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NAS CECIL FIELD, FL  
5090.3a

SOURCE REMOVAL REPORT FOR EXCAVATION OF PETROLEUM-CONTAMINATED SOIL  
AT FACILITY 616 NAS CECIL FIELD FL  
2/18/2000  
CH2MHILL CONSTRUCTORS INC

**SOURCE REMOVAL REPORT  
EXCAVATION OF PETROLEUM-CONTAMINATED SOIL AT  
FACILITY 616**

**NAVAL AIR STATION CECIL FIELD  
JACKSONVILLE, FLORIDA**

**Revision No. 00**

**Unit Identification Code: N65928**

**Contract Task Order No. 0005  
CONTRACT NO. N62467-98-D-0995**

**February 2000**

**Prepared by**



**CH2MHILL**  
*Constructors, Inc.*

115 Perimeter Center Place, N.E.  
Suite 700  
Atlanta, GA 30346

**Submitted to**

**Department of the Navy, Southern Division  
Naval Facilities Engineering Command  
2155 Eagle Drive  
North Charleston, South Carolina 29406**

**Release of this document requires the prior notification  
of the chief official of the activity studied.**

**Source Removal Report  
Excavation of Petroleum-Contaminated Soil at  
Facility 616  
Naval Air Station Cecil Field  
Jacksonville, Florida**

Revision No. 00

**Contract No. N62467-98-D-0995, CTO No. 0005**

Submitted to  
**Department of the Navy, Southern Division  
Naval Facilities Engineering Command**

Prepared by

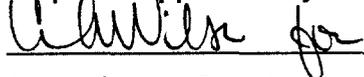


**CH2MHILL**  
*Constructors, Inc.*

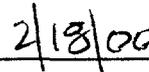
115 Perimeter Center Place, N.E.  
Suite 700  
Atlanta, GA 30346

February 2000

**Prepared/Approved By:**

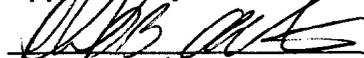


JoAnne Snelson, Project Manager

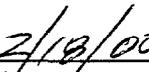


Date

**Approved By:**



Philip Altman, Program Manager



Date

**Client Acceptance:**

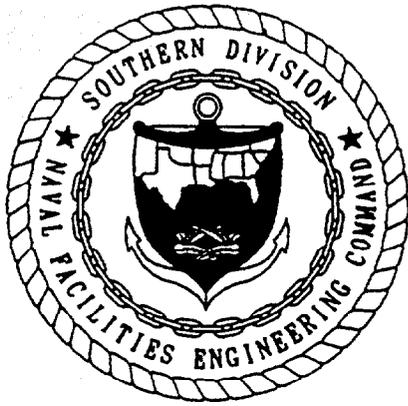
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U.S. Navy Responsible Authority

\_\_\_\_\_  
Date

02567

## DISTRIBUTION LIST

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Southern Division, Naval Facilities Engineering Command	1
NAS Cecil Field	2
Florida Department of Environmental Protection	1
CH2M HILL Constructors, Inc.	2
CH2M HILL, Inc.	1
Harding Lawson Associates	1



**CERTIFICATION OF TECHNICAL  
DATA CONFORMITY (FEBRUARY 2000)**

The contractor, CH2M HILL Constructors, Inc., hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-98-D-0995, Contract Task Order (CTO) No. 0005 is complete and accurate and complies with all requirements of this contract.

DATE: February 18, 2000

NAME AND TITLE OF CERTIFYING OFFICIAL:

JoAnne T. Snelson  
JoAnne T. Snelson, P.E.  
Project Manager

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**GLOSSARY**

bls	below land surface
CCI	CH2M HILL Constructors, Inc.
CTO	Contract Task Order
HLA	Harding Lawson Associates
NAS	Naval Air Station
NAVFAC	Naval Facilities Engineering Command

## 1.0 INTRODUCTION

CH2M HILL Constructors, Inc. (CCI) was contracted by the Southern Division, Naval Facilities Engineering Command (NAVFAC) to perform excavation, transportation, and disposal of petroleum-contaminated soil and prepare a Source Removal Report for Facility 616 at Naval Air Station (NAS) Cecil Field in Jacksonville, Florida. The Source Removal was conducted in accordance with the Sampling and Analysis Report for Facility 616, dated June 1999, prepared by Harding Lawson Associates (HLA).

