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NAS CECIL FIELD, FL
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SOURCE REMOVAL REPORT FOR SOIL EXCAVATION ADJACENT TO OIL-WATER SEPARATOR AT BUILDING 312 NAS CECIL FIELD FL

11/16/2000

CH2MHILL CONSTRUCTORS INC

CCI NAVY RAC

CH2MHILL Constructors, Inc.
115 Perimeter Center Place, NE
Suite 700
Atlanta, GA
30346-1278
TEL 770.604.9095
FAX 770.604.9282

November 16, 2000

Mr. Nick Ugolini
Southern Division, Naval Facilities Engineering Command
P.O. Box 190010
North Charleston, SC 29419-9010

RE: Contract No. N62467-98-D-0995
Contract Task Order 0002 – Naval Air Station (NAS) Cecil Field – Jacksonville, Florida
Source Removal Report for the Soil Excavation Adjacent to Oil/Water Separator at Building 312

Dear Mr. Ugolini:

CH2M HILL Constructors, Inc. (CCI) is pleased to provide one copy of the enclosed Source Removal Report for the Soil Excavation Adjacent to Oil/Water Separator at Building 312 at NAS Cecil Field in Jacksonville, Florida.

If you have any questions or comments regarding the enclosed, please do not hesitate to contact me at (904) 777-4812.

Sincerely,

CH2M HILL Constructors, Inc.

Samuel M. Ross
Project Manager

cc: Jimmy Jones, SoDiv (w/o)
Larry Blackburn, ROICC
Mike Deliz, FDEP
Mark Speranza, TetraTech NUS (2 copies)
Paul Calligan, TetraTech NUS
CCI Project File No. 149152

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Source Removal Report
Soil Excavation Adjacent to Oil/Water Separator at Building 312

Naval Air Station Cecil Field
Jacksonville, Florida

Contract No. N62467-98-D-0995
Contract Task Order No. 0002

Submitted to:

U.S. Naval Facilities Engineering Command Southern Division

Prepared by:

CH2MHILL Constructors, Inc.

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

November 2000

Source Removal Report
Soil Excavation Adjacent to Oil/Water Separator at Building 312

Contract No. N62467-98-D-0995
Contract Task Order No. 0002

Naval Air Station Cecil Field
Jacksonville, Florida

Submitted to:

U.S. Naval Facilities
Engineering Command
Southern Division

Prepared by:

CH2MHILL
Constructors, Inc.

November 2000

Prepared/Approved By:

Samuel M. Ross, Project Manager — Date: 11/10/00

Approved By:

R. Scott Newman, Program Manager — Date: 11/16/00

Client Acceptance:

U.S. Navy Responsible Authority — Date: 1-3-01

Distribution List

	Copies
Southern Division, Naval Facilities Engineering Command	1
NAS Cecil Field	1
City of Jacksonville, RESD	1
CH2M HILL Constructors, Inc.	2
CH2M HILL	1

Certification of Technical Data Conformity (November 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. 0002 are complete and accurate and comply with all requirements of this contract

Date:_____

Name and Title of Certifying Official: _____

Sam Ross
Project Manager

Certificate of Completion

CH2M HILL Constructors, Inc., attests that, to the best of its knowledge and belief, the soil excavation adjacent to the oil/water separator at Building 312, delivered under Contract No. N62467-98-D-0995, Naval Air Station Cecil Field, Jacksonville, Florida, Contract Task Order (CTO) No. 0002, has been completed, inspected, and tested, and is in compliance with the contract.

_____ _____

Project QC Manager Date

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Acronyms

bls	below land surface
CCI	CH2M HILL Constructors Inc.
CSE	Confirmatory Sampling Event
CTO	Contract Task Order
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FID	flame ionization detector
FL-PRO	Florida Petroleum Residual Organic
GC	Groundwater Criteria (per FAC Chapter 62-770 and 62-777)
HLA	Harding Lawson Associates
KAG	Kerosene Analytical Group
mg/kg	milligrams per kilogram
µg/L	micrograms per liter
NAS	Naval Air Station
NADSC	Natural Attenuation Default Source Concentrations (per FAC Chapter 62-770 and 62-777)
NAVFAC	Naval Facilities Engineering Command
OVA	organic vapor analyzer
OWS	oil/water separator
PAHs	polynuclear aromatic hydrocarbons
PID	Photoionization detector
ppm	parts per million
SA	Site Assessment
SCTLs	soil cleanup target levels (per FAC Chapter 62-770 and 62-777)
SJRWMD	St. Johns River Water Management District
SPLP	synthetic precipitation leaching procedure
SVOAs	semi-volatile organic aromatic compounds
TRPH	total recoverable petroleum hydrocarbons
VOCs	volatile organic compounds

Source Removal Report Requirements – *Checklist*

Per FAC 62-770.300(3), the Source Removal Report shall contain the following information in detail, as applicable:

Site Name: Building 312 OWS **Date(s) of Source Removal: 01/31/00 –03/30/00**

Required Information	Response
1. Volume of product that was discharged, if known	*Unknown*
2. Volume of free product and the volume of groundwater recovered	*None*
3. Volume of contaminated soil excavated and treated or properly disposed	*99.7 tons of soil excavated and disposed of offsite*
4. Disposal or recycling methods for free product and contaminated soil	*Contaminated soils recycled at Chesser Island Road Landfill, Folkston, Georgia*
5. Disposal methods for other contaminated media	*No other contaminated media*
6. Scaled site map (including a graphical representation of the scale used) showing location(s) of free product recovered and the area of soil removed or treated and the approximate locations of all samples taken	*See Figure 2-1*
7. Table summarizing free product thickness in each monitoring well or piezometer and the dates the measurements were made	*Monitoring wells were not measured for free product prior to the excavation.*
8. Type of field screening instrument or method used	*OVA/FID*
9. Dimensions of the excavation(s) and location(s), integrity, capacities and last known contents of storage tanks, integral piping, dispensers, or appurtenances removed	*Excavation areas: 25 feet long by 18 feet wide by 7 feet deep (see Figure 2-1)*
10. Dimensions of the excavation(s) and location(s) and capacities of replacement underground storage tanks	*Not Applicable. OWS was not removed per direction of the U.S. Navy.*
11. Table indicating the identification, depth and field soil screening results of each sample collected	*See Table 2-2*
12. Depth to groundwater at the time of each excavation, measurement locations and method used to obtain that information	*Depth to groundwater approximately 7 feet bls. Noted by visual observation (See Section 2.2.1)*
13. Type of petroleum or petroleum products discharged	*Used Oil*
14. Documentation confirming the proper treatment or proper disposal of the free product or contaminated soil, including disposal manifests for free product, a copy of the treatment or acceptance of the contaminated soil and results of analyses, if performed	*See Table 2-1 and Appendix C*
15. For land farmed soil, a copy of the pre-treatment and post-treatment analytical results	*Not Applicable. Soil disposed of offsite*

1.0 Introduction

CH2M HILL Constructors, Inc. (CCI) was contracted by the Southern Division Naval Facilities Engineering Command (Southern Division, NAVFAC) to excavate petroleum-contaminated soil adjacent to an oil/water separator (OWS) and prepare a Source Removal Report for Building 312 at Naval Air Station (NAS) Cecil Field in Jacksonville, Florida. The source removal was conducted in accordance with the Florida Department of Environmental Protection (FDEP) Petroleum Contamination Site Cleanup rule 62-770, Florida Administrative Code (FAC).

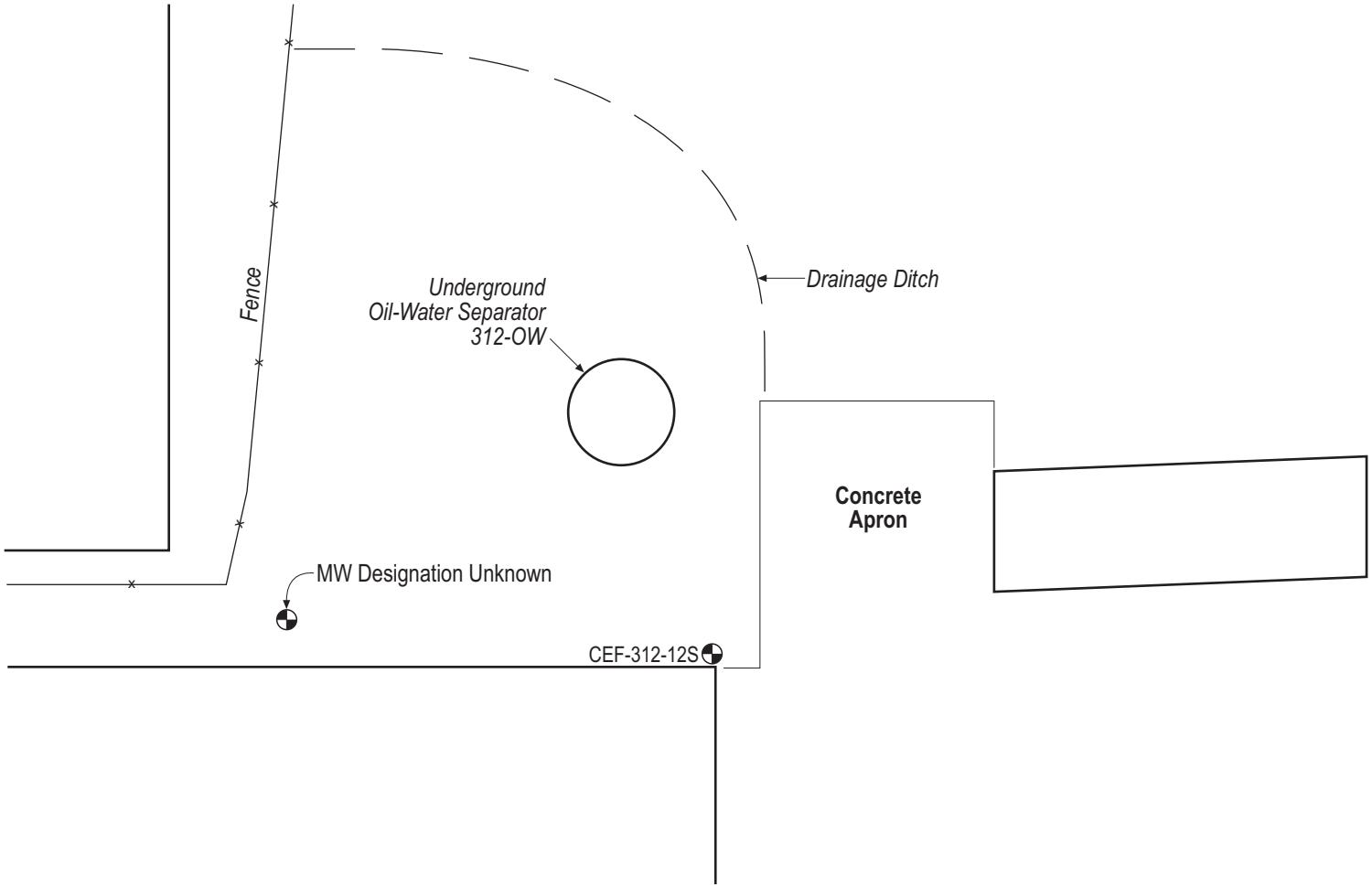
The scope of services for excavation of petroleum-contaminated soils at Building 312 is described in detail in the NAS Cecil Field Basewide Work Plan, Revision 01 (CCI, 1998a) and the Work Plan Addendum No. 1, Revision 01 (CCI, 1998b). This work was authorized under the Remedial Action Contract No. N62467-98-D-0995, Contract Task Order (CTO) No. 0002.

1.1 Site Background

Building 312 is an aircraft corrosion control facility that utilized an aircraft wash rack located east of the building. Wastewater from Building 312 and wash rinse water from the wash rack were routed through a 900-gallon OWS located northeast of Building 312. ABB Environmental Services conducted a confirmatory sampling event (CSE) in June 1998. Four subsurface soil samples were collected and analyzed by an organic vapor analyzer (OVA), one shallow monitoring well was installed, and one groundwater sample was collected and analyzed for Kerosene Analytical Group (KAG) parameters. The results of the CSE were summarized in a Confirmatory Sampling Report dated June 1999. The report documented maximum OVA headspace concentrations in the subsurface around the OWS of 1,350 parts per million (ppm). The groundwater sample from monitoring well CEF-312-1S was below the regulatory standards specified in FAC 62-770 for all KAG constituents. A site plan showing the site conditions prior to the source removal is presented on Figure 1-1.

1.2 Project Objectives

The primary objective of the soil excavation at the site was to remove petroleum-contaminated soils that exceeded the soil cleanup target levels (SCTLs) outlined in FAC 62-770 and 62-777. Soil excavation was based on visual inspection and field OVA headspace analysis as a screening tool in evaluating whether soil samples exceeded the SCTLs. Soils exhibiting staining/discoloration or an OVA concentration of greater than 50 ppm were considered to be excessively contaminated and were expected to contain constituents exceeding the SCTLs. Soils were excavated at Building 312 until there was no visible indication of contamination and OVA concentrations of less than 50 ppm were achieved, then confirmatory sampling for Used Oil Group Parameters was performed. The Used Oil Group analyses for soils includes volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) Method 8260, polynuclear aromatic hydrocarbons (PAHs) and semi-volatile organic aromatic compounds (SVOAs) by EPA Method 8270, metals by EPA Methods 6010, and 7471, and total recoverable petroleum hydrocarbons (TRPH) by the Florida Petroleum Residual Organic (FL-PRO) method.



LEGEND

CEF-312-12S Monitoring Well Location and Designation

N 1" = 10'

Figure 1-1
Pre-Excavation Site Conditions
Building 312 OWS
NAS Cecil Field, Jacksonville, Florida

CH2MHILL

A022000004ATL\lk 007.FH8

2.0 Source Removal Activities

A source removal was conducted at Building 312 during the period of January 31 to March 30, 2000. A total of 99.7 tons of petroleum-contaminated soil were excavated from the area around the OWS and disposed offsite. The OWS and associated underground storage tank were left in place. No free product was found during the excavation. Photographs showing the site during and after the source removal are presented in Appendix A.

2.1 Site Preparation

In preparation for excavation, the base maintenance contractor and Sunshine State One Call of Florida marked out all utilities. The active utilities that were encountered during the excavation included: 1) piping associated with the OWS system, 2) sanitary sewer piping and manholes, 3) two potable water supply lines, and 4) an electric conduit. The locations of these utilities are shown on Figure 2-1.

2.2 Soil Excavation and Disposal

Soils were excavated around the OWS and tank based on the limits of the excessively contaminated soil that was delineated during the excavation. The delineation was performed by visual inspection and by screening the walls of the excavation using headspace OVA analyses. (See Table 2-2 in Section 2.3.1) The excavation was limited to its northern extent by a drainage ditch, to the east by manhole structures and piping, and to the south by the foundation of Building 312.

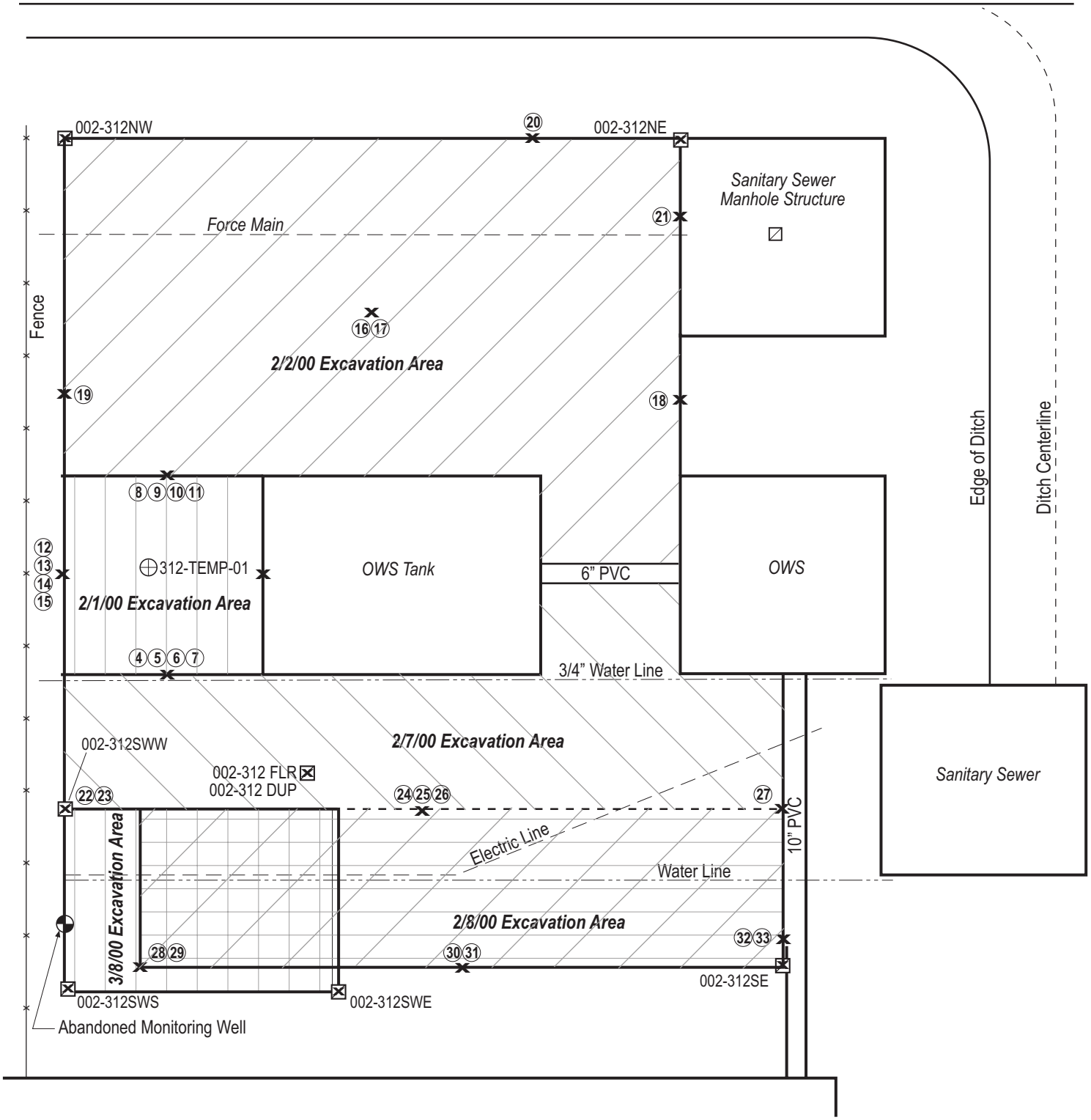
2.2.1 Soil Excavation

The soil was excavated to the water table, to a depth of approximately 7 feet below land surface (bls). The depth to groundwater was determined by visual inspection during the excavation.

