1R- 454

REPORTS

DATE:

11/18/2004

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SITE INVESTIGATION REPORT BP PIPELINES (NORTH AMERICA), INC. DENTON GATHERING SYSTEM SECTION 11, T15S R37E LOVINGTON, LEA COUNTY, NEW MEXICO DELTA PROJECT NO. F003-003

> Prepared for: Atlantic Richfield (A BP Affiliated Company) 501 Westlake Park Blvd. Houston, Texas Attn: Mr. Mike Whelan

> > Prepared by:

Delta Environmental Consultants, Inc. 2833 Trinity Square, Suite 149 Carrollton, Texas 75006 972-416-7171

November 18, 2004

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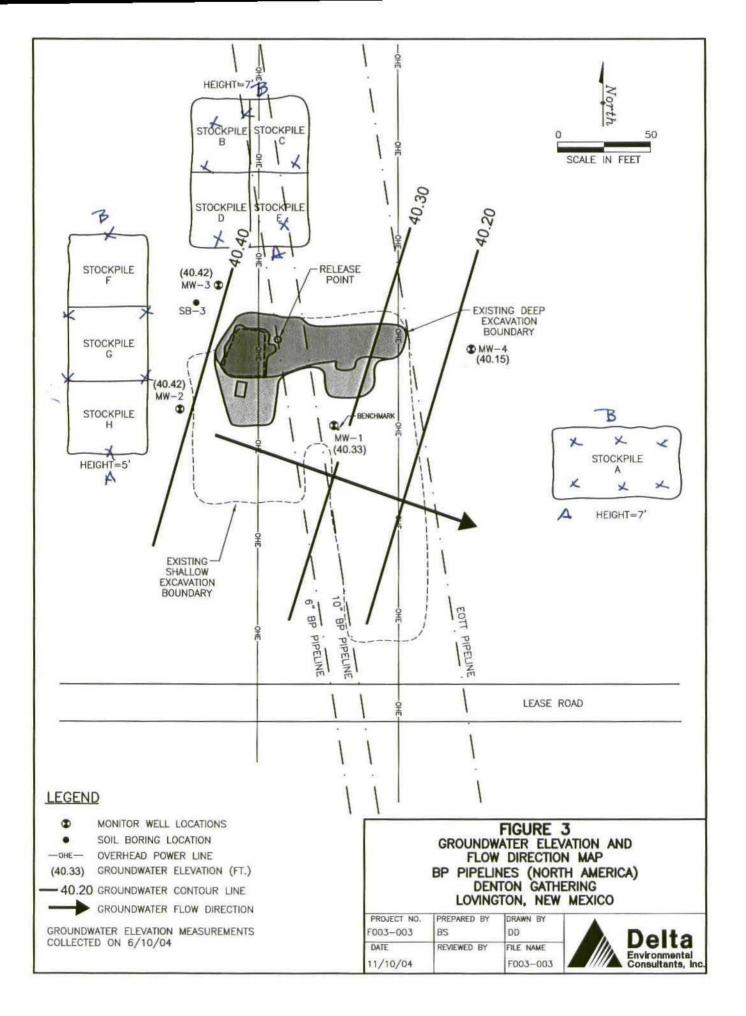


Table 4 Stockpile Analytical Data BP Pipelines, NA Denton Gathering Leak Site Lea County, NM

Sample #	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH-DRO (mg/kg)
Soil Target L	evels (mg/kg)	10		and the second second		50	100	100
A	4/30/2003	< 0.0100	<0.0100	0.114	0.757	0.871	38.2	<50.0
В	4/30/2003	< 0.0100	<0.0100	1.52	9.14	10.66	260	151
С	4/30/2003	< 0.0100	<0.0100	1.06	6.15	7.21	204	124
D	4/30/2003	< 0.0100	<0.0100	1.16	5.71	6.87	194	75
E	4/30/2003	< 0.0100	<0.0100	0.871	3.65	4.521	221	<50.0
F	8/20/2003	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<2.00	28
G	8/20/2003	<0.0200	<0.0200	<0.0200	0.0326	0.0326	<2.00	122
Н	8/20/2003	< 0.0100	<0.0100	0.0116	0.235	0.2466	33.3	103
A	10/1/2004	<0.025	<0.025	<0.025	<0.050	< 0.050	9.44	1080
В	10/1/2004	<0.025	<0.025	<0.025	1.8	1.8	156	6610
С	10/1/2004	<0.025	<0.025	< 0.025	< 0.050	<0.050	6.16	1670
D	10/1/2004	<0.025	<0.025	<0.025	0.688	0.688	68.1	4510
E	10/1/2004	<0.025	<0.025	<0.025	<0.050	<0.050	115	2220
F	10/1/2004	<0.025	<0.025	<0.025	< 0.050	<0.050	<2.50	369
G	10/1/2004	<0.025	<0.025	<0.025	<0.050	<0.050	<2.50	207
H	10/1/2004	<0.025	<0.025	<0.025	<0.050	< 0.050	<2.50	596



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November 19, 2004

Mr. Jack Ford New Mexico Oil Conservation Division 1220 S. St. Francis Drive Santa Fe, NM 87505

1) Pit Samples ? 2) % of soil > Jpproval concentrations 42 mil) thickness of liner? 4) Is there I rewedial file No, 21R454

Subject: Site Status and Project Summary BP Pipelines, NA Denton Gathering System Release Section 11 – Township 15S – Range 37E Lea County, New Mexico

1R454

Dear Mr. Ford:

On behalf of Atlantic Richfield (AR, a BP affiliated company), Delta Environmental Consultants, Inc. has prepared this status update for your review. A chronology of critical events is presented below for your information.

March 7, 2003 – A crude oil leak was discovered on the Denton Gathering system on property owned by Mr. Darr Angell. Initial excavation activities removed visibly affected soil and the line was repaired. Figure 1 shows the site location on the USGS topographic map for the area.

April 1, 2003 - The line was taken out of service with no plans to resume use of the line.

April 8, 2003 – Site meeting with New Mexico OCD, BNC, Delta, and Mr. Darr Angell to discuss cleanup alternatives.

April 28 through August 20, 2003 – Several episodes of over-excavation and confirmation sampling were conducted. Final samples indicate all crude oil affected soil above applicable cleanup standards have been removed, except for historical impact on the east side of the excavation next to EOTT pipeline. Excavation limits, sample locations and analytical data are shown on Figure 2.

September 30, 2003 - Soil Assessment Report and Remedial Work Plan (BNC) submitted to OCD for review.

February 25, 2004 – Delta submitted a Workplan for Monitor Well Installation for OCD review.

April 13, 2004 – Mr. Larry Johnson of OCD approves monitor well workplan.

June 2-4, 2004 - Monitor wells installed.

June 10, 2004 - Monitor wells surveyed, bailed and sampled

August 30, 2004 – Site Investigation Report submitted to OCD (Revised November 18, 2004).



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Excavation Assessment Summary

As indicated in the **Soil Assessment Report and Remedial Workplan** submitted on September 30, 2003, the site-specific cleanup targets are 10 mg/kg benzene, 50 mg/kg total BTEX, and 100 mg/kg TPH. During the course of soil excavation activities, the excavation was deepened to 22' below grade, approximately 5,000 cubic yards of affected soil were removed, and 28 confirmation samples were collected. The samples collected from the limits of the excavation (21) indicate that all hydrocarbon affected soil above site-specific target levels have been removed (see Figure 2).

Based on the results presented in the **Soil Assessment Report and Remedial Workplan**, and reviewed here, we believe the horizontal and vertical extent of hydrocarbon impact in soil has been defined, all affected soil has been removed, and no additional soil assessment or response actions are warranted.

Ground Water Assessment Summary

In accordance with the OCD approved **Workplan for Monitor Well Installation**, four ground water monitor wells were installed in and around the excavation to evaluate the potential for ground water impact from the release. MW-1 was installed in the excavation area as near the release point as possible in the estimated downgradient direction. Monitor wells 2 and 4 were installed in estimated cross gradient positions, and MW-3 was installed in a presumed upgradient position.

Monitor Well Soil Sampling - Hollow-stem auger drilling methods were used to install monitor wells 1, 2, and 4, and soils were sampled continuously using a 5-ft split spoon. Lithology was logged continuously in each borehole. Soil samples were collected at ten foot intervals (9-10 ft bgs, 19-20 ft bgs, etc.), at the soil/groundwater interface or at depths where hydrocarbon impact was visually observed. Soil samples collected were split, with one portion being placed in a sealed plastic bag for field screening using an organic vapor meter (OVM) and the second portion retained in an appropriate glass container then placed in an ice-filled cooler. The soil sample collected from above the soil/groundwater interface with the highest OVM reading and the sample collected at the soil/groundwater interface were submitted for laboratory analysis. If no OVM readings were observed in soil samples, the sample collected at the soil/groundwater interface was submitted for laboratory analysis.

The necessity of using air rotary methods to install well MW-3 precluded the collection of soil samples. However, soil cuttings were monitored continuously by a Delta geologist for olfactory or visual evidence of hydrocarbon impact. None were observed. Samples were analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA Method 8021B. Monitor well soil sample results are summarized in Table 1.

Monitor Well Installation and Ground Water Sampling – Ground water was encountered in the borings from 59 to 61 feet below grade during drilling. Two-inch diameter PVC monitor wells were installed in the borings with 15' of well screen and blank riser pipe to surface. The wells were completed with a sand filter pack and bentonite seal then finished with a concrete plug at the surface. The monitor wells were then developed by surging and bailing. Top-of-casing measurements were collected relative to an arbitrary benchmark and the monitor wells were gauged. The resulting ground water elevation data is presented in Table 2 with a Ground Water Elevation and Flow Direction Map as Figure 3.