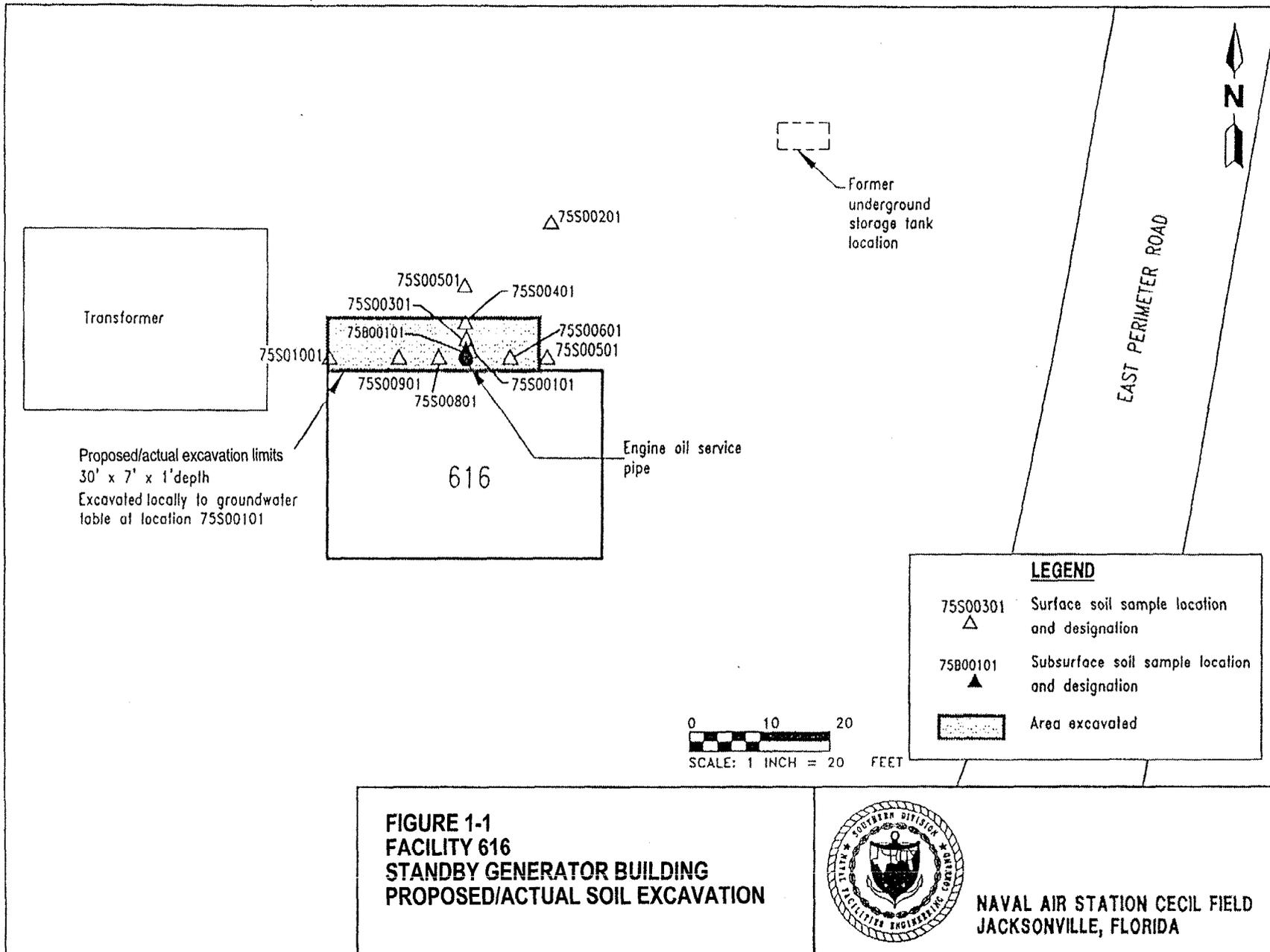
The scope of services for excavation of petroleum-contaminated soil at Facility 616 is described in detail in the NAS Cecil Field Basewide Work Plan, Revision 01 (CCI, 1998) and the Work Plan Addendum No. 02, (CCI, 1999). This work was authorized under Remedial Action Contract No. N62467-98-D-0995, CTO No. 0005.