The soil was excavated using a mini-excavator and was stockpiled on visqueen prior to being loaded into trucks. The final limits of the excavation area were approximately 25 feet long, 18 feet wide (average), and 7 feet deep (average), with sloping side walls adjacent to structures. The excavation areas are shown in Figure 2-1. Subsequent to completing the initial excavation, the southwest corner was re-excavated.

2.2.2 Soil Transportation and Disposal

The petroleum-contaminated soil was transported offsite by truck to the Chesser Island Road Landfill in Folkston, Georgia. A summary of the manifests is presented in Table 2-1 and copies of the manifests are presented in Appendix C.



LEGEND

002-312SWE ☒ Confirmatory Laboratory Soil Sample Location and Designation

31 ✕ OVA Screening Location and Designation

◕ Monitoring Well Location

312-TEMP-01 ⊕ Temporary Well Location and Designation

NOTES

Wall Samples collected 6 ft bls
Floor samples collected 7-8 ft bls

N Scale: 1"= 4'

Figure 2-1
Sample Locations
Building 312 OWS
NAS Cecil Field, Jacksonville, Florida

CH2MHILL

A022000004ATL\lk 008.FH8

TABLE 2-1
Summary of Manifests for Soil Disposal

Date	Truck #	Company	Manifests #	Weight (lbs)	Tare (lbs)	Net (lbs)	Net (tons)
02/21/00	743	Pritchett	1	79,180	30,500	48,680	24.34
02/21/00	704	Pritchett	2	71,620	30,000	41,620	20.81
02/21/00	373	Pritchett	3	61,460	23,700	37,760	18.88
02/21/00	743	Pritchett	4	76,840	30,500	46,340	23.17
03/30/00	331	Pritchett	5	49,320	24,320	25,000	12.50

2.2.3 Backfilling and Site Restoration

The material used to backfill the excavation was clean fill brought in from a borrow pit operated by the Marietta Sand Corporation. A copy of the letter 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 Sampling and Analysis

Soil samples were collected from the walls of the excavation at depths of 2, 4, 6, 7 and 8 feet bls and from the floor. The sampling locations are shown on Figure 2-1.

2.3.1 Headspace Analysis

Soil samples collected from the excavation were screened using an OVA equipped with a FID. A methane filter was used to subtract methane. The lateral excavation limits were expanded until headspace concentrations were below 50 ppm or a permanent underground structure was encountered. The results of the headspace analyses are shown in Table 2-2.

TABLE 2-2
Summary of Headspace Screening Results

Sample Location (see Figure 2-1)	Depth (feet bls)	FID Unfiltered (ppm)	FID with Filter (ppm)	FID Corrected (ppm)
1 (East)	4	2.5	0	250
2(East)	6	400	50	350
3(East)	8	520	40	480
4 (South)	2	9	0	9
5 (South)	4	101	10	91
6 (South)	6	240	160	80
7 (South)	8	>1,000	0	>1,000
8 (North)	2	7	0	7
9 (North)	4	6	0	6
10 (North)	6	350	16	334
11(North)	8	480	30	450
12 (West)	2	9	0	9
13 (West)	4	4	0	4
14 (West)	6	60	20	40
15 (West)	8	700	220	480
16 (North)	4	100	70	30
17 (North)	7	>1,000	>1,000	0
18 (East)	7	>1,000	660	>340
19 (East)	7	40	0	40
20 (Northeast)	6	220	120	100
21 (Northeast)	6	>1,000	>1,000	0
22 (Southwest)	4	1.5	0	1.5
23 (Southwest)	7	200	56	144
24 (South)	4	10	0	10
25 (South)	4	400	60	340
26 (South)	4	1.0	0	1.0
27 (Southeast)	4	150	30	120
28 (Southwest)	5	0	0	0
29 (Southwest)	7	76	1.0	75
30 (South)	5	5.4	0	5.4
31(South)	7	2.2	0	2.2
32 (Southeast)	5	>1.0	0	>1.0
33 (Southeast)	7	>1.0	0	>1.0

2.3.2 Laboratory Analysis for Used Oil Parameters Analyses for Soil

Five soil samples were collected from the excavation limits for Used Oil Parameters analyses. The sample locations are shown in Figure 2-1. The concentrations were below SCTLs outlined in FAC 62-770 and 62-777 for all Used Oil parameters except TRPH in the sample collected from the Southwest corner of the excavation, and trimethyl benzene in the duplicate sample. Subsequent to additional excavation of the southwest corner, three soil samples were collected from the excavation limit for TRPH analysis. The TRPH concentrations in all three samples were found to be below the SCTL. Analytical results are summarized in Table 2-3. Analytical laboratory reports are provided in Appendix E.

2.3.3 Temporary Well Installation and Laboratory Analyses of Groundwater Samples for Used Oil Parameters

A temporary well (312-TEMP-01) was installed in the center of the excavation on February 10, 2000. The location of the well is shown on Figure 2-1. The well was screened from 2 to 12 feet below land surface. The permanent monitoring well at the southwest corner of the excavation was properly abandoned by a licensed well driller and was not replaced.

One groundwater sample was collected from 312-TEMP-01 for Used Oil Parameters analyses. The concentrations were below the Groundwater Criteria (GC) set forth in FAC 62-770 and 62-777 for all constituents except 1,2,4-trimethyl benzene and hexachlorobutadiene, which were below the Natural Attenuation Default Source Concentrations (NADSC) set forth in FAC 62-770 and 62-777. The analytical results are summarized in Table 2-4. The analytical laboratory report is provided in Appendix F.

TABLE 2-3
Summary of Used Oil Parameters Analyses for Soil

Sample Location	Northeast	Northwest	Southeast	Southwest	Floor	Duplicate	Southwest	Southwest	Southwest	SCTL (Leachability)
Depth (feet)	6	6	6	6	8	--	5	5	5	--
Sample ID	002-312NE-S-0208-00	002-312NW-S-0208-00	002-312SE-S-0208-00	002-312SW-S-0208-00	002-312FLR-S-0208-00	002-312DUP-S-0208-00	002-312SWE-S-0328-00	002-312SWS-S-0328-00	002-312SWW-S-0328-00	--
Site	312	312	312	312	312	312	312	312	312	--
Date	2/8/00	2/8/00	2/8/00	2/8/00	2/8/00	2/8/00	3/28/00	3/28/00	3/28/00	--
TRPH	30	ND	ND	1000	120	30	ND	ND	ND	340
Naphthalene	ND	ND	ND	ND	0.015	0.028	-	-	-	1.7
2 Methylnaphthalene	ND	ND	ND	ND	0.85	ND	-	-	-	6.1
Ethylbenzene	ND	ND	ND	ND	0.003	0.065	-	-	-	0.6
Toluene	0.001	ND	ND	ND	ND	ND	-	-	-	0.5
Xylenes	0.002	ND	ND	0.002	0.005	0.190	-	-	-	0.2
Bis 2-Ethylbexylphthalate	ND	ND	ND	1.50	0.78	0.75	-	-	-	NA
n-Butylbenzene	ND	ND	ND	ND	ND	ND	-	-	-	NA
Arsenic	ND	ND	3.4	3.3	ND	ND	-	-	-	29
Barium	5.8	6.3	6.8	7.0	4.2	3.4	-	-	-	1600
Cadmium	0.82	0.41	0.78	0.86	0.5	0.34	-	-	-	8.0
Chromium	60	5.0	8.7	10	5.1	4.3	-	-	-	38
Lead	14	4.8	5.4	5.3	4.0	3.1	-	-	-	NA
Selenium	4.7	ND	ND	ND	ND	ND	-	-	-	5.0
1,2,4-Trimethyl benzene	0.005	ND	ND	0.004	0.031	0.74	-	-	-	0.3
1,3,5-Trimethyl benzene	0.001	ND	ND	ND	0.011	0.47	-	-	-	0.3
Methylene Chloride	0.002	0.003	ND	0.002	0.002	0.002	-	-	-	0.02
Isopropylbenzene	ND	ND	ND	ND	0.004	0.200	-	-	-	NA
n-Propylbenzene	ND	ND	ND	ND	0.005	0.220	-	-	-	NA
p-Isopropyltoluene	ND	ND	ND	ND	0.008	0.220	-	-	-	NA
Sec-Butylbenzene	ND	ND	ND	ND	0.012	0.390	-	-	-	NA

All values are provided in milligrams per kilogram (mg/kg).
ND – Not Detected Above Reportable Limit

TABLE 2-4
Summary of Used Oil Parameters Analyses for Groundwater

Sample Location	312-TEMP-01	Groundwater Criteria	Natural Attenuation Default Source Concentration
Screened Interval (feet)	2 – 12	--	--
Site	312	--	--
Date	3/01/00	--	--
TRPH	1700	5000	50000
Bis (2-Ethylhexyl) phthalate	7.4	6.0	200
1,2,3 Trichlorobenzene	3.7	70	700
1,2,4 Trichlorobenzene	2.9	70	700
1,2,4 Trimethylbenzene	26	10	100
1,3,5 Trimethylbenzene	6.9	10	100
Ethylbenzene	3.8	30	300
Hexachlorobutadiene	2.0	0.5	50
Isopropylbenzene	3.5	20	200
Naphthalene	16	20	200
Toluene	2.0	40	400
Xylenes	15	20	200

All values are provided in micrograms per liter (µg/L).

3.0 Conclusions

A total of 99.7 tons of petroleum-contaminated soils at Building 312 identified during the CSE and the source removal have been removed and properly disposed offsite. The horizontal limits of the excavation extended until headspace concentrations were below 50 ppm or a permanent underground structure was encountered. During the original excavation, a total of 87.2 tons of contaminated soil was excavated from the location shown in Figure 2-1, to the water table which was found at a depth of 7 feet bls. Five confirmatory soil samples that were collected and analyzed for Used Oil Parameters exhibited concentrations below the SCTLs per FAC 62-770 and 62-777, except for TRPH in the wall sample collected from the southwest limit of the excavation, and 1,2,4 trimethyl benzene and 1,3,5 trimethylbenzene in the duplicate sample collected from the floor. Based upon these results, an additional 12.5 tons of contaminated soil was excavated from the southwest corner of the original excavation as shown in Figure 2-1.

Additional excavation of the southwest corner was performed. Three soil samples were collected from the new excavation boundary walls and for TRPH analyses. The TRPH results were found to be below the SCTL for all three samples.

One groundwater sample was collected from temporary monitoring well 312-TEMP-01, installed in the center of the excavation, for Used Oil Parameters analyses. The sample exhibited no concentrations of KAG parameters above the Groundwater Criteria set forth in FAC 62-770 and 62-777, except for 1,2,4-trimethyl benzene and hexachlorobutadiene which were both below the NADSC. No free product was encountered during source removal activities.

Because 1,2,4-trimethyl benzene and hexachlorobutadiene were found in the groundwater under the NADSC concentrations by FAC 62-770 and 62-777, it is recommended that a Natural Attenuation Monitoring Plan be prepared for the site in accordance with FAC 62-770.

4.0 References

Harding Lawson Associates, 1999, Confirmatory Sampling Report, Building 312, Tank 312-OW, BRAC UST and AST Grey Sites, NAS Cecil Field, Jacksonville, Florida, June.

Harding Lawson Associates, 1998, Sampling and Analysis Outline and Report, Facility 312LS, BRAC Zone D, Industrial and Flightline Area, NAS Cecil Field, Jacksonville, Florida, September.

CH2M HILL Constructors, Inc., 1998a, Basewide Work Plan, Revision No. 1, NAS Cecil Field, Jacksonville, Florida, November.

CH2M HILL Constructors, Inc., 1998b, Work Plan Addendum No. 1, Revision No. 1, Excavation of Petroleum-Contaminated Soil from 11 Former UST Sites and the Day Tank 2 Area, NAS Cecil Field, Jacksonville, Florida, November.

Appendix A

Photographs

1. View, looking west, of the Building 312 OWS location prior to the initiation of soil excavation activities.

2. View, looking east, of soil excavation in progress. Note the exposed OWS and OWS effluent tank structures.

3. View of the Building 312 OWS location after backfilling has been completed.

4. View of the Building 312 OWS location after the completion of site restoration activities.

Appendix B

Copies of Soil Manifests

Printed Using ENVIRO Software, Inc. StateTrak - Version 1.0

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. FLS170002472
Manifest Doc. No.
2. Page 1 of 1

3. Generator's Name and Mailing Address
U.S. Navy, NAS Cecil Field
P.O. Box 104
Jacksonville FL 32215

4. Generator's Phone (904) 778-6820

5. Transporter 1 Company Name
Fitchwell Trucking, Inc.
6. US EPA ID Number
A. Transporter's Phone (904) 485-7504

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
Chesser Island Road Landfill
Chesser Island Road
Folkston, Ga 31537
10. US EPA ID Number
C. Facility's Phone (912) 496-7918

11. Waste Shipping Name and Description

	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Petroleum contaminated soil, Non-regulated material	001	CT	00012	Y
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
Petroleum contaminated soil (CAS-217)

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Account # 4. CK-9750
Site Address: 13100 Normandy Blvd., Jacksonville, FL
CEI # 726822
Tic # 18403

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name
Signature
Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space
Month Day Year

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Month Day Year
02 21 00

GENERATOR
TRANSPORTER
FACILITY

T/S/D/F COPY

Chesser Island Road Landfill

WASTE MANAGEMENT
Post Office Box 128
Folkston, Georgia 31537 - 0128
Telephone (912) 496-7918

№ 18403

Material Cont'd Soil-Cecil Filed

Date 02-21-00

Shipper Patchett Trucking Co. II 143

79180 LB 10:37 PM
30500 LB TR
48680 LB NET

Weigher Pat Bam

Remarks OCW Fay

24.34

Ticket # 74

Personal Waste Product Software, Inc. InformixTrans - Version 1.0

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. FLR170022474
Manifest Doc. No.
2. Page 1 of 1

3. Generator's Name and Mailing Address
U.S. Navy, NAS Cecil Field
P.O. Box 108
Jacksonville FL 32216

4. Generator's Phone ((904) 778-5520

5. Transporter 1 Company Name
Pritchett Trucking, Inc.
6. US EPA ID Number
A. Transporter's Phone (800) 486-7504

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
Chesser Island Road Landfill
Chesser Island Road
Folkston GA 31537
10. US EPA ID Number
C. Facility's Phone (912) 496-7916

11. Waste Shipping Name and Description

	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Petroleum contaminated soil, Non-regulated material				
b.	.001	DT	00018.	Y
c.				
d.				

D. Additional Descriptions for Materials Listed Above
a. Petroleum contaminated soil (OWS-312)

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Approval #: A CIC-9760
Site Address: 13200 Normandy Blvd., Jacksonville, Fl
CEI #: 725922

Tic # 18405

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name
Signature
Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name Kenny Sweat
Signature Kenny Sweat
Month Day Year 12 8 00

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space
Month Day Year

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Month Day Year

GENERATOR
TRANSPORTER
FACILITY

COPY

Chesser Island Road Landfill

WASTE MANAGEMENT
Post Office Box 128
Folkston, Georgia 31537 - 0128
Telephone (912) 496-7918

№ 18405

Material Cont'd Soil

Date 02-21-00

Cecil Field - Bldg. 312

Shipper Pritchett Trucking # 704

71620 LB 11:29 PM
30000 LB TR
41620 LB NET

Weigher Pat Barnard

Remarks OCA Jay

Henry Sweat 704

20.81

Printed Using EnviroSoft Corporation, Inc. WasteTracc - Version 1.0

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. FL5170022474
Manifest Doc. No.
2. Page 1 of 1

3. Generator's Name and Mailing Address
U.S. Navy, NAS Cecil Field
P.O. Box 108
Jacksonville FL 32215-

4. Generator's Phone ((904) 778-6650

5. Transporter 1 Company Name
Petroleum Trucking, Inc.
6. US EPA ID Number
A. Transporter's Phone (800) 486-7504

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
Chesser Island Road Landfill
Chesser Island Road
Folkston Ga 31537-
10. US EPA ID Number
C. Facility's Phone (912) 496-7916

11. Waste Shipping Name and Description

	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Petroleum contaminated soil, Non-regulated material	001	CT	00016	Y
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
a. Petroleum contaminated soil (CAS-317)

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Approval # A. CK-9750
Site Address: 13200 Normandy Blvd., Jacksonville, FL
CEI # 726822
Tic # 18411

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name
Signature
Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Month Day Year

GENERATOR
TRANSPORTER
FACILITY

COPY

WM
WASTE MANAGEMENT

Chesser Island Road Landfill

Post Office Box 128
Folkston, Georgia 31537-0128
Telephone (912) 496-7918

№ 18411

Material Cont'd Soil

Date 02-21-00

Cecil Field

Shipper Pritchett Trucking Co. # 373

61460 LB 01:16 PM FE 21 00
23700 LB TR
37760 LB NET

Weigher Pat Bennett

18.88

Remarks OCW Tarp

743

Printed Using Encoil Software, Inc. WasteTrak - Version 1.0

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. FL5170022574
Manifest Doc. No.
2. Page 1 of 1

3. Generator's Name and Mailing Address
U.S. Navy, NAS Cecil Field
P.O. Box 108
Jacksonville FL 32215

4. Generator's Phone ((904) 778-5520

5. Transporter 1 Company Name
Pritchet Trucking, Inc.
6. US EPA ID Number
A. Transporter's Phone (800) 486-7504

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
Chesser Island Road Landfill
Chesser Island Road
Folkston Ga 31537
10. US EPA ID Number
C. Facility's Phone (912) 496-7918

11. Waste Shipping Name and Description

	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Contaminated soil, Non-Regulated material	001	DT	00018	Y
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
a. Arsenic and pesticide contaminated soil (Site 11)

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Approved #: a.
Site Address: 13200 Normandy Blvd., Jacksonville, FL
CEI #: 726822
TIC # 18415

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name: Walter J. Kwak
Signature:
Month Day Year: 02 21 00

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Month Day Year: 02 21 00

GENERATOR
TRANSPORTER
FACILITY

COPY

WASTE MANAGEMENT

Chesser Island Road Landfill

Post Office Box 128
Folkston, Georgia 31537 - 0128
Telephone (912) 496-7918

№ 18415

Material Cont'd Soil

Date 02-21-00

Cecil Field - Bldg # 312

Shipper Pritchett Trucking #743

Weigher Pat Barnard

Remarks acw Tap

76840 LB 02107 PM FE 21 00
30500 LB TR
46340 LB NET

23.17

02/22/00 08:49 TEL 1+912+488+1132 Chesser Landfill 003

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NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. FL5170022474

Manifest Doc. No.

