Engineering & Environment, *Inc.*

11 January 2006

Mr. Dave Cleland
Department of the Navy
Navy Facilities Engineering Command, Atlantic
Code OPCEV4
6506 Hampton Boulevard, Building C, Room 311
Norfolk, Virginia 23508

Re: Annual Monitoring Report, Site FC-201 East, Revision 0
Marine Corps Base Camp Lejeune, North Carolina
Contract # N62470-03-D-4000, Contract Task Order 0015

Dear Mr. Cleland:

Engineering & Environment, Inc. (EEI) is pleased to provide this monitoring report summarizing groundwater gauging and sampling activities at site FC-201 East, Marine Corps Base (MCB) Camp Lejeune, North Carolina. Activities included quarterly well gauging and annual groundwater sampling at site monitoring well MW-3.

Site FC-201 East includes building FC-201E, a heavy construction equipment maintenance and storage facility located at Marine Corps Base (MCB), Camp Lejeune, North Carolina. The site is located on River Drive at MCB, Camp Lejeune. The nearest surface water body is French's Creek located to the southwest of the site. Figure 1-1 presents the site location on the 7.5-minute United States Geological Survey (USGS) Camp Lejeune and Jacksonville South Topographic Quadrangle Map. Previous site investigations indicated that petroleum constituents had been released from a former waste oil Underground Storage Tank basin (UST), previously located in the vicinity of Building FC-201E; well MW-3 is located in the immediate vicinity of the former UST (Figure 1-2).

Monitoring activities at the site included an annual groundwater sampling event, conducted on 30 November 2004 at well MW-3, and four quarterly gauging events, conducted on 30 November 2004, 25 February 2005, 2 May 2005, and 2 August 2005 at well MW-3. Table 1 presents a summary of the gauging data for the four events; field gauging data sheets are included as an attachment.

Well MW-3 was gauged using an oil-water interface probe, with data recorded to the nearest 0.01 foot and referenced to the top of the well casing. No measurable free product was detected at the well during any of the gauging events. Measured depths to water for the four events ranged from 3.99 to 6.95 feet. This range of 2.96 feet is consistent with expected seasonal fluctuations in the water table. Groundwater elevation contour maps could not be generated as only a single elevation datum per event was available. Historical data suggests that the general groundwater flow direction at the site is to the north and northwest.

824 GUM BRANCH ROAD ♦ SUITE S ♦ JACKSONVILLE, NORTH CAROLINA 28540
PHONE: 910.989.3214 ♦ FAX: 910.989.3341

On November 30, 2004, an EEI representative mobilized to the site for the annual sampling event. A stainless-steel submersible pump with new dedicated polyethylene tubing was lowered into well MW-3 and used to purge the well. Upon completion of the purge, a groundwater sample was collected for the following analyses: Volatile Organic Compounds (VOCs) by Method 6210D; Semi-Volatile Organic Compounds (SVOCs) by Method 625 (with 10 largest non-target peaks); Volatile Petroleum Hydrocarbons (VPH) by MADEP VPH; Extractable Petroleum Hydrocarbons (EPH) by MADEP EPH, and Metals (Lead and Chromium) by Method 6010B (with preparation by Method 3030C). The samples were submitted under chain-of-custody to Paradigm Analytical Laboratories, Inc. The field sampling data sheet, laboratory report, and chain-of-custody form are attached.

Eight VOCs were detected in the groundwater sample for MW-3 during the 30 November 2004 sampling event. Detected compounds included n-butylbenzene, sec-butylbenzene, 4-isopropyltoluene, naphthalene, n-propyl benzene, toluene, and xylenes, all reported at concentrations of less than 1 microgram per liter (ug/L). Table 2 presents a summary of groundwater quality analytical data for the sampling event. With the exception of 4-isopropyltoluene, reported at a concentration of 0.560 ug/L, the compounds are all substantially below North Carolina Groundwater Quality Standards (NCGWQSs) and Gross Contaminant Levels (GCLs). A NCGWQS has not been established for 4-isopropyltoluene; therefore, the standard set at the reporting limit, and consequently the detection of 4-isopropyltoluene is by definition above the standard. A GCL has not been established for 4-isopropyltoluene.

One target analyte SVOC was detected in the groundwater sample for MW-3. Fluorene was reported at an estimated concentration of 1.40 ug/L, substantially below the NCGWQS of 280 ug/L and GCL of 950 ug/L. Naphthalene, reported by the VOC analytical method at an estimated concentration of 0.430 ug/L, was not detected by the SVOC analytical method, at a reporting limit of 10 ug/L. Three Tentatively Identified Compounds (TICs) were reported, with a total estimated concentration of 21.43 ug/L. None the TICs were identified as specific compounds. (TICs are substances not on the target compound list, and not all TICs are identified and quantitated using individual standards. Frequently, TICs cannot be identified as specific compounds, and are reported as compound isomers or as unknown. All TIC quantitations are estimated.) Given the uncertainties associated with TIC quantitation and the lack of specific compound identification, the significance of the data is limited.

None of the hydrocarbon fractions quantitated by the VPH analytical method were present at detectable concentrations. One EPH hydrocarbon fraction, the C_{11}-C_{22} Aromatics, was reported at a concentration of 130 µg/L. A NCGWQS of 210 ug/L has been established for the C_9-C_{22} Aromatics hydrocarbon fraction, presented in Table 2 as the sum of the individually quantitated C_9-C_{10} Aromatics and the C_{11}-C_{22} Aromatics. As the C_9-C_{10} Aromatics were not detected, the summed C_9-C_{22} Aromatics concentration is 130 ug/L, below the NCGWQS. A GCL has not been established for the C_9-C_{22} Aromatics.

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Of the two metals analyzed (lead and chromium), only lead was detected, reported at an estimated concentration of 8.31 ug/L. This concentration is below the NCGWQS of 15 ug/L and the GCL of 15,000 ug/L.

In summary, no measurable free product was observed at well MW-3 during any of the four gauging events. One, 4-isopropyltoluene, was reported at a concentration of 0.560 ug/L; as a NCGWQS has not been established; the detection of the compound is considered to be above the NCGWQS. It recommended to continue site monitoring in a manner consistent with this monitoring program.

Engineering and Environment, Inc. appreciates the opportunity to work with the Navy on this project. If you have and questions regarding this report, please contact me at (910) 989-3214 (bmorris@eeimail.com).

Sincerely,

ENGINEERING AND ENVIRONMENT, INC.

