1R - 427-286

WORKPLANS

Date:

5-24-11

Rice Environmental Consulting & Safety
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

CERTIFIED MAIL
RETURN RECIEPT NO. 7008 1140 0001 3070 5726

May 24th, 2011

Mr. Edward Hansen
New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

RE: **INVESTIGATION & CHARACTERIZATION PLAN**
Rice Operating Company – EME SWD System
EME N-17 EOL (1R427-286): UL/N sec. 17 T19S R37E
(formerly EME Conoco A-17 EOL)

Mr. Hansen:

RICE Operating Company (ROC) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site in the EME Salt Water Disposal (SWD) system. The site was previously referred to as the EME Conoco A-17 EOL. However, GIS mapping shows the site to be located within unit letter N (Figure 1). To reflect the geographical location of the site, the name has been changed to EME N-17 EOL. All future correspondence will reference EME N-17 EOL.

ROC is the service provider (agent) for the EME 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 Parties, who provide all operating capital on a percentage/usage basis. Environmental projects of this nature require System Party AFE approval prior to work commencing at the site. In general, project funding is not forthcoming until NMOCD approves the work plan. Therefore, your timely review of this submission is greatly appreciated.

For all such environmental projects, ROC will choose the 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 generally have three submissions:

1. This Investigation and Characterization Plan (ICP) is proposed for gathering data 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) if warranted.

3. Finally, after implementing the remedy, a Termination Request with final documentation will be submitted.

Background and Previous Work

The site is located approximately 2.5 miles north-west of Monument, New Mexico at UL/N sec. 17 T19S R37E as shown on the Site Location Map (Figure 2). NM OSE records indicate that groundwater will likely be encountered at a depth of approximately 59 +/- feet.

In 2004, ROC initiated work on the former EME N-17 EOL junction boxes. The site consisted of two boxes, one north and one south. The south box contained a boot. The site was delineated using a backhoe to form a 20 ft x 25 ft x 13 ft deep excavation and soil samples were screened at regular intervals for both hydrocarbons and chlorides. From the excavation, the four-wall composite, the bottom composite and the backfill were taken to a commercial laboratory for analysis. Laboratory tests of the four-wall composite showed a chloride reading of 319 mg/kg, a gasoline range organics (GRO) reading of 372 mg/kg and a diesel range organics (DRO) reading of 1,260 mg/kg. The benzene reading on the four-wall composite was non-detect, the toluene reading was 0.177 mg/kg, the ethyl benzene reading was 0.338 mg/kg, and the total xylenes read 1.551 mg/kg. The bottom composite showed a chloride laboratory reading of 330 mg/kg, a gasoline range organics (GRO) reading of 155 mg/kg and a diesel range organics (DRO) reading of 520 mg/kg. The benzene reading on the bottom composite was non-detect, the toluene reading was 0.286 mg/kg, the ethyl benzene reading was 0.449 mg/kg, and the total xylenes read 1.814 mg/kg.

The excavated soil was remediated on site. Laboratory analysis of the blended backfill showed a chloride reading of 179 mg/kg, a GRO reading of 39.4 mg/kg and a DRO reading of 500 mg/kg. The area was contoured to the surrounding landscape and an identification plate was placed on the surface of the site to mark its location for future environmental considerations. NMOCD was notified of potential groundwater impact on May 4th, 2005 and a junction box disclosure report (Appendix A) was submitted to NMOCD with all the 2008 junction box closures and disclosures.

ROC proposes additional investigative work at the site to determine if there is potential for groundwater degradation from residual chlorides and hydrocarbons at the site.

Proposed Work Elements

1. Conduct vertical and lateral delineation of residual soil hydrocarbons and chlorides from samples taken using a drill rig, hand auger, and/or backhoe (see Appendix B for Quality Procedures).

a. Vertical sampling will be conducted until the following criteria are met in the field.
    i. Three samples in which the chloride concentration decreases and the third sample has a chloride concentration of ≤ 250 ppm; and,
    ii. Three samples in which PID readings decrease and the third sample has a PID reading of ≤ 100 ppm; or,
    iii. The sampling reaches the capillary fringe.
b. Lateral sampling will be conducted until the following criteria are met in the field.
    i. A decrease is observed in chloride concentrations between lateral bores at similar depths; and,
    ii. A chloride concentration of ≤ 250 ppm is observed in a lateral surface sample; or,
    iii. Safety concerns impede further lateral delineation.

2. If warranted, install a monitor well to provide direct measurement of the potential groundwater impact at the site. (All monitor wells will be installed by EPA, NMOCD, and industry standards.)
3. Evaluate the risk of groundwater impact based on the information obtained.

If the evaluation of the site shows no threat to groundwater from residual chlorides, then only a vadose zone remedy will be undertaken. However, if groundwater shows impact from residual chlorides, a CAP will be developed to address these concerns.

ROC appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-9174 or me if you have any questions or wish to discuss the site.

Sincerely,

Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

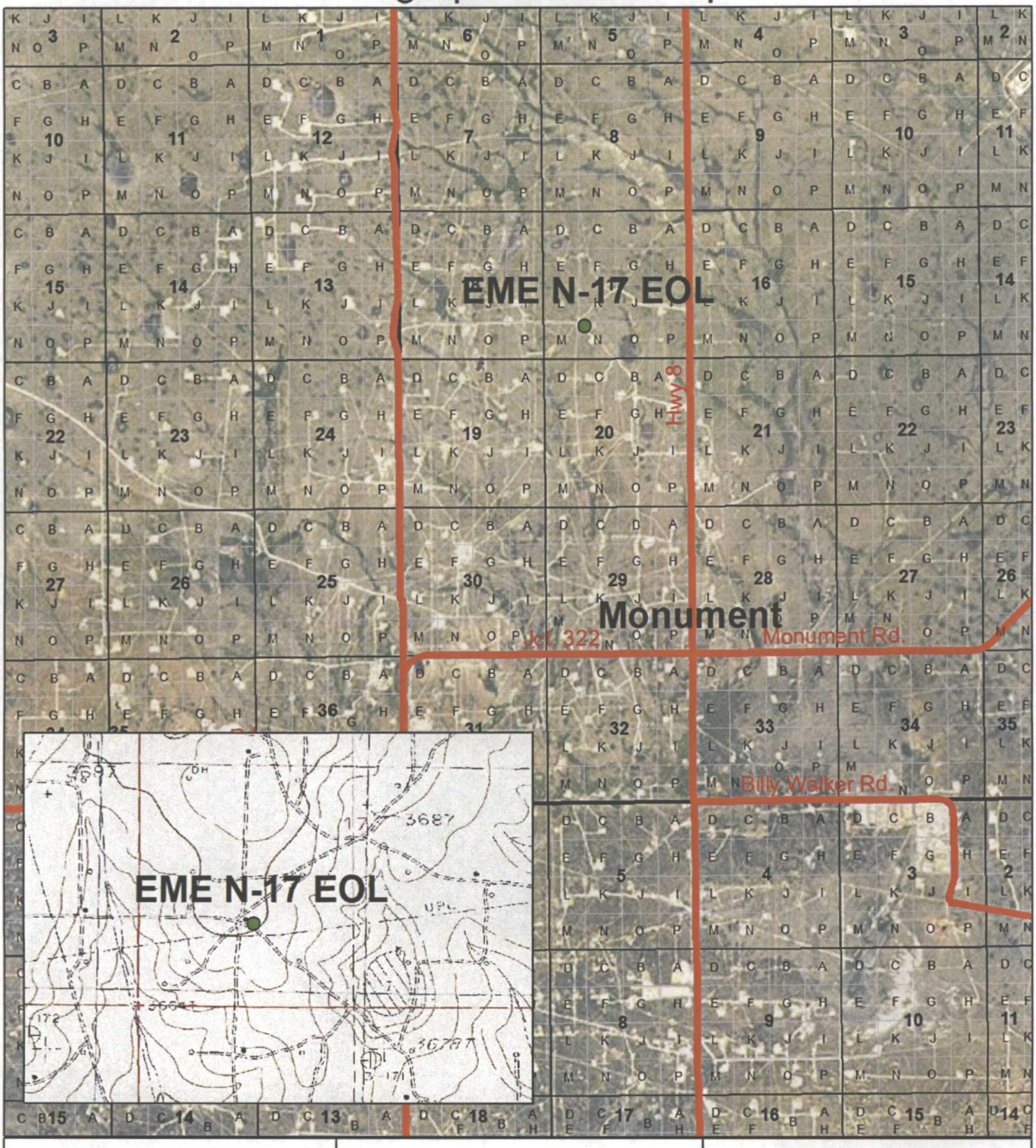
Attachments:

Figures – Site location map
Appendix A – Junction Box Disclosure Report
Appendix B – Quality Procedures

Figures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Geographical Site Map



RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

EME N-17 EOL

LEGALS: UL/N sec. 17
T19S R37E

NMOCD Case #: 1R427-286

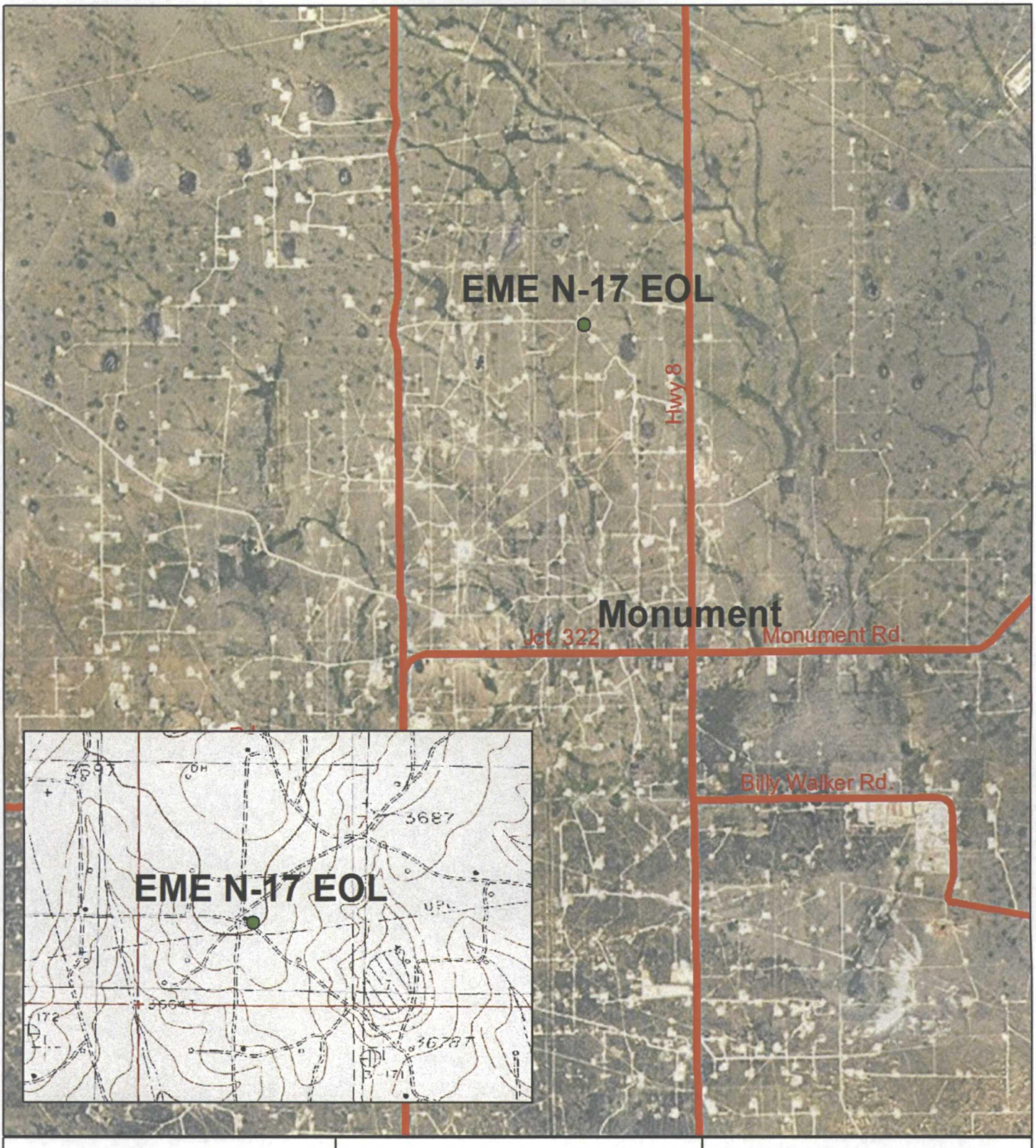
Figure 1

N W E S

0 2,250 4,500 9,000 Feet

Drawing date: 5-24-11
Drafted by: L. Weinheimer

Site Map



RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC
RECS

EME N-17 EOL

LEGALS: UL/N sec. 17
T19S R37E

NMOCD Case #: 1R427-286

Figure 2

N
W E
S

0 2,250 4,500 9,000
Feet

Drawing date: 5-4-11
Drafted by: L. Weinheimer

Appendix A

Junction Box Disclosure Report

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

RICE OPERATING COMPANY
JUNCTION BOX DISCLOSURE* REPORT

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
Eunice Monument Eumont (EME)	Conoco A-17 EOL (2 boxes)	M	17	19S	37E	Lea	moved 150 ft north		

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

Depth to Groundwater 59 feet NMOCD SITE ASSESSMENT RANKING SCORE: 20

Date Started 10/13/2004 Date Completed 5/6/2005 OCD Witness no

Soil Excavated 241 cubic yards Excavation Length 20 Width 25 Depth 13 feet

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

FINAL ANALYTICAL RESULTS: **Sample Date** 10/21/2004, 4/15/2005 **Sample Depth** 13 ft

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	Chlorides mg/kg
4-WALL COMP.	ND	0.177	0.338	1.551	372	1260	319
BOTTOM COMP.	ND.	0.286	0.449	1.814	155	520	330
BACKFILL	PID = 141 (field)				340	1970	276
REMEDIATED BACKFILL	PID = 23.1 (field)				39.4	500	179

General Description of Remedial Action: These junction boxes were addressed under the pipeline replacement/upgrade program. A new, watertight junction box was built 150 ft north of the former. After the former boxes were removed, an investigation was conducted using a backhoe to collect soil samples at regular intervals, producing a 20x25x12-ft-deep hole. Chloride field tests were performed on each sample. Organic vapors were measured using a PID, which yielded elevated levels. The excavated soil was remediated on-site and returned to the excavation to ground surface. An identification plate was placed on the surface of the backfilled site to mark the location of the former junction for future environmental consideration. NMOCD was notified of potential groundwater impact on 5/4/2005.

ADDITIONAL EVALUATION IS HIGH PRIORITY

enclosures: photos, lab results, PID screenings, BTEX comparison table, chloride curve

CHLORIDE FIELD TESTS

LOCATION	DEPTH	mg/kg
4-wall comp.	n/a	368
bottom comp.	13'	321
backfill comp.	n/a	2747
remediated backfill	n/a	198
delineation trench at junction (source)	5'	372
	6'	428
	7'	510
	8'	434
	9'	490
	10'	529
	11'	608
	12'	732

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 8-11-08

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

EME Conoco A-17
EOL

Unit M, Section 17, T19S, R37E

undisturbed junction box (1) 1/6/2004

undisturbed junction box (2) 1/6/2004
with box (1) on left hand side, facing north

junction boxes removed, facing north 9/1/2004

excavation, facing east 10/25/2004

backfilling excavation, facing west 5/6/2005

identification plates, facing south 5/16/2005

new, watertight junction box 12/10/2005

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12600 West I-20 East - Odessa, Texas 79765

Bottom + 4-wall composites with BTEX study

10-21-04

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Analytical Report

Prepared for:

Roy Rascon
Rice Operating Co.
122 W. Taylor
Hobbs, NM 88240

Project: EME Conoco Phillips A-17 EOL # JCT K-17 Bast
Project Number: None Given
Location: None Given

Lab Order Number: 4J25004

Report Date: 10/28/04

Rice Operating Co.	Project: EME Conoco Phillips A-17 EOL	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	10/28/04 08:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Btm Field Comp @ 13'	4J25004-01	Soil	10/21/04 16:15	10/24/04 14:00
4 Wall Field Comp.	4J25004-02	Soil	10/21/04 16:30	10/24/04 14:00
Remed. Dirt 5 pt Comp.	4J25004-03	Soil	10/22/04 10:10	10/24/04 14:00
4 Wall Lab Comp.	4J25004-04	Soil	10/21/04 00:00	10/24/04 14:00
Bottom Lab Comp.	4J25004-05	Soil	10/21/04 00:00	10/24/04 14:00

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Rice Operating Co.	Project: EME Conoco Phillips A-17 EOL	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Roy Rascon	10/28/04 08:20

Organics by GC

Environmental Lab of Texas

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bttm Field Comp @ 13' (4J25004-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EJ42716	10/26/04	10/26/04	EPA 8021B	
Toluene	0.286	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.449	0.0250	"	"	"	"	"	"	
Xylene (p/m)	1.51	0.0250	"	"	"	"	"	"	
Xylene (o)	0.304	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*101 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*123 %*	*80-120*		"	"	"	"	*S-04*
Gasoline Range Organics C6-C12	155	10.0	mg/kg dry	1	EJ42514	10/25/04	10/25/04	EPA 8015M	
Diesel Range Organics >C12-C35	520	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	675	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*95.4 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*92.8 %*	*70-130*		"	"	"	"	
4 Wall Field Comp. (4J25004-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EJ42716	10/26/04	10/26/04	EPA 8021B	
Toluene	0.177	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.338	0.0250	"	"	"	"	"	"	
Xylene (p/m)	1.23	0.0250	"	"	"	"	"	"	
Xylene (o)	0.321	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*93.8 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*116 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	372	10.0	mg/kg dry	1	EJ42514	10/25/04	10/25/04	EPA 8015M	
Diesel Range Organics >C12-C35	1260	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	1630	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*95.2 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*96.2 %*	*70-130*		"	"	"	"	
Remed. Dirt 5 pt Comp. (4J25004-03) Soil									
Gasoline Range Organics C6-C12	340	10.0	mg/kg dry	1	EJ42514	10/25/04	10/25/04	EPA 8015M	
Diesel Range Organics >C12-C35	1970	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	2310	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*98.6 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*99.8 %*	*70-130*		"	"	"	"	

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Rice Operating Co.	Project: EME Conoco Phillips A-17 EOL	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	10/28/04 08:20

Organics by GC
Environmental Lab of Texas

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
4 Wall Lab Comp. (4J25004-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EJ42716	10/26/04	10/26/04	EPA 8021B	
Toluene	**0.203**	0.0250	"	"	"	"	"	"	
Ethylbenzene	**0.479**	0.0250	"	"	"	"	"	"	
Xylene (p/m)	**1.69**	0.0250	"	"	"	"	"	"	
Xylene (o)	**0.383**	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*102 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*132 %*	*80-120*		"	"	"	"	*S-04*
Bottom Lab Comp. (4J25004-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EJ42716	10/26/04	10/26/04	EPA 8021B	
Toluene	**0.150**	0.0250	"	"	"	"	"	"	
Ethylbenzene	**0.352**	0.0250	"	"	"	"	"	"	
Xylene (p/m)	**1.09**	0.0250	"	"	"	"	"	"	
Xylene (o)	**0.236**	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*100 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*119 %*	*80-120*		"	"	"	"	

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Rice Operating Co.	Project: EME Conoco Phillips A-17 EOL	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	10/28/04 08:20

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

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bttm Field Comp @ 13' (4J25004-01) Soil									
Chloride	330	20.0	mg/kg Wet	2	EJ42612	10/25/04	10/26/04	SW 846 9253	
% Moisture	9.0		%	1	EJ42603	10/25/04	10/26/04	% calculation	
4 Wall Field Comp. (4J25004-02) Soil									
Chloride	319	20.0	mg/kg Wet	2	EJ42612	10/25/04	10/26/04	SW 846 9253	
% Moisture	10.0		%	1	EJ42603	10/25/04	10/26/04	% calculation	
Remed. Dirt 5 pt Comp. (4J25004-03) Soil									
Chloride	276	20.0	mg/kg Wet	2	EJ42612	10/25/04	10/26/04	SW 846 9253	
% Moisture	17.0		%	1	EJ42603	10/25/04	10/26/04	% calculation	
4 Wall Lab Comp. (4J25004-04) Soil									
% Moisture	11.0		%	1	EJ42603	10/25/04	10/26/04	% calculation	
Bottom Lab Comp. (4J25004-05) Soil									
% Moisture	9.0		%	1	EJ42603	10/25/04	10/26/04	% calculation	

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Rice Operating Co.	Project: EME Conoco Phillips A-17 EOL	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	10/28/04 08:20

Organics by GC - Quality Control
Environmental Lab of Texas

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ42514 - Solvent Extraction (GC)										
Blank (EJ42514-BLK1)			Prepared & Analyzed: 10/25/04							
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	*37.4*		*mg/kg*	*50.0*		*74.8*	*70-130*			
Surrogate: 1-Chlorooctadecane	*40.5*		"	*50.0*		*81.0*	*70-130*			
LCS (EJ42514-BS1)			Prepared & Analyzed: 10/25/04							
Gasoline Range Organics C6-C12	452	10.0	mg/kg wet	500		90.4	75-125			
Diesel Range Organics >C12-C35	488	10.0	"	500		97.6	75-125			
Total Hydrocarbon C6-C35	940	10.0	"	1000		94.0	75-125			
Surrogate: 1-Chlorooctane	*47.2*		*mg/kg*	*50.0*		*94.4*	*70-130*			
Surrogate: 1-Chlorooctadecane	*46.6*		"	*50.0*		*93.2*	*70-130*			
Calibration Check (EJ42514-CCV1)			Prepared & Analyzed: 10/25/04							
Gasoline Range Organics C6-C12	473		mg/kg	500		94.6	80-120			
Diesel Range Organics >C12-C35	533		"	500		107	80-120			
Total Hydrocarbon C6-C35	1010		"	1000		101	80-120			
Surrogate: 1-Chlorooctane	*50.9*		"	*50.0*		*102*	*70-130*			
Surrogate: 1-Chlorooctadecane	*49.9*		"	*50.0*		*99.8*	*70-130*			
Matrix Spike (EJ42514-MS1)		**Source: 4J25002-01**	Prepared & Analyzed: 10/25/04							
Gasoline Range Organics C6-C12	599	10.0	mg/kg dry	575	ND	104	75-125			
Diesel Range Organics >C12-C35	631	10.0	"	575	ND	110	75-125			
Total Hydrocarbon C6-C35	1230	10.0	"	1150	ND	107	75-125			
Surrogate: 1-Chlorooctane	*53.9*		*mg/kg*	*50.0*		*108*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.1*		"	*50.0*		*100*	*70-130*			
Matrix Spike Dup (EJ42514-MSD1)		**Source: 4J25002-01**	Prepared & Analyzed: 10/25/04							
Gasoline Range Organics C6-C12	607	10.0	mg/kg dry	575	ND	106	75-125	1.33	20	
Diesel Range Organics >C12-C35	640	10.0	"	575	ND	111	75-125	1.42	20	
Total Hydrocarbon C6-C35	1250	10.0	"	1150	ND	109	75-125	1.61	20	
Surrogate: 1-Chlorooctane	*53.4*		*mg/kg*	*50.0*		*107*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.5*		"	*50.0*		*101*	*70-130*			

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Rice Operating Co.	Project: EME Conoco Phillips A-17 EOL	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	10/28/04 08:20

Organics by GC - Quality Control
Environmental Lab of Texas

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ42716 - EPA 5030C (GC)										
Blank (EJ42716-BLK1)				Prepared: 10/26/04 Analyzed: 10/27/04						
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	*87.0*		ug/kg	*100*		*87.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*103*		"	*100*		*103*	*80-120*			
LCS (EJ42716-BS1)				Prepared & Analyzed: 10/26/04						
Benzene	115		ug/kg	100		115	80-120			
Toluene	108		"	100		108	80-120			
Ethylbenzene	105		"	100		105	80-120			
Xylene (p/m)	240		"	200		120	80-120			
Xylene (o)	115		"	100		115	80-120			
Surrogate: a,a,a-Trifluorotoluene	*111*		"	*100*		*111*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*119*		"	*100*		*119*	*80-120*			
Calibration Check (EJ42716-CCV1)				Prepared: 10/26/04 Analyzed: 10/27/04						
Benzene	99.0		ug/kg	100		99.0	80-120			
Toluene	92.9		"	100		92.9	80-120			
Ethylbenzene	96.9		"	100		96.9	80-120			
Xylene (p/m)	218		"	200		109	80-120			
Xylene (o)	104		"	100		104	80-120			
Surrogate: a,a,a-Trifluorotoluene	*103*		"	*100*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*114*		"	*100*		*114*	*80-120*			
Matrix Spike (EJ42716-MS1)	**Source: 4J25002-01**			Prepared: 10/26/04 Analyzed: 10/27/04						
Benzene	88.8		ug/kg	100	ND	88.8	80-120			
Toluene	91.2		"	100	ND	91.2	80-120			
Ethylbenzene	97.3		"	100	ND	97.3	80-120			
Xylene (p/m)	220		"	200	ND	110	80-120			
Xylene (o)	106		"	100	ND	106	80-120			
Surrogate: a,a,a-Trifluorotoluene	*104*		"	*100*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*118*		"	*100*		*118*	*80-120*			

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Rice Operating Co.	Project: EME Conoco Phillips A-17 EOL	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Roy Rascon	10/28/04 08:20

Organics by GC - Quality Control
Environmental Lab of Texas

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ42716 - EPA 5030C (GC)										
Matrix Spike Dup (EJ42716-MSD1)	**Source: 4J25002-01**			Prepared: 10/26/04		Analyzed: 10/27/04				
Benzene	92.0		ug/kg	100	ND	92.0	80-120	3.54	20	
Toluene	93.6		"	100	ND	93.6	80-120	2.60	20	
Ethylbenzene	102		"	100	ND	102	80-120	4.72	20	
Xylene (p/m)	233		"	200	ND	116	80-120	5.31	20	
Xylene (o)	113		"	100	ND	113	80-120	6.39	20	
Surrogate: a,a,a-Trifluorotoluene	*104*		"	*100*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*118*		"	*100*		*118*	*80-120*			

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Rice Operating Co.	Project: EME Conoco Phillips A-17 EOL	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Roy Rascon	10/28/04 08:20

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 EJ42603 - General Preparation (Prep)										
Blank (EJ42603-BLK1)				Prepared: 10/25/04 Analyzed: 10/26/04						
% Moisture	0.0		%							
Duplicate (EJ42603-DUP1)		Source: 4J25004-01		Prepared: 10/25/04 Analyzed: 10/26/04						
% Moisture	9.0		%		9.0			0.00	20	
Batch EJ42612 - Water Extraction										
Blank (EJ42612-BLK1)				Prepared: 10/22/04 Analyzed: 10/26/04						
Chloride	ND	20.0	mg/kg Wet							
Matrix Spike (EJ42612-MS1)		Source: 4J21010-01		Prepared: 10/22/04 Analyzed: 10/26/04						
Chloride	510	20.0	mg/kg Wet	500	0.00	102	80-120			
Matrix Spike Dup (EJ42612-MSD1)		Source: 4J21010-01		Prepared: 10/22/04 Analyzed: 10/26/04						
Chloride	520	20.0	mg/kg Wet	500	0.00	104	80-120	1.94	20	
Reference (EJ42612-SRM1)				Prepared & Analyzed: 10/26/04						
Chloride	5000		mg/kg	5000		100	80-120			

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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: 10-28-04

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 Biezugbe, Lab Tech.

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

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CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Ray Rascon
Company Name: RICE Operating
Company Address: 122 W. Taylor
City/State/Zip: Hobbs, NM 88240
Telephone No: (505) 393-9174 Fax No: (505) 397-1471
Sampler Signature: Ray R. Rascon

Project Name: EME Conoco Phillips A-17 EOL
Project #:
Project Loc:
PO #:

4J2500y

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO3	HCl	NaOH	H2SO4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify)	Analyze For: TCLP: TOTAL: TDS / CL / SAR / EC	TPH 418.1	TPH TX 1005/1003	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RUSH TAT (Pre-Schedule)	Standard TAT
	SP#1 EAST WALL (E.W.)	10-21-04	1340	1	✓									✓											
	SP#2		1343	1	✓									✓											
	SP#3		1345	1	✓									✓											
	SP#4		1347	1	✓									✓											
	SP#5		1350	1	✓									✓											
	SP#1 South WALL (S.W.)	10-21-04	230	1	✓									✓											
	SP#2		232	1	✓									✓											
	SP#3		235	1	✓									✓											
	SP#4		236	1	✓									✓											
	SP#5		240	1	✓									✓											

Special Instructions: Combined SP 1-5 for E.W., S.W., W.W., & N.W. See RRR in LAB. for 1-Composite; ~~Run C, 1605.00~~; & BTEX (BTEX Study) Label as 4 WALL Lab Comp in Report

Sample Containers Intact? (Y) N
Temperature Upon Receipt: 4.0 C
Laboratory Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
Ray R Rascon	10-22-04	500			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
	10-23-04	12 00	Kalandra Tabb	10-24-04	1400

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

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CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Roy Rascon
Company Name: RICE Operating
Company Address: 122 W. Taylor
City/State/Zip: Hobbs, NM 88240
Telephone No: (505) 393-9174
Fax No: (505) 397-1471
Sampler Signature: Roy R. Rascon

Project Name: EME Conoco PHillips A-17 EOL
Project #:
Project Loc:
PO #:

LAB # (lab use only) 452504	FIELD CODE	Date Sampled	Time Sampled	No. of Containers 4oz glass	Preservative: Ice	HNO3	HCl	NaOH	H2SO4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (Specify)	Analyze For: TCLP: TOTAL: TDS / Cl / SAR / EC	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									RUSH TAT (Pre-Schedule)
	SP#1 West Wall (W.W.)	10-21-04	300	1	✓									✓																		
	SP#2		306	1	✓									✓																		
	SP#3		310	1	✓									✓																		
	SP#4		311	1	✓									✓																		
	SP#5		314	1	✓									✓																		
	SP#1 North Wall (N.W.)	10-21-04	325	1	✓									✓																		
	SP#2		327	1	✓									✓																		
	SP#3		326	1	✓									✓																		
	SP#4		329	1	✓									✓																		
	SP#5		330	1	✓									✓																		

Special Instructions:

Sample Containers Intact? Y (N)
Temperature Upon Receipt: 4.0 °C
Laboratory Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
Roy R. Rascon	10-22-04	500			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
	10-23-04	8:45	Rolanda Tuck	10-23-04	1400

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

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CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Ray Rascon
Company Name: RICE Operating
Company Address: 122 W. Taylor
City/State/Zip: Hobbs, NM 88240
Telephone No: (505) 393-9174 Fax No: (505) 397-1471
Sampler Signature: Ray R. Rascon

Project Name: EME Conoco Phillips A-17 EOL
Project #:
Project Loc:
PO #:

LAB # (lab use only): 4J25004

FIELD CODE	Date Sampled	Time Sampled	No. of Containers: Headspace	Preservative: Ice	HNO3	HCl	NaOH	H2SO4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify)	Analyze For: TDS (Cl) SAR / EC	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	RUSH TAT (Pre-Schedule)
SP#1 BTM @ 13'	10-21-04	338	1	✓									✓										
SP#2		341	1	✓									✓										
SP#3		345	1	✓									✓										
SP#4		348	1	✓									✓										
SP#5		351	1	✓									✓									✓	
-01 BTM Field Comp @ 13'	10-21-04	~~345~~ 1500	1	✓									✓		✓	1544		✓				✓	
-02 4 Wall Field Comp	10-21-04	~~345~~ 1515	1	✓									✓		✓			✓				✓	
-03 Reshaped Dirt 5pt Comp	10-22-04	1010	1	✓									✓		✓			✓				-	
-04 4 Wall Lab Comp.	10-21-04		1	✓									✓									✓	
-05 Bottom Lab Comp.	10-21-04		1	✓									✓									✓	

Special Instructions: Composite SP #1 - #5 IN LAB FOR ONE composite ~~BTEX~~ BTEX (BTEX Study) Label as ~~Lab BTM Composite~~ "bottom lab comp." in report

Sample Containers Intact? (Y) N
Temperature Upon Receipt:
Laboratory Comments: 4 oC

Relinquished by:	Date	Time	Received by:	Date	Time
Ray R. Rascon	10-22-04	500			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
	10-25-04	12 pm	Roland Tuttle	10-24-04	1400

Jeanne McMurrey

From: "Roy Rascon" <rroyriceswd@leaco.net>
To: "Jeanne McMurrey" <jeanne@elabtexas.com>
Sent: Monday, October 25, 2004 12:44 PM
Subject: Conoco A-17 EOL

Field Bottom and Four Wall time refer to jar and not COC.

--

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

Client: Rice Operating Co.

Date/Time: 10-25-04 @ 0830

Order #: 4J25004

Initials: JMM

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Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	4.0 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 label(s) JMM 10-25-04	(Yes)	(No)	*see below
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: Roy Rescon Date/Time: 10-25-04 @ 10:10 Contacted by: JeanneMcMullen

Regarding:

* discrepancy of sample times on 2 samples

Corrective Action Taken:

* Client said to take the time on the container not the COC. Roy will e-mail confirmation on this when he gets to the office

Roy Rascon

From: "Jeanne McMurrey" <jeanne@elabtexas.com>
To: "Roy Rascon" <rroyriceswd@leaco.net>
Sent: Monday, October 25, 2004 12:13 PM
Subject: Re: Conoco A-17 EOL

Thanks Roy...Jeanne

---- Original Message ----
From: Roy Rascon
To: Jeanne McMurrey
Sent: Monday, October 25, 2004 12:44 PM
Subject: Conoco A-17 EOL

Field Bottom and Four Wall time refer to jar and not COC.

--

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Remediated Backfill
4-15-05

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

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Analytical Report

Prepared for:

Roy Rascon
Rice Operating Co.
122 W. Taylor
Hobbs, NM 88240

Project: EME Jct. K-17/ Jct. A-17 eol.
Project Number: None Given
Location: None Given

Lab Order Number: 5D22004

Report Date: 04/26/05

Rice Operating Co.	Project: EME Jct. K-17/ Jct. A-17 col	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Roy Rascon	04/26/05 14:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Remediated Backfill	5D22004-01	Soil	04/15/05 13:00	04/22/05 07:50

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Rice Operating Co.	Project: EME Jct. K-17/ Jct. A-17 col	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Roy Rascon	04/26/05 14:13

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Remediated Backfill (5D22004-01) Soil									
Gasoline Range Organics C6-C12	**39.4**	10.0	mg/kg dry	1	ED52212	04/22/05	04/25/05	EPA 8015M	
Diesel Range Organics >C12-C35	**500**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**539**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*88.6 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*87.8 %*	*70-130*		"	"	"	"	

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Rice Operating Co.	Project: EME Jct. K-17/ Jct. A-17 eol	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	04/26/05 14:13

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Remediated Backfill (5D22004-01) Soil									
Chloride	179	10.0	mg/kg	20	ED52606	04/25/05	04/25/05	EPA 300.0	
% Moisture	10.8	0.1	%	1	ED52501	04/22/05	04/25/05	% calculation	

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Rice Operating Co.	Project: EME Jct. K-17/ Jct. A-17 eol	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Roy Rascon	04/26/05 14:13

Organics by GC - Quality Control
Environmental Lab of Texas

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED52212 - Solvent Extraction (GC)										
Blank (ED52212-BLK1)				Prepared: 04/22/05 Analyzed: 04/25/05						
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	*36.5*		*mg/kg*	*50.0*		*73.0*	*70-130*			
Surrogate: 1-Chlorooctadecane	*36.2*		"	*50.0*		*72.4*	*70-130*			
LCS (ED52212-BS1)				Prepared: 04/22/05 Analyzed: 04/24/05						
Gasoline Range Organics C6-C12	473	10.0	mg/kg wet	500		94.6	75-125			
Diesel Range Organics >C12-C35	514	10.0	"	500		103	75-125			
Total Hydrocarbon C6-C35	987	10.0	"	1000		98.7	75-125			
Surrogate: 1-Chlorooctane	*38.2*		*mg/kg*	*50.0*		*76.4*	*70-130*			
Surrogate: 1-Chlorooctadecane	*35.8*		"	*50.0*		*71.6*	*70-130*			
Calibration Check (ED52212-CCV1)				Prepared: 04/22/05 Analyzed: 04/24/05						
Gasoline Range Organics C6-C12	434		mg/kg	500		86.8	80-120			
Diesel Range Organics >C12-C35	488		"	500		97.6	80-120			
Total Hydrocarbon C6-C35	922		"	1000		92.2	80-120			
Surrogate: 1-Chlorooctane	*49.9*		"	*50.0*		*99.8*	*70-130*			
Surrogate: 1-Chlorooctadecane	*45.3*		"	*50.0*		*90.6*	*70-130*			
Matrix Spike (ED52212-MS1)	Source: 5D22003-15			Prepared: 04/22/05 Analyzed: 04/25/05						
Gasoline Range Organics C6-C12	480	10.0	mg/kg dry	541	31.7	82.9	75-125			
Diesel Range Organics >C12-C35	559	10.0	"	541	38.5	96.2	75-125			
Total Hydrocarbon C6-C35	1040	10.0	"	1080	70.2	89.8	75-125			
Surrogate: 1-Chlorooctane	*55.7*		*mg/kg*	*50.0*		*111*	*70-130*			
Surrogate: 1-Chlorooctadecane	*49.7*		"	*50.0*		*99.4*	*70-130*			
Matrix Spike Dup (ED52212-MSD1)	Source: 5D22003-15			Prepared: 04/22/05 Analyzed: 04/25/05						
Gasoline Range Organics C6-C12	480	10.0	mg/kg dry	541	31.7	82.9	75-125	0.00	20	
Diesel Range Organics >C12-C35	547	10.0	"	541	38.5	94.0	75-125	2.17	20	
Total Hydrocarbon C6-C35	1030	10.0	"	1080	70.2	88.9	75-125	0.966	20	
Surrogate: 1-Chlorooctane	*54.6*		*mg/kg*	*50.0*		*109*	*70-130*			
Surrogate: 1-Chlorooctadecane	*51.1*		"	*50.0*		*102*	*70-130*			

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Rice Operating Co.	Project: EME Jct. K-17/ Jct. A-17 eol	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Roy Rascon	04/26/05 14:13

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 ED52501 - General Preparation (Prep)										
Blank (ED52501-BLK1)				Prepared: 04/22/05 Analyzed: 04/25/05						
% Moisture	ND	0.1	%							
Duplicate (ED52501-DUP1)		Source: 5D21010-01		Prepared: 04/22/05 Analyzed: 04/25/05						
% Moisture	12.8	0.1	%		13.0			1.55	20	
Batch ED52606 - Water Extraction										
Blank (ED52606-BLK1)				Prepared & Analyzed: 04/25/05						
Chloride	ND	0.500	mg/kg							
LCS (ED52606-BS1)				Prepared & Analyzed: 04/25/05						
Chloride	10.8		mg/L	10.0		108	80-120			
Calibration Check (ED52606-CCV1)				Prepared & Analyzed: 04/25/05						
Chloride	10.3		mg/L	10.0		103	80-120			
Duplicate (ED52606-DUP1)		Source: 5D22004-01		Prepared & Analyzed: 04/25/05						
Chloride	176	10.0	mg/kg		179			1.69	20	

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

Notes and Definitions

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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: 4-26-05

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

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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: Israel Juarez

Project Name: EME Jct K-17 / Jct A-17 eol
Project #:
Project Loc:
PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	Preservative: HNO_3	Preservative: HCl	Preservative: NaOH	Preservative: H_2SO_4	Preservative: None	Preservative: Other (Specify)	Matrix: Water	Matrix: Sludge	Matrix: Soil	Matrix: Other (specify):	Analyze For: TCLP:	Analyze For: TOTAL: /CL/	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRC/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
5042004 -01	Remediated Backfill	4/15/05	1:00	1	X									X			X			X								

Special Instructions:

Sample Containers Intact? Y N
Temperature Upon Receipt:
Laboratory Comments:
Rec 3.0°C

Relinquished by:	Date:	Time:	Received by:	Date	Time
Israel Juarez	4.21.05	4:20	CO Haynes	4/21	17:58
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
CO Haynes	4/22	7:50	Kalan d/c 1.0	4.22.05	0750

Environmental Lab of Texas

Variance / Corrective Action Report – Sample Log-In

Client: Rice Operating

Date/Time: 4/22/05 11:30

Order #: 5D22004

Initials: CK

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Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	3.0 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:

HOBBS, NEW MEXICO 8824
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE
AIR
LOT NO: 03-2475
EXP. DATE: 1-7-06
METER READING
ACCURACY: 100.1

SERIAL NO: 104412

100 PPM
BALANCE
FILL DATE: 7-7-04
ACCURACY: 100.0(+-) 2%

COPY

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
EME	ConocoPhillips A-17 EOL	3 M	17	19	37

@ JCT K-17

SAMPLE	PID RESULT	SAMPLE	PID RESULT
5 PT Comp 13'	949		
5 PT Comp 4 Wall	634		

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Roy L. Gibson
Signature

10-21-04
Date

HOBBS, NEW MEXICO 8824
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE
AIR
LOT NO: 03-2475
EXP. DATE: 1-7-06
METER READING
ACCURACY: 100.0

SERIAL NO: 104412

100 PPM
BALANCE
FILL DATE: 7-7-04
ACCURACY: 100.0 (+-)2%

COPY

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
EME	Conoco Phillips A-17 E of L &	M	17	19	37

JCT K-17

SAMPLE	PID RESULT	SAMPLE	PID RESULT
Remed. Soil 5PT Comp.	141		

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Roy R. Rascon
Signature

10-22-04
Date

EME K-17

4-15-05 Sent Remediated backfill to the lab

Cl. 198 PID 23.1

COPY

Israel Juarez

2008 BTEX Study

Revised Junction Box Upgrade Plan (2003)

System: EME
Site: Conoco A-17 EOL

Date: 10/21/2004
Sampler: Roy Rascon

Laboratory: Environmental Lab of Texas

Location	Component	PID reading (ppm)	FIELD COMPOSITE (mg/kg) Benzene	Toluene	Ethyl Benzene	Total Xylenes
bottom composite at 13 ft BGS	1	1,433.0	ND	0.286	0.449	1.814
	2	55.4				
	3	4.4				
	4	2.4				
	5	4.5				

LAB COMPOSITE (mg/kg) Benzene	Toluene	Ethyl Benzene	Total Xylenes
ND	0.150	0.352	1.326

Location	PID reading (ppm)	FIELD COMPOSITE (mg/kg) Benzene	Toluene	Ethyl Benzene	Total Xylenes
4-WALL COMPOSITE from 20x25x12	634.0	ND	0.177	0.338	1.551

LAB COMPOSITE (mg/kg) Benzene	Toluene	Ethyl Benzene	Total Xylenes
ND	0.203	0.479	2.073

Field PID tests <100 ppm are considered final for BTEX. If PID is >100 ppm, the components of the BTEX composite sample will be collected individually and will be composited under laboratory conditions to prevent excessive volatilization. A 15-box, 30-sample study will be made to compare field-compositing with lab-compositing BTEX samples. Composite components are collected in a skewed 'W' pattern.

Revised Junction Box Upgrade Work Plan (July 16, 2003)

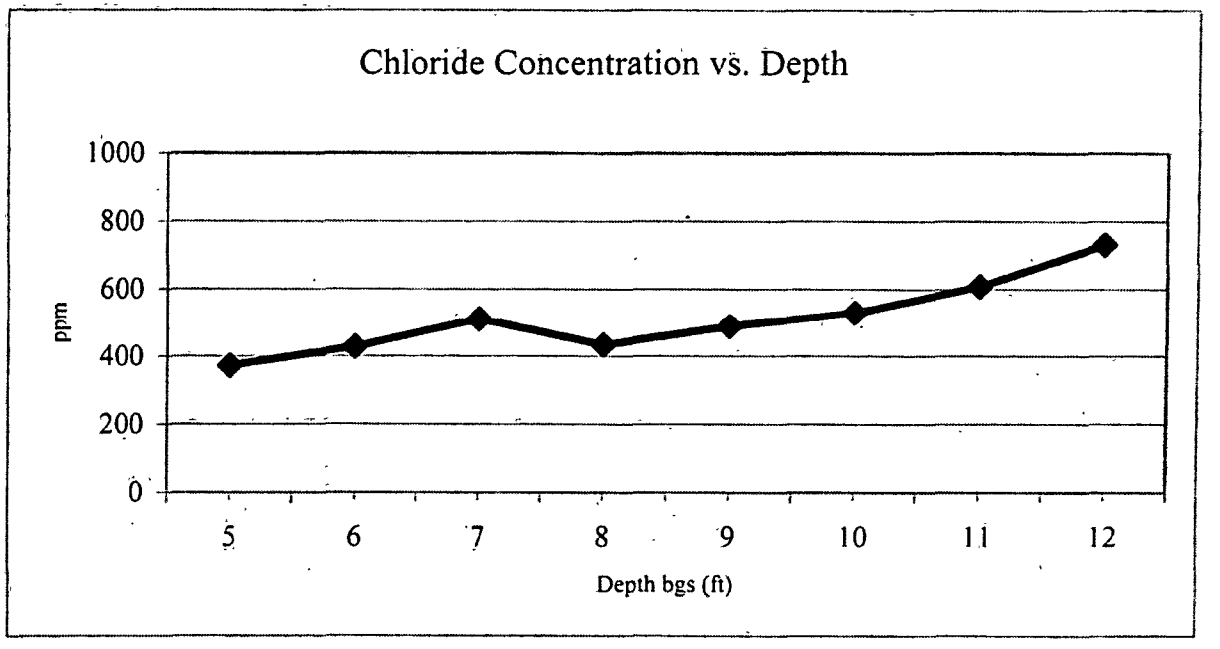
EME Conoco A-17 EOL

unit 'M', Sec. 17, T19S, R37E

Backhoe samples at junction (source)

Depth bgs (ft)	[Cl⁻] ppm
5	372
6	428
7	510
8	434
9	490
10	529
11	608
12	732

Groundwater = 59 ft



Appendix B
Quality Procedures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Rice Environmental Consulting and Safety

Quality Procedures

Table of Contents

Rice Environmental Consulting and Safety

Quality Procedure
Soil Samples for Transportation to a Laboratory

1.0 Purpose

This procedure outlines the methods to be employed when obtaining soil samples to be taken to a laboratory for analysis.

2.0 Scope

This procedure is to be used when collecting soil samples intended for ultimate transfer to a testing laboratory.

3.0 Preliminary

3.1 Obtain sterile sampling containers from the testing laboratory designated to conduct analyses of the soil.

3.2 If collecting TPH, BTEX, RCRA 8 metals, cation /anions or O&G, the sample jar may be a clear 4 oz. container with Teflon lid. If collecting PAH's, use an amber 4 oz. container.

4.0 Chain of Custody

4.1 Prepare a Sample Plan. The plan will list the number, location and designation of each planned sample and the individual tests to be performed on the sample. The sampler will check the list against the available inventory of appropriate sample collection bottles to insure against shortage.

4.2 Transfer the data to the Laboratory Chain of Custody Form. Complete all sections of the form except those that relate to the time of delivery of the samples to the laboratory.

4.3 Pre-label the sample collection jars. Include all requested information except time of collection. (Use a fine point Sharpie to insure that the ink remains on the label.) Affix the labels to the jars.

5.0 Sampling Procedure

5.1 Do not touch the soil with your bare hands. Use new nitrile gloves to help minimize any contamination.

5.2 Go to the sampling point with the sample container. If not analyzing for ions or metals, use a trowel to obtain the soil.

5.3 Pack the soil tightly into the container leaving the top slightly domed. Screw the lid down tightly. Enter the time of collection onto the sample collection jar label.

5.4 Place the sample directly on ice for transport to the laboratory if required.

5.5 Complete the Chain of Custody form to include the collection times for each sample. Deliver all samples to the laboratory.

6.0 Documentation

6.1 The testing laboratory shall provide the following minimum information:

a. Project and sample name.
b. Signed copy of the original Chain of Custody Form including the time the sample was received by the lab.
c. Results of the requested analyses
d. Test Methods employed
e. Quality Control methods and results

Rice Environmental Consulting and Safety

QUALITY PROCEDURE
Chloride Titration Using
0.282 Normal Silver Nitrate Solution

1.0 Purpose

This procedure is to be used to determine the concentration of chloride in soil.

2.0 Scope

This procedure is to be used as the standard field measurement for soil chloride concentrations.

3.0 Sample Collection and Preparation

3.1 Collect at least 80 grams of soil from the sample collection point. Take care to insure that the sample is representative of the general background to include visible concentrations of hydrocarbons and soil types. If necessary, prepare a composite sample for soils obtained at several points in the sample area. Take care to insure that no loose vegetation, rocks or liquids are included in the sample(s).

3.2 The soil sample(s) shall be immediately inserted into a one-quart or larger polyethylene freezer bag. Care should be taken to insure that no cross-contamination occurs between the soil sample and the collection tools or sample processing equipment.

3.3 The sealed sample bag should be massaged to break up any clods.

4.0 Sample Preparation

4.1 Tare a clean glass vial having a minimum 40 ml capacity. Add at least 10 grams of the soil sample and record the weight.

4.2 Add at least 20 grams of reverse osmosis water to the soil sample and shake well.

4.3 Allow the sample to set for a period of 5 minutes or until the separation of soil and water.

5.0 Titration Procedure

5.1 Using a graduated pipette, remove 10 ml extract and dispense into a clean plastic cup.

5.2 Add 2-3 drops potassium chromate (K_2CrO_4) to mixture if necessary.

5.3 Using a 1 ml pipette, carefully add .282 normal silver nitrate (one drop at a time) to the sample while constantly agitating it. Stop adding silver nitrate when the solution begins to change from yellow to red. Be consistent with endpoint recognition.

5.4 Record the ml of silver nitrate used.

6.0 Calculation

To obtain the chloride concentration, insert measured data into the following formula:

$$\frac{.282 \times 35{,}450 \times \text{ml } AgNO_3}{\text{ml water extract}} \times \frac{\text{grams of water in mixture}}{\text{grams of soil in mixture}}$$

Using Step 5.0, determine the chloride concentration of the RO water used to mix with the soil sample. Record this concentration and subtract it from the formula results to find the net chloride in the soil sample.

Record all results on the delineation form.

Rice Environmental Consulting and Safety

Quality Procedure
Development of Cased Water-Monitoring Wells

1.0 Purpose

This procedure outlines the methods to be employed to develop cased monitoring wells.

2.0 Scope

This procedure shall be used for developed, cased water monitoring wells. It is not to be used for standing water samples such as ponds or streams.

3.0 Sample Collection and Preparation

3.1 Prior to development, the static water level and height of the water column within the well casing will be measured with the use of an electric D.C. probe.

3.2 All measurements will be recorded within a field log notebook.

3.3 All equipment used to measure the static water level will be decontaminated after each use by means of Liquinox, a phosphate free laboratory detergent, and water to reduce the possibility of cross-contamination. The volume of water in each well casing will be calculated.

4.0 Purging

4.1 Wells will be purged by using a 2" decontaminated submersible pump or dedicated one liter Teflon bailer. Wells should be purged until the pH and conductivity are stabilized and the turbidity has been reduced to the greatest extent possible.

4.2 If a submersible is used the pump will be decontaminated prior to use by scrubbing the outside surface of tubing and wiring with a Liquinox water mixture, pumping a Liquinox-water mixture through the pump, and a final flush with fresh water.

5.0 Water Disposal

5.1 All purge and decontamination water will be temporarily stored within a portable tank to be later disposed of in an appropriate manner.

6.0 Records

6.1 Rice Environmental Consulting and Safety will record the amount of water removed from the well during development procedures. The purge volume will be reported to the appropriate regulatory authority when filing the closure report.

Rice Environmental Consulting and Safety

Quality Procedure
Sampling of Cased Water-Monitoring Well

1.0 Purpose

This procedure outlines the methods to be employed in obtaining water samples from cased monitoring wells.

2.0 Scope

This procedure shall be used for developed, cased water monitoring wells. It is not to be used for standing water samples such as ponds or streams.

3.0 Preliminary

3.1 Obtain sterile sampling containers from the testing laboratory designated to conduct analyses of the water.

3.2 The following table shall be used to select the appropriate sampling container, preservative method and holding times for the various elements and compounds to be analyzed.

Compound to be Analyzed	Sample Container Size	Sample Container Description	Cap Requirements	Preservative	Maximum Hold Time
BTEX	40 ml	VOA Container	Teflon Lined	HCL	14 days
TPH (8015 Extended)	40 ounces	(2) 40ml VOA vials	Teflon Lined	HCL and Ice	14 days
PAH	1 liter	amber glass	Teflon Lined	Ice	7 days
Cation/Anion	1 liter	HD polyethylene	Any Plastic	None	48 Hrs
Metals	1 liter	HD polyethylene	Any Plastic	Ice/HNO_3	28 Days
TDS	300 ml	clear glass or 250 ml HD polyethylene	Any Plastic	Ice	7 Days
Cl-	500 ml	HD polyethylene	Any Plastic	None	28 Days

4.0 Chain of Custody

4.1 Prepare a Sample Plan. The plan will list the well identification and the individual tests to be performed at that location. The sampler will check the list against the available inventory of appropriate sample collection bottles to insure against shortage.

4.2 Transfer the data to the Laboratory Chain of Custody Form. Complete all sections of the form except those that relate to the time of delivery of the samples to the laboratory.

4.3 Pre-label the sample collection jars. Include all requested information except time of collection. (Use a fine point Sharpie to insure that the ink remains on the label). Affix the labels to the jars.

5.0 Bailing Procedure

5.1 Identify the well from the sites schematics. Place pre-labeled jar(s) next to the well. Remove the plastic cap from the well bore by first lifting the metal lever and then unscrewing the entire assembly.

5.2 Using a dedicated one liter Teflon bailer or submersible pump, purge a minimum of three well volumes. Place the water in storage container for transport to a ROC disposal facility.

5.3 If using a bailer, take care to insure that the bailing device and string does not become cross-contaminated. A clean pair of nitrile gloves should be used when handling either the retrieval string or bailer. The retrieval string should not be allowed to come into contact with the ground.

6.0 Sampling Procedure

6.1 Once the well has been bailed in accordance with 5.2 of this procedure, a sample may be decanted into the appropriate sample collection jar directly from the bailer or submersible pump.

6.2 Note the time of collection on the sample jar with a fine Sharpie.

6.3 Place the sample directly on ice for transport to the laboratory. The preceding table shows the maximum hold times between collection and testing for the various analyses.

6.4 Complete the Chain of Custody form to include the collection times for each sample. Deliver all samples to the laboratory.

7.0 Documentation

7.1 The testing laboratory shall provide the following minimum information:

A. Project and sample name.
B. Signed copy of the original Chain of Custody Form including the time the sample was received by the lab.
C. Results of the requested analyses
D. Test Methods employed
E. Quality Control methods and results

Calculation for Determining the Minimum Bailing Volume for Monitor Wells
Formula V= ($\pi r^2 h$)
2" well [V/231=gal] X 3 = Purge Volume

V=Volume
π=pi
r=inside radius of the well bore
h=maximum height of well bore in water table

Example:

π	r^2	h(in)	V(cu.in)	V(gal)	X 3 Volumes	Actual
3.1416	1	180	565.488	2.448	7.34 gal	>10 gal

Rice Environmental Consulting and Safety

Quality Procedure
Composite Sampling of Excavation Sidewalls and Bottoms For TPH and Chloride Analysis

1.0 Purpose

This procedure outlines the methods to be employed when obtaining final composite soil samples for TPH and Chloride analysis.

2.0 Scope

This procedure is to be used in conjunction with ***Quality Procedure – 02: Soil Samples for Transportation to a Laboratory*** and will be inserted at subparagraph 5.2 of Section 5.0: Sampling Procedure.

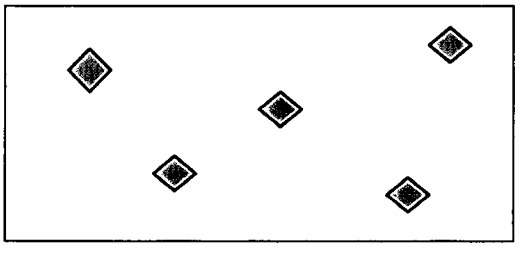
3.0 Sampling Procedure

Follow ***Quality Procedure – 02: Soil Samples for Transportation to a Laboratory*** for all Sections and subparagraphs until subparagraph 5.2 of Section 5.0: Sampling Procedure. Instead of 5.2 instructions, perform the composite sample collection procedure as follows:

3.1 Go to the excavation with a new plastic baggie. If not analyzing for ions or metals, use a trowel to obtain the soil. If the excavation is deeper than 6' BGS, do not enter the pit, but use a backhoe to assist in procurement of the sample. (If a backhoe is used, the backhoe will obtain an amount of soil from each composite point; bring the purchase to the surface staging area where a sample-portion of soil will be extracted from the backhoe purchase. The remainder of the backhoe purchase will be staged on the surface with other staged soils.)

3.2 Sidewall samples

3.2.1 On each sidewall, procure a 5oz sample from each of five distinct points on the sidewall with distinct points resembling the "W" pattern:



3.2.2 Thoroughly blend these five samples in a labeled baggie.
3.2.3 Repeat steps 3.2.1 through 3.2.4 for each remaining sidewall.
3.2.4 From each labeled baggie, procure a 5 oz portion and pour into a baggie labeled "Sidewall Composite". Blend this soil mixture completely.
3.2.5 Obtain proper laboratory sample container for "Sidewall Composite" and continue with subparagraph 5.3 of QP – 01.

3.3 Bottom Sample
3.3.1 From bottom of excavation, procure a 5oz sample from each of five distinct points with distinct points resembling the "W" pattern as illustrated above.
3.3.2 Thoroughly blend these five samples in a clean baggie.
3.3.3 Obtain proper laboratory sample container for "Bottom Composite" and continue with subparagraph 5.3 of QP – 01.

Rice Environmental Consulting and Safety

QUALITY PROCEDURE
Sampling and Testing Protocol for VOC in Soil

1.0 Purpose

This procedure is to be used to determine the concentrations of Volatile Organic Compounds in soils.

2.0 Scope

This procedure is to be used as the standard field measurement for soil VOC concentrations. It is not to be used as a substitute for full spectrographic speciation of organic compounds.

3.0 Procedure

3.1 Sample Collection and Preparation

3.1.1 Collect at least 500 g. of soil from the sample collection point. Take care to insure that the sample is representative of the general background to include visible concentrations of hydrocarbons and soil types. If necessary, prepare a composite sample of soils obtained at several points in the sample area. Take care to insure that no loose vegetation, rocks or liquids are included in the sample(s).

3.1.2 The soil sample(s) shall be immediately inserted into a one-quart or larger polyethylene freezer bag and sealed. When sealed, the bag should contain a nearly equal space between the soil sample and trapped air. Record the sample name and the time that the sample was collected on the Field Analytical Report Form.

3.1.3 The sealed samples shall be allowed to set for a minimum of five minutes at a temperature of between 10-15 Celsius, (59-77^{0}F). The sample temperatures may be adjusted by cooling the sample in ice, or by heating the sample within a generally controlled environment such as the inside of a vehicle. The samples should not be placed directly on heated surfaces or placed in direct heat sources such as lamps or heater vents.

3.1.4 The sealed sample bag should be massaged to break up any clods, and to provide the soil sample with as much exposed surface area as practically possible.

3.2 Sampling Procedure

3.2.1 The instrument to be used in conducting VOC concentration testing shall be a RAE Systems Photoionization device. (Device will be identified on VOC Field Test Report Form.) Prior to use, the instrument shall be zeroed-out in accordance with the appropriate maintenance and calibration procedure outlined in the instrument operation manual. The PID device will be calibrated each day it's used.

3.2.2 Carefully open one end of the collection bag and insert the probe tip into the bag taking care that the probe tip not touch the soil sample or the sidewalls of the bag.

3.2.3 Set the instrument to retain the highest result reading value. Record the reading onto the Field Test Report Form.

3.2.4 **If the instrument provides a reading exceeding 100 ppm, proceed to QP-7. If the reading is 100 ppm or less, NMOCD BTEX guideline has been met and no further testing for BTEX is necessary. File the Field Test Report Form in the project file.**

4.0 Clean-up

After testing, the soil samples shall be returned to the sampling location, and the bags collected for off-site disposal. **IN NO CASE SHALL THE SAME BAG BE USED TWICE. EACH SAMPLE CONTAINER MUST BE DISCARDED AFTER EACH USE.**

Rice Environmental Consulting and Safety

Quality Procedure
Composite Sampling of Excavation Sidewalls and Bottoms For BTEX

1.0 Purpose

This procedure outlines the methods to be employed when obtaining final composite soil samples for BTEX analysis.

2.0 Scope

This procedure is to be used when collecting soil samples intended for ultimate transfer to a testing laboratory for BTEX analysis. This procedure is to be used only when the PID field-test results for OVM exceeds 100 ppm.

3.0 Preliminary

3.1 Obtain sterile, clear, 2 oz. glass containers with Teflon lid from a laboratory supply company or the testing laboratory designated to conduct analyses of the soil.

4.0 Chain of Custody

4.1 Prepare a Sample Plan. The plan will list the number, location and designation of each planned sample and the individual tests to be performed on the sample. The sampler will check the list against the available inventory of appropriate sample collection bottles to insure against shortage.

4.2 Transfer the data to the Laboratory Chain of Custody Form. Complete all sections of the form except those that relate to the time of delivery of the samples to the laboratory.

4.3 Pre-label the sample collection jars. Include all requested information except time of collection. (Use a fine point Sharpie to insure that the ink remains on the label.) Affix the labels to the jars.

5.0 Sampling Procedure

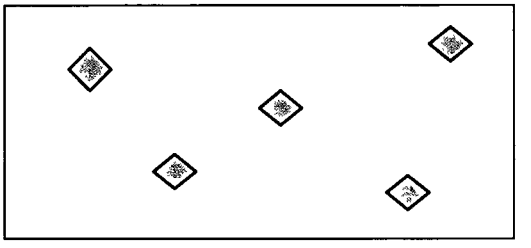
5.1. Do not touch the soil with your bare hands. Use new nitrile gloves to help minimize any cross-contamination.

5.2. If safe and within OSHA regulations, go to the sampling point with the sample container. If not analyzing for ions or metals, use a trowel to

obtain the soil. If the excavation is deeper than 6' BGS, do not enter the pit, but use a backhoe to assist in procurement of the sample. (If a backhoe is used, the backhoe will obtain an amount of soil from each composite point; bring the purchase to the surface staging area where a sample-portion of soil will be extracted from the backhoe purchase. The remainder of the backhoe purchase will be staged on the surface with other staged soils.)

5.3. Sidewall Samples

5.3.1. On each sidewall, procure a 2oz sample from each of five distinct points on the sidewall with distinct points resembling the "W" pattern:



5.4. Pack the soil tightly into the container leaving the top slightly domed. Screw the lid down tightly. Enter the time of collection onto the sample collection jar label. Repeat for each sampling point.

5.5. Place the samples directly on ice for transport to the laboratory if required.

5.6. Complete the Chain of Custody form to include the collection times for each sample. Deliver all samples to the laboratory.

6.0 Documentation

6.1 The testing laboratory shall provide the following minimum information:

a. Project and sample name.
b. Signed copy of the original Chain of Custody Form including the time the sample was received by the lab.
c. Results of the requested analyses
d. Test Methods employed
e. Quality Control methods and results

Rice Environmental Consulting and Safety

Procedure for Plugging & Abandonment of Cased Water Monitoring Wells

1.0 Purpose

This procedure outlines the methods to be employed to plug and abandon cased monitoring wells.

2.0 Scope

This procedure shall be used for developed, cased water monitoring wells located in the State of New Mexico

3.0 Preliminary

3.1 No well may be drilled, modified or plugged without NMOCD approval. Additional approvals may be required if the well is situated in a sensitive area, within municipal jurisdictions or on federal or tribal lands.

4.0 Plugging

4.1 Each bore will be filled with a 1% - 3% bentonite/concrete slurry to three feet bgs. The remaining three feet will be capped with concrete only.

4.2 All wellheads will be removed to below ground surface.

5.0 Records

5.1 The company plugging the well shall prepare a report on their company letter head listing the site name and describing general well construction including total depth of the well, the diameter of casing, material used to plug the well (e.g. bentonite/cement slurry), and date of the plugging operation.

5.2 It is recommended but not required that photographs of the final surface restoration be taken and included within the records.

5.3 Copies of the plugging report shall be submitted to all appropriate agencies and retained by the well operator for a minimum period of ten years.