

1R - 426-09

**GENERAL  
CORRESPONDENCE**

**YEAR(S):**  
2007

**Hansen, Edward J., EMNRD**

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**From:** Jeff [jkindley@hec-enviro.com]  
**Sent:** Thursday, August 09, 2007 2:44 PM  
**To:** Hansen, Edward J., EMNRD  
**Subject:** Rice Engineering H-19 Vent

Dear Mr. Hansen,

On the formerly attached ICP report for the above referenced site, we inadvertently submitted the report with soil samples listed in mg/L when they should have been mg/kg. The error is found in section 2 of the report referring to the excavated soils results.

A hard copy of the report was submitted this morning and should be in your office by Monday of next week.

Thanks for your help.

Jeffrey Kindley, P.G.  
Highlander Environmental Corp.

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8/9/2007



Highlander Environmental Corp. RECEIVED

Midland, Texas

2007 AUG 13 PM 1 49

CERTIFIED MAIL  
RETURN RECEIPT NO. 7005 1160 0005 3780 6355

1R426-09

August 3, 2007

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

RE: INVESTIGATION & CHARACTERIZATION WORK PLAN  
BD H-19 VENT  
UNIT "H", SEC. 19, T21S, R37E

Mr. Price:

RICE Operating Company (ROC) has retained Highlander Environmental Corp. (Highlander) to address potential environmental concerns at the above-referenced site. ROC is the service provider (agent) for the Blinebry Drinkard (BD) SWD System and has no ownership of any portion of the pipeline, well, or facility. The System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. In general, project funding is not forthcoming until NMOCD approves the work plan. Therefore, your timely review of this submission is requested.

For all environmental projects, ROC will choose a path forward that:

- protects public health,
- provides the greatest net environmental benefit,
- complies with NMOCD Rules, and
- is supported by good science.

Each site shall have three submissions or a combination of:

1. This **Investigation and Characterization Plan** (ICP) is a proposal for data gathering and site characterization and assessment.
2. Upon evaluating the data and results from the ICP, a recommended remedy will be submitted in a **Corrective Action Plan** (CAP).
3. Finally, after implementing the remedy, a **closure report** with final documentation will be submitted.

## **BACKGROUND & PREVIOUS WORK**

As part of the ROC Junction Box Upgrade Workplan, starting on July 14, 2003, the junction box was moved 25' to the northwest. The former junction box site was investigated vertically and horizontally with a trench utilizing a backhoe. The Site was delineated to 12 feet below ground surface (bgs) where chlorides were 9,570 mg/L and TPH was 1,550 mg/L. No water wells were located within Section 19 which contains the Site. However, according to the USGS Well Reports, one water well is located in adjacent Section 18 with a depth to groundwater of 98 feet bgs.

The trench was backfilled and contoured to the surrounding surface. On September 16, 2003, ROC submitted a Junction Box Disclosure Report to the NMOCD. A copy of the Junction Box Disclosure Report is included in Appendix A. A copy of the laboratory analysis is presented in Appendix B.

## **INVESTIGATION & CHARACTERIZATION PLAN**

As discussed above, existing site data suggest a potential for impairment of groundwater quality. Therefore the work elements described below are designed to assist ROC in selecting an appropriate vadose zone remedy and, if necessary, a groundwater remedy.

### **Task 1 Collect Regional Hydrogeologic Data**

A water well inventory will be performed to encompass a ½ mile radius around the release site. The inventory will include a review of water well records on the New Mexico Office of the State Engineer W.A.T.E.R.S. database and United States Geologic Survey (USGS) website. Any water wells denoted on the USGS 7.5 minute topographic quadrangle map within the search radius will be inspected. If viable wells are located, they will be evaluated for the possible incorporation of water level measurements and groundwater monitoring.

### **Task 2 Evaluate Concentrations of Constituents of Concern in Soil (and Ground Water)**

Highlander proposes to conduct soil borings at the former junction box site for further evaluation. The soil borings will be placed appropriately to evaluate subsurface TPH and chloride impacts, and for vertical and horizontal delineation. The soil boring samples will be field screened for chloride concentrations and hydrocarbons utilizing a photoionization detector (PID). If chloride concentrations do not decline sufficiently with depth or exceed 250 mg/kg within 10' of the suspected groundwater depth, one soil boring, in the area with the highest potential to impact groundwater, will be converted to a monitoring well.