Mr. William C. Morris, P.G.
Project Manager

attachments

cc: Mr. Andrew Smith, (MCB/EMD) Camp Lejeune

1-11-06

824 GUM BRANCH ROAD • SUITE S • JACKSONVILLE, NORTH CAROLINA 28540
PHONE: 910.989.3214 • FAX: 910.989.3341

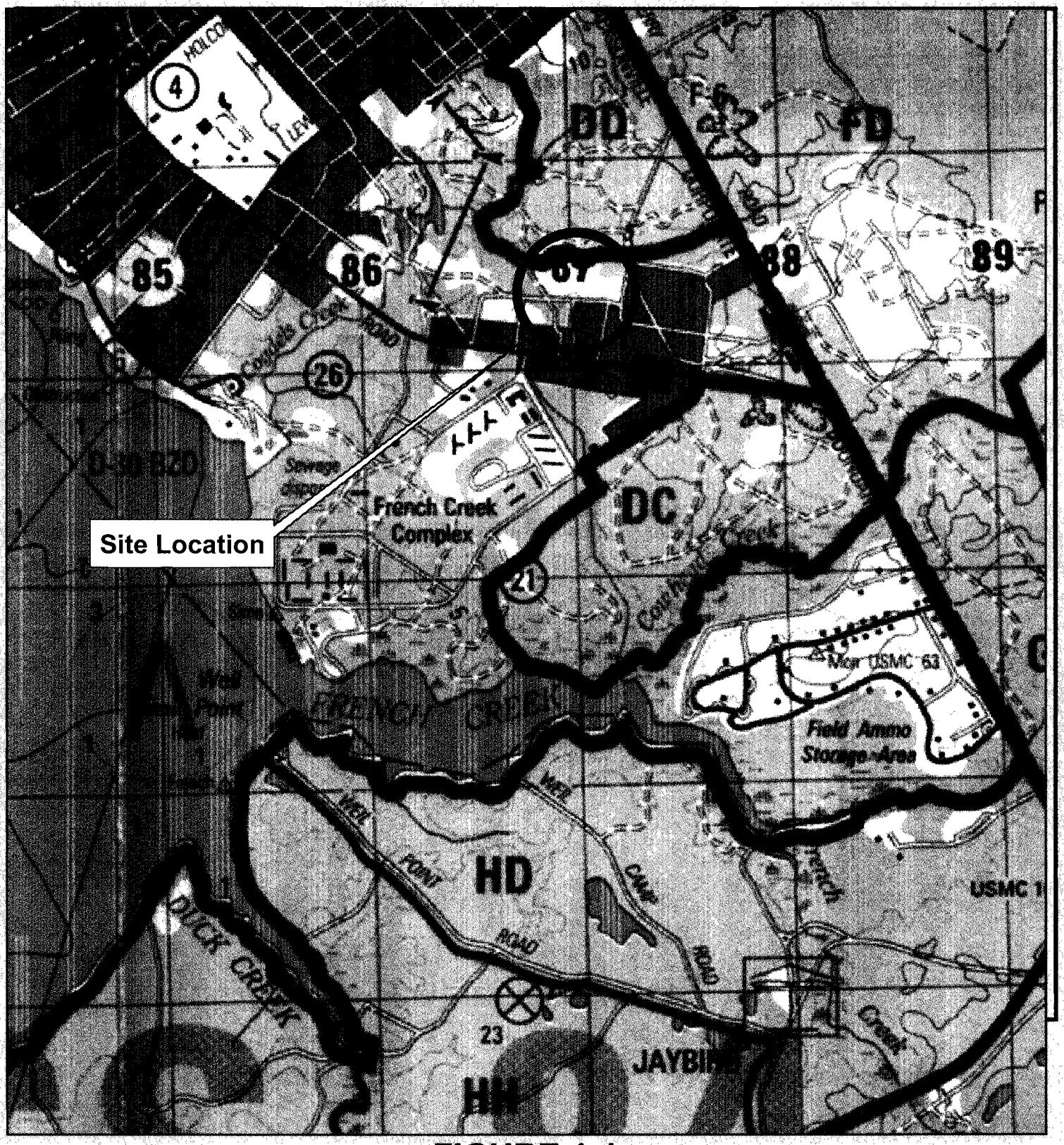

FIGURE 1-1
SITE LOCATION MAP

BUILDING FC-201 EAST
MARINE CORPS BASE
CAMP LEJEUNE, N.C.

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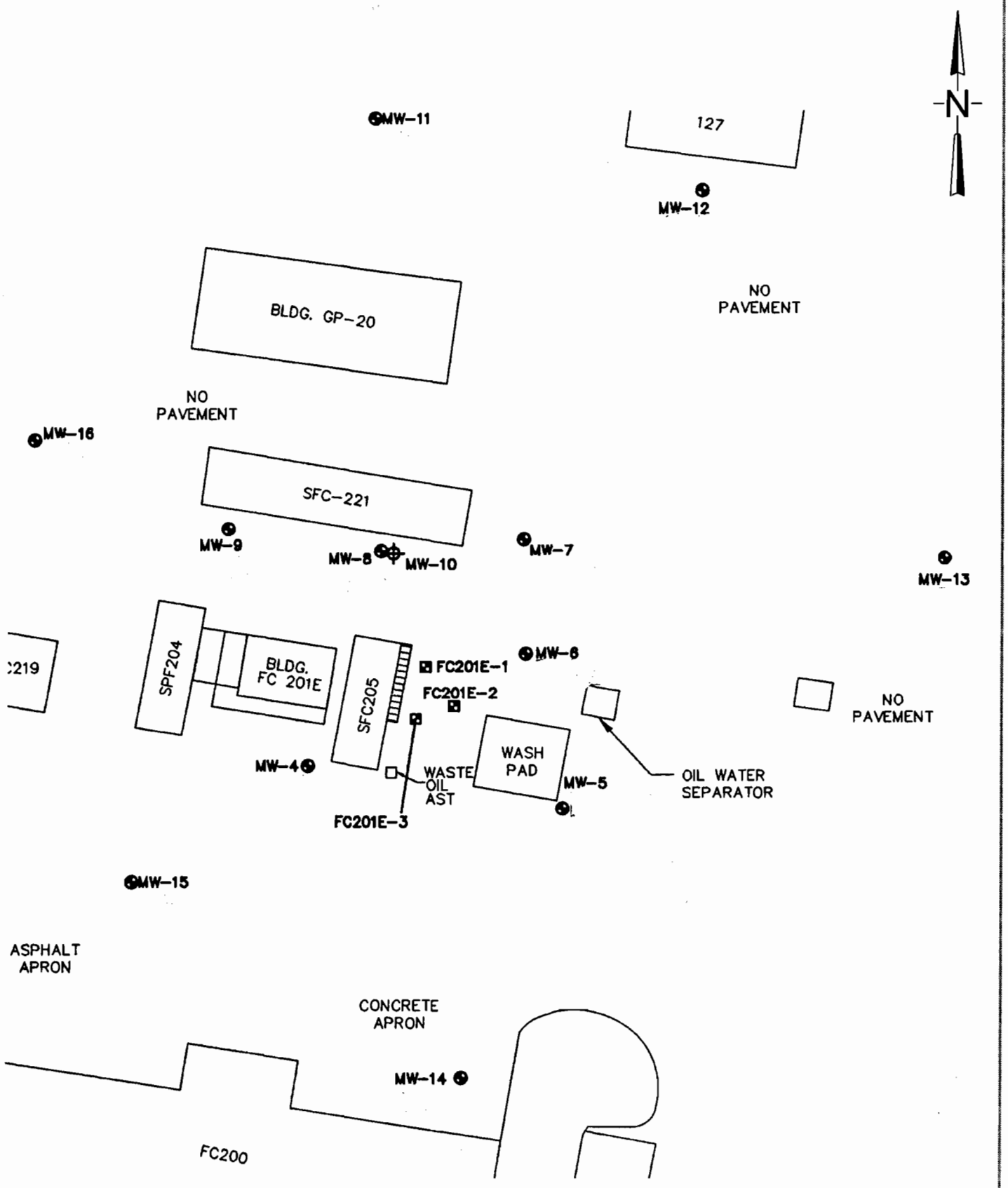
www.eeiinfo.com



SCALE (Feet)

0 50

(Map adapted from FC201E CAP, 1995, Catlin)

Engineering & Environment, Inc.