2. Page 1 of 1 — 312-005

3. Generator's Name and Mailing Address
U.S. Navy NAS Cecil Field 312-005
P.O. Box 108
Jacksonville FL 32215-

4. Generator's Phone ((904) 778-5520

5. Transporter 1 Company Name: Pritchett Trucking, Inc.
6. US EPA ID Number
A. Transporter's Phone: (800) 486-7504

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
Chesser Island Road Landfill
Chesser Island Road
Folkston Ga 31537-
10. US EPA ID Number
C. Facility's Phone: (912) 496-7918

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Petroleum contaminated soil, Non-regulated material	001	DT	12.5T ~~00018~~	Y
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
a. Petroleum contaminated soil (OWS-312)

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Approval #: a. CK-9750
Site Address: 13200 Normandy Blvd., Jacksonville, Fl

CEI #: 726822

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: [illegible] | Signature: [illegible] | Month . Day . Year .

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: RICHARD MATTE #331 | Signature: [illegible] | Month 03 Day 30 Year 00

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month . Day . Year .

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month . Day . Year .

GENERATOR — TRANSPORTER — FACILITY

COPY

Chesser Island Road Landfill

TE MANAGEMENT
Post Office Box 128
Folkston, Georgia 31537 - 0128
Telephone (912) 496-7918

No 20238

terial Cont'd Soil
e 03-30-00

per Pritchett 331
ecil Field
gher Pat B
arks OCW Jax
ft 312-605
0 047-023

Tonne ID
03-30-2000 13:27
72320 lb GROSS
24320 lb TARE
48000 lb NET

split Load
DSC 47 - 11.5 T
Bldg 312 12.5 T
24.0 T

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 Blvd., Jacksonville, Florida

A. The waste material(s) consisted of:
a) Petroleum Contaminated Soil (OWS 312) (99.7 Tons)

B. The waste material(s) were transported by:
Company: Pritchett Trucking EPA#: N/A

C. The waste material(s) were disposed of at:
Facility: Chesser Island Landfill EPA#: N/A
Address: Chesser Island Road (P.O. Box 128)
Folkston, GA 31537-0128

D. Disposal of your waste material(s) were accomplished by the following method(s):
a) Sub Title D Landfill

E. Date of Disposal: February 21, 2000 and March 30, 2000

Thank you for using Clark Environmental, Inc. for your complete industrial waste management needs.

Very truly yours,

Stephen W. Donovan, CHMM, REP
General Manager

Appendix D

Certification of Clean Fill

MARIETTA SAND CORPORATION

377 Agmac Avenue
Jacksonville, Florida 32254
(904) 781-7304

Pritchett Trucking
PO Box 311
Lake Butler, FL 32054

August 25, 1999

Attention: Mr. Bobby Lord

Please find attached, testing data on fill dirt pit located on Stratton Road in Jacksonville, Duval County, Florida. As you will notice these results are dated June, 1996. Please be advised that the material from this pit is clean and will meet The Navy specifications. Approximately 330 loads of this material was recently sent to Cecil Field for the Fuel Tank Farm. by another contractor and material was accepted.

If you have any questions or concerns, please contact me at the above listed number.

Respectfully,

Susan Henricks

Susan Henricks
Marietta Sand Corporation

Ellis & Associates Inc.

5109 STEPP AVENUE
JACKSONVILLE, FL 32216-6053
(904)733-0960 OFFICE
(904)448-5534 FAX NUMBER

PROJECT NO: 962-2093

REPORT NO: 6

LAB NO: 0-099

DATE: 06/17/96

- - - - - Continued from previous page - - - - -

SIEVE SIZE	PERCENT PASSING
No. 10	100
No. 20	99.8
No. 40	99.6
No. 60	97.6
No. 80	44.6
No. 100	28.3
No. 140	9.3
No. 140	6.3

SAMPLED BY: Client

INSPECTED BY: R. Kelley

Respectfully submitted,
ELLIS & ASSOCIATES, INC.

John E. Ellis, II, P.E.
6/17/96

DISTRIBUTION: JEE/dfh
2cc:Client

Appendix E

Analytical Laboratory Reports For Confirmatory Soil Samples

ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia 30017, Phone (770)449-8800, FAX (770)449-5477
FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB86193 **Accura Project #: 23602**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWANN
Client Project Number: 149152
Client Project Name: CTO 0002 BUILDING 312OWS
Client Sample ID: 002-312NE-S-0208-00

Date Sampled: 2/8/00
Date Received: 2/9/00
Date Reported: 3/20/00
Sample Matrix: SOIL

ANALYSIS: Metals - Mercury - RCRA Navy Method Ref: 7471A
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/11/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Mercury	<RDL	0.1

ANALYSIS: Metals - RCRA Navy Method Ref: 3050B/6010B
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Arsenic	<RDL	60
Barium	5.8	5.0
Cadmium	0.82J	4.0
Chromium	6.0J	7.0
Lead	14J	50
Selenium	4.7J	80
Silver	<RDL	7.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/14/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	30	30

ANALYSIS: SVOC's Navy Method Ref: 8270C
Date Ext/Dig/Prep: 2/16/00 Date Analyzed: 2/22/00 Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1,2,4-Trichlorobenzene	<RDL	660
1,2-Dichlorobenzene	<RDL	660
1,3-Dichlorobenzene	<RDL	660
1,4-Dichlorobenzene	<RDL	660
2,4,5-Trichlorophenol	<RDL	330

2,4,6-Trichlorophenol	<RDL	660
2,4-Dichlorophenol	<RDL	660
2,4-Dimethylphenol	<RDL	660
2,4-Dinitrophenol	<RDL	3300
2,4-Dinitrotoluene	<RDL	660
2,6-Dinitrotoluene	<RDL	660
2-Chloronaphthalene	<RDL	660
2-Chlorophenol	<RDL	660
2-Methylnaphthalene	<RDL	660
2-Methylphenol	<RDL	660
2-Nitroaniline	<RDL	3300
2-Nitrophenol	<RDL	660
3,3'-Dichlorobenzidine	<RDL	660
3-Methylphenol	<RDL	660
3-Nitroaniline	<RDL	3300
4,6-Dinitro-2-methylphenol	<RDL	3300
4-Bromophenyl phenyl ether	<RDL	660
4-Chloro-3-methylphenol	<RDL	1300
4-Chloroaniline	<RDL	660
4-Chlorophenyl phenyl ether	<RDL	660
4-Methylphenol	<RDL	660
4-Nitroaniline	<RDL	3300
4-Nitrophenol	<RDL	1600
Acenaphthene	<RDL	660
Acenaphthylene	<RDL	660
Anthracene	<RDL	660
Benzo(a)anthracene	<RDL	660
Benzo(a)pyrene	<RDL	660
Benzo(b)fluoranthene	<RDL	660
Benzo(g,h,i)perylene	<RDL	660
Benzo(k)fluoranthene	<RDL	660
Benzoic acid	<RDL	1600
Benzyl alcohol	<RDL	660
bis(2-Chloroethoxy)methane	<RDL	660
bis(2-Chloroethyl)ether	<RDL	660
bis(2-Chloroisopropyl)ether	<RDL	660
bis(2-Ethylhexyl)phthalate	<RDL	660
Butyl benzyl phthalate	<RDL	660
Carbazole	<RDL	660
Chrysene	<RDL	660
Di-n-butylphthalate	<RDL	660
Di-n-octylphthalate	<RDL	660
Dibenz(a,h)anthracene	<RDL	660
Dibenzofuran	<RDL	660
Diethylphthalate	<RDL	660
Dimethylphthalate	<RDL	660
Fluoranthene	<RDL	660
Fluorene	<RDL	660
Hexachlorobenzene	<RDL	660
Hexachlorobutadiene	<RDL	660
Hexachlorocyclopentadiene	<RDL	660
Hexachloroethane	<RDL	660

Indeno(1,2,3-cd)pyrene	<RDL	660
N-Nitroso-di-n-propylamine	<RDL	660
N-Nitrosodiphenylamine	<RDL	660
Naphthalene	<RDL	660
Nitrobenzene	<RDL	660
Pentachlorophenol	<RDL	3300
Phenanthrene	<RDL	660
Phenol	<RDL	660
Pyrene	<RDL	660

ANALYSIS: VOC's Navy Method Ref: 8260B

Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/10/00 Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1,2-Tetrachloroethane	<RDL	15
1,1,1-Trichloroethane	<RDL	20
1,1,2,2-Tetrachloroethane	<RDL	10
1,1,2-Trichloroethane	<RDL	25
1,1-Dichloroethane	<RDL	10
1,1-Dichloroethene	<RDL	30
1,2,3-Trichlorobenzene	<RDL	10
1,2,3-Trichloropropane	<RDL	100
1,2,4-Trichlorobenzene	<RDL	10
1,2,4-Trimethylbenzene	4.9 J	35
1,2-Dibromo-3-chloropropane	<RDL	50
1,2-Dichlorobenzene	<RDL	10
1,2-Dichloroethane	<RDL	15
1,2-Dichloropropane	<RDL	10
1,2-Ethylene Dibromide	<RDL	15
1,3,5-Trimethylbenzene	1.2 J	15
1,3-Dichlorobenzene	<RDL	30
1,3-Dichloropropane	<RDL	10
1,4-Dichlorobenzene	<RDL	10
2,2-Dichloropropane	<RDL	100
2-Chlorotoluene	<RDL	10
4-Chlorotoluene	<RDL	15
Benzene	<RDL	10
Bromobenzene	<RDL	10
Bromochloromethane	<RDL	10
Bromodichloromethane	<RDL	20
Bromoform	<RDL	30
Bromomethane	<RDL	25
Carbon tetrachloride	<RDL	50
Chlorobenzene	<RDL	10
Chloroethane	<RDL	25
Chloroform	<RDL	10
Chloromethane	<RDL	35
cis-1,2-Dichloroethene	<RDL	30
cis-1,3-Dichloropropene	<RDL	25
Dibromochloromethane	<RDL	15
Dibromomethane	<RDL	50

Dichlorodifluoromethane	<RDL	25
Ethylbenzene	<RDL	15
Hexachlorobutadiene	<RDL	25
Isopropylbenzene	<RDL	40
Methylene chloride	1.7 J B	10
n-Butylbenzene	<RDL	25
n-Propylbenzene	<RDL	10
Naphthalene	<RDL	10
p-Isopropyltoluene	<RDL	30
Sec-Butylbenzene	<RDL	35
Styrene	<RDL	10
Tert-Butylbenzene	<RDL	35
Tetrachloroethylene	<RDL	35
Toluene	1.1 J	25
Total Xylene	2.4 J	15
trans-1,2-Dichloroethene	<RDL	15
trans-1,3-Dichloropropene	<RDL	25
Trichloroethylene	<RDL	50
Trichlorofluoromethane	<RDL	20
Vinyl chloride	<RDL	45

ANALYSIS: X_PRO QC Surrogates (Soil) Method Ref: FL-PRO

Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/14/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39)	44	
o-Terphenyl	74	

ANALYSIS: X_VOC QC Surrogates Method Ref: 5035/8260B

Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4	99	
4-Bromofluorobenzene	114	
Toluene-d8	101	

ANALYSIS: X SVOC QC Surrogates (Soils) Method Ref: 8270C

Date Ext/Dig/Prep: 2/16/00 Date Analyzed: 2/22/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2,4,6-Tribromophenol	101	
2-Fluorobiphenyl	90	
2-Fluorophenol	81	
Nitrobenzene-d5	82	
p-Terphenyl-d14	78	
Phenol-d5	80	

Accura Analytical Laboratory, Inc.

ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia 30017, Phone (770)449-8800, FAX (770)449-5477
FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB86194 **Accura Project #: 23602**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWANN
Client Project Number: 149152
Client Project Name: CTO 0002 BUILDING 312OWS
Client Sample ID: 002-312NW-S-0208-00

Date Sampled: 2/8/00
Date Received: 2/9/00
Date Reported: 3/20/00
Sample Matrix: SOIL

ANALYSIS: Metals - Mercury - RCRA Navy Method Ref: 7471A
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/11/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Mercury	<RDL	0.1

ANALYSIS: Metals - RCRA Navy Method Ref: 3050B/6010B
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Arsenic	<RDL	60
Barium	6.3	5.0
Cadmium	0.41J	4.0
Chromium	5.0J	7.0
Lead	4.8J	50
Selenium	<RDL	80
Silver	<RDL	7.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	<RDL	30

ANALYSIS: SVOC's Navy Method Ref: 8270C
Date Ext/Dig/Prep: 2/16/00 Date Analyzed: 2/21/00 Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1,2,4-Trichlorobenzene	<RDL	660
1,2-Dichlorobenzene	<RDL	660
1,3-Dichlorobenzene	<RDL	660
1,4-Dichlorobenzene	<RDL	660
2,4,5-Trichlorophenol	<RDL	330

2,4,6-Trichlorophenol	<RDL	660
2,4-Dichlorophenol	<RDL	660
2,4-Dimethylphenol	<RDL	660
2,4-Dinitrophenol	<RDL	3300
2,4-Dinitrotoluene	<RDL	660
2,6-Dinitrotoluene	<RDL	660
2-Chloronaphthalene	<RDL	660
2-Chlorophenol	<RDL	660
2-Methylnaphthalene	<RDL	660
2-Methylphenol	<RDL	660
2-Nitroaniline	<RDL	3300
2-Nitrophenol	<RDL	660
3,3'-Dichlorobenzidine	<RDL	660
3-Methylphenol	<RDL	660
3-Nitroaniline	<RDL	3300
4,6-Dinitro-2-methylphenol	<RDL	3300
4-Bromophenyl phenyl ether	<RDL	660
4-Chloro-3-methylphenol	<RDL	1300
4-Chloroaniline	<RDL	660
4-Chlorophenyl phenyl ether	<RDL	660
4-Methylphenol	<RDL	660
4-Nitroaniline	<RDL	3300
4-Nitrophenol	<RDL	1600
Acenaphthene	<RDL	660
Acenaphthylene	<RDL	660
Anthracene	<RDL	660
Benzo(a)anthracene	<RDL	660
Benzo(a)pyrene	<RDL	660
Benzo(b)fluoranthene	<RDL	660
Benzo(g,h,i)perylene	<RDL	660
Benzo(k)fluoranthene	<RDL	660
Benzoic acid	<RDL	1600
Benzyl alcohol	<RDL	660
bis(2-Chloroethoxy)methane	<RDL	660
bis(2-Chloroethyl)ether	<RDL	660
bis(2-Chloroisopropyl)ether	<RDL	660
bis(2-Ethylhexyl)phthalate	<RDL	660
Butyl benzyl phthalate	<RDL	660
Carbazole	<RDL	660
Chrysene	<RDL	660
Di-n-butylphthalate	<RDL	660
Di-n-octylphthalate	<RDL	660
Dibenz(a,h)anthracene	<RDL	660
Dibenzofuran	<RDL	660
Diethylphthalate	<RDL	660
Dimethylphthalate	<RDL	660
Fluoranthene	<RDL	660
Fluorene	<RDL	660
Hexachlorobenzene	<RDL	660
Hexachlorobutadiene	<RDL	660
Hexachlorocyclopentadiene	<RDL	660
Hexachloroethane	<RDL	660

Indeno(1,2,3-cd)pyrene	<RDL	660
N-Nitroso-di-n-propylamine	<RDL	660
N-Nitrosodiphenylamine	<RDL	660
Naphthalene	<RDL	660
Nitrobenzene	<RDL	660
Pentachlorophenol	<RDL	3300
Phenanthrene	<RDL	660
Phenol	<RDL	660
Pyrene	<RDL	660

