1R - 425-47

REPORTS

DATE:

8-24-09

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SEP - 9 2009

Environmental Bureau
Oil Conservation Division

From: L Peter Galusky, Jr Ph.D.
To: Edward J. Hansen;
cc: Katie Jones; Hack Conder;
Subject: Rice Operating Company - NMOCD Case No. 1R0425-47 - VAC State K EOL - ICP Report & Termination Request
Date: Monday, August 24, 2009 1:31:54 PM
Attachments: Vacuum State K EOL ICP Report 08.24.09 lpg.pdf

Dear Edward,

Please find attached an ICP Report and Termination Request for the above-referenced project.

We look forward to discussing this with you during our meeting in September.

Thank you.

Sincerely,

Pete G.

--

L Peter Galusky, Jr. Ph.D.
Texerra
Cell: 432-634-9257
E-mail: lpg.texerra@gmail.com

L. Peter Galusky, Jr. Ph.D., P.G.
Texerra
505 N Big Spring, Suite 404
Midland, Texas 79701

August 24th, 2009

Mr. Edward Hansen
New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87504

RE: ICP Report and Termination Request
Rice Operating Company – Vacuum SWD System
VAC State K EOL: UL H, Sec 27, T 17S, R 35E
NMOCD Case No. 1R0425-47

Sent via E-mail & U.S. Certified Mail w/ Return Receipt 7003 0100 0001 2438 4118

Dear Mr. Hansen:

Texerra completed a soils evaluation for the above-referenced site per the approved Investigation and Characterization Plan (ICP) dated March 10th of this year. Site maps, photographs and data from the ICP are given in the Appendix.

A soil boring was advanced at the former junction box location using an air rotary bit on July 8th 2009. Samples were analyzed at five foot increments and field titrated for chlorides and analyzed for petroleum hydrocarbons using a PID device (Table 1). PID readings were essentially insignificant, being below 5 ppm throughout all depths sampled. Residual soil chlorides tested above 1,000 ppm at 15 ft bgs, but dropped precipitously from 20 to 35 ft bgs. The average soil chloride concentration in the lower 20 ft of analysis (20 through 35 ft bgs) was 213 ppm.

We believe that this site does not pose a threat to groundwater quality for the following reasons:

- Residual soil hydrocarbon levels beneath the former junction box were insignificant.
- Residual soil chlorides found beneath the former junction box averaged 213 ppm in the lower 20 ft of the soil bore.
- The estimated depth to groundwater is 75 ft (per NM OSE records)
- A protective clay barrier was installed during the removal of the former junction box (Appendix - Figure 4).

Please note, also, that there is no longer a threat of continued, compounded impact at this site as the former junction box has been removed and the Vacuum SWD system has been closed.

We, therefore, respectfully request that this project be granted remediation "termination" or similar closure status.

I welcome your thoughts on this matter, and would be pleased to discuss any details with you at your convenience.

ROC is the service provider (agent) for the Vacuum Salt Water Disposal (SWD) System and has no ownership of any portion of pipeline, well or facility. The Vacuum SWD System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis

Thank you for your consideration.

Sincerely,

L. Peter (Pete) Galusky, Jr. Ph.D., P.G.
Principal

Tel: 432-634-9257
E-mail: lpg@texerra.com
Web site: www.texerra.com

cc: Rice Operating Company

Attachments: Site Maps, Photographs, Junction Box Disclosure Form, Laboratory Analyses

Soil Boring Log
Rice Operating Company
VAC SWD System **State K EOL**

Identification: **SB-1**
Location: At/through former junction box location
Date: 7/8/2009
Driller: Harrison & Cooper, Inc. (Ken Cooper supervising)
Drill method: Air rotary
Logged by: L. Peter Galusky, Jr., Texerra
Total depth: 35 ft below ground surface
Screened interval: n/a (no well installed)
Pipe diameter: "

Depth (ft below ground surface)	Field Chloride Test (ppm)	Lab Chloride Test (ppm)	Field PID test (ppm)	Lab GRO test (ppm)	Lab DRO test (ppm)	Cutting Description
-5						rubble/fill
-10						"
-15	1,236	1,030	2.5			light gray fine sand w/ caliche
-20	436		0.7			"
-25	144		0.7			light gray fine sand w/ caliche
-30	151		0.6			light gray/light tan fine sand
-35	122	0	0.3			"