The four monitor wells were purged and sampled approximately one week later. The ground water samples were submitted for laboratory analysis of BTEX by EPA Method 8021B. Analytical results indicate that benzene, toluene and ethylbenzene were below laboratory method detection limits (<0.001 mg/L) in all wells. Total xylenes were below laboratory detection limits for all wells except MW-1. The total xylene concentration in MW-1 was 0.00191 mg/L. Ground water analytical data is summarized in Table 3.

Soil Stockpile Characterization

Approximately 5,000 cubic yards of soil were removed during site excavation activities. The soil is stockpiled around the excavation in three areas. Eight soil samples collected in 2003 indicate the TPH concentrations in the stockpiles ranged from 38.2 mg/kg to 411 mg/kg. The stockpiles were re-sampled on October 1, 2004. Analytical results indicate the TPH concentrations range from 207 mg/kg to 6,766 mg/kg and total BTEX

concentrations range from <0.050 (6 samples) to 1.8 mg/kg. Stockpile sample analytical results are summarized in Table 4 and the laboratory report from October 2004 is included as an attachment.

Summary and Closure Strategy

Based on the data collected during the excavation sampling, monitor well installation and soil stockpile sampling, Delta presents the following summary.

- All soil affected with hydrocarbon concentrations above 100 mg/kg TPH, 10 mg/kg benzene and 50 mg/kg total BTEX have been removed and stockpiled on site.
- The residual hydrocarbon impact in the stockpiled soil is generally lower mobility, heavy hydrocarbons with no remaining benzene, toluene or ethylbenzene.
- The residual hydrocarbons in the stockpiled soil are unlikely to leach to ground water at concentrations above NM WQCC target concentrations.
- Monitor well soil samples confirm that the release of hydrocarbons was confined to the previously
 excavated area.
- Ground water flow direction is apparently to the east and southeast.
- Monitor well water sample data indicates that ground water has not been affected by petroleum hydrocarbons at concentrations greater than the site-specific cleanup standards.

Given the data summarized above and in previous reports, and conversations with both yourself and Larry Johnson Delta proposes to complete the site work and close the case by;

- 1. Placing a polyethylene liner in the bottom of the excavation to reduce infiltration, then backfilling the most highly affected soil up to 2 feet below grade.
- 2. Placing a second polyethylene liner at 2 feet below grade to prevent ponding of rainfall in the excavation, then completing backfilling with the remaining soil as cover.
- 3. The excavation will be "crowned" to allow for subsequent settling of the backfilled soil.
- 4. The monitor wells will be plugged and abandoned.
- 5. Finally, a Site Closure Report will be prepared documenting site closure activities for your review and concurrence.

We appreciate your interest in this project. If you have any questions please do not hesitate to give me a call at 972-416-7171.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

Mark T. Smith Project Manager

Attachments:

Tables 1 - 4 Figures 1 - 3 October 2004 Stockpile Sample Analytical Report – Pace Analytical Report for Project #2039808 Soil Assessment Report and Remedial Workplan, September 30, 2003 (BNC) Site Investigation Report, November 18, 2004 (Delta)

cc: Larry Johnson – NM OCD Hobbs Mike Whelan – AR – Houston Jim Lucari – BP Legal (w/o reports)

TABLE 1Soil Analytical DataBP Pipelines NA, Inc.Denton Gathering SiteLea County, New Mexico

Soil Boring / Monitor Well	Date Sampled	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	m,p-xylenes (mg/kg)	o-xylenes (mg/kg)
Soil Target L	Soil Target Levels (mg/kg)		10				
MW-1	6/2/04	54-55	<0.025	<0.025	<0.025	<0.025	<0.025
MW-1	6/2/04	59-60	<0.025	<0.025	<0.025	<0.025	<0.025
MW-2	6/4/04	60-61	<0.025	<0.025	<0.025	<0.025	<0.025
MW-4	6/2/04	59-60	<0.025	<0.025	<0.025	<0.025	<0.025

Notes:

mg/kg = milligrams per kilogram Samples analyzed by EPA Method 8021B *Detection limit for all BTEX constituents and samples was 0.025 mg/kg

Table 2 Ground Water Elevation Data BP Pipelines NA, Inc. Denton Gathering Site Lea County, New Mexico

Monitor Well	Date Gauged	Top of	Depth to	Depth to	Product	Elevation
	Dale Gaugeu	Casing	Product	Water	Thickness	of Water
MW-1	6/10/04	96.28	NP	55.95	0	40.33
MW-2	6/10/04	100.10	NP	59.68	0	40.42
MW-3	6/10/04	100.15	NP	59.73	0	40.42
MW-4	6/10/04	99.82	NP	59.67	0	40.15

Notes:

Monitor wells were surveyed based on a relative Benchmark of 100.00 feet on June 10, 2004. NP = free product not present

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TABLE 3 Ground Water Analytical Data BP Pipelines NA, Inc. Denton Gathering Site Lea County, New Mexico

Monitor Well	Date	Benzene	Toluene	Ethylbenzene	m,p-xylenes	o-xylenes
	Sampled	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
NM WQCC Standard	NM WQCC Standard (mg/L)		0.75	0.75	0.62 (total	xylenes)
MW-1	6/10/04	<0.001	<0.001	<0.001	0.00191	<0.001
MW-2	6/10/04	<0.001	<0.001	<0.001	<0.001	<0.001
MW-3	6/10/04	<0.001	<0.001	<0.001	<0.001	<0.001
MW-4	6/10/04	<0.001	< 0.001	<0.001	<0.001	< 0.001
Trip Blank		<0.001	<0.001	<0.001	<0.001	<0.001

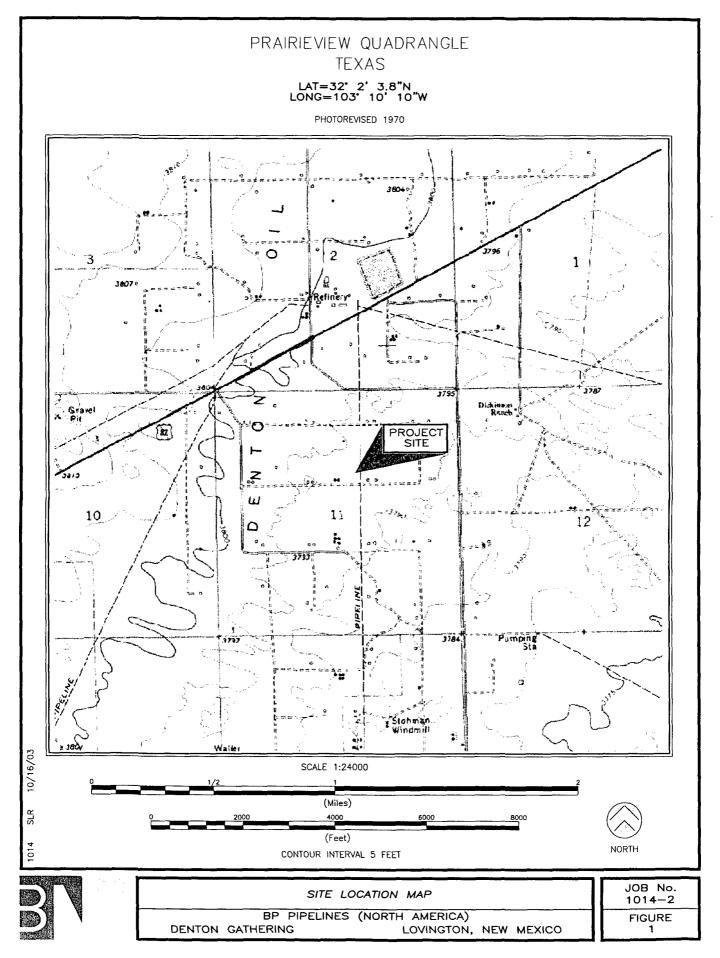
Notes:

NM WQCC = New Mexico Water Quality Control Commission mg/L = milligrams per Liter Samples analyzed by EPA Method 8021B Detection limit for all samples and constituents was 0.001 mg/L

Table 4 Stockpile Analytical Data BP Pipelines, NA Denton Gathering Leak Site Lea County, NM

Sample #	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH-DRO (mg/kg)
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A	4/30/2003	<0.0100	< 0.0100	0.114	0.757	0.871	38.2	<50.0
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G	8/20/2003	<0.0200	<0.0200	<0.0200	0.0326	0.0326	<2.00	122
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В	10/1/2004	<0.025	<0.025	<0.025	1.8	1.8	156	6610
С	10/1/2004	<0.025	<0.025	<0.025	<0.050	<0.050	6.16	1670
D	10/1/2004	<0.025	<0.025	<0.025	0.688	0.688	68.1	4510
E	10/1/2004	<0.025	<0.025	<0.025	< 0.050	<0.050	115	2220
F	10/1/2004	<0.025	<0.025	<0.025	<0.050	<0.050	<2.50	369
G	10/1/2004	<0.025	<0.025	<0.025	<0.050	<0.050	<2.50	207
Н	10/1/2004	<0.025	<0.025	<0.025	<0.050	<0.050	<2.50	596





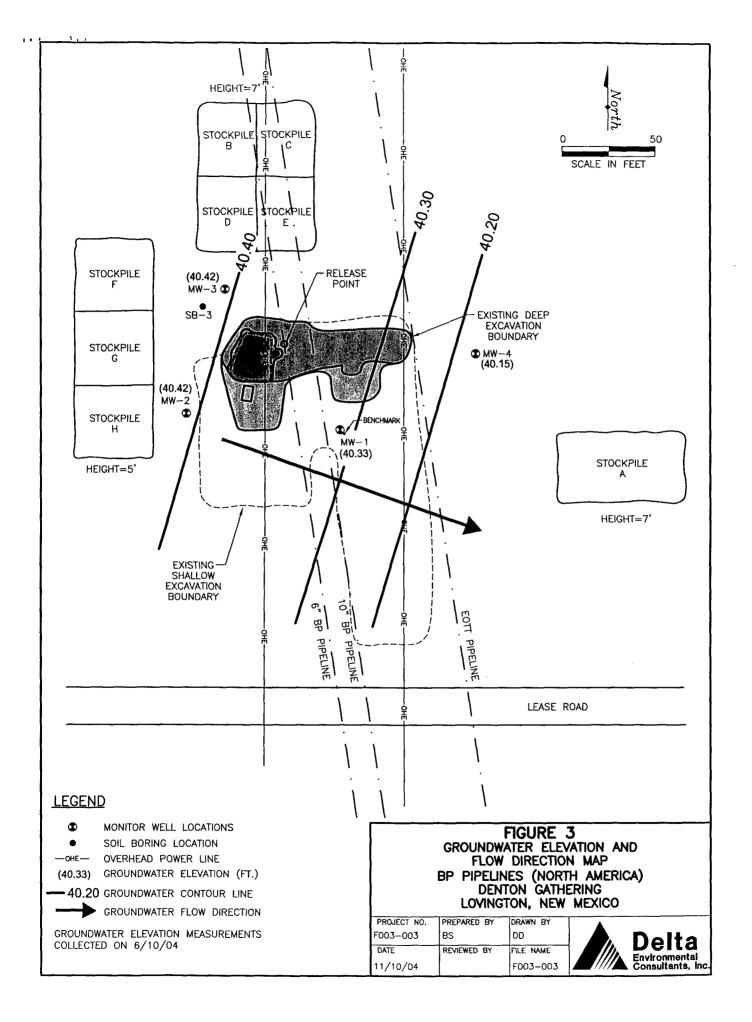
(GRO/DRO) (GRO/DRO) (mg/Kg) 100 mg/Kg bles	462 61.7 801 8DL 8DL 8DL 8DL				JOB No. 1762 FIGURE 2
PLE DATE TOTAL BTEX (mg/Kg) (0.00 mg/Kg) Excavation Confirmation Samples	4/8/2003 0.0119 4/30/2003 0.151 4/30/2003 0.151 4/8/2003 1.855 4/8/2003 BDL 4/8/2003 BDL 4/8/2003 BDL 4/8/2003 BDL			8/20/2003 <0.0100 8/20/2003 <0.0100 8/20/2003 <0.0100 8/20/2003 <0.0100 8/20/2003 <0.0100 8/20/2003 <0.0100 rthod 8021 hod 8021 hod 8021 hod 8021 to EOTT PL.	
SAMPLE ID Excavation	EEAFloor 5: 44 EE Floor 5' 8 4/3 EW Center 3' 4/4 EWC 3' B 4/3 EWN 2' 4/1 NWW 8' 4/1			EPA Met	AVATION DETAILS AMERICA) LOVINGTON, NEW MEXICO
Approximate Scale In Feet	Existing Deep Excovation Boundary	ŝ		'n	AND OVEREXC
pth=15' Phile 8'	Example 1	depth= $8^{-1} \cdot 1^{2}$		EWW 3.	SAMPLE LOCATI BP UTON GATHERIN
rdepth=20'		U10 EW Cente	ipeline	oline	
DENW 18' NWW 8'-	depth=22' DEWN 18' depth=22' depth=16' depth=1	WWC 2'B	Existing Shallow Boundary Boundary	Final Confirmation Sample Confirmation Sample Overhead Power Line	
	τά υ	WWC		► ► ► ► ► ► ► ► ► ► ► ► ► ► ► ► ► ► ►	

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Report of Laboratory Analysis Project Number: 2039808



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Client: Delta Environmental Consulting

Project: GLN/DENTON GATHERING F003-003

Project No.: 2039808

Sample ID	Lab ID	Matrix	Collecti Date/Ti		Received Date/Time		
STOCKILE A	20302628	Soil	10/01/2004	11:30	10/05/2004	10:45	
STOCKILE B	20302629	Soil	10/01/2004	11:50	10/05/2004	10:45	
STOCKILE C	20302630	Soil	10/01/2004	11:45	10/05/2004	10:45	
STOCKILE D	20302632	Soil	10/01/2004	12:00	10/05/2004	10:45	
STOCKILE E	20302633	Soil	10/01/2004	12:15	10/05/2004	10:45	
STOCKILE F	20302635	Soil	10/01/2004	12:30	10/05/2004	10:45	
STOCKILE G	20302636	Soil	10/01/2004	12:20	10/05/2004	10:45	
STOCKILE H	20302637	Soil	10/01/2004	12:35	10/05/2004	10:45	

Laboratory Certifications: Louislana Dept, of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept, of Health/fazardous Waste - E07595 Kansas Dept. of Health & Environmen/ELWHW - E-10266 LELAP (NELAP WWH2) - 02006 E08 - Certified Puerto Rice Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

10/19/2004 18:14:18

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Report of Laboratory Analysis

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Phone: 504,469,0333 Fax: 504,469,0555

	TPH - Diesel Range Organics (C10-C28)	1	108	30	1	0.0	
CAS Number	Parameter	Dilution	Resu	lt (Repo Ju Lir	U U	Reg. Limit
Prep Factor:	<u>l</u> Leached: <u>n/a</u>		Prepared:	<u>10/15/04</u>	Analyzed:	10/18/04	<u>16:04</u> DGS
			Collected:	<u>10/01/04</u>	Received:	10/05/04	
Method:	SW 8015B TPH Diesel & Oil Range Organ	<u>nics</u>	Units:	<u>mg/kg</u>	Target List:	TPHLOW	
Description:	None		Prep Level:	<u>Soil</u>	Batch:	<u>50489</u>	
Lab ID:	20302628		Matrix:	Soil	% Moisture:	Not Corre	cted
Project:	GLN/DENTON GATHERING F003-003	J	Project No.:	<u>2039808</u>	Sample Qu:		
Client ID:	STOCKILE A		Site:	None			
			Client:	<u>Delta Envi</u>	ronmental Consul	ting	

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. Regulatory limit denotes an actual regulatory limit or a client-requested notification limit. Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAPy/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - E07595 Kansas Dept. of Health & Environmerv/ELWHW - E-10266 LELAP (MELAP WW/HZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soli Import (U.S. Territories)

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Report of Laboratory Analysis

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

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			Client:	Delta Env	rironmenta	l Consult	ing		
Client ID:	STOCKILE A		Site:	None					
Project:	GLN/DENTON GATHERING F003-003]	Project No.:	<u>2039808</u>	Sam	ple Qu:			
Lab ID:	20302628		Matrix:	<u>Soil</u>	% M	oisture:	Not Corre	cted	
Description:	None		Prep Level:	<u>Soil</u>		Batch:	<u>50349</u>		
	SW 8015B TPH Gasoline Range Organics	<u>(C6-</u>	Units:	<u>ug/kg</u>	Targ	get List:	TPHGPTN	<u>MED</u>	2
	<u>C10)</u>		Collected:	<u>10/01/04</u>	R	eceived:	<u>10/05/04</u>		
Prep Factor:	Leached: <u>n/a</u>		Prepared:	10/12/04	Ar	alyzed:	10/14/04	<u>23:53 (</u>	<u> 20 W</u>
CAS Number	Parameter	Dilution	Resu	14	Qu	Repoi Lin	0	Reg. Limit	
	TPH - Gasoline Range Organics (C6-C10)	1	944 944		<u></u>	250			

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1 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit. DF denotes Dibution 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, we denotes result is not corrected for moisture and na denotes not applicable. Regulatory limit denotes an actual regulatory limit or a client-requested notification limit. Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - £87595 Kansas Dept. of Health & EnvironmenvELWHW - E-10266 LELAP (NELAP WW/HZ) - 02006 EOB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services . Foreign Soil Import (U.S. Territories)

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Report of Laboratory Analysis

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> Phone: 504.469.0333 Fax: 504.469.0555

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71-43-2	Benzene		1		ND		25.0	
CAS Number	Parameter		Dilution	Resu	lt	R Qu	eporting Limit	Reg. Limit
Prep Factor	: <u>1</u>	Leached: <u>n/a</u>		Prepared:	<u>10/12/04</u>	Analyzo	d: <u>10/14/04</u>	<u>23:52 CCW</u>
				Collected:	10/01/04	Receive	d: <u>10/05/04</u>	
Method	: <u>SW 8021 BTEX</u>			Units:	ug/kg	Target Li	st: <u>BTEXMI</u>	<u>ED</u>
Description	: None		I	Prep Level:	<u>Soil</u>	Bate	:h: <u>50348</u>	
Lab ID	: <u>20302628</u>			Matrix:	<u>Soil</u>	% Moistu	re: Not Corr	rected
Project	: GLN/DENTON GAT	HERING F003-003	P	roject No.:	<u>2039808</u>	Sample Q	u:	
Client ID	: STOCKILE A			Site:	None			
				Client:	Delta Env	vironmental Con	sulting	

71-43-2	Benzene	1	ND	25.0
100-41-4	Ethylbenzene	1	ND	25.0
108-88-3	Toluene	1	ND	25.0
1330-20-7	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. Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAPy/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - E0795 Kanasa Dept. of Health & Environment/ELWHW - E-10266 LELAP (MELAP WW/H2) - 02006 EOB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

Pace New Orleans	Analytical [™] s Laboratory	Report of Labor	ratory Anal	ysis		Riverbend B Saint Rose Phone: 50	rvices, inc. Ivd, Suite F 2. LA 70087 4.469.0333 4.469.0555
			Client:	<u>Delta Env</u>	ironmental Consult	ing	
Client ID:	STOCKILE B		Site:	None			
Project:	GLN/DENTON GATI	IERING F003-003	Project No.:	<u>2039808</u>	Sample Qu:		
Lab ID:	20302629		Matrix:	<u>Soil</u>	% Moisture:	Not Correc	ted
Description:	None		Prep Level:	<u>Soil</u>	Batch:	<u>50489</u>	
Method:	SW 8015B TPH Diese	1 & Oil Range Organics	Units:	<u>mg/kg</u>	Target List:	<u>TPHLOW</u>	ar a
			Collected:	<u>10/01/04</u>	Received:	10/05/04	
Prep Factor:	<u>l</u>	Leached: <u>n/a</u>	Prepared:	<u>10/15/04</u>	Analyzed:	<u>10/19/04</u>	<u>10:53 DGS</u>

Reporting Reg. **CAS Number** Parameter Dilution Result Limit Limit Qu TPH - Diesel Range Organics (C10-C28) 100. 10 6610 Dl 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 a/a denotes not applicable. Regulatory limit denotes an actual regulatory limit or a client-requested notification limit.

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Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health & Environment/ELWHW - E-10266 LELAP (NELAP WWHZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories) i

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Pace, New Orleans	Analytical [™]	eport of Laborat	tory Anal	ysis		Riverbend E Saint Ros Phone: 50	rvices, Inc. Sivd, Suite F e. LA 70087 4.469.0333 4.469.0555
			Client	Delta Enviro	onmental Consult	ing	
					minemai Consult	ing	
Client ID:	STOCKILE B		Site:	None			
Project:	GLN/DENTON GATHERI	NG F003-003	Project No.:	<u>2039808</u>	Sample Qu:		
Lab ID:	20302629		Matrix:	<u>Soil</u>	% Moisture:	Not Corre	cted
Description:	None		Prep Level:	<u>Soil</u>	Batch:	<u>50349</u>	
Method:	SW 8015B TPH Gasoline F	Range Organics (C6-	Units:	ug/kg	Target List:	TPHGPTM	<u>IED</u>
	<u>C10)</u>		Collected:	10/01/04	Received:	10/05/04	
Prep Factor:	<u>1</u> Lead	ched: <u>n/a</u>	Prepared:	<u>10/12/04</u>	Analyzed:	<u>10/15/04</u>	<u>02:48 CCW</u>
CAS Number	Parameter	Dilution	Resul	lt Qu	Repor Lin	0	Reg. Limit
	TPH - Gasoline Range Organics (C	6-C10) 1	15600	10 /	2500)	
l compound(s) reporte	đ						

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	New Orleans Laboratory

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Report of Laboratory Analysis

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

> Phone: 504.469.0333 Fax: 504.469.0555

		Client:	Delta Environmental Consul	ing	
Client ID:	STOCKILE B	Site:	None		
Project:	GLN/DENTON GATHERING	F003-003 Project No.:	<u>2039808</u> Sample Qu:		
Lab ID:	20302629	Matrix:	Soil % Moisture:	Not Correc	ted
Description:	None	Prep Level:	Soil Batch:	<u>50348</u>	
Method:	<u>SW 8021 BTEX</u>	Units:	ug/kg Target List:	BTEXME	2
		Collected:	<u>10/01/04</u> Received:	<u>10/05/04</u>	
Prep Factor:	<u>1</u> Leached	d: <u>n/a</u> Prepared:	<u>10/12/04</u> Analyzed:	10/15/04	<u>02:47</u> <u>CCW</u>
	an a	······································	Repo	rting	Reg.

CAS Number	Parameter	Dilution	David	0.11	Limit	Limit
		Distriction	Result	Qu		Limi
71-43-2	Benzene	1	ND		25.0	
100-41-4	Ethylbenzene	1	ND		25.0	
108-88-3	Toluene	1	ND		25.0	
1330-20-7	m,p-Xylene	1	ND		50.0	
95-47-6	o-Xylene	1	1800		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. Laborstory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health & Environment/ELWIWV - E-10266 LELAP (NELAP WW/HZ) - 02006 ECOB - Certified Puerto Rice Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

Pace	Analytical [™]	Report of Labo	oratory Anal	ysis			Riverbond E Saint Ros	rvices, Inc Nvd, Suita F a, LA 70087
	s Laboratory							4.469.0333 4.469.0355
			Client:	Delta En	vironn	nental Consult	ing	
Client ID:	STOCKILE C		Site:	None				
Project:	GLN/DENTON GAT	HERING F003-003	Project No.:	<u>2039808</u>		Sample Qu:		
Lab ID:	20302630		Matrix:	<u>Soil</u>	Q	% Moisture:	Not Corre	cted
Description:	None		Prep Level:	<u>Soil</u>		Batch:	<u>50489</u>	
Method:	SW 8015B TPH Diese	el & Oil Range Organics	Units:	<u>mg/kg</u>		Target List:	<u>TPHLOW</u>	
			Collected:	<u>10/01/04</u>		Received:	<u>10/05/04</u>	
Prep Factor:	1	Leached: <u>n/a</u>	Prepared:	<u>10/15/04</u>		Analyzed:	<u>10/18/04</u>	<u>17:46 DGS</u>
CAS Number	Parameter	Dil	ution Resu	lt	Qu	Repor Lin	Ģ	Reg. Limit

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TPH - Diesel Range Organics (C10-C28)1

1 compound(s) reported

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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 a/a denotes not applicable. Regulatory limit denotes an actual regulatory limit or a client-requested notification limit. Laboratory Certifications: Lauislana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - £87595 Kansas Dept. of Health & Environment/ELWHW - E-10266 LELAP (NELAP WW/HZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

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Pace / New Orleans	Analytical [™] s Laboratory	Report of Laboratory Analysis			a lytical Se Riverbend E Saint Ros Phone: 50 Fax: 50	8/vd, Sui e, LA 70	ito F 0087 333	
			Client:	Delta Enviro	nmental Consult	ing		
Client ID:	STOCKILE C		Site:	None				
Project:	GLN/DENTON GATH	IERING F003-003	Project No.:	<u>2039808</u>	Sample Qu:			
Lab ID:	20302630		Matrix:	<u>Soil</u>	% Moisture:	Not Corre	<u>cted</u>	
Description:	None		Prep Level:	<u>Soil</u>	Batch:	<u>50349</u>		
Method:		ine Range Organics (C6-	Units:	<u>ug/kg</u>	Target List:	<u>TPHGPTN</u>	1ED	2
	<u>C10)</u>		Collected:	<u>10/01/04</u>	Received:	<u>10/05/04</u>		
Prep Factor:	1	Leached: <u>n/a</u>	Prepared:	10/12/04	Analyzed:	<u>10/15/04</u>	<u>03:10</u>	<u>CCW</u>

					Reporting	Reg.	
CAS Number	Parameter	Dilution	Result	Qu	Limit	Limit	
	TPH - Gasoline Range Organics (C6-C10)	1	6160		2500		

1 compound(s) reported

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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. Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/flazardous Waste - E87595 Kansas Dept. of Health & EnvironmenvELWHW - E-10266 LELAP (NELAP WW/HZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

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 New Orleans Laboratory

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Report of Laboratory Analysis

Pace Analytical Services, Inc. 1000 Riverbond Blvd, Suhe F Salut Rose, LA 70087

> Phone: 504.469.0333 Fax: 504.469.0555

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			Client:	<u>Delta Envir</u>	conmental Consult	ing	
Client ID:	STOCKILE C		Site:	None			
Project:	GLN/DENTON GAT	HERING F003-003	Project No.:	<u>2039808</u>	Sample Qu:		
Lab ID:	20302630		Matrix:	<u>Soil</u>	% Moisture:	Not Correct	ed
Description:	None		Prep Level:	<u>Soil</u>	Batch:	<u>50348</u>	
Method:	<u>SW 8021 BTEX</u>		Units:	<u>ug/kg</u>	Target List:	BTEXMED	:
			Collected:	10/01/04	Received:	<u>10/05/04</u>	
Prep Factor:	1	Leached: <u>n/a</u>	Prepared:	<u>10/12/04</u>	Analyzed:	10/15/04	<u>03:09 CCW</u>

					Reporting	Reg.
CAS Number	Parameter	Dilution	Result	Qu	Limit	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	
1330-20-7	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. Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAPy/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - E07595 Kansas Dept. of Health & Environmenv/ELWHW - E-10266 LELAP (NELAP WW/HZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

	Analytical [™]	Report of Laboratory Analysis					Pace Analytical Services, Inc 1000 Riverbond Bivd, Suite F Saint Rose, LA 70087			
	S Laboratory								4.469 0333 4.469.0555	
				Client:	Delta En	viron	mental Consult	ing		
Client ID:	STOCKILE D			Site:	None					
Project:	GLN/DENTON GATH	ERING F003-003	I	Project No.:	<u>2039808</u>		Sample Qu:			
Lab ID:	20302632			Matrix:	<u>Soil</u>		% Moisture:	Not Corre	cted	
Description:	None		1	Prep Level:	<u>Soil</u>		Batch:	<u>50489</u>		
Method:	SW 8015B TPH Diesel	& Oil Range Organic	<u>s</u>	Units:	mg/kg		Target List:	<u>TPHLOW</u>	1	
				Collected:	10/01/04		Received:	10/05/04		
Prep Factor:	<u>1</u>	L eached: <u>n/a</u>		Prepared:	<u>10/15/04</u>		Analyzed:	<u>10/19/04</u>	<u>11:18 DGS</u>	
CAS Number	Parameter	D	lution	Resu	lt	Qu	Repor Lin	0	Reg. Limit	
	TPH - Diesel Range Organics	(C10-C28)	10	451	0	DI	100).		

1 compound(s) reported

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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 himit denotes an actual regulatory limit or a client-requested notification limit. Laboratory Certifications: Louislana Dept. of Health and Hospitals (ELAPyDrinking Water LA 030013 Florida Dept. of Health & Environment/ELWHW - E-10266 LELAP (NELAP WWH2) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories) ł

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 New Orleans Laboratory

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Report of Laboratory Analysis

Pace Analytical Services, Inc. 1000 Riverbend Bivd, Suita F Saint Roso, LA 70087

> Phone: 504.469.0333 Fax: 504.469.0555

			Client:	Delta Env	vironmenta	al Consult	ing		
Client ID:	STOCKILE D		Site:	None					
Project:	GLN/DENTON GATHERING F003-003	I	Project No.:	<u>2039808</u>	San	aple Qu:			
Lab ID:	20302632		Matrix:	<u>Soil</u>	% N	loisture:	Not Corre	cted	
Description:	None		Prep Level:	<u>Soil</u>		Batch:	<u>50349</u>		
Method:	SW 8015B TPH Gasoline Range Organics	<u>(C6-</u>	Units:	ug/kg	Tar	get List:	TPHGPTN	MED	1
	<u>C10)</u>		Collected:	10/01/04	R	eceived:	10/05/04		
Prep Factor:	<u>1</u> Leached: <u>n/a</u>		Prepared:	<u>10/12/04</u>	Α	nalyzed:	<u>10/15/04</u>	<u>03:31</u>	<u>CCW</u>
CAS Number	Parameter	Dilution	Resu	lt	Qu	Repo Lir	0	Reg. Limit	
	TPH - Gasoline Range Organics (C6-C10)	1	6810		.	250			

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. Regulatory limit denotes an actual regulatory limit or a client-requested notification limit. Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAPY/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - E87595 Kansas Dept. of Health & Environment/ELWHW - E-10266 LELAP (MELAP WW/HZ) - 02006 EQB - Certified Puerto Ricco Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soll Import (U.S. Territories)



Report of Laboratory Analysis

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

> Phone: 504.469.0333 Fax: 504.469.0555

> > į

			Client:	Delta Environ	nental Consult	ing	
Client ID:	STOCKILE D		Site:	None			
Project:	GLN/DENTON GATHE	ERING F003-003	Project No.:	<u>2039808</u>	Sample Qu:		
Lab ID:	20302632		Matrix:	<u>Soil</u>	% Moisture:	Not Correct	ed
Description:	None		Prep Level:	<u>Soil</u>	Batch:	<u>50348</u>	
Method:	<u>SW 8021 BTEX</u>		Units:	ug/kg	Target List:	BTEXMED	1.4 12
			Collected:	<u>10/01/04</u>	Received:	<u>10/05/04</u>	
Prep Factor:	<u>1</u> Le	eached: <u>n/a</u>	Prepared:	10/12/04	Analyzed:	10/15/04	<u>03:31</u> CCW

	Dilution	Result	Ou	Limit	Limit
zene	1	ND	×	25.0	
lbenzene	1	ND		25.0	
iene	1	ND		25.0	
-Xylene	1	ND		50.0	
ylene	1	688.	Ph	25.0	
/ 1	zene Ibenzene ene Xylene	zenc 1 Ibenzene 1 ene 1 Xylene 1	tene I ND Ibenzene I ND ene I ND Xylene I ND	tene 1 ND Ibenzene 1 ND ene 1 ND Xylene 1 ND	Iteme I ND 25.0 Ibenzene 1 ND 25.0 ene 1 ND 25.0 Xylene 1 ND 50.0

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 rand and denotes not applicable. Regulatory limit denotes an actual regulatory limit or a client-requested notification limit. Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAPy/Drinking Water LA 030013 Florida Dept. of Health & Environment/ELWHW - E-10266 LELAP (NELAP WWH2) - 02006 FOB - Certified Puerto Rice Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

5	TM	Report of Laboratory Analysis					Pace Analytical Services, Inc 1009 Riverbend Blvd, Suito ה Saint Rose, LA 70087			
	Analytical [™] s Laboratory							Phone: 50	4.469.0333 4.469.0555	
				Client:	Delta En	viron	nental Consult	ing		
Client ID:	STOCKILE E			Site:	None					
Project:	GLN/DENTON GATH	ERING F003-003	l	Project No.:	<u>2039808</u>		Sample Qu:			
Lab ID:	20302633			Matrix:	<u>Soil</u>		% Moisture:	Not Corre	cted	
Description:	None			Prep Level:	<u>Soil</u>		Batch:	<u>50489</u>		
Method:	SW 8015B TPH Diesel	& Oil Range Organ	<u>nics</u>	Units:	<u>mg/kg</u>		Target List:	<u>TPHLOW</u>		
				Collected:	<u>10/01/04</u>		Received:	<u>10/05/04</u>		
Prep Factor:	<u>1</u> 1	Leached: <u>n/a</u>		Prepared:	<u>10/15/04</u>		Analyzed:	<u>10/18/04</u>	<u>18:37</u> DGS	
CAS Number	Parameter		Dilution	Resu	lt	Qu	Repo Lin	Ģ	Reg. Limit	
······································	TPH - Diesel Range Organics	(C10-C28)	1	222	20		1	0.0		

TPH - Diesel Range Organics (C10-C28)

1 compound(s) reported

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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 a/a denotes not applicable. Regulatory limit denotes an actual regulatory limit or a client-requested notification limit.

Laboratory Certifications: Laulsiana Dept. of Health and Hospitals (ELAPY/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - E87595 Kansas Dept. of Health & Environment/ELWHW - E-10266 LELAP (NELAP WW/H2) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

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-	Analytical [™] s Laboratory	Report of La	borat	ory Anal	ysis			Riverbond Saint Ros Phone: 5	ervíces, Inc. Bivd, Suile F 10, LA 70087 04,469,0333 04,469,0555
	· _			Client:	Delta En	vironr	nental Consult	ing	
Client ID:	STOCKILE E			Site:	None				
Project:	GLN/DENTON GAT	HERING F003-003]	Project No.:	<u>2039808</u>		Sample Qu:		
Lab ID:	20302633			Matrix:	<u>Soil</u>	1	% Moisture:	Not Corre	cted
Description:	None			Prep Level:	<u>Soil</u>		Batch:	<u>50349</u>	
Method:	SW 8015B TPH Gaso	line Range Organics	<u>(C6-</u>	Units:	ug/kg		Target List:	TPHGPTN	<u>MED</u>
	<u>C10)</u>			Collected:	<u>10/01/04</u>		Received:	<u>10/05/04</u>	
Prep Factor:	<u>1</u>	Leached: <u>n/a</u>		Prepared:	<u>10/12/04</u>		Analyzed:	<u>10/15/04</u>	<u>03:53</u> CCW
CAS Number	Parameter		Dilution	Resu	lt	Qu	Repoi Lin	•	Reg. Limit
1 compound(s) report	TPH - Gasoline Range Organ a	nics (C6-C10)	1	1150)0		250	0	

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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.

Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/liazardous Waste - E07595 Kansas Dept. of Health & Environment/ELWINW - E-10266 LELAP (NELAP WWH2) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

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	New Orleans Laboratory

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Report of Laboratory Analysis

Pace Analytical Services, Inc. 1000 Riverband Blvd, Suile F Saint Rose, LA 70087

> Phone: 504.469.0333 Fax: 504.469.0555

		Client:	Delta Environmental Consult	ing
Client ID:	<u>STOCKILE E</u>	Site:	None	
Project:	GLN/DENTON GATHERING	F003-003 Project No.:	<u>2039808</u> Sample Qu:	
Lab ID:	20302633	Matrix:	Soil % Moisture:	Not Corrected
Description:	None	Prep Level:	Soil Batch:	<u>50348</u>
Method:	<u>SW 8021 BTEX</u>	Units:	ug/kg Target List:	BTEXMED
		Collected:	<u>10/01/04</u> Received:	10/05/04
Prep Factor:	<u>1</u> Leache	d: <u>n/a</u> Prepared:	<u>10/12/04</u> Analyzed:	<u>10/15/04</u> 03:53 CCW

					Reporting	Reg.
CAS Number	Parameter	Dilution	Result	Qu	Limit	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	
1330-20-7	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.
 Laboratory Certifications:

 DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
 Louisiana Dopt. of Health and Hospitals (ELAP)/Drinking Water LA 030013

 Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
 Florida Dept. of Health/Hazardous Waste - E07595

 Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
 Kansas Dept. of Health/Hazardous Waste - E0266

 For moisture results, wet denotes result is not corrected for moisture and d/a denotes not applicable.
 EOB - Certified Puerto Rico Chemist

 Regulatory limit denotes an actual regulatory limit or a client-requested notification limit.
 U.S. Territories)

	Analytical [™] s Laboratory	2					Pace Analytical Services, Inc. 1000 Riverbend Bivd, Suite F Saint Rose, LA 70087 Phone: 504.469.0333 Fax: 504.469.0555			
				Client:	Delta Env	vironr	nental Consult	ing		
Client ID:	STOCKILE F			Site:	None					
Project:	GLN/DENTON GAT	HERING F003-003	3	Project No.:	<u>2039808</u>		Sample Qu:			
Lab ID:	20302635			Matrix:	<u>Soil</u>		% Moisture:	Not Correc	cted	
Description:	None			Prep Level:	<u>Soil</u>		Batch:	<u>50489</u>		
Method:	SW 8015B TPH Diese	el & Oil Range Orga	nics	Units:	mg/kg		Target List:	<u>TPHLOW</u>	3	
		,		Collected:	10/01/04		Received:	10/05/04		
Prep Factor:	<u>1</u>	Leached: <u>n/a</u>		Prepared:	<u>10/15/04</u>		Analyzed:	<u>10/18/04</u>	<u>19:03</u> DGS	
CAS Number	Parameter		Dilution	Resu	lt	Qu	Repor Lim	0	Reg. Limit	
	TPH - Diesel Range Organic	s (C10-C28)	1	30	i9.		10).0		

1 compound(s) reported

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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.

Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - E87595 Kansas Dept. of Health & Environment/ELWHW - E-10266 LELAP INELAP WWHI21 - 02006 EOB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

	Apoli tiool™	Report of La	borat	ory Anal	ysis			a lytical Se Riverbend I Saint Ros	Bivd, Su	iite F
	Analytical [™] s Laboratory							Phone: 50 Fax: 50)4.469.0)4.469.0	
				Client:	Delta En	viron	mental Consult	ing		
Client ID:	STOCKILE F			Site:	None					
Project:	GLN/DENTON GAT	HERING F003-003]	Project No.:	<u>2039808</u>		Sample Qu:			
Lab ID:	20302635			Matrix:	<u>Soil</u>		% Moisture:	Not Corre	cted	
Description:	None			Prep Level:	<u>Soil</u>		Batch:	<u>50349</u>		
Method:	SW 8015B TPH Gaso	line Range Organics	<u>(C6-</u>	Units:	<u>ug/kg</u>		Target List:	<u>TPHGPTN</u>	<u>AED</u>	
	<u>C10)</u>			Collected:	10/01/04		Received:	<u>10/05/04</u>		
Prep Factor:	<u>1</u>	Leached: <u>n/a</u>		Prepared:	<u>10/12/04</u>		Analyzed:	<u>10/15/04</u>	<u>04:15</u>	<u>CCW</u>
CAS Number	Parameter		Dilution	Resu	lt	Qu	Repo Lir	0	Reg. Limit	

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ND

TPH - Gasoline Range Organics (C6-C10)

1 compound(s) reported

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ND denotes Not Defected 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 a/a denotes not applicable. Regulatory limit denotes an actual regulatory limit or a client-requested notification limit. Laboratory Certifications: Louislana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - E87595 Kansas Dept. of Health & Environment/ELWHW - E-10266 LELAP (NELAP WWHZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

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Report of Laboratory Analysis

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> Phone: 504.469.0333 Fax: 504.469.0555

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		Client:	Delta Envi	ironmental Consult	ing	
Client ID:	STOCKILE F	Site:	None			
Project:	GLN/DENTON GATHERING F003-003	Project No.:	<u>2039808</u>	Sample Qu:		
Lab ID:	20302635	Matrix:	<u>Soil</u>	% Moisture:	Not Corrected	
Description:	None	Prep Level:	<u>Soil</u>	Batch:	<u>50348</u>	
Method:	<u>SW 8021 BTEX</u>	Units:	ug/kg	Target List:	BTEXMED	
		Collected:	<u>10/01/04</u>	Received:	10/05/04	
Prep Factor:	1 Leached: <u>n/a</u>	Prepared:	10/12/04	Analyzed:	<u>10/15/04</u> <u>04:14</u> <u>CCW</u>	L
						-

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	
1330-20-7	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.
 Laboratory Certifications:

 DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
 Louisiana Dept. of Health and Hospitals (ELAPy/Drinking Water LA 030013

 Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
 Florida Dept. of Health and Hospitals (ELAPy/Drinking Water LA 030013

 Qu lists qualifiers.
 Kanasa Dept. of Health And Hospitals (ELAPy/Drinking Water LA 030013

 Florida Dept. of Health Control (Leapting Water LA 030013)
 Florida Dept. of Health And Hospitals (ELAPy/Drinking Water LA 030013

 Qu lists qualifiers.
 Kanasa Dept. of Health And Hospitals (ELAPy/Drinking Water LA 030013

 For moisture results, wet denotes rare defined at the end of the report.
 ELAP (MELAP WWH12). 02006

 For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
 EQB . Certified Puter Rico Chemist

 Regulatory limit denotes an actual regulatory limit or a client-requested notification limit.
 U.S. Dept. of Agriculture Animal & Plant Health Inspection Services .

 Foreign Soil Import (U.S. Territories)
 Foreign Soil Import (U.S. Territories)

\sim		Report of La	ıborat	ory Anal	ysis			Riverbend L	rvices, inc Bivd, Suite F
	Analytical [™] s Laboratory							Phone: 50	e, LA 70087)4.469.0333)4.469.0555
				Client:	Delta En	viron	mental Consult	ing	
Client ID:	STOCKILE G			Site:	None				
Project:	GLN/DENTON GATH	ERING F003-003	J	Project No.:	<u>2039808</u>		Sample Qu:		
Lab ID:	<u>20302636</u>			Matrix:	<u>Soil</u>		% Moisture:	Not Corre	cted
Description:	None			Prep Level:	<u>Soil</u>		Batch:	<u>50489</u>	
Method:	SW 8015B TPH Diesel	& Oil Range Orgar	nics	Units:	<u>mg/kg</u>		Target List:	<u>TPHLOW</u>	1
				Collected:	10/01/04		Received:	10/05/04	
Prep Factor:	<u>1</u> I	eached: <u>n/a</u>		Prepared:	<u>10/15/04</u>		Analyzed:	<u>10/18/04</u>	<u>19:29 DGS</u>
CAS Number	Parameter		Dilution	Resu	lt	Qu	Repoi Lin	0	Reg. Limit
	TPH - Diesel Range Organics (C10-C28)	1	20)7.		10	0.0	

1 compound(s) reported

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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. Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health & Environment/ELWHW - E-10266 LELAP (NELAP WW/HZ) - 02006 EOB - Certified Puerto Rice Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Tertitories) ļ

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	Analytical [™] s Laboratory	Report of Lab	orat	ory Anal	lysis			alytical Se Riverbend I Saint Ros Phone: 50 Fax: 50	Sivd, Su ie, LA 70	110 F 0087 333
				Client:	Delta Env	ironm	ental Consult	ing		
Client ID:	STOCKILE G			Site:	None					
Project:	GLN/DENTON GATH	HERING F003-003	J	Project No.:	<u>2039808</u>	5	Sample Qu:			
Lab ID:	20302636			Matrix:	<u>Soil</u>	%	6 Moisture:	Not Corre	cted	
Description:	None			Prep Level:	<u>Soil</u>		Batch:	<u>50349</u>		
Method:	SW 8015B TPH Gasol	line Range Organics (C	<u>.</u>	Units:	ug/kg	1	farget List:	TPHGPTN	<u>AED</u>	7
	<u>C10)</u>			Collected:	<u>10/01/04</u>		Received:	<u>10/05/04</u>		
Prep Factor:	<u>1</u>	Leached: <u>n/a</u>		Prepared:	<u>10/12/04</u>		Analyzed:	<u>10/15/04</u>	<u>04:37</u>	<u>ccw</u>
CAS Number	Parameter	D	ilution	Resu	lt	Qu	Repo	0	Reg. Limit	

TPH - Gasoline Range Organics (C6-C10) 1 ND

1 compound(s) reported

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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 list quadifiers. Specific qualifiers are defined at the end of the report. For moisture results, wet denotes result is not corrected for moisture and n's denotes not applicable. Regulatory limit denotes an actual regulatory limit or a client-requested notification limit. Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - E07595 Kansas Dept. of Health & Environment/ELW1HW - E-10266 LELAP (NELAP WW/HZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

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Report of Laboratory Analysis

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> Phone: 504.469.0333 Fax: 504.469.0555

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			Repo	rting	Reg.
Prep Factor:	<u>l</u> Leached:	<u>n/a</u> Prepared:	<u>10/12/04</u> Analyzed:	<u>10/15/04</u>	<u>04:36 CCW</u>
		Collected:	<u>10/01/04</u> Received:	<u>10/05/04</u>	
Method:	<u>SW 8021 BTEX</u>	Units:	ug/kg Target List:	BTEXME	2 🖉
Description:	None	Prep Level:	Soil Batch:	<u>50348</u>	
Lab ID:	20302636	Matrix:	Soil % Moisture:	Not Correc	oted
Project:	GLN/DENTON GATHERING F	<u>2003-003</u> Project No.:	<u>2039808</u> Sample Qu:		
Client ID:	STOCKILE G	Site:	None		
		Client:	Delta Environmental Consul	ing	

CAS Number	Parameter	Dilution	Result	Qu	Limit	Reg. Limit	
		Diation				Linu	
71-43-2	Benzene	ł	ND		25.0		
100-41-4	Ethylbenzene	1	ND		25.0		
108-88-3	Toluene	1	ND		25.0		
1330-20-7	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 list qualifiers. Specific qualifiers are defined at the end of the report. For moisture results, wet denotes result is not corrected for moisture and n/n denotes not applicable. Regulatory limit denotes an actual regulatory limit or a client-requested notification limit. Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 036013 Florida Dept. of Health & Environment/ELWINW - E-10266 LELAP (NELAP WW/H2) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

	Δ	Report of La	aborat	ory Anal		Pace Analytical Services, Inc. 1000 Riverbend Blvd, Suite F Saint Rose. LA 70087				
	Analytical [™] s Laboratory)4.469.0333)4.469.0555	
				Client:	Delta En	viron	mental Consult	ing		
Client ID:	STOCKILE H			Site:	None					
Project:	GLN/DENTON GAT	HERING F003-003	J	Project No.:	<u>2039808</u>		Sample Qu:			
Lab ID:	20302637			Matrix:	<u>Soil</u>		% Moisture:	Not Corre	cted	
Description:	None			Prep Level:	<u>Soil</u>		Batch:	<u>50489</u>		
Method:	SW 8015B TPH Dies	el & Oil Range Organ	nics	Units:	<u>mg/kg</u>		Target List:	<u>TPHLOW</u>	÷	
				Collected:	<u>10/01/04</u>	1	Received:	<u>10/05/04</u>		
Prep Factor:	<u>1</u>	Leached: <u>n/a</u>		Prepared:	<u>10/15/04</u>		Analyzed:	<u>10/18/04</u>	<u>19:54 DGS</u>	
CAS Number	Parameter	<u> </u>	Dilution	Resu	lt	Qu	Repoi Lin	0	Reg. Limit	
	TPH - Diesel Range Organi	cs (C10-C28)	1	59	96.		I	0.0		

l compound(s) reported

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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.

Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - E07595 Kansas Dept. of Health & Environmen/ELWHW - E-10266 LELAP (NELAP WW/HZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

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Report of Laboratory Analysis

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	TPH - Gasoline Range Organics (C6-C10)	1		ND		2500	
CAS Number	Parameter	Dilution	Resu	lt	Qu	Reporting Limit	Reg. Limit
Prep Factor:	<u>1</u> Leached: <u>n/a</u>		Prepared:	<u>10/12/04</u>	Anal	yzed: <u>10/15/04</u>	<u>04:58 CCW</u>
	<u>C10)</u>		Collected:	<u>10/01/04</u>	Reco	eived: <u>10/05/04</u>	
Method:	SW 8015B TPH Gasoline Range Organics	<u>(C6-</u>	Units:	ug/kg	Target	List: TPHGPT	MED
Description:	None		Prep Level:	<u>Soil</u>	E	Batch: <u>50349</u>	
Lab ID:	20302637		Matrix:	<u>Soil</u>	% Moi	sture: Not Corre	ected
Project:	GLN/DENTON GATHERING F003-003	I	Project No.:	<u>2039808</u>	Sampl	e Qu:	
Client ID:	STOCKILE H		Site:	None			
			Client:	Delta Env	vironmental C	Consulting	

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. Desculators an actual resultions while a collect transition to the term.

Regulatory limit denotes an actual regulatory limit or a client-requested notification limit.

Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - E07595 Kansas Dept. of Health & Environment/ELWHW - E-10266 LELAP (MELAP WW/HZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animai & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

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Report of Laboratory Analysis

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Phone: 504.469.0333 Fax: 504,469,0555

				Client:	Delta Env	viront	nental Consult	ing	
Client ID:	STOCKILE H			Site:	None				
Project:	GLN/DENTON GATH	IERING F003-003	P	roject No.:	<u>2039808</u>		Sample Qu:		
Lab ID:	20302637			Matrix:	<u>Soil</u>		% Moisture:	Not Corre	ected
Description:	None		l	Prep Level:	<u>Soil</u>		Batch:	<u>50348</u>	
Method:	<u>SW 8021 BTEX</u>			Units:	ug/kg		Target List:	BTEXME	<u>D</u>
				Collected:	10/01/04		Received:	<u>10/05/04</u>	
Prep Factor:	<u>1</u>	Leached: <u>n/a</u>		Prepared:	<u>10/12/04</u>		Analyzed:	<u>10/15/04</u>	<u>04:58</u> <u>CCW</u>
CAS Number	Parameter		Dilution	Resu	lt	Qu	Repo		Reg. Limit
71-43-2	Benzene		1		ND		2	5.0	
100-41-4	Ethylbenzene		1		ND		2	5.0	
108-88-3	Toluene		1		ND		2	5.0	
1330-20-7	m,p-Xylene		I		ND		5	0.0	

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ND

5 compound(s) reported

o-Xylene

95-47-6

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, wel 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.

Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/Hiazardous Waste - E07595 Kansas Dept. of Health & EnvironmenvELWHW - E-10266 LELAP (NELAP WWHZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

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Report of Quality Control

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Method: Med Soil GC Orga	<u>anics</u>			Project:	2039808	8						
				Batch:	<u>50349</u>		LCS:	<u>5034</u>	<u>9S1</u>	10/14/200	04_11:3	<u>1.00 P</u>
				Units:	ug/kg		MS:	<u>5034</u>	<u>9MS</u>	10/15/200	04 2:04	<u>:00 AM</u>
Parameter Name	LCS Spike		LCSD %Rec	 MS Spike	MS %Rec		(1)MS RPD		QC LCS	C Limits MS/MSD	Max RPD	Qu
TPH - Gasoline Range Organics (C6-C	250	00 133	3	 25(000 113	113	3 0	+	48 - 1	47 27 - 150	50	- <u></u>

* denotes recovery outside of QC limits. MS spike concentrations are not corrected for moisture content of the spiked sample. (1) MS RPD is calculated via SW-846 rules: on the basis of spiked sample concentrations rather than spike recoveries.

10/19/2004 18:14:36

Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAPy/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - E07595 Kansas Dept. of Health & ErwironmewtELWIRW - E-10266 LELAP (NELAP WW/HZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

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Method: Med Soil GC Orga	nics			Project:	2039808	3						
				Batch:	<u>50349</u>		LCS:	<u>5034</u>	<u>9S2</u>	10/14/20	04 1:32	:00 PM
				Units:	<u>ug/kg</u>		MS:					
Parameter Name	LCS Spike		LCSD %Rec	 MS Spike	MS %Rec		(1)MS RPD		Q0 LCS	C Limits MS/MSD	Max RPD	Qu
TPH - Gasoline Range Organics (C6-C	250	00 133		 250	000				48 - 1	47 27 - 150) 50	

* denotes recovery outside of QC limits. MS spike concentrations are not corrected for moisture content of the spiked sample. (1) MS RPD is calculated via SW-846 rules; on the basis of spiked sample concentrations rather than spike recoveries. Kansas Dept. of Healt

10/19/2004 18:14:36

Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP//Drinking Water LA 030013 Florida Dept. of Health & Environment/ELWHW - E-10266 Kansas Dept. of Health & Environment/ELWHW - E-10266 LELAP (NELAP WW/H2) - 02006 EQB - Certified Puerto Ricco Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

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Report of Quality Control

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Method: Low Soil GC Orga	<u>inics</u>			Project:	<u>2039808</u>	5						
				Batch:	<u>50489</u>		LCS:	<u>5048</u>	<u>981</u>	10/18/200	<u>)4 3:38</u>	:00 PM
				Units:	<u>mg/kg</u>		MS:	<u>5048</u>	<u>9MS</u>	<u>10/18/200</u>) <u>4 4:29</u>	:00 PM
Parameter Name	LCS Spike	LCS %Rec	LCSD %Rec	 MS Spike	MS %Rec		(1)MS RPD		Q(LCS	C Limits MS/MSD	Max RPD	Qu
TPH - Diesel Range Organics (C10-C2		40 88		 	40 703 *	() 200	*	56 - 1	38 0-178	50	Q3

* denotes recovery outside of QC limits. MS spike concentrations are not corrected for moisture content of the spiked sample.
 MS RPD is calculated via SW-846 rules: on the basis of spiked sample concentrations rather than spike recoveries.

10/19/2004 18:14:36

Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAPy/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - £07595 Kansas Dept. of Health & Environment/ELWIWW - E-10266 LELAP (MELAP WW/HZ) - 02006 EQ8 - Certified Puerto Ricco Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

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Report of Quality Control

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Method: Med Soil G	C Volatile Organi	<u>cs</u>		Project:	203980	<u>8</u>						
				Batch:	<u>50348</u>		LCS:	<u>5034</u>	<u>8S1</u>	10/14/200)4 11:0	<u>3:00 P</u>
				Units:	ug/kg		MS:	<u>5034</u>	<u>8MS</u>	10/15/200)4 12:14	<u>4:00 A</u>
Parameter Name		LCS 6Rec	 LCS RPD	MS Spike	MS %Rec		(1)MS RPD	DUP RPD	•	Limits MS/MSD	Max RPD	Qu
Benzene	1000	95		10	00 104	104	1 0		70 - 12	8 51 - 134	50	
Ethylbenzene	1000	97		10	00 127	133	3 4		81 - 13	1 50 - 153	50	
Toluene	1000	96		10	00 109	112	2 3		80 - 132	2 57 - 139	50	
m,p-Xylene	2000	104		20	00 109	109) 0		88 - 139	9 61 - 148	50	
o-Xylene	1000	103		10	00 133	129	3		88 - 134	4 50 - 164	50	

* denotes recovery outside of QC limits. MS spike concentrations are not corrected for moisture content of the spiked sample. (1) MS RPD is calculated via SW-846 rules: on the basis of spiked sample concentrations rather than spike recoveries.

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Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - £87595 Kansas Dept. of Health & Environment/ELWNW - E-10266 LELAP INELAP WW/HZI - 12006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)



Report of Batch Surrogate Recovery

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

> Phone: 504.469 0333 Fax: 504.469.0555

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Method: Med Soil GC Volatile Organics

Report: 2039808

Batch: 50348

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
20302628	Sample	112	111						
20302629	Sample G1	223*	381*						
20302630	Sample	105	101						
20302632	Sample G1	171*	218*						
20302633	Sample	125	114						
20302635	Sample	81	85						
20302636	Sample	79	81						
20302637	Sample	83	82						
20302877	Sample G1	294*	416*						
20302878	Sample G1	200*	219*						
20302879	Sample GI	149*	154*						
20302880	Sample	100	111						
20302881	Sample	125	125						
20302882	Sample G1	139*	154*						
50348B1	Blank	89	89						
50348MS	Spike	116	118						
50348MSD	Spike Dup G1	155*	121						
50348S1	LCS	110	103						
·	QC limits:	70-130	70-130					······································	

Sur 1: 4-Bromofluorobenzene (PID) (S)

Sur 2: 4-Bromofluorobenzene (PID confirmat

* 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.

Laboratory Certifications: Louisiana Dept, of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept, of Health/Hazardous Waste - £87595 Kansas Dept, of Health & ErwicanmewtELWNW - E-10266 LELAP (MELAP WW/HZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept, of Agriculture Animat & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

10/19/2004 18:14:37



Report of Batch Surrogate Recovery

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

> Phone: 504.469.0333 Fax: 504.469.0555

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i.

Method: Med Soil GC Organics

Report: 2039808

Batch: 50349

Lab ID	Type and	Sur 1	Sur 2	Sur 3	Sur 4	Sur 5	Sur 6	Sur 7	Sur 8
	Qualifiers	%Rec	%Rec	%Rec	%Rec	%Rec	%Rec	%Rec	%Rec
20302628	Sample G1		193*						
20302629	Sample G1		938*						
20302630	Sample G1		163*						
20302632	Sample GI		503*						
20302633	Sample G1		196*						
20302635	Sample		104						
20302636	Sample		106						
20302637	Sample		104						
20302877	Sample G1 D1		1071D						
20302878	Sample G1		365*						
20302879	Sample G1		246*						
20302880	Sample G1		144*						
20302881	Sample G1		195*						
20302882	Sample G1		251*						
20304903	Sample		87						
20304906	Sample		91						
20304907	Sample		92						
20304908	Sample		89						
50349B1	Blank		123						
50349B2	Blank		125						
50349MS	Spike G1		209*						
50349MSD	Spike Dup G1		205*						
5034981	LCS		119						
5034982	LCS		120						
	QC limits:	· <u> </u>	70-130						

Sur 2: 4-Bromofluorobenzene (FID) (S)

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* 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.

Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - 207595 Kansas Dept. of Health & Environment/ELWHW - E-10266 LELAP (NELAP WW/HZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soll Import (U.S. Territories)

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Pace Analytical New Orleans Laboratory

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

Phone: 504.469.0333 Fax: 504.469.0555

Method: Low Soil GC Organics

Report: 2039808

Batch: 50489

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	5
20302628	Sample	100	······				· · · · · · · · · · · · · · · · · · ·			
20302629	Sample D1	109								
20302630	Sample	111								
20302632	Sample D1	113								
20302633	Sample	97								
20302635	Sample	93								
20302636	Sample	91								
20302637	Sample	103								
20305009	Sample	99								
20306156	Sample	90								
20306157	Sample	102								
50489B1	Blank	92								
50489MS	Spike	112								
50489MSD	Spike Dup	107								
50489S1	LCS	82								
. <u></u>	QC limits:	40-140								
	Sur 1: 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.

Laboratory Certifications: 'Louisiana Dept. of Health and Hospitals (ELAPy/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste . E07395 Kansas Dept. of Health & Environment/ELWHW . E.10266 LELAP (NELAP WW/HZ) . 02006 EQB . Certified Puerto Ricco Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services . Foreign Soil Import (U.S. Territories)



Report of Method Blank

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

> Phone: 504.469.0333 Fax: 504.469.0555

Description: Med Soil Method Blan Method: Med Soil GC Volatile Organics

o-Xylene

Project No.: 2039808

Batch: 50348

ND

Units: ug/kg

25.0

Prep Factor: 1		Leached:	Prepa	ared: <u>12-Oc</u>	<u>ct-04</u>	Analyzed: <u>14-Oct-04</u> <u>22:47</u>	<u>CÇW</u>
CAS Number	Parameter		Dilution	Result	Qu	Reporting 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	
1330-20-7	m,p-Xylene		1	ND		50.0	

1

5 compound(s) reported

95-47-6

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.

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Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - E07595 Kansas Dept. of Health & Environment/ELWHW - E-10266 LELAP (NELAP WWHZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

Pace Analytic New Orleans Laborator	cal [™]	of Method B	lank		Pace Analytical Services 1000 Riverbend Blvd, S Saint Rose, LA 7 Phone: 504.469, Fax: 504.469,			
Lab ID: <u>50349B1</u>								
Description: Med Soil Me	thod Blan	Project	No.: 20398	<u>08</u>				
Method: Med Soil GC	Organics	B	atch: <u>50349</u>		Units: <u>ug/kg</u>			
Prep Factor: <u>1</u>	Leached:	Prepa	ared: <u>12-Oc</u>	<u>t-04</u>	Analyzed: 14-Oct-04	<u>22:47</u>	<u>CCW</u>	
CAS Number Parameter	•	Dilution	Result	Qu	Reporting Limit			
TPH - Gaso	line Range Organics (C6-C	1	ND		2500	····		

1 compound(s) reported

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513

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.

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Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - £87395 Kansas Dept. of Health & Environment/ELMHW - E-10266 LELAP (NELAP WWHZ) - 02006 EQB - Certified Puerto Rico Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories) -----

Pace Analy New Orleans Labora	<i>tical</i>	of Method B	lank		Phone:		luito F 70087 .0333
Lab ID: <u>50349B2</u>							
Description: Med Soil	Method Blan	Project	No.: <u>20398</u>	08			
Method: Med Soil	<u>GC Organics</u>	В	atch: <u>50349</u>		Units: <u>ug/kg</u>		
Prep Factor: 1	Leached:	Prepa	ared: <u>13-Oc</u>	<u>t-04</u>	Analyzed: <u>14-Oct-04</u>	<u>13:10</u>	<u>CCW</u>
CAS Number Param	ster	Dilution	Result	Qu	Reporting Limit		
TPH - C	Jasoline Range Organics (C6-C	1	ND		2500		

1 compound(s) reported

815 844

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.

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Laboratory Certifications: Louisiana Dept, of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept, of Health/Hazardous Waste - E87595 Kansas Dept, of Health & EnvironmenvELWHW - E-10266 LELAP (MELAP WW/HZ) - 02006 EOB - Certified Puerto Rico Chemist U.S. Dept, of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)



2 compound(s) reported

TPH - Oil Range Organics (>C28-C40)

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

50.0

Phone: 504.469.0333 Fax: 504.469.0555

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Lab ID: <u>50</u>	0489B1						
Description: La	ow Soil Method Blan		Project	No.: 20398	<u>808</u>		
Method: La	ow Soil GC Organics		B	atch: <u>50489</u>	<u>)</u>	Units: mg/kg	
Prep Factor: 1		Leached:	Prepa	ared: <u>15-Oc</u>	<u>:t-04</u>	Analyzed: <u>18-Oct-04</u> <u>15:13</u>	DGS
CAS Number	Parameter		Dilution	Result	Qu	Reporting Limit	
	TPH - Diesel Range Orga	nics (C10-C2	1	ND		10.0	

1

ND

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.

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Laboratory Certifications: Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013 Florida Dept. of Health/Hazardous Waste - E07595 Kansas Dept. of Health & Environmen/ELWHW - E-10266 LELAP (NELAP WW/HZ) - 02006 EQB - Certified Puerto Ricco Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soll Import (U.S. Territories)

Pace Analytical[™] New Orleans Laboratory

Report Qualifiers

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

> Phone: 504.469.0333 Fax: 504.469.0555

	Project No.: <u>2039808</u>
	Analyte Qualifiers
Qualifier	Qualifier Description
G1	Interferences are present which caused poor surrogate recovery.
Ph	The relative percent difference between the two detectors is greater than 40%, indicating interference on one or more detectors. The higher of the two values is reported.
	General Qualifiers
Qualifier	Qualifier Description
D1	The analysis was performed at a dilution due to the high analyte concentration.
	QC Qualifiers
Qualifier	Qualifier Description
Q3	The matrix spike recoveries are poor due to the presence of this analyte in the sample at a concentration greater than 4 times the spiked amount.

Acceptable method performance for this analyte has been demonstrated by the laboratory control sample.

Laboratory Certifications: Louisiana Dept. of Health And Hospitals (ELAPy/Drinking Water LA 030013 Florida Dept. of Health/Azardous Waste - E87595 Kansas Dept. of Health/Azardous Waste - E87595 I0/19/2004 18:14:38 LELAP (NELAP WW/H2 - 102006 EQB - Certified Puerto Rica Chemist U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -Foreign Soil Import (U.S. Territories)

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