Final
Close Out Report for the Ash Pit
Operable Unit I Area of Concern 2F

February 5, 2004

REGISTERED TO ISO 14001

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1.0 INTRODUCTION

This Close Out Report documents that Brookhaven National Laboratory has completed all response actions for the Ash Pit, Operable Unit I Area of Concern 2F, in accordance with *Close Out Procedures for National Priorities List Sites* (OSWER Directive 9320.2-09A-P).

2.0 SUMMARY OF SITE CONDITIONS

2.1 Background

The Ash Pits, designated as Area of Concern 2F, received ash and slag from a U.S. Army solid waste incinerator used from World War I to the early 1950's. The Ash Pits were also used for disposal of coal ash from various buildings throughout BNL until 1963. The Ash Pits occupy approximately 3 acres and are located north and south of East Princeton Avenue and west of Grove Street. According to personnel interviews, fill material was deposited on top of the Ash Pits along the north and south sides of East Princeton Avenue in order to build up the road. A portion of the northeast area of the Ash Pits was covered with concrete debris from concrete trucks dumping residual loads. In the late 1990's, the section of East Princeton Avenue that bisects the Ash Pits was raised approximately 10 feet to prevent rainwater runoff from ponding on the road. Also, to mitigate erosion, the north section of the Ash Pits was re-graded, re-vegetated with grass, and 4-inch stone rip-rap was placed in two locations. The northern and southern portions are vegetated with trees, shrubs, and grasses.

2.2 Remedial Investigation/Feasibility Study

The boundary of the Ash Pits was delineated in 1994 as part of the Landfills Closure Engineering Evaluation/Cost Analysis (EE/CA) (CDM Federal, 1995a) through the installation of thirteen test pits on the outer boundary of the area. Based on this investigation, the edge of the ash was delineated. However, the exact thickness of the ash within the pit was estimated because only one test pit was placed in the center of the Ash Pits. During the excavation of the thirteen test pits, eight grab soil samples were collected at depths from one to seven feet below ground surface. The eight grab samples were analyzed for TCLP organics, TAL metals, VOCs, SVOCs, pesticides, PCBs and radionuclides.

As part of the 1996 Remedial Investigation/Remedial Action for OU I/VI, an additional four surface soil samples and fifteen subsurface soil samples were collected and analyzed for TAL metals and radionuclides. Sample locations and a summary of the analytical data are presented in Appendix A.

Chemical concentrations in the Ash Pit were determined to be acceptable for an industrial or open space/recreational future use. Radionuclide concentrations were below EPA's target risk range for all future uses, including residential. However, the maximum lead concentration (2,100 mg/kg) exceeded EPA's soil screening level of 400 mg/kg for residential use. Future residential use of this area is not a realistic possibility because the ash and construction debris are unsuitable

foundation materials and would have to be removed prior to house construction. However, to be conservative and protective of human health, three remedial options were evaluated for the Ash Pit; No Action, Soil Cover, Excavation and Off-site Disposal.

2.3 Record of Decision Findings

The no action alternative would not protect human health and the environment and but does not comply with EPA's soil guidance for lead. In addition the toxicity, mobility, and volume would not be reduced.

For the second alternative, a soil cap would protect workers, the public, and wildlife and meet EPA's guidance. It is relatively simple to implement, would reduce the mobility of contaminants of concern, and is also cost-effective.

The third alternative, excavation and off-site disposal, would protect workers, the public, and wildlife. It is relatively simple to implement, would reduce the mobility of contaminants of concern, but is relatively costly for the limited benefits received.

The remedy selected was the installation of a 12-inch soil cap to address metal contamination. Institutional controls, monitoring and maintenance of the soil cap will occur to limit access to the site and prevent erosion to the soil cap. Recreational and residential uses will be prohibited. These activities meet the EPA guidance on lead contaminated soil.