FIGURE	1-2
DATE	12/20/05
REVISION	0
DRAWN BY	AER
FILE	FC201E Site Map

SITE LAYOUT

FC201 EAST SITE
ANNUAL MONITORING REPORT
MCB CAMP LEJEUNE, NC

Table 1

Summary of Groundwater Gauging Data

Site FC-201 East

Monitoring Well	Depths to Water (feet)			
	30 November 2004	25 February 2005	2 May 2005	2 August 2005
MW-3	6.60	6.95	5.79	3.99

Depths to water measured from the top of PVC well casing.

No measurable free prodoct was detected during the gauging events

Table 2

Summary of Groundwater Quality Analytical Data for November 2004

Site FC-201 East

EPA Method 6210D (ug/L)	NCGWQS	GCL	Well FC201E-3 30 November 2004
n-Butylbenzene	70	6900	**0.680**
sec-Butylbenzene	70	8,500	**0.780**
Isopropylbenzene	70	25,000	**0.820**
4-Isopropyltoluene	RL	NE	**0.560**
Naphthalene	21	15,500	**0.430 J**
n-Propyl benzene	70	30,000	**0.850**
Toluene	1000	257,500	**0.250**
m,p-Xylene [1]			**<1.00**
o-Xylene [1]			**0.240 J**
Total Xylenes [1]	530	87,500	**0.240**
EPA Method 625 (ug/L)			
Fluorene	280	950	**1.40 J**
Naphthalene	21	15,500	<10.0
TICs (total)			**21.43 J**
MADEP VPH (ug/L)			
C_5-C_8 Aliphatics	420	NE	<100
C_9-C_{12} Aliphatics [2]			<100
C_9-C_{10} Aromatics [2]			<100
MADEP EPH (ug/L)			
C_9-C_{18} Aliphatics [2]			<100
C_{19}-C_{36} Aliphatics	42,000	NE	<100
C_{11}-C_{22} Aromatics [2]			**130**
MADEP VPH + EPH (ug/L)			
C_9-C_{12} + C_9-C_{18} Aliphatics [2]	4200	NE	<200
C_9-C_{10} + C_{11}-C_{22} Aromatics [2]	210	NE	**130**
6010B / 3030C (ug/L)			
Lead	15	15000	**8.31 J**

[1] Laboratory quantiation is performed on the m,p-xylene isomers and on the o-xylene isomer; the NCGWQS is based on the sum of the m-, p-, and o-xylene isomers; the sum of the m,p-xylene isomers and the o-xylene isomer is presented as Total Xylenes

[2] Laboratory quantiation is performed on each of the indicated hydrocarbon fractions; NCGWQSs are based on the sum of the indicated fractions; the sums for the indicated fractions are presented as MADEP VPH + EPH

J: Estimated concentration below reporting limits or estimated concentration for TIC quantitations

GCL: Gross Contamination Level

NE: Not Established; a GCL has not been established for the analyte

NCGWQS: North Carolina Groundwater Quality Standard

RL: Reporting Limit, no NCGWQS established for the consitituent; therefore, the NCGWQS for the constituent is the reporting limit

TICs (total): Tentatively Identified Compound; sum of all TICs; all TIC concentrations are estimated; no TICs were identified as discrete compounds in the sample

ug/L: micrograms per liter

Bold type indicates analyte detection

Shaded area in bold indicates analyte detection at a concentration above the NCGWQS

Shaded area in bold italics indicates analyte detection at a concentration above the GCL

ENGINEERING AND ENVIRONMENT, INC.

FC-201 East Field Data

Project #LD03-004

Date 11/30/2004 **Time** 13:55 Weather

Sampler BS **Well/Sample #** USTFC201E-3

Depth To Bottom (ft) 19.32 **Depth To \ Water (ft)** 6.60 **Water Depth (ft)** 12.72

Well Vol. 2.08 **Purge Vol.** 6.24 **Vol. Purged**

Sampling Device (pump/Bailer)

	ONE	TWO	THREE	FOUR	FIVE	SIX	UNIT
Time	13:35	13:42	13:47	13:52			N/A
Temperature	21.6	21.48	21.49	21.45			©
Spec. Conductivity	0.592	0.536	0.525	0.521			(m s/m)
Dissolved Oxygen	1.59	0.9	0.56	0.38			ms/L
PH	6.91	6.88	6.88	6.87			STD
ORP	-129.9	-164.6	-176.1	-179.2			(G/L)
Turbitidy	46.4	8.35	2.64	2.15			(NTU)

Analyte	Size	Preserv.
6210D	3 X 40 ml	HCL
625	1 X 1 L	None
EPH	2 X 1 L	
VPH	2 X 40 ml	HCL

Comments:	Dry at 1.5 vol.; waited 20 minutes; took sample

2" well vol.=water depth X 0.1632 4" well vol.=water depth x 0.6528

ENGINEERING AND ENVIRONMENT, INC. **Water Level, FC-201 East** **Date: 11/30/04**

Well ID	MW01	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW02	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW03	Depth to Bottom		Depth to Product		Depth to Water	6.60
Well ID	MW05	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW06	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW07	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW08	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW09	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW10	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW11	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW12	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW13	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW14	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW15	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW16	Depth to Bottom		Depth to Product		Depth to Water	

ENGINEERING AND ENVIRONMENT, INC. **Water Level, FC-201 East** **Date: 02/25/05**

Well ID	MW01	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW02	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW03	Depth to Bottom		Depth to Product		Depth to Water	6.95
Well ID	MW05	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW06	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW07	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW08	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW09	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW10	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW11	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW12	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW13	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW14	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW15	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW16	Depth to Bottom		Depth to Product		Depth to Water	

ENGINEERING AND ENVIRONMENT, INC. **Water Level, FC-201 East** **Date: 05/02/05**

Well ID	MW01	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW02	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW03	Depth to Bottom		Depth to Product		Depth to Water	5.79
Well ID	MW05	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW06	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW07	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW08	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW09	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW10	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW11	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW12	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW13	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW14	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW15	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW16	Depth to Bottom		Depth to Product		Depth to Water	

ENGINEERING AND ENVIRONMENT, INC. **Water Level, FC-201 East** **Date: 08/02/05**

Well ID	MW01	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW02	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW03	Depth to Bottom		Depth to Product		Depth to Water	3.99
Well ID	MW05	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW06	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW07	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW08	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW09	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW10	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW11	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW12	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW13	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW14	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW15	Depth to Bottom		Depth to Product		Depth to Water	
Well ID	MW16	Depth to Bottom		Depth to Product		Depth to Water	

Mr. Bill Morris
Engineering & Environment, Inc.
824 Gum Branch Road
Jacksonville NC 28546

Report Number: G546-17

Client Project: USTFC201E

Dear Mr. Morris:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
Paradigm Analytical Laboratories, Inc.