**1.1 SITE BACKGROUND.** Facility 616 is a standby generator building located at the northwest corner of the intersection of East Perimeter Road and Warehouse Road in the Yellow Water Weapons Area north of NAS Cecil Field.

Soil samples were collected by HLA in an area of stained soil and stressed vegetation near an oil service pipe protruding from the north wall of Facility 616 to delineate the extent of petroleum-contaminated soil. The oil service pipe is connected to the oil pans of diesel engines within the building and was likely used for engine maintenance.

A site plan showing the proposed delineated soil excavation limits prior to this Source Removal is presented in Figure 1-1.

**1.2 PROJECT OBJECTIVES.** The primary objective of the soil excavation was to remove petroleum-contaminated soil to the horizontal excavation limits shown on Figure 1-1 and the vertical excavation limits of locally to groundwater at HLA soil sample location 75S00101 and 1 foot below land surface (bls) for the remaining excavation area, as specified in the Sampling and Analysis Report for Facility 616, Revision 1.0 (HLA, 1999). Soils were to be excavated until the vertical and horizontal excavation limits were reached, and then the excavated area backfilled with clean fill material imported from off site.



## 2.0 SOURCE REMOVAL ACTIVITIES

A source removal was conducted at Facility 616 on December 29 and 30, 1999, with a total of 16.78 tons of petroleum-contaminated soil excavated. The excavated soil was transported and disposed of off-site on December 30, 1999. Photographs showing the site before, during, and after the source removal are presented in Appendix A.

**2.1 SITE PREPARATION.** In preparation for excavation, utility locations were conducted by Sunshine State One-call of Florida. The excavation area was marked for utilities and these areas were hand-excavated and the utilities uncovered.

### 2.2 SOIL EXCAVATION AND DISPOSAL

**2.2.1 Soil Excavation.** Soils were excavated to the horizontal excavation limits shown on Figure 1-1 and the vertical excavation limits of locally to groundwater (7 feet bls) at HLA soil sample location 75S00101 and 1 foot bls for the remaining excavation area, as specified in the Sampling and Analysis Report for Facility 616, Revision 1.0 (HLA, 1999). An area 2 feet wide by 4 feet long was excavated around HLA soil sample location 75S00101.

The soil was excavated using a mini-excavator and was stockpiled, bermed, and covered prior to being loaded into a truck for transportation and disposal. Based on the manifest and truck weight ticket, 16.78 tons of petroleum-contaminated soil were excavated and disposed of offsite. The actual horizontal excavation limits matched the proposed horizontal excavation limits specified in the HLA document and are shown on Figure 1-1.

**2.2.2 Soil Transportation and Disposal.** The petroleum-contaminated soil was transported offsite by a truck provided by Pritchett Trucking to the Chesser Island Road Landfill in Folkston, Georgia. A summary of the manifest is presented in Table 2-1, and a copy of the manifest and of the certificate of disposal are presented in Appendices B and C, respectively.

**TABLE 2-1  
Summary of the Manifest for Soil Disposal**

Date	Truck No.	Company	Manifest No.	Weight (pounds)	Tare (pounds)	Net (pounds)	Net (tons)
12/30/99	315	Pritchett Trucking	87771	57,180	23,620	33,560	16.78

**2.2.3 Backfilling and Site Restoration.** The material used to backfill the excavation was clean fill brought in from the Dallas Harts Borrow Pit in Jacksonville, Florida. The analytical report certifying that the material was clean fill is presented in Appendix D.

Once the excavation area was backfilled, the site was graded and seeded with a mixture of rye and bahia grass.

### 2.3 CONFIRMATORY SAMPLING AND ANALYSIS

No confirmatory sampling and analyses were performed based on the Sampling and Analysis Report for Facility 616, Revision 1.0 (HLA, 1999) and the Baseline PSC Dig and Haul Schedule and Status prepared by Tetra Tech NUS, Inc. in December 1999.

### 3.0 CONCLUSIONS

A total of 16.78 tons of petroleum-contaminated soil at Facility 616 were removed and disposed of offsite during this source removal. The soil was excavated to the horizontal excavation limits shown on Figure 1-1 and the vertical excavation limits of locally to groundwater (7 feet bls) at HLA soil sample location 75S00101 and 1 foot bls for the remaining excavation area. The actual vertical and horizontal excavation limits matched the proposed vertical and horizontal excavation limits specified in the HLA document. No confirmatory sampling and analyses were performed based on the HLA document and the Baseline PSC Dig and Haul Schedule and Status (Tetra Tech NUS, Inc., 1999).

REFERENCES

CH2M HILL Constructors, Inc.; *Basewide Work Plan, Revision 1*; NAS Cecil Field, Jacksonville, Florida; November 1998.

CH2M HILL Constructors, Inc.; *CTO No. 0005 Work Plan Addendum No. 2, Revision 0, Excavation of Lead-, Arsenic-, PCB-, and/or Petroleum-Contaminated Soil from Various Grey Sites*; NAS Cecil Field, Jacksonville, Florida; June 1999.

Harding Lawson Associates; *Sampling and Analysis Report, Facility 616 Standby Generator Building, Base Realignment and Closure, Zone A, Yellow Water Weapons Compound, Revision 1.0*; NAS Cecil Field, Jacksonville, Florida; June 1999.

Tetra Tech NUS, Inc.; *Baseline PSC Dig and Haul Status and Schedule*; NAS Cecil Field, Jacksonville, Florida; December 1999.

**Appendix A**

**Photographs**



1. View of the Facility 616 site prior to excavation



2. View of the Facility 616 depth of excavation measurement



3. View of the Facility 616 depth of excavation measurement at HLA soil sample location 75S00101



4. View of the backfilled, seeded, and mulched Facility 616 excavation

## **Appendix B**

### **Copies of Soil Manifests**



# NON-HAZARDOUS MANIFEST

Print or type. (Form designed for use on a 12-pin dot-matrix printer.)

## NON-HAZARDOUS MANIFEST

1. Generator's US EPA ID No. **F L S 1 1 7 0 0 2 2 4 7 4 0 0 0 1**

Manifest Document No. **0 0 0 1**

2. Page of 1 **1** **Site 616**

3. Generator's Name and Mailing Address  
**CSO/USNAVY SOIV NAVFAC ENG COM  
13200 NORMANDY BLVD.  
JACKSONVILLE, FL 32215**

A. Manifest Number  
**WMNA 87771 87771**

4. Generator's Phone **904 777-4812**

B. State Generator's ID

5. Transporter 1 Company Name  
**PRITCHETT TRUCKING # 315**

6. US EPA ID Number  
**0 6 2 7 9 4 0 0 4 0 2 9**

C. State Transporter's ID  
**FL 984178269**

D. Transporter's Phone  
**(904) 486-2630**

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address  
**CHESSER ISLAND ROAD LANDFILL, INC.  
12.1 MILES SW OF FOLKSTON  
P. O. BOX 128  
FOLKSTON, GA 37537**

10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone  
**912-496-7918**

11. Description of Waste Materials	12. Container		13. Total Quantity	14. Unit Wt./Vol.	1. Misc. Comments
	No.	Type			
a. <b>NON-HAZARDOUS NONREGULATED SOIL FROM SITE 616</b> WM Profile # <b>510963</b>		<b>Dump Truck</b>	<b>16.78</b>	<b>Tons</b>	
b. <b>" " " " " " SITE 631</b> WM Profile #			<b>16.05</b>	<b>Tons</b>	
c. <b>WM Profile #</b>					
d. <b>WM Profile #</b>					

J. Additional Descriptions for Materials Listed Above  
Leachate \_\_\_\_\_ Solidification \_\_\_\_\_  
Bio Remediation \_\_\_\_\_

K. Disposal Location  
Cell \_\_\_\_\_ Level \_\_\_\_\_  
Grid \_\_\_\_\_

15. Special Handling Instructions and Additional Information  
Purchase Order # \_\_\_\_\_ EMERGENCY CONTACT: \_\_\_\_\_

16. GENERATOR'S CERTIFICATION:  
I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

17. Transporter 1 Acknowledgment of Receipt of Materials  
Printed/Typed Name: **Douglas McArthur** Signature: *Douglas McArthur* Month Day Year: **12/19/99**

18. Transporter 2 Acknowledgment of Receipt of Materials  
Printed/Typed Name: **Mark A. Gibson** Signature: *Mark A. Gibson* Month Day Year: **12/30/99**

19. Certificate of Final Treatment/Disposal  
Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month Day Year: \_\_\_\_\_

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.

20. Facility Owner or Operator Certification of receipt of non-hazardous materials covered by this manifest.  
Printed/Typed Name: **Attenderson** Signature: *Attenderson* Month Day Year: **12/30/99**

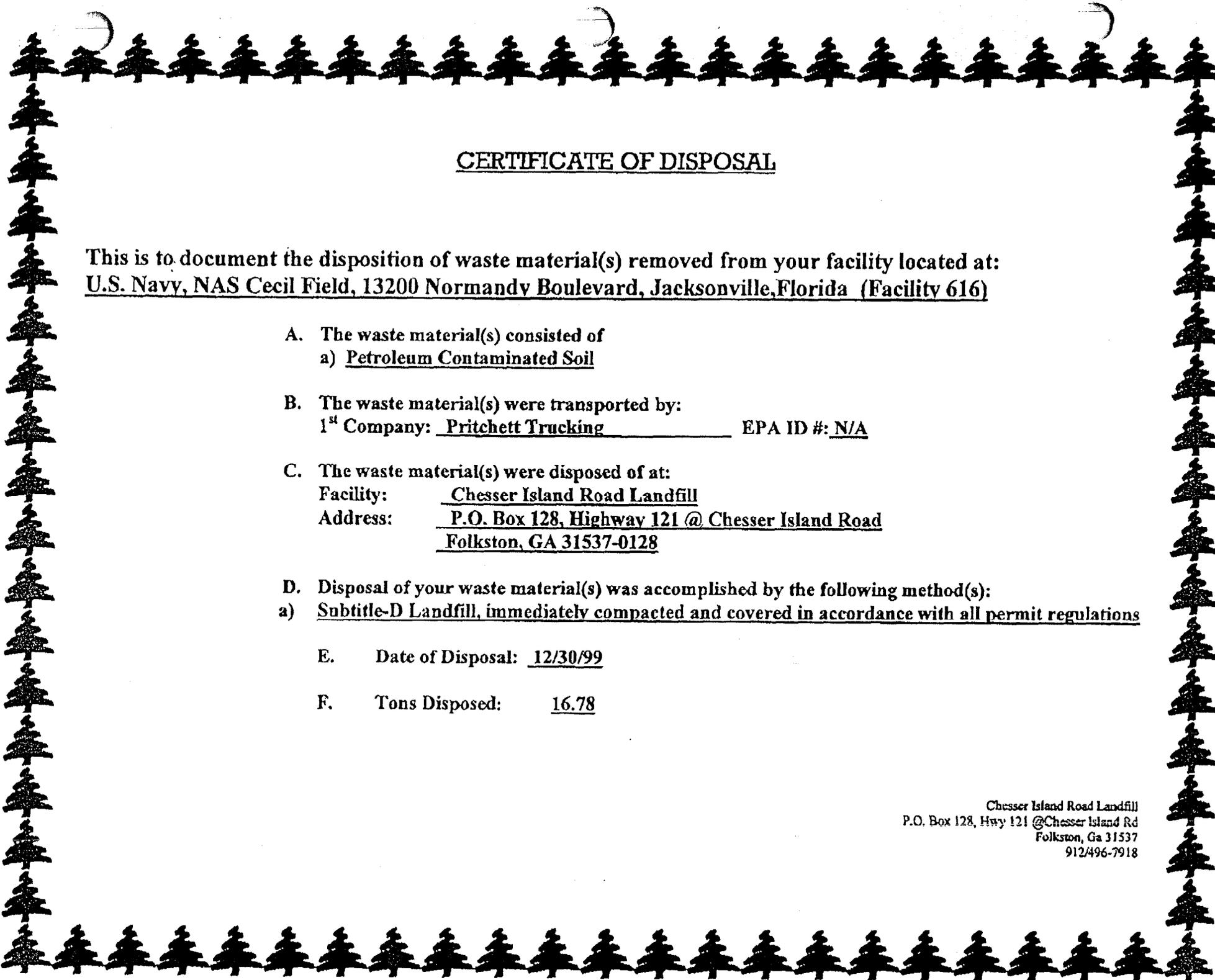
GENERATOR

TRANSPORTER

FACILITY

## Appendix C

### Certificate of Disposal



CERTIFICATE OF DISPOSAL

This is to document the disposition of waste material(s) removed from your facility located at:  
U.S. Navy, NAS Cecil Field, 13200 Normandy Boulevard, Jacksonville, Florida (Facility 616)

- A. The waste material(s) consisted of  
a) Petroleum Contaminated Soil
- B. The waste material(s) were transported by:  
1<sup>st</sup> Company: Pritchett Trucking EPA ID #: N/A
- C. The waste material(s) were disposed of at:  
Facility: Chesser Island Road Landfill  
Address: P.O. Box 128, Highway 121 @ Chesser Island Road  
Folkston, GA 31537-0128
- D. Disposal of your waste material(s) was accomplished by the following method(s):  
a) Subtitle-D Landfill, immediately compacted and covered in accordance with all permit regulations
- E. Date of Disposal: 12/30/99
- F. Tons Disposed: 16.78

Chesser Island Road Landfill  
P.O. Box 128, Hwy 121 @Chesser Island Rd  
Folkston, Ga 31537  
912496-7918

**Appendix D**

**Clean Fill Material Analytical Report**

## Report of Analysis

Page 1 of 2