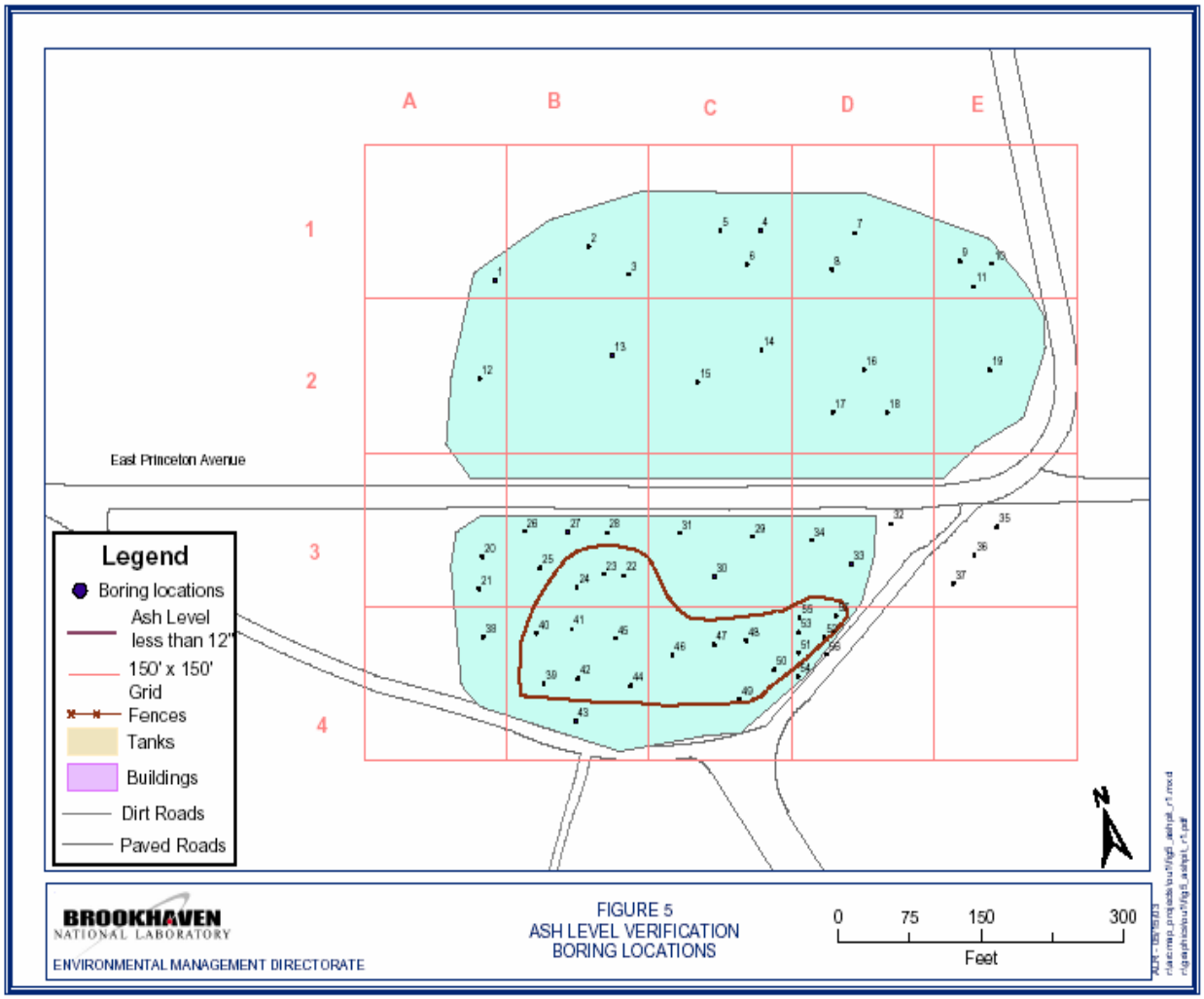
2.4 Remedial Activities

In an effort to minimize the amount of clearing of trees in the Ash Pits area, an ash level verification effort was conducted. Since the elevation of the ash was inferred from test pits on the periphery of the Ash Pits area, a Geoprobe was used to collect vertical soil borings to confirm the elevation of the ash within the delineated Ash Pits area. Areas where the ash was observed to have less than a 12-inch soil cover was staked out and identified as requiring additional soil cover. The areas where the ash is more than 12 inches below the surface will not be disturbed.

The ash level verification was performed in accordance with the Remedial Action Work Plan. The plan required the collection of five soil borings along four transects of the Ash Pit area. While performing the Supplemental Investigation, a total of fifty-six soil borings were completed to clearly identify the scope of remediation required. Figure 1 shows the sample locations and area requiring remediation.

Figure 1

Ash Level Verification Borings



Clearing and grubbing of the Ash Pit commenced on June 27, 2003. At the completion of clearing activities, clean fill material was brought in to level the area. The RAWP specified that the ash would not be disturbed, thus preventing a hazard to the workers. Therefore, adequate fill to level the area was brought in prior to grading. The depth of fill required ranged from several inches to greater than three feet. A twelve-inch cap of topsoil was then installed and seeded with native Long Island grass. Remedial activities were completed on July 30, 2003. The following photographs depict the remedial activities.

Photograph 1 – Clearing of trees and brush from the area requiring the soil cap.

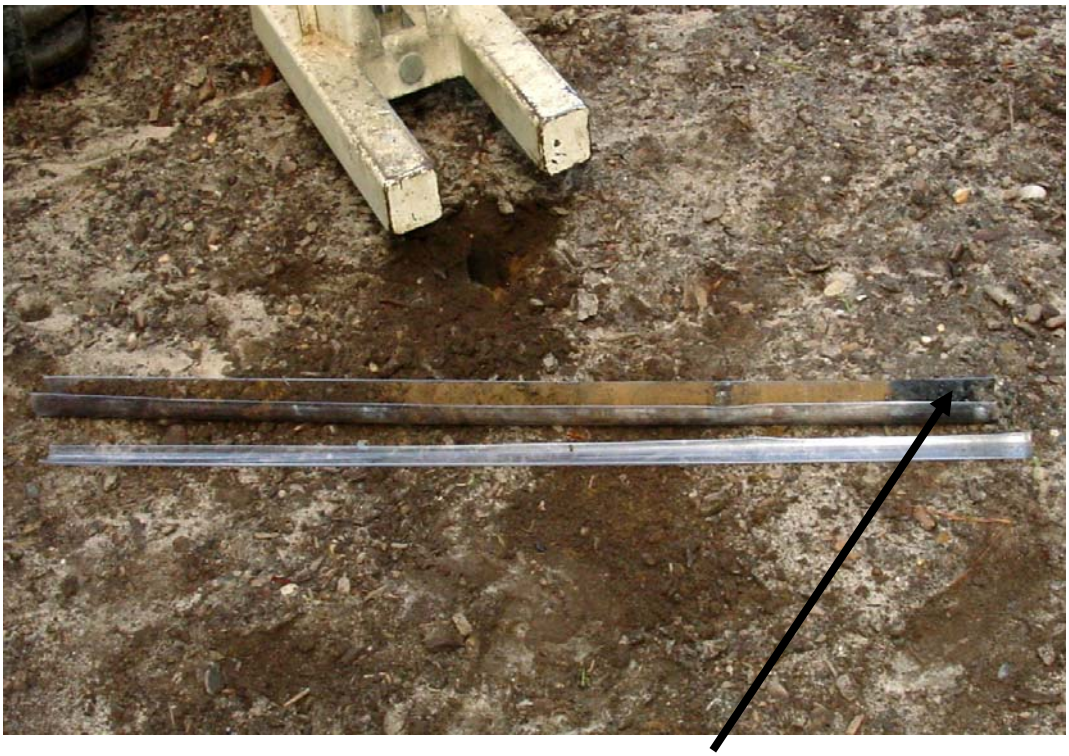
Photograph 2 – Removal and transportation of trees and shrubs.

Photograph 3 – Clean fill staged prior to grading over the Ash Pit area

Photograph 4 – Clean fill being graded at the Ash Pit

Photograph 5 – The Ash Pit area after the 12-inch topsoil cap has been installed

Photograph 6 – Verification sampling of cap depth and soil analysis



Photograph 7 – Verification of cap depth (Note the layer of ash at the far right of the tube).

3.0 MONITORING RESULTS

Soil borings and laboratory analyses were performed to verify the soil cap depth and the topsoil and fill material compliance with the New York State Department of Environmental Conservation Technical and Administrative Guidance Memorandum (TAGM) #4046. Fifteen soil cap depth verification borings were performed to ensure the soil cap met the 12-inch requirement as specified in the Record of Decision. The installed soil cap ranges from eighteen inches to greater than four feet. The fill material is in compliance with the TAGM's and the topsoil zinc (24.7 ppm) slightly exceeded the site background for zinc (22.4 ppm) as established in the Final RI/RA Report OU I/VI. All other analytes were below the TAGM's or site background and the results are in Appendix A.

4.0 LONG TERM RESPONSE ACTION

Long-term surveillance and monitoring for the Operable Unit I Areas of Concern will be performed by Brookhaven National Laboratory as specified in Work Package 179, Long Term Response Action. This work package prescribes the annual inspection of the Ash Pit to verify that the soil cap is intact and erosion is not evident. Institutional controls to restrict the future use of the Ash Pit have been put in place as prescribed in the Brookhaven National Laboratory Land Use Controls Management Plan.

5.0 REFERENCES

EPA, 2000. *Close Out Procedures for National Priorities List Sites* (OSWER Directive 9320.2-09A-P) January 2000.

CDM, 1995. Landfills Closure Engineering Evaluation/Cost Analysis (EE/CA) (CDM Federal, 1995a)

BNL, 1996. Final Remedial Investigation/Remedial Action Report for OU I/VI - June 14, 1996

EPA, 1996. Soil Screening Guidance: User's Guide. U.S. Environmental Protection Agency, Office of Solid Waste and Remedial Response. (OSWER Directive 9355.4-23)

P.W.Grosser, 2003. Remedial Action Work Plan, Area of Concern 2F, Operable Unit I, Ash Pits Remediation - April 15, 2003

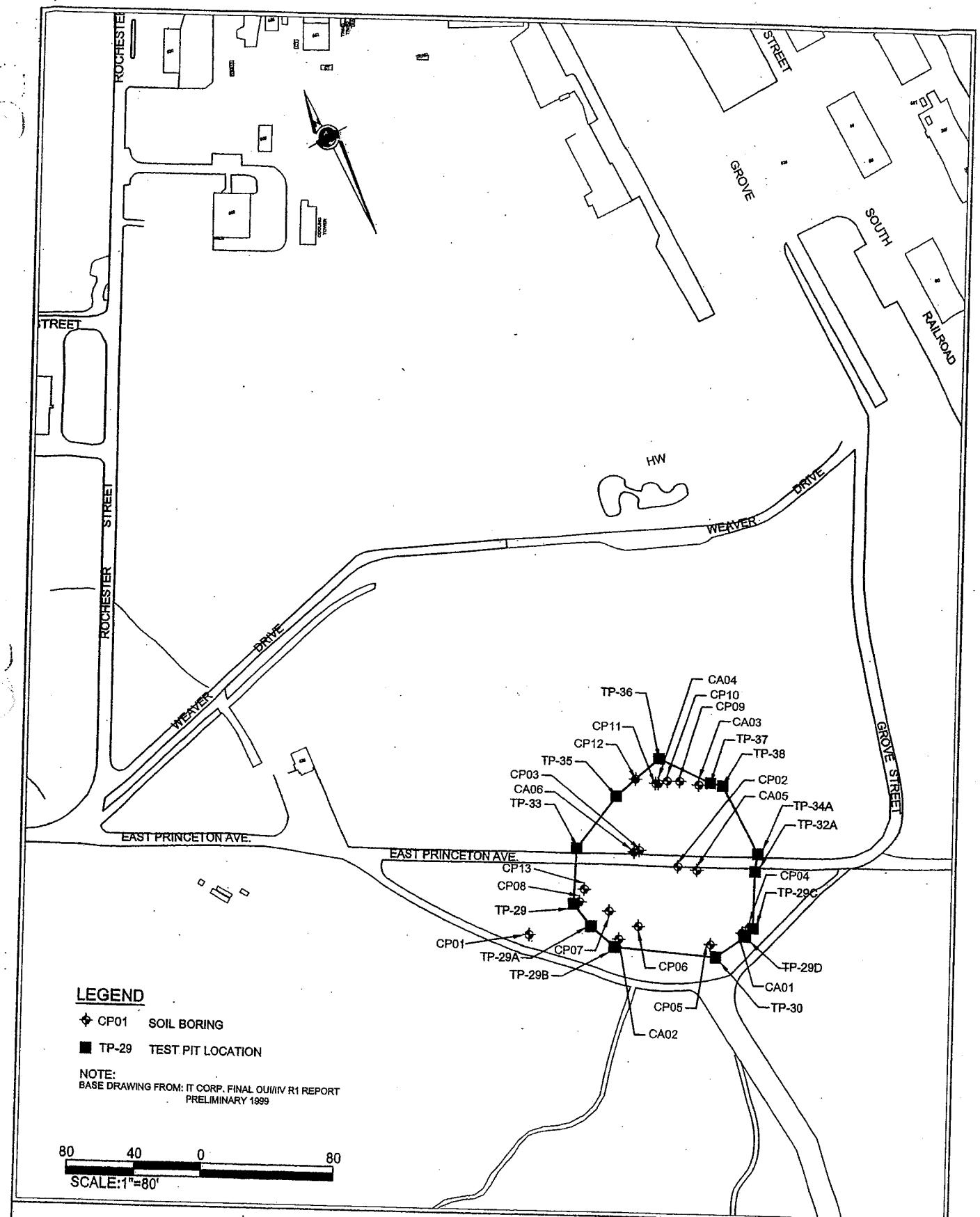
BNL, 2003. Supplemental Investigation Plan for the Meadow Marsh, Ash Pits, Waste Concentration Facility - Building 811 Supplemental Investigation

New York State Department of Environmental Conservation Technical and Administrative Guidance Memorandum (TAGM) #4046

BNL 1999. Operable Unit I, Record of Decision (ROD), June 1999

BNL 2003. Draft Brookhaven National Laboratory Land Use Controls Management Plan - January 2003

APPENDIX A



P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.
630 Johnson Ave, Suite 7
Bohemia, N.Y. 11716-2615
Ph: 516 589-6353 Fx: 516 589-8705
E-mail: pwgc-kg@worldnet.att.net

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FIGURE 1-3
LOCATION OF SOIL SAMPLES
AOC 2F - ASH PITS

jcall/bnl/2003/2018/cadd/07-15-03/cover.dwg

Table 1

Ash Pits Soil Data[1]

Sample No.	Lead (mg/kg)	Cs-137 (pCi/g)	Sr-90 (pCi/g)	Tritium (pCi/g)
CA01	1,150	0.24	1.5	0.09
CA02	436	0.28	1.3	0.10
CA03	97.4	0.26	1.2	0.12
CA04	223	0.29	1.0	0.13
CA05	625	0.3	1.0	0.14
CA06	157	2.1	1.2	0.17
CP01	N/A	0.32	1.0	0.14
CP02	184	0.29	1.2	0.13
CP03	43.7	0.29	1.1	0.08
CP04	879	0.25	1.2	0.13
CP05	236	0.28	1.3	0.07
CP06	702	0.28	1.3	0.12
CP07	181	0.24	1.3	0.09
CP08	2,100	0.6	1.5	0.15
CP09	145	0.76	1.2	0.13
CP10	160	0.44	1.4	0.14
CP11	226	0.37	1.2	0.10
CP12	84.8	0.16	1.2	0.06
CP13	638	0.48	1.3	0.13
TP30	230	0.27	0.24	0.01
TP32	292	0.31	1.0	0.03
TP33	725	0.36	0.9	0.01
TP35	186	0.29	0.99	0.10
TP36	164	0.35	0.36	0.17
TP37	85.9	0.13	0.13	0.13
TP38	88.8	0.28	0.26	0.06

[1] Source: CDM Federal, *Final Remedial Investigation / Risk Assessment Report, Operable Unit I/VI,* June 14,1996.

ASL Prefix No.

Page 1 of 1

BROOKHAVEN NATIONAL LABORATORY

Carrier/Waybill # _____

P.O. # _____

Chain of Custody No. 16891

Requires EDD [X] DQL ____

SAMPLING CHAIN OF CUSTODY

Analysis Requested By	Lab Contact	
Name: Tom Daniels	Name: LVS	Name: Severn Trent Laboratories
Life No: 19738 Ext. 4752	Contact:	Address: 1375 River Trail North
Acct. No: 07478 Dept: EA	Phone:	City: Earth City St: MO Zip: 63045
Email Reports To:	Email/Fax:	Contact: John Powell
1 TDaniels@bnl.gov	Sampler:	Phone: (314) 298-8566
2		Email/Fax: (314) 298-8757
Comments: 001 Ash Pit 5	Tom Daniels	Tom Doyle

SID	UID	Smp	Coll	Site ID/Bldg/Life #	Depth/RWP	Date	Time	Matrix	Name/Description	Cont.Vol/Units	Cont.Type	# of Cont	Preservative	Alpha/Beta	Tritium	Gamma	Semivolatiles herbicides Method 8150	Volatiles Method 8260	Metals Method 6010	Nitrotoluenes/Nitramines Explosives Method 8091	PCBs Method 8082	Metals (TAL)	Total Organic Carbon	Cyanide
	01	WG		APFL-01	2'-4'	7/25/03	0900	S	Ash Pit Fill	90z.	AG	3	—				X	X	X	X	X	X	X	X
	01	WG		APTS-01	0'	7/25/03	0900	S	Ash Pit Top Soil	90z.	AG	3	—				X	X	X	X	X	X	X	X
	01	WG		APFL-01	2'-4'	7/25/03	0900	S	Ash Pit Fill	40z	GG	2	—				X	X	X	X	X	X	X	X
	01	WG		APTS-01	0'	7/25/03	0900	S	Ash Pit Top Soil	40z.	GG	2	—				X	X	X	X	X	X	X	X

1 Relinquished By/Date/Time	2 Relinquished By/Date/Time	Relinquished By/Date/Time
Print Rob Allegrezza 7/25/03 1100	Print	Print
Signature	Signature	Signature
Received By/Date/Time	**2 Received By/Date/Time**	**Received By/Date/Time**
Print	Print	Print
Signature	Signature	Signature

Contractor Lab Sample Disposal:
- ☐ Return To Client
- ☒ Disposal by Lab
- ☐ Archive For ____ Months

Data Package: ☒ Full ☐ Summary

Turn-Around Time Required:
- ☐ Rush (1 Day)
- ☐ 14 Days
- ☐ 30 Days
- ☒ 7 Days
- ☐ Other ( )

BNL F 3101.C

Distribution WHITE (1) - Stays with Sample; PINK (2) - Lab or Other GREEN (3) - Returned to Client with Report GOLDENROD (4) - Field Copy - (Sampler)

METHODS SUMMARY

F3G260184

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Chlorinated Herbicides by GC	SW846 8151A	SW846 8151A
Cyanide, Total	SW846 9012A	SW846 9012A
Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3050B
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A	SW846 7471A
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD
PCBs by SW-846 8082	SW846 8082	SW846 3550B/366
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3550B
Total Organic Carbon	SW846 9060	SW846 9060
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3050B
Volatile Organics by GC/MS	SW846 8260B	SW846 5030

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F3G260184

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FT6LH	001	16891-01	07/25/03	09:00
FT6LK	002	16891-01	07/25/03	09:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC/MS Volatiles

Lot-Sample #...: F3G260184-001 **Work Order #...:** FT6LH1AG **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
Prep Date.....: 07/30/03 **Analysis Date..:** 07/31/03
Prep Batch #...: 3212150 **Analysis Time..:** 02:35
Dilution Factor: 1
% Moisture.....: 11 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	11	ug/kg
Vinyl chloride	ND	5.6	ug/kg
Bromomethane	ND	11	ug/kg
Chloroethane	ND	11	ug/kg
Acetone	ND	22	ug/kg
1,1-Dichloroethene	ND	5.6	ug/kg
Methylene chloride	ND	5.6	ug/kg
Carbon disulfide	ND	5.6	ug/kg
1,1-Dichloroethane	ND	5.6	ug/kg
2-Butanone	ND	22	ug/kg
1,2-Dichloroethene (total)	ND	5.6	ug/kg
Chloroform	ND	5.6	ug/kg
1,1,1-Trichloroethane	ND	5.6	ug/kg
Carbon tetrachloride	ND	5.6	ug/kg
1,2-Dichloroethane	ND	5.6	ug/kg
Benzene	ND	5.6	ug/kg
Trichloroethene	ND	5.6	ug/kg
1,2-Dichloropropane	ND	5.6	ug/kg
Bromodichloromethane	ND	5.6	ug/kg
4-Methyl-2-pentanone	ND	22	ug/kg
cis-1,3-Dichloropropene	ND	5.6	ug/kg
Toluene	ND	5.6	ug/kg
trans-1,3-Dichloropropene	ND	5.6	ug/kg
1,1,2-Trichloroethane	ND	5.6	ug/kg
2-Hexanone	ND	22	ug/kg
Tetrachloroethene	ND	5.6	ug/kg
Dibromochloromethane	ND	5.6	ug/kg
Chlorobenzene	ND	5.6	ug/kg
Ethylbenzene	ND	5.6	ug/kg
Xylenes (total)	ND	5.6	ug/kg
Styrene	ND	5.6	ug/kg
Bromoform	ND	5.6	ug/kg
1,1,2,2-Tetrachloroethane	ND	5.6	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	110	(76 - 129)
Dibromofluoromethane	118	(81 - 128)
1,2-Dichloroethane-d4	120	(77 - 130)
4-Bromofluorobenzene	103	(58 - 144)

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BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC/MS Volatiles

Lot-Sample #...: F3G260184-001 **Work Order #...:** FT6LH1AG **Matrix.....:** SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC/MS Semivolatiles

Lot-Sample #...: F3G260184-001 **Work Order #...:** FT6LH1AH **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
Prep Date.....: 07/28/03 **Analysis Date..:** 07/29/03
Prep Batch #...: 3209220 **Analysis Time..:** 17:44
Dilution Factor: 1
% Moisture.....: 11 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	370	ug/kg
bis(2-Chloroethyl)-ether	ND	370	ug/kg
2-Chlorophenol	ND	370	ug/kg
1,3-Dichlorobenzene	ND	370	ug/kg
1,4-Dichlorobenzene	ND	370	ug/kg
1,2-Dichlorobenzene	ND	370	ug/kg
2-Methylphenol	ND	370	ug/kg
2,2'-oxybis(1-Chloropropane)	ND	370	ug/kg
4-Methylphenol	ND	370	ug/kg
N-Nitrosodi-n-propyl-amine	ND	370	ug/kg
Hexachloroethane	ND	370	ug/kg
Nitrobenzene	ND	370	ug/kg
Isophorone	ND	370	ug/kg
2-Nitrophenol	ND	370	ug/kg
2,4-Dimethylphenol	ND	370	ug/kg
bis(2-Chloroethoxy) methane	ND	370	ug/kg
2,4-Dichlorophenol	ND	370	ug/kg
1,2,4-Trichloro-benzene	ND	370	ug/kg
Naphthalene	ND	370	ug/kg
4-Chloroaniline	ND	370	ug/kg
Hexachlorobutadiene	ND	370	ug/kg
4-Chloro-3-methylphenol	ND	370	ug/kg
2-Methylnaphthalene	ND	370	ug/kg
Hexachlorocyclopenta-diene	ND	1800	ug/kg
2,4,6-Trichloro-phenol	ND	370	ug/kg
2,4,5-Trichloro-phenol	ND	370	ug/kg
2-Chloronaphthalene	ND	370	ug/kg
2-Nitroaniline	ND	1800	ug/kg
Dimethyl phthalate	ND	370	ug/kg
Acenaphthylene	ND	370	ug/kg
2,6-Dinitrotoluene	ND	370	ug/kg

(Continued on next page)

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC/MS Semivolatiles

Lot-Sample #...: F3G260184-001 **Work Order #...:** FT6LH1AH **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
3-Nitroaniline	ND	1800	ug/kg
Acenaphthene	ND	370	ug/kg
2,4-Dinitrophenol	ND	1800	ug/kg
4-Nitrophenol	ND	1800	ug/kg
Dibenzofuran	ND	370	ug/kg
2,4-Dinitrotoluene	ND	370	ug/kg
Diethyl phthalate	ND	370	ug/kg
Fluorene	ND	370	ug/kg
4-Chlorophenyl phenyl ether	ND	370	ug/kg
4-Nitroaniline	ND	1800	ug/kg
4,6-Dinitro-2-methylphenol	ND	1800	ug/kg
N-Nitrosodiphenylamine	ND	370	ug/kg
4-Bromophenyl phenyl ether	ND	370	ug/kg
Hexachlorobenzene	ND	370	ug/kg
Pentachlorophenol	ND	1800	ug/kg
Phenanthrene	**84 J**	**370**	**ug/kg**
Anthracene	ND	370	ug/kg
Carbazole	ND	370	ug/kg
Di-n-butyl phthalate	ND	370	ug/kg
Fluoranthene	**240 J**	**370**	**ug/kg**
Pyrene	**230 J**	**370**	**ug/kg**
Butyl benzyl phthalate	ND	370	ug/kg
Benzo(a)anthracene	**120 J**	**370**	**ug/kg**
3,3'-Dichlorobenzidine	ND	1800	ug/kg
Chrysene	**160 J**	**370**	**ug/kg**
bis(2-Ethylhexyl) phthalate	ND	370	ug/kg
Di-n-octyl phthalate	ND	370	ug/kg
Benzo(b)fluoranthene	**200 J**	**370**	**ug/kg**
Benzo(k)fluoranthene	**250 J**	**370**	**ug/kg**
Benzo(a)pyrene	ND	370	ug/kg
Indeno(1,2,3-cd)pyrene	**200 J**	**370**	**ug/kg**
Benzo(ghi)perylene	**190 J**	**370**	**ug/kg**
Dibenzo(a,h)anthracene	ND	370	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	71	(19 - 115)
Phenol-d5	75	(27 - 115)
Nitrobenzene-d5	82	(10 - 115)
2-Fluorobiphenyl	87	(10 - 115)
2,4,6-Tribromophenol	75	(19 - 115)
Terphenyl-d14	76	(10 - 115)

(Continued on next page)

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC/MS Semivolatiles

Lot-Sample #...: F3G260184-001 **Work Order #...:** FT6LH1AH **Matrix.....:** SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC Semivolatiles

Lot-Sample #...: F3G260184-001 **Work Order #...:** FT6LH1AD **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
Prep Date.....: 07/30/03 **Analysis Date..:** 07/31/03
Prep Batch #...: 3211288 **Analysis Time..:** 01:39
Dilution Factor: 1
% Moisture.....: 11 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	1.9	ug/kg
Heptachlor epoxide	ND	1.9	ug/kg
Toxaphene	ND	75	ug/kg
Aldrin	ND	1.9	ug/kg
alpha-BHC	ND	1.9	ug/kg
beta-BHC	ND	1.9	ug/kg
delta-BHC	ND	1.9	ug/kg
gamma-BHC (Lindane)	ND	1.9	ug/kg
4,4'-DDD	ND	1.9	ug/kg
4,4'-DDE	ND	1.9	ug/kg
4,4'-DDT	ND	1.9	ug/kg
Dieldrin	ND	1.9	ug/kg
Endosulfan I	ND	1.9	ug/kg
Endosulfan II	ND	1.9	ug/kg
Endosulfan sulfate	ND	1.9	ug/kg
Endrin	ND	1.9	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	85	(18 - 150)
Decachlorobiphenyl	93	(30 - 150)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC Semivolatiles

Lot-Sample #...: F3G260184-001 **Work Order #...:** FT6LH1AJ **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
Prep Date.....: 07/30/03 **Analysis Date..:** 07/30/03
Prep Batch #...: 3211141 **Analysis Time..:** 19:22
Dilution Factor: 1
% Moisture.....: 11 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	105	(14 - 150)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC Semivolatiles

Lot-Sample #...: F3G260184-001 **Work Order #...:** FT6LH1AE **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
Prep Date.....: 07/29/03 **Analysis Date..:** 07/31/03
Prep Batch #...: 3210264 **Analysis Time..:** 23:54
Dilution Factor: 1
% Moisture.....: 11 **Method.....:** SW846 8151A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	90	ug/kg
2,4-DB	ND	90	ug/kg
2,4,5-TP (Silvex)	ND	22	ug/kg
2,4,5-T	ND	22	ug/kg
Dalapon	ND	45	ug/kg
Dicamba	ND	45	ug/kg
Dichlorprop	ND	90	ug/kg
Dinoseb	ND	13	ug/kg
MCPA	ND	9000	ug/kg
MCPP	ND	9000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4-Dichlorophenylacetic acid	109	(10 - 150)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC Semivolatiles

Lot-Sample #...: F3G260184-001 **Work Order #...:** FT6LH2AE **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
Prep Date.....: 08/01/03 **Analysis Date..:** 08/04/03
Prep Batch #...: 3213442 **Analysis Time..:** 14:33
Dilution Factor: 1
% Moisture.....: 11 **Method.....:** SW846 8151A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	90	ug/kg
2,4-DB	ND	90	ug/kg
2,4,5-TP (Silvex)	ND	22	ug/kg
2,4,5-T	ND	22	ug/kg
Dalapon	ND	45	ug/kg
Dicamba	ND	45	ug/kg
Dichlorprop	ND	90	ug/kg
Dinoseb	ND	13	ug/kg
MCPA	ND	9000	ug/kg
MCPP	ND	9000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4-Dichlorophenylacetic acid	63	(10 - 150)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

TOTAL Metals

Lot-Sample #...: F3G260184-001 **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
% Moisture.....: 11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3209183						
Mercury	ND	0.037	mg/kg	SW846 7471A	07/28-07/29/03	FT6LH1AK
		Dilution Factor: 1		Analysis Time..: 11:20		
Prep Batch #...: 3210179						
Aluminum	**6070 N**	**22.4**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1AQ**
		Dilution Factor: 1		Analysis Time..: 15:38		
Arsenic	**1.4**	**1.1**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1AL**
		Dilution Factor: 1		Analysis Time..: 16:53		
Lead	**9.1**	**0.34**	**mg/kg**	**SW846 6010B**	**07/29-07/31/03**	**FT6LH1AM**
		Dilution Factor: 1		Analysis Time..: 21:30		
Antimony	**0.41 B**	**1.1**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1AR**
		Dilution Factor: 1		Analysis Time..: 16:53		
Barium	**11.4 B**	**22.4**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1AT**
		Dilution Factor: 1		Analysis Time..: 16:53		
Selenium	**0.28 B**	**0.56**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1AN**
		Dilution Factor: 1		Analysis Time..: 16:53		
Beryllium	**0.18 B**	**0.56**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1AU**
		Dilution Factor: 1		Analysis Time..: 16:53		
Thallium	**1.0 BN**	**1.1**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1AP**
		Dilution Factor: 1		Analysis Time..: 16:53		
Cadmium	ND	0.56	mg/kg	SW846 6010B	07/29-07/30/03	FT6LH1AV
		Dilution Factor: 1		Analysis Time..: 16:53		
Calcium	**287 B**	**561**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1AW**
		Dilution Factor: 1		Analysis Time..: 16:53		
Chromium	**6.3**	**1.1**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1AX**
		Dilution Factor: 1		Analysis Time..: 16:53		
Cobalt	**1.7 B**	**5.6**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1A0**
		Dilution Factor: 1		Analysis Time..: 16:53		

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BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

TOTAL Metals

Lot-Sample #...: F3G260184-001 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Copper	**7.3**	**2.8**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1A1**
		Dilution Factor: 1		Analysis Time..: 15:38		
Iron	**6420 N**	**11.2**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1A2**
		Dilution Factor: 1		Analysis Time..: 15:38		
Magnesium	**595**	**561**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1A3**
		Dilution Factor: 1		Analysis Time..: 16:53		
Manganese	**58.0 N**	**1.7**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1A4**
		Dilution Factor: 1		Analysis Time..: 16:53		
Nickel	**3.4 B**	**4.5**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1A5**
		Dilution Factor: 1		Analysis Time..: 16:53		
Potassium	ND	561	mg/kg	SW846 6010B	07/29-07/30/03	FT6LH1A6
		Dilution Factor: 1		Analysis Time..: 15:38		
Silver	ND	1.1	mg/kg	SW846 6010B	07/29-07/30/03	FT6LH1A7
		Dilution Factor: 1		Analysis Time..: 16:53		
Sodium	**29.0 B**	**561**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1A8**
		Dilution Factor: 1		Analysis Time..: 15:38		
Vanadium	**11.7**	**5.6**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1A9**
		Dilution Factor: 1		Analysis Time..: 16:53		
Zinc	**16.0**	**2.2**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LH1CA**
		Dilution Factor: 1		Analysis Time..: 16:53		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

N Spiked analyte recovery is outside stated control limits.

B Estimated result. Result is less than RL.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

General Chemistry

Lot-Sample #...: F3G260184-001 **Work Order #...:** FT6LH **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Cyanide, Total	ND	0.56	mg/kg	SW846 9012A	07/29/03	3210452
		Dilution Factor: 1		Analysis Time..: 00:00		
Percent Moisture	**10.8**	**0.10**	**%**	**MCAWW 160.3 MOD**	**07/28-07/29/03**	**3209559**
		Dilution Factor: 1		Analysis Time..: 00:00		
Total Organic Carbon	**11400**	**28.0**	**mg/kg**	**SW846 9060**	**07/29/03**	**3210558**
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC/MS Volatiles

Lot-Sample #...: F3G260184-002 **Work Order #...:** FT6LK1AT **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
Prep Date.....: 07/30/03 **Analysis Date..:** 07/31/03
Prep Batch #...: 3212150 **Analysis Time..:** 03:08
Dilution Factor: 1
% Moisture.....: 12 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	11	ug/kg
Vinyl chloride	ND	5.7	ug/kg
Bromomethane	ND	11	ug/kg
Chloroethane	ND	11	ug/kg
Acetone	**7.2 J**	**23**	**ug/kg**
1,1-Dichloroethene	ND	5.7	ug/kg
Methylene chloride	ND	5.7	ug/kg
Carbon disulfide	ND	5.7	ug/kg
1,1-Dichloroethane	ND	5.7	ug/kg
2-Butanone	ND	23	ug/kg
1,2-Dichloroethene (total)	ND	5.7	ug/kg
Chloroform	ND	5.7	ug/kg
1,1,1-Trichloroethane	ND	5.7	ug/kg
Carbon tetrachloride	ND	5.7	ug/kg
1,2-Dichloroethane	ND	5.7	ug/kg
Benzene	ND	5.7	ug/kg
Trichloroethene	ND	5.7	ug/kg
1,2-Dichloropropane	ND	5.7	ug/kg
Bromodichloromethane	ND	5.7	ug/kg
4-Methyl-2-pentanone	ND	23	ug/kg
cis-1,3-Dichloropropene	ND	5.7	ug/kg
Toluene	ND	5.7	ug/kg
trans-1,3-Dichloropropene	ND	5.7	ug/kg
1,1,2-Trichloroethane	ND	5.7	ug/kg
2-Hexanone	ND	23	ug/kg
Tetrachloroethene	ND	5.7	ug/kg
Dibromochloromethane	ND	5.7	ug/kg
Chlorobenzene	ND	5.7	ug/kg
Ethylbenzene	ND	5.7	ug/kg
Xylenes (total)	ND	5.7	ug/kg
Styrene	ND	5.7	ug/kg
Bromoform	ND	5.7	ug/kg
1,1,2,2-Tetrachloroethane	ND	5.7	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	109	(76 - 129)
Dibromofluoromethane	117	(81 - 128)
1,2-Dichloroethane-d4	116	(77 - 130)
4-Bromofluorobenzene	115	(58 - 144)

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BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC/MS Volatiles

Lot-Sample #...: F3G260184-002 Work Order #...: FT6LK1AT Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC/MS Semivolatiles

Lot-Sample #...: F3G260184-002 **Work Order #...:** FT6LK1AU **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
Prep Date.....: 07/28/03 **Analysis Date..:** 07/29/03
Prep Batch #...: 3209220 **Analysis Time..:** 19:34
Dilution Factor: 1
% Moisture.....: 12 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	370	ug/kg
bis(2-Chloroethyl)-ether	ND	370	ug/kg
2-Chlorophenol	ND	370	ug/kg
1,3-Dichlorobenzene	ND	370	ug/kg
1,4-Dichlorobenzene	ND	370	ug/kg
1,2-Dichlorobenzene	ND	370	ug/kg
2-Methylphenol	ND	370	ug/kg
2,2'-oxybis(1-Chloropropane)	ND	370	ug/kg
4-Methylphenol	ND	370	ug/kg
N-Nitrosodi-n-propyl-amine	ND	370	ug/kg
Hexachloroethane	ND	370	ug/kg
Nitrobenzene	ND	370	ug/kg
Isophorone	ND	370	ug/kg
2-Nitrophenol	ND	370	ug/kg
2,4-Dimethylphenol	ND	370	ug/kg
bis(2-Chloroethoxy) methane	ND	370	ug/kg
2,4-Dichlorophenol	ND	370	ug/kg
1,2,4-Trichloro-benzene	ND	370	ug/kg
Naphthalene	ND	370	ug/kg
4-Chloroaniline	ND	370	ug/kg
Hexachlorobutadiene	ND	370	ug/kg
4-Chloro-3-methylphenol	ND	370	ug/kg
2-Methylnaphthalene	ND	370	ug/kg
Hexachlorocyclopenta-diene	ND	1800	ug/kg
2,4,6-Trichloro-phenol	ND	370	ug/kg
2,4,5-Trichloro-phenol	ND	370	ug/kg
2-Chloronaphthalene	ND	370	ug/kg
2-Nitroaniline	ND	1800	ug/kg
Dimethyl phthalate	ND	370	ug/kg
Acenaphthylene	ND	370	ug/kg
2,6-Dinitrotoluene	ND	370	ug/kg

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BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC/MS Semivolatiles

Lot-Sample #...: F3G260184-002 **Work Order #...:** FT6LK1AU **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
3-Nitroaniline	ND	1800	ug/kg
Acenaphthene	ND	370	ug/kg
2,4-Dinitrophenol	ND	1800	ug/kg
4-Nitrophenol	ND	1800	ug/kg
Dibenzofuran	ND	370	ug/kg
2,4-Dinitrotoluene	ND	370	ug/kg
Diethyl phthalate	ND	370	ug/kg
Fluorene	ND	370	ug/kg
4-Chlorophenyl phenyl ether	ND	370	ug/kg
4-Nitroaniline	ND	1800	ug/kg
4,6-Dinitro-2-methylphenol	ND	1800	ug/kg
N-Nitrosodiphenylamine	ND	370	ug/kg
4-Bromophenyl phenyl ether	ND	370	ug/kg
Hexachlorobenzene	ND	370	ug/kg
Pentachlorophenol	ND	1800	ug/kg
Phenanthrene	ND	370	ug/kg
Anthracene	ND	370	ug/kg
Carbazole	ND	370	ug/kg
Di-n-butyl phthalate	ND	370	ug/kg
Fluoranthene	ND	370	ug/kg
Pyrene	ND	370	ug/kg
Butyl benzyl phthalate	ND	370	ug/kg
Benzo(a)anthracene	ND	370	ug/kg
3,3'-Dichlorobenzidine	ND	1800	ug/kg
Chrysene	ND	370	ug/kg
bis(2-Ethylhexyl) phthalate	ND	370	ug/kg
Di-n-octyl phthalate	ND	370	ug/kg
Benzo(b)fluoranthene	ND	370	ug/kg
Benzo(k)fluoranthene	ND	370	ug/kg
Benzo(a)pyrene	ND	370	ug/kg
Indeno(1,2,3-cd)pyrene	ND	370	ug/kg
Benzo(ghi)perylene	ND	370	ug/kg
Dibenzo(a,h)anthracene	ND	370	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	68	(19 - 115)
Phenol-d5	69	(27 - 115)
Nitrobenzene-d5	78	(10 - 115)
2-Fluorobiphenyl	84	(10 - 115)
2,4,6-Tribromophenol	72	(19 - 115)
Terphenyl-d14	65	(10 - 115)

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BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC/MS Semivolatiles

Lot-Sample #...: F3G260184-002 Work Order #...: FT6LK1AU Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC Semivolatiles

Lot-Sample #...: F3G260184-002 **Work Order #...:** FT6LK1AP **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
Prep Date.....: 07/30/03 **Analysis Date..:** 07/31/03
Prep Batch #...: 3211288 **Analysis Time..:** 02:03
Dilution Factor: 1
% Moisture.....: 12 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Heptachlor	ND	1.9	ug/kg
Heptachlor epoxide	ND	1.9	ug/kg
Toxaphene	ND	76	ug/kg
Aldrin	ND	1.9	ug/kg
alpha-BHC	ND	1.9	ug/kg
beta-BHC	ND	1.9	ug/kg
delta-BHC	ND	1.9	ug/kg
gamma-BHC (Lindane)	ND	1.9	ug/kg
4,4'-DDD	ND	1.9	ug/kg
4,4'-DDE	ND	1.9	ug/kg
4,4'-DDT	ND	1.9	ug/kg
Dieldrin	ND	1.9	ug/kg
Endosulfan I	ND	1.9	ug/kg
Endosulfan II	ND	1.9	ug/kg
Endosulfan sulfate	ND	1.9	ug/kg
Endrin	ND	1.9	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	92	(18 - 150)
Decachlorobiphenyl	94	(30 - 150)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC Semivolatiles

Lot-Sample #...:	F3G260184-002	**Work Order #...:**	FT6LK1AV	**Matrix.....:**	SOLID
Date Sampled...:	07/25/03 09:00	**Date Received..:**	07/26/03		
Prep Date.....:	07/30/03	**Analysis Date..:**	07/30/03		
Prep Batch #...:	3211141	**Analysis Time..:**	20:19		
Dilution Factor:	1				
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	130	(14 - 150)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC Semivolatiles

Lot-Sample #...: F3G260184-002 **Work Order #...:** FT6LK1AQ **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
Prep Date.....: 07/29/03 **Analysis Date..:** 08/01/03
Prep Batch #...: 3210264 **Analysis Time..:** 11:47
Dilution Factor: 1
% Moisture.....: 12 **Method.....:** SW846 8151A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	90	ug/kg
2,4-DB	ND	90	ug/kg
2,4,5-TP (Silvex)	ND	23	ug/kg
2,4,5-T	ND	23	ug/kg
Dalapon	ND	45	ug/kg
Dicamba	ND	45	ug/kg
Dichlorprop	ND	90	ug/kg
Dinoseb	ND	14	ug/kg
MCPA	ND	9000	ug/kg
MCPP	ND	9000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4-Dichlorophenylacetic acid	82	(10 - 150)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

GC Semivolatiles

Lot-Sample #...: F3G260184-002 **Work Order #...:** FT6LK2AQ **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
Prep Date.....: 08/01/03 **Analysis Date..:** 08/04/03
Prep Batch #...: 3213442 **Analysis Time..:** 15:05
Dilution Factor: 1
% Moisture.....: 12 **Method.....:** SW846 8151A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	90	ug/kg
2,4-DB	ND	90	ug/kg
2,4,5-TP (Silvex)	ND	23	ug/kg
2,4,5-T	ND	23	ug/kg
Dalapon	ND	45	ug/kg
Dicamba	ND	45	ug/kg
Dichlorprop	ND	90	ug/kg
Dinoseb	ND	14	ug/kg
MCPA	ND	9000	ug/kg
MCPP	ND	9000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4-Dichlorophenylacetic acid	72	(10 - 150)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

TOTAL Metals

Lot-Sample #...: F3G260184-002 **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
% Moisture.....: 12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3209183						
Mercury	**0.023 B**	**0.038**	**mg/kg**	**SW846 7471A**	**07/28-07/29/03**	**FT6LK1AW**
		Dilution Factor: 1		Analysis Time..: 11:27		
Prep Batch #...: 3210179						
Aluminum	**5880 N**	**22.6**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1A3**
		Dilution Factor: 1		Analysis Time..: 15:55		
Arsenic	**1.4**	**1.1**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1AX**
		Dilution Factor: 1		Analysis Time..: 17:11		
Lead	**6.3**	**0.34**	**mg/kg**	**SW846 6010B**	**07/29-07/31/03**	**FT6LK1A0**
		Dilution Factor: 1		Analysis Time..: 21:47		
Antimony	ND	1.1	mg/kg	SW846 6010B	07/29-07/30/03	FT6LK1A4
		Dilution Factor: 1		Analysis Time..: 17:11		
Barium	**8.3 B**	**22.6**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1A5**
		Dilution Factor: 1		Analysis Time..: 17:11		
Selenium	**0.41 B**	**0.57**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1A1**
		Dilution Factor: 1		Analysis Time..: 17:11		
Beryllium	**0.13 B**	**0.57**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1A6**
		Dilution Factor: 1		Analysis Time..: 17:11		
Thallium	**1.2 N**	**1.1**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1A2**
		Dilution Factor: 1		Analysis Time..: 17:11		
Cadmium	ND	0.57	mg/kg	SW846 6010B	07/29-07/30/03	FT6LK1A7
		Dilution Factor: 1		Analysis Time..: 17:11		
Calcium	**150 B**	**565**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1A8**
		Dilution Factor: 1		Analysis Time..: 17:11		
Chromium	**5.2**	**1.1**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1A9**
		Dilution Factor: 1		Analysis Time..: 17:11		
Cobalt	**1.2 B**	**5.7**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1AA**
		Dilution Factor: 1		Analysis Time..: 17:11		

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BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

TOTAL Metals

Lot-Sample #...: F3G260184-002 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Copper	**3.5**	**2.8**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1AC**
		Dilution Factor: 1		Analysis Time..: 15:55		
Iron	**6260 N**	**11.3**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1AD**
		Dilution Factor: 1		Analysis Time..: 15:55		
Magnesium	**410 B**	**565**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1AE**
		Dilution Factor: 1		Analysis Time..: 17:11		
Manganese	**36.7 N**	**1.7**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1AF**
		Dilution Factor: 1		Analysis Time..: 17:11		
Nickel	**2.5 B**	**4.5**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1AG**
		Dilution Factor: 1		Analysis Time..: 17:11		
Potassium	**258 B**	**565**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1AH**
		Dilution Factor: 1		Analysis Time..: 15:55		
Silver	ND	1.1	mg/kg	SW846 6010B	07/29-07/30/03	FT6LK1AJ
		Dilution Factor: 1		Analysis Time..: 17:11		
Sodium	**27.1 B**	**565**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1AK**
		Dilution Factor: 1		Analysis Time..: 15:55		
Vanadium	**12.0**	**5.7**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1AL**
		Dilution Factor: 1		Analysis Time..: 17:11		
Zinc	**24.7**	**2.3**	**mg/kg**	**SW846 6010B**	**07/29-07/30/03**	**FT6LK1CA**
		Dilution Factor: 1		Analysis Time..: 17:11		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

N Spiked analyte recovery is outside stated control limits.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 16891-01

General Chemistry

Lot-Sample #...: F3G260184-002 **Work Order #...:** FT6LK **Matrix.....:** SOLID
Date Sampled...: 07/25/03 09:00 **Date Received..:** 07/26/03
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Cyanide, Total	ND	0.57	mg/kg	SW846 9012A	07/29/03	3210452
		Dilution Factor: 1		Analysis Time..: 00:00		
Percent Moisture	**11.5**	**0.10**	**%**	**MCAWW 160.3 MOD**	**07/28-07/29/03**	**3209559**
		Dilution Factor: 1		Analysis Time..: 00:00		
Total Organic Carbon	**>18100**	**28.3**	**mg/kg**	**SW846 9060**	**07/29/03**	**3210558**
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.