1/11/05

Laboratory Director Date
J. Patrick Weaver

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles
by GCMS 6210D

Client Sample ID: USTFC201-3
Client Project ID: USTFC201E
Lab Sample ID: G546-17-1B
Lab Project ID: G546-17

Analyzed By: JTF
Date Collected: 11/30/2004 13:55
Date Received: 12/01/2004
Matrix: Water

Compound	Result UG/L	Quantitation Limit UG/L	MDL UG/L	Dilution Factor	Date Analyzed	Flag
Benzene	BQL	0.500	0.152	1	12/14/2004	
Bromobenzene	BQL	0.500	0.199	1	12/14/2004	
Bromochloromethane	BQL	0.500	0.312	1	12/14/2004	
Bromodichloromethane	BQL	0.500	0.195	1	12/14/2004	
Bromoform	BQL	0.500	0.116	1	12/14/2004	
Bromomethane	BQL	0.500	0.398	1	12/14/2004	
n-Butylbenzene	**0.680**	0.500	0.262	1	12/14/2004	
sec-Butylbenzene	**0.780**	0.500	0.234	1	12/14/2004	
tert-Butylbenzene	BQL	0.500	0.181	1	12/14/2004	
Carbon tetrachloride	BQL	0.500	0.150	1	12/14/2004	
Chlorobenzene	BQL	0.500	0.178	1	12/14/2004	
Chloroethane	BQL	0.500	0.373	1	12/14/2004	
Chloroform	BQL	0.500	0.195	1	12/14/2004	
Chloromethane	BQL	0.500	0.457	1	12/14/2004	
2-Chlorotoluene	BQL	0.500	0.204	1	12/14/2004	
4-Chlorotoluene	BQL	0.500	0.198	1	12/14/2004	
Dibromochloromethane	BQL	0.500	0.198	1	12/14/2004	
1,2-Dibromo-3-chloropropane	BQL	5.00	1.89	1	12/14/2004	
Dibromomethane	BQL	0.500	0.276	1	12/14/2004	
1,2-Dibromoethane (EDB)	BQL	0.500	0.269	1	12/14/2004	
1,2-Dichlorobenzene	BQL	0.500	0.187	1	12/14/2004	
1,3-Dichlorobenzene	BQL	0.500	0.242	1	12/14/2004	
1,4-Dichlorobenzene	BQL	0.500	0.177	1	12/14/2004	
1,1-Dichloroethane	BQL	0.500	0.201	1	12/14/2004	
1,1-Dichloroethene	BQL	0.500	0.159	1	12/14/2004	
1,2-Dichloroethane	BQL	0.500	0.223	1	12/14/2004	
cis-1,2-Dichloroethene	BQL	0.500	0.161	1	12/14/2004	
trans-1,2-dichloroethene	BQL	0.500	0.230	1	12/14/2004	
1,2-Dichloropropane	BQL	0.500	0.132	1	12/14/2004	
1,3-Dichloropropane	BQL	0.500	0.163	1	12/14/2004	
2,2-Dichloropropane	BQL	0.500	0.263	1	12/14/2004	
1,1-Dichloropropene	BQL	0.500	0.176	1	12/14/2004	
Dichlorodifluoromethane	BQL	5.00	0.459	1	12/14/2004	
Diisopropyl ether (DIPE)	BQL	0.500	0.204	1	12/14/2004	
Ethylbenzene	BQL	0.500	0.183	1	12/14/2004	
Hexachlorobutadiene	BQL	0.500	0.406	1	12/14/2004	
Isopropylbenzene	**0.820**	0.500	0.163	1	12/14/2004	
4-Isopropyltoluene	**0.560**	0.500	0.203	1	12/14/2004	
Methylene chloride	BQL	5.00	0.176	1	12/14/2004	
Methyl-tert-butyl ether (MTBE)	BQL	0.500	0.201	1	12/14/2004	
Naphthalene	**0.430**	0.500	0.259	1	12/14/2004	J
n-Propyl benzene	**0.850**	0.500	0.203	1	12/14/2004	

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles
by GCMS 6210D

Client Sample ID: USTFC201-3
Client Project ID: USTFC201E
Lab Sample ID: G546-17-1B
Lab Project ID: G546-17

Analyzed By: JTF
Date Collected: 11/30/2004 13:55
Date Received: 12/01/2004
Matrix: Water

Compound	Result UG/L	Quantitation Limit UG/L	MDL UG/L	Dilution Factor	Date Analyzed	Flag
Styrene	BQL	0.500	0.235	1	12/14/2004	
1,1,1,2-Tetrachloroethane	BQL	0.500	0.298	1	12/14/2004	
1,1,2,2-Tetrachloroethane	BQL	0.500	0.217	1	12/14/2004	
Tetrachloroethene	BQL	0.500	0.219	1	12/14/2004	
Toluene	**0.250**	0.500	0.154	1	12/14/2004	J
1,2,3-Trichlorobenzene	BQL	0.500	0.206	1	12/14/2004	
1,2,4-Trichlorobenzene	BQL	0.500	0.271	1	12/14/2004	
Trichloroethene	BQL	0.500	0.201	1	12/14/2004	
1,1,1-Trichloroethane	BQL	0.500	0.168	1	12/14/2004	
1,1,2-Trichloroethane	BQL	0.500	0.231	1	12/14/2004	
Trichlorofluoromethane	BQL	0.500	0.481	1	12/14/2004	
1,2,3-Trichloropropane	BQL	0.500	0.214	1	12/14/2004	
1,2,4-Trimethylbenzene	BQL	0.500	0.205	1	12/14/2004	
1,3,5-Trimethylbenzene	BQL	0.500	0.179	1	12/14/2004	
Vinyl chloride	BQL	0.500	0.464	1	12/14/2004	
m-,p-Xylene	BQL	1.00	0.388	1	12/14/2004	
o-Xylene	**0.240**	0.500	0.156	1	12/14/2004	J

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	10	10.2	102
1,2-Dichloroethane-d4	10	10.4	104
Toluene-d8	10	9.99	100

Comments:

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles
by GCMS 6210D

Client Sample ID: Trip Blank
Client Project ID: USTFC201E
Lab Sample ID: G546-17-2A
Lab Project ID: G546-17

Analyzed By: JTF
Date Collected: 11/30/2004 00:00
Date Received: 12/01/2004
Matrix: Water

Compound	Result UG/L	Quantitation Limit UG/L	MDL UG/L	Dilution Factor	Date Analyzed	Flag
Benzene	BQL	0.500	0.152	1	12/14/2004	
Bromobenzene	BQL	0.500	0.199	1	12/14/2004	
Bromochloromethane	BQL	0.500	0.312	1	12/14/2004	
Bromodichloromethane	BQL	0.500	0.195	1	12/14/2004	
Bromoform	BQL	0.500	0.116	1	12/14/2004	
Bromomethane	BQL	0.500	0.398	1	12/14/2004	
n-Butylbenzene	BQL	0.500	0.262	1	12/14/2004	
sec-Butylbenzene	BQL	0.500	0.234	1	12/14/2004	
tert-Butylbenzene	BQL	0.500	0.181	1	12/14/2004	
Carbon tetrachloride	BQL	0.500	0.150	1	12/14/2004	
Chlorobenzene	BQL	0.500	0.178	1	12/14/2004	
Chloroethane	BQL	0.500	0.373	1	12/14/2004	
Chloroform	BQL	0.500	0.195	1	12/14/2004	
Chloromethane	BQL	0.500	0.457	1	12/14/2004	
2-Chlorotoluene	BQL	0.500	0.204	1	12/14/2004	
4-Chlorotoluene	BQL	0.500	0.198	1	12/14/2004	
Dibromochloromethane	BQL	0.500	0.198	1	12/14/2004	
1,2-Dibromo-3-chloropropane	BQL	5.00	1.89	1	12/14/2004	
Dibromomethane	BQL	0.500	0.276	1	12/14/2004	
1,2-Dibromoethane (EDB)	BQL	0.500	0.269	1	12/14/2004	
1,2-Dichlorobenzene	BQL	0.500	0.187	1	12/14/2004	
1,3-Dichlorobenzene	BQL	0.500	0.242	1	12/14/2004	
1,4-Dichlorobenzene	BQL	0.500	0.177	1	12/14/2004	
1,1-Dichloroethane	BQL	0.500	0.201	1	12/14/2004	
1,1-Dichloroethene	BQL	0.500	0.159	1	12/14/2004	
1,2-Dichloroethane	BQL	0.500	0.223	1	12/14/2004	
cis-1,2-Dichloroethene	BQL	0.500	0.161	1	12/14/2004	
trans-1,2-dichloroethene	BQL	0.500	0.230	1	12/14/2004	
1,2-Dichloropropane	BQL	0.500	0.132	1	12/14/2004	
1,3-Dichloropropane	BQL	0.500	0.163	1	12/14/2004	
2,2-Dichloropropane	BQL	0.500	0.263	1	12/14/2004	
1,1-Dichloropropene	BQL	0.500	0.176	1	12/14/2004	
Dichlorodifluoromethane	BQL	5.00	0.459	1	12/14/2004	
Diisopropyl ether (DIPE)	BQL	0.500	0.204	1	12/14/2004	
Ethylbenzene	BQL	0.500	0.183	1	12/14/2004	
Hexachlorobutadiene	BQL	0.500	0.406	1	12/14/2004	
Isopropylbenzene	BQL	0.500	0.163	1	12/14/2004	
4-Isopropyltoluene	BQL	0.500	0.203	1	12/14/2004	
Methylene chloride	BQL	5.00	0.176	1	12/14/2004	
Methyl-tert-butyl ether (MTBE)	BQL	0.500	0.201	1	12/14/2004	
Naphthalene	BQL	0.500	0.259	1	12/14/2004	
n-Propyl benzene	BQL	0.500	0.203	1	12/14/2004	

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles
by GCMS 6210D

Client Sample ID: Trip Blank
Client Project ID: USTFC201E
Lab Sample ID: G546-17-2A
Lab Project ID: G546-17

Analyzed By: JTF
Date Collected: 11/30/2004 00:00
Date Received: 12/01/2004
Matrix: Water

Compound	Result UG/L	Quantitation Limit UG/L	MDL UG/L	Dilution Factor	Date Analyzed	Flag
Styrene	BQL	0.500	0.235	1	12/14/2004	
1,1,1,2-Tetrachloroethane	BQL	0.500	0.298	1	12/14/2004	
1,1,2,2-Tetrachloroethane	BQL	0.500	0.217	1	12/14/2004	
Tetrachloroethene	BQL	0.500	0.219	1	12/14/2004	
Toluene	BQL	0.500	0.154	1	12/14/2004	
1,2,3-Trichlorobenzene	BQL	0.500	0.206	1	12/14/2004	
1,2,4-Trichlorobenzene	BQL	0.500	0.271	1	12/14/2004	
Trichloroethene	BQL	0.500	0.201	1	12/14/2004	
1,1,1-Trichloroethane	BQL	0.500	0.168	1	12/14/2004	
1,1,2-Trichloroethane	BQL	0.500	0.231	1	12/14/2004	
Trichlorofluoromethane	BQL	0.500	0.481	1	12/14/2004	
1,2,3-Trichloropropane	BQL	0.500	0.214	1	12/14/2004	
1,2,4-Trimethylbenzene	BQL	0.500	0.205	1	12/14/2004	
1,3,5-Trimethylbenzene	BQL	0.500	0.179	1	12/14/2004	
Vinyl chloride	BQL	0.500	0.464	1	12/14/2004	
m-,p-Xylene	BQL	1.00	0.388	1	12/14/2004	
o-Xylene	BQL	0.500	0.156	1	12/14/2004	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	10	10.1	101
1,2-Dichloroethane-d4	10	10.3	103
Toluene-d8	10	10.1	101

Comments:

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles
by GCMS 6210D

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: VBLK4121404B
Lab Project ID:

Analyzed By: JTF
Date Collected:
Date Received:
Matrix: Water

Compound	Result UG/L	Quantitation Limit UG/L	MDL UG/L	Dilution Factor	Date Analyzed	Flag
Benzene	BQL	0.500	0.152	1	12/14/2004	
Bromobenzene	BQL	0.500	0.199	1	12/14/2004	
Bromochloromethane	BQL	0.500	0.312	1	12/14/2004	
Bromodichloromethane	BQL	0.500	0.195	1	12/14/2004	
Bromoform	BQL	0.500	0.116	1	12/14/2004	
Bromomethane	BQL	0.500	0.398	1	12/14/2004	
n-Butylbenzene	BQL	0.500	0.262	1	12/14/2004	
sec-Butylbenzene	BQL	0.500	0.234	1	12/14/2004	
tert-Butylbenzene	BQL	0.500	0.181	1	12/14/2004	
Carbon tetrachloride	BQL	0.500	0.150	1	12/14/2004	
Chlorobenzene	BQL	0.500	0.178	1	12/14/2004	
Chloroethane	BQL	0.500	0.373	1	12/14/2004	
Chloroform	BQL	0.500	0.195	1	12/14/2004	
Chloromethane	BQL	0.500	0.457	1	12/14/2004	
2-Chlorotoluene	BQL	0.500	0.204	1	12/14/2004	
4-Chlorotoluene	BQL	0.500	0.198	1	12/14/2004	
Dibromochloromethane	BQL	0.500	0.198	1	12/14/2004	
1,2-Dibromo-3-chloropropane	BQL	5.00	1.89	1	12/14/2004	
Dibromomethane	BQL	0.500	0.276	1	12/14/2004	
1,2-Dibromoethane (EDB)	BQL	0.500	0.269	1	12/14/2004	
1,2-Dichlorobenzene	BQL	0.500	0.187	1	12/14/2004	
1,3-Dichlorobenzene	BQL	0.500	0.242	1	12/14/2004	
1,4-Dichlorobenzene	BQL	0.500	0.177	1	12/14/2004	
1,1-Dichloroethane	BQL	0.500	0.201	1	12/14/2004	
1,1-Dichloroethene	BQL	0.500	0.159	1	12/14/2004	
1,2-Dichloroethane	BQL	0.500	0.223	1	12/14/2004	
cis-1,2-Dichloroethene	BQL	0.500	0.161	1	12/14/2004	
trans-1,2-dichloroethene	BQL	0.500	0.230	1	12/14/2004	
1,2-Dichloropropane	BQL	0.500	0.132	1	12/14/2004	
1,3-Dichloropropane	BQL	0.500	0.163	1	12/14/2004	
2,2-Dichloropropane	BQL	0.500	0.263	1	12/14/2004	
1,1-Dichloropropene	BQL	0.500	0.176	1	12/14/2004	
Dichlorodifluoromethane	BQL	5.00	0.459	1	12/14/2004	
Diisopropyl ether (DIPE)	BQL	0.500	0.204	1	12/14/2004	
Ethylbenzene	BQL	0.500	0.183	1	12/14/2004	
Hexachlorobutadiene	BQL	0.500	0.406	1	12/14/2004	
Isopropylbenzene	BQL	0.500	0.163	1	12/14/2004	
4-Isopropyltoluene	BQL	0.500	0.203	1	12/14/2004	
Methylene chloride	BQL	5.00	0.176	1	12/14/2004	
Methyl-tert-butyl ether (MTBE)	BQL	0.500	0.201	1	12/14/2004	
Naphthalene	BQL	0.500	0.259	1	12/14/2004	
n-Propyl benzene	BQL	0.500	0.203	1	12/14/2004	

Results for Volatiles
by GCMS 6210D

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: VBLK4121404B
Lab Project ID:

Analyzed By: JTF
Date Collected:
Date Received:
Matrix: Water

Compound	Result UG/L	Quantitation Limit UG/L	MDL UG/L	Dilution Factor	Date Analyzed	Flag
Styrene	BQL	0.500	0.235	1	12/14/2004	
1,1,1,2-Tetrachloroethane	BQL	0.500	0.298	1	12/14/2004	
1,1,2,2-Tetrachloroethane	BQL	0.500	0.217	1	12/14/2004	
Tetrachloroethene	BQL	0.500	0.219	1	12/14/2004	
Toluene	BQL	0.500	0.154	1	12/14/2004	
1,2,3-Trichlorobenzene	**0.480**	0.500	0.206	1	12/14/2004	J
1,2,4-Trichlorobenzene	BQL	0.500	0.271	1	12/14/2004	
Trichloroethene	BQL	0.500	0.201	1	12/14/2004	
1,1,1-Trichloroethane	BQL	0.500	0.168	1	12/14/2004	
1,1,2-Trichloroethane	BQL	0.500	0.231	1	12/14/2004	
Trichlorofluoromethane	BQL	0.500	0.481	1	12/14/2004	
1,2,3-Trichloropropane	BQL	0.500	0.214	1	12/14/2004	
1,2,4-Trimethylbenzene	BQL	0.500	0.205	1	12/14/2004	
1,3,5-Trimethylbenzene	BQL	0.500	0.179	1	12/14/2004	
Vinyl chloride	BQL	0.500	0.464	1	12/14/2004	
m-,p-Xylene	BQL	1.00	0.388	1	12/14/2004	
o-Xylene	BQL	0.500	0.156	1	12/14/2004	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	10	9.9	99
1,2-Dichloroethane-d4	10	10.2	102
Toluene-d8	10	10.1	101

Comments:

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

Results for Laboratory Control Spike (LCS)
by GC/MS

Lab Sample ID: lcs4121404a
Analyst: JTF
Batch ID: 4121404

Date Analyzed: 14 Dec 2004 10:45 am
Matrix: Water

Compound	Spiked ug/L	Amount recovered	LCS (%)	Limits Lower (%)	Limits Upper (%)
benzene	5.0	4.43	88.7	77.4	123
chlorobenzene	5.0	4.79	95.9	72.5	128
1,1-dichloroethene	5.0	4.01	80.1	71.7	128
toluene	5.0	4.61	92.2	75.9	124
trichloroethene	5.0	4.48	89.5	77.9	122

Comments:
Concentration values are on column amount.

Flags:
* = Out of limits.
NA = Not applicable

Reviewed By: _____

VO42.072303.1

Results for MS/MSD
by GC/MS

Client Project ID: Batch QC
Lab Sample ID: g158-233-4a x100
Batch ID: 4121404

Date Analyzed: 14 Dec 2004 7:27 pm
Matrix: water
Analyzed By: JTF

Compound	Unspiked Sample ug/L	Spike conc. ug/L	Recovered MS %	Recovered MSD %	Limits Lower %	Limits Upper %	RPD %	RPD Limit %
benzene	3.3	5	85.2	86.9	61.6	135	1.9	30
chlorobenzene	BQL	5	104.8	101.8	77.2	118	3.0	30
1,1-dichloroethene	BQL	5	77.9	80.7	64.4	130	3.5	30
toluene	BQL	5	96.6	89.7	66.4	128	7.4	30
trichloroethene	BQL	5	92.7	88.6	84.9	136	4.6	30

Comments:

Concentrations are on column amounts.
Concentration Units: ug/L

Flags:

* = Out of limits.
NA = Not applicable
BQL = Below quantitation limit.

Reviewed By: _____

VO43.072303.1

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Engineering & Environment, Inc.

Project Name: USTFC201E

Sample Information and Analytical Results	
Sample Identification	USTFC201-3
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	11/30/04
Date Received	12/01/04
Date Extracted	12/12/04
Date Analyzed	12/12/04
Dry Weight	
Dilution Factor	1
C_5-C_8 Aliphatics**	< 100 (µg/L)
C_9-C_{12} Aliphatics**	< 100 (µg/L)
C_9-C_{10} Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	130
Surrogate % Recovery - FID	120

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g546-17-1e

Reviewed By: _____

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 12/09/04 PID Initial Calibration Date: 12/09/04

Calibration Ranges and Limits

Range	MDL (07/15/2004) (µg/L)	ML (µg/L)	RL (µg/L)	RL (mg/Kg)
C_5-C_8 Aliphatics	4.4	14	100	10
C_9-C_{12} Aliphatics	3.4	11	100	10
C_9-C_{10} Aromatics	0.13	0.41	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	%RSD or CCC	Method of Quantitation
C_5-C_8 Aliphatics	40	4.0	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C_9-C_{12} Aliphatics	10	14.8	Calibration Factor
	250		
	500		
	750		
	1000		
C_9-C_{10} Aromatics	10	7.4	Calibration Factor
	250		
	500		
	750		
	1000		

Calibration Check Date: 12/12/04

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	RPD
C_5-C_8 Aliphatics	2000	200	1.9
C_9-C_{12} Aliphatics	500	50	21.3
C_9-C_{10} Aromatics	500	50	4.3

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit
RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Engineering & Environment, Inc.

Project Name: USTFC201E

Sample Information and Analytical Results	
Sample Identification	USTFC201-3
Sample Matrix	Water
Date Collected	11/30/04
Date Received	12/01/04
Date Extracted	12/13/04
Date Analyzed	12/20/04
Dry Weight	
Dilution Factor	1:1
C_9-C_{18} Aliphatics*	< 100 (ug/L)
C_{19}-C_{36} Aliphatics*	< 100 (ug/L)
C_{11}-C_{22} Aromatics*	130 (ug/L)
Aliphatic Surrogate % Recovery	52
Aromatic Surrogate % Recovery	65
Fractionation Surrogate 1 % Recovery	98

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G546-17-1P

Reviewed By: mc

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 12/15/04

Calibration Ranges and Limits

Range	MDL (2/2004) (µg/L)	ML (µg/L)	RL (µg/L)	RL (mg/Kg)
C_9-C_{18} Aliphatics	3.84	12.2	100	10
C_{19}-C_{36} Aliphatics	0.57	1.8	100	10
C_{11}-C_{22} Aromatics	4.54	14.4	100	10

Calibration Concentration Levels

Range	Levels (µg/mL)	%RSD or CCC	Method of Quantitation
C_9-C_{18} Aliphatics	6	4.80	Calibration Factor
	30		
	60		
	120		
	240		
C_{19}-C_{36} Aliphatics	8	8.3	Calibration Factor
	40		
	80		
	160		
	320		
C_{11}-C_{22} Aromatics	17	5.4	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 12/20/04

Calibration Check

Range	Levels (µg/mL)	RPD
C_9-C_{18} Aliphatics	120	0.7
C_{19}-C_{36} Aliphatics	160	-7.5
C_{11}-C_{22} Aromatics	340	11.8

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit
RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

Results for Metals

Client Sample ID:	USTFC201-3	Analyzed By:	RML
Client Project ID:	USTFC201E	Date Collected:	11/30/2004 13:55
Lab Sample ID:	G546-17-1	Date Received:	12/1/04
Lab Project ID:	G546-17	Matrix:	WATER
Batch ID:	2078		

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Chromium	BQL	0.0100	0.000310	1	MG/L	6010B	12/13/04	
Lead	**0.00831**	0.0100	0.00121	1	MG/L	6010B	12/13/04	J

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
Sample prepared by SM 3030C.

Reviewed By: _____

Results for Metals

Client Sample ID:	Lab Blank	Analyzed By:	RML
Client Project ID:		Date Collected:	
Lab Sample ID:	pb2078	Date Received:	
Lab Project ID:		Matrix:	WATER
Batch ID:	2078		

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Chromium	BQL	0.0100	0.000310	1	MG/L	6010B	12/13/04	
Lead	BQL	0.0100	0.00121	1	MG/L	6010B	12/13/04	

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
Sample prepared by SM 3030C.

Reviewed By: MC

METALS Results for LCS/LCD

ICP Batch: 2078
HG Batch:
Other:

Matrix: WATER
Units: MG/L

Analyte	TRUE Value	LCS	LCS %REC	LCD	LCD %REC	Limit Lower	Limit Upper	RPD	RPD Limit
Chromium	0.400	0.407	102	0.408	102	80	120	0.245	20
Lead	0.400	0.425	106	0.424	106	80	120	0.236	20

Reviewed By:

PARADIGM ANALYTICAL LABORATORIES, INC.

MS/MSD Results for METALS

Lab ID: G546-17-1
MS Lab ID: G546-17-1
MSD Lab ID: G546-17-1
ICP Batch: 2078
HG Batch:
Other:

Analyzed By: PSW
Matrix: Water
Units: MG/L

Analyte	Sample Result	SA MS	MS Result	MS %REC	SA MSD	MSD Result	MSD %REC	Limit Lower	Limit Upper	RPD	RPD Limit
Chromium	BQL	0.400	0.358	89.5	0.400	0.362	90.5	75	125	1.11	20
Lead	0.00831	0.400	0.372	93.0	0.400	0.374	93.5	75	125	0.536	20

Comments

*=Out of Limits
NA = Not applicable, due to sample concentration greater than three times spike concentration

Reviewed By:

Results for Semivolatiles by GCMS 625

Client Sample ID: USTFC201-3
Client Project ID: USTFC201E
Lab Sample ID: G546-17-1O
Lab Project ID: G546-17

Analyzed By: MRC
Date Collected: 11/30/2004 13:55
Date Received: 12/01/2004
Date Extracted: 12/06/2004
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	12/08/2004	
Acenaphthylene	BQL	10.0	1.12	1	12/08/2004	
Anthracene	BQL	10.0	1.75	1	12/08/2004	
Benzo[a]anthracene	BQL	10.0	1.36	1	12/08/2004	
Benzo[a]pyrene	BQL	10.0	1.27	1	12/08/2004	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	12/08/2004	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	12/08/2004	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	12/08/2004	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	12/08/2004	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	12/08/2004	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	12/08/2004	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	12/08/2004	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	12/08/2004	
Butylbenzylphthalate	BQL	10.0	1.53	1	12/08/2004	
2-Chloronaphthalene	BQL	10.0	1.25	1	12/08/2004	
2-Chlorophenol	BQL	10.0	4.22	1	12/08/2004	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	12/08/2004	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	12/08/2004	
Chrysene	BQL	10.0	1.11	1	12/08/2004	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	12/08/2004	
Di-n-Butylphthalate	BQL	10.0	1.65	1	12/08/2004	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	12/08/2004	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	12/08/2004	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	12/08/2004	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	12/08/2004	
2,4-Dichlorophenol	BQL	10.0	3.75	1	12/08/2004	
Diethylphthalate	BQL	10.0	1.48	1	12/08/2004	
Dimethylphthalate	BQL	10.0	1.04	1	12/08/2004	
2,4-Dimethylphenol	BQL	10.0	9.25	1	12/08/2004	
Di-n-octylphthalate	BQL	10.0	1.16	1	12/08/2004	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	12/08/2004	
2,4-Dinitrophenol	BQL	50.0	4.20	1	12/08/2004	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	12/08/2004	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	12/08/2004	
Fluoranthene	BQL	10.0	1.41	1	12/08/2004	
Fluorene	1.40	10.0	1.22	1	12/08/2004	J
Hexachlorobenzene	BQL	10.0	1.22	1	12/08/2004	
Hexachlorobutadiene	BQL	10.0	1.58	1	12/08/2004	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	12/08/2004	
Hexachloroethane	BQL	10.0	1.58	1	12/08/2004	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	12/08/2004	
Isophorone	BQL	10.0	1.27	1	12/08/2004	

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTFC201-3
Client Project ID: USTFC201E
Lab Sample ID: G546-17-1O
Lab Project ID: G546-17

Analyzed By: MRC
Date Collected: 11/30/2004 13:55
Date Received: 12/01/2004
Date Extracted: 12/06/2004
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Naphthalene	BQL	10.0	1.08	1	12/08/2004	
Nitrobenzene	BQL	10.0	1.32	1	12/08/2004	
2-Nitrophenol	BQL	10.0	3.52	1	12/08/2004	
4-Nitrophenol	BQL	50.0	3.17	1	12/08/2004	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	12/08/2004	
N-Nitrosodiphenylamine	BQL	10.0	1.53	1	12/08/2004	
Pentachlorophenol	BQL	50.0	2.83	1	12/08/2004	
Phenanthrene	BQL	10.0	1.38	1	12/08/2004	
Phenol	BQL	10.0	3.38	1	12/08/2004	
Pyrene	BQL	10.0	2.08	1	12/08/2004	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	12/08/2004	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	12/08/2004	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.3	83
2-Fluorophenol	10	8.4	84
Nitrobenzene-d5	10	8.3	83
Phenol-d6	10	8.4	84
2,4,6-Tribromophenol	5	3.8	76
4-Terphenyl-d14	10	9.8	98

Comments:

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: MRC

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTFC201-3
Client Project ID: USTFC201E
Lab Sample ID: G546-17-1O
Lab Project ID: G546-17
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 11/30/2004 13:55
Date Received: 12/01/2004
Date Analyzed: 12/08/2004
Date Extracted: 12/06/2004
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Propenylbenzene, Isomer of	7.32			8.5
2	Unknown	16.24			7.55
3	Aromatic, Unknown	8.59			5.38
4					
5					
6					
7					
8					
9					
10					

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: mc

Results for Semivolatiles
by GCMS 625

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB2089
Lab Project ID:

Analyzed By: MRC
Date Collected:
Date Received:
Date Extracted: 12/06/2004
Matrix: WATER