Client Sample ID:	005-BFI-S-1220-99	Date Sampled:	12/20/99
Lab Sample ID:	F5529-1	Date Received:	12/21/99
Matrix:	SO - Soil	Percent Solids:	88.6
Method:	SW846 8260B		
Project:	Cecil Field-Grey Sites		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H00S415.D	1	12/22/99	CJP	n/a	n/a	VH20
Run #2							

## VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	53.6	82	ug/kg	J
71-43-2	Benzene	ND	3.3	ug/kg	
75-27-4	Bromodichloromethane	ND	3.3	ug/kg	
75-25-2	Bromoform	ND	3.3	ug/kg	
108-90-7	Chlorobenzene	ND	3.3	ug/kg	
75-00-3	Chloroethane	ND	8.2	ug/kg	
67-66-3	Chloroform	ND	3.3	ug/kg	
75-15-0	Carbon disulfide	ND	16	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.3	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.3	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.3	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.3	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.3	ug/kg	
124-48-1	Dibromochloromethane	ND	3.3	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.3	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.3	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.3	ug/kg	
100-41-4	Ethylbenzene	ND	3.3	ug/kg	
591-78-6	2-Hexanone	ND	16	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	16	ug/kg	
74-83-9	Methyl bromide	ND	8.2	ug/kg	
74-87-3	Methyl chloride	ND	8.2	ug/kg	
75-09-2	Methylene chloride	ND	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	16	ug/kg	
100-42-5	Styrene	ND	3.3	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.3	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.3	ug/kg	
127-18-4	Tetrachloroethylene	ND	3.3	ug/kg	
108-88-3	Toluene	ND	3.3	ug/kg	
79-01-6	Trichloroethylene	ND	3.3	ug/kg	
75-01-4	Vinyl chloride	ND	8.2	ug/kg	
1330-20-7	Xylene (total)	ND	9.8	ug/kg	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



## Report of Analysis

Page 1 of 2

Client Sample ID:	005-BFI-S-1220-99	Date Sampled:	12/20/99
Lab Sample ID:	F5529-1	Date Received:	12/21/99
Matrix:	SO - Soil	Percent Solids:	88.6
Method:	SW846 3550B/8270C		
Project:	Cecil Field-Grey Sites		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L002877.D	1	12/30/99	ME	12/30/99	OP1192	SL189
Run #2							

## ABN TCL List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	940	ug/kg	
95-57-8	2-Chlorophenol	ND	380	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	380	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	380	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	940	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	940	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	750	ug/kg	
95-48-7	2-Methylphenol	ND	380	ug/kg	
	3&4-Methylphenol	ND	380	ug/kg	
88-75-5	2-Nitrophenol	ND	380	ug/kg	
100-02-7	4-Nitrophenol	ND	940	ug/kg	
87-86-5	Pentachlorophenol	ND	940	ug/kg	
108-95-2	Phenol	ND	380	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	380	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	380	ug/kg	
83-32-9	Acenaphthene	ND	380	ug/kg	
208-96-8	Accnaphthylene	ND	380	ug/kg	
120-12-7	Anthracene	ND	380	ug/kg	
56-55-3	Benzo(a)anthracene	ND	380	ug/kg	
50-32-8	Benzo(a)pyrene	ND	380	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	380	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	380	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	380	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	380	ug/kg	
85-68-7	Buryl benzyl phthalate	ND	380	ug/kg	
100-51-6	Benzyl Alcohol	ND	380	ug/kg	
91-58-7	2-Chloronaphthalene	ND	380	ug/kg	
106-47-8	4-Chloroaniline	ND	380	ug/kg	
86-74-8	Carbazole	ND	380	ug/kg	
218-01-9	Chrysene	ND	380	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	380	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	380	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	380	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	380	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	380	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	380	ug/kg	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

Page 2 of 2

Client Sample ID: 005-BFI-S-1220-99  
Lab Sample ID: F5529-1  
Matrix: SO - Soil  
Method: SW846 8260B  
Project: Cecil Field-Grey Sites

Date Sampled: 12/20/99  
Date Received: 12/21/99  
Percent Solids: 88.6

## VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		71-122%
2037-26-5	Toluene-D8	103%		73-128%
460-00-4	4-Bromofluorobenzene	110%		53-158%
17060-07-0	1,2-Dichloroethane-D4	111%		71-122%

ND = Not detected  
RL = Reporting Limit  
E = Indicates value exceeds calibration range

J = Indicates an estimated value  
B = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound

### Report of Analysis

Client Sample ID:	005-BFI-S-1220-99	Date Sampled:	12/20/99
Lab Sample ID:	F5529-1	Date Received:	12/21/99
Matrix:	SO - Soil	Percent Solids:	88.6
Method:	SW846 3550B/8081A		
Project:	Cecil Field-Grey Sites		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ST02118.D	1	12/29/99	SKW	12/27/99	OP1184	GST85
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RL	Units	Q
309-00-2	Aldrin	ND	1.9	ug/kg	
319-84-6	alpha-BHC	ND	1.9	ug/kg	
319-85-7	beta-BHC	ND	1.9	ug/kg	
319-86-8	delta-BHC	ND	1.9	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	1.9	ug/kg	
5103-71-9	alpha-Chlordane	ND	3.8	ug/kg	
5103-74-2	gamma-Chlordane	ND	3.8	ug/kg	
60-57-1	Dieldrin	ND	1.9	ug/kg	
72-54-8	4,4'-DDD	ND	3.8	ug/kg	
72-55-9	4,4'-DDE	ND	3.8	ug/kg	
50-29-3	4,4'-DDT	ND	3.8	ug/kg	
72-20-8	Endrin	ND	3.8	ug/kg	
1031-07-8	Endosulfan sulfate	ND	3.8	ug/kg	
7421-93-4	Endrin aldehyde	ND	3.8	ug/kg	
53494-70-5	Endrin ketone	ND	3.8	ug/kg	
959-98-8	Endosulfan-I	ND	1.9	ug/kg	
33213-65-9	Endosulfan-II	ND	3.8	ug/kg	
76-44-8	Heptachlor	ND	1.9	ug/kg	
1024-57-3	Heptachlor epoxide	ND	1.9	ug/kg	
72-43-5	Methoxychlor	ND	7.5	ug/kg	
8001-35-2	Toxaphene	ND	190	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	107%		50-144%
2051-24-3	Decachlorobiphenyl	91%		10-180%

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

Client Sample ID:	005-BFI-S-1220-99	Date Sampled:	12/20/99
Lab Sample ID:	F5529-1	Date Received:	12/21/99
Matrix:	SO - Soil	Percent Solids:	88.6
Method:	SW846 3550B/8270C		
Project:	Cecil Field-Grey Sites		

ABN TCL List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	380	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	380	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	380	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	750	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	380	ug/kg	
132-64-9	Dibenzofuran	ND	380	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	380	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	380	ug/kg	
84-66-2	Diethyl phthalate	ND	380	ug/kg	
131-11-3	Dimethyl phthalate	ND	380	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	380	ug/kg	
206-44-0	Fluoranthene	ND	380	ug/kg	
86-73-7	Fluorene	ND	380	ug/kg	
118-74-1	Hexachlorobenzene	ND	380	ug/kg	
87-68-3	Hexachlorobutadiene	ND	380	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	380	ug/kg	
67-72-1	Hexachloroethane	ND	380	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	380	ug/kg	
78-59-1	Isophorone	ND	380	ug/kg	
91-57-6	2-Methylnaphthalene	ND	380	ug/kg	
88-74-4	2-Nitroaniline	ND	380	ug/kg	
99-09-2	3-Nitroaniline	ND	380	ug/kg	
100-01-6	4-Nitroaniline	ND	380	ug/kg	
91-20-3	Naphthalene	ND	380	ug/kg	
98-95-3	Nitrobenzene	ND	380	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	380	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	380	ug/kg	
85-01-8	Phenanthrene	ND	380	ug/kg	
129-00-0	Pyrene	ND	380	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	380	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	81%		36-129%
4165-62-2	Phenol-d5	94%		38-135%
118-79-6	2,4,6-Tribromophenol	87%		37-144%
4165-60-0	Nitrobenzene-d5	90%		36-135%
321-60-8	2-Fluorobiphenyl	87%		44-135%
1718-51-0	Terphenyl-d14	87%		42-149%

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Page 1 of 1

Client Sample ID: 005-BFI-S-1220-99	Date Sampled: 12/20/99
Lab Sample ID: F5529-1	Date Received: 12/21/99
Matrix: SO - Soil	Percent Solids: 88.6
Project: Cecil Field-Grey Sites	

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method
Arsenic	<1.1	1.1	mg/kg	1	12/24/99	12/27/99 JK	SW846 6010A
Barium	<21	21	mg/kg	1	12/24/99	12/27/99 JK	SW846 6010A
Cadmium	<0.42	0.42	mg/kg	1	12/24/99	12/27/99 JK	SW846 6010A
Chromium	3.5	1.1	mg/kg	1	12/24/99	12/27/99 JK	SW846 6010A
Lead	<11	11	mg/kg	1	12/24/99	12/27/99 JK	SW846 6010A
Mercury	<0.18	0.18	mg/kg	1	12/27/99	12/28/99 JK	SW846 7471A
Selenium	<11	11	mg/kg	1	12/24/99	12/27/99 JK	SW846 6010A
Silver	<1.1	1.1	mg/kg	1	12/24/99	12/27/99 JK	SW846 6010A

RL = Reporting Limit



Report of Analysis

Client Sample ID: 005-BFI-S-1220-99	Date Sampled: 12/20/99
Lab Sample ID: F5529-1	Date Received: 12/21/99
Matrix: SO - Soil	Percent Solids: 8806.0
Method: SW846 8151	
Project: OMEGATUC: Cecil Field-Grey Sites	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EF28214.D	1	12/27/99	LAG	12/23/99	OP6633	GEF1652
Run #2							

Herbicide List

CAS No.	Compound	Result	RL	Units	Q
94-75-7	2,4-D	ND	11	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	2.2	ug/kg	
93-76-5	2,4,5-T	ND	2.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	146%		40-150%
19719-28-9	2,4-DCAA	148%		40-150%

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound