALLS: NONE

PERSONNEL ON SITE: D. BOSWELL, D. MACDOUGALL

SUPERVISOR: [signature] 000357 DATE: 7-25-93

FERNALD RI/FS
INSTALLATION DIAGRAM
MONITORING WELL NO. 1950

INSTALLATION DATE: 5/6/93



MATERIALS USED

SAND TYPE AND QUANTITY: 10x20, 6 bags
BENTONITE PELLETS (5-GALLON BUCKETS): 1
BAGS OF VOLCLAY GROUT: 1
AMOUNT OF CEMENT: NA - Lorped only
AMOUNT OF WATER USED: 15 gal
TASK

NOTES:

1) RISER PIPE IS 2 IN. ID. 316 STAINLESS STEEL PIPE, FLUSH-THREADED JOINTS.
2) SCREEN IS 2 IN. ID. 316 STAINLESS STEEL PIPE WITH 0.01 IN. SLOTS.
3) LOWER END OF SCREEN IS CAPPED WITH AN END CAP OR THREADED SUMP.
4) WATER DEPTH AND DATE 15.5 - 5/6/93
5) TOP OF CASING IS SECURED WITH A STAINLESS STEEL CAP
6) PARENTHESIS INDICATE DEPTH BELOW GROUND LEVEL
7) WELL CASING HAS A PROTECTIVE COVER WITH PADLOCK

GEOLOGIST/ENGINEER: J. Reagan

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

- Test # 5
- Rate LOG
- Log 0000
- # of XDs 1
- Type [Level] LEVEL
- ID (Well ID) [Well #] [FH/RH] MW1950 FH
- Reference [0] 0
- Quad Coefficient (serial #) 203456
- Linearity (serial #) 0.096
- Scale (serial #) 20.0632
- Offset (serial #) 0.0516

More > Delay – 50 m/s (check default values)
S Gravity – 1 (check default values)
Units – feet (check default values)
Mode – TOC (check default values)

Recheck Reference Level Enter [0]

- Manual Water Level 7.18 FT
- Slug Measurements Diameter 1-IN
  Length 4-FT

- Transducer Placement

Date of Test

Start time (minutes and seconds) 1331 7-24-93

End time 1608 7-24-93

Datalogger File Name: 1950FH

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test #			6
• Rate			LOG
• Log			0000
# of XDs			1
Type	[Level]		LEVEL
• ID (Well ID)	[Well #]	[FH/RH]	MW-1950 RH
• Reference	[0]		0
• Quad Coefficient	(serial #)		203456
• Linearity	(serial #)		0.096
• Scale	(serial #)		20.0632
• Offset	(serial #)		0.0516

More >	Delay – 50 m/s	(check default values)
	S Gravity – 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	0
• Manual Water Level		7.42 Ft
• Slug Measurements	Diameter	1-IN
	Length	4-FT

• Transducer Placement

Date of Test

Start time (minutes and seconds)	0842 7-25-93
End time	1142 7-25-93

Datalogger File Name: 1950RH

Well 1952

Bouwer & Rice Analysis

Falling Head

$L_e = L_w = H = 11.18$ feet

$r_w = 4.25$ inch

$$\frac{L_e}{r_w} = \frac{11.18}{4.25/12} = 31.57 \quad \Rightarrow \quad C = 2.16$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln (L_w/r_w)} + \frac{C}{L_e/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln 31.57} + \frac{2.16}{31.57} \right]^{-1}$$

$$= 2.584$$

$$K = \frac{r_c^2 \ln \frac{R_e}{r_w}}{2 L_e} \cdot \frac{1}{t} \ln \frac{Y_0}{Y_t}$$

$$= \frac{(2.47 \times 2.54)^2 \times 2.584}{2 \times 11.18 \times 30.48} \times \frac{9.6 \times 10^{-3}}{60}$$

$$= 2.4 \times 10^{-5} \text{ cm/sec}$$

CLIENT	DOE	DEPARTMENT	
PROJECT	CRU-2 FEMP	ORIGINATED BY	Amar Bumb DATE 9/8/93
ENG. COMM. NO.	RDC 11 PROJECT NO. 04424331	CHECKED BY	John J Benet DATE 10-29-93
AREA	Slug Tests RI	REVISION NUMBER	DATE
SUBJECT		REVISED BY	

Form E53-2 (2-90)

Well 1952

Rising Head

$$L_e = L_w = H = 11.13 \text{ feet}$$

$$r_w = 4.25 \text{ inch}$$

$$\frac{L_e}{r_w} = \frac{11.13}{4.25/12} = 31.43$$

$$\Rightarrow \quad C = 2.16$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln (L_w/r_w)} + \frac{C}{L_e/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln 31.43} + \frac{2.16}{31.43} \right]^{-1}$$

$$= 2.579$$

$$K = \frac{r_c^2 \ln \frac{R_e}{r_w}}{2 L_e} \frac{1}{t} \ln \frac{Y_0}{Y_t}$$

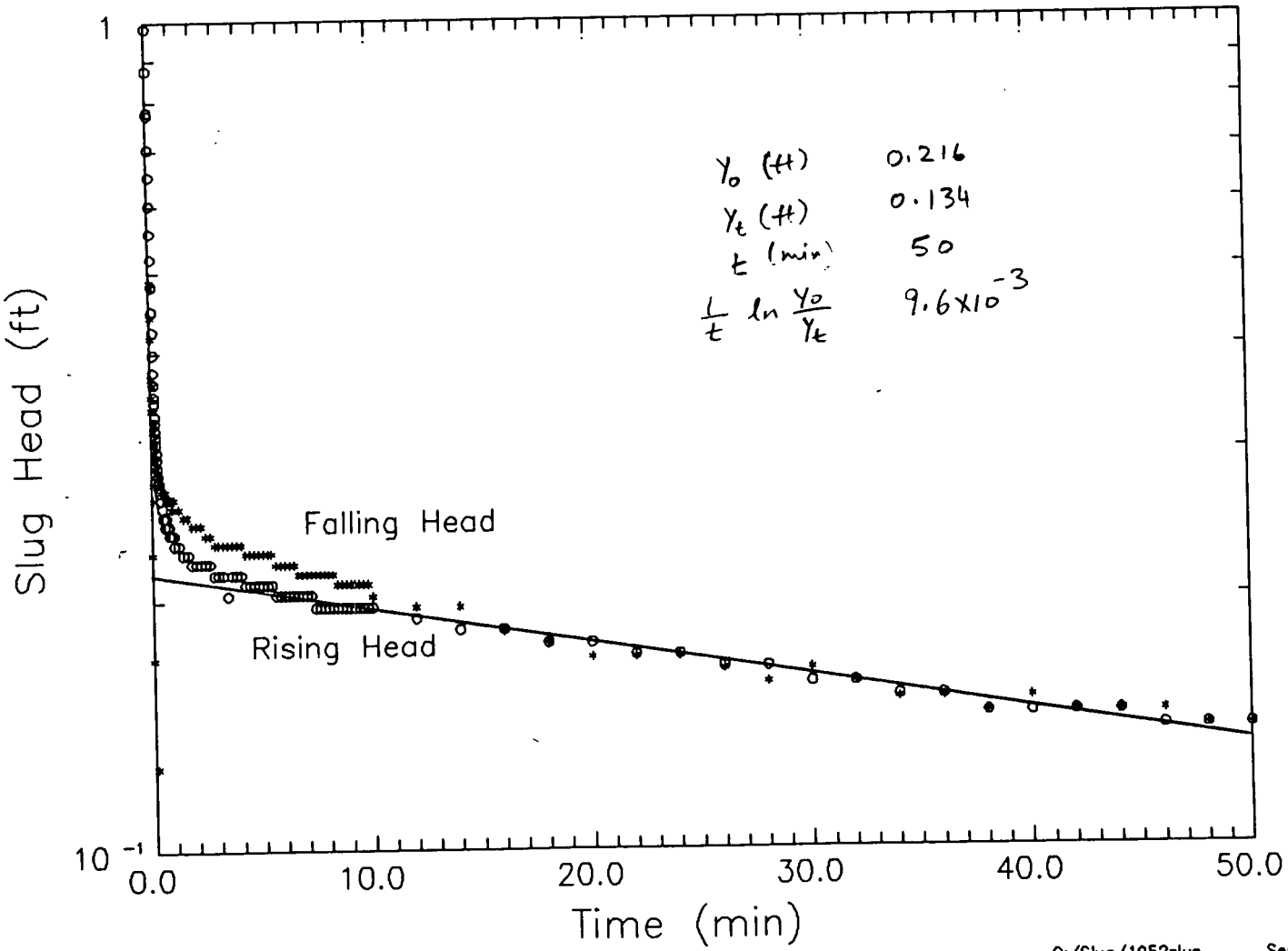
$$= \frac{(2.47 \times 2.54)^2 \times 2.579}{2 \times 11.18 \times 30.48} \times \frac{9.6 \times 10^{-3}}{60}$$

$$= 2.4 \times 10^{-5} \text{ cm/sec}$$

CLIENT DOE		DEPARTMENT	
PROJECT CRU-2 FEMP		ORIGINATED BY Amar Bumb	DATE 9/8/93
ENG. COMM. NO. RDC 11	PROJECT NO.	CHECKED BY [signature]	DATE 10-29-95
AREA Slug Tests / RI		REVISION NUMBER	DATE
SUBJECT		REVISED BY	

Form E53-2 (2-90)

1952 Slug Tests – Bower & Rice Analysis



C:/Slug/1952slug September 8, 1993

000363

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LO			
NO.	20	03	05
SHEET	1	OF	1

PROJECT NAME: CRU-2 Slug Testing
PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: MW 1952 Slug Test

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930098
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 77166

1400 Arrived at MW 1952
BY background: 60-80 cpm
M-Tip BG: 0 ppm DH: 0.1 ppm DZ: 0 ppm
Water level 10.88 ft.
Well depth: 20.21 ft.
Screen Interval: 10 ft → 20 ft.
Sandpack Interval: 9 ft. → 22 ft.

Screen: 10 – 20
Sandpack: 9 – 22
Sand layer: clayey only sometimes with trace sand

1415 Set up test #8 Ref. # 1952 FH
Lowered transducer to: 19.935 ft.
Waited for water level to return to static level
1553 After waiting over 1.5 hrs. for return to static level, Test #8 started
Water level with transducer: 10.83 ft.
Slug length: 5.99 ft. Slug dia.: 1 in.
Began manual water levels
1605 Secured Hermit 2000, transducer, and well under plastic
- well was locked without applying pressure to transducer cable
- Hermit custody taped shut
Exited site 1:12:38 into test #8
1615 Entered plant to shower and change
1700 Leave for day

See FAL 7-25-93 Ref. # MW 1954 for prior activities on 7-25-93

MICROTIP CALIBRATED BY R. McGarnley
ON 7-25-93
USING Isobutylene
LOT # 101692-2

VISITORS ON SITE:
NONE

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
Test #8 started before return to static water level
Test #8 run 7-25-93 → 7-26-93

WEATHER CONDITIONS:
Hazy, Hot, Humid 84°F
BP: 28.77 in. Hg

IMPORTANT TELEPHONE CALLS:
NONE

PERSONNEL ON SITE: R. McGarnley, K. Martinez

SUPERVISOR: Robert McGarnley DATE: 7-25-93

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
NO.	N/A	N/A	N/A
SHEET	1	OF	1

PROJECT NAME: CRU-2 Slug Testing
PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: MW 1952 Slug Test (cont. from 7-25-93)

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930058
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 77166

0600 Arrived at T-305
Met with D. Scheper concerning CRU-2 priority wells
0715 Entered plant to change into company issued clothing
0745 Arrived at MW 1952
* Stopped Test #8 Ref.# 1952 FH 1014 minutes into test
0800 Set up Test #9 Ref.# 1952 RH
Transducer depth: 19.947 ft.
Water level: 10.88 ft.
M-Tip: 0ppm BG, DH, BZ
0810 Began Test #9
Began water level measurements manually
1112 Test #9 terminated
1120 Water Quality taken
1135 Exited site
Prepped vehicle for removal from plant
1230 Entered plant to shower and change
1300 Lunch
1400 Returned
Completed paperwork
1730 Leave for day

* See FAOL 7-25-93 Ref# MW 1952 for information concerning start of Test #8 Ref.# 1952 FH.

MICROTIP CALIBRATED BY R. McGormley
ON 7-26-93
USING Isobutylene
LOT # 101692-2

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
NONE	NONE
WEATHER CONDITIONS:	**IMPORTANT TELEPHONE CALLS:**
Hazy, Hot, Humid 84°F BP: 29.14 in. Hg.	NONE

PERSONNEL ON SITE: R. McGormley, K. Martinez

SUPERVISOR: Robert McGormley DATE: 7-26-93

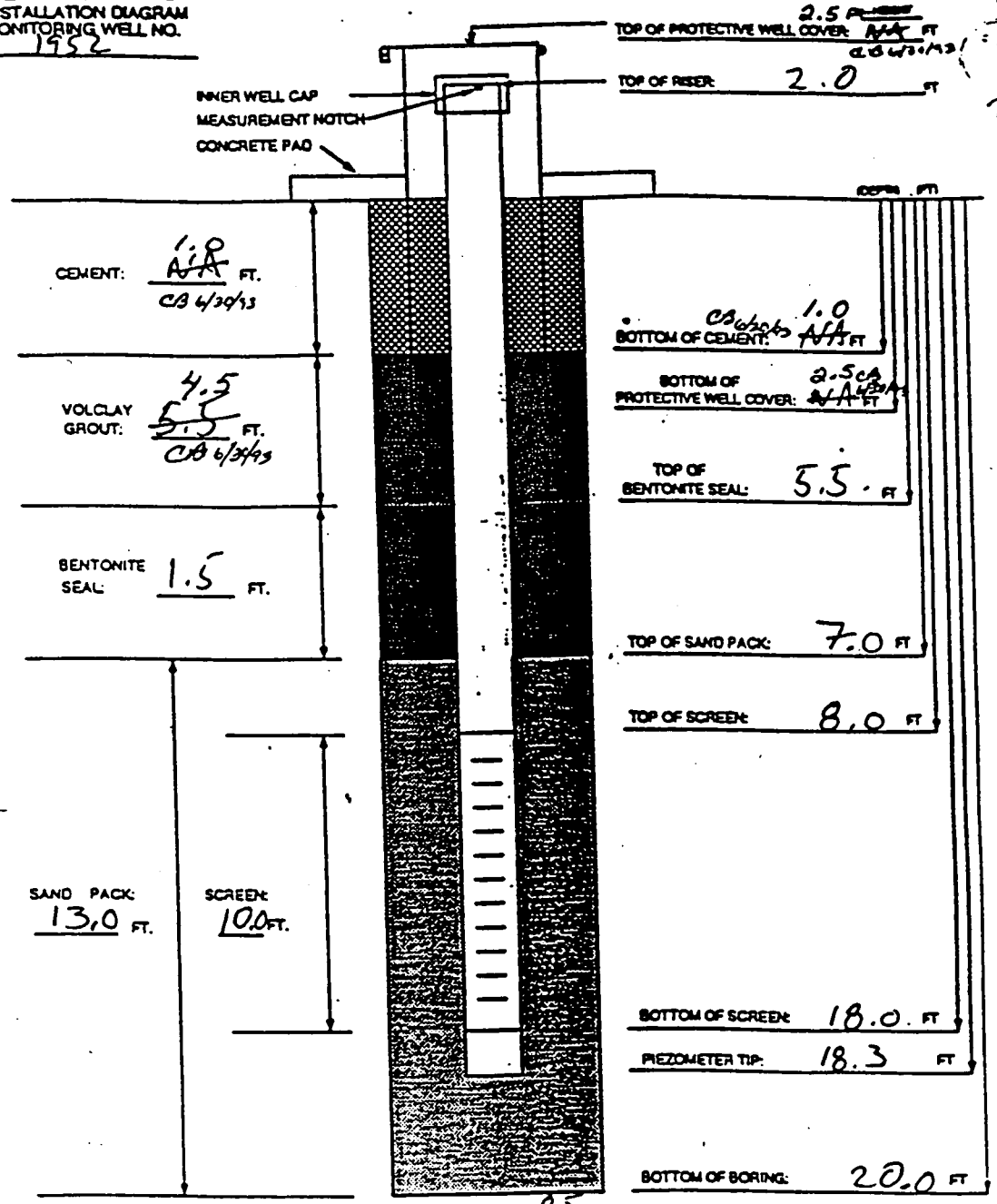
FERNALD RI/FS
INSTALLATION DIAGRAM
MONITORING WELL NO. 1952

INSTALLATION DATE: 5/1/93

TOP OF PROTECTIVE WELL COVER: ~~NA~~ 2.5 FT CB 6/30/93

TOP OF RISER: 2.0 FT

7.6



CEMENT: ~~NA~~ 1.0 FT. CB 6/30/93

VOLCLAY GROUT: ~~5.5~~ 4.5 FT. CB 6/30/93

BENTONITE SEAL: 1.5 FT.

SAND PACK: 13.0 FT.

SCREEN: 10.0 FT.

BOTTOM OF CEMENT: ~~NA~~ 1.0 FT CB 6/30/93

BOTTOM OF PROTECTIVE WELL COVER: ~~NA~~ 2.5 FT CB 6/30/93

TOP OF BENTONITE SEAL: 5.5 FT

TOP OF SAND PACK: 7.0 FT

TOP OF SCREEN: 8.0 FT

BOTTOM OF SCREEN: 18.0 FT

PIEZOMETER TIP: 18.3 FT

BOTTOM OF BORING: 20.0 FT

BOREHOLE DIAMETER: 8.5 IN.

MATERIALS USED

SAND TYPE AND QUANTITY: 10x20, 8 bags
BENTONITE PELLETS (5-GALLON BUCKETS): 1/2
BAGS OF VOLCLAY GROUT: 1
AMOUNT OF CEMENT: ~~None~~ 1/2 bag CB 6/30/93
AMOUNT OF WATER USED: 20 gal
OTHER: NA
TASK: 20.03.05

NOTES:

1) RISER PIPE IS 2 IN. ID. 316 STAINLESS STEEL PIPE, FLUSH-THREADED JOINTS.
2) SCREEN IS 2 IN. ID. 316 STAINLESS STEEL PIPE WITH 0.01 IN. SLOTS.
3) LOWER END OF SCREEN IS CAPPED WITH AN END CAP OR THREADED SUMP.
GEOLOGIST/ENGINEER: 1 Reagan
4) WATER DEPTH AND DATE 18 FT
5) TOP OF CASING IS SECURED WITH A STAINLESS STEEL CAP.
6) PARENTHESIS INDICATE DEPTH BELOW GROUND LEVEL.
7) WELL CASING HAS A PROTECTIVE COVER WITH PADLOCK.

ASI FORM 0157 REV. 01

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test#			#8
• Rate			2 min.
• Log			log
# of XDs			1
Type	[Level]		level
• ID (Well ID)	[Well #]	[FH/RH]	1952 FH
• Reference	[0]		0
• Quad Coefficient	(serial #)		N/A
• Linearity	(serial #)		.1078
• Scale	(serial #)		20.0943
• Offset	(serial #)		.0352

More >	Delay – 50 m/s	(check default values)
	S Gravity – .1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	0
• Manual Water Level		10.83 ft
• Slug Measurements	Diameter	1 in.
	Length	5.99 ft

• Transducer Placement 10.188 ft

Date of Test 7-25-93 → 7-26-93

Start time (minutes and seconds) 0 min. @ 1553

End time 1014 min. @ 0747

Datalogger File Name: 1952 FH

FEMP-OU02-6 FINAL
January 21, 1995

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test#			#9
• Rate			2 min.
• Log			log
# of XDs			1
Type	[Level]		level
• ID (Well ID)	[Well #]	[FH/RH]	1952 RH
• Reference	[0]		0
• Quad Coefficient	(serial #)		N/A
• Linearity	(serial #)		.1078
• Scale	(serial #)		20.0943
• Offset	(serial #)		.0352

More >	Delay – 50 m/s	(check default values)
	S Gravity – 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	0
• Manual Water Level		10.88
• Slug Measurements	Diameter	1 in.
	Length	5.99 ft

• Transducer Placement 19.947 ft.

Date of Test 7-26-93

Start time (minutes and seconds) 0 min @ .0812

End time 180 min. @ 1120

Datalogger File Name: 1952 RH

erafs1 vol1:rsapps\rsdata\ssdata\vogelfrm

Well 1954

Bouwer & Rice Analysis

Falling Head

$L_w = L_e = H = 7.62$ feet

$r_w = 4$ inch

$$\frac{L_e}{r_w} = \frac{7.62}{4/12} = 22.86$$

$$\Rightarrow C = 1.8$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln (L_w/r_w)} + \frac{C}{L_e/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln 22.86} + \frac{1.8}{22.86} \right]^{-1}$$

$$= 2.324$$

$$K = \frac{r_c^2 \ln \frac{R_e}{r_w}}{2 L_e} \times \ln \frac{y_0}{y_t}$$

$$= \frac{(2.35 \times 2.54)^2 \times 2.324}{2 \times 7.62 \times 30.48} \times \frac{0.0504}{60}$$

$$= 1.5 \times 10^{-4} \text{ cm/sec}$$

CLIENT	DOE	DEPARTMENT	
PROJECT	CRU-2 FEMP	ORIGINATED BY	Anwar Bumb DATE 9/6/93
ENG. COMM. NO.	RDC 11 PROJECT NO.	CHECKED BY	John J. Banks DATE 9-7-93
AREA	Slug Tests / RI	REVISION NUMBER	1 DATE
SUBJECT		REVISED BY	

Form E53-2 (2-90)

000369

SHEET 1 OF 2

Well 1954

Rising Head

$$L_w = L_e = H = 7.56 \text{ feet}$$

$$r_w = 4 \text{ inch}$$

$$\frac{L_e}{r_w} = \frac{7.56}{4/12} = 22.68$$

$$\Rightarrow \quad C = 1.8$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln \frac{L_w}{r_w}} + \frac{C}{L_e/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln 22.68} + \frac{1.8}{22.68} \right]^{-1}$$

$$= 2.316$$

$$K = \frac{r_c^2 \ln \frac{R_e}{r_w}}{2 L_e} \frac{1}{t} \ln \frac{Y_0}{Y_t}$$

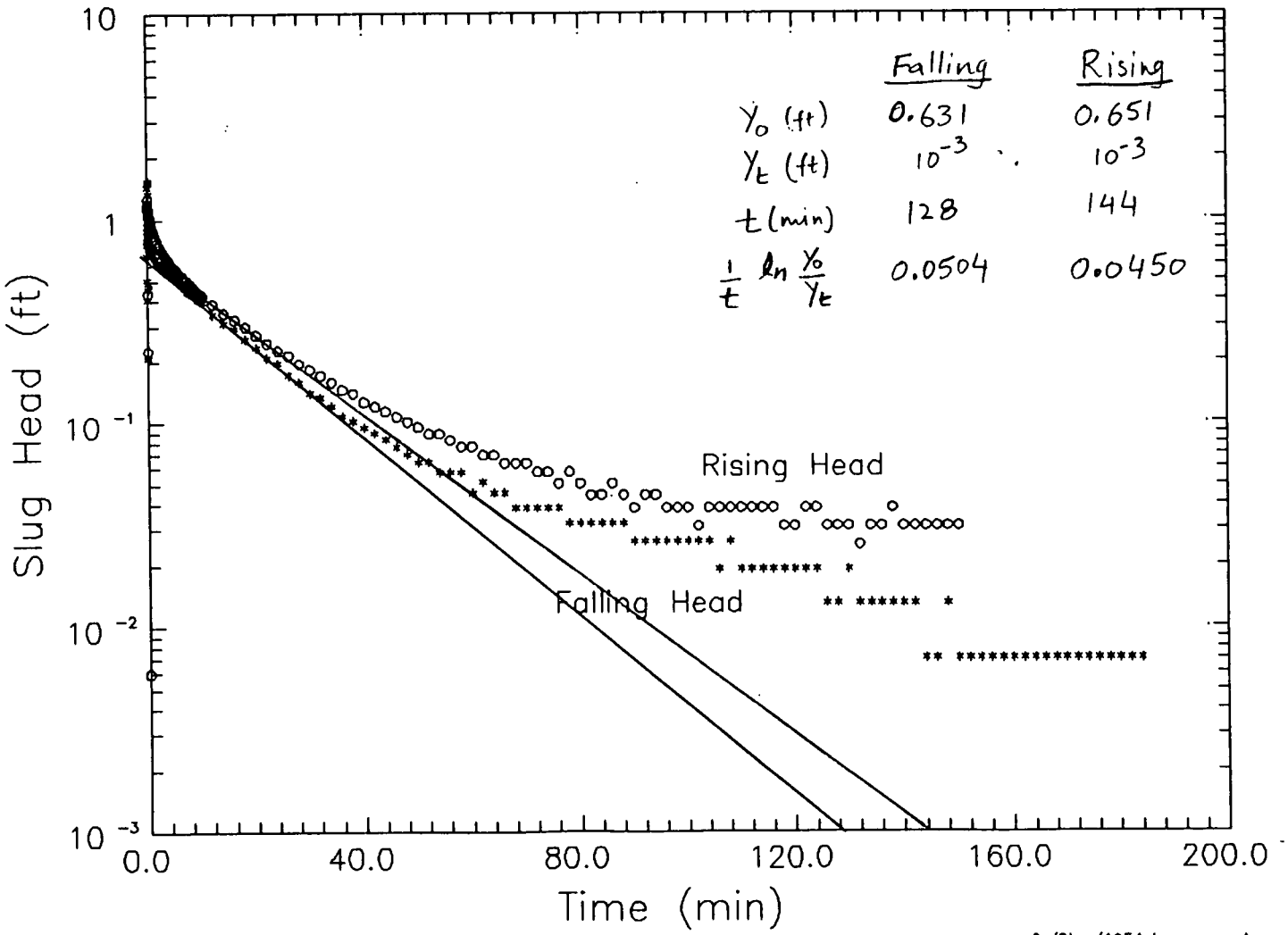
$$= \frac{(2.35 \times 2.54)^2 \times 2.316}{2 \times 7.56 \times 30.48} \times \frac{0.045}{60}$$

$$= 1.3 \times 10^{-4} \text{ cm/sec}$$

CLIENT	DOE	DEPARTMENT	
PROJECT	CAU-2 FEMP	ORIGINATED BY	Amor Burns DATE 6 Sept. 93
ENG. COMM. NO.	RDC 11 PROJECT NO.	CHECKED BY	DATE 10-29-93
AREA	Slug Tests / RI	REVISION NUMBER	1 DATE 9/5/97
SUBJECT		REVISED BY	

Form E53-2 (2-90)

1954 Slug Tests – Bouwer & Rice Analysis



C:/Slug/1954slug August 27, 1993

000374

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	7	28	93
NO.	NA	—	—
SHEET	1	OF	1

PROJECT NAME CRU-2 Slug Test | PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: Slug Test MW-1954

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PP930098
~~ALPHA METER S.N.~~ KM 7-28-93
BETA GAMMA METER S.N. 86064

1300 Arrive back from Lunch.

1407 Arrive at Location MW-1954
Bγ: 40→60 cpm
Microtip: BG 0.0ppm, Bβ 0.0ppm, DH 0.0ppm.
Water Level: 14.5 Total Depth: 21.25
Top of Screen: 11 Ft Bottom of screen: 21 Ft
Top of Sand Pack: 9 ft Bottom of Sand Pack: 22 ft

1425 Set up Test #12 Ref. # 1954 F.H

1430 Adjust slug lenth to 5.05 ft

1545 Test #12 starts.
Transducer depth 20.912 ft

Test continued through 7-28-93 into 7-29-93

1605 exit site

16 min. into test, .310 ft remaining

1645 Arrive at base
Shower & clean up

Return to base, work on paper work.

1800 End of Day
Leave Base

MICROTIP CALIBRATED BY
Rob McGormley
ON 7-28-93
USING IsoButylene
LOT # 101692-2

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
NP	NP
WEATHER CONDITIONS: Clear, Breezy, Hot, Humid 90 → 95°F	IMPORTANT TELEPHONE CALLS: NA

PERSONNEL ON SITE: Rob McGormley, Ken Martinez

SUPERVISOR: Ken Martinez DATE: 7-28-93

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	7	29	93
NO.	NA	→	
SHEET 1	OF 1		

PROJECT NAME CRU-2 Slug Test | PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: Slug test MW-1954

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930098
~~ALPHA METER S.N.~~ KM 7-29-93
BETA GAMMA METER S.N. 75247

0600 Arrive at Base
Prepare for day's activities
Leave for Process Area to dress-out.

0700 Arrive at South Field
Notify Rad Techs that this team is about to enter South Field

0710 Arrive at Location MW-1954
BG: 40-60 cpm, Microtip: BG 4.3, KZ 4.1, DH 2.2

0712 Terminate Test #12, 1954 RH
Test Ran for 15 hrs, 32 min
Water Level: 14.57 (.06 ft beyond initial Water Level)

0730 Set up for test #13 Ref # 1954 RH
Transducer depth: 20.94 ft

0739 Start Test # 13 - 1954 RH

1000 Recharge on this Location for Last .03 ft
As Per Tom Anderson, Terminate test.

1010 Test #13 terminated
Water Quality taken
Decon and General area clean-up.

* See additional FADLs for remainder of day's work.

MICROTIP CALIBRATED BY
Ken Martinez
ON 7-29-93
USING Isobutylene
LOT # 101693-2

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
John Berrite	Test #13 Terminated early due to slow Recharge as Per Tom Anderso
WEATHER CONDITIONS: Sunny, Warm 77°F	IMPORTANT TELEPHONE CALLS: NA

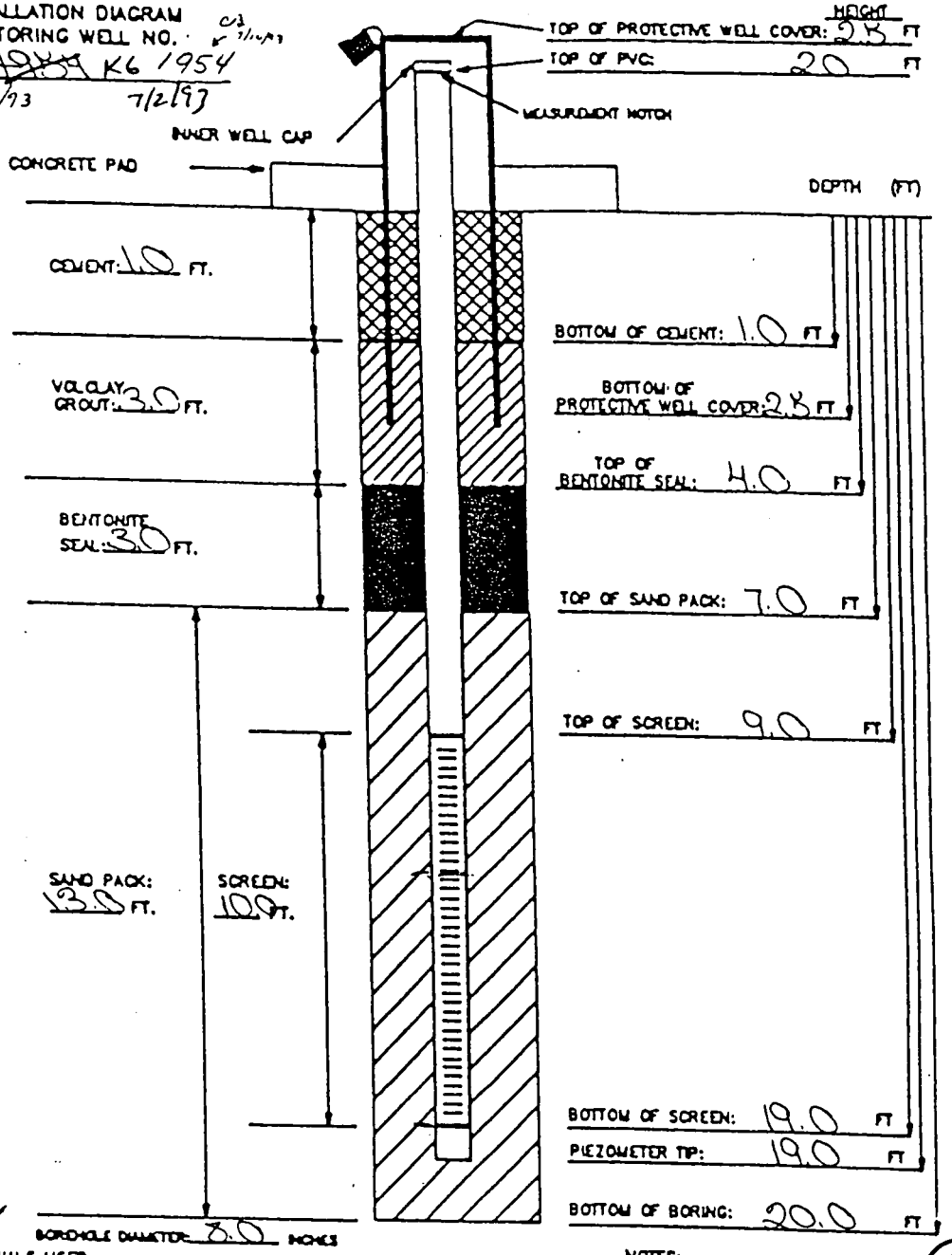
PERSONNEL ON SITE: Rob McGormley, Ken Martinez

SUPERVISOR: Ken Martinez 000373 DATE: 7-29-93

FERNALD RI/FS

INSTALLATION DIAGRAM
MONITORING WELL NO. ~~(11027)1954~~ K6 1954
CB 7/6/93 7/2/93

INSTALLATION DATE: 8/15/93



MATERIALS USED:
SAND TYPE AND QUANTITY: 10/20 8 1/2 bag
BENTONITE PELLETS (5-GALLON BUCKETS): 1 bucket
BAGS OF VOLCLAY GROUT: 1 bag
AMOUNT OF CEMENT: 1/2 bag
AMOUNT OF WATER USED: 3 gallon
OTHER:

NOTES:
1) RISER PIPE IS 2-INCH SCHEDULE 40 PVC PIPE, FLUSH-THREADED JOINTS.
2) SCREEN IS 2-INCH I.D. SCHEDULE 40 PVC PIPE WITH 0.020-INCH SLOTS.
3) LOWER END OF SCREEN IS CAPPED WITH AN END CAP OR THREADED SUMP.
4) WATER DEPTH/DATE: 5.0 FT 08/10/93

FMPC Q. DSC 7/6/93

2 soil drum TASK: 20.03.05 GEOLOGIST/ENGINEER: D. O'Brien

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

- Test# — Test # 12
- Rate — 2 min
- Log — Log
- # of XDs — 1
- Type [Level] — Level
- ID (Well ID) [Well #] [FH/RH] — MW-1954 FH
- Reference [0] — 0
- Quad Coefficient (serial #) —
- Linearity (serial #) — .1078
- Scale (serial #) — 20.0943
- Offset (serial #) — .0352

More > Delay – 50 m/s (check default values)
S Gravity – .1 (check default values)
Units – feet (check default values)
Mode – TOC (check default values)

Recheck Reference Level Enter [0] — 0
- Manual Water Level — 14.51 ft
- Slug Measurements Diameter — 1 in
  Length — 5.05 ft

- Transducer Placement

Date of Test — 7-28-93
Start time (minutes and seconds) — 1545. 7-28-93
End time — 0712 7-29-93

Datalogger File Name: — 1954 FH

erafs1 vol1:rsapps:rsdata:asdata:vogelfrm

PARSONS
ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

* Test#			#13
* Rate			2 min.
* Log			log
# of XDs			1
Type	[Level]		level
* ID (Well ID)	[Well #]	[FH/RH]	1954 RH
* Reference	[0]		0
* Quad Coefficient	(serial #)		N/A
* Linearity	(serial #)		.1078
* Scale	(serial #)		20.0943
* Offset	(serial #)		.0352

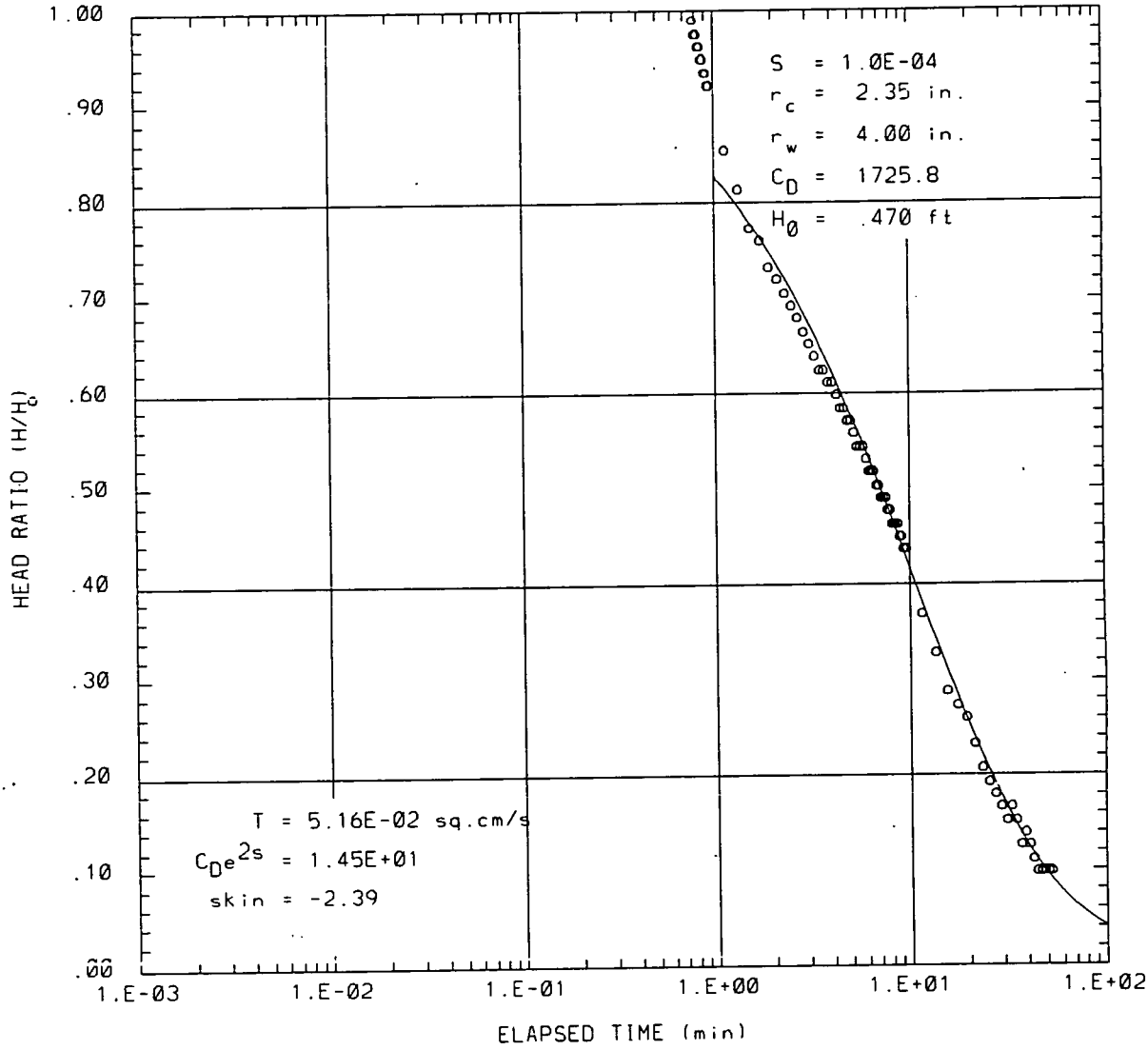
More >	Delay – 50 m/s	(check default values)
	S Gravity – 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

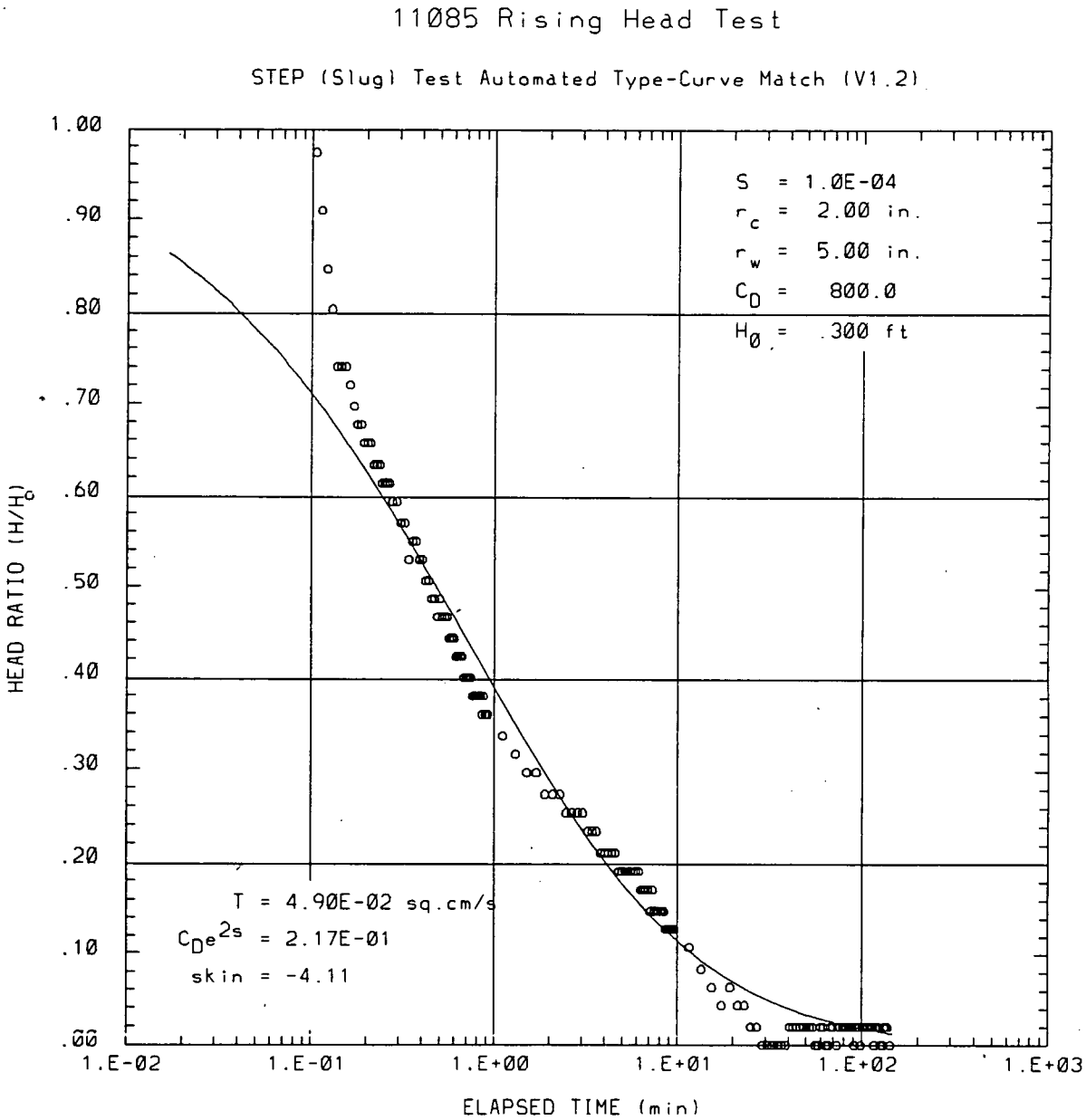
Recheck Reference Level	Enter [0]	0
* Manual Water Level		14.57 ft
* Slug Measurements	Diameter	1 in.
	Length	5.05 ft.

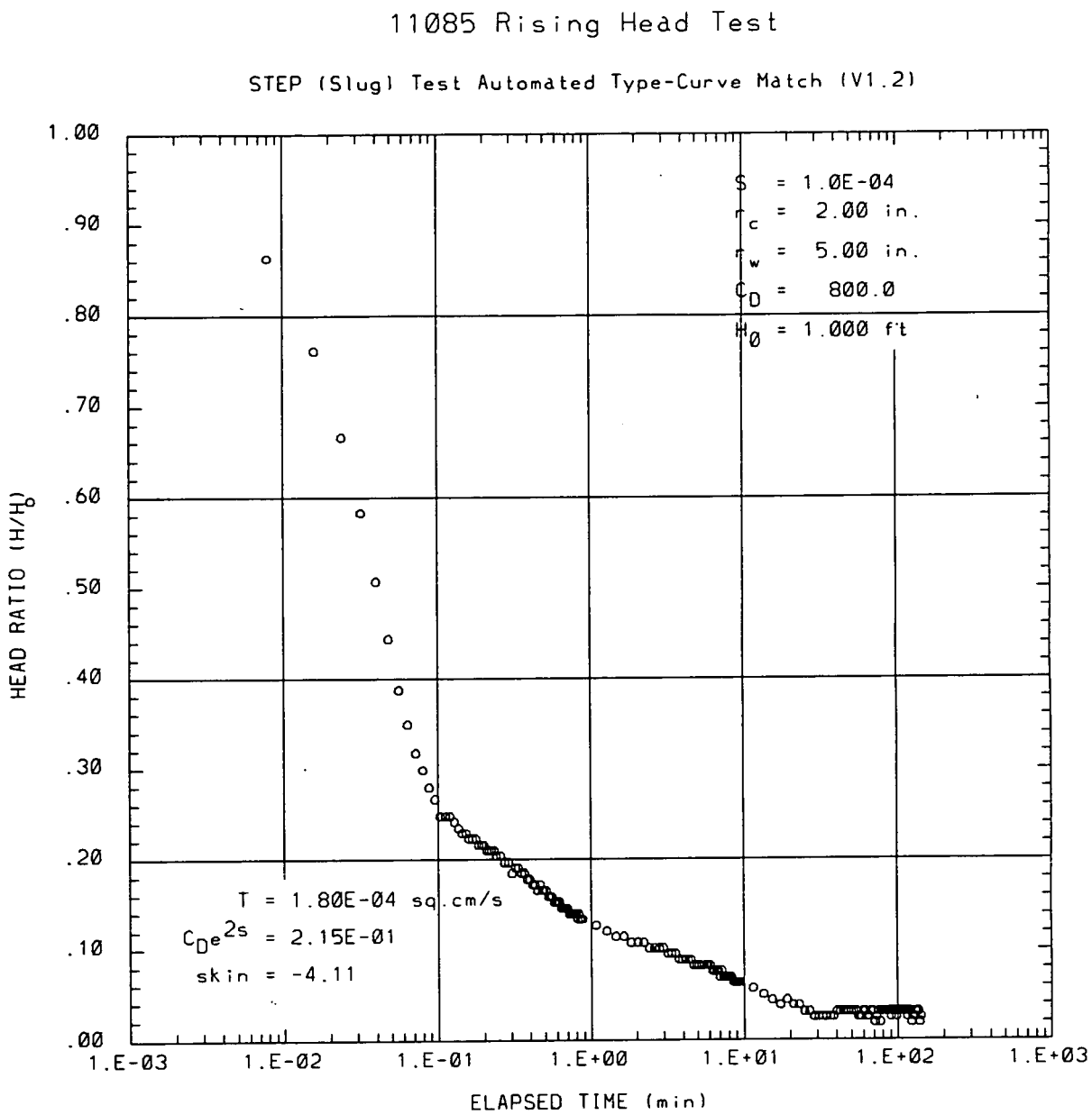
* Transducer Placement	20.94 ft.
Date of Test	7-29-93
Start time (minutes and seconds)	0min. @ 0739
End time	1010 7-29-93
Datalogger File Name:	1954 RH

WELL 11085 Falling Head Test

STEP (Slug) Test Automated Type-Curve Match (V1.2)




11085 Rising Head Test
STEP (Slug) Test Automated Type-Curve Match (V1.2)
S = 1.0E-04
r_c = 2.00 in.
r_w = 5.00 in.
C_D = 800.0
H_0 = .300 ft
T = 4.90E-02 sq.cm/s
C_De^{2s} = 2.17E-01
skin = -4.11
HEAD RATIO (H/H_0)
1.00
.90
.80
.70
.60
.50
.40
.30
.20
.10
.00
1.E-02
1.E-01
1.E+00
1.E+01
1.E+02
1.E+03
ELAPSED TIME (min)


11085 Rising Head Test
STEP (Slug) Test Automated Type-Curve Match (V1.2)
S = 1.0E-04
r_c = 2.00 in.
r_w = 5.00 in.
C_D = 800.0
H_0 = 1.000 ft
T = 1.80E-04 sq.cm/s
C_De^{2s} = 2.15E-01
skin = -4.11
HEAD RATIO (H/H_0)
1.00
.90
.80
.70
.60
.50
.40
.30
.20
.10
.00
1.E-03
1.E-02
1.E-01
1.E+00
1.E+01
1.E+02
1.E+03
ELAPSED TIME (min)

Well 11085

Bouwer and Rice Analysis

$L_e = L_w = H = 3$ feet

$r_w = 4$ inch

$$\frac{L_e}{r_w} = \frac{3}{4/12} = 9 \quad \Rightarrow \quad C = 1.151$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln(L_w/r_w)} + \frac{C}{L_e/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln 9} + \frac{1.151}{9} \right]^{-1}$$

$$= 1.591$$

Falling Head

$$K = \frac{r_c^2 \ln(R_e/r_w)}{2 L_e} \frac{1}{t} \ln \frac{Y_0}{Y_t}$$

$$= \frac{(2.35 \times 2.54)^2 \times 1.591}{2 \times 3 \times 30.48} \times \frac{0.0725}{60}$$

$$= 3.7 \times 10^{-4} \text{ cm/sec}$$

Rising Head

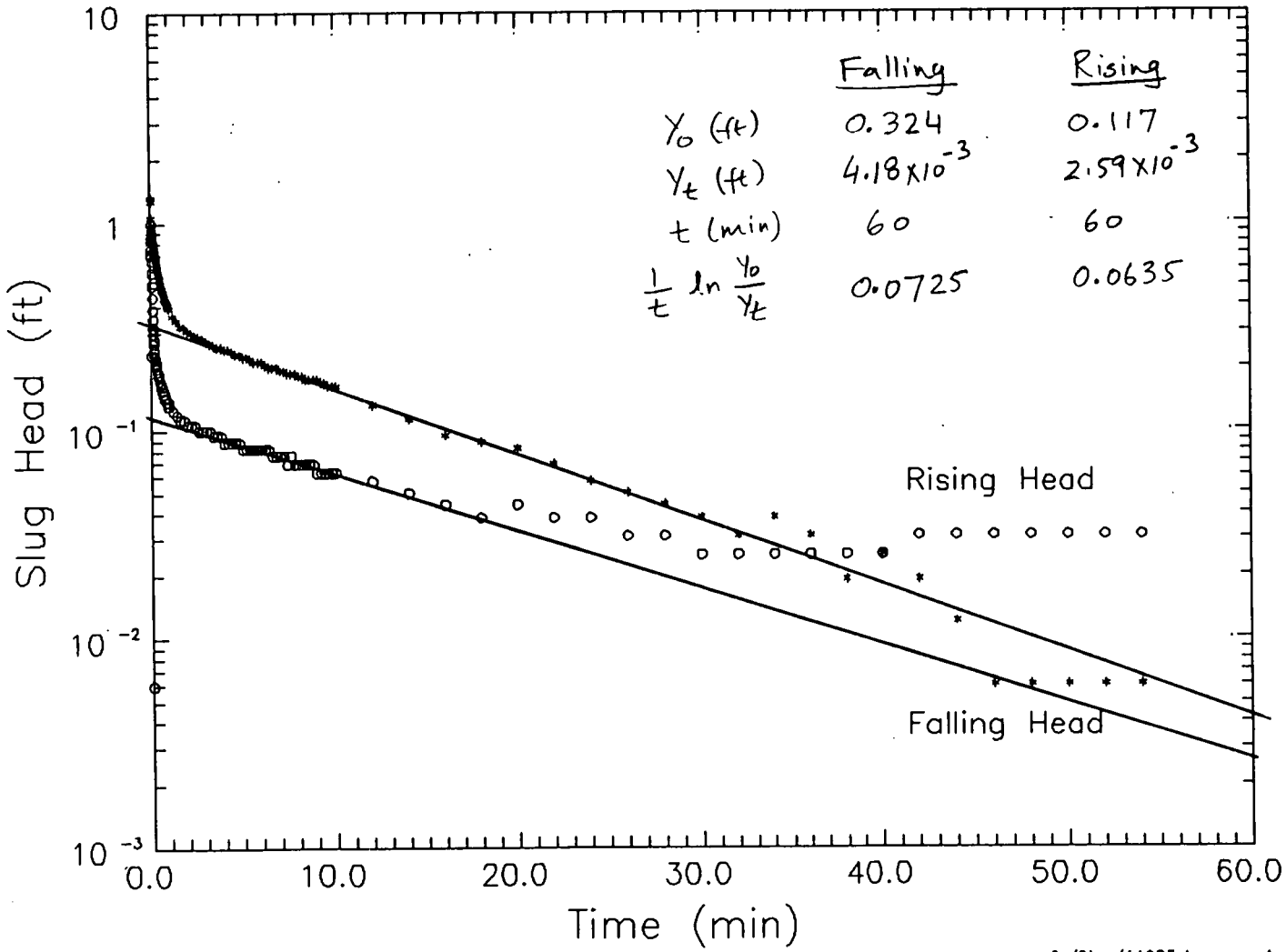
$$K = \frac{(2.35 \times 2.54)^2 \times 1.591}{2 \times 3 \times 30.48} \times \frac{0.0535}{60}$$

$$= 3.3 \times 10^{-4} \text{ cm/sec}$$

CLIENT DOE		DEPARTMENT	
PROJECT CRU-2 FEMP		ORIGINATED BY Emar Burns	DATE 9/6/93
ENG. COMM. NO. EDC 11	PROJECT NO.	CHECKED BY John Bennett	DATE 9-7-93
AREA Slug Tests		REVISION NUMBER	DATE
SUBJECT		REVISED BY	

Form E53-2 (2-90) SHEET OF

11085 Slug Tests – Bouwer & Rice Analysis



C:/Slug/11085slg August 27, 1993

000381

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	7	27	93
NO.	NA	→	
SHEET	1	OF 2	

PROJECT NAME: Cru 2 Slug Test — PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: Slug Test of MW 11085

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

Microtip S.N. PA930098
Beta Gamma Meter S.N. 77120

0600 Arrive at base
Prepare for day's activities, A.M. briefing with Dick Scheper
Assigned to begin Slug tests in South Field.

