

1R - 1057

REPORTS

5/14/2007

May 14, 2007

Mr. Glenn Von Gonten
Environmental Hydrologist
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico, 87505

Subject: **Monitor Well Installation and Risk Evaluation Report**
Halliburton/Baroid Mud Plant
401 East Avenue R
Lovington, Lea County, New Mexico

Dear Mr. Johnson:

Delta Environmental Consultants, Inc. (Delta) submits the enclosed Monitor Well Installation and Risk Evaluation Report outlining field activities completed in March 2007 at the site referenced above. Based on the groundwater data and risk evaluation, Halliburton Energy Services, Inc. (HESI) is requesting closure of this site.

We appreciate your prompt review of the report. Please contact either myself at 512 342-8096 or Mr. James McGinty of HESI at 281-575-4428, if you have any questions concerning the site.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.



A handwritten signature in black ink, appearing to read "John Barry".

John Barry
Sr. Project Manager

CC: Larry Johnson- Environmental Engineer
Chris Williams - District I Supervisor
Wayne Price – Environmental Bureau Chief
Patricia Caperton – Environmental Tech

MONITOR WELL INSTALLATION AND RISK EVALUATION REPORT

**HALLIBURTON/BAROID MUD PLANT
401 EAST AVENUE R
LOVINGTON, LEA COUNTY, NEW MEXICO**

DELTA PROJECT NO. F004-004

Prepared for:

**Halliburton Energy Services, Inc.
10200 Bellaire Boulevard
Houston, Texas 77072**

May 11, 2007

Prepared by:



**Delta Environmental Consultants, Inc.
9009 Mountain Ridge Dr., Ste 110
Austin, Texas 78759
(800) 477-7411**

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MONITOR WELL INSTALLATION AND RISK EVALUATION REPORT

**HALLIBURTON/BAROID MUD PLANT
401 EAST AVENUE R
LOVINGTON, LEA COUNTY, NEW MEXICO**

DELTA PROJECT NO. F004-004

1.0 REPORT SUMMARY

This report presents the results of monitor well installation and groundwater sampling activities at the site referenced above. The chemicals of concern (COCs) in the groundwater at the site were compared to the New Mexico Oil Conservation Division's (OCD's) cleanup levels, the New Mexico Water Quality Control Commission (WQCC) standards, and New Mexico Environment Department's (NMED's) risk guidelines. Also included in this text is a qualitative risk evaluation to determine the actual or potential for public and environmental exposure to hydrocarbon impact at the site.

2.0 SITE HISTORY

The site is a former mud plant operated by Baroid, now owned by Halliburton Company. The mud plant has been inactive for approximately 20 years; however, the warehouse area of the site is currently in use. Site demolition activities in early 2004 indicated several potential areas of concern (AOCs) on the mud plant portion of the property, north of the warehouse. These included: an unlined pit on the north side of the property, the former mud tank containment area with one former below grade tank, several areas where apparently impacted surface soil was observed, and the former debris pile area on the north end of the property.

In April 2004, the contents of the mud tanks were removed, the mud tank containment area was razed, the tanks and debris from the site were removed, and some soil excavation (surface soil and the soil in the mud tank containment area) occurred. One (1) sample from the mud plant and one (1) soil sample from the pit area were collected during the field activities. The mud plant sample contained 6,820 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons (TPH) by EPA Method 418.1, and the sample from the pit area contained 24,200 mg/kg TPH. Analysis for Toxicity Characteristic Leaching Procedure (TCLP) semi-volatile organic compounds (SVOCs) and TCLP RCRA Metals were below laboratory detection limits. TCLP volatile organic compounds (VOCs) were either below laboratory detection limits or below the Environmental Protection Agency's (EPA's) limit for each compound. Copies of the laboratory analytical reports were previously submitted to the OCD. The sludge and soil were removed

and transported for off-site disposal at Sundance Services in Eunice, New Mexico. Excavation was not completed in the pit area at that time.

In July 2004, eight soil borings were advanced in the areas of concern. Soil sample results indicated impact near the former mud tank containment area and near the pit. Subsequently, approximately 2,800 cubic yards of soil were removed from the pit area. Soil confirmation results indicated total petroleum hydrocarbons – diesel range organics (TPH-D) concentrations ranged from <5 mg/kg to 13,000 mg/kg. Six of the eight soil confirmation samples exceeded the target level of 1,000 mg/kg TPH-D.

In September 2004, an estimated additional 3,000 cubic yards of soil were removed from the pit and former mud plant areas. Soil confirmation results indicate only one sample collected from the north wall of the mud plant excavation exceeded 1,000 mg/kg TPH-D. The samples with the two highest TPH-D results were also analyzed for benzene, toluene, ethyl benzene, and total xylenes (BTEX), polynuclear aromatic hydrocarbons (PAHs), and TCLP metals. All results were below laboratory detection limits or State standards. Copies of the laboratory analytical reports were previously submitted to the OCD.

The excavations were backfilled in November 2004 after verbal approval from the OCD. At the request of the OCD, Halliburton sampled the backfill material for TPH and chlorides. The results indicated a chloride concentration in excess of the OCD target level. Halliburton re-sampled the backfill by collecting eleven soil samples and the results indicated that the average chloride concentration of the backfill was not above the OCD target level of 250 mg/kg. The results of the backfill samples were submitted to the OCD on September 13, 2005.

In April 2004, Halliburton resubmitted the monitor well installation and risk evaluation work plan and an additional C-144 form at the request of the OCD. After further discussions with the OCD, Halliburton submitted a revised work plan and C-144 form for review and approval. The work plan was verbally approved in September 2005 after receipt of the backfill sample results.

In October 2005, three (3) monitor wells were installed on the site. One (1) monitor well was advanced in the location of the former below-grade tank in the former mud plant area. One (1) monitor well was advanced directly in the center of the former pit area. One (1) monitor well was advanced in the assumed down-gradient direction on the north side of the property. As per the approved work plan, soil samples

were not collected. Each monitor well is 2-inch in diameter, constructed in compliance with OCD guidelines, screened across the water table and completed flush with the existing ground surface.

Each well was developed by surging and bailing until fines were removed.

One (1) additional monitor well was installed as requested by the OCD at the site on March 20, 2007. Monitor well location is shown on Figure 1. The monitor well was advanced on the adjoining property to the east of the property. As per the approved work plan, soil samples were not collected. The monitor well is 2-inch in diameter, constructed in compliance with OCD guidelines, screened across the water table and completed flush with the existing ground surface. The monitor well construction diagram is included in Appendix A.

The well was developed by surging and bailing until fines were removed. Soil cuttings and purged water is currently being stored on-site in 55-gallon drums pending completion of characterization for disposal. The north-side top-of-casing elevation was surveyed relative to an arbitrary benchmark.

3.0 CHEMICALS OF CONCERN IN GROUNDWATER

Historical groundwater samples from MW-1 through MW-3 have been analyzed for gasoline range organics (TPH-G), TPH-D, oil range organics (TPH-O), BTEX. The groundwater sample with the highest TPH and BTEX results, was also analyzed for PAH and RCRA Metals. Previous site sampling has indicated that groundwater concentrations were below the BTEX, RCRA metals and PAHs standards established by the NMED screening guidance. All of the COCs were below the WQCC drinking water standards. TPH was below the NMED screening levels set for TPH-O. The only COC that exceeded site target levels is TPH-D in groundwater sample MW-3 collected in October of 2005. No standards have been established for TPH-G. Historical groundwater sample analytical results are presented in Table 2.

4.0 MARCH 2007 GROUNDWATER ASSESSMENT

The depth to groundwater measurements were collected using a product/water interface probe. The average depth to groundwater in March 2007 was 56.4 feet. Groundwater elevation data from the March 2007 site visit indicate that groundwater flows to the northeast in roughly the same direction as the topographic gradient. Groundwater elevation data are summarized in Table 1, and a groundwater gradient map is included as Figure 2.

After groundwater elevations stabilized, groundwater samples were collected from each monitor well according to OCD protocol and submitted for analysis of TPH-G, TPH-D and TPH-O by EPA Method 8015M and BTEX by EPA Method 8021B. MW-3 had the highest TPH concentration and was also analyzed for PAHs by EPA Method 8270.

Site sampling indicated that groundwater concentrations were below the BTEX, and PAHs standards established by the NMED screening guidance. All of the COCs were below the WQCC drinking water standards. TPH was below the NMED screening levels set for TPH-D and TPH-O. No standards have been established for TPH-G. Groundwater sample analytical results are presented in Table 2. The laboratory analytical report is included in Appendix B.

5.0 RISK EVALUATION

The objective of this risk evaluation is to determine the potential threat to human health and/or the environment to COCs remaining in soil and those detected in groundwater at the site. The only COC that exceeded site target levels is TPH-D in soil sample MPSS-5 and groundwater sample MW-3 collected in October 2005. TPH is a good indicator compound used to assess the relative impact from a petroleum release, but can not be used to definitively assess risk. Petroleum hydrocarbons contain a mixture of compounds and therefore the toxicity of TPH can not be evaluated. For both of these samples BTEX, PAHs and RCRA Metals were analyzed. According to the laboratory data, none of these individual COCs exceeded OCD, NMED or WQCC target levels.

The site is currently operated as a warehouse facility. The former mud plant was located to the north of the warehouse area. Surrounding land use is industrial. Access to the property is restricted by a locked fence. Currently, there is no complete pathway of exposure to impacted soil or groundwater at the site.

Soil containing residual COCs is present on-site at a depth of 14 feet below grade. There is no off-site impact. Site workers will not come in contact with residual COCs remaining in on-site soil, since impacted surface soil was removed during excavation activities. Site construction workers are not anticipated to be exposed to the remaining hydrocarbons in soil because the soil is present below the average construction depth of 10 feet below grade. Furthermore, COCs are protective of both types of exposures because BTEX, PAHs and RCRA Metals are below the NMED risk screening standards for these exposure scenarios.

Water is supplied to the site by the City of Lovington. Groundwater is present at depths of 54 to 58 feet below grade. According to the New Mexico State Engineer's Office database, no water wells are currently located on or within 2,640 feet of the site. A copy of the water well search was previously submitted to the OCD. Groundwater analytical data shows that the shallow water-bearing zone meets drinking water standards. Monitor wells MW-2 and MW-4, located down gradient from MW-3 which had the highest TPH concentrations, had COC concentrations below the WQCC drinking water standards and TPH concentrations below the NMED screening levels set for TPH-D and TPH-O.

6.0 RECOMMENDATION

Based on the results of the soil excavation activities, the recent groundwater sampling and the risk evaluation, Halliburton recommends project closure. Upon OCD approval, Halliburton will plug the on-site monitor wells per New Mexico guidelines and dispose of the monitor well purge water at an approved off-site facility.

7.0 REMARKS AND SIGNATURES

The interpretations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

This report was prepared by **DELTA ENVIRONMENTAL CONSULTANTS, INC.**



Patrick Marty
Staff Scientist

May 11, 2007

Date: _____

Reviewed by:



John Barry P.E.
Sr. Project Manager

May 11, 2007

Date: _____

TABLES

TABLE 1
GROUNDWATER ELEVATION DATA
HALLIBURTON/BAROID MUD PLANT
LOVINGTON, NEW MEXICO
DELTA PROJECT NO. F004-004

Sample ID	Date Collected	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Groundwater (ft)	Corrected GW Elevation (ft)
MW-1	10/14/05	100.28	NP	54.24	46.04
	03/21/07		NP	58.28	42.00
MW-2	10/14/05	100.00	NP	54.59	45.41
	03/21/07		NP	55.30	44.70
MW-3	10/14/05	102.42	NP	57.71	44.71
	03/21/07		NP	55.00	47.42
MW-4	03/21/07	100.84	NP	57.33	43.51

Explanation:

Top of casing elevations relative to an on-site benchmark

NP - Not present

TABLE 2
GROUNDWATER LABORATORY ANALYTICAL RESULTS
HALLIBURTON/BAROID MUD PLANT
LOVINGTON, NEW MEXICO
DELTA PROJECT NO. F004-004

Sample ID	Date Collected	TPH GRO (mg/L)	TPH DRO (mg/L)	TPH ORO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	PAHs (mg/L)
MW-1	10/14/05	0.102	0.24	<0.20	0.00102	0.000565	<0.0005	<0.0015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/21/07	<0.05000	0.208	0.189	<0.0005	<0.0005	<0.0005	<0.0015	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2	10/14/05	<0.1	0.45	0.28	<0.0005	<0.0005	<0.0005	<0.0015	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/21/07	<0.05000	0.54	0.262	<0.0005	<0.0005	<0.0005	<0.0015	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3	10/14/05	<0.1	2.2	0.6	<0.0005	<0.0005	<0.0005	<0.0015	<0.02	0.751	<0.0007	<0.01	0.00198	<0.0002	0.013	<0.0001	<0.0036*
	03/21/07	<0.05000	0.95	0.183	<0.0005	<0.0005	<0.0005	<0.0015	NA	NA	NA	NA	NA	NA	NA	NA	0.00012
MW-4	03/21/07	<0.05000	0.278	<0.150	<0.0005	<0.0005	<0.0005	<0.0015	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Mexico WQCC Levels		NE	NE	NE	0.01	0.75	0.75	0.62	0.1	1	0.01	0.05	0.05	0.002	0.05	0.05	Various
NMED TPH Screening Level		NE	1.8	1.8	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

Explanation:

All values are expressed in milligrams per liter (mg/L)

Non-detect results are expressed as less than the reporting limit

NA-not analyzed

NE- protective concentration not established

TPH - total petroleum hydrocarbons

GRO - gasoline range organics

DRO - diesel range organics

ORO - oil range organics

Benzene, toluene, ethyl benzene, and total xylenes analysis by EPA Method 8021B

PAH - polynuclear aromatic hydrocarbons by EPA Method 8270C;

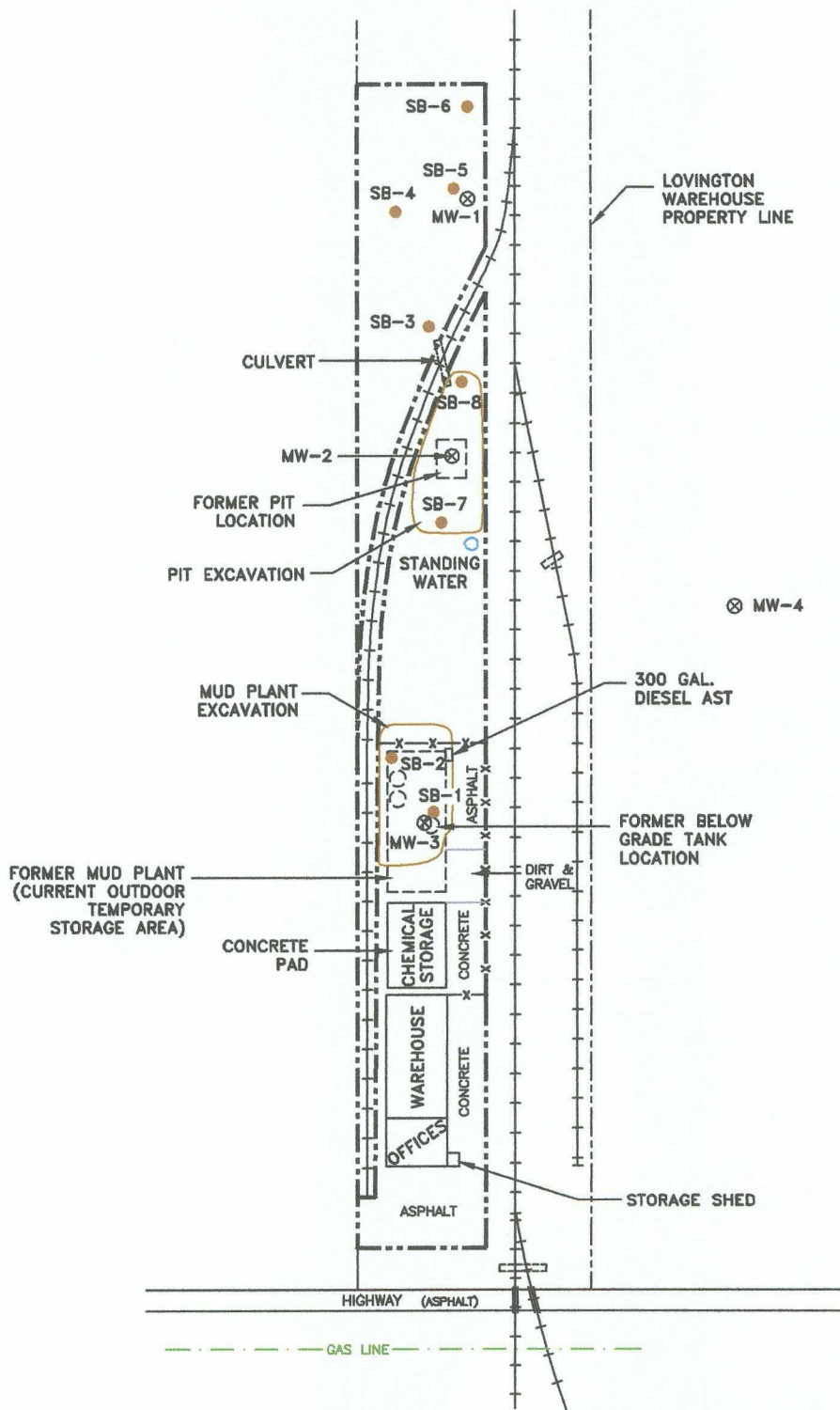
* All PAH results from October 2005 sampling were below the laboratory detection limits which ranged from 0.00052 to 0.0036 mg/L

All PAH all results from March 2007 sampling were below reporting limits of 0.0001 mg/L except Fluoranthene (0.00012 mg/L)

New Mexico WQCC Level - New Mexico Water Quality Control Commission Regulations 20.6.2 NMAC (September 15, 2002)

NMED TPH Screening Standard - New Mexico Environment Department TPH Screening Guidelines (June 3, 2003)

FIGURES



0 200
SCALE IN FEET

LEGEND	
⊗	Monitor Well Location
●	Soil Boring Location
-x-x-x-	Chain-Link Fence
-----	Property Boundary
+ + + +	Railroad Spur



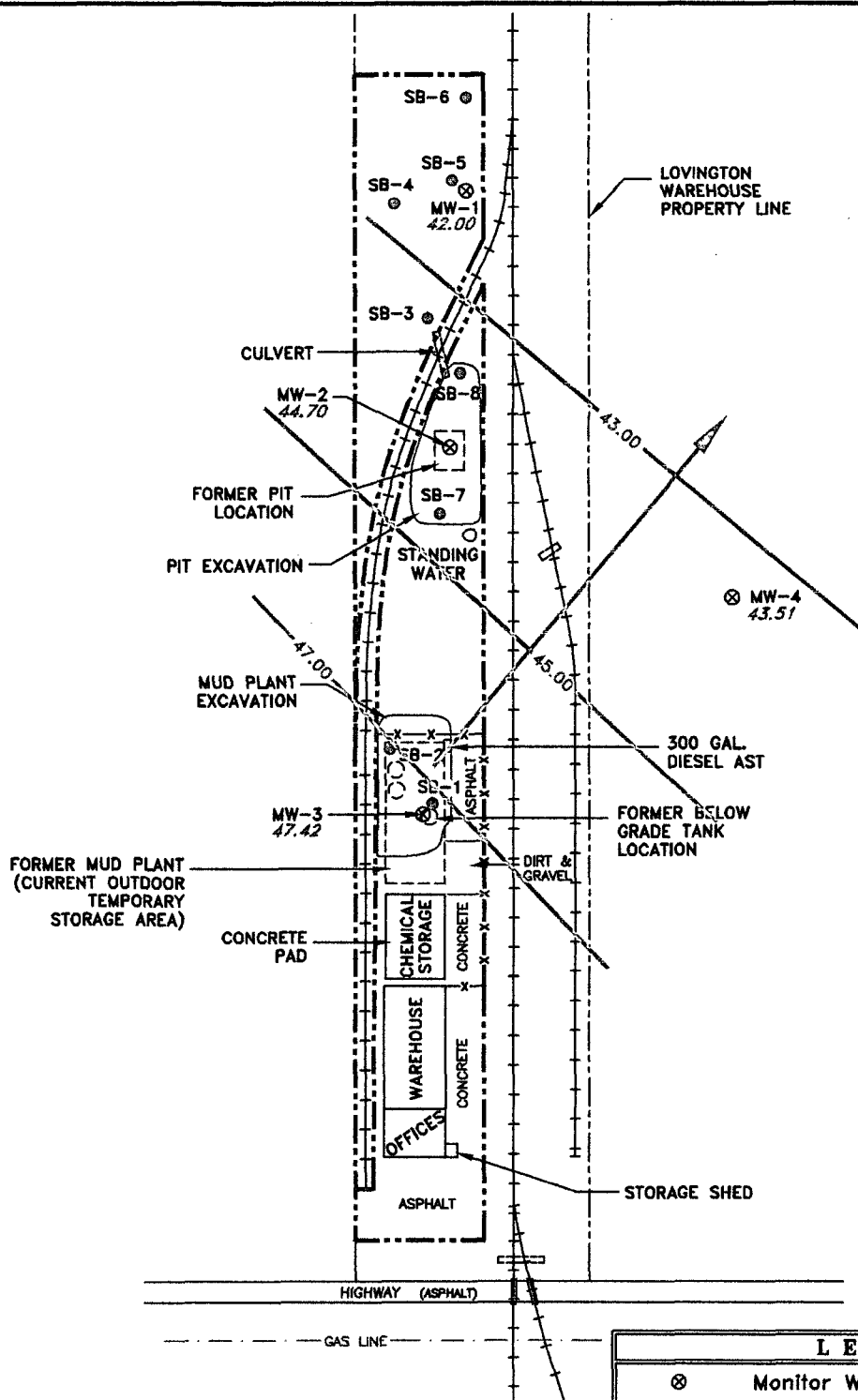
F004-004-1
01-10-2007 05-09-2007
HOUSTON O.F. J.B.
HA4004-SM

HALLIBURTON
BAROID MUD PLANT
401 East Avenue R
Lovington, New Mexico

Site Map

FIGURE

1



0 200
SCALE IN FEET

LEGEND

- ⊗ Monitor Well Location
- Soil Boring Location
- x-x-x- Chain-Link Fence
- - - - - Property Boundary
- + + + + + Railroad Spur
- 47.42 Groundwater Elevation, ft.
- 45.00 - Groundwater Elevation Contour, ft.
Contour Interval: 2.00 ft.
- Apparent Groundwater Flow Direction



F004-004-1
05-07-2007 05-07-2007
FILE: HOUSTON O.P. P.M.
HA4004-GW1

HALLIBURTON
BAROID MUD PLANT
401 East Avenue R
Lovington, New Mexico

Groundwater
Elevation Map
March 2007

FIGURE

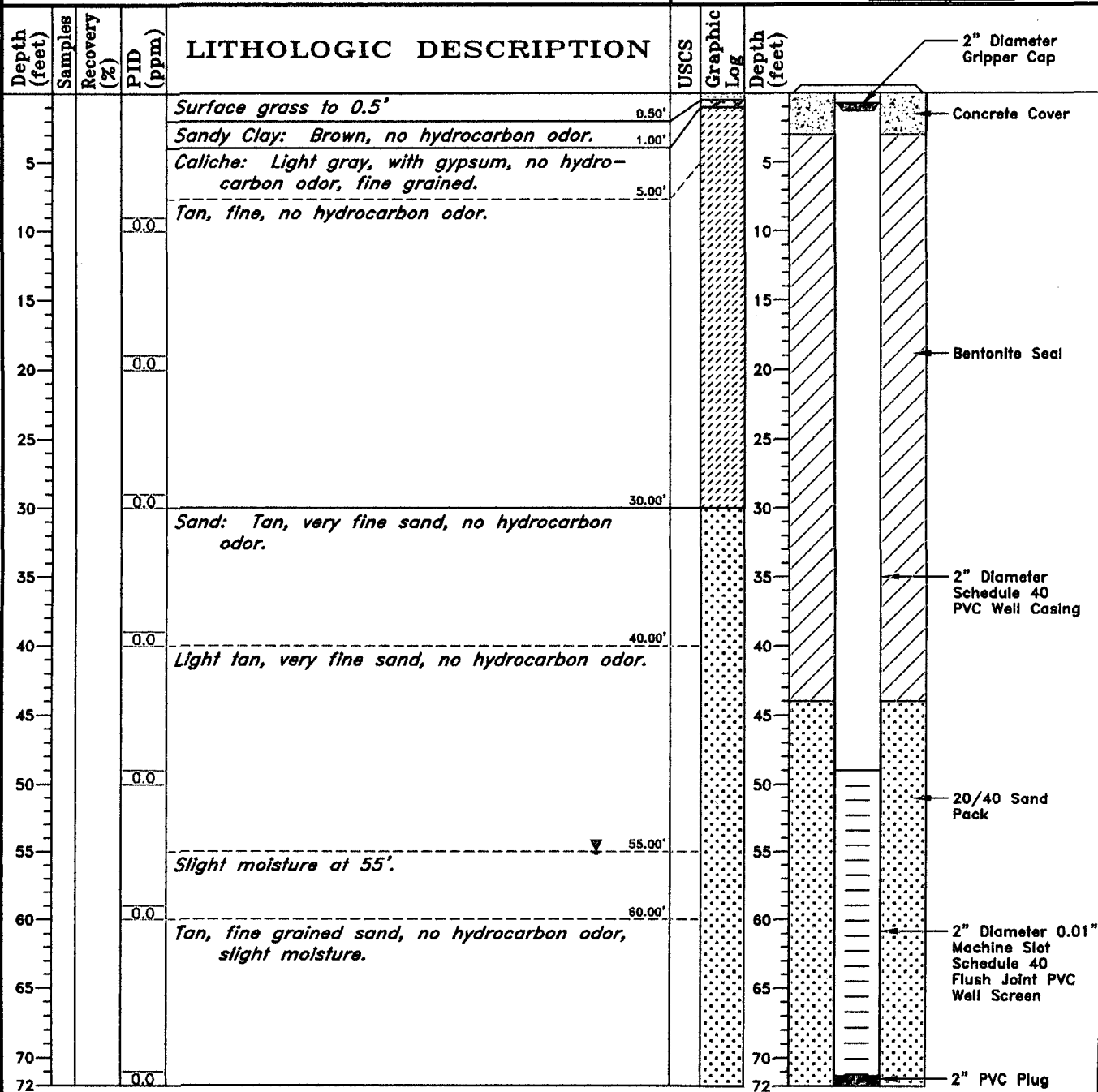
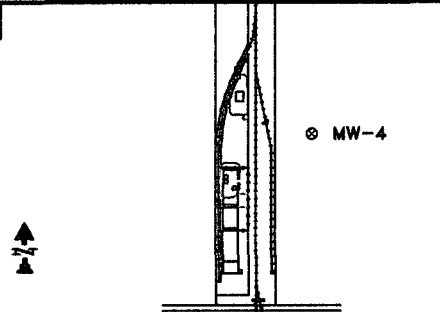
2

APPENDICES

APPENDIX A
SOIL BORING/MONITOR WELL CONSTRUCTION DIAGRAMS

Drilling Started: 03/20/2007
 Drilling Completed: 03/20/2007
 Drilling Method: Air Rotary
 Drilling Company:
 Drilled By: Harrison Cooper
 Logged By: Scott Barnica
 Well: MW-4

SITE



▼ = Initial Water Level

Note: THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.



F004-004-1
 05-07-2007
 HOUSTON
 0.F. P.M.
 HA4004-MW4

HALLIBURTON
 BAROID MUD PLANT
 401 East Avenue R
 Lovington, New Mexico

Soil Log and Well
 Construction Details
 MW-4

FIGURE

APPENDIX B
GROUNDWATER LABORATORY REPORTS



Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
Saint Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02008

April 13, 2007

James Hodges
Delta Environmental-Houston
3701 Briarpark Drive
Suite 300
Houston, TX 77042

RE: Project: 2067804
RE: Project ID: Lovington Site

Dear James Hodges:

Enclosed are the analytical results for sample(s) received by the laboratory on March 22, 2007. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Randy Shackelford



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.

1000 Riverbend Blvd. Suite F
St. Rose, LA 70087

Phone: 504.469.0333

Fax: 504.469.0555

LELAP # 02006



Report of Laboratory Analysis

Project Number: 2067804



4/13/2007 13:41:38



Sample Cross Reference Report

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Delta Environmental-Houston

Project: Lovington Site

Project No.: 2067804

Sample ID	Lab ID	Matrix	Collection Date/Time		Received Date/Time	
MW-1	20508993	Water	03/21/2007	12:00	03/22/2007	10:00
MW-2	20508994	Water	03/21/2007	11:30	03/22/2007	10:00
MW-3	20508995	Water	03/21/2007	11:00	03/22/2007	10:00
MW-4	20508997	Water	03/21/2007	10:30	03/22/2007	10:00
SOIL DRUMS	20508998	Soil	03/21/2007	12:30	03/22/2007	10:00

4/13/2007 13:41:41

New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
Arkansas Dept. of Environmental Quality - 88-0681
Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Project Narrative

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Project: 2067804

Narrative detail for GC semi-volatiles analyses:

The method blank and LCS for TPH batch 83816 yielded poor recoveries for pentacosane, one of the two surrogates used. Pentacosane was within limits in all of the associated samples. All other QC was acceptable.

4/13/2007 13:42:11

New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
Arkansas Dept. of Environmental Quality - 88-0681
Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health, Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Project Narrative

Pace Analytical Services, Inc.
1000 Riverbend Blvd, Suite F
St. Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Pace Analytical
New Orleans Laboratory

Project: 2067804

Sample Receipt Condition:

All samples were received in accordance with EPA protocol.

Holding Times:

All holding times were met.

Blanks:

All blank results were below reporting limits.

Laboratory Control Samples:

LCS recoveries outside of QC limits are qualified in the Report of Quality Control section.

Matrix Spikes and Duplicates:

MS or MSD recoveries outside of QC limits are qualified in the Report of Quality Control section.

Surrogates:

All surrogate recoveries were within QC limits.

Regulatory, Permit or Client Specified Limits:

Results were found that exceeded regulatory, permit or client specified limits:

Method EPA 8015 Mod Ext sample 20508993 Diesel Range Organics (C10-28) result .208mg/L is greater than .15mg/L limit

Method EPA 8015 Mod Ext sample 20508994 Diesel Range Organics (C10-28) result .54mg/L is greater than .15mg/L limit

Method EPA 8015 Mod Ext sample 20508995 Diesel Range Organics (C10-28) result .95mg/L is greater than .15mg/L limit

Method EPA 8015 Mod Ext sample 20508997 Diesel Range Organics (C10-28) result .278mg/L is greater than .15mg/L limit

Method EPA 8015 Mod Ext sample 20508993 Oil Range Organics (>C28-40) result .189mg/L is greater than .15mg/L limit

Method EPA 8015 Mod Ext sample 20508994 Oil Range Organics (>C28-40) result .262mg/L is greater than .15mg/L limit

Method EPA 8015 Mod Ext sample 20508995 Oil Range Organics (>C28-40) result .183mg/L is greater than .15mg/L limit

4/13/2007 13:42:14

New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
Arkansas Dept. of Environmental Quality - 88-0681
Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Project Narrative

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Pace Analytical
New Orleans Laboratory

Project: 2067804

Analytical Method	Batch	Sample used for QC
EPA 8015 Mod Ext	83816	Project sample MW-1
EPA 8015 Mod Ext	84154	Batch sample from another client
EPA 8021	83914	Batch sample from another client
EPA 8015 Mod Pur	83915	Project sample MW-1
EPA 8021	83932	Project sample SOIL DRUMS
EPA 8015 Mod Pur	83933	Project sample SOIL DRUMS
EPA 6010	83789	Batch sample from another client
EPA 6010	84559	Project sample MW-3
EPA 7471	83790	Batch sample from another client
EPA 7470	84590	Project sample MW-3
EPA 8270	83838	Project sample MW-1

For the sample used as the original for the DUP or MS/MSD for the batch:

Project sample means a sample from this project was used.

Client sample means a sample from the same client but in a different project was used.

Batch sample means a sample from the a different client was used.

4/13/2007 13:42:17
New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
Arkansas Dept. of Environmental Quality - 88-0681
Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health, Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Pace Analytical
New Orleans Laboratory

Client: Delta Environmental-Houston

Client ID: MW-3

Site: None

Project: Lovington Site

Project No.: 2067804

Sample Qu:

Lab ID: 20508995

Matrix: Water

% Moisture: n/a

Description: None

Prep Level: Water

Batch: 83838

Method: 8270 SVOAs SIM Water

Units: ug/L

Target List: 827S WL20

Collected: 03/21/07

Received: 03/22/07

Prep Factor: 1

Prepared: 03/24/07

Analyzed: 04/03/07 21:01 JAM(1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
83-32-9	Acenaphthene	1	ND		0.100	
208-96-8	Acenaphthylene	1	ND		0.100	
120-12-7	Anthracene	1	ND		0.100	
56-55-3	Benzo(a)anthracene	1	ND		0.100	
205-99-2	Benzo(b)fluoranthene	1	ND		0.100	
207-08-9	Benzo(k)fluoranthene	1	ND		0.100	
191-24-2	Benzo(g,h,i)perylene	1	ND		0.100	
50-32-8	Benzo(a)pyrene	1	ND		0.100	
218-01-9	Chrysene	1	ND		0.100	
53-70-3	Dibenz(a,h)anthracene	1	ND		0.100	
206-44-0	Fluoranthene	1	0.120		0.100	
86-73-7	Fluorene	1	ND		0.100	
193-39-5	Indeno(1,2,3-cd)pyrene	1	ND		0.100	
91-57-6	2-Methylnaphthalene	1	ND		0.100	
91-20-3	Naphthalene	1	ND		0.100	
85-01-8	Phenanthrene	1	ND		0.100	
129-00-0	Pyrene	1	ND		0.100	

17 compound(s) reported

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New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
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Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270



Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Delta Environmental-Houston
Site: None
Client ID: MW-1
Project: Lovington Site
Project No.: 2067804
Lab ID: 20508993
Matrix: Water
Sample Qu:
Description: None
Prep Level: Water
Batch: 83816
Method: 8015 TPH Extractables Water
Units: mg/L
Target List: TPH WL20
Collected: 03/21/07
Received: 03/22/07
Prep Factor: 1
Prepared: 03/24/07
Analyzed: 04/03/07 19:50 SPPI (1)

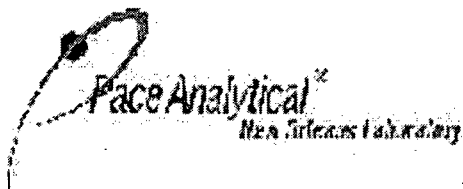
CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
	Diesel Range Organics (C10-28)	1	0.208		0.150	0.150
	Oil Range Organics (>C28-40)	1	0.189		0.150	0.150

2 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
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Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Delta Environmental-Houston
Site: None
Project: Lovington Site Project No.: 2067804 Sample Qu:
Lab ID: 20508993 Matrix: Water % Moisture: n/a
Description: None Prep Level: Water Batch: 83915
Method: 8015 TPH Gasoline Water Units: mg/L Target List: TPHG WL20
Collected: 03/21/07 Received: 03/22/07
Prep Factor: 1 Prepared: 03/28/07 Analyzed: 03/28/07 07:03 DET (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
	Gasoline Range Organics(C6-10)	1	ND		0.0500	0.150

1 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
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LELAP # 02006

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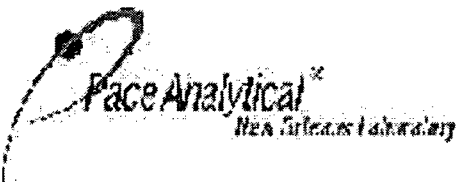
Client: Delta Environmental-Houston
Site: None
Client ID: MW-1
Project: Lovington Site
Project No.: 2067804
Lab ID: 20508993
Matrix: Water
Sample Qu:
Description: None
Prep Level: Water
Batch: 83914
Method: 8021 VOAs Water
Units: ug/L
Target List: 8021 WL20
Collected: 03/21/07
Received: 03/22/07
Prep Factor: 1
Prepared: 03/28/07
Analyzed: 03/28/07 07:03 DET (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
71-43-2	Benzene	1	ND		5.00	
100-41-4	Ethylbenzene	1	ND		5.00	
108-88-3	Toluene	1	ND		5.00	
	m&p-Xylene	1	ND		10.0	
95-47-6	o-Xylene	1	ND		5.00	

5 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
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Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
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Report of Laboratory Analysis

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Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Delta Environmental-Houston
Client ID: MW-2 Site: None
Project: Lovington Site Project No.: 2067804 Sample Qu:
Lab ID: 20508994 Matrix: Water % Moisture: n/a
Description: None Prep Level: Water Batch: 83816
Method: 8015 TPH Extractables Water Units: mg/L Target List: TPH WL20
Collected: 03/21/07 Received: 03/22/07
Prep Factor: 1 Prepared: 03/24/07 Analyzed: 04/03/07 21:06 SPP1 (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
	Diesel Range Organics (C10-28)	1	0.540		0.150	0.150
	Oil Range Organics (>C28-40)	1	0.262		0.150	0.150

2 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
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 Fax: 504.469.0555
 LELAP # 02006

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 New Orleans Laboratory

Client: Delta Environmental-Houston
Site: None
Client ID: MW-2
Project: Lovington Site
Project No.: 2067804
Lab ID: 20508994
Matrix: Water
Description: None
Prep Level: Water
Method: 8015 TPH Gasoline Water
Units: mg/L
Prep Factor: 1
Sample Qu:
% Moisture: n/a
Batch: 83915
Target List: TPHG WL20
Collected: 03/21/07
Received: 03/22/07
Prepared: 03/28/07
Analyzed: 03/28/07 07:28 DET (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
	Gasoline Range Organics(C6-10)	1	ND		0.0500	0.150

1 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
 DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
 Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
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Phone: 504.469.0333
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LELAP # 02006

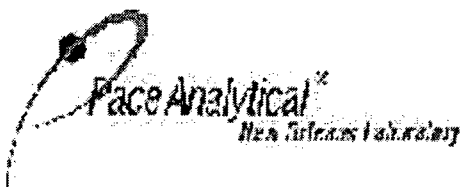
Client: Delta Environmental-Houston
Site: None
Client ID: MW-2
Project: Lovington Site
Project No.: 2067804
Lab ID: 20508994
Matrix: Water
Sample Qu:
Description: None
Prep Level: Water
Batch: 83914
Method: 8021 VOAs Water
Units: ug/L
Target List: 8021 WL20
Collected: 03/21/07
Received: 03/22/07
Prep Factor: 1
Prepared: 03/28/07
Analyzed: 03/28/07 07:28 DET (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
71-43-2	Benzene	1	ND		5.00	
100-41-4	Ethylbenzene	1	ND		5.00	
108-88-3	Toluene	1	ND		5.00	
	m&p-Xylene	1	ND		10.0	
95-47-6	o-Xylene	1	ND		5.00	

5 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
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Report of Laboratory Analysis

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1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Delta Environmental-Houston
Site: None
Client ID: MW-3
Project: Lovington Site
Project No.: 2067804
Lab ID: 20508995
Matrix: Water
Sample Qu:
Description: None
Prep Level: Water
Batch: 83816
Method: 8015 TPH Extractables Water
Units: mg/L
Target List: TPH WL20
Collected: 03/21/07
Received: 03/22/07
Prep Factor: 1
Prepared: 03/24/07
Analyzed: 04/03/07 21:32 SPP1 (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
	Diesel Range Organics (C10-28)	1	0.950		0.150	0.150
	Oil Range Organics (>C28-40)	1	0.183		0.150	0.150

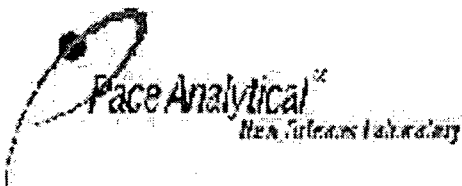
2 compound(s) reported

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Report of Laboratory Analysis

Pace Analytical Services, Inc.
 1000 Riverbend Blvd. Suite F
 St. Rose, LA 70087
 Phone: 504.469.0333
 Fax: 504.469.0555
 LELAP # 02006



Client: Delta Environmental-Houston
Client ID: MW-3
Site: None
Project: Lovington Site
Project No.: 2067804
Sample Qu:
Lab ID: 20508995
Matrix: Water
% Moisture: n/a
Description: None
Prep Level: Water
Batch: 83915
Method: 8015 TPH Gasoline Water
Units: mg/L
Target List: TPHG WL20
Collected: 03/21/07
Received: 03/22/07
Prep Factor: 1
Prepared: 03/28/07
Analyzed: 03/28/07 07:54 DET (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
	Gasoline Range Organics(C6-10)	1	ND		0.0500	0.150

1 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
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St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Delta Environmental-Houston
Site: None
Client ID: MW-3
Project: Lovington Site
Lab ID: 20508995
Description: None
Method: 8021 VOAs Water
Prep Factor: 1
Project No.: 2067804
Matrix: Water
Prep Level: Water
Units: ug/L
Collected: 03/21/07
Prepared: 03/28/07
Sample Qu:
% Moisture: n/a
Batch: 83914
Target List: 8021 WL20
Received: 03/22/07
Analyzed: 03/28/07 07:54 DET(1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
71-43-2	Benzene	1	ND		5.00	
100-41-4	Ethylbenzene	1	ND		5.00	
108-88-3	Toluene	1	ND		5.00	
	m&p-Xylene	1	ND		10.0	
95-47-6	o-Xylene	1	ND		5.00	

5 compound(s) reported

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Phone: 504.469.0333

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LELAP # 02006

Pace Analytical

New Orleans Laboratory

Client: Delta Environmental-Houston

Client ID: MW-4

Site: None

Project: Lovington Site

Project No.: 2067804

Sample Qu:

Lab ID: 20508997

Matrix: Water

% Moisture: n/a

Description: None

Prep Level: Water

Batch: 83816

Method: 8015 TPH Extractables Water

Units: mg/L

Target List: TPH WL20

Prep Factor: 1

Collected: 03/21/07

Received: 03/22/07

Prepared: 03/24/07

Analyzed: 04/03/07 21:57 SPPL(1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
	Diesel Range Organics (C10-28)	1	0.278		0.150	0.150
	Oil Range Organics (>C28-40)	1	ND		0.150	0.150

2 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.

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Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Delta Environmental-Houston
Site: None
Client ID: MW-4
Project: Lovington Site
Lab ID: 20508997
Description: None
Method: 8015 TPH Gasoline Water
Prep Factor: 1
Project No.: 2067804
Matrix: Water
Prep Level: Water
Units: mg/L
Collected: 03/21/07
Prepared: 03/28/07
Sample Qu:
% Moisture: n/a
Batch: 83915
Target List: TPHG WL20
Received: 03/22/07
Analyzed: 03/28/07 08:20 DET (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
	Gasoline Range Organics(C6-10)	1	ND		0.0500	0.150

1 compound(s) reported

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Phone: 504.469.0333
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Pace Analytical
New Orleans Laboratory

Client: Delta Environmental-Houston
Site: None
Client ID: MW-4
Project: Lovington Site
Lab ID: 20508997
Description: None
Method: 8021 VOAs Water
Prep Factor: 1
Project No.: 2067804
Matrix: Water
Prep Level: Water
Units: ug/L
Collected: 03/21/07
Prepared: 03/28/07
Sample Qu:
% Moisture: n/a
Batch: 83914
Target List: 8021 WL20
Received: 03/22/07
Analyzed: 03/28/07 08:20 DET(1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
71-43-2	Benzene	1	ND		5.00	
100-41-4	Ethylbenzene	1	ND		5.00	
108-88-3	Toluene	1	ND		5.00	
	m&p-Xylene	1	ND		10.0	
95-47-6	o-Xylene	1	ND		5.00	

5 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
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Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Delta Environmental-Houston
Site: None
Client ID: SOIL DRUMS
Project: Lovington Site
Project No.: 2067804
Lab ID: 20508998
Matrix: Soil
Sample Qu:
Description: None
Prep Level: Soil
Batch: 84154
Method: 8015 TPH Extractables Soil
Units: mg/kg
Target List: TPH SL20
Collected: 03/21/07
Received: 03/22/07
Prep Factor: 1
Prepared: 04/04/07
Analyzed: 04/04/07 20:22 SPP1 (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
	Diesel Range Organics (C10-28)	1	ND		10.0	65.0
	Oil Range Organics (>C28-40)	1	ND		50.0	180.

2 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
Regulatory limit denotes an actual regulatory limit or a client-requested notification limit.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

4/13/2007 13:42:24
New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
Arkansas Dept. of Environmental Quality - 88-0681
Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270



Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

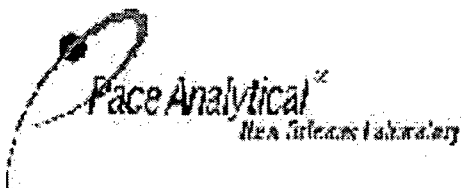
Client: Delta Environmental-Houston
Site: None
Client ID: SOIL DRUMS
Project: Lovington Site
Project No.: 2067804
Lab ID: 20508998
Matrix: Soil
Sample Qu: 0 Not Corrected
Description: None
Prep Level: Soil
Batch: 83933
Method: 8015 TPH Gasoline Med Soil
Units: mg/kg
Target List: TPHGM SL20
Collected: 03/21/07
Received: 03/22/07
Prep Factor: 1
Prepared: 03/23/07
Analyzed: 03/28/07 16:51 DET (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
	Gasoline Range Organics(C6-10)	1	ND		2.50	65.0

1 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
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St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Delta Environmental-Houston
Site: None
Client ID: SOIL DRUMS
Project: Lovington Site
Lab ID: 20508998
Description: None
Method: 8021 VOAs Med Soil
Prep Factor: 1
Project No.: 2067804
Matrix: Soil
Prep Level: Soil
Units: ug/kg
Collected: 03/21/07
Prepared: 03/23/07
Sample Qu:
% Moisture: 0 Not Corrected
Batch: 83932
Target List: 8021M SL20
Received: 03/22/07
Analyzed: 03/28/07 16:51 DET (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
71-43-2	Benzene	1	ND		25.0	
100-41-4	Ethylbenzene	1	ND		25.0	
108-88-3	Toluene	1	ND		25.0	
	m&p-Xylene	1	ND		50.0	
95-47-6	o-Xylene	1	ND		25.0	

5 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
Regulatory limit denotes an actual regulatory limit or a client-requested notification limit.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

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Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client ID: MW-3

Client: Delta Environmental-Houston

Project: Lovington Site

Site: None

Lab ID: 20508995

Project No.: 2067804

Description: None

Matrix: Water

%Moisture: n/a

Collected: 03/21/07

Received: 03/22/07

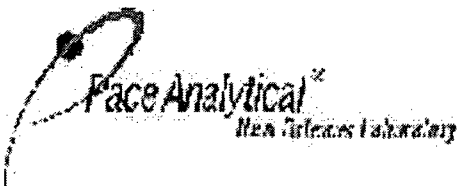
ParameterName	Method	Batch	DF	Result	Qu	Units	Reporting Limit	Prep.	Analysis	Reg. Limit
Arsenic, Dissolved	EPA 6010	84559	1	ND		ug/L	10.0	12-Apr-07	12-Apr-07 15:56	KJR (1)
Barium, Dissolved	EPA 6010	84559	1	ND		ug/L	200.	12-Apr-07	12-Apr-07 15:56	KJR (1)
Cadmium, Dissolved	EPA 6010	84559	1	ND		ug/L	5.00	12-Apr-07	12-Apr-07 15:56	KJR (1)
Chromium, Dissolved	EPA 6010	84559	1	ND		ug/L	10.0	12-Apr-07	12-Apr-07 15:56	KJR (1)
Lead, Dissolved	EPA 6010	84559	1	ND		ug/L	5.00	12-Apr-07	12-Apr-07 15:56	KJR (1)
Mercury, Dissolved	EPA 7470	84590	1	ND		ug/L	0.200	13-Apr-07	13-Apr-07 08:57	MHB1 (1)
Selenium, Dissolved	EPA 6010	84559	1	ND		ug/L	35.0	12-Apr-07	12-Apr-07 15:56	KJR (1)
Silver, Dissolved	EPA 6010	84559	1	ND		ug/L	10.0	12-Apr-07	12-Apr-07 15:56	KJR (1)

8 parameter(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of final sample. PF denotes sample Prep Factor which accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
(1a) pH less than 2.0 or greater than 12.5 is hazardous for corrosivity.
(1b) Flash point less than 140 degrees F is hazardous for ignitability.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

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Kansas Dept. of Health Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

4/13/2007 13:42:27



Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client ID: SOIL DRUMS
Project: Lovington Site
Lab ID: 20508998
Description: None

Client: Delta Environmental-Houston
Site: None
Project No.: 2067804
Matrix: Soil %Moisture: 0 Not Corrected
Collected: 03/21/07 Received: 03/22/07

ParameterName	Method	Batch	DF	Result	Qu	Units	Reporting	Prep.	Analysis	Reg. Limit
							Limit			
Arsenic	EPA 6010	83789	1	4.76		mg/kg	0.877	24-Mar-07	03-Apr-07 20:20	KJR (1)
Barium	EPA 6010	83789	1	229.		mg/kg	17.5	24-Mar-07	03-Apr-07 20:20	KJR (1)
Cadmium	EPA 6010	83789	1	ND		mg/kg	0.439	24-Mar-07	03-Apr-07 20:20	KJR (1)
Chromium	EPA 6010	83789	1	2.45		mg/kg	0.877	24-Mar-07	03-Apr-07 20:20	KJR (1)
Lead	EPA 6010	83789	1	ND		mg/kg	0.439	24-Mar-07	03-Apr-07 20:20	KJR (1)
Mercury	EPA 7471	83790	1	ND		mg/kg	0.0188	25-Mar-07	25-Mar-07 11:45	MHB1 (1)
Selenium	EPA 6010	83789	1	18.9		mg/kg	3.07	24-Mar-07	03-Apr-07 20:20	KJR (1)
Silver	EPA 6010	83789	1	ND		mg/kg	0.877	24-Mar-07	03-Apr-07 20:20	KJR (1)

8 parameter(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of final sample. PF denotes sample Prep Factor which accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
(1a) pH less than 2.0 or greater than 12.5 is hazardous for corrosivity.
(1b) Flash point less than 140 degrees F is hazardous for ignitability.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

4/13/2007 13:42:27

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U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Report of Quality Control

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Method: EPA 8270

Project: 2067804

LCS: 20509511 4/3/2007 12:39:00 PM

Batch: 83838

MS: 20509518 4/3/2007 1:07:00 PM

Units: ug/L

Original for MS: 20508993 Client Sample

Parameter Name	LCS Spike	LCS Found	LCS %Rec	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	MSD RPD	QC Limits LCS	MS/MSD	Max RPD	Qu
Acenaphthene	2	1.22	61	4	0.00	2.08	2.26	52	57	8	49 - 111	16 - 140	20	
Acenaphthylene	2	1.1	55	4	0.00	2.04	2.2	51	55	8	39 - 107	30 - 113	20	
Anthracene	2	1.12	56	4	0.00	2.08	2.4	52	60	14	29 - 115	12 - 126	20	
Benzo(a)anthracene	2	1.21	61	4	0.00	2.04	2.52	51	63	21 *	45 - 107	10 - 125	20	
Benzo(b)fluoranthene	2	1.32	66	4	0.00	2.22	2.58	56	65	15	47 - 113	10 - 138	20	
Benzo(k)fluoranthene	2	1.37	69	4	0.00	2.2	2.58	55	65	16	41 - 121	10 - 134	20	
Benzo(g,h,i)perylene	2	1.52	76	4	0.00	2.48	2.82	62	71	13	40 - 111	10 - 126	20	
Benzo(a)pyrene	2	1.25	63	4	0.00	2.38	2.74	60	69	14	25 - 116	10 - 124	20	
Chrysene	2	1.21	61	4	0.00	2.28	2.46	57	62	8	44 - 117	10 - 131	20	
Dibenz(a,h)anthracene	2	1.46	73	4	0.00	2.46	2.82	62	71	14	32 - 119	10 - 126	20	
Fluoranthene	2	1.41	71	4	0.00	2.4	2.88	60	72	18	43 - 120	25 - 129	20	
Fluorene	2	1.24	62	4	0.00	2.1	2.38	53	60	12	49 - 116	30 - 137	20	
Indeno(1,2,3-cd)pyrene	2	1.45	73	4	0.00	2.4	2.78	60	70	15	37 - 120	10 - 133	20	
2-Methylnaphthalene	2	1.22	61	4	0.00	2.22	2.48	56	62	11	50 - 150	50 - 150	20	
Naphthalene	2	1.26	63	4	0.00	2.14	2.32	54	58	8	49 - 112	21 - 146	20	
Phenanthrene	2	1.27	64	4	0.00	2.12	2.48	53	62	16	46 - 111	11 - 142	20	
Pyrene	2	1.21	61	4	0.00	1.98	2.36	50	59	18	43 - 111	20 - 119	20	

17 compound(s) reported

* denotes recovery outside of QC limits.

MS/MSD RPD is calculated via SW-846 rules on the basis of spiked sample concentrations rather than spike recoveries.

4/13/2007 13:42:30

New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
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Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Report of Batch Surrogate Recovery

Pace Analytical Services, Inc.
 1000 Riverbend Blvd. Suite F
 St. Rose, LA 70087
 Phone: 504.469.0333
 Fax: 504.469.0555
 LELAP # 02006

Pace Analytical
 New Orleans Laboratory

Report: 2067804

Batch: 83838

Lab ID	Type and Qualifiers	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20508995	Sample	59	52	55					
20509510	BLANK	52	43	48					
20509511	LCS	48	57	47					
20509518	MS	50	52	57					
20509519	MSD	50	42	57					

QC limits: 36-108 10-120 25-118

Sur 1: 2-Fluorobiphenyl (S)

Sur 2: Nitrobenzene-d5 (S)

Sur 3: Terphenyl-d14 (S)

* denotes surrogate recovery outside of QC limits.
 D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.
 A Lab ID consisting of a batch number with a B suffix is a method blank.
 A Lab ID consisting of a batch number with a S suffix is an LCS.
 A Lab ID with a MS suffix is a matrix spike.
 A Lab ID with a MSD suffix is a matrix spike duplicate.

4/13/2007 13:42:33
 New Orleans Laboratory Certifications
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 Arkansas Dept. of Environmental Quality - 88-0681
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 Florida Dept. of Health (NELAC) - E87595
 Kansas Dept. of Health Environment - E-10266
 U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Report of Method Blank

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Lab ID: 20509510

Description: 8270 SVOAs SIM Water

Project No.: 2067804

Method: EPA 8270

Batch: 83838

Units: ug/L

Prep Factor: 1

Leached:

Prepared: 24-Mar-07

Analyzed: 04/03/07 12:11 JAM(1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit
83-32-9	Acenaphthene	1	ND		0.100
208-96-8	Acenaphthylene	1	ND		0.100
120-12-7	Anthracene	1	ND		0.100
56-55-3	Benzo(a)anthracene	1	ND		0.100
205-99-2	Benzo(b)fluoranthene	1	ND		0.100
207-08-9	Benzo(k)fluoranthene	1	ND		0.100
191-24-2	Benzo(g,h,i)perylene	1	ND		0.100
50-32-8	Benzo(a)pyrene	1	ND		0.100
218-01-9	Chrysene	1	ND		0.100
53-70-3	Dibenz(a,h)anthracene	1	ND		0.100
206-44-0	Fluoranthene	1	ND		0.100
86-73-7	Fluorene	1	ND		0.100
193-39-5	Indeno(1,2,3-cd)pyrene	1	ND		0.100
90-12-0	1-Methylnaphthalene	1	ND		0.100
91-57-6	2-Methylnaphthalene	1	ND		0.100
91-20-3	Naphthalene	1	ND		0.100
85-01-8	Phenanthrene	1	ND		0.100
129-00-0	Pyrene	1	ND		0.100

18 compound(s) reported

ND denotes Not Detected at or above the reporting limit.

DF denotes Dilution Factor.

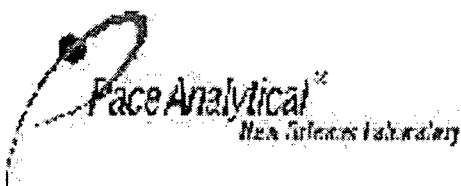
RL denotes sample Reporting Limit.

Qu lists qualifiers. Specific qualifiers are defined at the end of the report.

Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

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Kansas Dept. of Health, Environment - E-10266
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Report of Quality Control

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Method: EPA 8015 Mod Ext

Project: 2067804

LCS: 20509413 4/3/2007 5:44:00 PM

Batch: 83816

MS: 20509534 4/3/2007 8:16:00 PM

Units: mg/L

Original for MS: 20508993 Client Sample

Parameter Name	LCS Spike	LCS Found	LCS %Rec	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	MSD RPD	QC Limits LCS MS/MSD	Max RPD	Qu
Diesel Range Organics (C1 1 compound(s) reported	0.4	0.4081	102	0.4	0.21	0.407	0.3336	50	32	20	40 - 143 10 - 171	20	

* denotes recovery outside of QC limits.

MS/MSD RPD is calculated via SW-846 rules on the basis of spiked sample concentrations rather than spike recoveries.

4/13/2007 13:42:39

New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
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Report of Quality Control

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Method: EPA 8015 Mod Ext

Project: 2067804

LCS: 20510968 4/4/2007 7:56:00 PM

Batch: 84154

MS: 20510969 4/4/2007 10:04:00 PM

Units: mg/kg

Original for MS: 20509172 Batch Sample

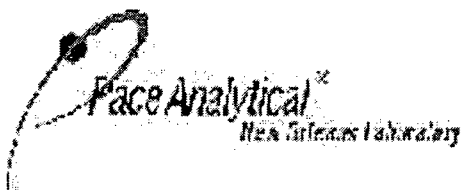
Parameter Name	LCS Spike	LCS Found	LCS %Rec	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	MSD RPD	QC Limits LCS MS/MSD	Max RPD	Qu
Diesel Range Organics (C1 1 compound(s) reported	40	27.77	69	46.92	51.87	54.79	61.78	6 *	21	12	55 - 140 10 - 174	20	Q1

* denotes recovery outside of QC limits.

MS/MSD RPD is calculated via SW-846 rules on the basis of spiked sample concentrations rather than spike recoveries.

4/13/2007 13:42:39

New Orleans Laboratory Certifications
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Report of Quality Control

Pace Analytical Services, Inc.
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St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Method: EPA 8015 Mod Pur

Project: 2067804

LCS: 20509743 3/28/2007 9:12:00 AM

Batch: 83915

MS: 20509744 3/28/2007 9:37:00 AM

Units: mg/L

Original for MS: 20508993 Client Sample

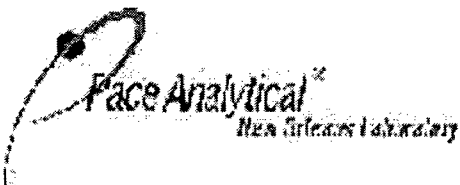
Parameter Name	LCS Spike	LCS Found	LCS %Rec	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	MSD RPD	QC Limits LCS MS/MSD	Max RPD	Qu
Gasoline Range Organics(C) 1 compound(s) reported	0.5	0.5232	105	0.5	0.03	0.4867	0.4854	91	91	0	69 - 152 40 - 153	20	

* denotes recovery outside of QC limits.

MS/MSD RPD is calculated via SW-846 rules on the basis of spiked sample concentrations rather than spike recoveries.

4/13/2007 13:42:40

New Orleans Laboratory Certifications
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Report of Quality Control

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Method: EPA 8015 Mod Pur

Project: 2067804

LCS: 20509865 3/28/2007 10:24:00 PM

Batch: 83933

MS: 20509936 3/28/2007 10:50:00 PM

Units: mg/kg

Original for MS: 20508998 Client Sample

Parameter Name	LCS Spike	LCS Found	LCS %Rec	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	MSD RPD	QC Limits LCS MS/MSD	Max RPD	Qu
Gasoline Range Organics(C) 1 compound(s) reported	25	27.85	111	25	1.72	25.54	26.36	95	99	3	70 - 146 20 - 156	20	

* denotes recovery outside of QC limits.

MS/MSD RPD is calculated via SW-846 rules on the basis of spiked sample concentrations rather than spike recoveries.

4/13/2007 13:42:40

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Report of Quality Control

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Method: EPA 8021

Project: 2067804

LCS: 20509739 3/28/2007 12:35:00 AM

Batch: 83914

MS: 20509740 3/28/2007 1:52:00 AM

Units: ug/L

Original for MS: 20509004 Batch Sample

Parameter Name	LCS	LCS	LCS	MS	Sample	MS	MSD	MS	MSD	MSD	QC Limits		Max	Qu
	Spike	Found	%Rec	Spike	Found	Found	Found	%Rec	%Rec	RPD	LCS	MS/MSD	RPD	
Benzene	20	19.16	96	20	0.09	17.79	19.58	89	98	10	72 - 133	51 - 147		20
Ethylbenzene	20	18.86	94	20	0.10	17.34	18.79	86	93	8	75 - 136	55 - 145		20
Toluene	20	19.13	96	20	0.75	18.79	20.31	90	98	8	77 - 132	57 - 143		20
m&p-Xylene	40	37.32	93	40	0.22	34.13	36.79	85	91	8	79 - 136	79 - 130		20
o-Xylene	20	18.63	93	20	0.16	17.51	18.9	87	94	8	79 - 136	79 - 130		20

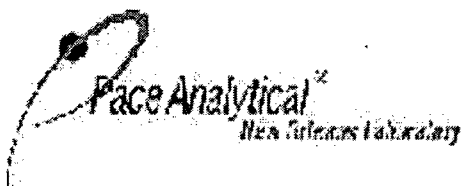
5 compound(s) reported

* denotes recovery outside of QC limits.

MS/MSD RPD is calculated via SW-846 rules on the basis of spiked sample concentrations rather than spike recoveries.

4/13/2007 13:42:40

New Orleans Laboratory Certifications
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Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270



Report of Quality Control

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Method: EPA 8021

Project: 2067804

LCS: 20509863 3/28/2007 4:26:00 PM

Batch: 83932

MS: 20509932 3/28/2007 5:17:00 PM

Units: ug/kg

Original for MS: 20508998 Client Sample

Parameter Name	LCS Spike	LCS Found	LCS %Rec	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	MSD RPD	QC Limits		Max	Qu
											LCS	MS/MSD	RPD	
Benzene	800	531	66	800	4.20	510.5	493.7	63	61	3	65 - 137	39 - 144	20	
Ethylbenzene	800	752.5	94	800	2.34	728	728.5	91	91	0	73 - 138	44 - 151	20	
Toluene	800	642	80	800	4.72	619.5	612.5	77	76	1	74 - 135	47 - 145	20	
m&p-Xylene	1600	1488	93	1600	6.23	1438	1442	90	90	0	74 - 144	48 - 152	20	
o-Xylene	800	779	97	800	2.66	752.5	756	94	94	0	76 - 138	48 - 152	20	

5 compound(s) reported

* denotes recovery outside of QC limits.

MS/MSD RPD is calculated via SW-846 rules on the basis of spiked sample concentrations rather than spike recoveries.

4/13/2007 13:42:40

New Orleans Laboratory Certifications
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Report of Batch Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Report: 2067804

Batch: 83816

Lab ID	Type and Qualifiers	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20508993	Sample	25	74						
20508994	Sample	34	82						
20508995	Sample	51	87						
20508997	Sample	30	75						
20509412	BLANK	10 *	77						
20509413	LCS	11 *	80						
20509534	MS	48	73						
20509535	MSD	52	75						

QC limits: 14-169 36-142

Sur 1: n-Pentacosane (S)

Sur 2: o-Terphenyl (S)

* denotes surrogate recovery outside of QC limits.
D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.
A Lab ID consisting of a batch number with a B suffix is a method blank.
A Lab ID consisting of a batch number with a S suffix is an LCS.
A Lab ID with a MS suffix is a matrix spike.
A Lab ID with a MSD suffix is a matrix spike duplicate.

4/13/2007 13:42:43
New Orleans Laboratory Certifications
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Report of Batch Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Pace Analytical

New Orleans Laboratory

Report: 2067804

Batch: 83914

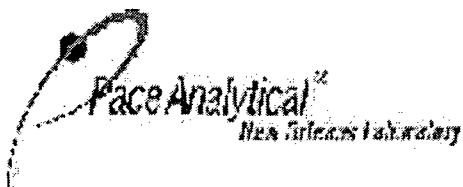
Lab ID	Type and Qualifiers	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20508993	Sample	68							
20508994	Sample	68							
20508995	Sample	68							
20508997	Sample	69							
20509738	BLANK	105							
20509739	LCS	101							
20509740	MS	92							
20509741	MSD	92							
20510175	BLANK	105							
20510374	BLANK	86							
20510375	LCS	89							

QC limits: 58-143

Sur 1: 4-Bromofluorobenzene (S)

* denotes surrogate recovery outside of QC limits.
D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.
A Lab ID consisting of a batch number with a B suffix is a method blank.
A Lab ID consisting of a batch number with a S suffix is an LCS.
A Lab ID with a MS suffix is a matrix spike.
A Lab ID with a MSD suffix is a matrix spike duplicate.

4/13/2007 13:42:43
New Orleans Laboratory Certifications
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Report of Batch Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Report: 2067804

Batch: 83915

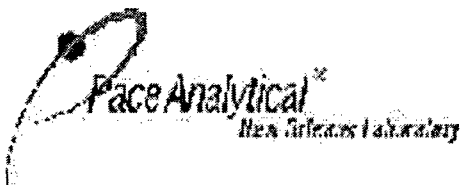
Lab ID	Type and Qualifiers	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20508993	Sample	70							
20508994	Sample	69							
20508995	Sample	68							
20508997	Sample	70							
20509742	BLANK	107							
20509743	LCS	94							
20509744	MS	94							
20509745	MSD	94							

QC limits: 58-143

Sur 1: 4-Bromofluorobenzene (S)

* denotes surrogate recovery outside of QC limits.
D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.
A Lab ID consisting of a batch number with a B suffix is a method blank.
A Lab ID consisting of a batch number with a S suffix is an LCS.
A Lab ID with a MS suffix is a matrix spike.
A Lab ID with a MSD suffix is a matrix spike duplicate.

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Report of Batch Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Report: 2067804

Batch: 83932

Lab ID	Type and Qualifiers	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20508998	Sample	91							
20509862	BLANK	94							
20509863	LCS	101							
20509932	MS	98							
20509933	MSD	102							
20509934	BLANK	94							
20509935	LCS	101							

QC limits: 32-157

Sur 1: 4-Bromofluorobenzene (S)

* denotes surrogate recovery outside of QC limits.
D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.
A Lab ID consisting of a batch number with a B suffix is a method blank.
A Lab ID consisting of a batch number with a S suffix is an LCS.
A Lab ID with a MS suffix is a matrix spike.
A Lab ID with a MSD suffix is a matrix spike duplicate.

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New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
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Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
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Report of Batch Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Report: 2067804

Batch: 83933

Lab ID	Type and Qualifiers	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20508998	Sample	93							
20509864	BLANK	95							
20509865	LCS	109							
20509936	MS	98							
20509937	MSD	98							

QC limits: 32-157

Sur 1: 4-Bromofluorobenzene (S)

* denotes surrogate recovery outside of QC limits.
D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.
A Lab ID consisting of a batch number with a B suffix is a method blank.
A Lab ID consisting of a batch number with a S suffix is an LCS.
A Lab ID with a MS suffix is a matrix spike.
A Lab ID with a MSD suffix is a matrix spike duplicate.

4/13/2007 13:42:43
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Louisiana Dept. of Environmental Quality (LELAP) - 02006
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Report of Batch Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd, Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Pace Analytical

New Orleans Laboratory

Report: 2067804

Batch: 84154

Lab ID	Type and Qualifiers	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20508998	Sample	83	80						
20509172	OQS	96	79						
20510967	BLANK	92	90						
20510968	LCS	73	75						
20510969	MS	101	91						
20510970	MSD	102	93						

QC limits: 22-165 42-146

Sur 1: n-Pentacosane (S)

Sur 2: o-Terphenyl (S)

* denotes surrogate recovery outside of QC limits.
D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.
A Lab ID consisting of a batch number with a B suffix is a method blank.
A Lab ID consisting of a batch number with a S suffix is an LCS.
A Lab ID with a MS suffix is a matrix spike.
A Lab ID with a MSD suffix is a matrix spike duplicate.

4/13/2007 13:42:43

New Orleans Laboratory Certifications
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Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health Environment - E-10266
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Report of Method Blank

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Lab ID: 20509412

Description: TPH Extractables Water BLK LCS

Project No.: 2067804

Method: EPA 8015 Mod Ext

Batch: 83816

Units: mg/L

Prep Factor: 1

Leached:

Prepared: 24-Mar-07

Analyzed: 04/03/07 17:19 SPP1 (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit
	Diesel Range Organics (C10-28)	1	ND		0.150
	Oil Range Organics (>C28-40)	1	ND		0.150

2 compound(s) reported

ND denotes Not Detected at or above the reporting limit.
DF denotes Dilution Factor.
RL denotes sample Reporting Limit.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

4/13/2007 13:42:46
New Orleans Laboratory Certifications
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Kansas Dept. of Health Environment - E-10266
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Report of Method Blank

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Pace Analytical
New Orleans Laboratory

Lab ID: 20509742

Description: TPH GRO Water, Blank

Project No.: 2067804

Method: EPA 8015 Mod Pur

Batch: 83915

Units: mg/L

Prep Factor: 1

Leached:

Prepared: 28-Mar-07

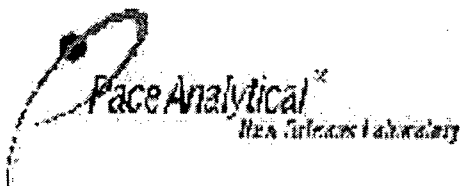
Analyzed: 03/28/07 05:19 DET (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit
	Gasoline Range Organics(C6-10)	1	ND		0.0500

1 compound(s) reported

ND denotes Not Detected at or above the reporting limit.
DF denotes Dilution Factor.
RL denotes sample Reporting Limit.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

4/13/2007 13:42:46
New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
Arkansas Dept. of Environmental Quality - 88-0681
Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
Florida Dept. of Health (NELAC) - E37595
Kansas Dept. of Health, Environment - E-10266
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Report of Method Blank

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Lab ID: 20509862

Description: 8021 VOAs Med Soil

Project No.: 2067804

Method: EPA 8021

Batch: 83932

Units: ug/kg

Prep Factor: 1

Leached:

Prepared: 23-Mar-07

Analyzed: 03/28/07 16:01 DET (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit
71-43-2	Benzene	1	ND		25.0
100-41-4	Ethylbenzene	1	ND		25.0
1634-04-4	Methyl-tert-butyl ether	1	ND		25.0
108-88-3	Toluene	1	ND		25.0
	m&p-Xylene	1	ND		50.0
95-47-6	o-Xylene	1	ND		25.0

6 compound(s) reported

ND denotes Not Detected at or above the reporting limit.
DF denotes Dilution Factor.

RL denotes sample Reporting Limit.

Qu lists qualifiers. Specific qualifiers are defined at the end of the report.

Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

4/13/2007 13:42:46

New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
Arkansas Dept. of Environmental Quality - 88-0681
Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
Florida Dept. of Health (NELAC) - E87595
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Report of Method Blank

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Lab ID: 20509864

Description: 8015 TPH Gasoline Med Soil

Project No.: 2067804

Method: EPA 8015 Mod Pur

Batch: 83933

Units: mg/kg

Prep Factor: 1

Leached:

Prepared: 23-Mar-07

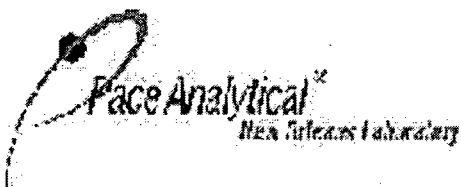
Analyzed: 03/28/07 16:01 DET(1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit
	Gasoline Range Organics(C6-10)	1	ND		2.50

1 compound(s) reported

ND denotes Not Detected at or above the reporting limit.
DF denotes Dilution Factor.
RL denotes sample Reporting Limit.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

4/13/2007 13:42:46
New Orleans Laboratory Certifications
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Report of Method Blank

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1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Lab ID: 20509934

Description: 8021 VOAs Med Soil

Project No.: 2067804

Method: EPA 8021

Batch: 83932

Units: ug/kg

Prep Factor: 1

Leached:

Prepared: 23-Mar-07

Analyzed: 03/28/07 16:01 DET (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit
71-43-2	Benzene	1	ND		25.0
100-41-4	Ethylbenzene	1	ND		25.0
1634-04-4	Methyl-tert-butyl ether	1	ND		25.0
108-88-3	Toluene	1	ND		25.0
	m&p-Xylene	1	ND		50.0
95-47-6	o-Xylene	1	ND		25.0
6 compound(s) reported					

ND denotes Not Detected at or above the reporting limit.

DF denotes Dilution Factor.

RL denotes sample Reporting Limit.

Qu lists qualifiers. Specific qualifiers are defined at the end of the report.

Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

4/13/2007 13:42:46

New Orleans Laboratory Certifications
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Report of Method Blank

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Lab ID: 20510175

Description: 8021 VOAs Water Blank

Project No.: 2067804

Method: EPA 8021

Batch: 83914

Units: ug/L

Prep Factor: 1

Leached:

Prepared: 28-Mar-07

Analyzed: 03/28/07 05:19 DET (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit
71-43-2	Benzene	1	ND		0.500
100-41-4	Ethylbenzene	1	ND		0.500
1634-04-4	Methyl-tert-butyl ether	1	ND		0.500
108-88-3	Toluene	1	ND		0.500
	m&p-Xylene	1	ND		1.00
95-47-6	o-Xylene	1	ND		0.500

6 compound(s) reported

ND denotes Not Detected at or above the reporting limit.
DF denotes Dilution Factor.
RL denotes sample Reporting Limit.
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Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

4/13/2007 13:42:47
New Orleans Laboratory Certifications
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Arkansas Dept. of Environmental Quality - 88-0681
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Report of Method Blank

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1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Lab ID: 20510967

Description: 8015 TPH Extractables Soil

Project No.: 2067804

Method: EPA 8015 Mod Ext

Batch: 84154

Units: mg/kg

Prep Factor: 1

Leached:

Prepared: 04-Apr-07

Analyzed: 04/04/07 19:31 SPP1 (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit
	Diesel Range Organics (C10-28)	1	ND		10.0
	Oil Range Organics (>C28-40)	1	ND		50.0

2 compound(s) reported

ND denotes Not Detected at or above the reporting limit.
DF denotes Dilution Factor.
RL denotes sample Reporting Limit.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

4/13/2007 13:42:47
New Orleans Laboratory Certifications
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Kansas Dept. of Health Environment - E-10266
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Report of Quality Control

Pace Analytical Services, Inc.
 1000 Riverbend Blvd. Suite F
 St. Rose, LA 70087
 Phone: 504.469.0333
 Fax: 504.469.0555
 LELAP # 02006

Project: 2067804

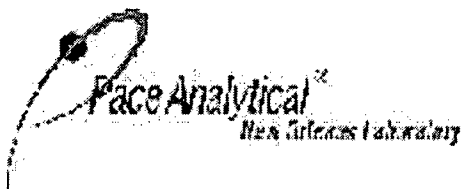
Parameter	Batch	Blank	ARL	Units	LCS Spike	LCS Found	LCS %Rec	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	MSD RPD	QC Limits LCS	MS/MSD	Max RPD	Qu
Arsenic	83789	ND	1.00	mg/kg	100	94	94	114.3	0.00	96.55	102.7	85	90	6	71 - 131	46 - 137	20	
Barium	83789	ND	20.0	mg/kg	100	100.4	100	114.3	143.80	249.3	306	92	142	20	68 - 131	33 - 156	20	
Cadmium	83789	ND	0.500	mg/kg	100	93.95	94	114.3	0.06	97.84	103.3	86	90	5	69 - 128	31 - 154	20	
Chromium	83789	ND	1.00	mg/kg	100	93.81	94	114.3	20.89	127.4	131.9	93	97	3	70 - 127	34 - 165	20	
Lead	83789	ND	0.500	mg/kg	100	96.72	97	114.3	37.09	150.3	155.9	99	104	4	68 - 133	31 - 156	20	
Selenium	83789	ND	3.50	mg/kg	100	91.26	91	114.3	19.76	121.9	129.8	89	96	6	66 - 126	41 - 129	20	
Silver	83789	ND	1.00	mg/kg	50	48.47	97	57.15	0.00	54.1	56.71	95	99	5	25 - 163	10 - 154	20	
Mercury	83790	ND	0.0200	mg/kg	0.1	0.1047	105	0.1081	0.02	0.1351	0.1507	108	119	11	80 - 120	75 - 125	20	
Arsenic, Disso	84559	ND	10.0	ug/L	1000	924.5	92	1000	0.00	852	872.6	85	87	2	72 - 116	60 - 123	20	
Barium, Disso	84559	ND	200.	ug/L	1000	979	98	1000	103.30	932.8	960	83	86	3	77 - 115	42 - 126	20	
Cadmium, Dis	84559	ND	5.00	ug/L	1000	917.1	92	1000	0.13	790.2	819	79	82	4	77 - 116	28 - 151	20	
Chromium, Di	84559	ND	10.0	ug/L	1000	911.6	91	1000	0.00	781.8	807.8	78	81	3	76 - 117	55 - 121	20	
Lead, Dissolve	84559	ND	5.00	ug/L	1000	941.3	94	1000	0.56	786.2	816.9	79	82	4	75 - 118	51 - 119	20	
Selenium, Dis	84559	ND	35.0	ug/L	1000	946	95	1000	3.15	867.5	904.8	86	90	4	74 - 116	55 - 127	20	
Silver, Dissolv	84559	ND	10.0	ug/L	500	490	98	500	1.50	434.8	451.3	87	90	4	64 - 127	10 - 152	20	
Mercury, Diss	84590	ND	0.200	ug/L	1	0.986	99	1	0.04	0.8663	0.8624	83	83	0	80 - 120	75 - 125	20	

* denotes recovery outside of QC limits.
 ARL denotes Adjusted Reporting Limit, corrected for sample size, dilution and moisture content as applicable.
 MS/MSD RPD is calculated via SW-846 rules on the basis of spiked sample concentrations rather than spike recoveries.

4/13/2007 13:42:49
 New Orleans Laboratory Certifications
 Louisiana Dept. of Environmental Quality (LELAP) - 02006
 Arkansas Dept. of Environmental Quality - 88-0681
 Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
 Florida Dept. of Health (NELAC) - E87595
 Kansas Dept. of Health, Environment - E-10266
 U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Report Qualifiers

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006



Project: **2067804**

QC Qualifiers

Qualifier	Qualifier Description
Q1	The matrix spike recoveries are poor. Acceptable method performance for this analyte has been demonstrated by the laboratory control sample recovery.

4/13/2007 13:42:52

New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
Arkansas Dept. of Environmental Quality - 88-0681
Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A

Required Client Information:

Company: Delta Consultants

Address:

Houston, TX

Email To:

jhodges@deltaconsultants.com

Phone:

713-353-2311

Requested Due Date/TAT:

STD

Section B

Required Project Information:

Report To:

James Habes

Copy To:

James Habes

Purchase Order No.:

FOC4-004

Project Name:

HHS - Livingston

Project Number:

FOC4-004

Section C

Invoice Information:

Attention:

James Habes

Company Name:

Delta

Address:

James A

Pace Quote Reference:

Pace Project Manager:

Pace Profile #:

ITEM #	Valid Matrix Codes MATRIX DRINKING WATER WATER WASTE WATER PRODUCT SOIL/SOLID OIL WIPE AIR OTHER TISSUE	Valid Matrix Codes CODE DW WT PW SL WP AR OT TS	Section D Required Client Information SAMPLE ID One Character per box. (A-Z, 0-9 / -)	Samples IDs MUST BE UNIQUE	MATRIX CODE	SAMPLE TYPE G-RAB C-COMP	COLLECTED		SAMPLE TEMP	# OF CONTAINERS	Preservatives						Filtered (Y/N)	Requested Analysis:	Residual Chlorine (Y/N)	Pace Project Number Lab ID
							DATE	TIME			COMPOSITE START	COMPOSITE END/GRAB	DATE	TIME	DATE	TIME				
1	MW-1				WTG-324-17	1200					11	X							20568998	
2	MW-2					1130					1								994	
3	MW-3					1100					1								995	
4	MW-4					1030					2								997	
5	SOIL C				SLC	1230					2								998	
6	DRUMS																			
7																				
8																				
9																				
10																				
11																				
12																				

Additional Comments:

- Lab Filter Metals
- Run, PTH's & Metals on
water sample w/ most Elevated
TPH Concentration
RCRA 8 metals.

SEE REVERSE SIDE FOR INSTRUCTIONS

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

R. Scott Burnica

SIGNATURE of SAMPLER:

R. Scott Burnica

DATE Signed (MM/DD/YY)

3-21-07

RELINQUISHED BY / AFFILIATION

DATE

TIME

ACCEPTED BY / AFFILIATION

DATE

TIME

SAMPLE CONDITION

Received

on ice

Custody

Sealed Cooler

Samples

Infect

Temp in °C

Y/N

Y/N

Y/N

Y/N

Y/N

Y/N

Y/N

Y/N

ALLO202rev.3.1Mar05