Compound	Result ug/L	Quantitation Limit ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	12/07/2004	
Acenaphthylene	BQL	10.0	1.12	1	12/07/2004	
Anthracene	BQL	10.0	1.75	1	12/07/2004	
Benzo[a]anthracene	BQL	10.0	1.36	1	12/07/2004	
Benzo[a]pyrene	BQL	10.0	1.27	1	12/07/2004	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	12/07/2004	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	12/07/2004	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	12/07/2004	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	12/07/2004	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	12/07/2004	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	12/07/2004	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	12/07/2004	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	12/07/2004	
Butylbenzylphthalate	BQL	10.0	1.53	1	12/07/2004	
2-Chloronaphthalene	BQL	10.0	1.25	1	12/07/2004	
2-Chlorophenol	BQL	10.0	4.22	1	12/07/2004	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	12/07/2004	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	12/07/2004	
Chrysene	BQL	10.0	1.11	1	12/07/2004	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	12/07/2004	
Di-n-Butylphthalate	BQL	10.0	1.65	1	12/07/2004	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	12/07/2004	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	12/07/2004	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	12/07/2004	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	12/07/2004	
2,4-Dichlorophenol	BQL	10.0	3.75	1	12/07/2004	
Diethylphthalate	BQL	10.0	1.48	1	12/07/2004	
Dimethylphthalate	BQL	10.0	1.04	1	12/07/2004	
2,4-Dimethylphenol	BQL	10.0	9.25	1	12/07/2004	
Di-n-octylphthalate	BQL	10.0	1.16	1	12/07/2004	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	12/07/2004	
2,4-Dinitrophenol	BQL	50.0	4.20	1	12/07/2004	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	12/07/2004	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	12/07/2004	
Fluoranthene	BQL	10.0	1.41	1	12/07/2004	
Fluorene	BQL	10.0	1.22	1	12/07/2004	
Hexachlorobenzene	BQL	10.0	1.22	1	12/07/2004	
Hexachlorobutadiene	BQL	10.0	1.58	1	12/07/2004	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	12/07/2004	
Hexachloroethane	BQL	10.0	1.58	1	12/07/2004	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	12/07/2004	
Isophorone	BQL	10.0	1.27	1	12/07/2004	

Results for Semivolatiles
by GCMS 625

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB2089
Lab Project ID:

Analyzed By: MRC
Date Collected:
Date Received:
Date Extracted: 12/06/2004
Matrix: WATER

Compound	Result ug/L	Quantitation Limit ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Naphthalene	BQL	10.0	1.08	1	12/07/2004	
Nitrobenzene	BQL	10.0	1.32	1	12/07/2004	
2-Nitrophenol	BQL	10.0	3.52	1	12/07/2004	
4-Nitrophenol	BQL	50.0	3.17	1	12/07/2004	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	12/07/2004	
N-Nitrosodiphenylamine	BQL	10.0	1.53	1	12/07/2004	
Pentachlorophenol	BQL	50.0	2.83	1	12/07/2004	
Phenanthrene	BQL	10.0	1.38	1	12/07/2004	
Phenol	BQL	10.0	3.38	1	12/07/2004	
Pyrene	BQL	10.0	2.08	1	12/07/2004	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	12/07/2004	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	12/07/2004	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.6	86
2-Fluorophenol	10	9	90
Nitrobenzene-d5	10	8.7	87
Phenol-d6	10	9	90
2,4,6-Tribromophenol	5	3.4	68
4-Terphenyl-d14	10	10.6	106

Comments:

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: mc

Results For Water Laboratory Control Standard (LCS)
by GCMS

Client Sample ID: Batch QC
Client Project ID:
Lab Sample ID: W-LCS-2089
Lab Project ID:
Matrix: Water

Date Collected:
Date Received:
Date Analyzed: 12/07/04
Analyzed By: MRC

	Spiked	LCS	LCS	LIMITS	
	ng	ng	% Rec.	LOWER	UPPER
Acenaphthylene	10	9.40	94	84	114
4-Chloro-3-methylphenol	10	8.14	81	63	110
2-Chlorophenol	10	7.96	80	64	94
1,4-Dichlorobenzene	10	4.86	49	27	78
2,4-Dinitrotoluene	10	8.20	82	73	103
N-Nitrosodi-n-propylamine	10	9.52	95	73	100
4-Nitrophenol	10	9.34	93	45	127
Pentachlorophenol	10	7.56	76	54	99
Phenol	10	8.30	83	64	94
Pyrene	10	7.63	76	58	114
1,2,4-Trichlorobenzene	10	6.99	70	51	96

Comments:

Concentrations are on column amounts.

Flags:

* = Out of limits.
NA = Not applicable.

Reviewed By: MC

Results For Water Matrix Spike / Matrix Spike Duplicate (MS/MSD)
by GCMS

Client Sample ID: Batch QC
Client Project ID:
Lab Sample ID: W-MS-2089
Lab Project ID:
Matrix: Water

Date Collected:
Date Received:
Date Analyzed: 12/07/04
Analyzed By: MRC
Dilution: 1

	Sample	Spiked	MS	MSD	Limits		RPD	Limit
					Lower	Upper		Max.
	ng	ng	%	%	%	%	%	%
Acenaphthylene	BQL	10	93	88	79	118	5.7	30
4-Chloro-3-methylphenol	BQL	10	80	79	63	112	1.9	30
2-Chlorophenol	BQL	10	79	75	57	102	6.0	30
1,4-Dichlorobenzene	BQL	10	61	58	40	89	3.8	30
2,4-Dinitrotoluene	BQL	10	82	79	70	108	3.2	30
N-Nitrosodi-n-propylamine	BQL	10	93	91	66	109	2.7	30
4-Nitrophenol	BQL	10	95	89	50	130	6.2	30
Pentachlorophenol	BQL	10	75	73	52	110	3.2	30
Phenol	BQL	10	86	83	59	100	3.3	30
Pyrene	BQL	10	76	75	58	112	1.0	30
1,2,4-Trichlorobenzene	BQL	10	73	71	46	103	3.9	30

Comments:

Concentrations are on column amounts.

Flags:

* = Out of limits.
NA = Not applicable.

Reviewed By: MRC

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% soilds = Percent Solids

Special Notes:

1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.

2) Uncertainty for all reported data is less than or equal to 30 percent.

MI34.011404.1

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 42318

Page ____ of ____

Client: Engineering + Environmental
Address: 824 Gumbranch rd
Address: Suite 5
Quote #: Jacksonville NC.

Project ID: UST FC201E
Contact: Bill Morris
Phone: 910-989-3219
Fax:

Date: 11-30-04
Turnaround: Standard
Job Number:
P.O. Number:

Report To:

Invoice To:

Sample ID	Date	Time	Matrix	Preservative: HNO3	HCl	Ice		Analysis: 62100	VPH	EPH 239.1+1310C PB+CR	1625+HC					
UST FC201-3	11-30-04	13:55	GV	2	1	1		x	x	x	x	4				
Trip Blank	11-30-04	10:10						1								

G546-17

Analysis added per B. Sellers 12/2/04 gl

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Required
Bob Sellers	11-30-04	15:13	Julie Glenn	12/1/04	1045	1.5°C	NC ____ SC ____ Other ____

SEE REVERSE FOR TERMS AND CONDITIONS

ORIGINAL

PARADIGM ANALYTICAL LABORATORIES, INC.

N.C. CERTIFICATION #481