1R - 426-110

WORKPLANS

DATE:
6-18-08

ARCADIS

Infrastructure, buildings, environment, communications

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2008 JUN 19 PM 1 31

ARCADIS U.S., Inc.
1004 N. Big Spring Street
Suite 300
Midland Texas 79701
Tel 432.687.5400
Fax 432.687.5401
www.arcadis-us.com

Ed Hansen
New Mexico Oil Conservation Division
1220 So. Saint Francis Drive
Santa Fe, New Mexico 87505

Certified Mail Receipt No. 7002 2410 0001 5813 3630

IR426-110

Subject:
Investigation and Characterization Plan
Blinebry-Drinkard (BD) Junction F-35
T21S, R37E, Section 35, Unit F, Eunice, Lea County, New Mexico

Date:
June 16, 2008

Contact:
Sharon Hall

Phone:
432 687-5400

Email:
shall@arcadis-us.com

Dear Mr. Hansen,

RICE Operating Company (ROC) has retained ARCADIS U.S., Inc. 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. Environmental projects of this magnitude require System Partner AFE approval and work begins as funds are received. 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.

On behalf of ROC, ARCADIS respectfully submits this ICP for the above-referenced site.

SITE HISTORY AND BACKGROUND

The site is located west of the town of Eunice, New Mexico (Figure1). Elevated chlorides in this area have been reported since as early as 1952 (Ground-Water Report 6, Geology and Ground-Water Conditions in Southern Lea County, Alexander Nicholson, Jr. and Alfred Clebsch, Jr.). The expected depth to groundwater at this site is approximately 44 feet below ground surface.

The junction was eliminated and replaced with a new junction box located 30 feet west of the former junction box location (Figure 2). Initial delineation began on April 27, 2005 and was completed on April 28, 2005. A delineation trench was excavated at the former junction box location using a backhoe. A backhoe was used to collect soil samples at one-foot intervals to a depth of 12 feet below ground surface (bgs) at the removed junction box location. Soil samples were analyzed in the field for chlorides using field-adapted Method 9253 and screened in the field using a photoionization detector (PID). Field analytical and PID results are shown in Table 1. Laboratory results are shown in Table 2.

A grab sample was collected from the bottom of the excavation and submitted to Environmental Lab of Texas and analyzed for benzene, toluene (BTEX), ethylbenzene and total xylenes, gasoline range organics (GRO), diesel range organics (DRO) and chloride analysis. BTEX was detected at very low concentrations. DRO was detected at a concentration of 2120 milligrams per kilogram (mg/kg). GRO was detected at a concentration of 616 mg/kg. Elevated PID readings were observed in the samples collected from a depth of 5 feet bgs to 12 feet bgs. Field chloride concentrations were low (131 mg/kg or less). The chloride concentration of the 12 foot bgs sample submitted to the lab was 32.2 mg/kg. Field and Laboratory analytical results and PID readings are summarized in Table 1.

Based on the results of the soil sampling analytical results elevated hydrocarbon (DRO) concentrations are present at the subject site (Figure 2).

The excavation was backfilled with imported clean soil and the surface graded and seeded. An identification plate was placed on the surface to identify the former junction box location and for possible future environmental considerations.

ROC disclosed potential groundwater impact at the site to NMOCD in a Disclosure Report dated 5/16/2005. A disclosure report was submitted to NMOCD with all of the ROC 2005 Junction Box Reports in March 2006 per the ROC Junction Box Upgrade Work Plan. The source of this impact is historical and has been removed.

INVESTIGATION AND CHARACTERIZATION PLAN

As discussed above, existing site data suggest a potential for impairment of ground water 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

Chloride impacted regional groundwater has been reported in this area near the towns of Eunice and Monument since as early as 1952 (Groundwater Report 6, Geology and Ground-Water Conditions in Southern Lea County , New Mexico, Nicholson and Clebsch, United States Geological Survey).

A one-half mile water well inventory will be performed. The water well inventory will include a review of water well records listed on the New Mexico State Engineer Office and United States Geological Survey (USGS) websites and windmills indicated on applicable USGS topographic maps.

Task 2- Evaluate Concentrations of Constituents of Concern in Soil and Groundwater

One soil boring will be installed at the site near the former Junction box location. Soil samples will be collected at regular intervals no greater than five feet, screened in the field using a photo ionization detector (PID) and field tested for chlorides. Soil lithology and the presence of any observed staining or odor will be recorded. Representative select samples will be submitted to a laboratory for laboratory analysis as confirmation of the field sampling. The soil boring will be drilled to a depth where PID readings do not exceed 100 ppm or to groundwater, whichever is shallower. It is not anticipated that elevated chloride concentrations will be detected. If field readings indicate elevated hydrocarbon concentrations at the total depth of the boring, the boring will be converted to a monitor well.

The monitor well will be constructed of Schedule 40 PVC blank and the well screen will consist of Schedule 40 PVC with 0.020 inch slots. 15 feet of well screen will be installed, 5 feet above the groundwater table and 10 foot below. The monitor well will be constructed, developed and sampled in accordance with Environmental Protection Agency and NMOCD standards. A groundwater sample will be collected and submitted for laboratory analysis for chlorides, BTEX and general chemistry.

If analytical results indicate that chloride and/or BTEX concentrations in groundwater exceed New Mexico Water Quality Control Commission standards, additional monitoring wells may be installed as warranted by the results of the investigation.