If a monitoring well is installed, it will be constructed according to EPA and industry standards and developed either by bailing with a rig or hand bailer, or pumping with an electric submersible pump to remove fine grained sediment disturbed during drilling and to ensure collection of representative groundwater samples. Water removed from any monitor well will be disposed of in the BD SWD System.



If a monitoring well is completed, it will be inspected for the presence of phase-separated hydrocarbons (PSH) and, if present, a sample will be collected and analyzed by gas chromatography (GC) to determine composition and origin. The well will be properly purged and sampled with a clean, dedicated, polyethylene bailer and disposable line. Groundwater samples will be submitted to a laboratory for analysis of Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) by method EPA 8021B, and chloride by method 300.0.

**Task 3 Evaluate Flux from the Vadose Zone to Ground Water**

As part of the ICP, the residual impact to vadose zone soils will be evaluated to determine what, if any remediation/isolation techniques will be required at the Site.

The information gathered from tasks 1-3 will be evaluated and utilized to design a groundwater remedy if needed. The groundwater remedy that offers the greatest environmental benefit while causing the least environmental impairment will be selected. If the evaluation demonstrates that residual constituents pose no threat to groundwater quality, only a vadose zone remedy will be proposed. Such recommendations and findings will be presented to NMOCD in a subsequent Corrective Action Plan (CAP). When evaluating any proposed remedy or investigative work, ROC will confirm that there is a reasonable relationship between the benefits created by the proposed remedy or assessment and the economic and social costs.

Should you have any questions, please contact me at (432) 682-4559. Your prompt review of this submission is appreciated. Thank you for your attention to this matter.

Highlander Environmental Corp.

*Jeffrey Kindley*  
Jeffrey Kindley, P.G.  
Senior Environmental Geologist

cc: ROC  
Edward Hansen - NMOCD  
Larry Johnson - NMOCD

enclosures: photos, disclosure report, laboratory analysis



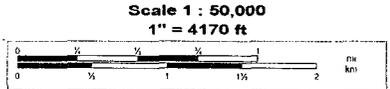
Figures



FIGURE NO. 1  
LEA COUNTY, NM  
RICE OPERATING  
TOPOGRAPHIC MAP



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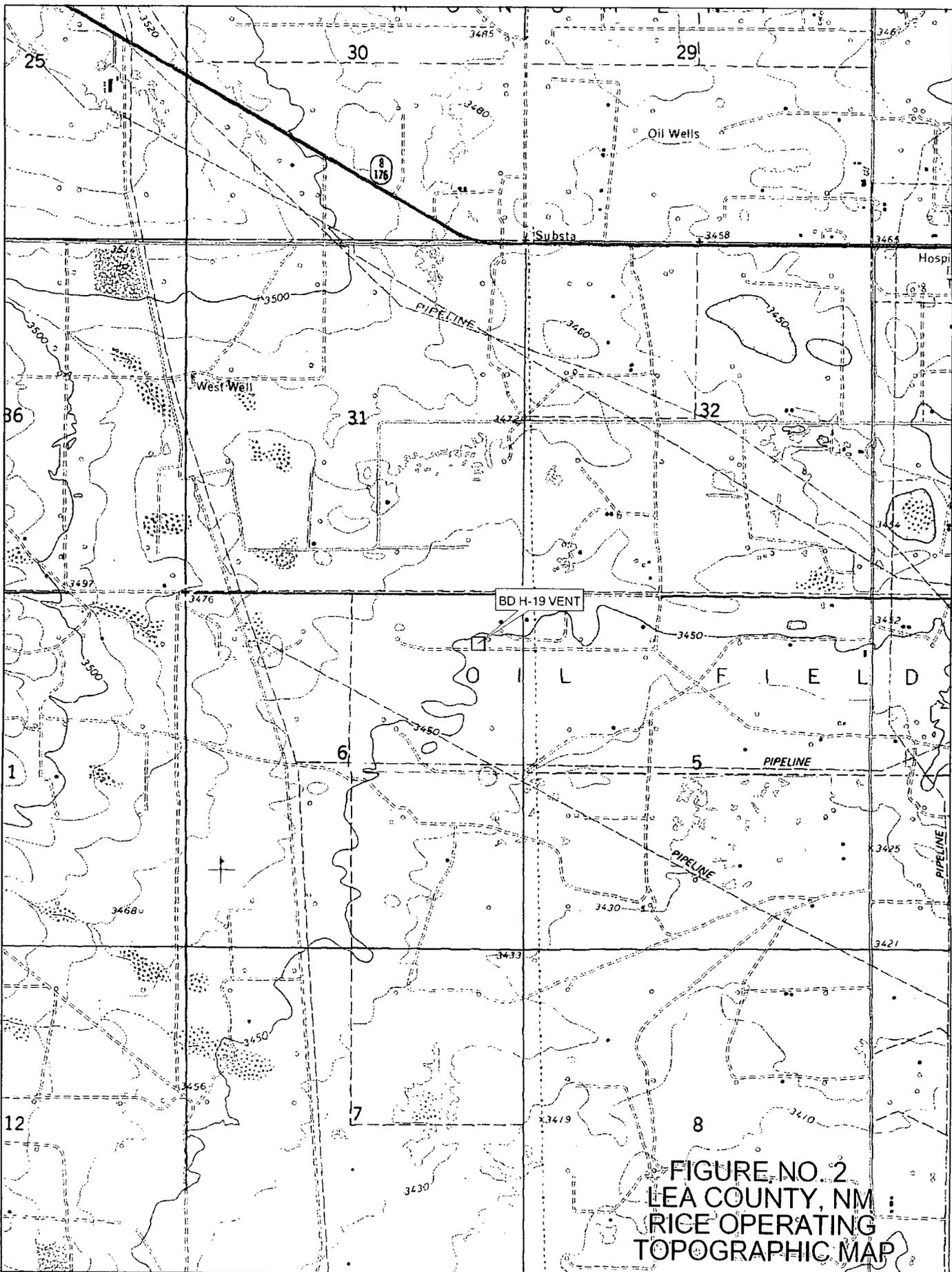
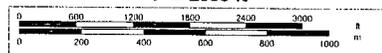