0700 Arrive at B. Street
Discuss with Rad Tech PPE requirements for South Field
Rad tech scans Truck cargo for exit of process area.

0830 Leave process area

0900 Arrive at Location MW-11085
Bγ: 70 → 80 cpm
Microtip: BG-0.0ppm, BR-0.0ppm, DH-0.0ppm

Initial Water Level: 8.01 ft — Well Depth: 17.83 ft
Top of Screen: 8.0 ft — Bottom of screen: 18.0 ft
Top of Sand Pack: 7.5 ft — Bottom of sand Pack: 18.5 ft

Set up for Test #10 11085FH
Wait until Static Water Level returns
Water Level with Transducer in place: 8.01 ft

Sand/G tense at 11.00 ft TOC
12-12.5'
14.5-17

1012 Start Test #10 Falling Head

1112 Complete Test #10 Falling Head

1115 ~~Start~~ Setup Test #11 11085 RH

Water Level with Transducer: 8.01 ft — Transducer: 16.887 ft

1116 Start Test #11

Microtip calibrated by: Ken Martinez on: 7-27-93, using Isobutylene, Lot #101692-2

VISITORS ON SITE:
John Barrett - CRU 2
Tom Anderson
EPA Rep.

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
NA

WEATHER CONDITIONS:
Clear, Calm.

IMPORTANT TELEPHONE CALLS:
NA

PERSONNEL ON SITE: R. McGormley, K. Martinez

SUPERVISOR: [signature] — DATE: 7-27-93

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	7	27	93
NO.	NA		→
SHEET	2	OF	2

PROJECT NAME: Cru 2 Slug Test — PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: Slug Test of MW 11085

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

Micro Tip S.N. PA 930098
Beta Gamma Meter S.N. 77120

1315 Minimal Recharge.
Discuss with Tom Anderson termination of test early due to minimal Recharge. Mr. Anderson Agrees.

1745 Test #11 Stopped.

Final Water Level: 8.02 ft Final Transducer: 16.871

Note: 0.025 ft from Static Water Level.
Stopped: As Per Tom Anderson.

1400 Water Quality Parameters taken.

Decon & General area clean-up.

Water Level Without Transeducer: 8.14 ft.

1430 Leave Site for base.

1460 Clean & exchange sample vehicles with Transportation.

Locate toppers for new sample vehicles.
(Toppers do not fit)

1700 Shower & clean up.

1730 Paper work.

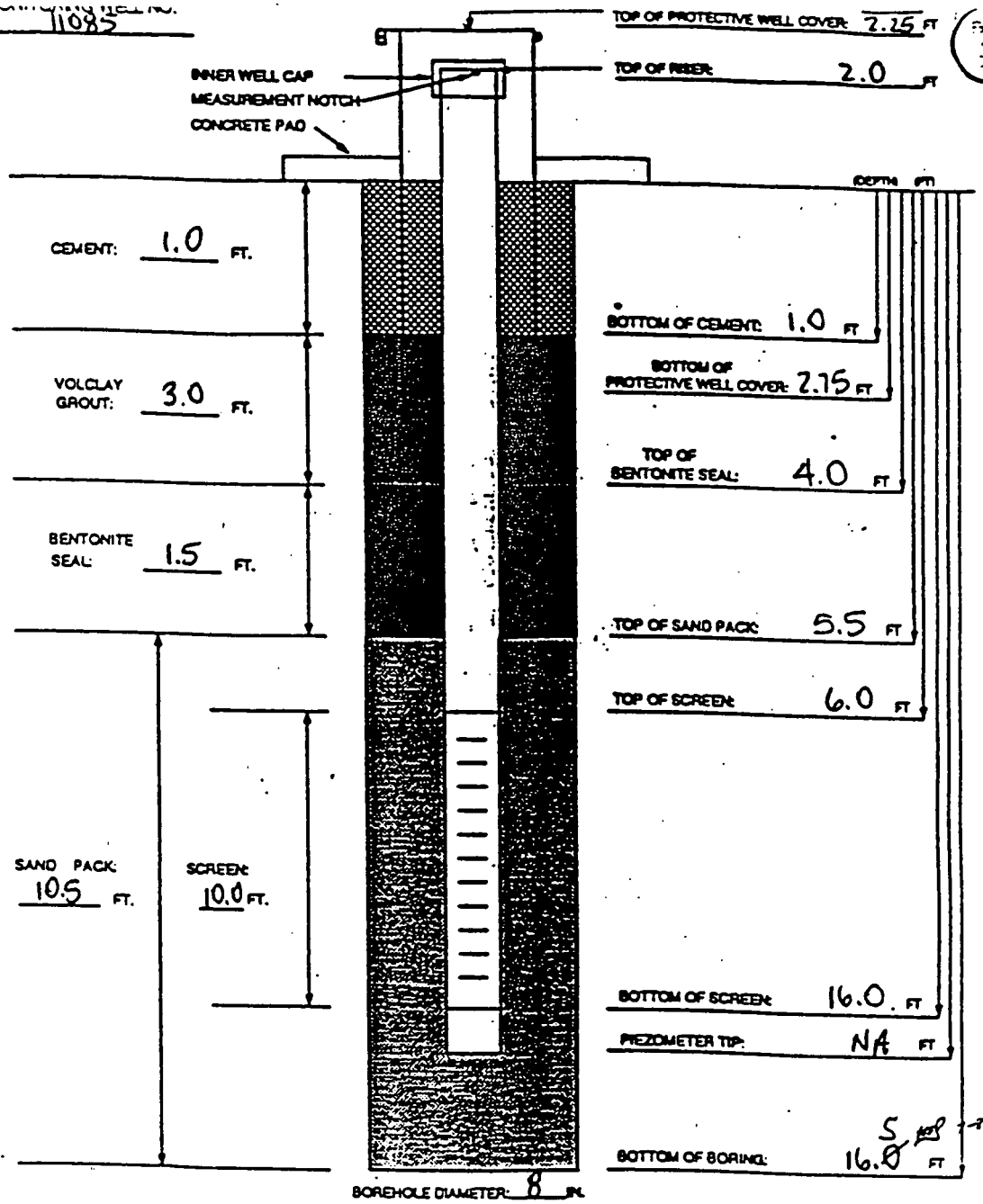
Micro tip Calibrated by: Ken Martinez, on: 7-27-93, using Isobutylene, Lot # 101692-2

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
John Berrerz - CRU-2 Tom Anderson EPA Rep	Terminate Test #11, 11085RH after 2 hrs. 20 mins. due to slow recharge. As Per Tom Anderson.
WEATHER CONDITIONS: Clear Calm	IMPORTANT TELEPHONE CALLS: N/A

PERSONNEL ON SITE: R. McGormley, K. Martinez

SUPERVISOR: Ken Martinez DATE: 7-27-93

MONITORING WELL NO. 11085



MATERIALS USED

SAND TYPE AND QUANTITY: 16/20 7 bags
BENTONITE PELLETS (5-GALLON BUCKETS): 1
BAGS OF VOLCLAY GROUT: 1
AMOUNT OF CEMENT: 2 bags
AMOUNT OF WATER USED: 5 gallons
OTHER: 2" stainless steel
TASK: Monitoring well

NOTES:

1) RISER PIPE IS 2 IN. ID. 316 STAINLESS STEEL PIPE, FLUSH-THREADED JOINTS.
2) SCREEN IS 2 IN. ID. 316 STAINLESS STEEL PIPE WITH a 10 IN. SLOTS.
3) LOWER END OF SCREEN IS CAPPED WITH AN END CAP OR THREADED SUMP.
GEOLOGIST/ENGINEER: A. Como
4) WATER DEPTH AND DATE NA FT: NA
5) TOP OF CASING IS SECURED WITH A STAINLESS STEEL CAP.
6) PARENTHESIS INDICATE DEPTH BELOW GROUND LEVEL.
7) WELL CASING HAS A PROTECTIVE COVER WITH PADLOCK.

ES: FORM 0157 REV (0)

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test#			#10
• Rate			2 min
• Log			Log.
# of XDs			1
Type	[Level]		Level
• ID (Well ID)	[Well #]	[FH/RH]	MW-11085 FH
• Reference	[0]		0
• Quad Coefficient	(serial #)		NA
• Linearity	(serial #)		.1078
• Scale	(serial #)		20.0943
• Offset	(serial #)		.0352

More >	Delay – 50 m/s	(check default values)
	S Gravity – 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	
• Manual Water Level		8.01 ft
• Slug Measurements	Diameter	1 in
	Length	5.99 ft

• Transducer Placement 16.874 ft

Date of Test 7-27-93

Start time (minutes and seconds) 1012 0 min

End time 1112 60 min

Datalogger File Name: 11085.FH

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test#			#11
• Rate			2 min
• Log			Log
# of XDs			1
Type	[Level]		Level
• ID (Well ID)	[Well #]	[FH/RH]	MW-11085
• Reference	[0]		0
• Quad Coefficient	(serial #)		NA
• Linearity	(serial #)		.1078
• Scale	(serial #)		20.0943
• Offset	(serial #)		.0352

More >	Delay – 50 m/s	(check default values)
	S Gravity – .1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level Enter [0]

• Manual Water Level		8.01 Ft
• Slug Measurements	Diameter	1 in
	Length	5.99 Ft

• Transducer Placement 16.887 Ft

Date of Test 7-27-93

Start time (minutes and seconds) 1116 0 min

End time 1345 149 min

Datalogger File Name: 11085RH

MONITORING WELL INSTALLATION RECORD

08/24/92

PROJECT NAME: Fernald RI/FS
PROJECT NO. : 602.3.2
BORING NO. : 1042
WELL NUMBER: 1042

FIELD ENG./GEO.: M. GOLDBERG DATE: 04/21/88
CHECKED BY : Not Noted DATE: N/A
N,E COORDINATES: 480388.77, 1379543.2
DATE OF INSTAL.: 04/21/88

BOREHOLE DRILLING

DRILLING METHOD: Not Noted
DRILLING FLUID(S) USED: (in Feet)
FLUID: WATER FROM: 3 TO: 21
FLUID: N/A FROM: N/ATO: N/A
NOTES/COMMENTS:

TYPE OF BIT: Flat Head Hammer
IS CASING TEMPORARY?: No
CASING TYPE : MONITORING
CASING DIAM.:
CASING SIZE(S) USED: (in Feet)
SIZE: 10 FROM: 0 TO: 21
SIZE: N/A FROM: N/A TO: N/A

WELL DESCRIPTION

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

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

RISER JOINING METHOD: THREAD AND COUPLE

PROTECTION SYSTEM

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

OTHER PROTECTION (* NOTED BELOW)

ITEM	DISTANCE ABOVE/BELOW GROUND SURFACE		ELEVATION MSL	
TOP OF RISER PIPE	2.0 Ft.		576.46	
GROUND SURFACE	0.0		N/A	
BOTTOM OF PROTECTIVE PIPE	2.5 Ft.			
BOREHOLE FILL MATERIALS	TOP	BOTTOM	TOP	BOTTOM
Bentonite Pellets	0	5	N/A	N/A
Gravel	5	21	N/A	N/A
PERFORATED SECTION	9	19	N/A	N/A
WELL TIP	21		N/A	
BOTTOM OF BOREHOLE	21		N/A	
GWL AFTER INSTALLATION	5.3		N/A	

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

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

				FALLING	RISING
• Test#				12 3 4	3
• Rate				MINUTES	MINUTES
• Log				LOG	LOG
# of XDs					
Type		[Level]			
• ID	(Well ID)	[Well #]	[FH/RH]	1042 1043	1042
• Reference		[0]		0 0	0
• Quad Coefficient		(serial #)			
• Linearity		(serial #)		0.1078	0.1077
• Scale		(serial #)		20.0943	20.0943
• Offset		(serial #)		0.0352	0.0350

More >	Delay – 50 m/s	(check default values)	
	S Gravity – 1	(check default values)	
	Units – feet	(check default values)	
	Mode – TOC	(check default values)	

Recheck Reference Level	Enter [0]	0	0	0
• Manual Water Level		5.48	5.47	5.48
• Slug Measurements	Diameter	2"	2"	2"
	Length	~35'	~45	~35'
	VOLUME	0.15 ft³		0.15 ft³

• Transducer Placement	19'	19'

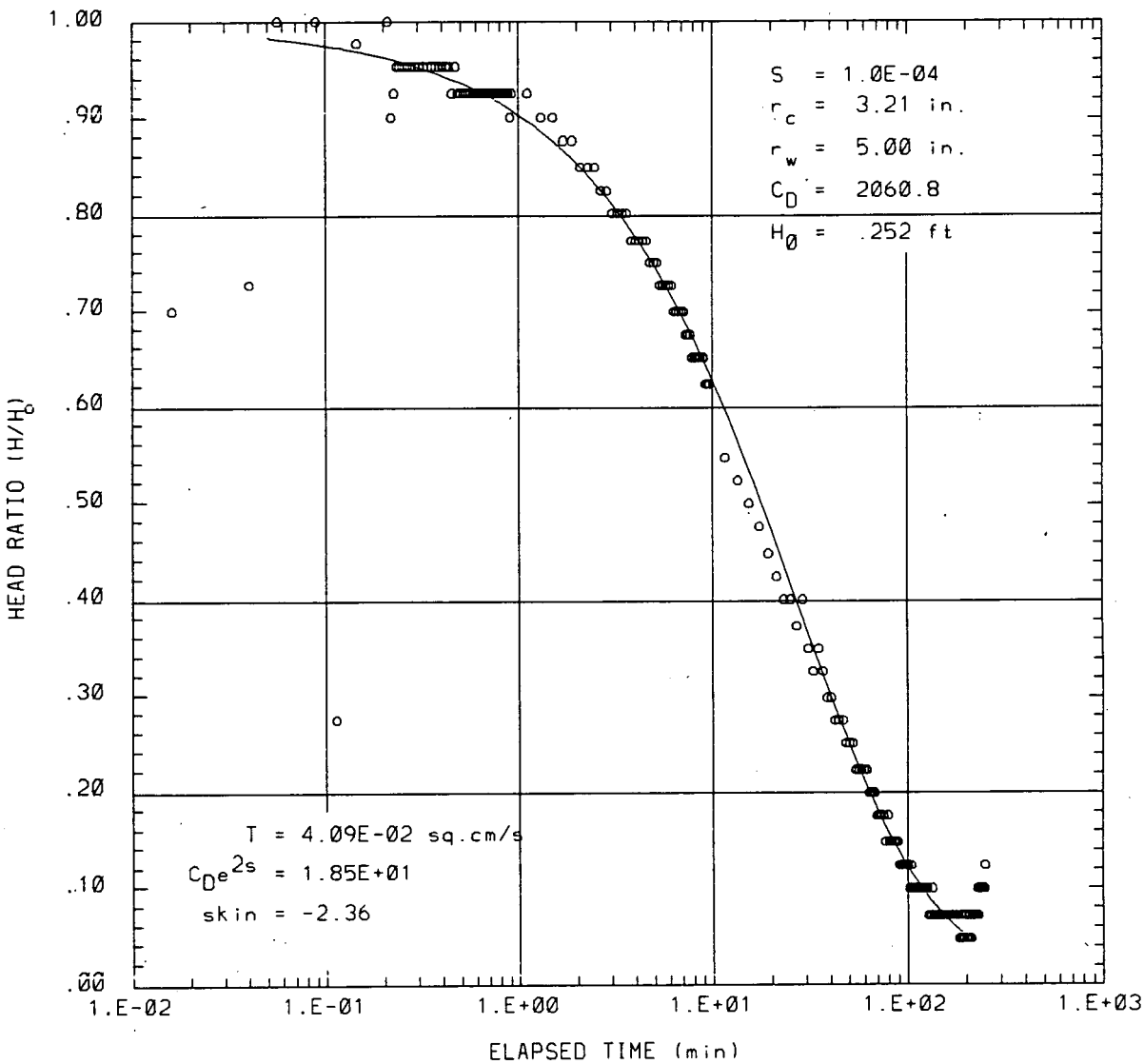
Date of Test

Start time (minutes and seconds)	0820	1035	0935
End time	0910	1125	1025

Datalogger File Name: _____

WELL 1046 Falling Head Test

STEP (Slug) Test Automated Type-Curve Match (V1.2)



Well 1046

Bouwer and Rice Analysis

$L_e = 2.1$ ft

$L_w = H = 5.8$ ft

$r_w = 5$ inch

$$\frac{L_e}{r_w} = \frac{2.1}{5/12} = 5.04 \implies C = 0.86$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln(L_w/r_w)} + \frac{C}{L_e/r_w}\right]^{-1}$$

$$= \left[\frac{1.1}{\ln\left(\frac{5.8}{5/12}\right)} + \frac{0.86}{5.04}\right]^{-1}$$

$$= 1.544$$

Falling Head

$$K = \frac{r_c^2 \ln\left(\frac{R_e}{r_w}\right)}{2 L_e} \frac{1}{t} \ln \frac{Y_o}{Y_t}$$

$$= \frac{(3.21 \times 2.54)^2 \times 1.544}{2 \times 2.1 \times 30.48} \times \frac{0.0424}{60}$$

$$= 5.7 \times 10^{-4} \text{ cm/sec}$$

Rising Head

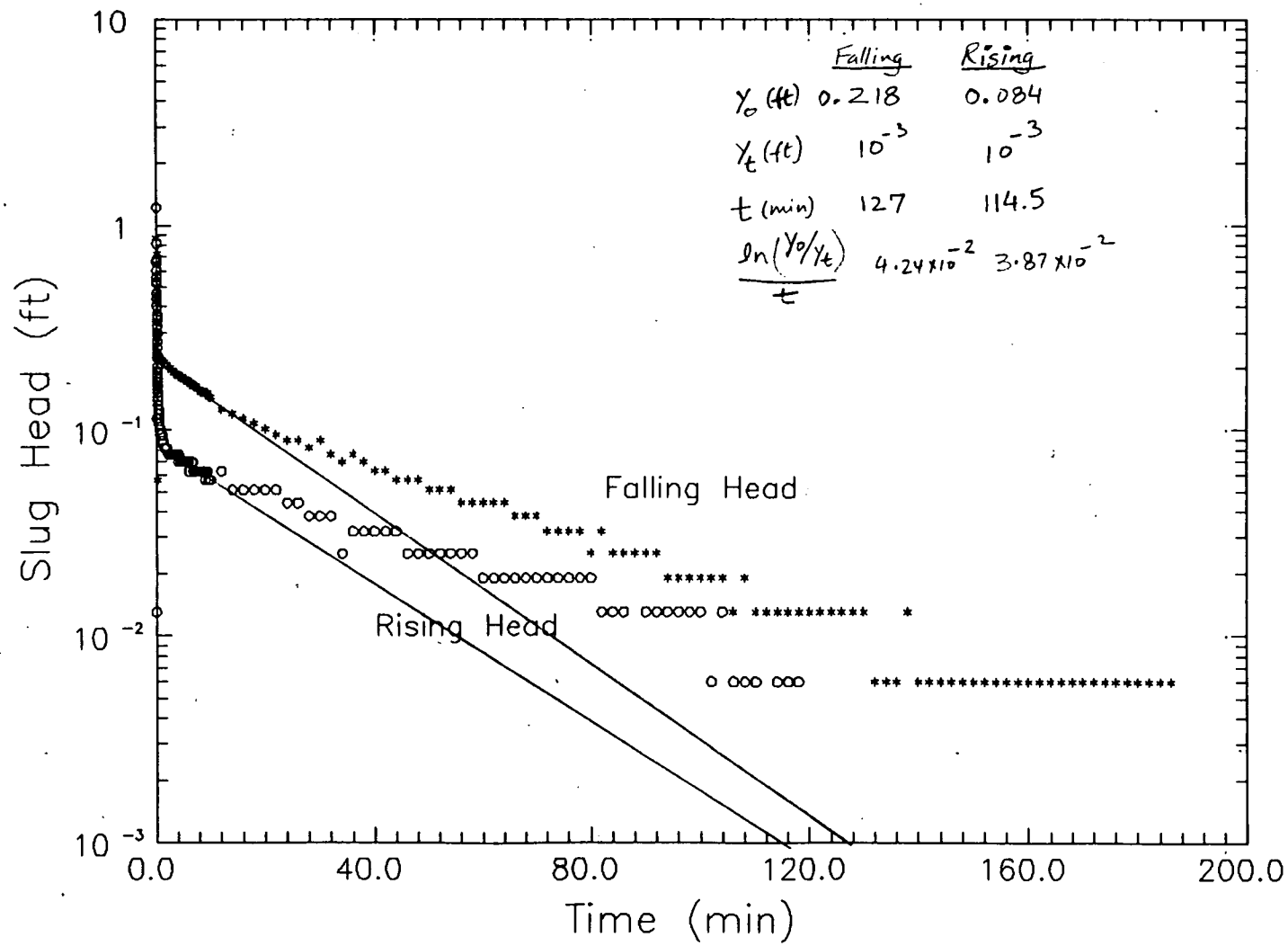
$$K = \frac{(3.21 \times 2.54)^2 \times 1.544}{2 \times 2.1 \times 30.48} \times \frac{0.0387}{60}$$

$$= 5.2 \times 10^{-4} \text{ cm/sec}$$

CLIENT	DOE	DEPARTMENT	
PROJECT	CRU-2 FEMP	ORIGINATED BY	Amar Bumb DATE 9/5/93
ENG. COMM. NO.	RDC 11 PROJECT NO. 04424331	CHECKED BY	John J Bennett DATE 10-29-93
AREA	slug Tests / RI	REVISION NUMBER	1 DATE 9/18/93
SUBJECT		REVISED BY	Amar Bumb

Form E53-2 (2-90)

1046 Slug Tests – Bower & Rice Analysis



C:/Slug/1046slug August 27, 1993

000391

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG				
	DATE	8	5	93
	NO.	N/A	→	
	SHEET	1	OF	2

PROJECT NAME: CRU-2 Slug Testing — PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: MW 1046 slug test

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930098
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 77193

0600 to 0840 See FADL 8-5-93 REF# MW 1942

0840 Arrived at MW 1046 — WL in Screen
βγ: 60-70 cpm
M-Tip BG: 0 ppm DH: 60.1 ppm BZ: 2.3 ppm
Water level: 13.22 ft.
Well depth: 24.94 ft.
Screen interval: 12 ft. to 22 ft.
Sandpack interval: 9.5 ft. to 24.5 ft.
Slug length: 3 ft. Slug diameter: 2 in.
Transducer # 9, HERMIT # 2-1

Sands at 14.7 - 15.1 TOC
16.8 - 18.6
20.1 - 20.5 (20.9)

0910 Set up test # 0 Ref. # 1046 FH
Transducer lowered to 22.061 ft.
Waited for return to static water level

act as confined

0928 Took water level at MW 1942

0945 Continued manual water levels at MW 1046 to determine return to static water level in order to initiate test # 0

1034 Returned to MW 1942 for water level

1052 Began test # 0 at MW 1046
Water level: 13.21 ft.

1110 Returned to MW 1942 to complete test # 1 Ref. # 1942 RH

1130 Returned to MW 1046 to continue manual water levels

1245 Lunch
Entered plant to change

1350 Returned from lunch and changed out

1411 Arrived at MW 1046
Stopped test # 0 after 259 min.
Water level: 13.18 ft.

MICROTIP CALIBRATED BY T. Smith
ON 8-5-93
USING Isobutylene
LOT # 101692-2

VISITORS ON SITE:
Don Vogel - Parsons
John Berrete - CRU-2

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
Ended Test # 1 Ref. # 1046 RH after 2 hrs.

WEATHER CONDITIONS:
Mostly sunny, cool 72°F
BP: 30.20 in. Hg

IMPORTANT TELEPHONE CALLS:
N/A

PERSONNEL ON SITE: R. McGormley, T. Smith

SUPERVISOR: Robert W. McGormley — DATE: 8-5-93

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	8	5	93
NO.	N/A	→	
SHEET 2 OF 2			

PROJECT NAME: CRU-2 Slug Testing
PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: MW 1046 Slug Testing

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

1415 Set up test #1 Ref. # 1046 RH
Water level: 13.18 ft.
Transducer depth: 22.069 ft.
1419 Test #1 began
Began manual water levels
1619 Test #1 stopped per Tom Anderson due to extremely slow recharge
- water level: 13.21 ft.
1625 Water Quality taken
1635 Exit Southfield
1700 Enter plant to shower and change
1730 Leave for day

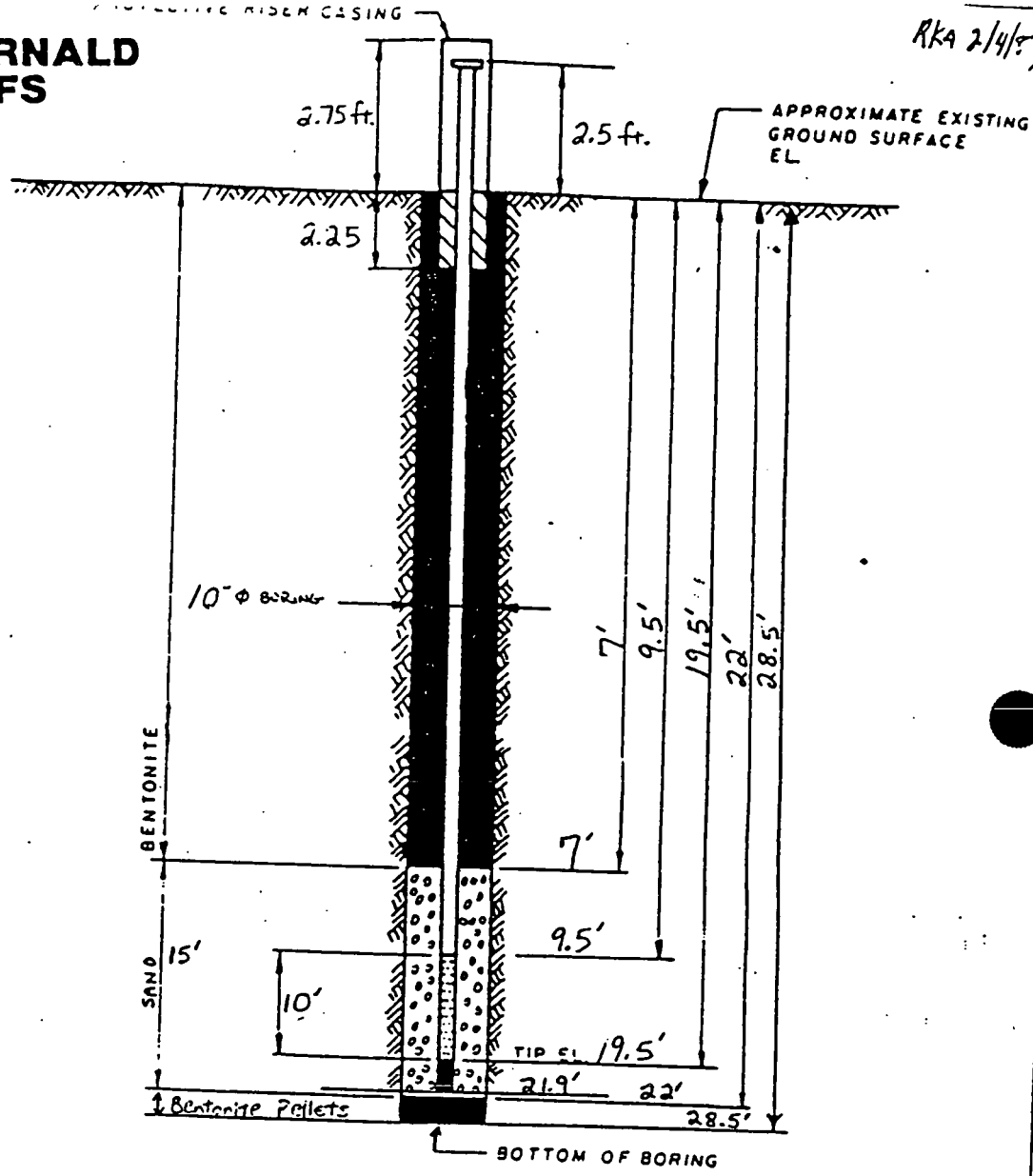
PERSONNEL ON SITE: R. McGuinley, T. Smith

SUPERVISOR: Robert W. McGuinley

DATE: 8-5-93

RKA 2/4/83

FERNALD RI/FS



DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
T. Sullivan			

NOTES:

1. RISER PIPE IS 4 IN I.D SCHEDULE PIPE, THREADED, FLUSH-JOINTED.
2. SCREEN IS 4 IN I.D S.S. PIPE CONTINUOUS SLOT SCREEN (0.010 IN SLOT SIZE).
3. LOWER END OF SCREEN IS CAPPED.
4. ELEVATION OF WATER LEVEL 6.55 ft. below TOC, 4.05 ft below ground surface.
5. WATER LEVEL READING ON 2/9/83 09:50

INSTALLATION DETAILS
MONITORING WELL ~~146~~ 104168

PREPARED FOR
FMPC RI/FS

(Bentonite plug from total depth up to 22 ft.)

This form did not represent the installed monitoring well, therefore, it has been modified with whiteout by Tim Sullivan.
JPK 4/04/88

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test#			#0
• Rate			2 min.
• Log			log
# of XDs			1
Type	[Level]		level
• ID (Well ID)	[Well #]	[FH/RH]	1046 FH
• Reference	[0]		0
• Quad Coefficient	(serial #)		N/A
• Linearity	(serial #)		.1188
• Scale	(serial #)		19.998
• Offset	(serial #)		.0397

Transducer # 9

More >	Delay – 50 m/s	(check default values)
	S Gravity – 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	0
• Manual Water Level		13.21
• Slug Measurements	Diameter	2 in.
	Length	3 ft.

• Transducer Placement 22.061 ft

Date of Test	8-5-93
Start time (minutes and seconds)	0 min @ 1052
End time	259 min. @ 1411

Datalogger File Name: 1046 FH

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test#			#1	
• Rate			2 min.	
• Log			log	
# of XDs			1	
Type	[Level]		level	
• ID (Well ID)	[Well #]	[FH/RH]	1046 RH	
• Reference	[0]		0	
• Quad Coefficient	(serial #)		N/A	
• Linearity	(serial #)		.1188	Transducer #9
• Scale	(serial #)		19.998	
• Offset	(serial #)		.0397	

More >	Delay – 50 m/s		(check default values)
	S Gravity – .1		(check default values)
	Units – feet		(check default values)
	Mode – TOC		(check default values)

Recheck Reference Level	Enter [0]	0
• Manual Water Level		13.18
• Slug Measurements	Diameter	2 in.
	Length	3 ft.

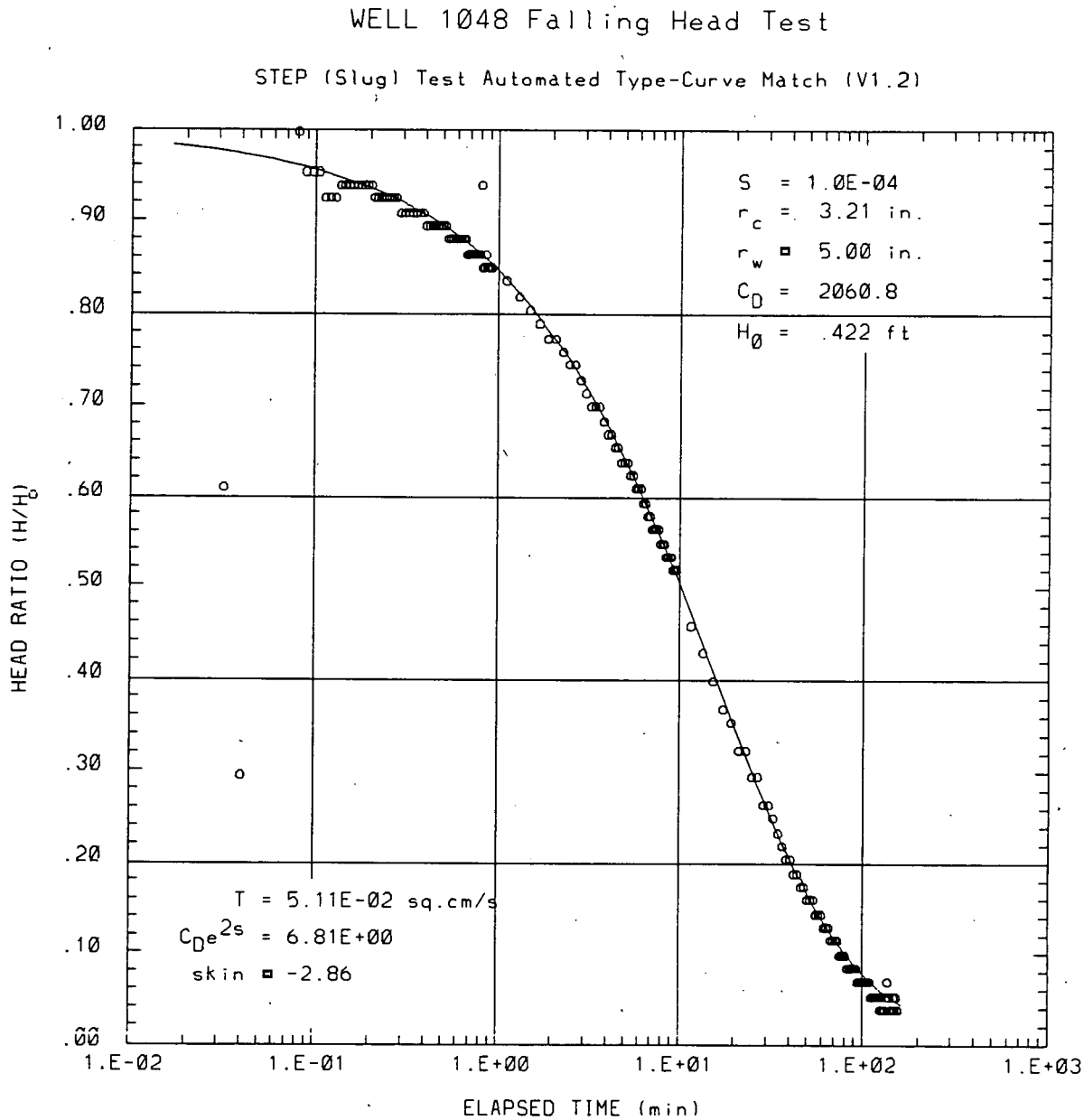
• Transducer Placement 22.069 ft.

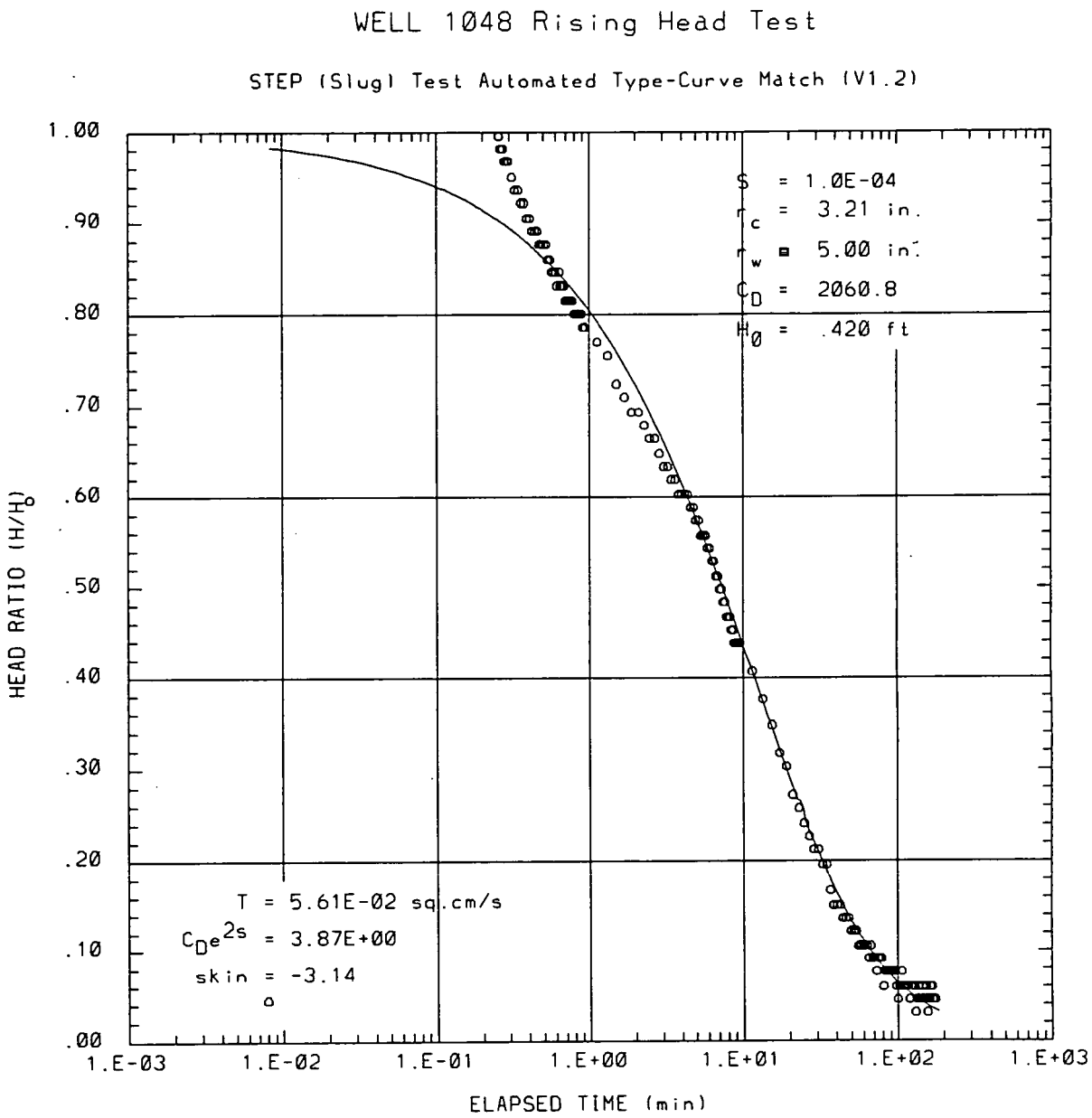
Date of Test 8-5-93

Start time (minutes and seconds) 0 min. @ 1419

End time 120 min. @ 1619

Datalogger File Name: 1046 RH


WELL 1048 Falling Head Test
STEP (Slug) Test Automated Type-Curve Match (V1.2)
S = 1.0E-04
r_c = 3.21 in.
r_w = 5.00 in.
C_D = 2060.8
H_0 = .422 ft
T = 5.11E-02 sq.cm/s
C_De^{2s} = 6.81E+00
skin = -2.86
HEAD RATIO (H/H_0)
1.00
.90
.80
.70
.60
.50
.40
.30
.20
.10
.00
1.E-02
1.E-01
1.E+00
1.E+01
1.E+02
1.E+03
ELAPSED TIME (min)


WELL 1048 Rising Head Test
STEP (Slug) Test Automated Type-Curve Match (V1.2)
S = 1.0E-04
r_c = 3.21 in.
r_w = 5.00 in.
C_D = 2060.8
H_0 = .420 ft
T = 5.61E-02 sq.cm/s
C_De^{2s} = 3.87E+00
skin = -3.14
HEAD RATIO (H/H_0)
1.00
.90
.80
.70
.60
.50
.40
.30
.20
.10
.00
1.E-03
1.E-02
1.E-01
1.E+00
1.E+01
1.E+02
1.E+03
ELAPSED TIME (min)

Well 1048

Bouwer and Rice Analysis

$L_e = L_w = H = 5$ ft

$r_w = 5$ inch

$$\frac{L_e}{r_w} = \frac{5}{5/12} = 12 \quad \Rightarrow \quad C = 1.295$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln(L_w/r_w)} + \frac{C}{L_e/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln(12)} + \frac{1.295}{12} \right]^{-1}$$

$$= 1.816$$

Falling Head

$$K = \frac{r_c^2 \ln(R_e/r_w)}{2 L_e} \frac{1}{t} \ln \frac{Y_0}{Y_t}$$

$$= \frac{(3.21 \times 2.54)^2 \times 1.816}{2 \times 5 \times 30.48} \times \frac{0.0508}{60}$$

$$= 3.4 \times 10^{-4} \text{ cm/sec}$$

Rising Head

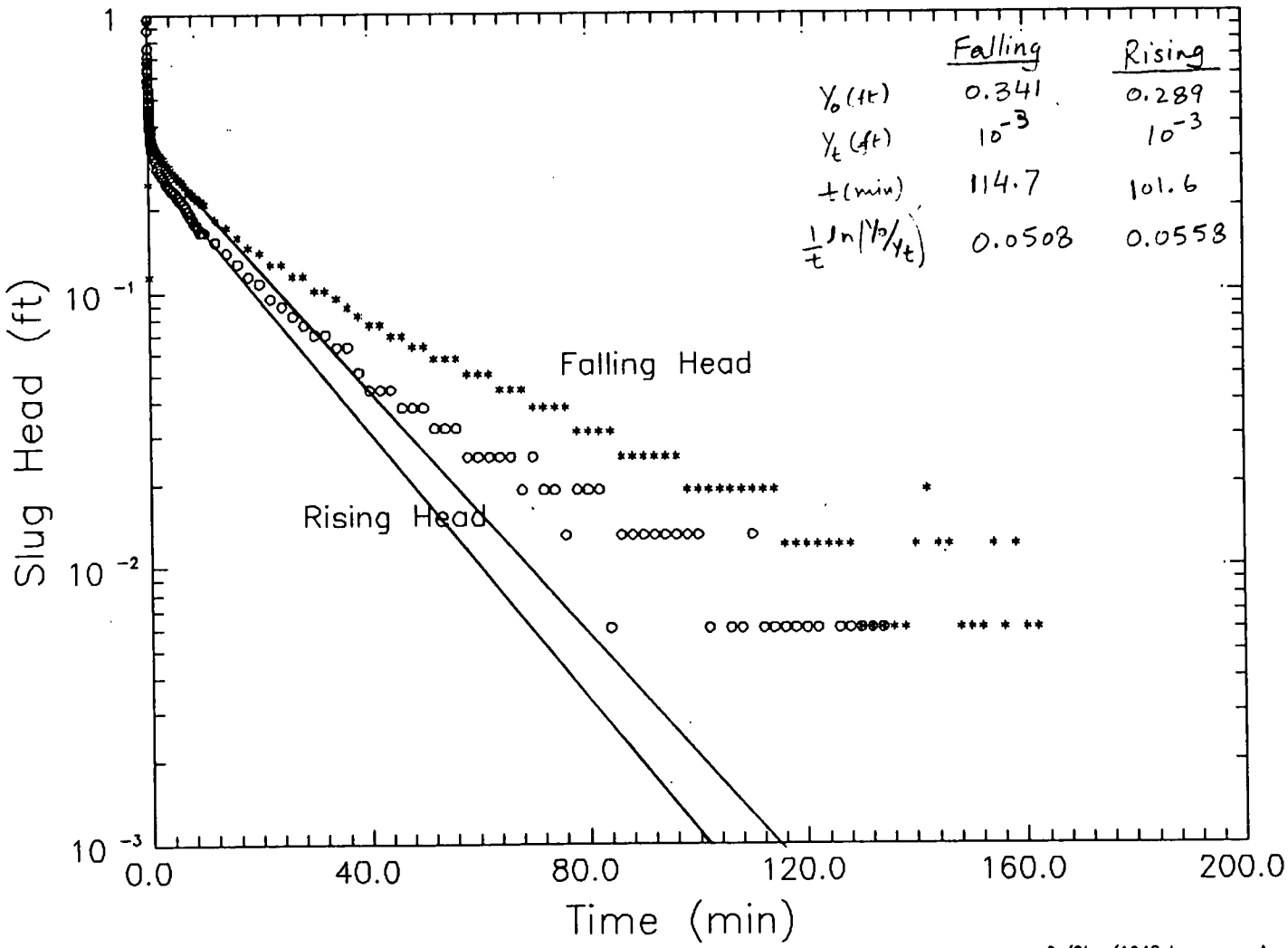
$$K = \frac{(3.21 \times 2.54)^2 \times 1.816}{2 \times 5 \times 30.48} \times \frac{0.0558}{60}$$

$$= 3.7 \times 10^{-4} \text{ cm/sec}$$

CLIENT	DOE	DEPARTMENT	
PROJECT	CRU-2 FEMP	ORIGINATED BY	Amar Bumb DATE 9/5/93
ENG. COMM. NO.	RDC 11 PROJECT NO.	CHECKED BY	John J. Berretz DATE 9-7-93
AREA	Slug Tests / RI	REVISION NUMBER	DATE
SUBJECT		REVISED BY	

Form E53-2 (2-90)

1048 Slug Tests – Bouwer & Rice Analysis



C:/Slug/1048slug August 27, 1993

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG				
	DATE	8	7	93
	NO.	N/A		→
	SHEET	1	OF 1	

PROJECT NAME: CRU-2 Slug Testing — PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: MW 1048 Slug Test

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930098
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 77090

0600 Arrived at T-305
0645 Entered plant to dress out
0730 Arrived at MW 1048
Explained slug test procedures to D. Scheper
β8: 0-20 cpm
M-Tip: BG: 0 DH: 15.2 ppm B2: 0
Water level: 8.78 ft.
Well depth: 17.89 ft.
Screen interval: 7.5 ft. to 17.5 ft.
Sandpack interval: 5.5 ft. to 18.2 ft.
Slug length: 3.0 ft. slug diameter: 2 in.
0800 Set up Test #2 Ref. # 1048 FH
lowered transducer down well
Waited for well to equilibrate
0845 Started test #2
Transducer depth: 17.312 ft.
Water level: 8.77 ft.
Hermit #2.2, transducer #7
1130 Stopped test #2 (100% recovery/165 min.)
1145 lunch
1245 Returned
Set up test #3 Ref. # 1048 RH
1309 Started test #3
transducer depth: ~~17.232 ft.~~ RM 8-7-93 17.322 ft.
Water level: 8.78 ft.
1615 Test #3 ended
Water level: 8.79 ft after 184.0 min.
1625 Water quality taken
1655 Entered plant to shower and change
1750 Leave for day

Sands
9.0 – 14 ft.
20 – 21.5 ft.

MICROTIP CALIBRATED BY R. McGarnley
ON 8-7-93
USING Isobutylene
LOT # 101690-2

VISITORS ON SITE: D. Scheper

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: NONE

WEATHER CONDITIONS: Mostly sunny 77°F
BP: not available

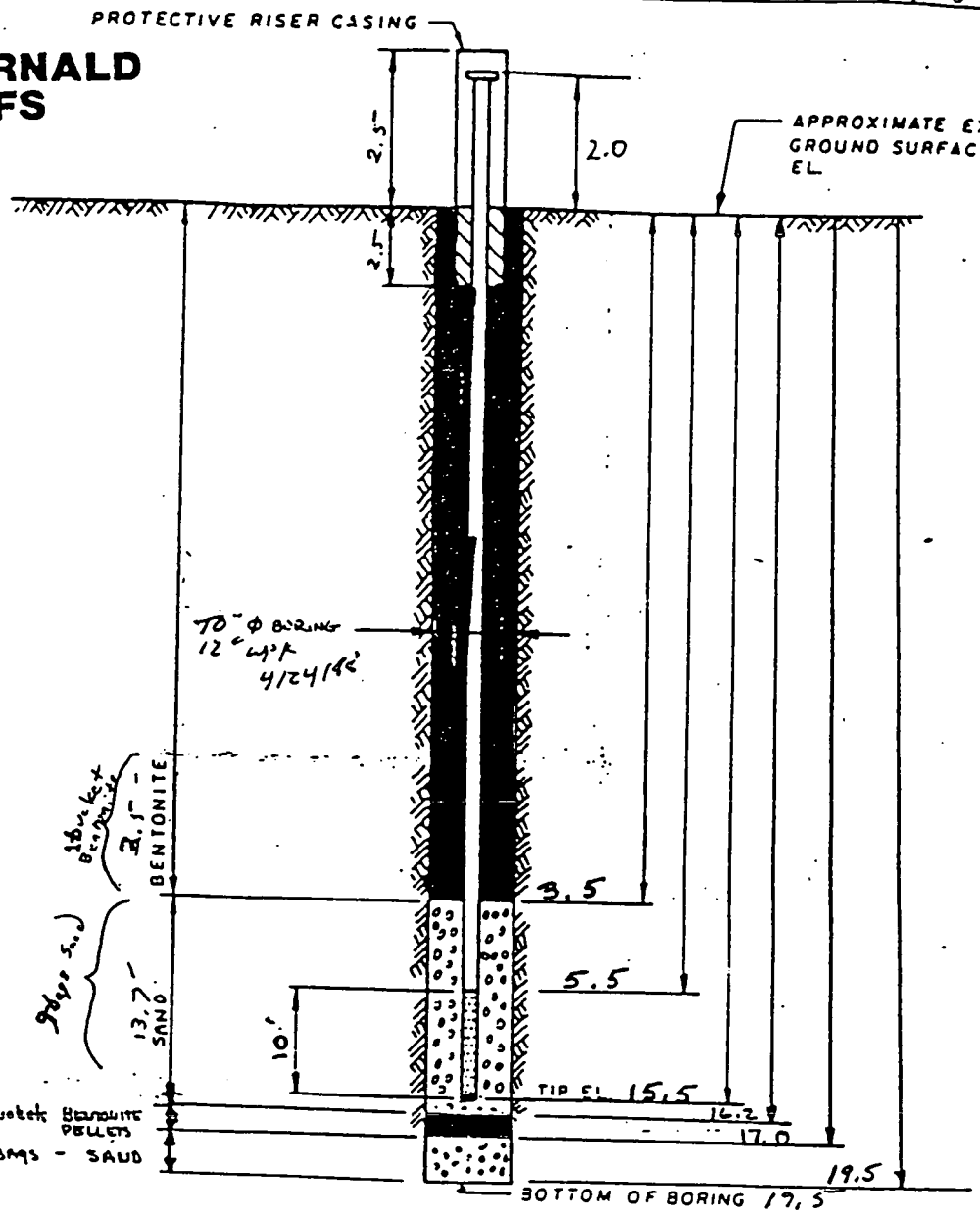
IMPORTANT TELEPHONE CALLS: NONE

PERSONNEL ON SITE: R. McGarnley, T. Smith, D. Scheper

SUPERVISOR: Robert W. McGarnley DATE: 8-7-93

WELL ~~148~~ 1048 BL
1-5-91

FERNALD RI/FS



DRAWING NUMBER

CHECKED BY

APPROVED BY

DRAWN BY

NOTES:

1. RISER PIPE IS 4 IN I.D. SCHEDULE PIPE, THREADED, FLUSH-JOINTED.
2. SCREEN IS 4 IN I.D. S.S. PIPE CONTINUOUS SLOT SCREEN (0.010 IN SLOT SIZE).
3. LOWER END OF SCREEN IS CAPPED.
4. ELEVATION OF WATER LEVEL
5. WATER LEVEL READING ON

INSTALLATION DETAILS
MONITORING WELL ~~148~~ 1048
BB 1-5-91

PREPARED FOR

FMPC RI/FS

This form did not represent the installed monitoring well, therefore it has been modified with white out.
WPK 4/20/95

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test#			#2
• Rate			2 min.
• Log			log
# of XDs			1
Type	[Level]		level
• ID (Well ID)	[Well #]	[FH/RH]	1048 FH
• Reference	[0]		0
• Quad Coefficient	(serial #)		N/A
• Linearity	(serial #)		.0937
• Scale	(serial #)		20.068
• Offset	(serial #)		-.1127

More >	Delay – 50 m/s	(check default values)
	S Gravity – 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	0
• Manual Water Level		8.77 ft.
• Slug Measurements	Diameter	2 in.
	Length	3.0 ft.

• Transducer Placement 17.312 ft.

Date of Test 8-7-93

Start time (minutes and seconds) 0 min. @ 0845

End time 165 min. @ 1130

Datalogger File Name: 1048 FH

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test#			# 3
• Rate			2 min.
• Log			log
# of XDs			1
Type	[Level]		level
• ID (Well ID)	[Well #]	[FH/RH]	1048 RH
• Reference	[0]		0
• Quad Coefficient	(serial #)		N/A
• Linearity	(serial #)		.0937
• Scale	(serial #)		20.068
• Offset	(serial #)		-.1127

More >	Delay – 50 m/s	(check default values)
	S Gravity – .1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	0
• Manual Water Level		8.78 ft.
• Slug Measurements	Diameter	2 in.
	Length	3.0 ft.

• Transducer Placement 17.322 ft.

Date of Test 8-7-93

Start time (minutes and seconds) 0 min. @ 1309

End time 184 min. @ 1615

Datalogger File Name: 1048 RH

Well 1433

Bouwer and Rice Analysis

$L_e = L_w = H = 3.71$ ft

$r_w = 5$ inch

$$\frac{L_e}{r_w} = \frac{3.71}{5/12} = 8.9 \quad \Rightarrow \quad C = 1.15$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln(L_w/r_w)} + \frac{C}{L_e/r_w}\right]^{-1}$$

$$= \left[\frac{1.1}{\ln 8.9} + \frac{1.15}{8.9}\right]^{-1}$$

$$= 1.581$$

Rising Head

$$K = \frac{r_c^2 \ln\left(\frac{R_e}{r_w}\right)}{2 L_e} \frac{1}{t} \ln \frac{Y_0}{Y_t}$$

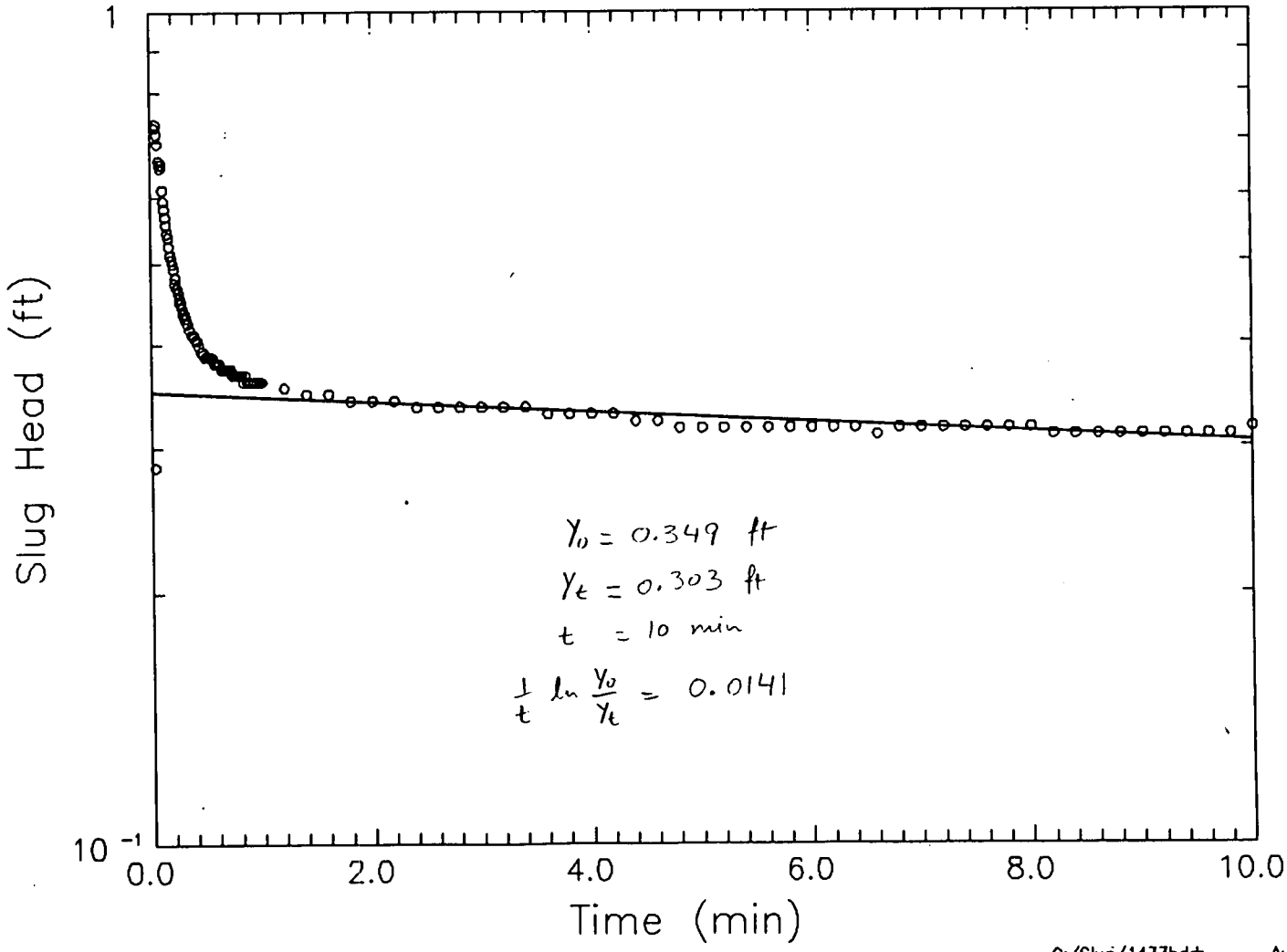
$$= \frac{(3.21 \times 2.54)^2 \times 1.581}{2 \times 3.71 \times 30.48} \times \frac{0.0141}{60}$$

$$= 1.1 \times 10^{-4} \text{ cm/sec}$$

CLIENT DOE		DEPARTMENT	
PROJECT CRU-2 FEMP		ORIGINATED BY Amar Bumb	DATE 9/5/93
ENG. COMM. NO. RDC 11	PROJECT NO. 04424331	CHECKED BY Joel Beard	DATE 10-29-95
AREA Slug Tests / RI		REVISION NUMBER 1	DATE 9/18/93
SUBJECT		REVISED BY Amar Bumb	

Form E53-2 (2-90)

1433 Bail-Down Test – Bower & Rice Analysis



C:/Slug/1433bdrh August 27, 1993

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	8	8	93
NO.	N/A		→
SHEET	1	OF	1

PROJECT NAME: CRU-2 Slug Testing
PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: Bail down test of MW 1433

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930098
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 86112

0600 Arrived at T-305
Gathered equipment and paperwork
0730 Entered plant to dress out
0800 Arrived at Southfield control point
Waited on Rad Coverage
0845 Arrived at MW 1433
BY BG: 80-100 cpm Riser pipe: 200-300 cpm
M-Tip: BG: 0 ppm DH: 0.5 ppm BZ: 0 ppm
Water level: 11.86 ft.
Well depth: 14.30 ft.
Screen interval: 8 ft. to 13 ft.
Sandpack interval: 7.5 ft. to 14.5 ft.
0915 Set up test # 4 Ref. # 1433 BDRH
Waited for water level to equilibrate
0958 Started test #4
Water level: 11.78 ft.
Transducer depth: 14.248 ft.
Two (1) liter bailers were tied together and used to pull up a measured quantity of water (1830 ml).
1102 Water level at 12.08 ft., down from previous level of 12.07 ft.
1105 Locked well and left site for lunch
1230 Returned to 1433
1300 Stopped test # 4
Water level: 12.07 ft.
Moved to MW 1941 after taking water quality

* Actual well measurements differ from installation diagram (see attached diagram)
Top of casing to ground: 3.04 ft.
Top of riser to ground: 2.81 ft.

MICROTIP CALIBRATED BY R. McGarmley
ON 8-8-93
USING Isobutylene
LOT # K1692-2

VISITORS ON SITE: NONE

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
Used bail-down test under direction of CRU-5/CRU-2

WEATHER CONDITIONS:
Sunny, 72°F,
BP: 29.52 in. Hg.

IMPORTANT TELEPHONE CALLS: NONE

PERSONNEL ON SITE: R. McGarmley, T. Smith

SUPERVISOR: Robert W. McGarmley DATE: 8-8-93

Page 3 of 1

8-7-92
~~8-9-92~~ K.M. 8-4-92

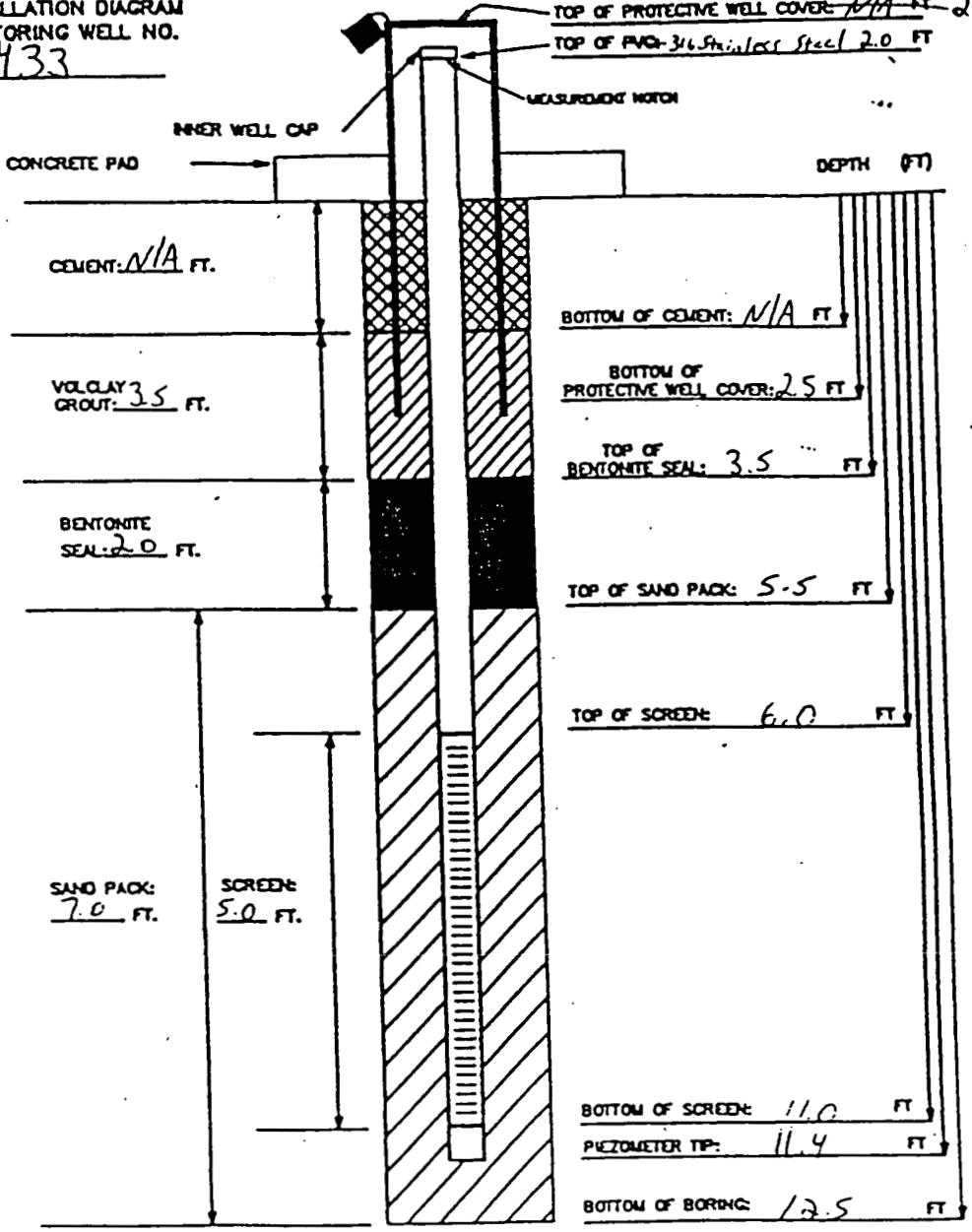
Stickups

FERNALD RI/FS

INSTALLATION DIAGRAM
MONITORING WELL NO. 1433

INSTALLATION DATE: ~~7-29-92~~

HEIGHT K.M. 8-2-92



BOREHOLE DIAMETER: 10.0 INCHES

MATERIALS USED:
SAND TYPE AND QUANTITY: 5 80 lb. bags of 10/20 SAND
BENTONITE PELLETS (5-GALLON BUCKETS): 1
BAGS OF VOLCLAY GROUT: 1
AMOUNT OF CEMENT: N/A
AMOUNT OF WATER USED: 30 gallons
OTHER: Fine Sand / Drill cuttings were generated
Pipe [illegible] Sump, 5 ft Stainless Steel screen, 2 ft Stainless Steel riser

NOTES: 4 inch ID 316 Stainless Steel
1) RISER PIPE IS ~~2-INCH SCHEDULE 40~~ PVC PIPE, FLUSH-THREADED JOINTS.
2) SCREEN IS ~~2-INCH I.D. SCHEDULE 40~~ PVC PIPE WITH 0.020-INCH SLOTS. 4 inch ID [illegible]
3) LOWER END OF SCREEN IS CAPPED WITH AN END CAP OR THREADED SUMP.
4) WATER DEPTH/DATE: Dry Hole

TASK: GEA-Geology

GEOLOGIST/ENGINEER: K.M. Marion

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test#			#4
• Rate			2 min.
• Log			log
# of XDs			1
Type	[Level]		level
• ID (Well ID)	[Well #]	[FH/RH]	1433 BDRH
• Reference	[0]		0
• Quad Coefficient	(serial #)		N/A
• Linearity	(serial #)		.0937
• Scale	(serial #)		20.068
• Offset	(serial #)		-.1127

More >	Delay – 50 m/s	(check default values)
	S Gravity – 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	0
• Manual Water Level		11.78 ft.
• Slug Measurements	Diameter	N/A
	Length	N/A

used 2 2 in. 1 liter bailers

• Transducer Placement 14.248 ft.

Date of Test 8-8-93

Start time (minutes and seconds) 0 min. @ 0958

End time 182 min. @ 1300

Datalogger File Name: 1433 BDRH

Field Permeability Tests
Rising/Falling Head* (Sheet 2 of 2)

Date: 8-8-93

Observers/Participants: RM, TS

Datalogger Output File Name: 1433 BDRH

Weather: Sunny 72°F, BP: 29.52 in Hg

Comments:

- Protective casing and top of riser are not the dimensions described on the installation diagram.
- Actual dimensions:
  Top of casing to ground: 3.04 ft.
  Top of riser to ground: 2.51 ft.
- 2 One liter bailers were tied together to remove a known quantity of water (1830 ml)

RNALD
RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	7	28	93
NO.	NA		→
SHEET	1	OF	1

PROJECT NAME CPU-2 Slug Test
PROJECT NO. 28.03.05

FIELD ACTIVITY SUBJECT: Slug Test MW-1711

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930098
~~ALPHA METER S.N.~~ KM 7-28-93
BETA GAMMA METER S.N. 86064

0600 Arrive at base
Prepare for day's activities
Enter process area to dress-out.

0700 Discuss with Rad Tech field support requirements for South field

0745 Rad Tech survey South field Locations

0845 Enter South field

0900 Arrive at Location MW-1711
Bγ : 40-60 cpm
Microtip: BG 0.0ppm, 137 0.0ppm, DH 0.0ppm.

Water Level : 16.1 ft
Total Depth : 16.63 ft

Insufficient water column to perform slug test

* See addition FADLs for remainder of day's activities

MICROTIP CALIBRATED BY
Rob McGormley
ON 7-28-93
USING ISO Butylene
LOT #101691-2

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
NA	NA
WEATHER CONDITIONS: Clear, Breezy, Hot & Humid 90 → 95°F	IMPORTANT TELEPHONE CALLS: NA

PERSONNEL ON SITE: Rob McGormley, Ken Marriner

SUPERVISOR: [signature] DATE: 7-28-93

Well 1934

Falling Head

$L_e = 13.5$ ft

$L_w = H = 15.39$ ft

$r_w = 4$ inch

$$\frac{L_e}{r_w} = \frac{13.5}{4/12} = 40.5$$

$$\Rightarrow C = 2.45$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln \frac{L_w}{r_w}} + \frac{C}{L_e/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln \frac{15.39}{4/12}} + \frac{2.45}{40.5} \right]^{-1}$$

$$= 2.877$$

$$K = \frac{r_c^2 \ln \frac{R_e}{r_w}}{2 L_e} \frac{1}{t} \ln \frac{Y_0}{Y_t}$$

$$= \frac{(1 \times 2.54)^2 \times 2.877}{2 \times 13.5 \times 30.48} \times \frac{0.078}{60}$$

$$= 2.9 \times 10^{-5} \text{ cm/sec}$$

CLIENT DOE		DEPARTMENT	
PROJECT FEMP CRU-2		ORIGINATED BY Amar Bumb	DATE 10/17/93
ENG. COMM. NO. 2ARN1	PROJECT NO.	CHECKED BY [illegible]	DATE 12-29-93
AREA Slug Tests - RI		REVISION NUMBER	DATE
SUBJECT		REVISED BY	

Form E53-2 (2-90)

Well 1934

Rising Head

$L_e = 13.5$ ft

$L_w = H = 15.38$ ft

$r_w = 4$ inch

$$\frac{L_e}{r_w} = \frac{13.5}{4/12} = 40.5$$

$$\Rightarrow \quad C = 2.45$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln \frac{L_w}{r_w}} + \frac{C}{L_2/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln \frac{15.38}{4/12}} + \frac{2.45}{40.5} \right]^{-1}$$

$$= 2.877$$

$$K = \frac{r_c^2 \ln \frac{R_e}{r_w}}{2 L_e} \quad \frac{1}{t} \ln \frac{Y_0}{Y_t}$$

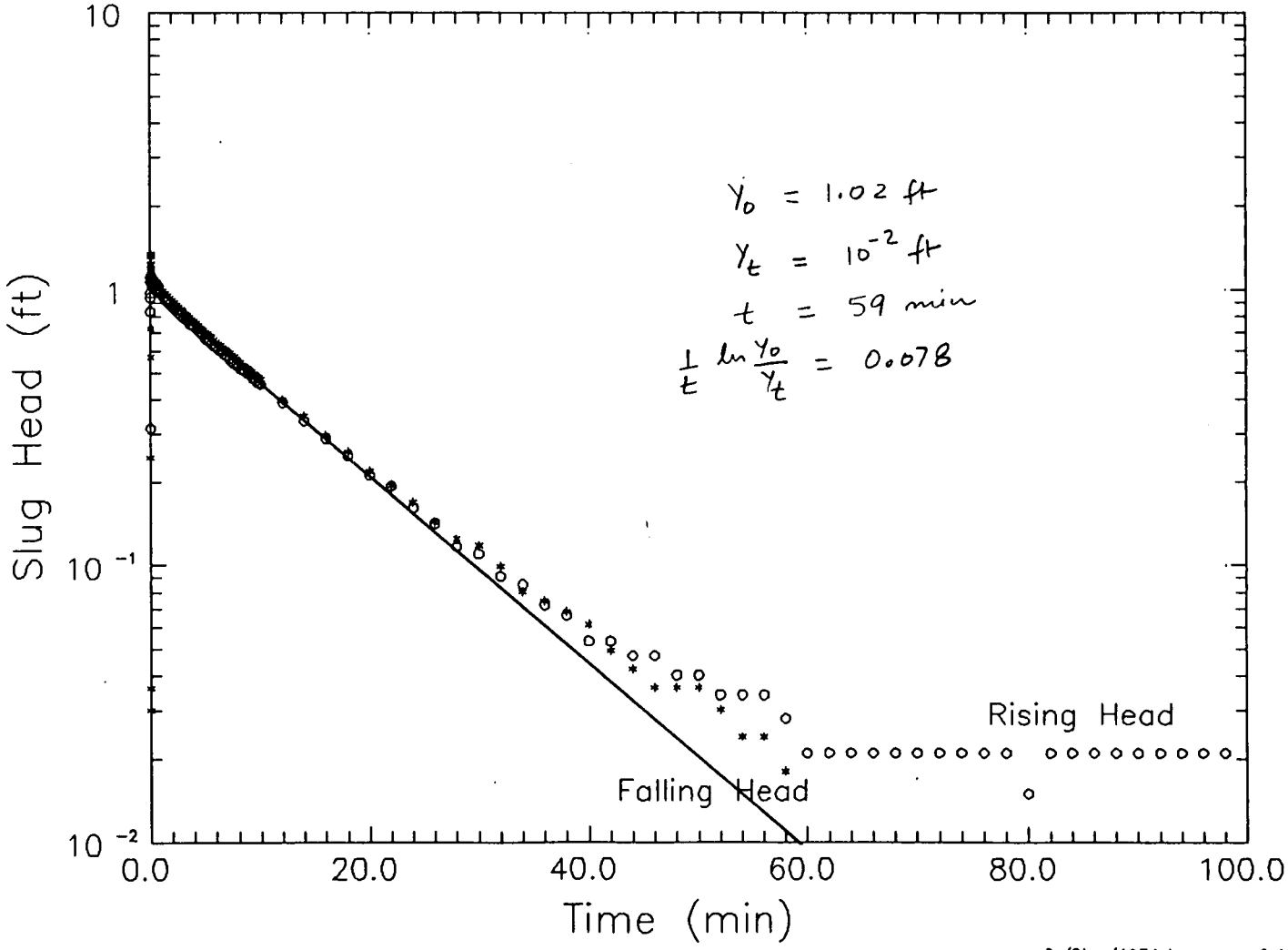
$$= \frac{(1 \times 2.54)^2 \times 2.877}{2 \times 13.5 \times 30.48} \times \frac{0.078}{60}$$

$$= 2.9 \times 10^{-5} \text{ cm/sec}$$

CLIENT	DOE	DEPARTMENT	
PROJECT	FEMP CRU-2	ORIGINATED BY Amar Bumb	DATE 10/17/93
ENG. COMM. NO.	2ARN1 PROJECT NO.	CHECKED BY John Bennett	DATE 10-29-93
AREA	Slug Tests - RI	REVISION NUMBER	DATE
SUBJECT		REVISED BY	

Form E53-2 (2-90)

1934 Slug Tests – Bower & Rice Analysis



C:/Slug/1934slug October 17, 1993

000414

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
NO.	20	03	05
SHEET 1 OF 1			

PROJECT NAME: CRU-2 Slug Testing
PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: MW 1934 Slug Test

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930098
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 77166

0600 Arrived at T-305
0630 Entered plant to dress out
0700 Arrived at MW 1934
βγ background: 60-100 cpm
MTip BG: 0 ppm DH: 0 ppm
Water level: 7.38 ft.
Well depth: 21.32 ft.
Screen Interval: 11.5 ft. → 21.5 ft.
Sandpack Interval: 9.5 ft. → 23.0 ft.
0735 Set up Test #6 Ref# 1934 FH
Lowered transducer down well to 21.160 ft.
Waited for water to return to static level
0817 Began Test #6
Slug length: 5.99 ft. Slug Dia.: 1 in.
Initial water level with transducer: 7.37 ft.
Water level taken 15 sec. into test: 6.30 ft.
0917 Completed Test #6
Water level: 7.38 ft.
0920 Set up Test # 7 Ref.# 1934 RH
Transducer depth: 21.160 ft.
Water level: 7.38 ft
0922 Began Test # 7
Began manual water levels
1122 Test # 7 terminated
Final water level: 7.40 ft
- this water level was maintained for approx. last hour of test.
1135 Water Quality taken
1200 Entered plant to shower and change
1230 Lunch
1330 Returned
Entered plant to dress out and test MW 1952

Screen 11.5 – 21.5
Sandpack 9.5 – 23
Sand layer:
silty clay with 1" sand layer

MICROTIP CALIBRATED BY R. McGarnley
ON 7-25-93
USING Isobutylene
LOT # 101690-2

VISITORS ON SITE: NONE

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
Test # 7 ended after 2 hrs

WEATHER CONDITIONS:
Hazy, Hot, Humid 84°F
BP: 28.77 in. Hg

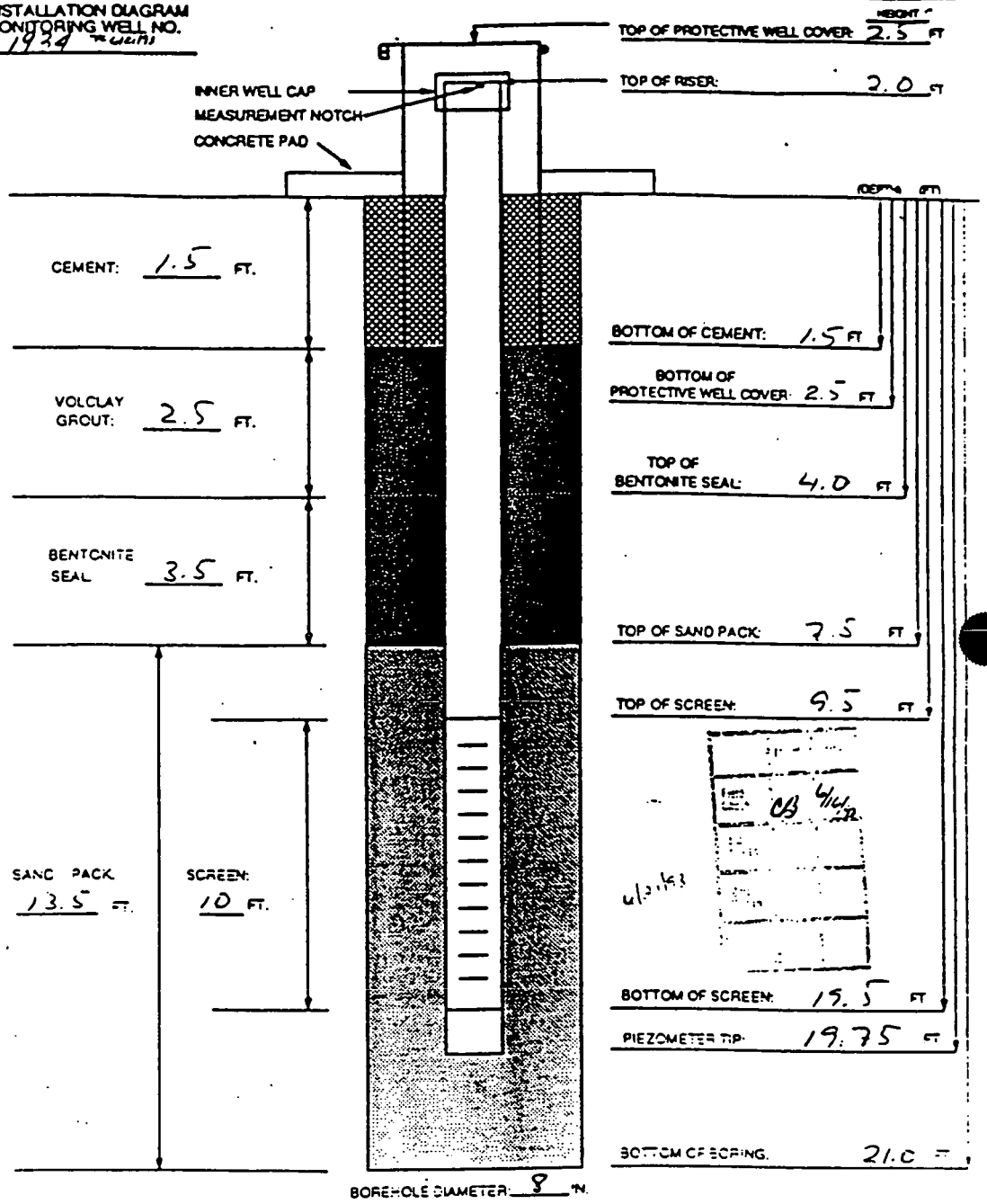
IMPORTANT TELEPHONE CALLS: NONE

PERSONNEL ON SITE: R. McGarnley, K. Martinez

SUPERVISOR: Robert McGarnley DATE: 7-25-93

FERNALD RI/FS
INSTALLATION DIAGRAM
MONITORING WELL NO. 1934 [illegible]

INSTALLATION DATE: 04 MAY 93



BOREHOLE DIAMETER: 8 IN.

MATERIALS USED

SAND TYPE AND QUANTITY: 10/20 6 x 50 # BAGS
BENTONITE PELLETS (5-GALLON BUCKETS): 1 BUCKET
BAGS OF VOLCLAY GROUT: 1/2 80# BAG
AMOUNT OF CEMENT: 1/2 94# BAG
AMOUNT OF WATER USED: 5 GALS
OTHER: N/A
TA: 20 02 05

NOTES.

1) RISER PIPE IS 2.0 IN. ID. 316 STAINLESS STEEL PIPE, FLUSH-THREADED JOINTS.
2) SCREEN IS 2.0 IN. ID. 316 STAINLESS STEEL PIPE WITH 0.010 IN. SLOTS.
3) LOWER END OF SCREEN IS CAPPED WITH AN END CAP OR THREADED SUMP
GEOLOGIST ENGINEER: R E MULLER
4) WATER DEPTH AND DATE: [illegible]
5) TOP OF CASING IS SECURED [illegible] STAINLESS STEEL CAP
6) PARENTHESIS AND DATE DEPT[illegible] GROUND LEVEL
7) WELL CASING HAS A PROTE[illegible] COVER WITH PADLOCK

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test#			#6
• Rate			2 min.
• Log			log
# of XDs			1
Type	[Level]		level
• ID (Well ID)	[Well #]	[FH/RH]	1934 FH
• Reference	[0]		0
• Quad Coefficient	(serial #)		N/A
• Linearity	(serial #)		.1078
• Scale	(serial #)		20.0943
• Offset	(serial #)		.0352

More >	Delay – 50 m/s	(check default values)
	S Gravity – 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	0
• Manual Water Level		7.37 ft.
• Slug Measurements	Diameter	1 in.
	Length	5.99 ft.

• Transducer Placement	21.162 ft.
Date of Test	7-25-93
Start time (minutes and seconds)	0 min. @ 0817
End time	60 min. @ 0917
Datalogger File Name:	1934 FH

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

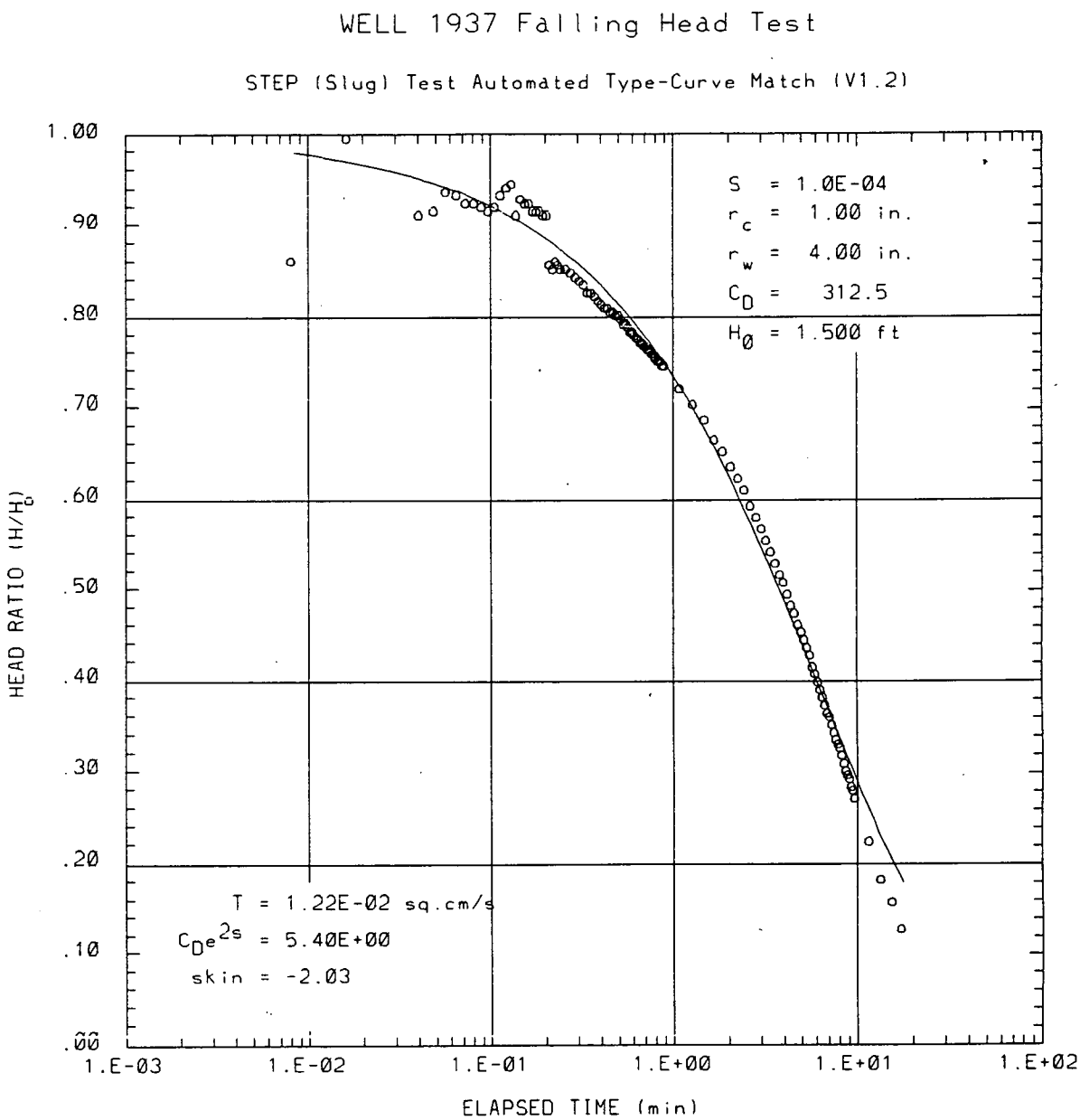
Unit On

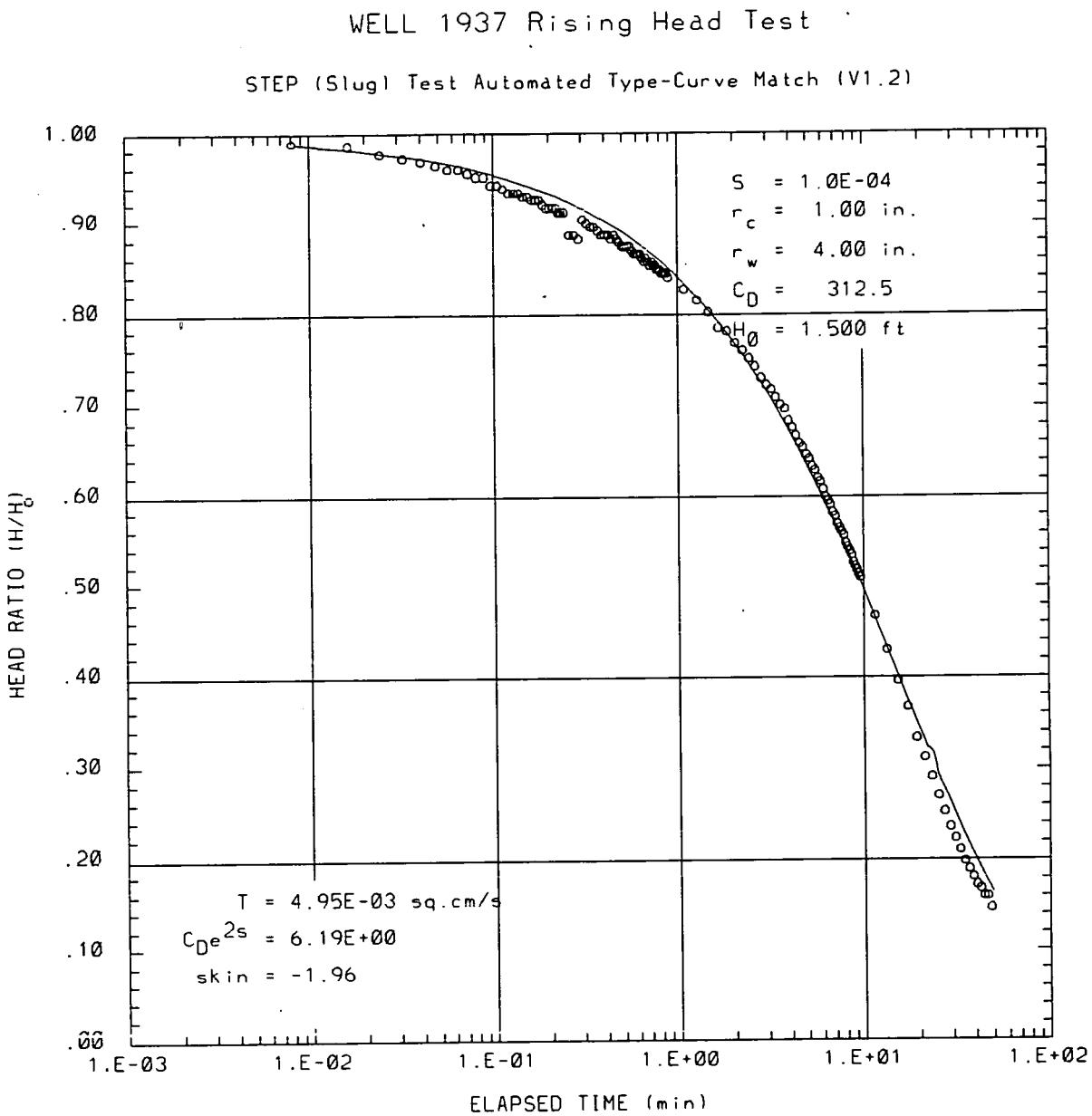
• Test#			#7
• Rate			2 min.
• Log			log
# of XDs			1
Type	[Level]		level
• ID (Well ID)	[Well #]	[FH/RH]	1934 RH
• Reference	[0]		0
• Quad Coefficient	(serial #)		N/A
• Linearity	(serial #)		.1078
• Scale	(serial #)		20.0943
• Offset	(serial #)		.0352

More >	Delay – 50 m/s	(check default values)
	S Gravity – 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	0
• Manual Water Level		7.38 ft.
• Slug Measurements	Diameter	1 in.
	Length	5.99 ft.

• Transducer Placement	21.16 ft.
Date of Test	7-25-93
Start time (minutes and seconds)	0 min. @ 0922
End time	120 min. @ 1122
Datalogger File Name:	1934 RH


WELL 1937 Falling Head Test
STEP (Slug) Test Automated Type-Curve Match (V1.2)
S = 1.0E-04
r_c = 1.00 in.
r_w = 4.00 in.
C_D = 312.5
H_0 = 1.500 ft
T = 1.22E-02 sq.cm/s
C_De^{2s} = 5.40E+00
skin = -2.03
HEAD RATIO (H/H_0)
1.00
.90
.80
.70
.60
.50
.40
.30
.20
.10
.00
1.E-03
1.E-02
1.E-01
1.E+00
1.E+01
1.E+02
ELAPSED TIME (min)


WELL 1937 Rising Head Test
STEP (Slug) Test Automated Type-Curve Match (V1.2)
S = 1.0E-04
r_c = 1.00 in.
r_w = 4.00 in.
C_D = 312.5
H_0 = 1.500 ft
T = 4.95E-03 sq.cm/s
C_De^{2s} = 6.19E+00
skin = -1.96
HEAD RATIO (H/H_0)
1.00
.90
.80
.70
.60
.50
.40
.30
.20
.10
.00
1.E-03
1.E-02
1.E-01
1.E+00
1.E+01
1.E+02
ELAPSED TIME (min)

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

CRU-2 Slug Testing

DAILY LOG NO. ~~50~~ 20 03 ~~04~~ 05
SHEET 1 OF 1

PROJECT NAME ~~Glacial Till Hydraulic Investigation~~	PROJECT NO. ~~50.03.24~~ 20.03.05
FIELD ACTIVITY SUBJECT: Slug Test of MW 1937	

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930098
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 86064

0600 Arrived at trailer
0630 Entered plant to change into company issued clothing
Located wells available for sampling.
0850 Arrived at MW 1937
BB background: 60-80 cpm
M-Tip background: 0.5 ppm
breathing zone: 0.5 ppm
down hole: 4.0 ppm
Initial water level: 5.67 ft.
Well depth: 20.75 ft.
Top of screen: 10.5 ft. Base of screen: 20.5 ft.
Top of sandpack: 8.5 ft. Base of sandpack: 22.5 ft.
Transducer placement: 20.261 ft.
Water level with transducer: 5.63 ft.
Slug diameter: 1 in. Slug length: 5.99 ft.

Sand layer: 14.5-20.5
Sandpack 8.5-22.5
Screen 10.5-20.5

0925 Set up test #4 Ref.# 1937FH
0950 Began test #4
Began manual water level measurements
1008 Completed test #4
- water level continued to fall beyond what was considered static water level - waited 30 min. before beginning test #5
1050 Set up and began test #5 Ref.# 1937RH
water level: 5.88 ft.
Transducer depth: 20.263 ft.
Began manual water levels
1140 Test #5 completed
- water returned to static level
1150 Water Quality taken
1210 Exited site
Entered plant to shower and change
1300 Lunch
1400 Return
Paperwork
1700 Leave for day

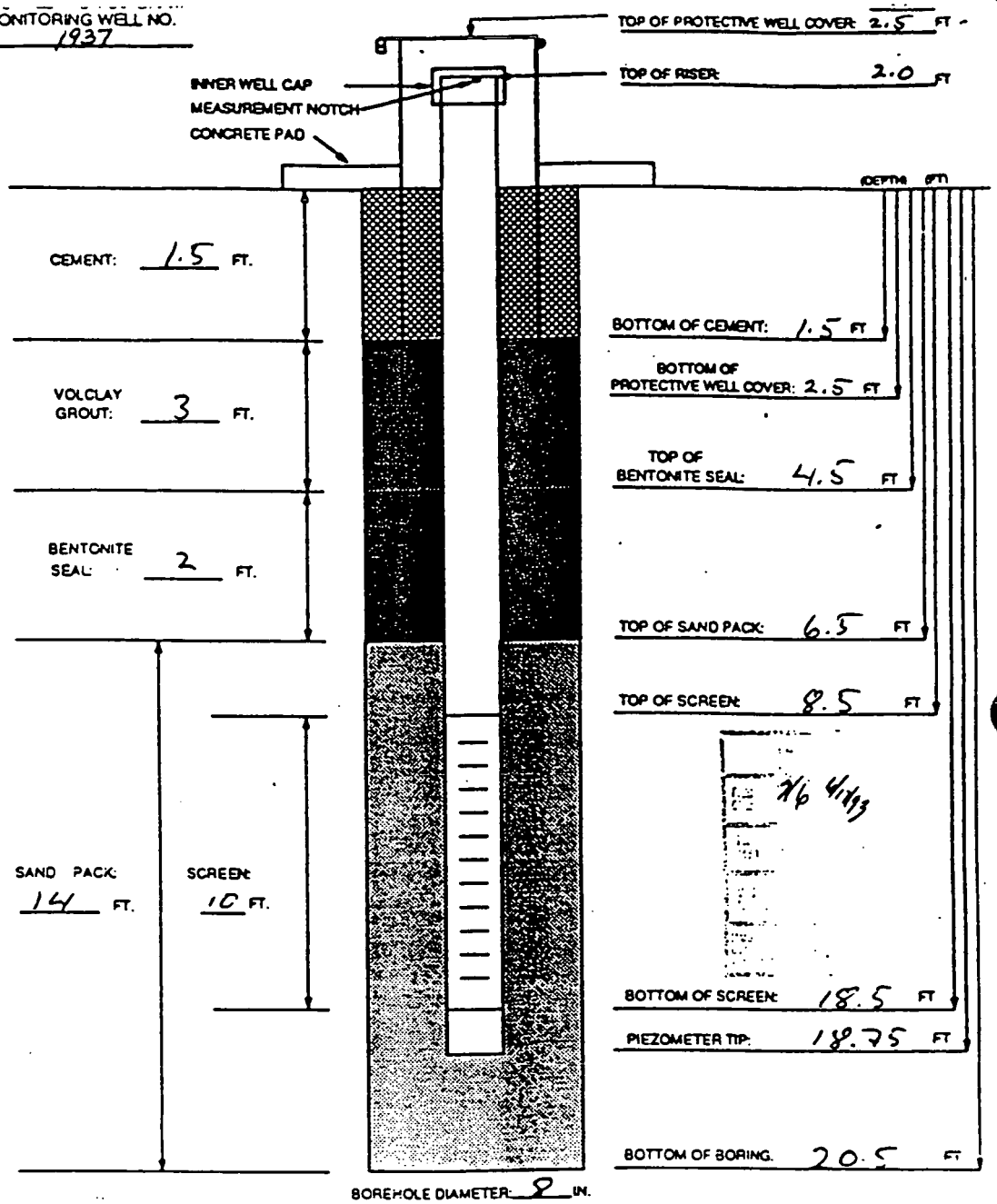
MICROTIP CALIBRATED BY R. McGormley
ON 7-24-93
USING Isobutylene
LOT # 101690-2

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
None	None
WEATHER CONDITIONS:	**IMPORTANT TELEPHONE CALLS:**
Sunny, hot, humid 82°F BP: 29.14 in. Hg	None

PERSONNEL ON SITE: R. McGormley, K. Martinez

SUPERVISOR: [signature] DATE: 7-24-93

MONITORING WELL NO. 1937



MATERIALS USED

SAND TYPE AND QUANTITY: 10/20 7.50#
BENTONITE PELLETS (5-GALLON BUCKETS): 1
BAGS OF VOLCLAY GROUT: 1/2 BAG 50#
AMOUNT OF CEMENT: 1/2 BAG 50#
AMOUNT OF WATER USED: 8 GALLONS
OTHER: NA
TASK: WBS 200305

NOTES:

1) RISER PIPE IS 2 IN. ID. 316 STAINLESS STEEL PIPE, FLUSH-THREADED JOINTS.
2) SCREEN IS 2 IN. ID. 316 STAINLESS STEEL PIPE WITH 0.010 IN. SLOTS.
3) LOWER END OF SCREEN IS CAPPED WITH AN END CAP OR THREADED SUMP
GEOLOGIST/ENGINEER: D. E. MILLER
4) WATER DEPTH AND DATE 1.83 FT 6/6
5) TOP OF CASING IS SECURED WITH A STAINLESS STEEL CAP
6) PARENTHESIS INDICATE DEPTH BELOW GROUND LEVEL
7) WELL CASING HAS A PROTECTIVE COVER WITH PADLOCK

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test#			#4
• Rate			2 min.
• Log			log
# of XDs			1
Type	[Level]		level
• ID (Well ID)	[Well #]	[FH/RH]	1937 FH
• Reference	[0]		0
• Quad Coefficient	(serial #)		N/A
• Linearity	(serial #)		.1078
• Scale	(serial #)		20.0943
• Offset	(serial #)		.0352

More >	Delay – 50 m/s	(check default values)
	S Gravity – 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	
• Manual Water Level		5.63 ft.
• Slug Measurements	Diameter	1 in.
	Length	5.99 ft.

• Transducer Placement	20.261 ft.
Date of Test	7-24-93
Start time (minutes and seconds)	0 min. (@0950)
End time	18 min. (@1008)
Datalogger File Name:	1937 FH

FEMP-OU02-6 FINAL
January 21, 1995

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test#			#5
• Rate			2 min.
• Log			Log
# of XDs			1
Type	[Level]		level
• ID (Well ID)	[Well #]	[FH/RH]	1937 RH
• Reference	[0]		0
• Quad Coefficient	(serial #)		N/A
• Linearity	(serial #)		.1078
• Scale	(serial #)		20.0943
• Offset	(serial #)		.0352

More >	Delay – 50 m/s	(check default values)
	S Gravity – 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	
• Manual Water Level		5.88 ft.
• Slug Measurements	Diameter	1 in.
	Length	5.99 ft.

• Transducer Placement 20.263 ft.

Date of Test 7-24-93

Start time (minutes and seconds) 0 min. (1050)

End time 50 min. (1140)

Datalogger File Name: 1937 RH

Well 1941

Bouwer and Rice Analysis

$L_e = L_w = H = 2$ feet

$r_w = 4$ inch

$$\frac{L_e}{r_w} = \frac{2}{4/12} = 6 \quad \Longrightarrow \quad C = 0.9$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{L_e/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln 6} + \frac{0.9}{6} \right]^{-1}$$

$$= 1.309$$

Rising Head

$$K = \frac{r_c^2 \ln\left(\frac{R_e}{r_w}\right)}{2 L_e} \frac{1}{t} \ln \frac{Y_0}{Y_t}$$

$$= \frac{(2.35 \times 2.54)^2 \times 1.309}{2 \times 2 \times 30.48} \times \frac{0.0187}{60}$$

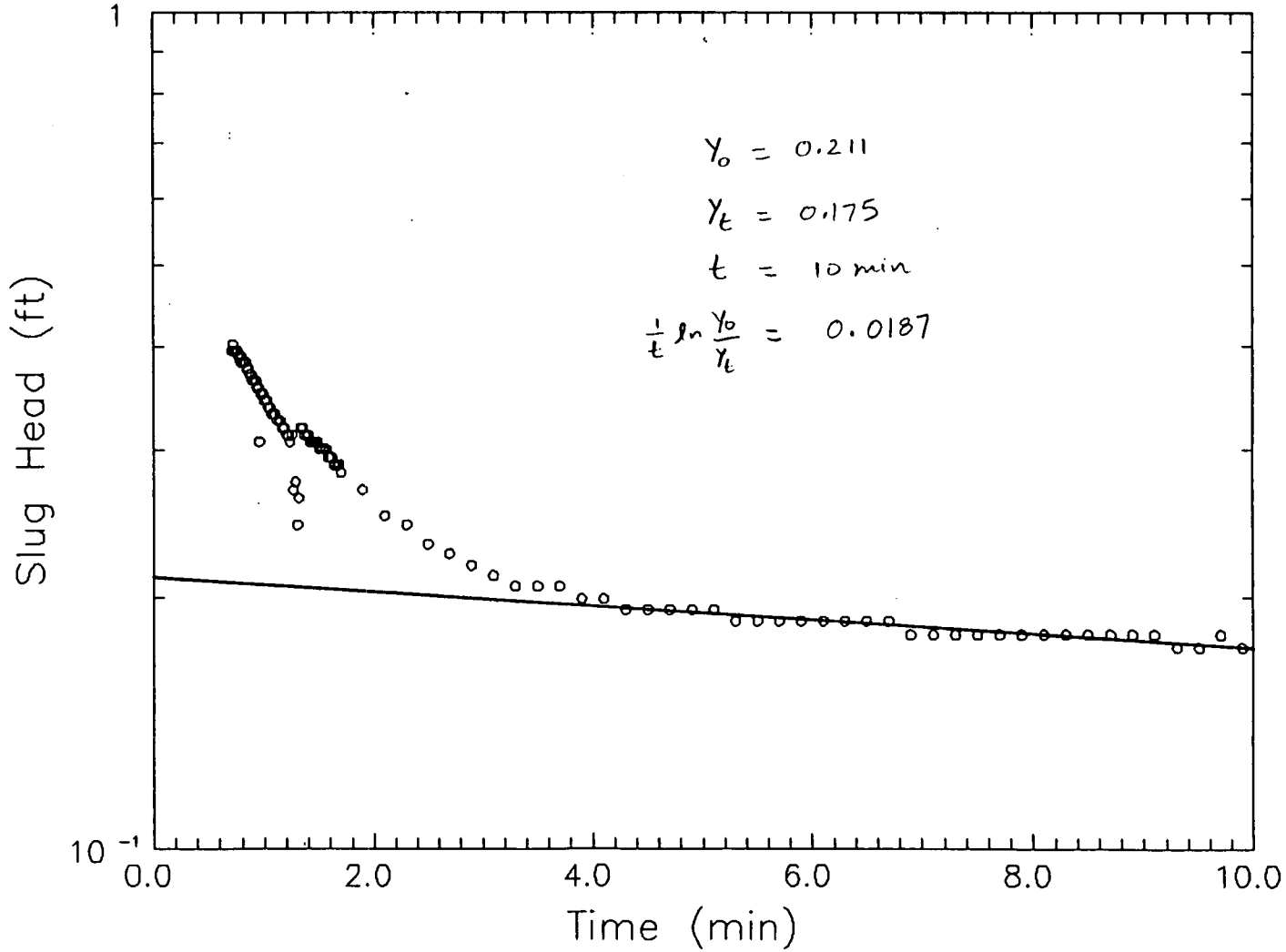
$$= 1.2 \times 10^{-4} \text{ cm/sec}$$

CLIENT DOE		DEPARTMENT	
PROJECT CRU-2 FEMP		ORIGINATED BY Amar Bumb	DATE 9/5/93
ENG. COMM. NO. RDC 11	PROJECT NO. 04424331	CHECKED BY [illegible]	DATE 10-29-93
AREA Slug Tests / RI		REVISION NUMBER 1	DATE 9/18/93
SUBJECT		REVISED BY Amar Bumb	

Form E53-2 (2-90)

SHEET 1 OF 1

1941 Bail-Down Test – Bower & Rice Analysis

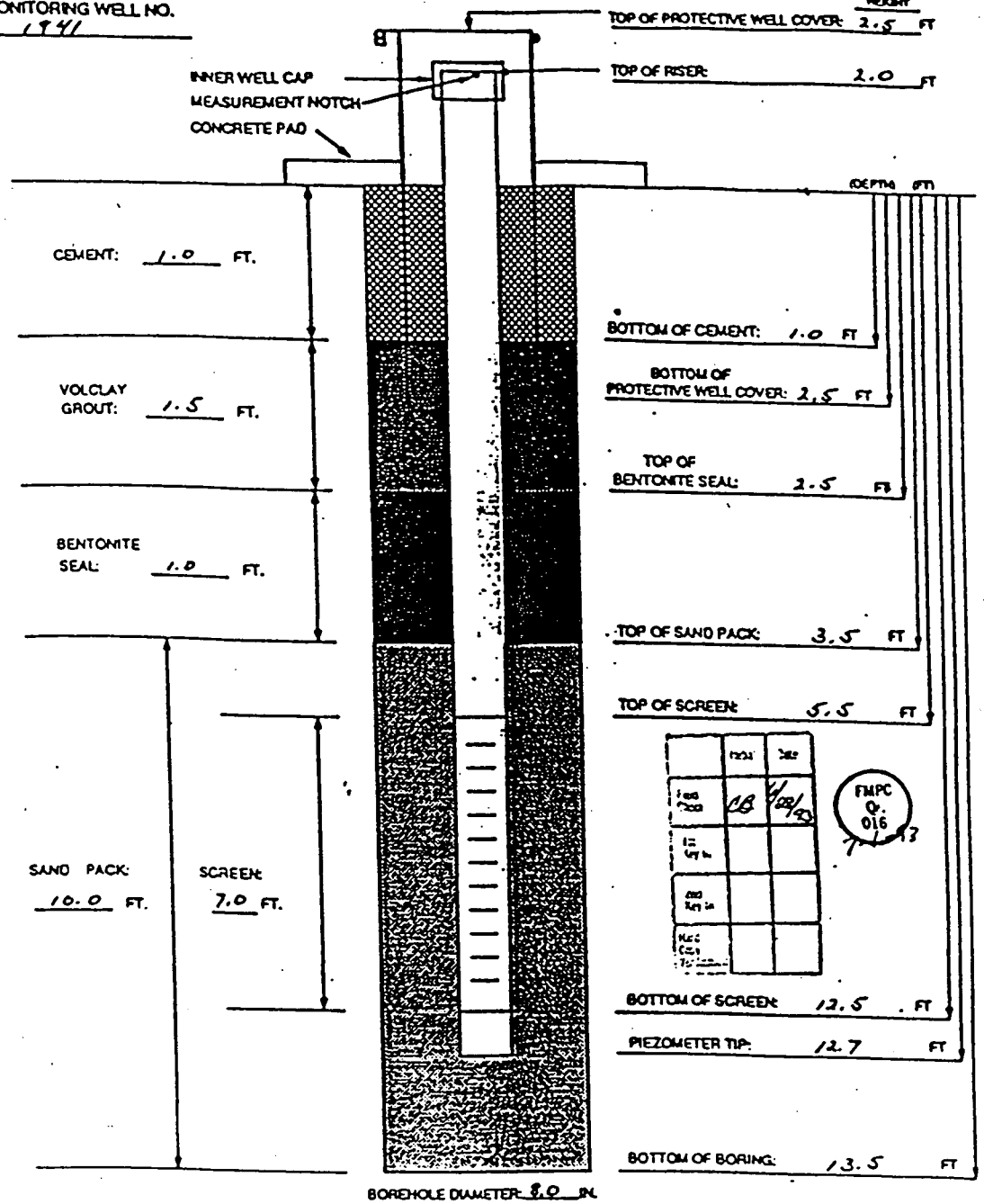


C:/Slug/1941bdrh August 27, 1993

000436

FERNALD RI/FS
INSTALLATION DIAGRAM
MONITORING WELL NO. 1941

INSTALLATION DATE: 4/20/93



MATERIALS USED

SAND TYPE AND QUANTITY: 10/20, 6 1/2 - 50 lb bags
BENTONITE PELLETS (5-GALLON BUCKETS): 1-bucket
BAGS OF VOLCLAY GROUT: 1/2 - 50 lb bag
AMOUNT OF CEMENT: 1 - 94 lb bag
AMOUNT OF WATER USED: 7.0 gals
OTHER: 1-7' screen, 1-sump cap, 1-7' section
TASK: WAS 20.03.05 : 1000-series well

NOTES:

1) RISER PIPE IS 2.0 IN. ID. 316 STAINLESS STEEL PIPE, FLUSH-THREADED JOINTS.
2) SCREEN IS 2.0 IN. ID. 316 STAINLESS STEEL PIPE WITH 0.010 IN. SLOTS.
3) LOWER END OF SCREEN IS CAPPED WITH AN END CAP OR THREADED SUMP.
4) WATER DEPTH AND DATE 2.40 FT. 4/
5) TOP OF CASING IS SECURED WITH A STAINLESS STEEL CAP.
6) PARENTHESIS INDICATE DEPTH BELOW GROUND LEVEL.
7) WELL CASING HAS A PROTECTIVE COVER WITH PADLOCK.

GEOLOGIST/ENGINEER: Oakes/Boyer

ASI FORM 0157 REV. (0)

Well 1942

Bouwer and Rice Analysis

Falling Head

$L_e = L_w = H = 1.48$ feet

$r_w = 5$ inch

$$\frac{L_e}{r_w} = \frac{1.48}{5/12} = 3.55 \implies C = 0.65$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln(L_w/r_w)} + \frac{C}{L_e/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln 3.55} + \frac{0.65}{3.55} \right]^{-1}$$

$$= 0.951$$

$$K = \frac{r_c^2 \ln\left(\frac{R_e}{r_w}\right)}{2 L_e} \frac{1}{t} \ln \frac{y_0}{y_t}$$

$$= \frac{(2.86 \times 2.54)^2 \times 0.951}{2 \times 1.48 \times 30.48} \times \frac{6.8 \times 10^{-3}}{60}$$

$$= 6.3 \times 10^{-5} \text{ cm/sec}$$

CLIENT DOE		DEPARTMENT	
PROJECT CRU-2 FEMP		ORIGINATED BY Amar Bumb	DATE 9/18/93
ENG. COMM. NO. RDC 11	PROJECT NO. 04424 331	CHECKED BY [illegible]	DATE 10 29 93
AREA Slug Tests / RI		REVISION NUMBER	DATE
SUBJECT		REVISED BY	

Form E53-2 (2-90)

Well 1942

Rising Head

$L_e = L_w = H = 1.45$ feet

$r_w = 5$ inch

$$\frac{L_e}{r_w} = \frac{1.45}{5/12} = 3.48 \implies C = 0.65$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln\left(L_w/r_w\right)} + \frac{C}{L_e/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln 3.48} + \frac{0.65}{3.48} \right]^{-1}$$

$$= 0.936$$

$$K = \frac{r_c^2 \ln\left(\frac{R_e}{r_w}\right)}{2 L_e} \frac{1}{t} \ln \frac{Y_o}{Y_t}$$

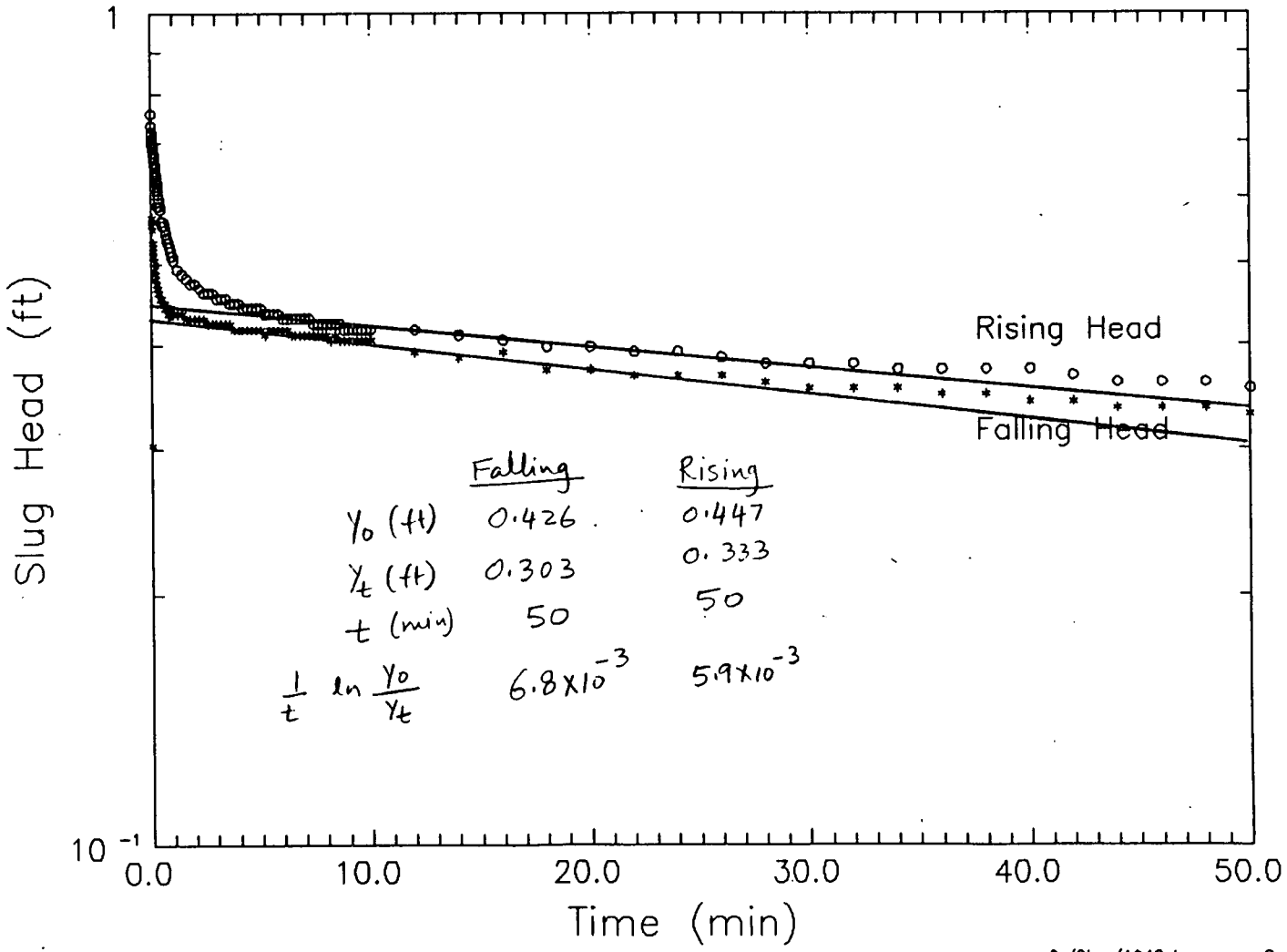
$$= \frac{(2.86 \times 2.54)^2 \times 0.936}{2 \times 1.45 \times 30.48} \times \frac{5.9 \times 10^{-3}}{60}$$

$$= 5.5 \times 10^{-5} \text{ cm/sec}$$

CLIENT DOE		DEPARTMENT	
PROJECT CRU-2 FEMP		ORIGINATED BY Amar Bumb	DATE 9/18/93
ENG. COMM. NO. RDC 11	PROJECT NO. 04424331	CHECKED BY [illegible]	DATE 10-29-93
AREA Slug Tests / RI		REVISION NUMBER	DATE
SUBJECT		REVISED BY	

Form E53-2 (2-90)

1942 Slug Tests – Bower & Rice Analysis



C:/Slug/1942slug September 8, 1993

000430

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	8	8	93
NO.	N/A	→	
SHEET 1 OF 1			

PROJECT NAME: CRU-2 Slug Testing — PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: Bail down test of MW 1941

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930098
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 86112

0600 to 1315 See FADL 8-8-93 Ref. # MW 1433

1315 Arrived at MW 1941
BR: 20 - 40 cpm
M-Tip: BG: 0 ppm DH: 0 ppm
Water level: 12.69 ft.
Well depth: 14.63 ft.
Screen interval: 7.5 ft. to 14.5 ft.
Sandpack interval: 5.5 ft. to 15.5 ft.

1325 Setup test #5 Ref. # 1941BDRH
Waited for well to equilibrate after lowering 1 liter bailer

1347 Started test by removing 800 ml of water with bailer then lowering transducer, referencing Hermit to 0, and finally starting the log readings 42 sec. after initially pulling the bailer.
This procedure directed by CRU-5 was inadequate in recording the initial water level changes

1447 Test was terminated per T. Anderson of CRU-5

1505 Exited Southfield

1700 Left for day

MICROTIP CALIBRATED BY R. McGarvey
ON 8-8-93
USING Isobutylene
LOT # 101692-2

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
NONE	Test discontinued per CRU-5
WEATHER CONDITIONS:	**IMPORTANT TELEPHONE CALLS:**
Sunny 70°F BP: N/A	To Tom Anderson

PERSONNEL ON SITE: R. McGarvey, T. Smith

SUPERVISOR: [signature] 000431 DATE: 8-8-93

RI/FS

FIELD ACTIVITY DAILY LOG

DAILY NO. NA
SHEET 1 OF 1

PROJECT NAME CRU-2 Slug Test | PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: Slug testing MW-1942

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930095
~~ALPHA METER S.N.~~ EM 7-28-93
BETA GAMMA METER S.N. 86064

1011 Arrive at Location MW-1942
This Location has no well pad or well Lock.
Call Cate Brier for a well Lock.
Bγ: 40→60 cpm
Microtip: BG 0.0ppm, B 20.0ppm, DH 0.0ppm
~~Water Level~~ 13.01 Total Depth 18.20 Ft
Well Diagram is measure in inches not tenth's of foot.
Needs ~~clarification~~ clarification. Will discuss this
with Cate Brier.

Install new well Lock.
Leave site for base.

1100 Arrive at base
Discuss with Cate Brier well diagram
As per Cate Brier's interpretation, this Location can be tested
at a Later date.

1200 Break for Lunch.

* See Additional FADLs for remainder of day's work

MICROTIP CALIBRATED BY
Rob McGormley
ON 7-28-93
USING Isobutylene
LOT # 101691-2

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
NA	NA
WEATHER CONDITIONS: Clear, Breezy, Hot & Humid 90→95°F	IMPORTANT TELEPHONE CALLS: NA

PERSONNEL ON SITE: Rob McGormley, Ken Mortimer

SUPERVISOR: Ken Mortimer DATE: 7-28-93

FERNALD
RI/FS

FIELD ACTIVITY DAILY LOG

DAILY NO. N/A
SHEET 1 OF 1

PROJECT NAME CRU-2 Slug Testing
PROJECT NO. 20.03.05
FIELD ACTIVITY SUBJECT: MW 1942 Slug Test

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930098
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 77166

0600 Arrived at T-305
Began work on paperwork
0800 Met with Tom Anderson of CRU-5 concerning slug testing
1000 Continued paperwork until lunch
1130 lunch
1230 Returned
Entered plant to dress out
1300 Arrived at Southfield control point
Waited on Rad coverage
1330 Arrived at MW 1942
BR: 40-60 cpm
M-Tip BG: 0ppm DH: 0ppm
Water level: 13.79 ft.
~~Well depth: 18.82 ft.~~
-Screen and sandpack intervals not accurate due to well diagram differing from actual well construction
Slug length: 3.10 ft. Slug diameter: 1 in.
1350 Transducer lowered down well
Waited for well to equilibrate
1421 Water level with transducer: 13.72 ft.
~~Transducer depth: 18.036 ft.~~
Began Test # 0 Ref. # 1942 F#
Hermit # 2-2 Transducer # 7
1605 Test allowed to run over night per T. Anderson
left site 102 min. into test with -.291 remaining to recover
1650 Entered plant to shower and change
1720 left for day

MICROTIP CALIBRATED BY
R. McGormley
ON 8-4-93
USING Isobutylene
LOT # 101692-2

VISITORS ON SITE:
NONE

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
Specifics of well construction not known

WEATHER CONDITIONS:
Sunny, warm Mid 70's

IMPORTANT TELEPHONE CALLS:
To Tom Anderson

PERSONNEL ON SITE: R. McGormley, T. Smith

SUPERVISOR: Robert W. McGormley DATE: 8-4-93

RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG NO. N/A
SHEET 1 OF 1

PROJECT NAME CRU-2 Slug Testing | PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: MW 1942 Slug Test

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930098
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 77166

0600 Arrived at T-305
Reported to D. Scheper on Slug Testing Status
0715 Entered plant to dress out
0735 Arrived at Southfield
0745 Arrived at MW 1942
0750 Stopped test #0 at 1050 min. into test — 1285 minutes
Water level 13.82 ft, 0.03 ft. below previous day static water level of 13.79 ft.
0800 Set up Test #1 Ref. # 1942 RH
Transducer depth: 18.054 ft.
0810 Began test #1
Began manual water level measurements
0835 Left site to start another test at MW 1046
*See FADL 8-5-93 Ref # MW 1046 for information
0938 Returned to MW 1942 to take water level
1034 Returned to MW 1942 to take water level
1110 Terminated test #1 at MW 1942 after 180 min. Water level: 14.08 ft.
1120 Took water Quality
~~1135~~ 1130 Returned to MW 1046
RM 8-5-93

* See FADL 8-5-93 Ref # MW 1046 for remainder of day's activities

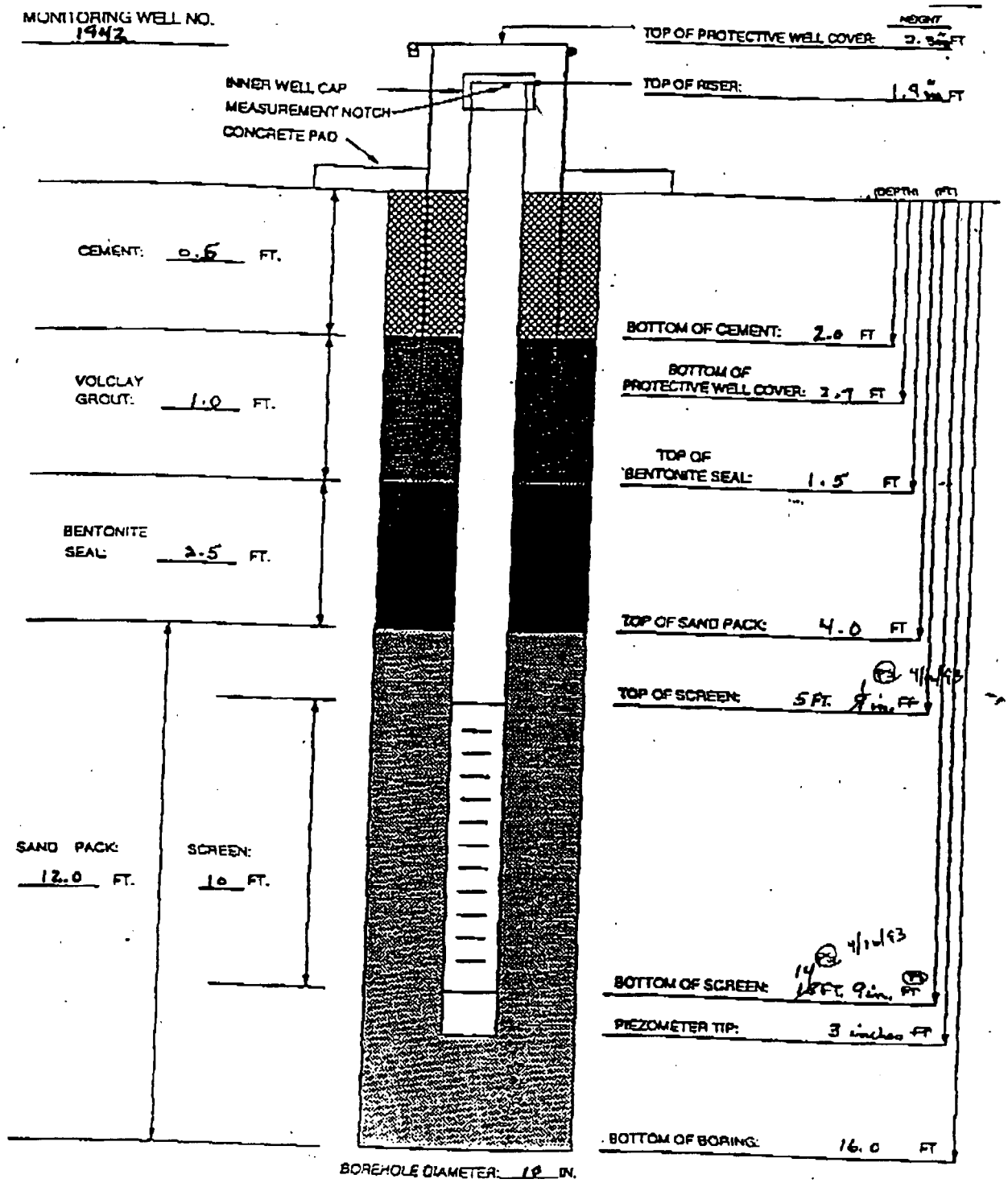
MICROTIP CALIBRATED BY T. Smith
ON 8-5-93
USING Isobutylene
LOT # 101692-2

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
NONE	NONE
WEATHER CONDITIONS:	IMPORTANT TELEPHONE CALLS:
Sunny, warm 68°F BP: 29.15 in. Hg	NONE

PERSONNEL ON SITE: R. McGormley, T. Smith

SUPERVISOR: Robert W. McGormley DATE: 8-5-93

MONITORING WELL NO. 1942



BOREHOLE DIAMETER: 10 IN.

ALS USED

PE AND QUANTITY: 10/20 silica
TE PELLETS (5-GALLON BUCKETS): 1
VOLCLAY GROUT: 1 BAG
OF CEMENT: 1 BAG
OF WATER USED: 5 gallons
N/A
N/A 20 0305
ROUTES

NOTES:

1) RISER PIPE IS 2 IN. ID. 316 STAINLESS STEEL PIPE. FLUSH-THREADED JOINTS.
2) SCREEN IS 2 IN. ID. 316 STAINLESS STEEL PIPE WITH 0.010 IN. SLOTS.
3) LOWER END OF SCREEN IS CAPPED WITH AN END CAP OR THREADED SUMP.
4) WATER DEPTH AND DATE N/A PS 6/10/9: FT/ 4/16
5) TOP OF CASING IS SECURED WITH A STAINLESS STEEL CAP.
6) PARENTHESIS INDICATE DEPTH BELOW GROUND LEVEL.
7) WELL CASING HAS A PROTECTIVE COVER WITH PADLOCK.

GEOLOGIST/ENGINEER: P. Smith

0157 REV 0

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test#			# 1
• Rate			2 min.
• Log			log.
# of XDs			1
Type	[Level]		level
• ID (Well ID)	[Well #]	[FH/RH]	1942 RH
• Reference	[0]		0
• Quad Coefficient	(serial #)		N/A
• Linearity	(serial #)		.0937
• Scale	(serial #)		20.068
• Offset	(serial #)		-.1127

More >	Delay – 50 m/s	(check default values)
	S Gravity – 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	0
• Manual Water Level		13.82 ft.
• Slug Measurements	Diameter	1 in.
	Length	3.10 ft.

• Transducer Placement 18.054 ft

Date of Test 8-5-93

Start time (minutes and seconds) 0 min @ 0810

End time 180 min. @ 1110

Datalogger File Name: 1942 RH

emsi voll rsapps rsdw wsdata wogelfrm

Rev No

000436

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

* Test#			#0
* Rate			2 min.
* Log			log
# of XDs			1
Type	[Level]		level
* ID (Well ID)	[Well #]	[FH/RH]	1942 FH
* Reference	[0]		0
* Quad Coefficient	(serial #)		N/A
* Linearity	(serial #)		.0937
* Scale	(serial #)		20.068
* Offset	(serial #)		-.1127

More >	Delay – 50 m/s	(check default values)
	S Gravity – 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	0
* Manual Water Level		13.79
* Slug Measurements	Diameter	1 in.
	Length	3.10 ft.

* Transducer Placement	18.036 ft.
Date of Test	8-4-93 to 8-5-93
Start time (minutes and seconds)	0 min. @ 1421
End time	1050 min. @ 0750
Datalogger File Name:	1942 FH

erais1 vol1 rsopps rsdata sdata vogelfrm

Rev. No.
000437

Well 1947

Bouwer & Rice Analysis

Falling Head

$$L_e = L_w = H = 10.54 \text{ feet}$$

$$r_w = 4.25 \text{ inch}$$

$$\frac{L_e}{r_w} = \frac{10.54}{4.25/12} = 29.76$$

$$\Rightarrow C = 2$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln \frac{L_w}{r_w}} + \frac{C}{L_e/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln 29.76} + \frac{2}{29.76} \right]^{-1}$$

$$= 2.555$$

$$K = \frac{r_c^2 \ln \frac{R_e}{r_w}}{2 L_e} \frac{1}{t} \ln \frac{Y_o}{Y_t}$$

$$= \frac{(2.47 \times 2.54)^2 \times 2.555}{2 \times 10.54 \times 30.48} \times \frac{0.0535}{60}$$

$$= 1.4 \times 10^{-4} \text{ cm/sec}$$

CLIENT	DOE	DEPARTMENT	
PROJECT	CRU-2 FEMP	ORIGINATED BY	Amar Bumb DATE
ENG. COMM. NO.	RDC 11 PROJECT NO.	CHECKED BY	John J Benoit DATE 10-29-93
AREA	Slug Tests / RI	REVISION NUMBER	DATE
SUBJECT		REVISED BY	

Form E53-2 (2-90)

Rising Head

$$L_e = L_w = H = 10.47 \text{ feet}$$

$$r_w = 4.25 \text{ inch}$$

$$\frac{L_e}{r_w} = \frac{10.47}{4.25/12} = 29.56$$

$$\Rightarrow \quad C = 2$$

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln \frac{L_w}{r_w}} + \frac{C}{R_e/r_w} \right]^{-1}$$

$$= \left[\frac{1.1}{\ln 29.56} + \frac{2}{29.56} \right]^{-1}$$

$$= 2.548$$

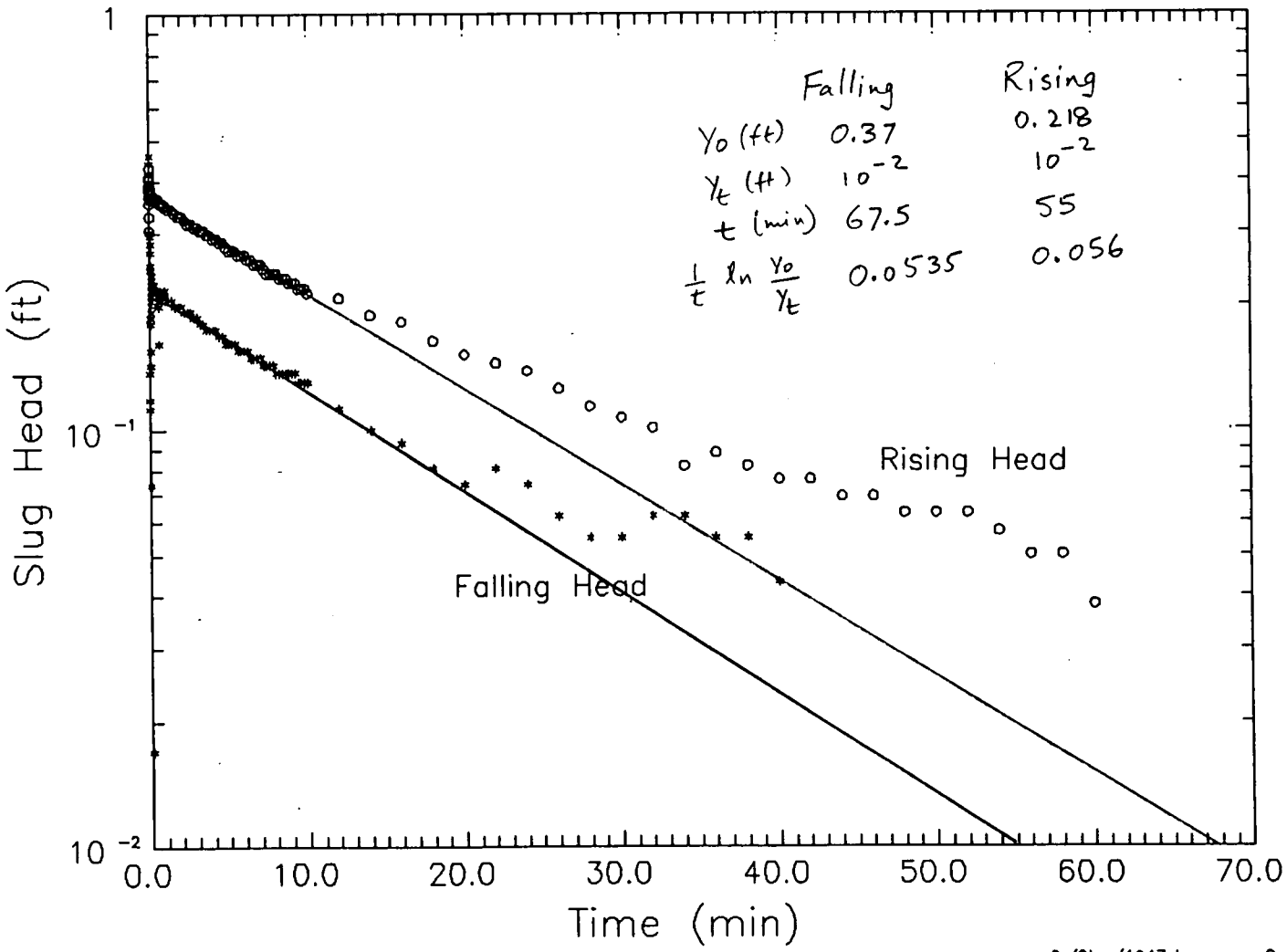
$$K = \frac{r_c^2 \ln \frac{R_e}{r_w}}{2 L_e} \cdot \frac{1}{t} \ln \frac{Y_0}{Y_t}$$

$$= \frac{(2.47 \times 2.54)^2 \times 2.548}{2 \times 10.47 \times 30.48} \times \frac{0.056}{60}$$

$$= 1.5 \times 10^{-4} \text{ cm/sec}$$

CLIENT	DOE	DEPARTMENT	
PROJECT	CDU-2 FEMP	ORIGINATED BY	Amar Bumb DATE
ENG. COMM. NO.	RDC 11 PROJECT NO.	CHECKED BY	John J Benet DATE 10-29-93
AREA	Slug Tests RI	REVISION NUMBER	DATE
SUBJECT		REVISED BY	

1947 Slug Tests – Bower & Rice Analysis



C:/Slug/1947slug September 8, 1993

FERNALD RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	7	29	93
NO.			
SHEET	1	OF	1

PROJECT NAME CRU-2 SLUG TESTS | PROJECT NO. 20.03.05

FIELD ACTIVITY SUBJECT: SLUG TESTS ON MW-1947

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

MICROTIP S.N. PA930076
ALPHA METER S.N. N/A
BETA GAMMA METER S.N. 86112

0900 · ENTER PLANT 1
· GO TO MW-1947 w/ EQUIPMENT
0945 · ARRIVE AT MW-1947 + CONDUCT INITIAL MEASUREMENTS
WELL DEPTH = 22.24 FT WATER LEVEL = 11.64 FT
· MICROTIP BACKGROUND, BREATHING ZONE, + DOWNHOLE = 0.0 ppm
BETA-GAMMA = 100 cpm
· PREPARE FOR FALLING HEAD
1006 · START FALLING HEAD TEST FILE # 1947FH
· WATER LEVELS FLUCTUATE HUNDREDTHS OF A FOOT
REASON IS UNKNOWN
1047 · END TEST AFTER WELL RECOVERS 90% @ 40 MINUTES
1050 · START RISING HEAD TEST FILE # 1947RH
· AFTER 1 HR STILL NOT RECOVERED
1215 · GO TO LUNCH
1315 · RETURN FROM LUNCH
1355 · END RISING HEAD TEST.
WELL RECOVERED 100%
1430 · TAKE WATER QUALITY INFORMATION
· CLEAN UP AREA + LEAVE MW-1947
1530 · GET GEAR FRISKED OUT OF PLANT 1
· GO TO LOCKER ROOM TO DRESS OUT
1700 · EXIT FEMP

Screen (TOC) - 12-21.7
Sandpack : 10-22
Sand layer:
Silty Clays only

MICROTIP CALIBRATED BY
DON BOSWELL
ON 7-29-93
USING ISO BUTYLENE
LOT # 110542-4

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
NONE	NONE
WEATHER CONDITIONS: BREEZY, BRIGHT TEMP = 84°F	IMPORTANT TELEPHONE CALLS: NONE

PERSONNEL ON SITE: D. BOSWELL, D. MACDOUGALL

SUPERVISOR: [signature] DATE: 7-29-93

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test #			15
• Rate			LOG
• Log			0000
# of XDs			1
Type	[Level]		LEVEL
• ID (Well ID)	[Well #]	[FH/RH]	MW 1947FH
• Reference	[0]		0
• Quad Coefficient	(serial #)		203456
• Linearity	(serial #)		0.096
• Scale	(serial #)		20.0632
• Offset	(serial #)		0.0516

More >	Delay – 50 m/s	(check default values)
	S Gravity = 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	0
• Manual Water Level		11.64 FT
• Slug Measurements	Diameter	1-IN
	Length	4-FT

• Transducer Placement 20 FT

Date of Test

Start time (minutes and seconds)	1006 7-29-93
End time	1047 7-29-93

Datalogger File Name: 1947FH

PARSONS ERA PROJECT

Datalogger Summary/Set-Up Form

Unit On

• Test #			16
• Rate			LOG
• Log			0000
# of XDs			1
Type	[Level]		LEVEL
• ID (Well ID)	[Well #]	[FH/RH]	MW1947 RH
• Reference	[0]		0
• Quad Coefficient	(serial #)		203456
• Linearity	(serial #)		0.096
• Scale	(serial #)		20.0632
• Offset	(serial #)		0.0516

More >	Delay – 50 m/s	(check default values)
	S Gravity – 1	(check default values)
	Units – feet	(check default values)
	Mode – TOC	(check default values)

Recheck Reference Level	Enter [0]	0
• Manual Water Level		11.71 FT
• Slug Measurements	Diameter	1-IN
	Length	4-FT

• Transducer Placement 21 FT

Date of Test

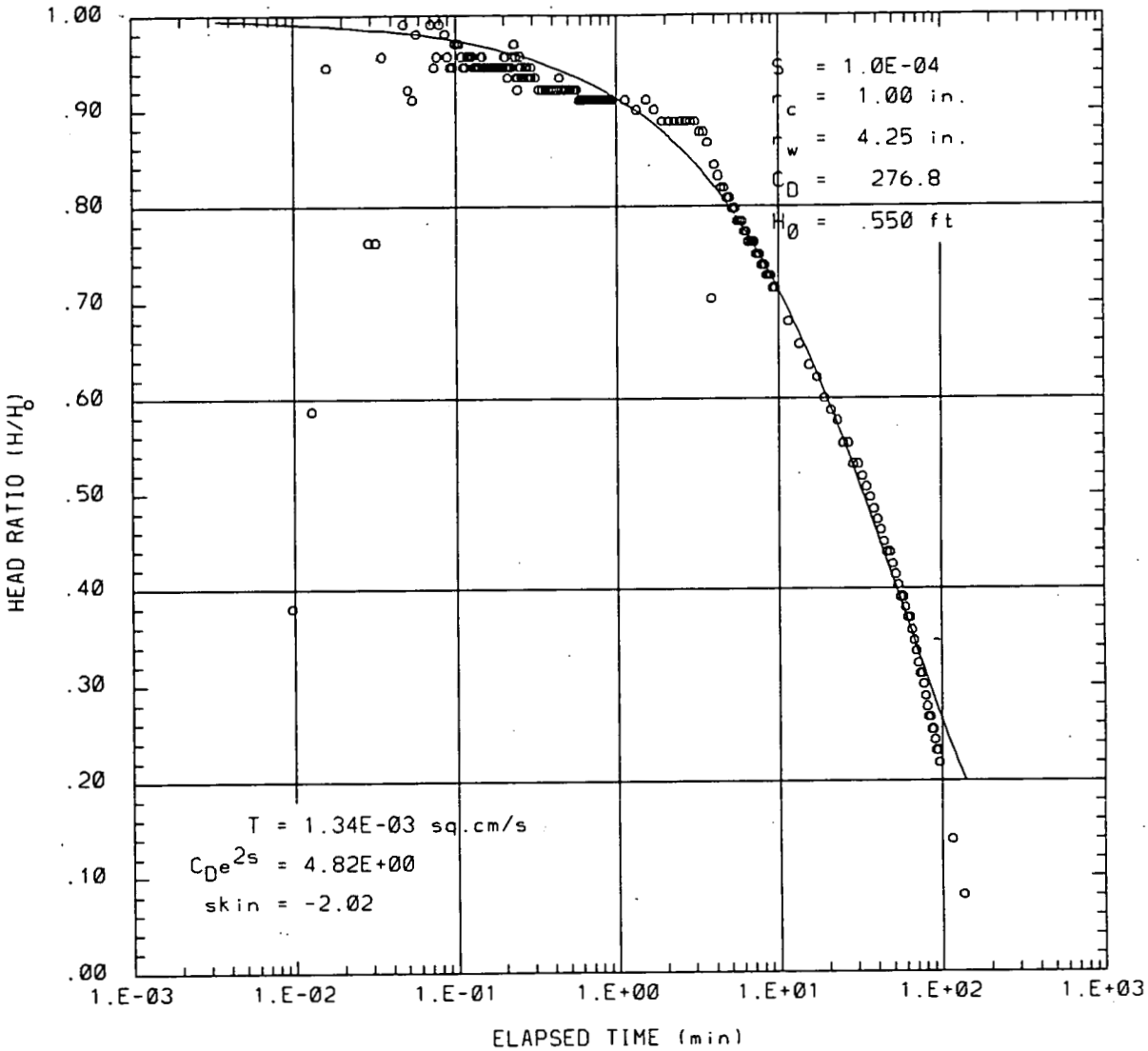
Start time (minutes and seconds) 1050 7-29-97

End time 1350 7-29-97

Datalogger File Name: 1947RH

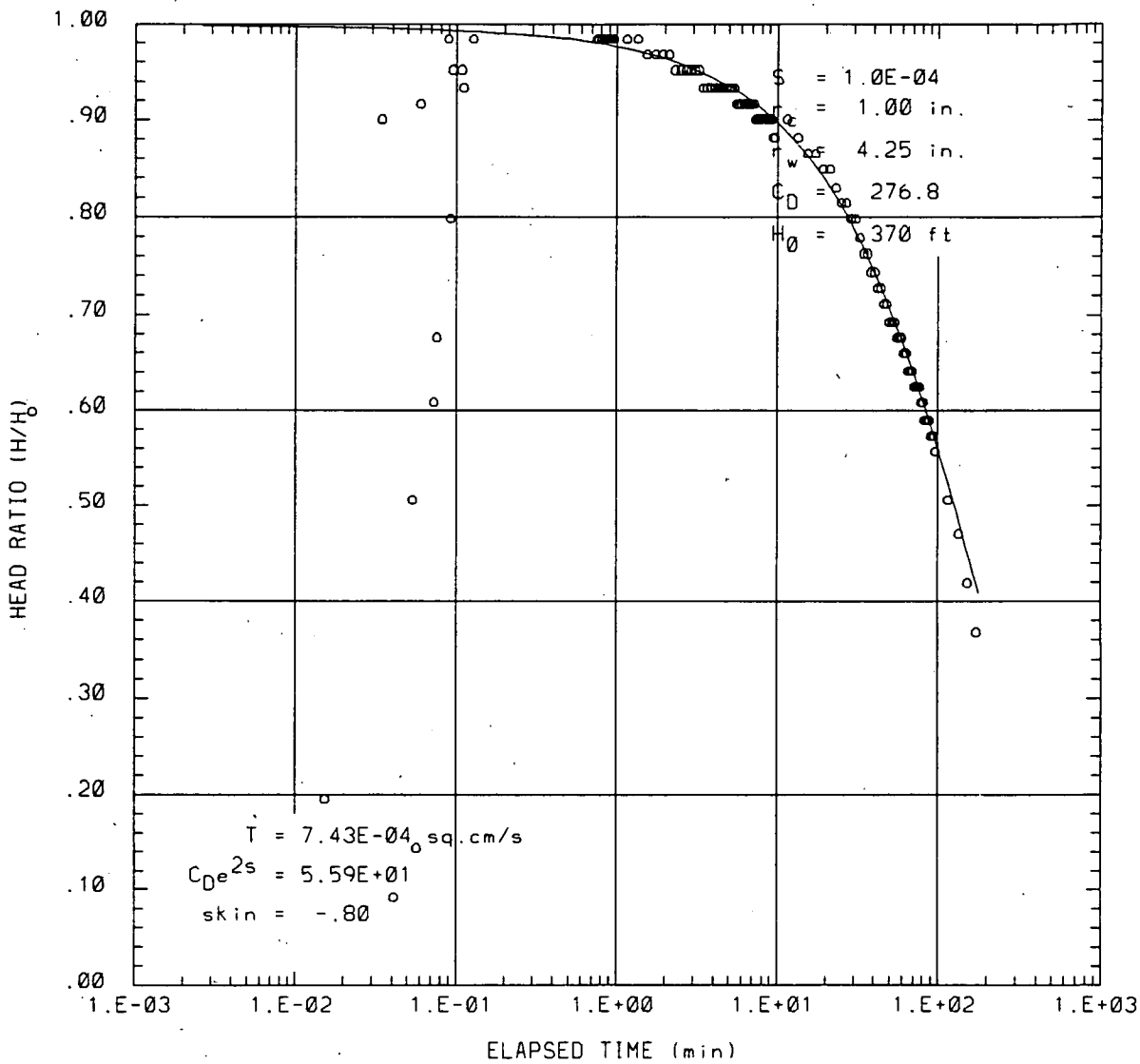
WELL 1950 Falling Head Test

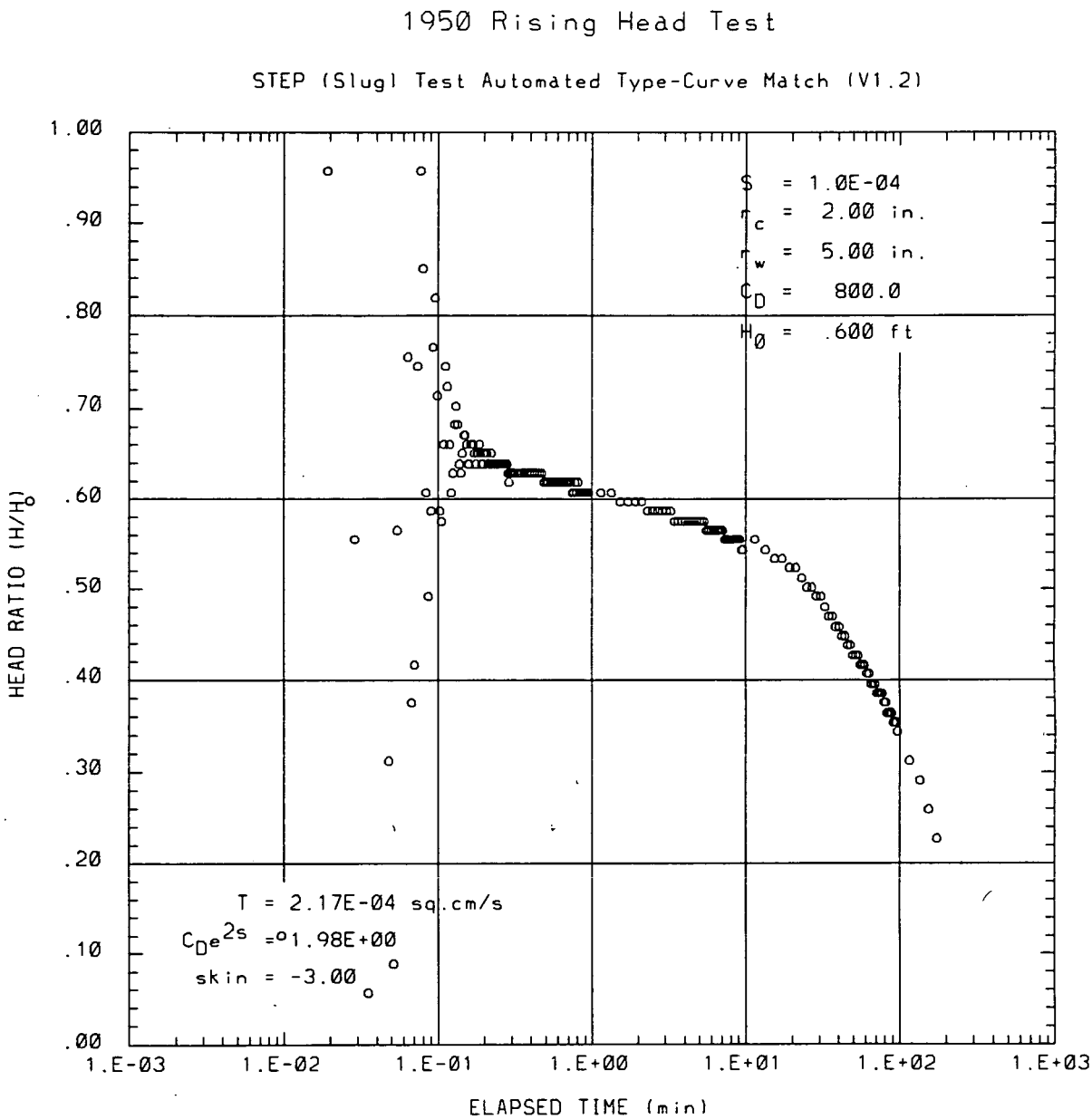
STEP (Slug) Test Automated Type-Curve Match (V1.2)



WELL 1950 Rising Head Test

STEP (Slug) Test Automated Type-Curve Match (V1.2)





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