Additional soil borings will be used to evaluate soil impacts. Soil borings will be installed in the approximate locations shown in Figure 3 in order to delineate the lateral extent of impacts to soil. Soil samples will be collected at regular intervals no greater than five feet, screened in the field using a photo ionization detector (PID) and field tested for chlorides. Soil lithology and the presence of any observed staining or odor will be recorded. Representative select samples will be submitted to a laboratory for laboratory analysis as confirmation of the field sampling.

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

The information gathered from Tasks 1 and 2 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 surface restoration plan protective of groundwater 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.

A report that details the investigation activities and results will be submitted to the NMOCD. The report will include recommendations for further action (CAP) if necessary or for closure of the site.

Very truly yours,

ARCADIS U.S, Inc.

Sharon E. Hall

Sharon E. Hall
Associate Vice President

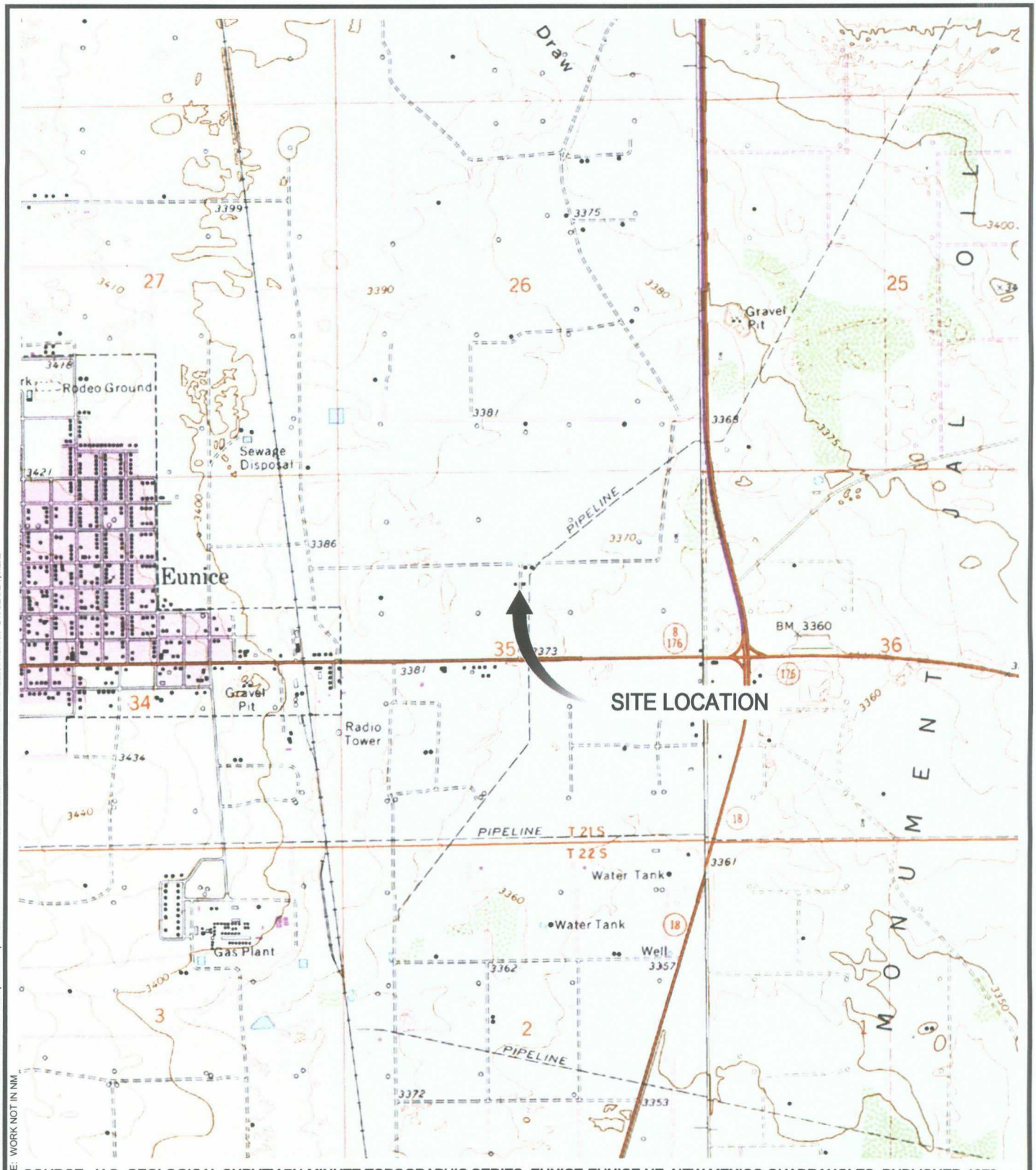
Copies:
Marvin Burrows- Rice Operating Company

Attachment:

Figures 1 and 2

Disclosure report with field sampling results

Tables 1 and 2



SOURCE: U.S. GEOLOGICAL SURVEY 7½ MINUTE TOPOGRAPHIC SERIES, EUNICE-EUNICE NE, NEW MEXICO QUADRANGLES, PUBLISHED 1979.