ANALYSIS: VOC's Navy Method Ref: 8260B

Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/10/00 Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1,2-Tetrachloroethane	<RDL	15
1,1,1-Trichloroethane	<RDL	20
1,1,2,2-Tetrachloroethane	<RDL	10
1,1,2-Trichloroethane	<RDL	25
1,1-Dichloroethane	<RDL	10
1,1-Dichloroethene	<RDL	30
1,2,3-Trichlorobenzene	<RDL	10
1,2,3-Trichloropropane	<RDL	100
1,2,4-Trichlorobenzene	<RDL	10
1,2,4-Trimethylbenzene	3.1 J	35
1,2-Dibromo-3-chloropropane	<RDL	50
1,2-Dichlorobenzene	<RDL	10
1,2-Dichloroethane	<RDL	15
1,2-Dichloropropane	<RDL	10
1,2-Ethylene Dibromide	<RDL	15
1,3,5-Trimethylbenzene	<RDL	15
1,3-Dichlorobenzene	<RDL	30
1,3-Dichloropropane	<RDL	10
1,4-Dichlorobenzene	<RDL	10
2,2-Dichloropropane	<RDL	100
2-Chlorotoluene	<RDL	10
4-Chlorotoluene	<RDL	15
Benzene	<RDL	10
Bromobenzene	<RDL	10
Bromochloromethane	<RDL	10
Bromodichloromethane	<RDL	20
Bromoform	<RDL	30
Bromomethane	<RDL	25
Carbon tetrachloride	<RDL	50
Chlorobenzene	<RDL	10
Chloroethane	<RDL	25
Chloroform	<RDL	10
Chloromethane	<RDL	35
cis-1,2-Dichloroethene	<RDL	30
cis-1,3-Dichloropropene	<RDL	25
Dibromochloromethane	<RDL	15
Dibromomethane	<RDL	50

Dichlorodifluoromethane	<RDL	25
Ethylbenzene	<RDL	15
Hexachlorobutadiene	<RDL	25
Isopropylbenzene	<RDL	40
Methylene chloride	2.9 J B	10
n-Butylbenzene	<RDL	25
n-Propylbenzene	<RDL	10
Naphthalene	<RDL	10
p-Isopropyltoluene	<RDL	30
Sec-Butylbenzene	<RDL	35
Styrene	<RDL	10
Tert-Butylbenzene	<RDL	35
Tetrachloroethylene	<RDL	35
Toluene	<RDL	25
Total Xylene	1.8 J	15
trans-1,2-Dichloroethene	<RDL	15
trans-1,3-Dichloropropene	<RDL	25
Trichloroethylene	<RDL	50
Trichlorofluoromethane	<RDL	20
Vinyl chloride	<RDL	45

ANALYSIS: X PRO QC Surrogates (Soil) Method Ref: FL-PRO

Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39)	20	
o-Terphenyl	61	

ANALYSIS: X VOC QC Surrogates Method Ref: 5035/8260B

Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4	97	
4-Bromofluorobenzene	99	
Toluene-d8	94	

ANALYSIS: X SVOC QC Surrogates (Soils) Method Ref: 8270C

Date Ext/Dig/Prep: 2/16/00 Date Analyzed: 2/21/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2,4,6-Tribromophenol	97	
2-Fluorobiphenyl	86	
2-Fluorophenol	86	
Nitrobenzene-d5	82	
p-Terphenyl-d14	94	
Phenol-d5	84	

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LABORATORY REPORT

Accura Sample ID #: AB86195 **Accura Project #: 23602**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWANN
Client Project Number: 149152
Client Project Name: CTO 0002 BUILDING 312OWS
Client Sample ID: 002-312SW-S-0208-00

Date Sampled: 2/8/00
Date Received: 2/9/00
Date Reported: 3/20/00
Sample Matrix: SOIL

ANALYSIS: Metals - Mercury - RCRA Navy Method Ref: 7471A
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/11/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Mercury	<RDL	0.1

ANALYSIS: Metals - RCRA Navy Method Ref: 3050B/6010B
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Arsenic	3.3J	60
Barium	7.0	5.0
Cadmium	0.86J	4.0
Chromium	10	7.0
Lead	5.3J	50
Selenium	<RDL	80
Silver	<RDL	7.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	1000	150

ANALYSIS: SVOC's Navy Method Ref: 8270C
Date Ext/Dig/Prep: 2/16/00 Date Analyzed: 2/22/00 Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1,2,4-Trichlorobenzene	<RDL	660
1,2-Dichlorobenzene	<RDL	660
1,3-Dichlorobenzene	<RDL	660
1,4-Dichlorobenzene	<RDL	660
2,4,5-Trichlorophenol	<RDL	330

2,4,6-Trichlorophenol	<RDL	660
2,4-Dichlorophenol	<RDL	660
2,4-Dimethylphenol	<RDL	660
2,4-Dinitrophenol	<RDL	3300
2,4-Dinitrotoluene	<RDL	660
2,6-Dinitrotoluene	<RDL	660
2-Chloronaphthalene	<RDL	660
2-Chlorophenol	<RDL	660
2-Methylnaphthalene	<RDL	660
2-Methylphenol	<RDL	660
2-Nitroaniline	<RDL	3300
2-Nitrophenol	<RDL	660
3,3'-Dichlorobenzidine	<RDL	660
3-Methylphenol	<RDL	660
3-Nitroaniline	<RDL	3300
4,6-Dinitro-2-methylphenol	<RDL	3300
4-Bromophenyl phenyl ether	<RDL	660
4-Chloro-3-methylphenol	<RDL	1300
4-Chloroaniline	<RDL	660
4-Chlorophenyl phenyl ether	<RDL	660
4-Methylphenol	<RDL	660
4-Nitroaniline	<RDL	3300
4-Nitrophenol	<RDL	1600
Acenaphthene	<RDL	660
Acenaphthylene	<RDL	660
Anthracene	<RDL	660
Benzo(a)anthracene	<RDL	660
Benzo(a)pyrene	<RDL	660
Benzo(b)fluoranthene	<RDL	660
Benzo(g,h,i)perylene	<RDL	660
Benzo(k)fluoranthene	<RDL	660
Benzoic acid	<RDL	1600
Benzyl alcohol	<RDL	660
bis(2-Chloroethoxy)methane	<RDL	660
bis(2-Chloroethyl)ether	<RDL	660
bis(2-Chloroisopropyl)ether	<RDL	660
bis(2-Ethylhexyl)phthalate	1500	660
Butyl benzyl phthalate	<RDL	660
Carbazole	<RDL	660
Chrysene	<RDL	660
Di-n-butylphthalate	<RDL	660
Di-n-octylphthalate	<RDL	660
Dibenz(a,h)anthracene	<RDL	660
Dibenzofuran	<RDL	660
Diethylphthalate	<RDL	660
Dimethylphthalate	<RDL	660
Fluoranthene	<RDL	660
Fluorene	<RDL	660
Hexachlorobenzene	<RDL	660
Hexachlorobutadiene	<RDL	660
Hexachlorocyclopentadiene	<RDL	660
Hexachloroethane	<RDL	660

Indeno(1,2,3-cd)pyrene	<RDL	660
N-Nitroso-di-n-propylamine	<RDL	660
N-Nitrosodiphenylamine	<RDL	660
Naphthalene	<RDL	660
Nitrobenzene	<RDL	660
Pentachlorophenol	<RDL	3300
Phenanthrene	<RDL	660
Phenol	<RDL	660
Pyrene	<RDL	660

ANALYSIS: VOC's Navy Method Ref: 8260B

Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/10/00 Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1,2-Tetrachloroethane	<RDL	15
1,1,1-Trichloroethane	<RDL	20
1,1,2,2-Tetrachloroethane	<RDL	10
1,1,2-Trichloroethane	<RDL	25
1,1-Dichloroethane	<RDL	10
1,1-Dichloroethene	<RDL	30
1,2,3-Trichlorobenzene	<RDL	10
1,2,3-Trichloropropane	<RDL	100
1,2,4-Trichlorobenzene	<RDL	10
1,2,4-Trimethylbenzene	4.0 J	35
1,2-Dibromo-3-chloropropane	<RDL	50
1,2-Dichlorobenzene	<RDL	10
1,2-Dichloroethane	<RDL	15
1,2-Dichloropropane	<RDL	10
1,2-Ethylene Dibromide	<RDL	15
1,3,5-Trimethylbenzene	<RDL	15
1,3-Dichlorobenzene	<RDL	30
1,3-Dichloropropane	<RDL	10
1,4-Dichlorobenzene	<RDL	10
2,2-Dichloropropane	<RDL	100
2-Chlorotoluene	<RDL	10
4-Chlorotoluene	<RDL	15
Benzene	<RDL	10
Bromobenzene	<RDL	10
Bromochloromethane	<RDL	10
Bromodichloromethane	<RDL	20
Bromoform	<RDL	30
Bromomethane	<RDL	25
Carbon tetrachloride	<RDL	50
Chlorobenzene	<RDL	10
Chloroethane	<RDL	25
Chloroform	<RDL	10
Chloromethane	<RDL	35
cis-1,2-Dichloroethene	<RDL	30
cis-1,3-Dichloropropene	<RDL	25
Dibromochloromethane	<RDL	15
Dibromomethane	<RDL	50

Dichlorodifluoromethane	<RDL	25
Ethylbenzene	<RDL	15
Hexachlorobutadiene	<RDL	25
Isopropylbenzene	<RDL	40
Methylene chloride	1.9 J B	10
n-Butylbenzene	<RDL	25
n-Propylbenzene	<RDL	10
Naphthalene	<RDL	10
p-Isopropyltoluene	<RDL	30
Sec-Butylbenzene	<RDL	35
Styrene	<RDL	10
Tert-Butylbenzene	<RDL	35
Tetrachloroethylene	<RDL	35
Toluene	<RDL	25
Total Xylene	2.1 J	15
trans-1,2-Dichloroethene	<RDL	15
trans-1,3-Dichloropropene	<RDL	25
Trichloroethylene	<RDL	50
Trichlorofluoromethane	<RDL	20
Vinyl chloride	<RDL	45

ANALYSIS: X PRO QC Surrogates (Soil) Method Ref: FL-PRO

Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39)	42	
o-Terphenyl	85	

ANALYSIS: X VOC QC Surrogates Method Ref: 5035/8260B

Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4	98	
4-Bromofluorobenzene	100	
Toluene-d8	94	

ANALYSIS: X SVOC QC Surrogates (Soils) Method Ref: 8270C

Date Ext/Dig/Prep: 2/16/00 Date Analyzed: 2/22/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2,4,6-Tribromophenol	106	
2-Fluorobiphenyl	74	
2-Fluorophenol	97	
Nitrobenzene-d5	124	
p-Terphenyl-d14	79	
Phenol-d5	91	

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LABORATORY REPORT

Accura Sample ID #: AB86196 **Accura Project #: 23602**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWANN
Client Project Number: 149152
Client Project Name: CTO 0002 BUILDING 312OWS
Client Sample ID: 002-312SE-S-0208-00

Date Sampled: 2/8/00
Date Received: 2/9/00
Date Reported: 3/20/00
Sample Matrix: SOIL

ANALYSIS: Metals - Mercury - RCRA Navy Method Ref: 7471A
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/11/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Mercury	<RDL	0.1

ANALYSIS: Metals - RCRA Navy Method Ref: 3050B/6010B
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Arsenic	3.4J	60
Barium	6.8	5.0
Cadmium	0.78J	4.0
Chromium	8.7	7.0
Lead	5.4J	50
Selenium	<RDL	80
Silver	<RDL	7.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	<RDL	30

ANALYSIS: SVOC's Navy Method Ref: 8270C
Date Ext/Dig/Prep: 2/16/00 Date Analyzed: 2/21/00 Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1,2,4-Trichlorobenzene	<RDL	660
1,2-Dichlorobenzene	<RDL	660
1,3-Dichlorobenzene	<RDL	660
1,4-Dichlorobenzene	<RDL	660
2,4,5-Trichlorophenol	<RDL	330

2,4,6-Trichlorophenol	<RDL	660
2,4-Dichlorophenol	<RDL	660
2,4-Dimethylphenol	<RDL	660
2,4-Dinitrophenol	<RDL	3300
2,4-Dinitrotoluene	<RDL	660
2,6-Dinitrotoluene	<RDL	660
2-Chloronaphthalene	<RDL	660
2-Chlorophenol	<RDL	660
2-Methylnaphthalene	<RDL	660
2-Methylphenol	<RDL	660
2-Nitroaniline	<RDL	3300
2-Nitrophenol	<RDL	660
3,3'-Dichlorobenzidine	<RDL	660
3-Methylphenol	<RDL	660
3-Nitroaniline	<RDL	3300
4,6-Dinitro-2-methylphenol	<RDL	3300
4-Bromophenyl phenyl ether	<RDL	660
4-Chloro-3-methylphenol	<RDL	1300
4-Chloroaniline	<RDL	660
4-Chlorophenyl phenyl ether	<RDL	660
4-Methylphenol	<RDL	660
4-Nitroaniline	<RDL	3300
4-Nitrophenol	<RDL	1600
Acenaphthene	<RDL	660
Acenaphthylene	<RDL	660
Anthracene	<RDL	660
Benzo(a)anthracene	<RDL	660
Benzo(a)pyrene	<RDL	660
Benzo(b)fluoranthene	<RDL	660
Benzo(g,h,i)perylene	<RDL	660
Benzo(k)fluoranthene	<RDL	660
Benzoic acid	<RDL	1600
Benzyl alcohol	<RDL	660
bis(2-Chloroethoxy)methane	<RDL	660
bis(2-Chloroethyl)ether	<RDL	660
bis(2-Chloroisopropyl)ether	<RDL	660
bis(2-Ethylhexyl)phthalate	<RDL	660
Butyl benzyl phthalate	<RDL	660
Carbazole	<RDL	660
Chrysene	<RDL	660
Di-n-butylphthalate	<RDL	660
Di-n-octylphthalate	<RDL	660
Dibenz(a,h)anthracene	<RDL	660
Dibenzofuran	<RDL	660
Diethylphthalate	<RDL	660
Dimethylphthalate	<RDL	660
Fluoranthene	<RDL	660
Fluorene	<RDL	660
Hexachlorobenzene	<RDL	660
Hexachlorobutadiene	<RDL	660
Hexachlorocyclopentadiene	<RDL	660
Hexachloroethane	<RDL	660

Indeno(1,2,3-cd)pyrene	<RDL	660
N-Nitroso-di-n-propylamine	<RDL	660
N-Nitrosodiphenylamine	<RDL	660
Naphthalene	<RDL	660
Nitrobenzene	<RDL	660
Pentachlorophenol	<RDL	3300
Phenanthrene	<RDL	660
Phenol	<RDL	660
Pyrene	<RDL	660

ANALYSIS: VOC's Navy Method Ref: 8260B

Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/10/00 Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1,2-Tetrachloroethane	<RDL	15
1,1,1-Trichloroethane	<RDL	20
1,1,2,2-Tetrachloroethane	<RDL	10
1,1,2-Trichloroethane	<RDL	25
1,1-Dichloroethane	<RDL	10
1,1-Dichloroethene	<RDL	30
1,2,3-Trichlorobenzene	<RDL	10
1,2,3-Trichloropropane	<RDL	100
1,2,4-Trichlorobenzene	<RDL	10
1,2,4-Trimethylbenzene	<RDL	35
1,2-Dibromo-3-chloropropane	<RDL	50
1,2-Dichlorobenzene	<RDL	10
1,2-Dichloroethane	<RDL	15
1,2-Dichloropropane	<RDL	10
1,2-Ethylene Dibromide	<RDL	15
1,3,5-Trimethylbenzene	<RDL	15
1,3-Dichlorobenzene	<RDL	30
1,3-Dichloropropane	<RDL	10
1,4-Dichlorobenzene	<RDL	10
2,2-Dichloropropane	<RDL	100
2-Chlorotoluene	<RDL	10
4-Chlorotoluene	<RDL	15
Benzene	<RDL	10
Bromobenzene	<RDL	10
Bromochloromethane	<RDL	10
Bromodichloromethane	<RDL	20
Bromoform	<RDL	30
Bromomethane	<RDL	25
Carbon tetrachloride	<RDL	50
Chlorobenzene	<RDL	10
Chloroethane	<RDL	25
Chloroform	<RDL	10
Chloromethane	<RDL	35
cis-1,2-Dichloroethene	<RDL	30
cis-1,3-Dichloropropene	<RDL	25
Dibromochloromethane	<RDL	15
Dibromomethane	<RDL	50

Dichlorodifluoromethane	<RDL	25
Ethylbenzene	<RDL	15
Hexachlorobutadiene	<RDL	25
Isopropylbenzene	<RDL	40
Methylene chloride	<RDL	10
n-Butylbenzene	<RDL	25
n-Propylbenzene	<RDL	10
Naphthalene	<RDL	10
p-Isopropyltoluene	<RDL	30
Sec-Butylbenzene	<RDL	35
Styrene	<RDL	10
Tert-Butylbenzene	<RDL	35
Tetrachloroethylene	<RDL	35
Toluene	<RDL	25
Total Xylene	<RDL	15
trans-1,2-Dichloroethene	<RDL	15
trans-1,3-Dichloropropene	<RDL	25
Trichloroethylene	<RDL	50
Trichlorofluoromethane	<RDL	20
Vinyl chloride	<RDL	45

ANALYSIS: X PRO QC Surrogates (Soil) Method Ref: FL-PRO

Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39)	5.3	
o-Terphenyl	69	

ANALYSIS: X VOC QC Surrogates Method Ref: 5035/8260B

Date Ext/Dig/Prep: 2/9/00 Date Analyzed: 2/9/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4	126	
4-Bromofluorobenzene	108	
Toluene-d8	100	

ANALYSIS: X SVOC QC Surrogates (Soils) Method Ref: 8270C

Date Ext/Dig/Prep: 2/16/00 Date Analyzed: 2/21/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2,4,6-Tribromophenol	91	
2-Fluorobiphenyl	84	
2-Fluorophenol	85	
Nitrobenzene-d5	76	
p-Terphenyl-d14	83	
Phenol-d5	80	

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LABORATORY REPORT

Accura Sample ID #: AB86197 **Accura Project #: 23602**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWANN
Client Project Number: 149152
Client Project Name: CTO 0002 BUILDING 312OWS
Client Sample ID: 002-312FLR-S-0208-00

Date Sampled: 2/8/00
Date Received: 2/9/00
Date Reported: 3/20/00
Sample Matrix: SOIL

ANALYSIS: Metals - Mercury - RCRA Navy Method Ref: 7471A
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/11/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Mercury	<RDL	0.1

ANALYSIS: Metals - RCRA Navy Method Ref: 3050B/6010B
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Arsenic	<RDL	60
Barium	4.2J	5.0
Cadmium	0.50J	4.0
Chromium	5.1J	7.0
Lead	4.0J	50
Selenium	<RDL	80
Silver	<RDL	7.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	120	30

ANALYSIS: SVOC's Navy Method Ref: 8270C
Date Ext/Dig/Prep: 2/16/00 Date Analyzed: 2/22/00 Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1,2,4-Trichlorobenzene	<RDL	660
1,2-Dichlorobenzene	<RDL	660
1,3-Dichlorobenzene	<RDL	660
1,4-Dichlorobenzene	<RDL	660
2,4,5-Trichlorophenol	<RDL	330

2,4,6-Trichlorophenol	<RDL	660
2,4-Dichlorophenol	<RDL	660
2,4-Dimethylphenol	<RDL	660
2,4-Dinitrophenol	<RDL	3300
2,4-Dinitrotoluene	<RDL	660
2,6-Dinitrotoluene	<RDL	660
2-Chloronaphthalene	<RDL	660
2-Chlorophenol	<RDL	660
2-Methylnaphthalene	850	660
2-Methylphenol	<RDL	660
2-Nitroaniline	<RDL	3300
2-Nitrophenol	<RDL	660
3,3'-Dichlorobenzidine	<RDL	660
3-Methylphenol	<RDL	660
3-Nitroaniline	<RDL	3300
4,6-Dinitro-2-methylphenol	<RDL	3300
4-Bromophenyl phenyl ether	<RDL	660
4-Chloro-3-methylphenol	<RDL	1300
4-Chloroaniline	<RDL	660
4-Chlorophenyl phenyl ether	<RDL	660
4-Methylphenol	<RDL	660
4-Nitroaniline	<RDL	3300
4-Nitrophenol	<RDL	1600
Acenaphthene	<RDL	660
Acenaphthylene	<RDL	660
Anthracene	<RDL	660
Benzo(a)anthracene	<RDL	660
Benzo(a)pyrene	<RDL	660
Benzo(b)fluoranthene	<RDL	660
Benzo(g,h,i)perylene	<RDL	660
Benzo(k)fluoranthene	<RDL	660
Benzoic acid	<RDL	1600
Benzyl alcohol	<RDL	660
bis(2-Chloroethoxy)methane	<RDL	660
bis(2-Chloroethyl)ether	<RDL	660
bis(2-Chloroisopropyl)ether	<RDL	660
bis(2-Ethylhexyl)phthalate	780	660
Butyl benzyl phthalate	<RDL	660
Carbazole	<RDL	660
Chrysene	<RDL	660
Di-n-butylphthalate	<RDL	660
Di-n-octylphthalate	<RDL	660
Dibenz(a,h)anthracene	<RDL	660
Dibenzofuran	<RDL	660
Diethylphthalate	<RDL	660
Dimethylphthalate	<RDL	660
Fluoranthene	<RDL	660
Fluorene	<RDL	660
Hexachlorobenzene	<RDL	660
Hexachlorobutadiene	<RDL	660
Hexachlorocyclopentadiene	<RDL	660
Hexachloroethane	<RDL	660

Indeno(1,2,3-cd)pyrene	<RDL	660
N-Nitroso-di-n-propylamine	<RDL	660
N-Nitrosodiphenylamine	<RDL	660
Naphthalene	<RDL	660
Nitrobenzene	<RDL	660
Pentachlorophenol	<RDL	3300
Phenanthrene	<RDL	660
Phenol	<RDL	660
Pyrene	<RDL	660

ANALYSIS: VOC's Navy Method Ref: 8260B

Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/10/00 Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1,2-Tetrachloroethane	<RDL	15
1,1,1-Trichloroethane	<RDL	20
1,1,2,2-Tetrachloroethane	<RDL	10
1,1,2-Trichloroethane	<RDL	25
1,1-Dichloroethane	<RDL	10
1,1-Dichloroethene	<RDL	30
1,2,3-Trichlorobenzene	<RDL	10
1,2,3-Trichloropropane	<RDL	100
1,2,4-Trichlorobenzene	<RDL	10
1,2,4-Trimethylbenzene	31 J	35
1,2-Dibromo-3-chloropropane	<RDL	50
1,2-Dichlorobenzene	<RDL	10
1,2-Dichloroethane	<RDL	15
1,2-Dichloropropane	<RDL	10
1,2-Ethylene Dibromide	<RDL	15
1,3,5-Trimethylbenzene	11 J	15
1,3-Dichlorobenzene	<RDL	30
1,3-Dichloropropane	<RDL	10
1,4-Dichlorobenzene	<RDL	10
2,2-Dichloropropane	<RDL	100
2-Chlorotoluene	<RDL	10
4-Chlorotoluene	<RDL	15
Benzene	<RDL	10
Bromobenzene	<RDL	10
Bromochloromethane	<RDL	10
Bromodichloromethane	<RDL	20
Bromoform	<RDL	30
Bromomethane	<RDL	25
Carbon tetrachloride	<RDL	50
Chlorobenzene	<RDL	10
Chloroethane	<RDL	25
Chloroform	<RDL	10
Chloromethane	<RDL	35
cis-1,2-Dichloroethene	<RDL	30
cis-1,3-Dichloropropene	<RDL	25
Dibromochloromethane	<RDL	15
Dibromomethane	<RDL	50

Dichlorodifluoromethane	<RDL	25
Ethylbenzene	2.6 J	15
Hexachlorobutadiene	<RDL	25
Isopropylbenzene	4.2 J	40
Methylene chloride	1.6 J B	10
n-Butylbenzene	<RDL	25
n-Propylbenzene	4.7 J	10
Naphthalene	15 B	10
p-Isopropyltoluene	7.9 J	30
Sec-Butylbenzene	12 J	35
Styrene	<RDL	10
Tert-Butylbenzene	<RDL	35
Tetrachloroethylene	<RDL	35
Toluene	<RDL	25
Total Xylene	5.2 J	15
trans-1,2-Dichloroethene	<RDL	15
trans-1,3-Dichloropropene	<RDL	25
Trichloroethylene	<RDL	50
Trichlorofluoromethane	<RDL	20
Vinyl chloride	<RDL	45

ANALYSIS: X PRO QC Surrogates (Soil) Method Ref: FL-PRO

Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39)	46	
o-Terphenyl	86	

ANALYSIS: X VOC QC Surrogates Method Ref: 5035/8260B

Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4	95	
4-Bromofluorobenzene	97	
Toluene-d8	94	

ANALYSIS: X SVOC QC Surrogates (Soils) Method Ref: 8270C

Date Ext/Dig/Prep: 2/16/00 Date Analyzed: 2/22/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2,4,6-Tribromophenol	108	
2-Fluorobiphenyl	82	
2-Fluorophenol	93	
Nitrobenzene-d5	138	
p-Terphenyl-d14	92	
Phenol-d5	92	

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LABORATORY REPORT

Accura Sample ID #: AB86198 **Accura Project #: 23602**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWANN
Client Project Number: 149152
Client Project Name: CTO 0002 BUILDING 312OWS
Client Sample ID: 002-312DUP-S-0208-00

Date Sampled: 2/8/00
Date Received: 2/9/00
Date Reported: 3/20/00
Sample Matrix: SOIL

ANALYSIS: Metals - Mercury - RCRA Navy Method Ref: 7471A
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/11/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Mercury	<RDL	0.1

ANALYSIS: Metals - RCRA Navy Method Ref: 3050B/6010B
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Arsenic	<RDL	60
Barium	3.4J	5.0
Cadmium	0.34J	4.0
Chromium	4.3J	7.0
Lead	3.1J	50
Selenium	<RDL	80
Silver	<RDL	7.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	30	30

ANALYSIS: SVOC's Navy Method Ref: 8270C
Date Ext/Dig/Prep: 2/16/00 Date Analyzed: 2/22/00 Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1,2,4-Trichlorobenzene	<RDL	660
1,2-Dichlorobenzene	<RDL	660
1,3-Dichlorobenzene	<RDL	660
1,4-Dichlorobenzene	<RDL	660
2,4,5-Trichlorophenol	<RDL	330

2,4,6-Trichlorophenol	<RDL	660
2,4-Dichlorophenol	<RDL	660
2,4-Dimethylphenol	<RDL	660
2,4-Dinitrophenol	<RDL	3300
2,4-Dinitrotoluene	<RDL	660
2,6-Dinitrotoluene	<RDL	660
2-Chloronaphthalene	<RDL	660
2-Chlorophenol	<RDL	660
2-Methylnaphthalene	<RDL	660
2-Methylphenol	<RDL	660
2-Nitroaniline	<RDL	3300
2-Nitrophenol	<RDL	660
3,3'-Dichlorobenzidine	<RDL	660
3-Methylphenol	<RDL	660
3-Nitroaniline	<RDL	3300
4,6-Dinitro-2-methylphenol	<RDL	3300
4-Bromophenyl phenyl ether	<RDL	660
4-Chloro-3-methylphenol	<RDL	1300
4-Chloroaniline	<RDL	660
4-Chlorophenyl phenyl ether	<RDL	660
4-Methylphenol	<RDL	660
4-Nitroaniline	<RDL	3300
4-Nitrophenol	<RDL	1600
Acenaphthene	<RDL	660
Acenaphthylene	<RDL	660
Anthracene	<RDL	660
Benzo(a)anthracene	<RDL	660
Benzo(a)pyrene	<RDL	660
Benzo(b)fluoranthene	<RDL	660
Benzo(g,h,i)perylene	<RDL	660
Benzo(k)fluoranthene	<RDL	660
Benzoic acid	<RDL	1600
Benzyl alcohol	<RDL	660
bis(2-Chloroethoxy)methane	<RDL	660
bis(2-Chloroethyl)ether	<RDL	660
bis(2-Chloroisopropyl)ether	<RDL	660
bis(2-Ethylhexyl)phthalate	750	660
Butyl benzyl phthalate	<RDL	660
Carbazole	<RDL	660
Chrysene	<RDL	660
Di-n-butylphthalate	<RDL	660
Di-n-octylphthalate	<RDL	660
Dibenz(a,h)anthracene	<RDL	660
Dibenzofuran	<RDL	660
Diethylphthalate	<RDL	660
Dimethylphthalate	<RDL	660
Fluoranthene	<RDL	660
Fluorene	<RDL	660
Hexachlorobenzene	<RDL	660
Hexachlorobutadiene	<RDL	660
Hexachlorocyclopentadiene	<RDL	660
Hexachloroethane	<RDL	660

Indeno(1,2,3-cd)pyrene	<RDL	660
N-Nitroso-di-n-propylamine	<RDL	660
N-Nitrosodiphenylamine	<RDL	660
Naphthalene	<RDL	660
Nitrobenzene	<RDL	660
Pentachlorophenol	<RDL	3300
Phenanthrene	<RDL	660
Phenol	<RDL	660
Pyrene	<RDL	660

ANALYSIS: VOC's Navy Method Ref: 8260B

Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/10/00 Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1,2-Tetrachloroethane	<RDL	15
1,1,1-Trichloroethane	<RDL	20
1,1,2,2-Tetrachloroethane	<RDL	10
1,1,2-Trichloroethane	<RDL	25
1,1-Dichloroethane	<RDL	10
1,1-Dichloroethene	<RDL	30
1,2,3-Trichlorobenzene	<RDL	10
1,2,3-Trichloropropane	<RDL	100
1,2,4-Trichlorobenzene	<RDL	10
1,2,4-Trimethylbenzene	740 E	35
1,2-Dibromo-3-chloropropane	<RDL	50
1,2-Dichlorobenzene	<RDL	10
1,2-Dichloroethane	<RDL	15
1,2-Dichloropropane	<RDL	10
1,2-Ethylene Dibromide	<RDL	15
1,3,5-Trimethylbenzene	470 E	15
1,3-Dichlorobenzene	<RDL	30
1,3-Dichloropropane	<RDL	10
1,4-Dichlorobenzene	<RDL	10
2,2-Dichloropropane	<RDL	100
2-Chlorotoluene	<RDL	10
4-Chlorotoluene	<RDL	15
Benzene	<RDL	10
Bromobenzene	<RDL	10
Bromochloromethane	<RDL	10
Bromodichloromethane	<RDL	20
Bromoform	<RDL	30
Bromomethane	<RDL	25
Carbon tetrachloride	<RDL	50
Chlorobenzene	<RDL	10
Chloroethane	<RDL	25
Chloroform	<RDL	10
Chloromethane	<RDL	35
cis-1,2-Dichloroethene	<RDL	30
cis-1,3-Dichloropropene	<RDL	25
Dibromochloromethane	<RDL	15
Dibromomethane	<RDL	50

Dichlorodifluoromethane	<RDL	25
Ethylbenzene	65	15
Hexachlorobutadiene	<RDL	25
Isopropylbenzene	200	40
Methylene chloride	1.7 J B	10
n-Butylbenzene	<RDL	25
n-Propylbenzene	220	10
Naphthalene	28 B	10
p-Isopropyltoluene	220 E	30
Sec-Butylbenzene	390	35
Styrene	<RDL	10
Tert-Butylbenzene	<RDL	35
Tetrachloroethylene	<RDL	35
Toluene	<RDL	25
Total Xylene	190	15
trans-1,2-Dichloroethene	<RDL	15
trans-1,3-Dichloropropene	<RDL	25
Trichloroethylene	<RDL	50
Trichlorofluoromethane	<RDL	20
Vinyl chloride	<RDL	45

ANALYSIS: X_PRO QC Surrogates (Soil) Method Ref: FL-PRO

Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39)	29	
o-Terphenyl	73	

ANALYSIS: X_VOC QC Surrogates Method Ref: 5035/8260B

Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4	103	
4-Bromofluorobenzene	118	
Toluene-d8	103	

ANALYSIS: X SVOC QC Surrogates (Soils) Method Ref: 8270C

Date Ext/Dig/Prep: 2/16/00 Date Analyzed: 2/22/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2,4,6-Tribromophenol	104	
2-Fluorobiphenyl	81	
2-Fluorophenol	84	
Nitrobenzene-d5	105	
p-Terphenyl-d14	93	
Phenol-d5	84	

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LABORATORY REPORT

Accura Sample ID #: AB86199 **Accura Project #: 23602**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWANN
Client Project Number: 149152
Client Project Name: CTO 0002 BUILDING 312OWS
Client Sample ID: 002-312EQ-S-0208-00

Date Sampled: 2/8/00
Date Received: 2/9/00
Date Reported: 3/20/00
Sample Matrix: WATER

ANALYSIS: Metals - Mercury - RCRA Navy Method Ref: 7470A
Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/11/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Mercury	<RDL	0.001

ANALYSIS: Metals - RCRA Navy Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Arsenic	<RDL	0.60
Barium	<RDL	0.50
Cadmium	<RDL	0.040
Chromium	<RDL	0.070
Lead	<RDL	0.50
Selenium	<RDL	0.80
Silver	<RDL	0.070

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	<RDL	1.0

ANALYSIS: SVOC's Navy Method Ref: 8270C
Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/23/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2,4-Trichlorobenzene	<RDL	10
1,2-Dichlorobenzene	<RDL	10
1,3-Dichlorobenzene	<RDL	10
1,4-Dichlorobenzene	<RDL	10
2,4,5-Trichlorophenol	<RDL	50

2,4,6-Trichlorophenol	<RDL	10
2,4-Dichlorophenol	<RDL	10
2,4-Dimethylphenol	<RDL	10
2,4-Dinitrophenol	<RDL	50
2,4-Dinitrotoluene	<RDL	10
2,6-Dinitrotoluene	<RDL	10
2-Chloronaphthalene	<RDL	10
2-Chlorophenol	<RDL	10
2-Methylnaphthalene	<RDL	10
2-Methylphenol	<RDL	10
2-Nitroaniline	<RDL	50
2-Nitrophenol	<RDL	10
3,3'-Dichlorobenzidine	<RDL	20
3-Methylphenol	<RDL	10
3-Nitroaniline	<RDL	50
4,6-Dinitro-2-methylphenol	<RDL	50
4-Bromophenyl phenyl ether	<RDL	10
4-Chloro-3-methylphenol	<RDL	20
4-Chloroaniline	<RDL	20
4-Chlorophenyl phenyl ether	<RDL	10
4-Methylphenol	<RDL	10
4-Nitroaniline	<RDL	50
4-Nitrophenol	<RDL	50
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Benzoic acid	<RDL	50
Benzyl alcohol	<RDL	20
bis(2-Chloroethoxy)methane	<RDL	10
bis(2-Chloroethyl)ether	<RDL	10
bis(2-Chloroisopropyl)ether	<RDL	10
bis(2-Ethylhexyl)phthalate	<RDL	10
Butyl benzyl phthalate	<RDL	10
Carbazole	<RDL	10
Chrysene	<RDL	10
Di-n-butylphthalate	<RDL	10
Di-n-octylphthalate	<RDL	10
Dibenz(a,h)anthracene	<RDL	10
Dibenzofuran	<RDL	10
Diethylphthalate	<RDL	10
Dimethylphthalate	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Hexachlorobenzene	<RDL	10
Hexachlorobutadiene	<RDL	10
Hexachlorocyclopentadiene	<RDL	10
Hexachloroethane	<RDL	10

Indeno(1,2,3-cd)pyrene	<RDL	10
N-Nitroso-di-n-propylamine	<RDL	10
N-Nitrosodiphenylamine	<RDL	10
Naphthalene	<RDL	10
Nitrobenzene	<RDL	10
Pentachlorophenol	<RDL	50
Phenanthrene	<RDL	10
Phenol	<RDL	10
Pyrene	<RDL	10

ANALYSIS: VOC's Navy Method Ref: 8260B

Date Ext/Dig/Prep: 2/9/00 Date Analyzed: 2/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1,2-Tetrachloroethane	<RDL	2.5
1,1,1-Trichloroethane	<RDL	4
1,1,2,2-Tetrachloroethane	<RDL	2
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	2
1,1-Dichloroethene	<RDL	6
1,2,3-Trichlorobenzene	<RDL	1.5
1,2,3-Trichloropropane	<RDL	16
1,2,4-Trichlorobenzene	<RDL	2
1,2,4-Trimethylbenzene	<RDL	6.5
1,2-Dibromo-3-chloropropane	<RDL	13
1,2-Dichlorobenzene	<RDL	1.5
1,2-Dichloroethane	<RDL	3
1,2-Dichloropropane	<RDL	2
1,2-Ethylene Dibromide	<RDL	3
1,3,5-Trimethylbenzene	<RDL	2.5
1,3-Dichlorobenzene	<RDL	6
1,3-Dichloropropane	<RDL	2
1,4-Dichlorobenzene	<RDL	1.5
2,2-Dichloropropane	<RDL	17.5
2-Chlorotoluene	<RDL	2
4-Chlorotoluene	<RDL	3
Benzene	<RDL	2
Bromobenzene	<RDL	1.5
Bromochloromethane	<RDL	2
Bromodichloromethane	<RDL	4
Bromoform	<RDL	6
Bromomethane	<RDL	5.5
Carbon tetrachloride	<RDL	10.5
Chlorobenzene	<RDL	2
Chloroethane	<RDL	5
Chloroform	<RDL	1.5
Chloromethane	<RDL	6.5
cis-1,2-Dichloroethene	<RDL	6
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	2.5
Dibromomethane	<RDL	12

Dichlorodifluoromethane	<RDL	5
Ethylbenzene	<RDL	3
Hexachlorobutadiene	<RDL	5.5
Isopropylbenzene	<RDL	2.5
Methylene chloride	<RDL	1.5
n-Butylbenzene	<RDL	5.5
n-Propylbenzene	<RDL	2
Naphthalene	<RDL	2
p-Isopropyltoluene	<RDL	6
Sec-Butylbenzene	<RDL	6.5
Styrene	<RDL	2
Tert-Butylbenzene	<RDL	7
Tetrachloroethylene	<RDL	7
Toluene	<RDL	5.5
Total Xylenes	<RDL	5
trans-1,2-Dichloroethene	<RDL	3
trans-1,3-Dichloropropene	<RDL	5
Trichloroethylene	<RDL	5
Trichlorofluoromethane	<RDL	4
Vinyl chloride	<RDL	5.5

ANALYSIS: X PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39)	16	
o-Terphenyl	83	

ANALYSIS: X VOC QC Surrogates (Waters) Method Ref: 8260B

Date Ext/Dig/Prep: 2/9/00 Date Analyzed: 2/9/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4	86	
4-Bromofluorobenzene	101	
Toluene-d8	97	

ANALYSIS: X SVOC QC Surrogates (Waters) Method Ref: 8270C

Date Ext/Dig/Prep: 2/10/00 Date Analyzed: 2/23/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2,4,6-Tribromophenol	95	
2-Fluorobiphenyl	82	
2-Fluorophenol	78	
Nitrobenzene-d5	75	
p-Terphenyl-d14	86	
Phenol-d5	77	

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LABORATORY REPORT

Accura Sample ID #: AB86200 **Accura Project #: 23602**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWANN
Client Project Number: 149152
Client Project Name: CTO 0002 BUILDING 312OWS
Client Sample ID: METHOD BLANK-1

Date Sampled: 2/9/00
Date Received: 2/9/00
Date Reported: 3/20/00
Sample Matrix: SOIL

ANALYSIS: Metals - Mercury - RCRA Navy Method Ref: 7471A
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/11/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Mercury	<RDL	0.1

ANALYSIS: Metals - RCRA Navy Method Ref: 3050B/6010B
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/15/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Arsenic	<RDL	60
Barium	<RDL	5.0
Cadmium	<RDL	4.0
Chromium	<RDL	7.0
Lead	<RDL	50
Selenium	<RDL	80
Silver	<RDL	7.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 2/11/00 Date Analyzed: 2/14/00 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	<RDL	30

ANALYSIS: SVOC's Navy Method Ref: 8270C
Date Ext/Dig/Prep: 2/16/00 Date Analyzed: 2/21/00 Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1,2,4-Trichlorobenzene	<RDL	660
1,2-Dichlorobenzene	<RDL	660
1,3-Dichlorobenzene	<RDL	660
1,4-Dichlorobenzene	<RDL	660
2,4,5-Trichlorophenol	<RDL	330

2,4,6-Trichlorophenol	<RDL	660
2,4-Dichlorophenol	<RDL	660
2,4-Dimethylphenol	<RDL	660
2,4-Dinitrophenol	<RDL	3300
2,4-Dinitrotoluene	<RDL	660
2,6-Dinitrotoluene	<RDL	660
2-Chloronaphthalene	<RDL	660
2-Chlorophenol	<RDL	660
2-Methylnaphthalene	<RDL	660
2-Methylphenol	<RDL	660
2-Nitroaniline	<RDL	3300
2-Nitrophenol	<RDL	660
3,3'-Dichlorobenzidine	<RDL	660
3-Methylphenol	<RDL	660
3-Nitroaniline	<RDL	3300
4,6-Dinitro-2-methylphenol	<RDL	3300
4-Bromophenyl phenyl ether	<RDL	660
4-Chloro-3-methylphenol	<RDL	1300
4-Chloroaniline	<RDL	660
4-Chlorophenyl phenyl ether	<RDL	660
4-Methylphenol	<RDL	660
4-Nitroaniline	<RDL	3300
4-Nitrophenol	<RDL	1600
Acenaphthene	<RDL	660
Acenaphthylene	<RDL	660
Anthracene	<RDL	660
Benzo(a)anthracene	<RDL	660
Benzo(a)pyrene	<RDL	660
Benzo(b)fluoranthene	<RDL	660
Benzo(g,h,i)perylene	<RDL	660
Benzo(k)fluoranthene	<RDL	660
Benzoic acid	<RDL	1600
Benzyl alcohol	<RDL	660
bis(2-Chloroethoxy)methane	<RDL	660
bis(2-Chloroethyl)ether	<RDL	660
bis(2-Chloroisopropyl)ether	<RDL	660
bis(2-Ethylhexyl)phthalate	<RDL	660
Butyl benzyl phthalate	<RDL	660
Carbazole	<RDL	660
Chrysene	<RDL	660
Di-n-butylphthalate	<RDL	660
Di-n-octylphthalate	<RDL	660
Dibenz(a,h)anthracene	<RDL	660
Dibenzofuran	<RDL	660
Diethylphthalate	<RDL	660
Dimethylphthalate	<RDL	660
Fluoranthene	<RDL	660
Fluorene	<RDL	660
Hexachlorobenzene	<RDL	660
Hexachlorobutadiene	<RDL	660
Hexachlorocyclopentadiene	<RDL	660
Hexachloroethane	<RDL	660

Client Sample ID: METHOD BLANK-1 AALSample ID #: AB86200 Accura Project #: 23602

Indeno(1,2,3-cd)pyrene	<RDL	660
N-Nitroso-di-n-propylamine	<RDL	660
N-Nitrosodiphenylamine	<RDL	660
Naphthalene	<RDL	660
Nitrobenzene	<RDL	660
Pentachlorophenol	<RDL	3300
Phenanthrene	<RDL	660
Phenol	<RDL	660
Pyrene	<RDL	660

ANALYSIS: VOC's Navy Method Ref: 8260B

Date Ext/Dig/Prep: 02/10/2000 Date Analyzed: 02/10/2000 Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1,2-Tetrachloroethane	<RDL	15
1,1,1-Trichloroethane	<RDL	20
1,1,2,2-Tetrachloroethane	<RDL	10
1,1,2-Trichloroethane	<RDL	25
1,1-Dichloroethane	<RDL	10
1,1-Dichloroethene	<RDL	30
1,2,3-Trichlorobenzene	<RDL	10
1,2,3-Trichloropropane	<RDL	100
1,2,4-Trichlorobenzene	<RDL	10
1,2,4-Trimethylbenzene	<RDL	35
1,2-Dibromo-3-chloropropane	<RDL	50
1,2-Dichlorobenzene	<RDL	10
1,2-Dichloroethane	<RDL	15
1,2-Dichloropropane	<RDL	10
1,2-Ethylene Dibromide	<RDL	15
1,3,5-Trimethylbenzene	<RDL	15
1,3-Dichlorobenzene	<RDL	30
1,3-Dichloropropane	<RDL	10
1,4-Dichlorobenzene	<RDL	10
2,2-Dichloropropane	<RDL	100
2-Chlorotoluene	<RDL	10
4-Chlorotoluene	<RDL	15
Benzene	<RDL	10
Bromobenzene	<RDL	10
Bromochloromethane	<RDL	10
Bromodichloromethane	<RDL	20
Bromoform	<RDL	30
Bromomethane	<RDL	25
Carbon tetrachloride	<RDL	50
Chlorobenzene	<RDL	10
Chloroethane	<RDL	25
Chloroform	<RDL	10
Chloromethane	<RDL	35
cis-1,2-Dichloroethene	<RDL	30
cis-1,3-Dichloropropene	<RDL	25
Dibromochloromethane	<RDL	15
Dibromomethane	<RDL	50

Dichlorodifluoromethane	<RDL	25
Ethylbenzene	<RDL	15
Hexachlorobutadiene	<RDL	25
Isopropylbenzene	<RDL	40
Methylene chloride	1.1 J	10
n-Butylbenzene	<RDL	25
n-Propylbenzene	<RDL	10
Naphthalene	1.0 J	10
p-Isopropyltoluene	<RDL	30
Sec-Butylbenzene	<RDL	35
Styrene	<RDL	10
Tert-Butylbenzene	<RDL	35
Tetrachloroethylene	<RDL	35
Toluene	<RDL	25
Total Xylene	<RDL	15
trans-1,2-Dichloroethene	<RDL	15
trans-1,3-Dichloropropene	<RDL	25
Trichloroethylene	<RDL	50
Trichlorofluoromethane	<RDL	20
Vinyl chloride	<RDL	45

ANALYSIS: X PRO QC Surrogates (Soil) Method Ref: FL-PRO

Date Ext/Dig/Prep: 02/11/2000 Date Analyzed: 02/14/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39)	36	
o-Terphenyl	47	

ANALYSIS: X VOC QC Surrogates Method Ref: 5035/8260B

Date Ext/Dig/Prep: 02/09/2000 Date Analyzed: 02/09/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4	109	
4-Bromofluorobenzene	107	
Toluene-d8	100	

ANALYSIS: X SVOC QC Surrogates (Soils) Method Ref: 8270C

Date Ext/Dig/Prep: 02/16/2000 Date Analyzed: 02/21/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2,4,6-Tribromophenol	81	
2-Fluorobiphenyl	76	
2-Fluorophenol	75	
Nitrobenzene-d5	69	
p-Terphenyl-d14	80	
Phenol-d5	72	

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FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB86201 **Accura Project #: 23602**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWANN
Client Project Number: 149152
Client Project Name: CTO 0002 BUILDING 312OWS
Client Sample ID: METHOD BLANK-2

Date Sampled: 02/09/2000
Date Received: 02/09/2000
Date Reported: 03/21/2000
Sample Matrix: WATER

ANALYSIS: Metals - Mercury - RCRA Navy Method Ref: 7470A
Date Ext/Dig/Prep: 02/10/2000 Date Analyzed: 02/11/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Mercury	<RDL	0.001

ANALYSIS: Metals - RCRA Navy Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 02/10/2000 Date Analyzed: 02/16/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Arsenic	<RDL	0.60
Barium	<RDL	0.50
Cadmium	<RDL	0.040
Chromium	<RDL	0.070
Lead	<RDL	0.50
Selenium	<RDL	0.80
Silver	<RDL	0.070

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 02/11/2000 Date Analyzed: 02/14/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	<RDL	1.0

ANALYSIS: SVOC's Navy Method Ref: 8270C
Date Ext/Dig/Prep: 02/10/2000 Date Analyzed: 02/23/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2,4-Trichlorobenzene	<RDL	10
1,2-Dichlorobenzene	<RDL	10
1,3-Dichlorobenzene	<RDL	10
1,4-Dichlorobenzene	<RDL	10
2,4,5-Trichlorophenol	<RDL	50

2,4,6-Trichlorophenol	<RDL	10
2,4-Dichlorophenol	<RDL	10
2,4-Dimethylphenol	<RDL	10
2,4-Dinitrophenol	<RDL	50
2,4-Dinitrotoluene	<RDL	10
2,6-Dinitrotoluene	<RDL	10
2-Chloronaphthalene	<RDL	10
2-Chlorophenol	<RDL	10
2-Methylnaphthalene	<RDL	10
2-Methylphenol	<RDL	10
2-Nitroaniline	<RDL	50
2-Nitrophenol	<RDL	10
3,3'-Dichlorobenzidine	<RDL	20
3-Methylphenol	<RDL	10
3-Nitroaniline	<RDL	50
4,6-Dinitro-2-methylphenol	<RDL	50
4-Bromophenyl phenyl ether	<RDL	10
4-Chloro-3-methylphenol	<RDL	20
4-Chloroaniline	<RDL	20
4-Chlorophenyl phenyl ether	<RDL	10
4-Methylphenol	<RDL	10
4-Nitroaniline	<RDL	50
4-Nitrophenol	<RDL	50
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Benzoic acid	<RDL	50
Benzyl alcohol	<RDL	20
bis(2-Chloroethoxy)methane	<RDL	10
bis(2-Chloroethyl)ether	<RDL	10
bis(2-Chloroisopropyl)ether	<RDL	10
bis(2-Ethylhexyl)phthalate	<RDL	10
Butyl benzyl phthalate	<RDL	10
Carbazole	<RDL	10
Chrysene	<RDL	10
Di-n-butylphthalate	<RDL	10
Di-n-octylphthalate	<RDL	10
Dibenz(a,h)anthracene	<RDL	10
Dibenzofuran	<RDL	10
Diethylphthalate	<RDL	10
Dimethylphthalate	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Hexachlorobenzene	<RDL	10
Hexachlorobutadiene	<RDL	10
Hexachlorocyclopentadiene	<RDL	10
Hexachloroethane	<RDL	10

Indeno(1,2,3-cd)pyrene	<RDL	10
N-Nitroso-di-n-propylamine	<RDL	10
N-Nitrosodiphenylamine	<RDL	10
Naphthalene	<RDL	10
Nitrobenzene	<RDL	10
Pentachlorophenol	<RDL	50
Phenanthrene	<RDL	10
Phenol	<RDL	10
Pyrene	<RDL	10

ANALYSIS: VOC's Navy Method Ref: 8260B

Date Ext/Dig/Prep: 02/09/2000 Date Analyzed: 02/09/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1,2-Tetrachloroethane	<RDL	2.5
1,1,1-Trichloroethane	<RDL	4
1,1,2,2-Tetrachloroethane	<RDL	2
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	2
1,1-Dichloroethene	<RDL	6
1,2,3-Trichlorobenzene	1.7	1.5
1,2,3-Trichloropropane	<RDL	16
1,2,4-Trichlorobenzene	1.1 J	2
1,2,4-Trimethylbenzene	<RDL	6.5
1,2-Dibromo-3-chloropropane	<RDL	13
1,2-Dichlorobenzene	<RDL	1.5
1,2-Dichloroethane	<RDL	3
1,2-Dichloropropane	<RDL	2
1,2-Ethylene Dibromide	<RDL	3
1,3,5-Trimethylbenzene	<RDL	2.5
1,3-Dichlorobenzene	<RDL	6
1,3-Dichloropropane	<RDL	2
1,4-Dichlorobenzene	<RDL	1.5
2,2-Dichloropropane	<RDL	17.5
2-Chlorotoluene	<RDL	2
4-Chlorotoluene	<RDL	3
Benzene	<RDL	2
Bromobenzene	<RDL	1.5
Bromochloromethane	<RDL	2
Bromodichloromethane	<RDL	4
Bromoform	<RDL	6
Bromomethane	<RDL	5.5
Carbon tetrachloride	<RDL	10.5
Chlorobenzene	<RDL	2
Chloroethane	<RDL	5
Chloroform	<RDL	1.5
Chloromethane	<RDL	6.5
cis-1,2-Dichloroethene	<RDL	6
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	2.5
Dibromomethane	<RDL	12

Client Sample ID: METHOD BLANK-2 AALSample ID #: AB86201 Accura Project #: 23602

Dichlorodifluoromethane	<RDL	5
Ethylbenzene	<RDL	3
Hexachlorobutadiene	<RDL	5.5
Isopropylbenzene	<RDL	2.5
Methylene chloride	<RDL	1.5
n-Butylbenzene	<RDL	5.5
n-Propylbenzene	<RDL	2
Naphthalene	3.0	2
p-Isopropyltoluene	<RDL	6
Sec-Butylbenzene	<RDL	6.5
Styrene	<RDL	2
Tert-Butylbenzene	<RDL	7
Tetrachloroethylene	<RDL	7
Toluene	<RDL	5.5
Total Xylenes	<RDL	5
trans-1,2-Dichloroethene	<RDL	3
trans-1,3-Dichloropropene	<RDL	5
Trichloroethylene	<RDL	5
Trichlorofluoromethane	<RDL	4
Vinyl chloride	<RDL	5.5

ANALYSIS: X PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 02/11/2000 Date Analyzed: 02/14/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39)	15	
o-Terphenyl	76	

ANALYSIS: X VOC QC Surrogates (Waters) Method Ref: 8260B

Date Ext/Dig/Prep: 02/09/2000 Date Analyzed: 02/09/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4	81	
4-Bromofluorobenzene	100	
Toluene-d8	97	

ANALYSIS: X SVOC QC Surrogates (Waters) Method Ref: 8270C

Date Ext/Dig/Prep: 02/10/2000 Date Analyzed: 02/23/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2,4,6-Tribromophenol	98	
2-Fluorobiphenyl	84	
2-Fluorophenol	81	
Nitrobenzene-d5	77	
p-Terphenyl-d14	78	
Phenol-d5	75	

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CASE NARRATIVE for Project Number: 23602

Client Project: CTO 0002 Building 312OWS / 149152

The following items were noted concerning this project:

1. The samples were received at 6°C.

2. The results for the soil samples associated with this project are reported on a wet weight basis.

3. The J values noted for the VOC and Metals analyses indicate estimated values in which the compounds are present at concentrations that are less than the quantitation limit, but above the method detection limit.

4. The B value noted for the VOC analysis indicates the analyte is present in the method blank at a concentration that is above the MDL for that analyte, and the sample result should therefore be considered estimated.

5. The following analyte concentrations were above the calibration range:

   VOC SW-846-8260C

1,2,4-Trimethylbenzene	002-312DUP-S-0208-00
1,3,5-Trimethylbenzene	002-312DUP-S-0208-00
p-Isopropyltoluene	002-312DUP-S-0208-00
sec-Butylbenzene	002-312DUP-S-0208-00

   The results for these analytes should be considered estimated.

6. The recoveries of C(39) surrogate for the PRO analyses were outside the method specified limits for all samples and the associated batch QC. However, the recoveries were typical of previous analyses performed by the laboratory.

7. The following surrogates were outside the method specified limits due to matrix interference:

   PRO FL-PRO

O-Terphenyl	002-312NW-S-0208-00

   SVOC SW-8270C

Nitrobenzene-d5	002-312SW-S-0208-00
Nitrobenzene-d5	002-312FLR-S-0208-00

8. The following sample required dilution due to high analyte concentration, resulting in elevated detection limits:

   PRO FL-PRO

   002-312SW-S-0208-00

9. The matrix spike and/or matrix spike duplicate recoveries were outside the method specified limit for the following analytes due to sample heterogeneity:

Metals SW-846-6010B	VOC SW-846-8260B	SVOC SW-846-8270C
Silver (Ag)	Methylene Chloride	2,4-Dinitrophenol
	Benzoic acid *	

   The laboratory control sample recoveries were within the acceptable limits; therefore the data satisfies the method requirements.

* The laboratory control sample did not meet the method specified limits for this compound; therefore the results for this analyte should be considered estimated.

10. The relative percent difference between the matrix spike and matrix spike duplicate analyses was outside the method specified limits for the following analytes due to sample heterogeneity:

Metals SW-846-6010B	VOC SW-846-8260B	SVOC SW-846-8270C
Silver (Ag)	Methylene Chloride	2,4-Dinitrophenol

11. The following analytes did not meet the method specified limits for the laboratory control sample:

VOC SW-846-8260B	SVOC SW-846-8270C
Bromomethane	Benzoic acid

The results for these analytes should be considered estimated.

Quality Assurance

26542

ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

CHAIN OF CUSTODY

Company Name: CCI

Address: [illegible] GA 30346

Report Sent to: (Client Contact): [illegible]

Contact Phone # 770/[illegible] Fax # 770/[illegible]

Project Name: CTO 0002 [illegible]

Project Number: 149152

Billing address: [illegible], GA 30346

Client P.O. # [illegible]

For Laboratory Use Only

Custody Seal: Y N Page ___ OF ___

QC Level: N 1 2 3 4 Init/Temp: ___

Sample Condition: AAL Lab Project #

Samplers: (signature): [illegible]

Samplers: (printed): [illegible]

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	ANALYSIS: 826003 (VOA)	82704 (SVOA)	[illegible] (Metals)	[illegible]					Remarks	Accura Sample ID No. AB
002-S12NE-S-0208-00	[illegible]/1425		✓	S	[illegible]	[illegible]	5	✓	✓	✓	✓						
002-S12NW-S-0208-00	[illegible]/1355		✓	S	[illegible]	[illegible]	5	✓	✓	✓	✓						
002-S12SW-S-0208-00	[illegible]/1500		✓	S	[illegible]	[illegible]	5	✓	✓	✓	✓						
002-S12SE-S-0208-00	[illegible]/1440		✓	S	[illegible]	[illegible]	11	✓	✓	✓	✓					RUN TO MS/MSD THIS SAMPLE	
002-S12FLW-S-0208-00	[illegible]/1515		✓	S	[illegible]	[illegible]	5	✓	✓	✓	✓						
002-S12WAY-S-0208-00	[illegible]/1525		✓	S	[illegible]	[illegible]	5	✓	✓	✓	✓						
002-S12FLW-S-0208-00	[illegible]/1540		✓	W	✓	[illegible]	5	✓	✓	✓	✓						

Relinquished By:	Date / Time	Received By:	Date / Time	Special Requirements Or Remarks:
[illegible]	1605/[illegible]	FEDEX		
Relinquished By:	**Date / Time**	**Received By:**	**Date / Time**	**Turnaround Time Requested:**
FEDEX				7 CAL. DAY

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

COC97-2.XLS

CTO-002
6.06.1.3 Analytical 312

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LABORATORY REPORT

Accura Sample ID #: AB89951 **Accura Project #: 24059**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWAN
Client Project Number: 149152
Client Project Name: CTO #0002 BLD 312OWS
Client Sample ID: 002-312SWE-5-0328-00

Date Sampled: 03/28/2000
Date Received: 03/30/2000
Date Reported: 10/17/2000
Sample Matrix: SOIL

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 04/05/2000 Date Analyzed: 04/06/2000 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	<RDL	30

ANALYSIS: X PRO QC Surrogates (Soil) Method Ref: FL-PRO
Date Ext/Dig/Prep: 04/05/2000 Date Analyzed: 04/06/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Rec. Limit: 60-118)	40	
o-Terphenyl (Rec. Limit: 62-109)	72	

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FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB89952 **Accura Project #: 24059**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWAN
Client Project Number: 149152
Client Project Name: CTO #0002 BLD 312OWS
Client Sample ID: 002-312SWS-5-0328-00

Date Sampled: 03/28/2000
Date Received: 03/30/2000
Date Reported: 10/17/2000
Sample Matrix: SOIL

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 04/05/2000 Date Analyzed: 04/06/2000 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	<RDL	30

ANALYSIS: X_PRO QC Surrogates (Soil) Method Ref: FL-PRO
Date Ext/Dig/Prep: 04/05/2000 Date Analyzed: 04/06/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Rec. Limit: 62-109)	23	
o-Terphenyl (Rec. Limit: 60-118)	77	

Accura Analytical Laboratory, Inc.

ACCURA ANALYTICAL LABORATORY, INC.

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FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB89953 **Accura Project #: 24059**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWAN
Client Project Number: 149152
Client Project Name: CTO #0002 BLD 312OWS
Client Sample ID: 002-312-SWW-5-0328-00

Date Sampled: 03/28/2000
Date Received: 03/30/2000
Date Reported: 10/17/2000
Sample Matrix: SOIL

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 04/05/2000 Date Analyzed: 04/06/2000 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	<RDL	30

ANALYSIS: X_PRO QC Surrogates (Soil) Method Ref: FL-PRO
Date Ext/Dig/Prep: 04/05/2000 Date Analyzed: 04/06/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Rec. Limit: 62-109)	30	
o-Terphenyl (Rec. Limit: 60-118)	71	

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LABORATORY REPORT

Accura Sample ID #: AB89954 **Accura Project #: 24059**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWAN
Client Project Number: 149152
Client Project Name: CTO #0002 BLD 312OWS
Client Sample ID: 002-312-EQ-W-0328-00

Date Sampled: 03/28/2000
Date Received: 03/30/2000
Date Reported: 10/17/2000
Sample Matrix: WATER

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 04/03/2000 Date Analyzed: 04/05/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	<RDL	1.0

ANALYSIS: X PRO QC Surrogates (Water) Method Ref: FL-PRO
Date Ext/Dig/Prep: 04/03/2000 Date Analyzed: 04/05/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Rec. Limit: 42-193)	5.5	
o-Terphenyl (Rec. Limit: 82-142)	80	

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LABORATORY REPORT

Accura Sample ID #: AB89987 **Accura Project #: 24059**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWAN
Client Project Number: 149152
Client Project Name: CTO #0002 BLD 312OWS
Client Sample ID: METHOD BLANK-1

Date Sampled: 03/30/2000
Date Received: 03/30/2000
Date Reported: 10/17/2000
Sample Matrix: SOIL

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 04/05/2000 Date Analyzed: 04/06/2000 Result Units: mg/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	<RDL	30

ANALYSIS: X PRO QC Surrogates (Soil) Method Ref: FL-PRO
Date Ext/Dig/Prep: 04/05/2000 Date Analyzed: 04/06/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Rec. Limit: 62-109)	33	
o-Terphenyl (Rec. Limit: 60-118)	59	

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LABORATORY REPORT

Accura Sample ID #: AB89989 **Accura Project #: 24059**

Client: CH2M HILL - CCI
Client Contact: LISA SCHWAN
Client Project Number: 149152
Client Project Name: CTO #0002 BLD 312OWS
Client Sample ID: METHOD BLANK-2

Date Sampled: 03/30/2000
Date Received: 03/30/2000
Date Reported: 10/17/2000
Sample Matrix: WATER

ANALYSIS: $DR05-1X Method Ref:
Date Ext/Dig/Prep: 04/03/2000 Date Analyzed: 04/04/2000 Result Units:

Analyte Name	Analytical Results	Reported Detection Limits
Standard PRO Surrogates & Spikes	04/04/2000	

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 04/03/2000 Date Analyzed: 04/05/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	<RDL	1.0

ANALYSIS: X PRO QC Surrogates (Water) Method Ref: FL-PRO
Date Ext/Dig/Prep: 04/03/2000 Date Analyzed: 04/05/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Rec. Limit:42-193)	7.4	
o-Terphenyl (Rec. Limit: 82-142)	94	

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Chain of Custody 25621

ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

CHAIN OF CUSTODY

Company Name: CCI / ~~[illegible]~~
Address: ~~115 PERIMETER CENTER PLACE NE, SUITE 700~~ ATLANTA, GA 30346
Report Sent to: (Client Contact): LISA SCHWANN
Contact Phone # (770) 604-9182 EXT 51 Fax # (770) 604-9282
Project Name: CTO # 0002 BLD 312 OWS
Project Number: 149152

Billing address: ~~115 PERIMETER CENTER PLACE NE~~ SUITE 700 ATLANTA, GA 30346
Client P.O. # 1727

For Laboratory Use Only
Custody Seal: Y N Page OF
QC Level: N 1 2 3 4 Init/Temp:
Sample Condition: AAL Lab Project #

Samplers: (signature) [signature]
Samplers: (printed) GREGORY S. RAMEY

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	ANALYSIS: TRPH								Remarks	Accura Sample ID No. AB
002-312SWE-5-0328-00	3-28/15:50		X	S	ICE	SW CORNER OF SITE EAST SIDE OF PIT 5' bls	1	X									
002-312SWS-5-0328-00	3-28/15:40		X			SW CORNER OF SITE SOUTH SIDE OF PIT 5' bls	1	X									
002-312SWW-5-0328-00	3-28/15:30		X			SW CORNER OF SITE WEST SIDE OF PIT 5' bls	1	X									

Relinquished By:	Date / Time	Received By:	Date / Time	Special Requirements Or Remarks:
G.S. RAMEY	3-29/08:00	FEDEX		
Relinquished By:	**Date / Time**	**Received By:**	**Date / Time**	**Turnaround Time Requested:** 7 DAY (CALENDAR DAYS)

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

COC97-2.XLS

CTO-2 Building 312

Appendix F

Analytical Laboratory Report for Confirmatory Groundwater Sample

ACCURA ANALYTICAL LABORATORY, INC.

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LABORATORY REPORT

Accura Sample ID #: AB88072 **Accura Project #: 23800**

Client: CH2M HILL - CCI
Client Contact: SAM ROSS
Client Project Number: CTO 002
Client Project Name: BLDG. 312 NAS CECIL FIELD
Client Sample ID: 002-312TEMP01-GW-0301-00

Date Sampled: 3/1/00
Date Received: 3/3/00
Date Reported: 3/20/00
Sample Matrix: WATER

ANALYSIS: Metals - Mercury - RCRA Navy Method Ref: 7470A

Date Ext/Dig/Prep: 3/9/00 Date Analyzed: 3/10/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Mercury	<RDL	0.001

ANALYSIS: Metals - RCRA Navy Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 3/8/00 Date Analyzed: 3/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Arsenic	<RDL	0.60
Barium	0.45J	0.50
Cadmium	<RDL	0.040
Chromium	0.13	0.070
Lead	0.11J	0.50
Selenium	<RDL	0.80
Silver	<RDL	0.070

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 3/7/00 Date Analyzed: 3/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	1.7	1.0

ANALYSIS: SVOC's Navy Method Ref: 8270C

Date Ext/Dig/Prep: 3/6/00 Date Analyzed: 3/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2,4-Trichlorobenzene	<RDL	10
1,2-Dichlorobenzene	<RDL	10
1,3-Dichlorobenzene	<RDL	10
1,4-Dichlorobenzene	<RDL	10
2,4,5-Trichlorophenol	<RDL	50

2,4,6-Trichlorophenol	<RDL	10
2,4-Dichlorophenol	<RDL	10
2,4-Dimethylphenol	<RDL	10
2,4-Dinitrophenol	<RDL	50
2,4-Dinitrotoluene	<RDL	10
2,6-Dinitrotoluene	<RDL	10
2-Chloronaphthalene	<RDL	10
2-Chlorophenol	<RDL	10
2-Methylnaphthalene	<RDL	10
2-Methylphenol	<RDL	10
2-Nitroaniline	<RDL	50
2-Nitrophenol	<RDL	10
3,3'-Dichlorobenzidine	<RDL	20
3-Methylphenol	<RDL	10
3-Nitroaniline	<RDL	50
4,6-Dinitro-2-methylphenol	<RDL	50
4-Bromophenyl phenyl ether	<RDL	10
4-Chloro-3-methylphenol	<RDL	20
4-Chloroaniline	<RDL	20
4-Chlorophenyl phenyl ether	<RDL	10
4-Methylphenol	<RDL	10
4-Nitroaniline	<RDL	50
4-Nitrophenol	<RDL	50
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Benzoic acid	<RDL	50
Benzyl alcohol	<RDL	20
bis(2-Chloroethoxy)methane	<RDL	10
bis(2-Chloroethyl)ether	<RDL	10
bis(2-Chloroisopropyl)ether	<RDL	10
bis(2-Ethylhexyl)phthalate	7.4J	10
Butyl benzyl phthalate	<RDL	10
Carbazole	<RDL	10
Chrysene	<RDL	10
Di-n-butylphthalate	<RDL	10
Di-n-octylphthalate	<RDL	10
Dibenz(a,h)anthracene	<RDL	10
Dibenzofuran	<RDL	10
Diethylphthalate	<RDL	10
Dimethylphthalate	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Hexachlorobenzene	<RDL	10
Hexachlorobutadiene	<RDL	10
Hexachlorocyclopentadiene	<RDL	10
Hexachloroethane	<RDL	10

Indeno(1,2,3-cd)pyrene	<RDL	10
N-Nitroso-di-n-propylamine	<RDL	10
N-Nitrosodiphenylamine	<RDL	10
Naphthalene	<RDL	10
Nitrobenzene	<RDL	10
Pentachlorophenol	<RDL	50
Phenanthrene	<RDL	10
Phenol	<RDL	10
Pyrene	<RDL	10

ANALYSIS: VOC's Navy Method Ref: 8260B

Date Ext/Dig/Prep: 3/10/00 Date Analyzed: 3/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1,2-Tetrachloroethane	<RDL	2.5
1,1,1-Trichloroethane	<RDL	4
1,1,2,2-Tetrachloroethane	<RDL	2
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	2
1,1-Dichloroethene	<RDL	6
1,2,3-Trichlorobenzene	3.7	1.5
1,2,3-Trichloropropane	<RDL	16
1,2,4-Trichlorobenzene	2.9	2
1,2,4-Trimethylbenzene	26	6.5
1,2-Dibromo-3-chloropropane	<RDL	13
1,2-Dichlorobenzene	<RDL	1.5
1,2-Dichloroethane	<RDL	3
1,2-Dichloropropane	<RDL	2
1,2-Ethylene Dibromide	<RDL	3
1,3,5-Trimethylbenzene	6.9	2.5
1,3-Dichlorobenzene	<RDL	6
1,3-Dichloropropane	<RDL	2
1,4-Dichlorobenzene	<RDL	1.5
2,2-Dichloropropane	<RDL	17.5
2-Chlorotoluene	<RDL	2
4-Chlorotoluene	<RDL	3
Benzene	<RDL	2
Bromobenzene	<RDL	1.5
Bromochloromethane	<RDL	2
Bromodichloromethane	<RDL	4
Bromoform	<RDL	6
Bromomethane	<RDL	5.5
Carbon tetrachloride	<RDL	10.5
Chlorobenzene	<RDL	2
Chloroethane	<RDL	5
Chloroform	<RDL	1.5
Chloromethane	<RDL	6.5
cis-1,2-Dichloroethene	<RDL	6
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	2.5
Dibromomethane	<RDL	12

Dichlorodifluoromethane	<RDL	5
Ethylbenzene	3.8	3
Hexachlorobutadiene	2.0J	5.5
Isopropylbenzene	3.5	2.5
Methylene chloride	<RDL	1.5
n-Butylbenzene	<RDL	5.5
n-Propylbenzene	4.2	2
Naphthalene	16	2
p-Isopropyltoluene	11	6
Sec-Butylbenzene	4.0J	6.5
Styrene	<RDL	2
Tert-Butylbenzene	<RDL	7
Tetrachloroethylene	<RDL	7
Toluene	2.0J	5.5
Total Xylenes	15	5
trans-1,2-Dichloroethene	<RDL	3
trans-1,3-Dichloropropene	<RDL	5
Trichloroethylene	<RDL	5
Trichlorofluoromethane	<RDL	4
Vinyl chloride	<RDL	5.5

ANALYSIS: X PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 3/7/00 Date Analyzed: 3/9/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39)	20	
o-Terphenyl	67	

ANALYSIS: X VOC QC Surrogates (Waters) Method Ref: 8260B

Date Ext/Dig/Prep: 3/10/00 Date Analyzed: 3/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4	83	
4-Bromofluorobenzene	108	
Toluene-d8	96	

ANALYSIS: X SVOC QC Surrogates (Waters) Method Ref: 8270C

Date Ext/Dig/Prep: 3/6/00 Date Analyzed: 3/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2,4,6-Tribromophenol	101	
2-Fluorobiphenyl	68	
2-Fluorophenol	87	
Nitrobenzene-d5	70	
p-Terphenyl-d14	33	
Phenol-d5	78	

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LABORATORY REPORT

Accura Sample ID #: AB88073 **Accura Project #: 23800**

Client: CH2M HILL - CCI
Client Contact: SAM ROSS
Client Project Number: CTO 002
Client Project Name: BLDG. 312 NAS CECIL FIELD
Client Sample ID: 002-312EQ01-W-0301-00

Date Sampled: 3/1/00
Date Received: 3/3/00
Date Reported: 3/20/00
Sample Matrix: WATER

ANALYSIS: Metals - Mercury - RCRA Navy Method Ref: 7470A
Date Ext/Dig/Prep: 3/9/00 Date Analyzed: 3/10/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Mercury	<RDL	0.001

ANALYSIS: Metals - RCRA Navy Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 3/8/00 Date Analyzed: 3/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Arsenic	<RDL	0.60
Barium	0.15J	0.50
Cadmium	<RDL	0.040
Chromium	0.12	0.070
Lead	0.10J	0.50
Selenium	<RDL	0.80
Silver	<RDL	0.070

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 3/7/00 Date Analyzed: 3/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	1.6	1.0

ANALYSIS: SVOC's Navy Method Ref: 8270C
Date Ext/Dig/Prep: 3/6/00 Date Analyzed: 3/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2,4-Trichlorobenzene	<RDL	10
1,2-Dichlorobenzene	<RDL	10
1,3-Dichlorobenzene	<RDL	10
1,4-Dichlorobenzene	<RDL	10
2,4,5-Trichlorophenol	<RDL	50

2,4,6-Trichlorophenol	<RDL	10
2,4-Dichlorophenol	<RDL	10
2,4-Dimethylphenol	<RDL	10
2,4-Dinitrophenol	<RDL	50
2,4-Dinitrotoluene	<RDL	10
2,6-Dinitrotoluene	<RDL	10
2-Chloronaphthalene	<RDL	10
2-Chlorophenol	<RDL	10
2-Methylnaphthalene	<RDL	10
2-Methylphenol	<RDL	10
2-Nitroaniline	<RDL	50
2-Nitrophenol	<RDL	10
3,3'-Dichlorobenzidine	<RDL	20
3-Methylphenol	<RDL	10
3-Nitroaniline	<RDL	50
4,6-Dinitro-2-methylphenol	<RDL	50
4-Bromophenyl phenyl ether	<RDL	10
4-Chloro-3-methylphenol	<RDL	20
4-Chloroaniline	<RDL	20
4-Chlorophenyl phenyl ether	<RDL	10
4-Methylphenol	<RDL	10
4-Nitroaniline	<RDL	50
4-Nitrophenol	<RDL	50
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Benzoic acid	<RDL	50
Benzyl alcohol	<RDL	20
bis(2-Chloroethoxy)methane	<RDL	10
bis(2-Chloroethyl)ether	<RDL	10
bis(2-Chloroisopropyl)ether	<RDL	10
bis(2-Ethylhexyl)phthalate	4.3J	10
Butyl benzyl phthalate	<RDL	10
Carbazole	<RDL	10
Chrysene	<RDL	10
Di-n-butylphthalate	<RDL	10
Di-n-octylphthalate	<RDL	10
Dibenz(a,h)anthracene	<RDL	10
Dibenzofuran	<RDL	10
Diethylphthalate	<RDL	10
Dimethylphthalate	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Hexachlorobenzene	<RDL	10
Hexachlorobutadiene	<RDL	10
Hexachlorocyclopentadiene	<RDL	10
Hexachloroethane	<RDL	10

Indeno(1,2,3-cd)pyrene	<RDL	10
N-Nitroso-di-n-propylamine	<RDL	10
N-Nitrosodiphenylamine	<RDL	10
Naphthalene	<RDL	10
Nitrobenzene	<RDL	10
Pentachlorophenol	<RDL	50
Phenanthrene	<RDL	10
Phenol	<RDL	10
Pyrene	<RDL	10

ANALYSIS: VOC's Navy Method Ref: 8260B

Date Ext/Dig/Prep: 3/9/00 Date Analyzed: 3/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1,2-Tetrachloroethane	<RDL	2.5
1,1,1-Trichloroethane	<RDL	4
1,1,2,2-Tetrachloroethane	<RDL	2
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	2
1,1-Dichloroethene	<RDL	6
1,2,3-Trichlorobenzene	<RDL	1.5
1,2,3-Trichloropropane	<RDL	16
1,2,4-Trichlorobenzene	<RDL	2
1,2,4-Trimethylbenzene	25	6.5
1,2-Dibromo-3-chloropropane	<RDL	13
1,2-Dichlorobenzene	<RDL	1.5
1,2-Dichloroethane	<RDL	3
1,2-Dichloropropane	<RDL	2
1,2-Ethylene Dibromide	<RDL	3
1,3,5-Trimethylbenzene	6.5	2.5
1,3-Dichlorobenzene	<RDL	6
1,3-Dichloropropane	<RDL	2
1,4-Dichlorobenzene	<RDL	1.5
2,2-Dichloropropane	<RDL	17.5
2-Chlorotoluene	<RDL	2
4-Chlorotoluene	<RDL	3
Benzene	<RDL	2
Bromobenzene	<RDL	1.5
Bromochloromethane	<RDL	2
Bromodichloromethane	<RDL	4
Bromoform	<RDL	6
Bromomethane	<RDL	5.5
Carbon tetrachloride	<RDL	10.5
Chlorobenzene	<RDL	2
Chloroethane	<RDL	5
Chloroform	<RDL	1.5
Chloromethane	<RDL	6.5
cis-1,2-Dichloroethene	<RDL	6
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	2.5
Dibromomethane	<RDL	12

Dichlorodifluoromethane	<RDL	5
Ethylbenzene	4.4	3
Hexachlorobutadiene	<RDL	5.5
Isopropylbenzene	3.1	2.5
Methylene chloride	<RDL	1.5
n-Butylbenzene	<RDL	5.5
n-Propylbenzene	3.8	2
Naphthalene	13	2
p-Isopropyltoluene	13	6
Sec-Butylbenzene	3.6J	6.5
Styrene	<RDL	2
Tert-Butylbenzene	<RDL	7
Tetrachloroethylene	<RDL	7
Toluene	<RDL	5.5
Total Xylenes	17	5
trans-1,2-Dichloroethene	<RDL	3
trans-1,3-Dichloropropene	<RDL	5
Trichloroethylene	<RDL	5
Trichlorofluoromethane	<RDL	4
Vinyl chloride	<RDL	5.5

ANALYSIS: X PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 3/7/00 Date Analyzed: 3/9/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39)	12	
o-Terphenyl	55	

ANALYSIS: X VOC QC Surrogates (Waters) Method Ref: 8260B

Date Ext/Dig/Prep: 3/9/00 Date Analyzed: 3/9/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4	96	
4-Bromofluorobenzene	94	
Toluene-d8	98	

ANALYSIS: X SVOC QC Surrogates (Waters) Method Ref: 8270C

Date Ext/Dig/Prep: 3/6/00 Date Analyzed: 3/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2,4,6-Tribromophenol	110	
2-Fluorobiphenyl	75	
2-Fluorophenol	90	
Nitrobenzene-d5	75	
p-Terphenyl-d14	34	
Phenol-d5	82	

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LABORATORY REPORT

Accura Sample ID #: AB88074 **Accura Project #: 23800**

Client: CH2M HILL - CCI
Client Contact: SAM ROSS
Client Project Number: CTO 002
Client Project Name: BLDG. 312 NAS CECIL FIELD
Client Sample ID: METHOD BLANK

Date Sampled: 3/3/00
Date Received: 3/3/00
Date Reported: 3/20/00
Sample Matrix: WATER

ANALYSIS: Metals - Mercury - RCRA Navy Method Ref: 7470A
Date Ext/Dig/Prep: 3/9/00 Date Analyzed: 3/10/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Mercury	<RDL	0.001

ANALYSIS: Metals - RCRA Navy Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 3/8/00 Date Analyzed: 3/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Arsenic	<RDL	0.60
Barium	<RDL	0.50
Cadmium	<RDL	0.040
Chromium	<RDL	0.070
Lead	<RDL	0.50
Selenium	<RDL	0.80
Silver	<RDL	0.070

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 3/7/00 Date Analyzed: 3/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	<RDL	1.0

ANALYSIS: SVOC's Navy Method Ref: 8270C
Date Ext/Dig/Prep: 3/6/00 Date Analyzed: 3/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2,4-Trichlorobenzene	<RDL	10
1,2-Dichlorobenzene	<RDL	10
1,3-Dichlorobenzene	<RDL	10
1,4-Dichlorobenzene	<RDL	10
2,4,5-Trichlorophenol	<RDL	50

2,4,6-Trichlorophenol	<RDL	10
2,4-Dichlorophenol	<RDL	10
2,4-Dimethylphenol	<RDL	10
2,4-Dinitrophenol	<RDL	50
2,4-Dinitrotoluene	<RDL	10
2,6-Dinitrotoluene	<RDL	10
2-Chloronaphthalene	<RDL	10
2-Chlorophenol	<RDL	10
2-Methylnaphthalene	<RDL	10
2-Methylphenol	<RDL	10
2-Nitroaniline	<RDL	50
2-Nitrophenol	<RDL	10
3,3'-Dichlorobenzidine	<RDL	20
3-Methylphenol	<RDL	10
3-Nitroaniline	<RDL	50
4,6-Dinitro-2-methylphenol	<RDL	50
4-Bromophenyl phenyl ether	<RDL	10
4-Chloro-3-methylphenol	<RDL	20
4-Chloroaniline	<RDL	20
4-Chlorophenyl phenyl ether	<RDL	10
4-Methylphenol	<RDL	10
4-Nitroaniline	<RDL	50
4-Nitrophenol	<RDL	50
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Benzoic acid	<RDL	50
Benzyl alcohol	<RDL	20
bis(2-Chloroethoxy)methane	<RDL	10
bis(2-Chloroethyl)ether	<RDL	10
bis(2-Chloroisopropyl)ether	<RDL	10
bis(2-Ethylhexyl)phthalate	<RDL	10
Butyl benzyl phthalate	<RDL	10
Carbazole	<RDL	10
Chrysene	<RDL	10
Di-n-butylphthalate	<RDL	10
Di-n-octylphthalate	<RDL	10
Dibenz(a,h)anthracene	<RDL	10
Dibenzofuran	<RDL	10
Diethylphthalate	<RDL	10
Dimethylphthalate	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Hexachlorobenzene	<RDL	10
Hexachlorobutadiene	<RDL	10
Hexachlorocyclopentadiene	<RDL	10
Hexachloroethane	<RDL	10

Indeno(1,2,3-cd)pyrene	<RDL	10
N-Nitroso-di-n-propylamine	<RDL	10
N-Nitrosodiphenylamine	<RDL	10
Naphthalene	<RDL	10
Nitrobenzene	<RDL	10
Pentachlorophenol	<RDL	50
Phenanthrene	<RDL	10
Phenol	<RDL	10
Pyrene	<RDL	10

ANALYSIS: VOC's Navy Method Ref: 8260B

Date Ext/Dig/Prep: 3/9/00 Date Analyzed: 3/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1,2-Tetrachloroethane	<RDL	2.5
1,1,1-Trichloroethane	<RDL	4
1,1,2,2-Tetrachloroethane	<RDL	2
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	2
1,1-Dichloroethene	<RDL	6
1,2,3-Trichlorobenzene	<RDL	1.5
1,2,3-Trichloropropane	<RDL	16
1,2,4-Trichlorobenzene	<RDL	2
1,2,4-Trimethylbenzene	<RDL	6.5
1,2-Dibromo-3-chloropropane	<RDL	13
1,2-Dichlorobenzene	<RDL	1.5
1,2-Dichloroethane	<RDL	3
1,2-Dichloropropane	<RDL	2
1,2-Ethylene Dibromide	<RDL	3
1,3,5-Trimethylbenzene	<RDL	2.5
1,3-Dichlorobenzene	<RDL	6
1,3-Dichloropropane	<RDL	2
1,4-Dichlorobenzene	<RDL	1.5
2,2-Dichloropropane	<RDL	17.5
2-Chlorotoluene	<RDL	2
4-Chlorotoluene	<RDL	3
Benzene	<RDL	2
Bromobenzene	<RDL	1.5
Bromochloromethane	<RDL	2
Bromodichloromethane	<RDL	4
Bromoform	<RDL	6
Bromomethane	<RDL	5.5
Carbon tetrachloride	<RDL	10.5
Chlorobenzene	<RDL	2
Chloroethane	<RDL	5
Chloroform	<RDL	1.5
Chloromethane	<RDL	6.5
cis-1,2-Dichloroethene	<RDL	6
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	2.5
Dibromomethane	<RDL	12

Dichlorodifluoromethane	<RDL	5
Ethylbenzene	<RDL	3
Hexachlorobutadiene	<RDL	5.5
Isopropylbenzene	<RDL	2.5
Methylene chloride	<RDL	1.5
n-Butylbenzene	<RDL	5.5
n-Propylbenzene	<RDL	2
Naphthalene	<RDL	2
p-Isopropyltoluene	<RDL	6
Sec-Butylbenzene	<RDL	6.5
Styrene	<RDL	2
Tert-Butylbenzene	<RDL	7
Tetrachloroethylene	<RDL	7
Toluene	<RDL	5.5
Total Xylenes	<RDL	5
trans-1,2-Dichloroethene	<RDL	3
trans-1,3-Dichloropropene	<RDL	5
Trichloroethylene	<RDL	5
Trichlorofluoromethane	<RDL	4
Vinyl chloride	<RDL	5.5

ANALYSIS: X PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 3/7/00 Date Analyzed: 3/9/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39)	19	
o-Terphenyl	79	

ANALYSIS: X VOC QC Surrogates (Waters) Method Ref: 8260B

Date Ext/Dig/Prep: 3/9/00 Date Analyzed: 3/9/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4	93	
4-Bromofluorobenzene	95	
Toluene-d8	98	

ANALYSIS: X SVOC QC Surrogates (Waters) Method Ref: 8270C

Date Ext/Dig/Prep: 3/6/00 Date Analyzed: 3/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2,4,6-Tribromophenol	106	
2-Fluorobiphenyl	77	
2-Fluorophenol	77	
Nitrobenzene-d5	77	
p-Terphenyl-d14	82	
Phenol-d5	83	

Accura Analytical Laboratory, Inc.

ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia, 30071, Phone (770) 449-8800

CASE NARRATIVE for Project Number: 23800

Client Project: BLDG. 312 NAS Cecil Field / CTO 002

The following items were noted concerning this project:

1. The samples were received at 6^0C.

2. The J values noted for the VOC, SVOC and Metals analyses indicate estimated values in which the compounds are present at concentrations that are less than the quantitation limit, but above the method detection limit.

3. The recoveries of (C39) surrogate for the PRO analyses were outside the method specified limits for all samples and associated QC. However, the recoveries were within established in-house limits.

4. The following surrogates were outside the method specified limits due to matrix interference:

   Petroleum Range Organics FL-PRO

o-Terphenyl	002-312TEMP01-GW-0301-00
o-Terphenyl	002-312EQ01-W-0301-00

5. The following spike recoveries were outside the method specified limits:

   VOC SW-846-8260B

MS/MSD	1,2,4-Trimethylbenzene
MS/MSD	Naphthalene
LCS	Chloroethane

   SVOC SW-846-8270C

LCS/LCSD	Hexachlorocyclopentadiene
LCS/LCSD	Hexachloroethane

6. The relative percent difference between the matrix spike and the matrix spike duplicate analyses was outside the method specified limits for the following analyte:

   VOC SW-846-8260B

   Bromomethane

_____

Quality Assurance

26544

ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

CHAIN OF CUSTODY

Company Name: CCI / J.A. Jones FMV
Address: Bldg. 1 Cecil Field
Report Sent to: (Client Contact): Sam Ross
Contact Phone # (904) 777-4312 Fax # (904) 777-4312
Project Name: Bldg 312 NAS Cecil Field
Project Number: CTO 002

Billing address: 115 Perimeter Center Place NE Suite 700 Atlanta, GA 30346
Client P.O. #

For Laboratory Use Only

Custody Seal: Y N Page ___ OF ___
QC Level: N 1 2 3 4 Init/Temp:
Sample Condition: AAL Lab Project #

Samplers: (signature): R. Dunlap
Samplers: (printed): Rory Dunlap

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	8260	8270	6010	TL-TPH						Remarks	Accura Sample ID No. AB
002-312TEMP01-SW-0301-00	3/1/00/1515		X	W	X	CF-312-TEMP01	5	X	X	X	X							
002-312EQ01-W-0301-00	3/1/00/1525		X	W	X	CF-312-TEMP01	5	X	X	X	X							

Relinquished By:	Date / Time	Received By:	Date / Time	Special Requirements Or Remarks:
R. Dunlap	3/2/00			
Relinquished By:	**Date / Time**	**Received By:**	**Date / Time**	**Turnaround Time Requested:**
				7-day

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

COC97-2.XLS

CTO-002
6.06.1.3 Analytical 312