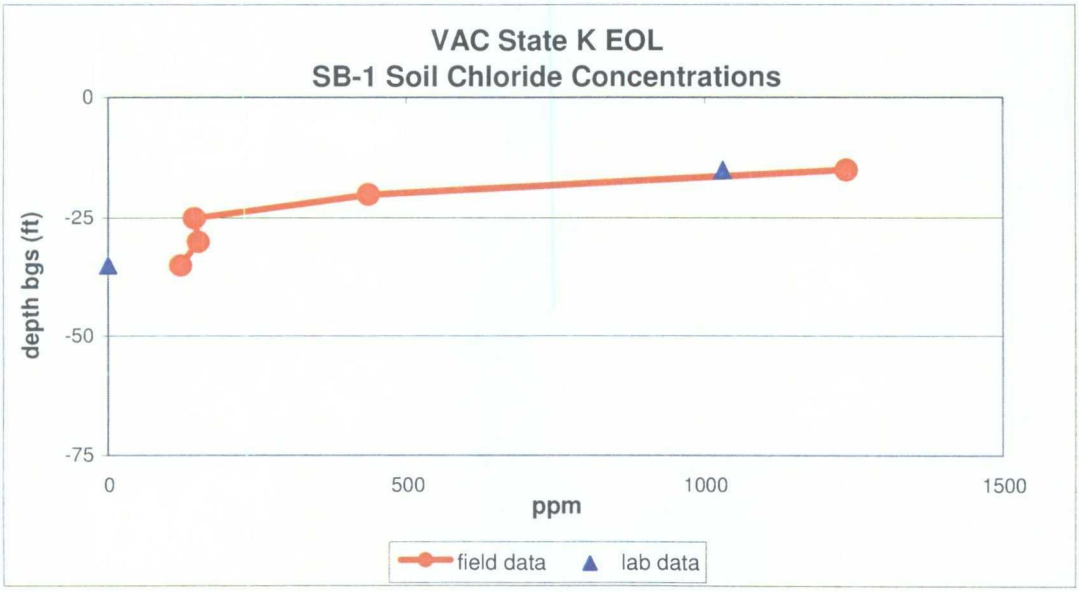

Table 1 – VAC State K EOL at-source soil boring log.

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: HACK CONDER
122 WEST TAYLOR
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 07/10/09
Reporting Date: 07/13/09
Project Number: NOT GIVEN
Project Name: VACUUM ST. K. EOL
Project Location: VACUUM ST. K. EOL

Analysis Date: 07/10/09
Sampling Date: 07/08/09
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: CK
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl^- (mg/kg)
H17778-1	SB #1 @ 15'	1,060
H17778-2	SB #1 @ 35'	< 16
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-Cl B

Note: Analyses performed on 1:4 w:v aqueous extracts.

Chemist

Date 7/14/09

H17778 RICE

Table 2 – Laboratory verification of field soil chloride measurements.

APPENDIX – Figures, Photographs and Data from ICP

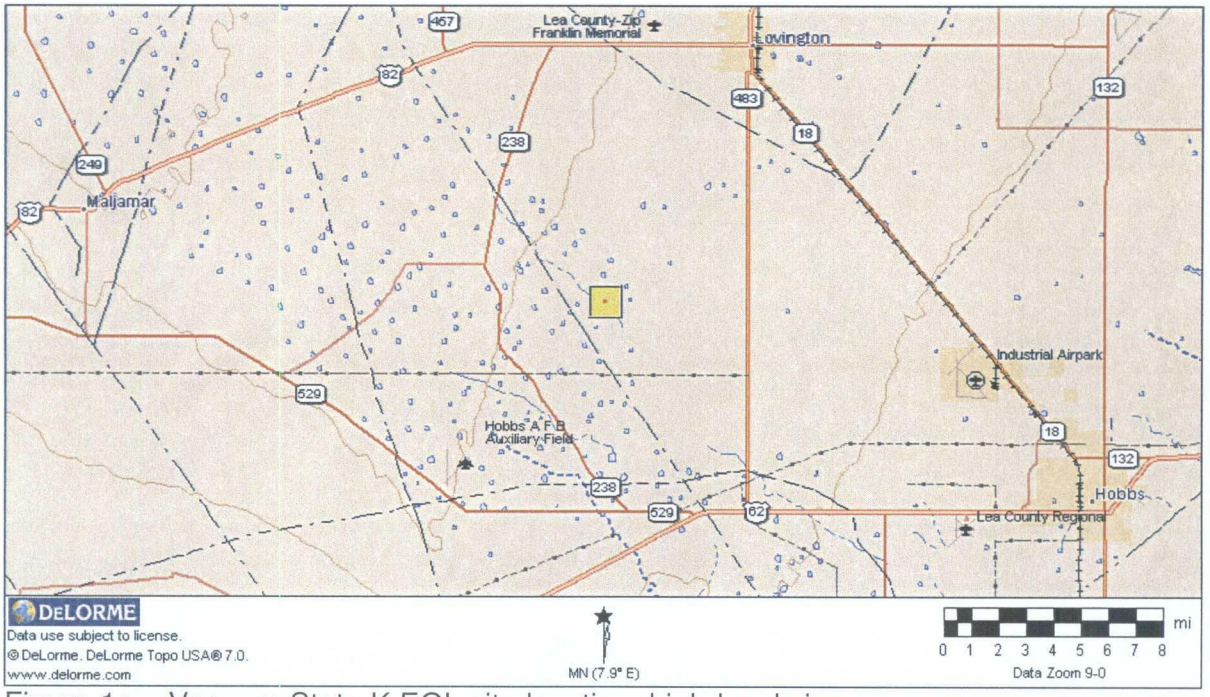

Figure 1a – Vacuum State K EOL site location, high-level view.

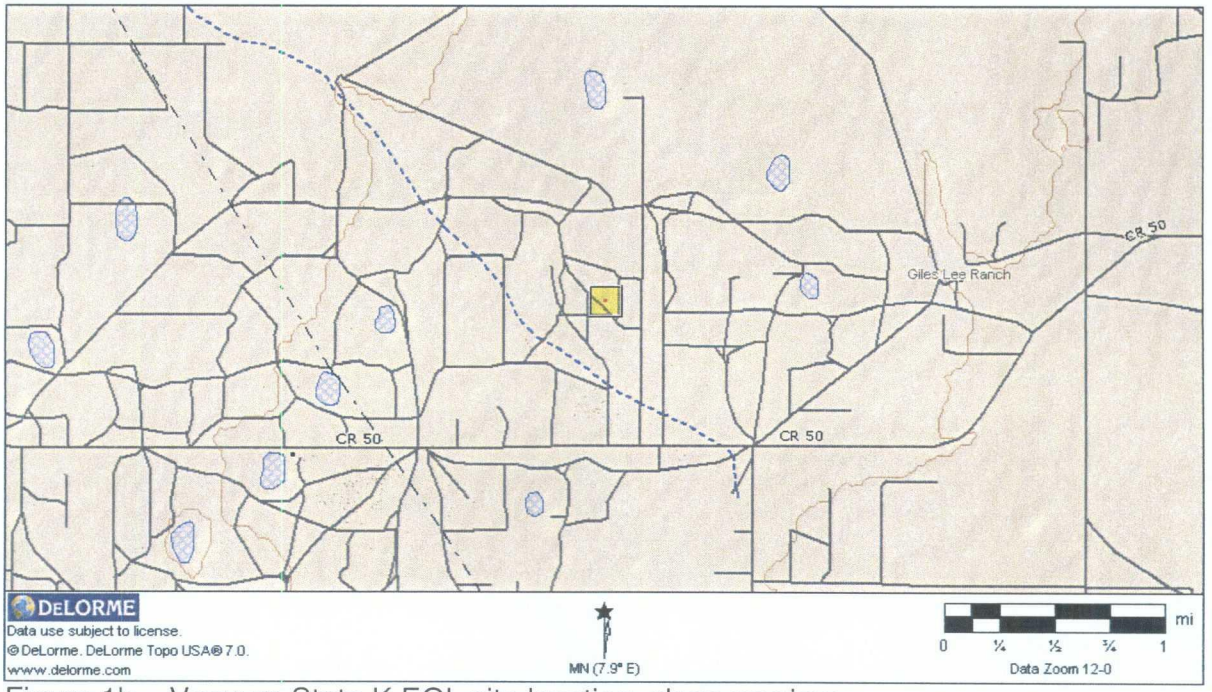

Figure 1b – Vacuum State K EOL site location, close-up view.

Figure 2 - Excavation of former junction box.

Figure 3 – Completed excavation.

Figure 4 – Installation and compaction of sub-surface clay layer (infiltration barrier).

Figure 5 – Preparing the surface and reseeding with native vegetation mix.

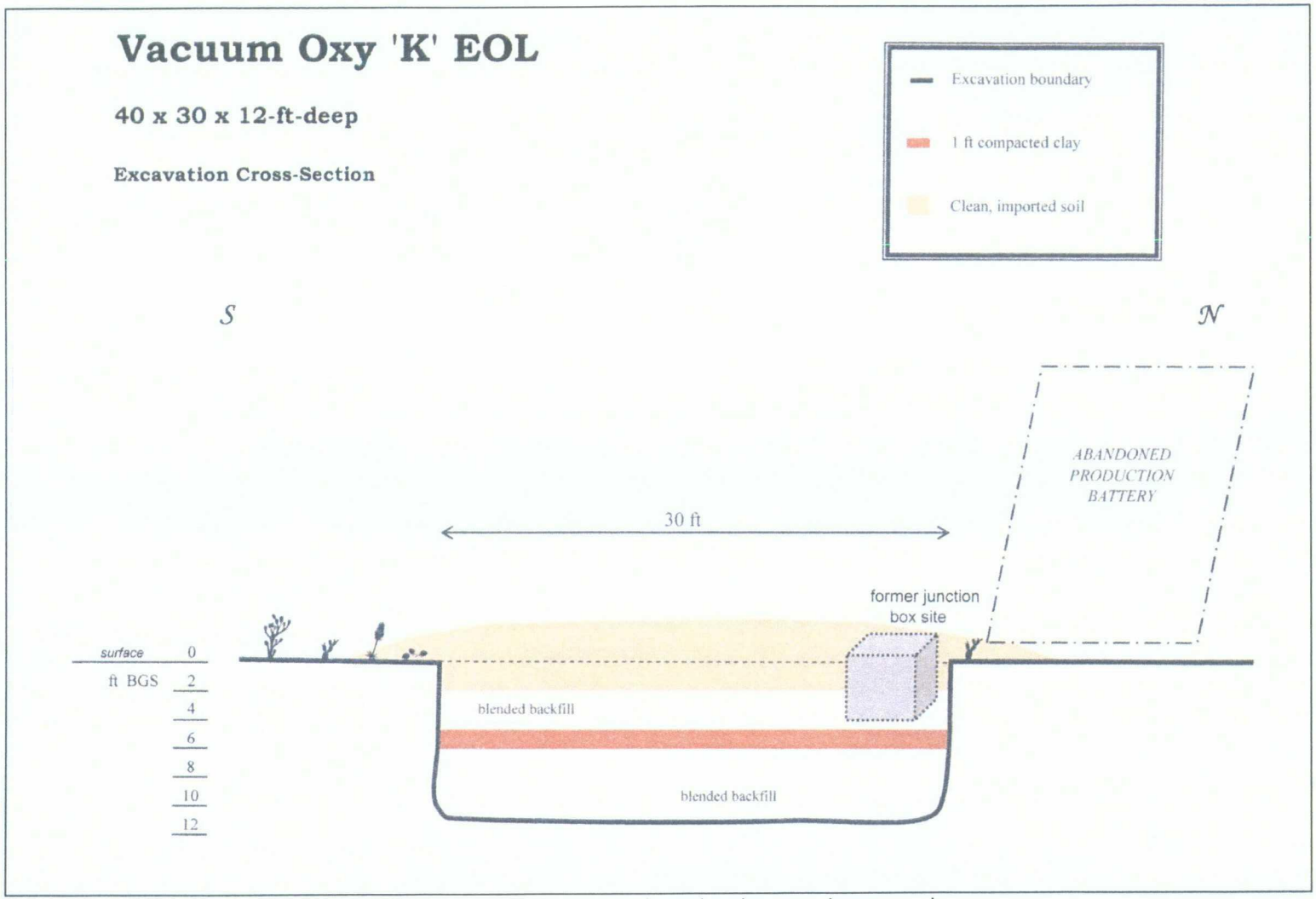

Figure 6 – Schematic cross sectional diagram of former junction box and excavation.

RICE OPERATING COMPANY
JUNCTION BOX DISCLOSURE* REPORT

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
Vacuum	Oxy Phillips 'K' EOL	H	27	17S	35E	Lea	eliminated		

LAND TYPE: BLM ___ STATE X FEE LANDOWNER _____ OTHER _____

Depth to Groundwater 75 feet NMOCD SITE ASSESSMENT RANKING SCORE: 10

Date Started 7/26/2005 Date Completed 4/20/2006 OCD Witness no

Soil Excavated 533 cubic yards Excavation Length 30 Width 40 Depth 12 feet

Soil Disposed 0 cubic yards Offsite Facility n/a Location n/a

FINAL ANALYTICAL RESULTS: **Sample Date** 9/20/2005 Sample Depth 12 ft

Procure 5-point composite sample of bottom and 4-point composite sample of sidewalls. TPH and Chloride laboratory test results completed by using an approved lab and testing procedures pursuant to NMOCD guidelines.

Sample Location	PID (field) ppm	GRO mg/kg	DRO mg/kg	Chlorides mg/kg
4-WALL COMP.	0.0	<10.0	<10.0	851
BOTTOM COMP.	0.0	<10.0	<10.0	1910
BACKFILL	0.0	<10.0	<10.0	1060

CHLORIDE FIELD TESTS

LOCATION	DEPTH	mg/kg
4-wall comp.	n/a	803
bottom comp.	12'	2078
backfill comp.	n/a	746
vertical delineation trench at former junction (source)	3'	233
	4'	422
	5'	430
	6'	469
	7'	448
	8'	479
	9'	664
	10'	559
	11'	872
	12'	1539

General Description of Remedial Action: This junction box was eliminated during the pipeline/upgrade program. After the box was removed, an investigation was conducted using a backhoe to collect samples at regular intervals producing a 10x10x12-ft-deep hole. Chloride field tests were performed on each sample, which yielded elevated levels that did not relent with depth. Organic vapors were measured using a PID, which yielded low concentrations. Representative composite samples were sent to a commercial laboratory for analysis of chloride and TPH. The site was then excavated to a 30x40x12-ft-deep hole collecting soil samples at regular intervals. Chloride field tests yielded elevated levels of chloride that did not relent with depth. Organic vapors were measured using a PID, which yielded low concentrations. The excavated soil was blended on-site and returned to the excavation up to 6 ft below ground surface. At 6-5 ft BGS, a 1-ft-thick clay barrier was installed. The remaining fill was used to backfill the excavation to ground surface. An identification plate was placed on the surface at the former junction site to mark the presence of the clay below. Imported, clean top soil was used as a top cap and to contour to the surrounding area. On 4/24/2006, the site was seeded with a blend of native vegetation and is expected to return to a productive capacity at a normal rate. NMOCD was notified of potential groundwater impact on 8/7/2008.

ADDITIONAL EVALUATION IS MEDIUM PRIORITY

enclosures: photos, cross-section, lab results, PID screening, clay test, chloride curve

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SITE SUPERVISOR Roy Rascon SIGNATURE not available COMPANY RICE OPERATING COMPANY

REPORT ASSEMBLED BY Katie Jones INITIAL KJ

PROJECT LEADER Larry Bruce Baker Jr. SIGNATURE Larry Bruce Baker Jr. DATE 8-8-08

*This site is a "DISCLOSURE." It will be placed on a prioritized list of similar sites for further consideration.

Figure 7 – Junction Box Disclosure Report and summary of field chloride and petroleum hydrocarbon analyses.

Rice Operating Co.	Project: Vacuum Oxy Phillips K-EOL	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	09/26/05 16:58

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Blended Backfill (5I22002-01) Soil									
Chloride	1060	20.0	mg/kg	40	EI52305	09/22/05	09/23/05	EPA 300.0	
% Moisture	7.7	0.1	%	1	EI52301	09/22/05	09/23/05	% calculation	
5 PT Bottom@ 12' (5I22002-02) Soil									
Chloride	1910	25.0	mg/kg	50	EI52305	09/22/05	09/23/05	EPA 300.0	
% Moisture	7.8	0.1	%	1	EI52301	09/22/05	09/23/05	% calculation	
10'X10' 4 Wall Comp. (5I22002-03) Soil									
Chloride	851	10.0	mg/kg	20	EI52305	09/22/05	09/23/05	EPA 300.0	
% Moisture	5.7	0.1	%	1	EI52301	09/22/05	09/23/05	% calculation	

Figure 8 – Laboratory chloride analyses of soil samples from representative locations as noted.

Rice Operating Co.	Project: Vacuum Oxy Phillips K-EOL	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Roy Rascon	09/26/05 16:58

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Blended Backfill (5122002-01) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI52304	09/23/05	09/26/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*73.6 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*92.6 %*	*70-130*		"	"	"	"	
5 PT Bottom@ 12' (5122002-02) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI52304	09/23/05	09/23/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*88.0 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*94.4 %*	*70-130*		"	"	"	"	
10'X10' 4 Wall Comp. (5122002-03) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI52304	09/23/05	09/23/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*90.2 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*94.0 %*	*70-130*		"	"	"	"	

COPY

12600 West I-20 East - Odessa, Texas 79765 - (432) 563-1800 - Fax (432) 563-1713

Figure 9 – Laboratory petroleum hydrocarbon analyses of soil samples from representative locations as noted.

Vacuum State 'K' EOL (1R0425-47)