0 2000' 4000'

APPROXIMATE SCALE: 1" = 2000'

RICE OPERATING COMPANY
LEA COUNTY, NEW MEXICO

BLINEBRY-DRINKARD (B) JUNCTION F-35 BOOT INVESTIGATION AND CHARACTERIZATION PLAN

SITE LOCATION MAP

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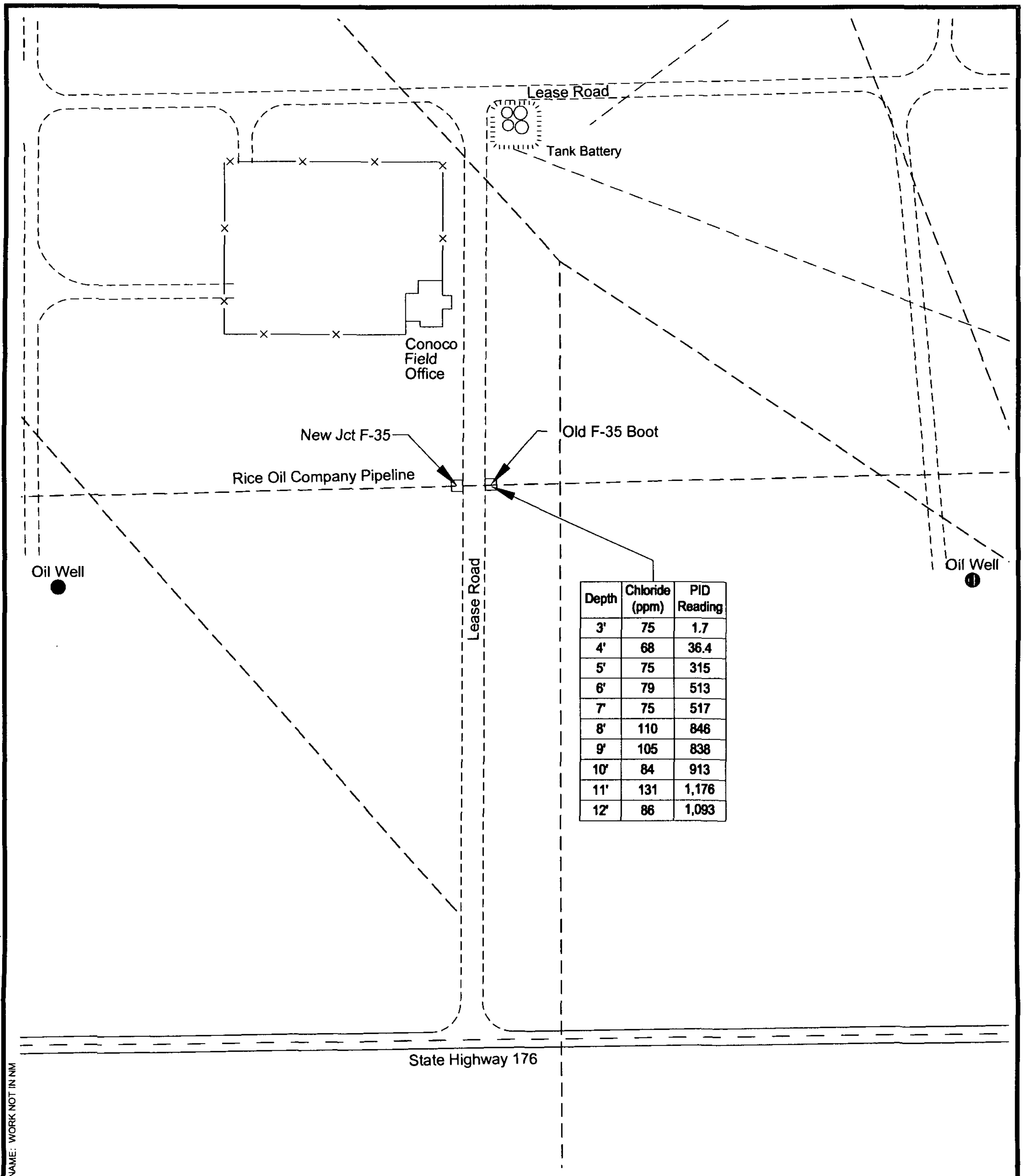
FIGURE 1

CITY: MIDLAND TX DIV/GROUP: ENV DB: HC LD: HC PIC: PM: SH TM: SH LYR: ON=*;OFF=*REF* UN:
G:\CAD\ACTIVITY\010140001\000010\DWG\010140801.DWG LAYOUT: 1 SAVED: 6/13/2008 7:38 AM ACADVER: 17.0S (LMS TECH) PAGESETUP: — PLOTSTYLETABLE: AGANDM.CTB PLOTTED: 6/13/2008 7:37 AM BY: CLARDY, HERB
XREFS:
IMAGES:
EUNICE-EUNICE NE.tif
PROJECTNAME: WORK NOT IN NM



Depth	Chloride (ppm)	PID Reading
3'	75	1.7
4'	68	36.4
5'	75	315
6'	79	513
7'	75	517
8'	110	846
9'	105	838
10'	84	913
11'	131	1,176
12'	86	1,093

EXPLANATION

- PIPELINE TRACE
- LEASE ROADS
- BERMED AREAS

0 200' 400'

APPROXIMATE SCALE: 1" = 200'

RICE OPERATING COMPANY
LEA COUNTY, NEW MEXICO

BLINEBRY-DRINKARD (B) JUNCTION F-35 BOOT INVESTIGATION AND CHARACTERIZATION PLAN

CHLORIDE AND PID RESULTS

ARCADIS

FIGURE 2

CITY: MIDLAND TX DIV/GROUP: ENV DB: HC LD: HC PIC: PM: SH TM: SH LYR: ON=*;OFF=*REF* UN:
G:\CAD\ACT\MT001014\0001\00001\DWG\01014C01.DWG LAYOUT: 2 SAVED: 8/13/2008 7:39 AM ACADVER: 17.0S (LMS TECH) PAGESETUP: — PLOTSTYLETABLE: AGANDM.CTB PLOTTED: 8/13/2008 7:39 AM BY: CLARDY, HERB
XREFS: IMAGES: F-35 Boot.tif PROJECTNAME: WORK NOT IN NM