FIGURE NO. 2  
LEA COUNTY, NM  
RICE OPERATING  
TOPOGRAPHIC MAP



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www.delorme.com

Scale 1 : 24,000  
1" = 2000 ft



TN  
MN  
8.7°E

NORTH  
↑

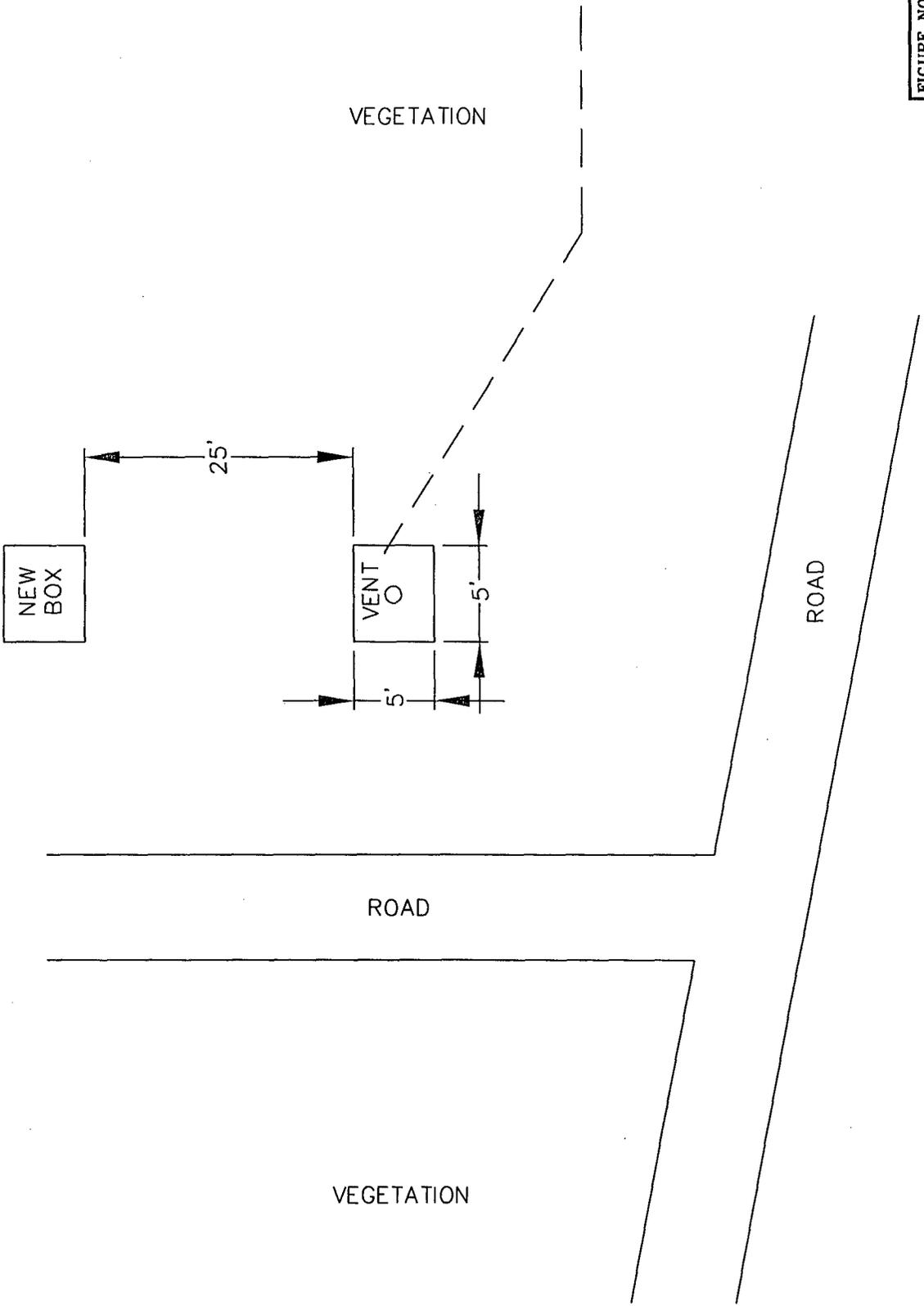


FIGURE NO. 3

LEA COUNTY, NEW MEXICO  
RICE OPERATING COMPANY  
BD H-19 VENT  
HIGHLANDER ENVIRONMENTAL CORP.  
MIDLAND, TEXAS

DATE: 8/6/07  
DWN. BY: RC  
FILE: 1001-0003  
SHEET 13 OF 14

NOT TO SCALE

Photographs

**PHOTOGRAPHIC DOCUMENTATION**

Rice Operating Company

BD H-19 Vent, Lea County, New Mexico

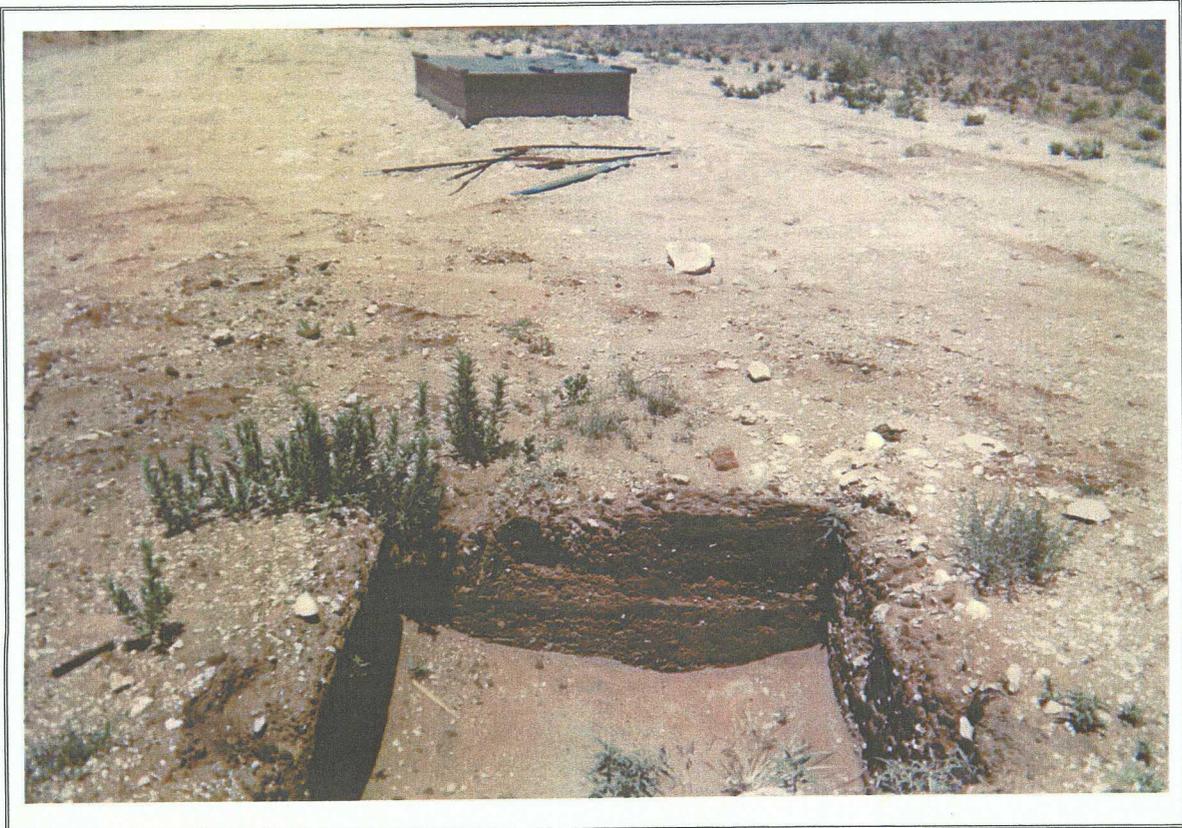


1. View of site after removal of original junction box.

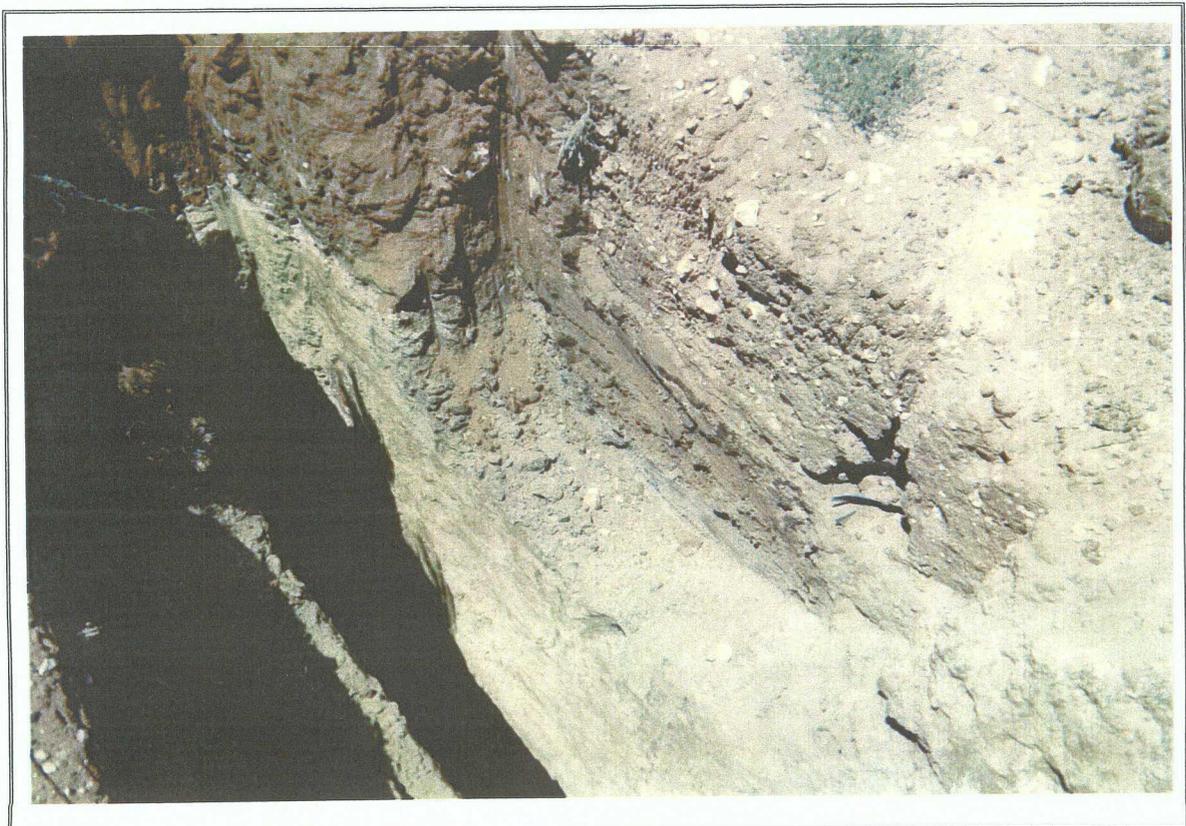


2. View of site after removal of original junction box.

**PHOTOGRAPHIC DOCUMENTATION**  
Rice Operating Company  
BD H-19 Vent, Lea County, New Mexico.



3. View of site before excavation.



4. View of excavated trench.

**PHOTOGRAPHIC DOCUMENTATION**

Rice Operating Company  
BD H-19 Vent, Lea County, New Mexico



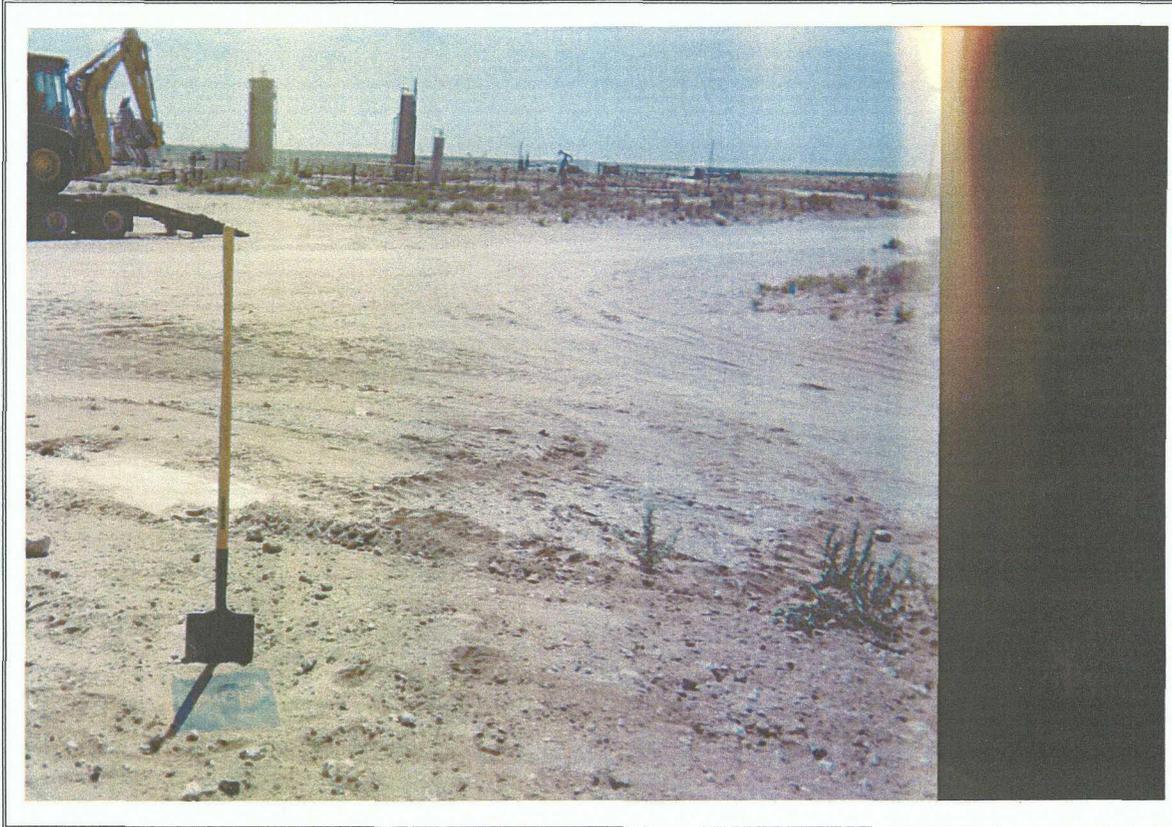
5. View of the trench at the junction box.



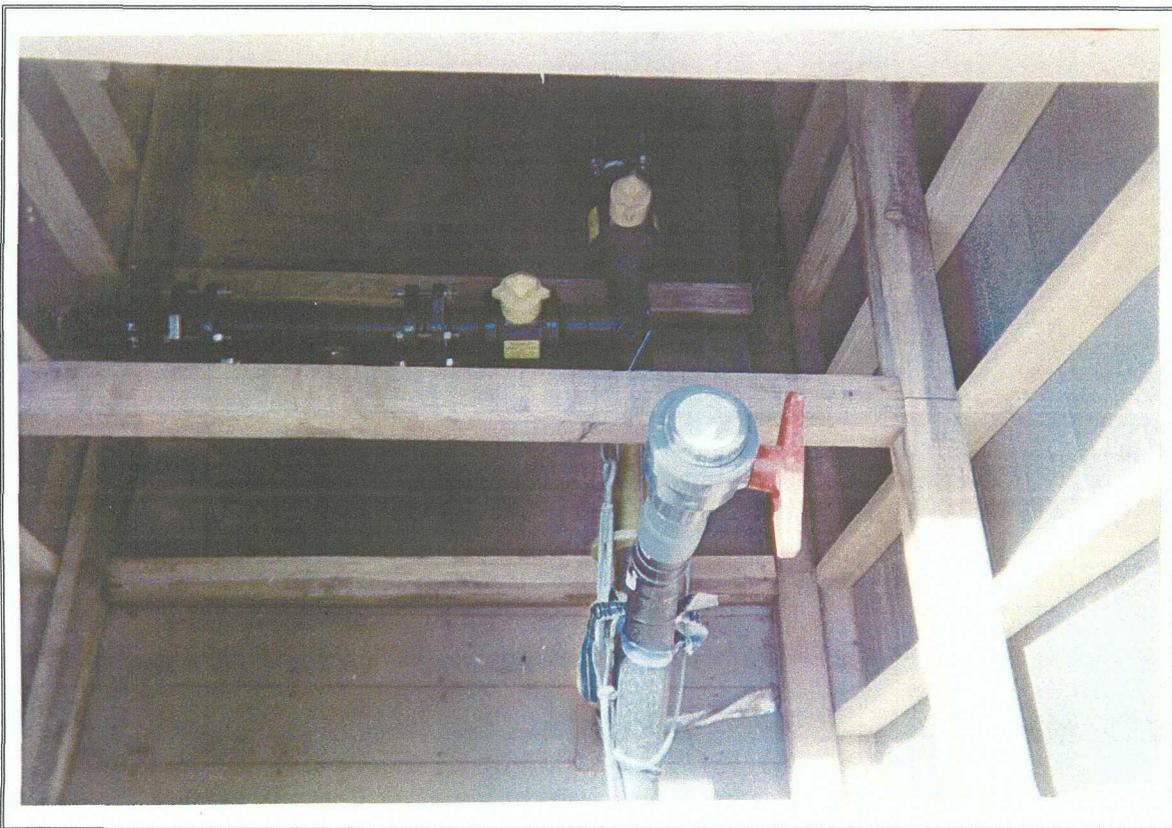
6. View of the trench at the junction box.

**PHOTOGRAPHIC DOCUMENTATION**

Rice Operating Company  
BD H-19 Vent, Lea County, New Mexico



7. View of the backfilled site.



8. View of the interior of the new junction box.

Appendix A

**RICE OPERATING COMPANY  
JUNCTION BOX DISCLOSURE\* REPORT**

**BOX LOCATION**

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
BD	H-19	H	10/19	21 S	37 E	Lea	Moved 25 ft northwest		

LAND TYPE: BLM \_\_\_\_\_ STATE \_\_\_\_\_ FEE LANDOWNER Joe Robin Sims OTHER \_\_\_\_\_

Depth to Groundwater 99 feet NMOCD SITE ASSESSMENT RANKING SCORE: 10

Date Started 7/14/2003 Date Completed 8/6/2003 OCD Witness No

Soil Excavated 16 cubic yards Excavation Length 12 Width 3 Depth 12 feet

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

**FINAL ANALYTICAL RESULTS:** Sample Date 8/6/2003 Sample Depth 12 ft bgs

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

Sample Location	Benzene mg/kg	Toluene mg/kg	Ethyl Benzene mg/kg	Total Xylenes mg/kg	GRO mg/kg	DRO mg/kg	Chloride mg/kg
Vertical @ 12 ft	<0.025	<0.025	<0.025	<0.025	<10.0	1550	9570

General Description of Remedial Action: During vertical delineation, it became apparent that chloride concentrations did not significantly decline with depth. There were elevated TPH concentrations down to the 12 ft sample where NOOCD guideline concentrations were not met. The hole was backfilled and the location identified for further consideration at a later date. A new watertight junction box has been built 25 ft northwest of this site.

**CHLORIDE FIELD TESTS**

LOCATION	DEPTH (ft)	ppm
Vertical	6	2300
	8	2400
	10	2250
	12	5200

**ADDITIONAL EVALUATION IS HIGH PRIORITY.**

cc: lab results, chloride graph, photos

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

DATE 9/16/2003 PRINTED NAME Kristin Farris

SIGNATURE Kristin Farris TITLE Project Scientist

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

Appendix B

# ANALYTICAL REPORT

## Prepared for:

Kristin Farris  
Rice Operating  
122 W. Taylor  
Hobbs, NM 88240

Project: BD  
PO#: 505  
Order#: G0307181  
Report Date: 08/13/2003

### Certificates

US EPA Laboratory Code TX00158

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

Rice Operating  
122 W. Taylor  
Hobbs, NM 88240  
505-397-1471

Order#: G0307181  
Project:  
Project Name: BD  
Location: H-19

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0307181-01	12' bgs	SOIL	8/6/03 14:30	8/8/03 16:30	4 oz glass	ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 1.0 C		
	8015M					
	8021B/5030 BTEX					
	Chloride					

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

Kristin Farris  
 Rice Operating  
 122 W. Taylor  
 Hobbs, NM 88240

Order#: G0307181  
 Project:  
 Project Name: BD  
 Location: H-19

Lab ID: 0307181-01  
 Sample ID: 12' bgs

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		8/8/03	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	1,550	10.0
TOTAL, C6-C35	1,550	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	118%	70	130
1-Chlorooctadecane	121%	70	130

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0006466-02		8/11/03	1	25		
		14:33				

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Toluene	<0.025	0.025
Ethylbenzene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	86%	80	120
Bromofluorobenzene	84%	80	120

Approval:  08/13/03  
 Ralend K. Tuttle, Lab Director, QA Officer  
 Celey D. Keene, Org. Tech. Director  
 Jeanne McMurrey, Inorg. Tech. Director  
 Sandra Biezugbe, Lab Tech.  
 Sara Molina, Lab Tech.

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

Kristin Farris  
Rice Operating  
122 W. Taylor  
Hobbs, NM 88240

Order#: G0307181  
Project:  
Project Name: BD  
Location: H-19

Lab ID: 0307181-01  
Sample ID: 12' bgs

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution</u> <u>Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date</u> <u>Analyzed</u>	<u>Analyst</u>
Chloride	9570	mg/kg	1	20	9253	8/11/03	SB

Approval: Celey D. Keene 08/13/03

Raland K. Tuttle, Lab Director, QA Officer  
Celey D. Keene, Org. Tech. Director  
Jeanne McMurrey, Inorg. Tech. Director  
Sandra Biezugbe, Lab Tech.  
Sara Molina, Lab Tech.

Date

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

8015M

Order#: G0307181

<i>BLANK</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0006486-02			<10.0		
<i>CONTROL</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0006486-03		952	807	84.8%	
<i>CONTROL DUP</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0006486-04		952	760	79.8%	6.%
<i>SRM</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0006486-05		1000	858	85.8%	

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0307181

<i>BLANK</i>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
	Benzene-mg/kg	0006466-02			<0.025		
	Toluene-mg/kg	0006466-02			<0.025		
	Ethylbenzene-mg/kg	0006466-02			<0.025		
	p/m-Xylene-mg/kg	0006466-02			<0.025		
	o-Xylene-mg/kg	0006466-02			<0.025		
<i>MS</i>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
	Benzene-mg/kg	0307188-03	0	0.1	0.080	80.0%	
	Toluene-mg/kg	0307188-03	0	0.1	0.080	80.0%	
	Ethylbenzene-mg/kg	0307188-03	0	0.1	0.084	84.0%	
	p/m-Xylene-mg/kg	0307188-03	0	0.2	0.170	85.0%	
	o-Xylene-mg/kg	0307188-03	0	0.1	0.085	85.0%	
<i>MSD</i>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
	Benzene-mg/kg	0307188-03	0	0.1	0.087	87.0%	8.4%
	Toluene-mg/kg	0307188-03	0	0.1	0.086	86.0%	7.2%
	Ethylbenzene-mg/kg	0307188-03	0	0.1	0.090	90.0%	6.9%
	p/m-Xylene-mg/kg	0307188-03	0	0.2	0.183	91.5%	7.4%
	o-Xylene-mg/kg	0307188-03	0	0.1	0.092	92.0%	7.9%
<i>SRM</i>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
	Benzene-mg/kg	0006466-05		0.1	0.085	85.0%	
	Toluene-mg/kg	0006466-05		0.1	0.084	84.0%	
	Ethylbenzene-mg/kg	0006466-05		0.1	0.087	87.0%	
	p/m-Xylene-mg/kg	0006466-05		0.2	0.176	88.0%	
	o-Xylene-mg/kg	0006466-05		0.1	0.088	88.0%	

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

### Test Parameters

Order#: G0307181

<i>BLANK</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0006460-01			<20.0		
<i>MS</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0307180-01	2660	500	3120	92%	
<i>MSD</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0307180-01	2660	500	3140	96%	0.6%
<i>SRM</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0006460-04		5000	4960	99.2%	