Blinebry-Drinkard F-35 Boot

Table 1
Field Sampling Results
Removed Junction Box Location

Depth (feet)	Chloride result (ppm)	PID Reading
3	75	1.7
4	68	36.4
5	75	315
6	79	513
7	75	517
8	110	846
9	105	838
10	84	913
11	131	1176
12	86	1093

Table 2
Laboratory Results, mg/kg
Removed Junction Box, 12 Feet below Ground Surface

Benzene	Toluene	Ethylbenzene	Total Xylenes	GRO	DRO	Chloride
0.00976	0.187	0.645	2.021	616	2120	32.2

RICE OPERATING COMPANY
JUNCTION BOX DISCLOSURE* REPORT

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
BD	F-35 boot	F	35	21S	37E	Lea	moved 30 ft west		

LAND TYPE: BLM _____ STATE _____ FEE LANDOWNER Eva Owen Estate OTHER _____

Depth to Groundwater 44 feet NMOCD SITE ASSESSMENT RANKING SCORE: 20

Date Started 4/27/2005 Date Completed 4/28/2005 NMOCD Witness no

Soil Excavated 12 cubic yards Excavation Length 9 Width 3 Depth 12 feet

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

FINAL ANALYTICAL RESULTS: **Sample Date** 4/28/2005 **Sample Depth** 12 ft

TPH, BTEX, and chloride laboratory test results completed by using an approved laboratory 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
GRAB @ 12 ft below junction box	0.00976	0.187	0.645	2.021	616	2120	32.2

General Description of Remedial Action:

This junction box historically contained a gas-releasing boot. The junction was moved 30 ft west with the pipeline replacement program. The box from the former junction was removed when the site was decontaminated for NORM. On 4/27/2005, a delineation trench was excavated at the site of the former junction with soil samples collected every vertical foot to 12 ft BGS. Sandy soils from the trench exhibited odors and stains of hydrocarbon impact. Chloride concentrations were very low and similar to that of the background sample (84 ppm). On 4/28/2005 a 12 ft grab sample was collected for lab analysis from the trench before it was backfilled. 12 cubic yards of clean soil was imported to complete the backfill and to contour the surface. An identification plate was placed on the surface of this site to mark the location of the former junction for future environmental considerations. NMOCD has been notified of potential groundwater impact at this location. A new water-tight junction box was built 30 ft west of this site.

ADDITIONAL EVALUATION IS *HIGH* PRIORITY

enclosures: chloride graph, photos, lab results

CHLORIDE FIELD TESTS

LOCATION	DEPTH (ft)	ppm
vertical trench at junction box	3	75
	4	68
	5	75
	6	79
	7	75
	8	110
	9	105
	10	84
	11	131
	12	86

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

SITE SUPERVISOR Israel Juarez SIGNATURE Israel Juarez COMPANY RICE Operating Company

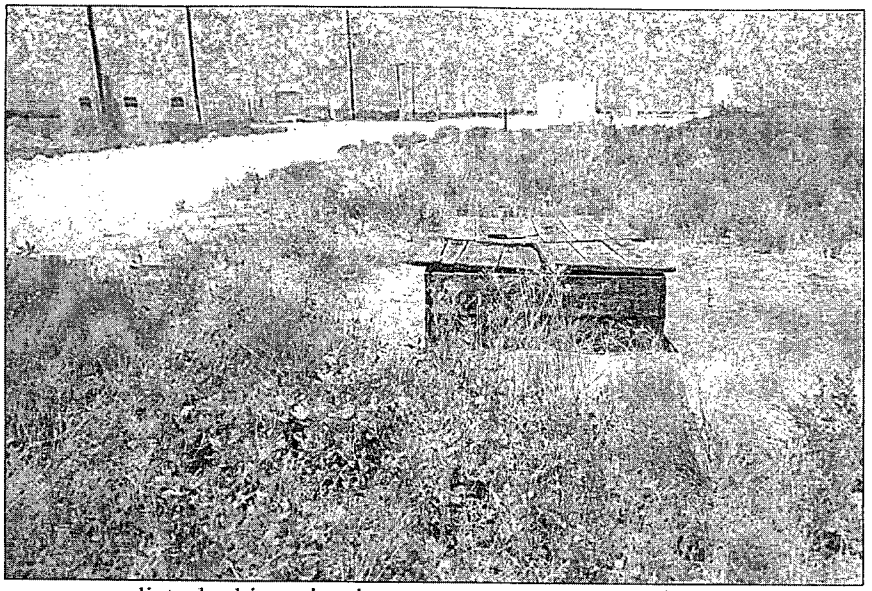
REPORT ASSEMBLED BY Kristin Farris Pope SIGNATURE Kristin Farris Pope

DATE 5/16/2005 TITLE Project Scientist

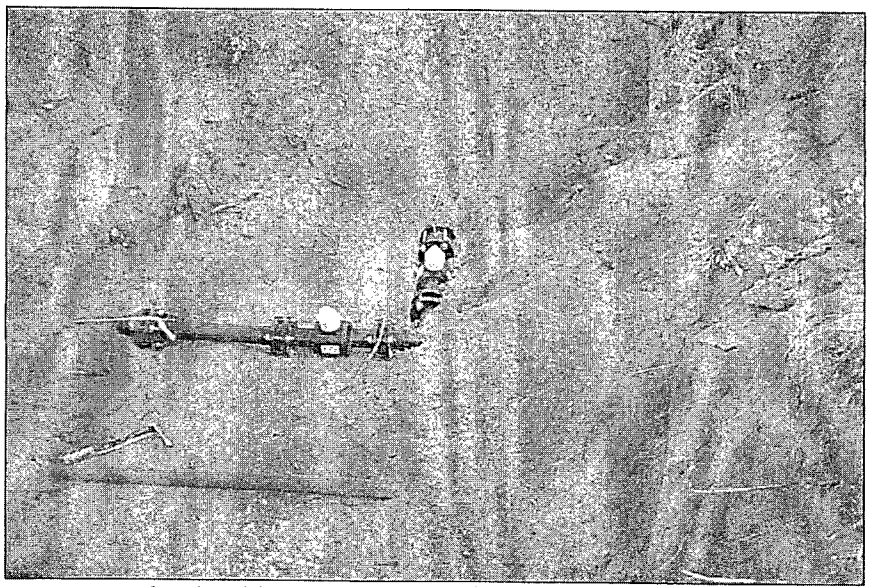
This site is a "DISCLOSURE." It will be placed on a prioritized list of similar sites for further consideration.

BD F-35 vent & boot

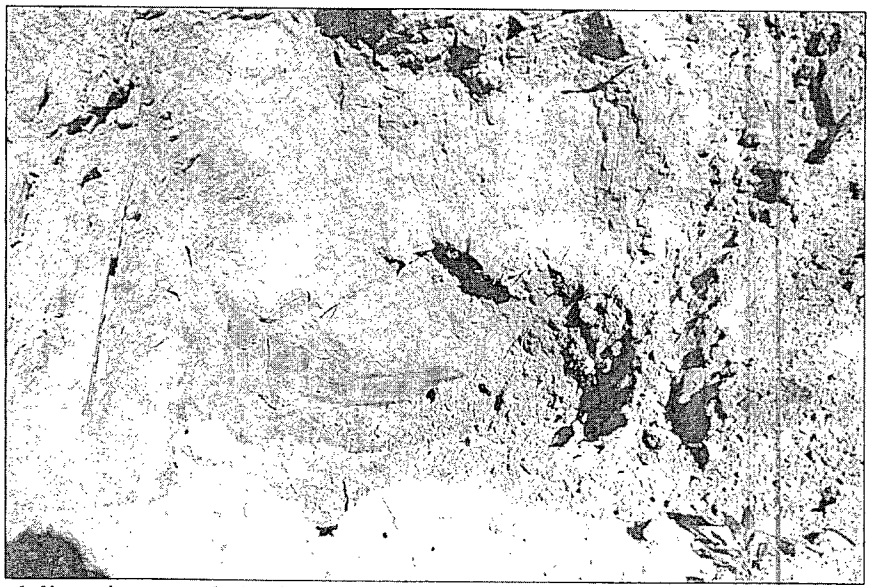
Unit 'F', Sec. 35, T21S, R37E



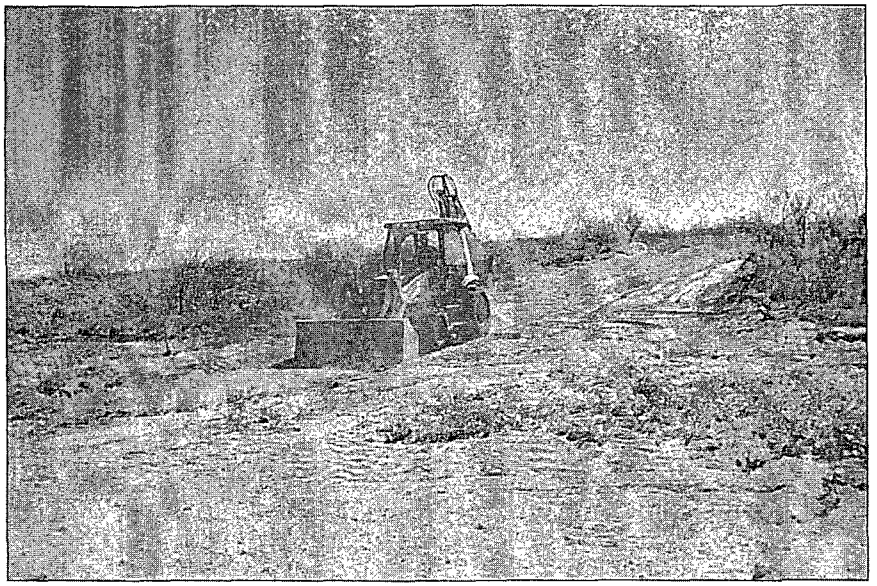
undisturbed junction box 7/23/2003



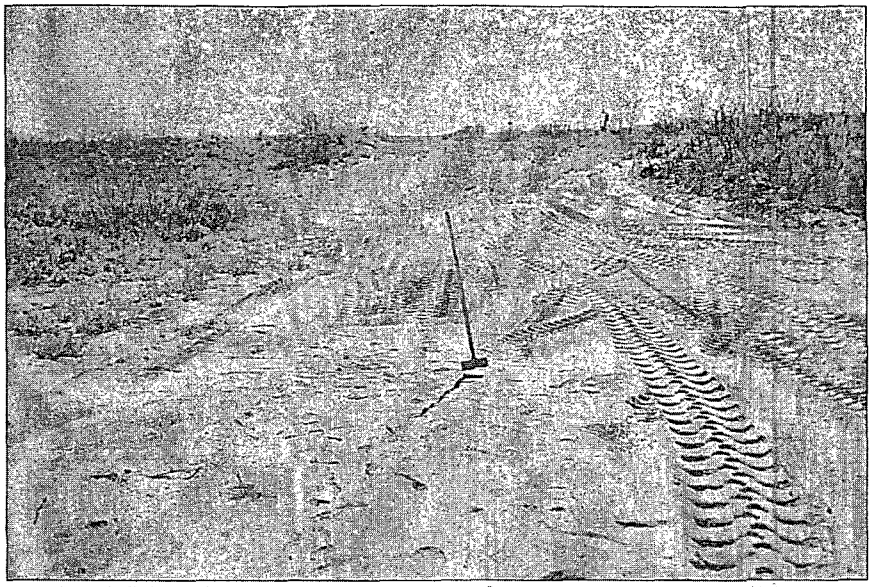
new poly plumbing for new junction box 30 ft west of former



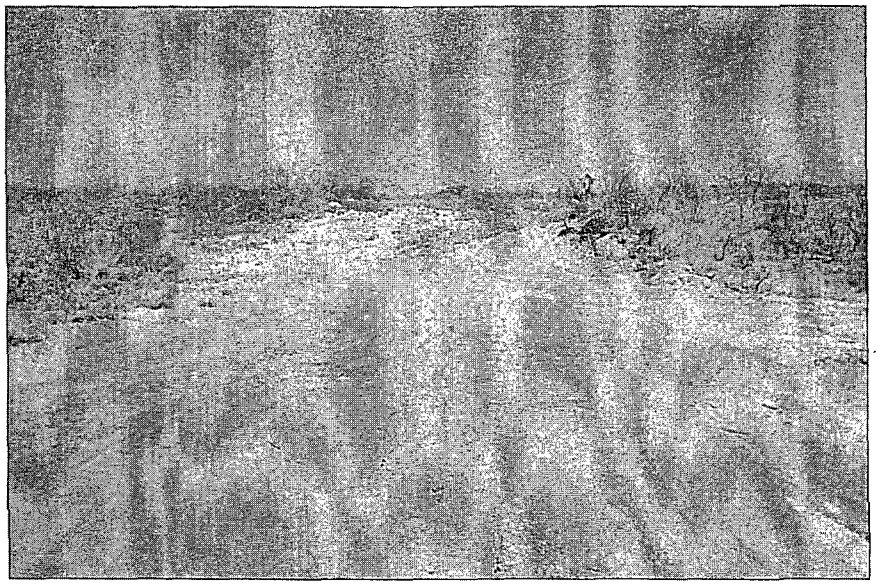
delineation trench 12 ft deep at former junction site 4/27/2005



backfilling trench with imported soil 4/28/2005



Backfilled site with ID plate on surface 4/28/2005



backfill complete 4/28/2005

seeding backfilled site 5/9/2005

BD jct. F-35 boot

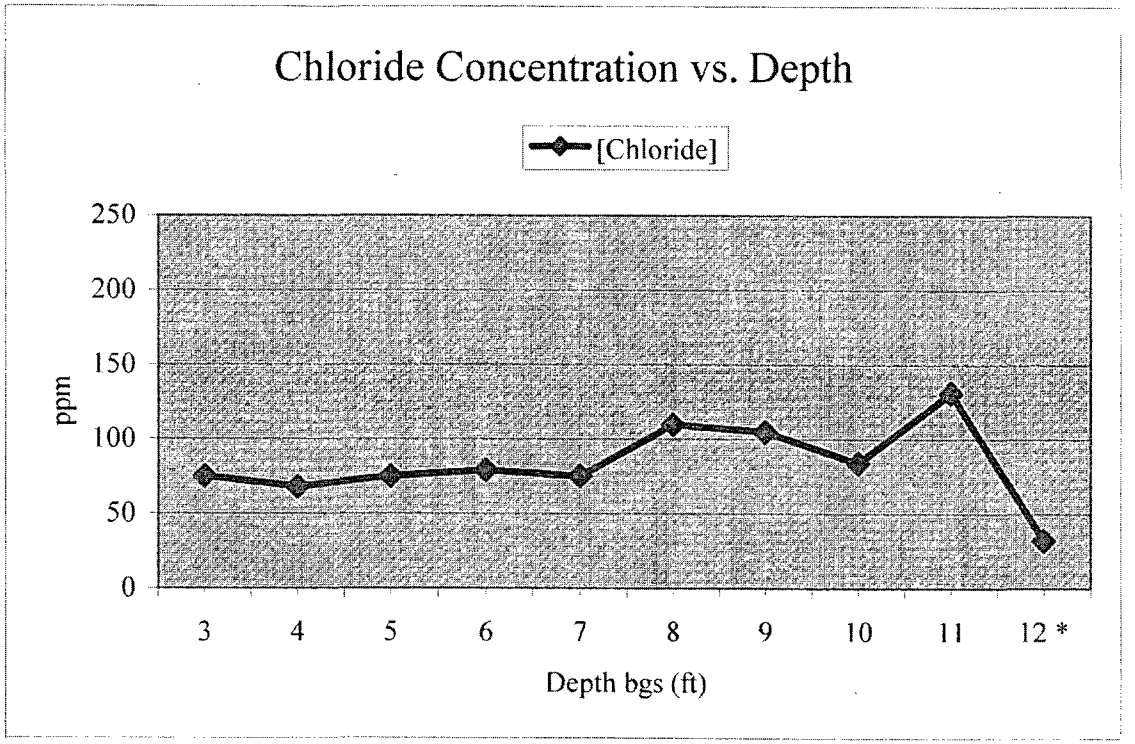
T21S, R37E

Vertical Delineation at Source

Depth bgs (ft)	[Cl] ppm
3	75
4	68
5	75
6	79
7	75
8	110
9	105
10	84
11	131
12 *	32.3

Groundwater = 44 ft

* Laboratory analysis



ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Roy Rascon

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: BD F-35 Boot Grab Sample @ 12'

Project Number: None Given

Location: None Given

Lab Order Number: 5E02013

Report Date: 05/05/05

Rice Operating Co.	Project: BD F-35 Boot Grab Sample @ 12'	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	05/05/05 12:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Grab Sample	5E02013-01	Soil	04/28/05 08:51	04/30/05 08:30

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: BD F-35 Boot Grab Sample @ 12'	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	05/05/05 12:49

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Grab Sample (5E02013-01) Soil									
Benzene	**J [0.00976]**	0.0250	mg/kg dry	25	EE50306	05/03/05	05/03/05	EPA 8021B	J
Toluene	**0.187**	0.0250	"	"	"	"	"	"	
Ethylbenzene	**0.645**	0.0250	"	"	"	"	"	"	
Xylene (p/m)	**1.63**	0.0250	"	"	"	"	"	"	
Xylene (o)	**0.391**	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*105 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*129 %*	*80-120*		"	"	"	"	*S-04*
Gasoline Range Organics C6-C12	**616**	10.0	mg/kg dry	1	EE50205	05/02/05	05/02/05	EPA 8015M	
Diesel Range Organics >C12-C35	**2120**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**2740**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*86.0 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*76.4 %*	*70-130*		"	"	"	"	

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122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	05/05/05 12:49

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Grab Sample (5E02013-01) Soil									
Chloride	**32.2**	5.00	mg/kg	10	EE50311	05/03/05	05/03/05	EPA 300.0	
% Moisture	**9.5**	0.1	%	1	EE50301	05/02/05	"	% calculation	

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Rice Operating Co.	Project: BD F-35 Boot Grab Sample @ 12'	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	05/05/05 12:49

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE50205 - Solvent Extraction (GC)										
Blank (EE50205-BLK1)			Prepared & Analyzed: 05/02/05							
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*38.5*		*mg/kg*	*50.0*		*77.0*	*70-130*			
Surrogate: 1-Chlorooctadecane	*37.4*		"	*50.0*		*74.8*	*70-130*			
LCS (EE50205-BS1)			Prepared & Analyzed: 05/02/05							
Gasoline Range Organics C6-C12	411	10.0	mg/kg wet	500		82.2	75-125			
Diesel Range Organics >C12-C35	444	10.0	"	500		88.8	75-125			
Total Hydrocarbon C6-C35	855	10.0	"	1000		85.5	75-125			
Surrogate: 1-Chlorooctane	*35.7*		*mg/kg*	*50.0*		*71.4*	*70-130*			
Surrogate: 1-Chlorooctadecane	*39.8*		"	*50.0*		*79.6*	*70-130*			
Calibration Check (EE50205-CCV1)			Prepared & Analyzed: 05/02/05							
Gasoline Range Organics C6-C12	428		mg/kg	500		85.6	80-120			
Diesel Range Organics >C12-C35	520		"	500		104	80-120			
Total Hydrocarbon C6-C35	948		"	1000		94.8	80-120			
Surrogate: 1-Chlorooctane	*46.4*		"	*50.0*		*92.8*	*70-130*			
Surrogate: 1-Chlorooctadecane	*38.2*		"	*50.0*		*76.4*	*70-130*			
Matrix Spike (EE50205-MS1)	**Source: 5E02002-01**		Prepared & Analyzed: 05/02/05							
Gasoline Range Organics C6-C12	411	10.0	mg/kg dry	503	ND	81.7	75-125			
Diesel Range Organics >C12-C35	545	10.0	"	503	ND	108	75-125			
Total Hydrocarbon C6-C35	956	10.0	"	1010	ND	94.7	75-125			
Surrogate: 1-Chlorooctane	*40.7*		*mg/kg*	*50.0*		*81.4*	*70-130*			
Surrogate: 1-Chlorooctadecane	*36.1*		"	*50.0*		*72.2*	*70-130*			
Matrix Spike Dup (EE50205-MSD1)	**Source: 5E02002-01**		Prepared & Analyzed: 05/02/05							
Gasoline Range Organics C6-C12	495	10.0	mg/kg dry	503	ND	98.4	75-125	18.5	20	
Diesel Range Organics >C12-C35	523	10.0	"	503	ND	104	75-125	4.12	20	
Total Hydrocarbon C6-C35	1020	10.0	"	1010	ND	101	75-125	6.48	20	
Surrogate: 1-Chlorooctane	*42.0*		*mg/kg*	*50.0*		*84.0*	*70-130*			
Surrogate: 1-Chlorooctadecane	*35.8*		"	*50.0*		*71.6*	*70-130*			

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: BD F-35 Boot Grab Sample @ 12'	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	05/05/05 12:49

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE50306 - EPA 5030C (GC)										
Blank (EE50306-BLK1)				Prepared & Analyzed: 05/03/05						
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	*87.8*		*ug/kg*	*100*		*87.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*94.7*		"	*100*		*94.7*	*80-120*			
LCS (EE50306-BS1)				Prepared & Analyzed: 05/03/05						
Benzene	86.9		ug/kg	100		86.9	80-120			
Toluene	90.9		"	100		90.9	80-120			
Ethylbenzene	91.8		"	100		91.8	80-120			
Xylene (p/m)	208		"	200		104	80-120			
Xylene (o)	99.3		"	100		99.3	80-120			
Surrogate: a,a,a-Trifluorotoluene	*104*		"	*100*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*117*		"	*100*		*117*	*80-120*			
Calibration Check (EE50306-CCV1)				Prepared: 05/03/05 Analyzed: 05/04/05						
Benzene	86.1		ug/kg	100		86.1	80-120			
Toluene	87.3		"	100		87.3	80-120			
Ethylbenzene	82.6		"	100		82.6	80-120			
Xylene (p/m)	178		"	200		89.0	80-120			
Xylene (o)	85.5		"	100		85.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	*99.5*		"	*100*		*99.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*88.0*		"	*100*		*88.0*	*80-120*			
Matrix Spike (EE50306-MS1)	**Source: 5D29014-02**			Prepared: 05/03/05 Analyzed: 05/04/05						
Benzene	90.6		ug/kg	100	ND	90.6	80-120			
Toluene	93.5		"	100	ND	93.5	80-120			
Ethylbenzene	93.6		"	100	ND	93.6	80-120			
Xylene (p/m)	211		"	200	ND	106	80-120			
Xylene (o)	101		"	100	ND	101	80-120			
Surrogate: a,a,a-Trifluorotoluene	*101*		"	*100*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*106*		"	*100*		*106*	*80-120*			

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Rice Operating Co.	Project: BD F-35 Boot Grab Sample @ 12'	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	05/05/05 12:49

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE50306 - EPA 5030C (GC)										
Matrix Spike Dup (EE50306-MSD1)	**Source: 5D29014-02**			Prepared & Analyzed: 05/03/05						
Benzene	83.2		ug/kg	100	ND	83.2	80-120	8.52	20	
Toluene	85.0		"	100	ND	85.0	80-120	9.52	20	
Ethylbenzene	82.2		"	100	ND	82.2	80-120	13.0	20	
Xylene (p/m)	182		"	200	ND	91.0	80-120	15.2	20	
Xylene (o)	88.5		"	100	ND	88.5	80-120	13.2	20	
Surrogate: a,a,a-Trifluorotoluene	*96.0*		"	*100*		*96.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*113*		"	*100*		*113*	*80-120*			

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Rice Operating Co.	Project: BD F-35 Boot Grab Sample @ 12'	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	05/05/05 12:49

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE50301 - General Preparation (Prep)										
Blank (EE50301-BLK1)				Prepared: 05/02/05 Analyzed: 05/03/05						
% Moisture	ND	0.1	%							
Duplicate (EE50301-DUP1)	**Source: 5E02002-01**			Prepared: 05/02/05 Analyzed: 05/03/05						
% Moisture	0.5	0.1	%		0.5			0.00	20	
Batch EE50311 - Water Extraction										
Blank (EE50311-BLK1)				Prepared & Analyzed: 05/03/05						
Chloride	ND	0.500	mg/kg							
LCS (EE50311-BS1)				Prepared & Analyzed: 05/03/05						
Chloride	10.2		mg/L	10.0		102	80-120			
Calibration Check (EE50311-CCV1)				Prepared & Analyzed: 05/03/05						
Chloride	10.7		mg/L	10.0		107	80-120			
Duplicate (EE50311-DUP1)	**Source: 5E02004-01**			Prepared & Analyzed: 05/03/05						
Chloride	634	100	mg/kg		636			0.315	20	

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Rice Operating Co.	Project: BD F-35 Boot Grab Sample @ 12'	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	05/05/05 12:49

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K. Tuttle Date: 5/5/2005

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
James L. Hawkins, Chemist/Geologist
Sandra Sanchez, Lab Tech.

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763

Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Roy Rascon
Company Name: Rice Operating Company
Company Address: 122 W Taylor
City/State/Zip: Hobbs, NM 88240
Telephone No: 505-393-9174
Fax No: 505-397-1471
Sampler Signature: [signature]

Project Name: BD F-35 Boot Grab Sample @ 12'
Project #:
Project Loc:
PO #:

Analyze For: TCLP: / TOTAL:

LAB # (lab use only) 5E02013	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Cl^-	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	EC, CEC, SAR, ESP	Major cations/anions, TDS					RUSH TAT (Pre-Schedule)	Standard TAT
-01	Grab Sample at 12'	4-28-05	8:51 am	1	X									X		X			X				X								

Special Instructions:

Sample Containers Intact? (Y) N
Temperature Upon Receipt: 2.0c
Laboratory Comments: seals - both, ice, labels, 4.0z jar

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	4-29-05	9:15	[signature]	4/29	18:18
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
[signature]	4/30	8:40	Ralan [illegible]	4-30-05	0830

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: Rice operating

Date/Time: 5/2/05 8:30

Order #: 5E0204|3

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	2.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample labels?	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation:

Contact Person: _____ Date/Time: _____ Contacted by: _____

Regarding:

Corrective Action Taken: