

10.

1R-427-420

EME O-28 EOL

2013

CLOSURE

RICE *Operating Company*

122 West Taylor • Hobbs, New Mexico 88240

Phone: (575) 393-9174 • Fax: (575) 397-1471

April 1, 2014

Mr. Leonard Lowe

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

RE: Termination Request
EME O-28 EOL: UL/O, Sec. 28, T20S, R36E
RICE Operating Company – Eunice Monument Eumont SWD System

Mr. Lowe:

Rice Operating Company (ROC) is the service provider (agent) for the EME Saltwater Disposal (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 ownership/usage basis.

Background

The site is located in UL/O, Sec. 28, T20S, R36E. NM OSE records indicate that groundwater would likely be encountered at a depth of approximately 106.5 +/- feet. The former junction box was located within an active facility. Based on a mutual understanding between Rice Operating Company and the system parties, junction boxes located within active facilities would be encompassed in the remediation activities conducted by the producer once the facility has been abandoned. The junction box site map, area map, final report, and photo documentation are attached.

Please contact me at (575)393-2967 if you have any questions or wish to discuss this site. Thank you for your time and consideration.

Sincerely,
RICE Operating Company



Hack Conder
Environmental Manager

RICE OPERATING COMPANY JUNCTION BOX FINAL REPORT

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
Eunice Monument Eumont (EME)	O-28 EOL	O	28	20S	36E	Lea	Length	Width	Depth
							Eliminated		

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

Depth to Groundwater 106.5 feet NMOCD SITE ASSESSMENT RANKING SCORE: 0

Date Started n/a Date Completed n/a OCD Witness No

Soil Excavated n/a cubic yards Excavation Length n/a Width n/a Depth n/a feet

Soil Disposed None cubic yards Offsite Facility n/a Location n/a

FINAL ANALYTICAL RESULTS: Sample Date n/a Sample Depth n/a

The former junction box was located within an active facility, as shown on the attached pictures. Based on a mutual understanding between Rice Operating Company and the system parties, junction boxes located within active facilities would be encompassed in the remediation activities conducted by the producer once the facility has been abandoned.

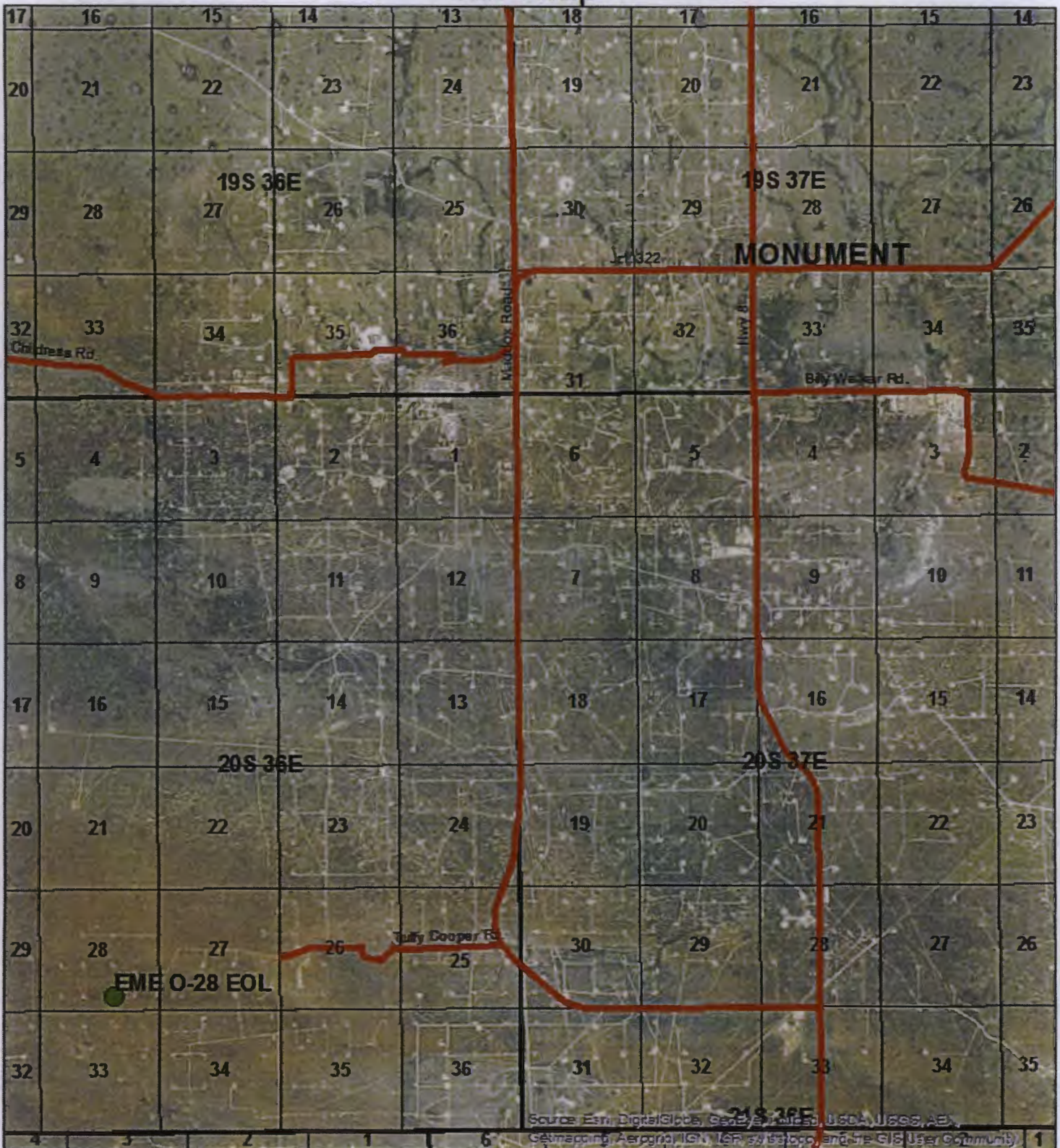
Enclosures: site location map, area map, and current photodocumentation

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

REPORT ASSEMBLED BY Laura Flores SIGNATURE Laura Flores COMPANY Rice Environmental Consulting & Safety

PROJECT LEADER Kyle Norman SIGNATURE Kyle Norman DATE 2-24-14

Site Map



Source: Esri, DigitalGlobe, GeoEye, AeroMap, IGN, IGP, and the GIS User Community



EME O-28 EOL

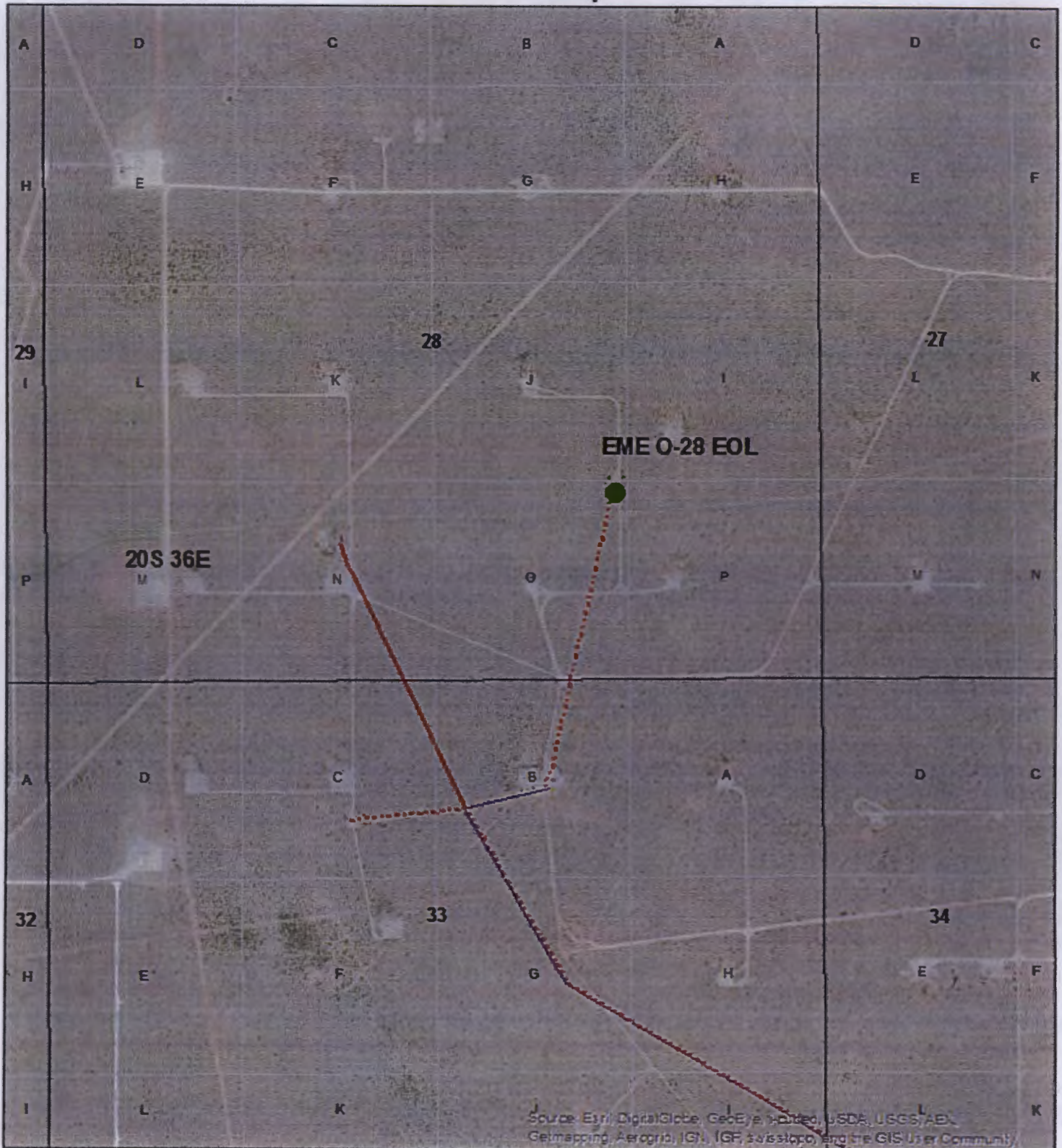
Unit Letter O, Section 28,
T20S, R36E
Lea County, NM



0 4,000 8,000
Feet

Drawing date: 2/19/14 LF

Area Map



EME O-28 EOL

Unit Letter O, Section 28,
T20S, R36E
Lea County, NM



0 620 1,240
Feet

Drawing date: 2/19/14 LF

EME O-28 EOL
UL/O, Section 28, T20S, R36E



Facing north

2/14/2014



Facing east

2/14/2014

RICE *Operating Company*

122 West Taylor • Hobbs, New Mexico 88240

Phone: (575) 393-9174 • Fax: (575) 397-1471

RECEIVED OGD

2014 MAR 32 A 10: 17

April 1, 2014

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

RE: JUNCTION BOX UPGRADE REPORT for 2013
EME SWD SYSTEM
Lea County, New Mexico

Mr. Lowe:

Rice Operating Company (ROC) takes this opportunity to submit the Junction Box Upgrade results for the year 2013. Enclosed is a list of the completed junction boxes and their respective closure/disclosure dates. These boxes are located in the Eunice-Monument-Eumont (EME) Salt Water Disposal (SWD) System located in the vicinity of Eunice, New Mexico.

ROC completed 11 junction boxes in 2013.

Enclosed are the 2008 results (17 sites evaluated with 22 sampling locations) from the PID/BTEX study described in the NMOCD-approved Revised Junction Box Upgrade Work Plan (July 16, 2003). A third-party analysis, conducted by Peter Galusky, Jr. Ph.D. of Texerra, concluded from the data collected thus far that field-composited values tend to produce slightly higher BTEX numbers above the point at which BTEX concentrations become significant. This is likely due to the fact that BTEX is volatile and quickly biodegradable. This analysis was submitted to NMOCD on March 12, 2009. An appropriate number of sample sites could not be obtained to conduct a 2013 BTEX comparison analysis. Peter Galusky, Jr. Ph.D. of Texerra also compared ROC's 2013 chloride field tests to chloride laboratory analyses; the analysis is also enclosed. The study of this data continues to validate the accuracy of the chloride field tests employed by ROC.

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 ownership/usage basis.

Replacement/closure projects of this magnitude require System Party AFE approval and work begins as funds are received.

Thank you for your consideration of this Junction Box Upgrade Report for 2013.

RICE OPERATING COMPANY

A handwritten signature in black ink, appearing to read 'H. Conder', with a long horizontal flourish extending to the right.

Hack Conder
Environmental Manager

enclosures as stated

cc: SC, file, Mr. Geoffrey Leking
NMOCD, District I Office
1625 N. French Drive
Hobbs, NM 88240

Rice Operating Company
EME SWD System Junction Box Upgrade Project
2013 Completed Boxes

		Legal Description							
	Jct Box Name	Unit	Sec	T	R	Completion Date	OCD Assessment Score	Report Status	Case Number
1	B-19 EOL	B	19	19S	37E	6/28/2013	20	Closure	
2	E-21 EOL	E	21	20S	37E	1/8/2014	20	Closure	
3	JCT. D-19	D	19	19S	37E	5/10/2013	20	Closure	
4	JCT. D-20	D	20	19S	37E	6/10/2013	20	Closure	
5	JCT. F-26	F	26	20S	36E	11/7/2012	0	Closure	
6	JCT. H-4	H	4	20S	36E	6/7/2013	20	Closure	
7	JCT. I-9	I	9	20S	36E	6/7/2013	20	Closure	
8	JCT. K-19	K	19	19S	37E	6/11/2013	20	Closure	
9	M-9 EOL	M	9	21S	36E	6/24/2013	0	Closure	
10	O-28 EOL	O	28	20S	36E	n/a	0	Closure	
11	P-5 EOL	P	5	21S	36E	6/24/2013	0	Closure	

L. Peter Galusky, Jr. Ph.D., P.G.

Texerra

505 N Big Spring, Suite 404 Midland, Texas 79701

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

March 10th, 2009

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

Re: Comparison of Field versus Lab Compositing of BTEX soil samples
Rice Operating Company, Junction Box Upgrade Work Plan

Sent via Certified Mail w/ Return Receipt No. 7006 0100 0001 2438 3944

Dear Mr. Jones:

On behalf of Rice Operating Company (ROC) I am submitting the attached comparison and analysis of field versus laboratory soil compositing for soil BTEX samples. This is to address the question of whether it is better to mix multiple samples in the field or to do so in the laboratory in order to produce a composite, representative sample for analysis. This work was undertaken in support of ROC's Junction Box Upgrade Work Plan to ensure the quality of their field analysis program.

In brief, this work indicates that field compositing of soil samples generally gives rise to *slightly* higher BTEX values than does laboratory compositing of multiple samples. This is presumably due to the likelihood that field compositing and packaging of soil samples better preserves sample integrity. It would therefore appear that field compositing would represent the better method of procuring soil samples for subsequent analysis of BTEX.

Please call me if you have any questions or wish to discuss any of the details of this study.

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

Sincerely,



L. Peter Galusky, Jr. Ph.D.
Principal

Copy: Rice Operating Company,
Edward Hansen (NMOCD) sent certified mail w/ return receipt
No. 7006 0100 0001 2438 3937

Attachment: As noted, above.

Rice Operating Company

Comparison of Field Compositing versus Laboratory Compositing of Soil BTEX Samples¹

The careful mixing of multiple soil samples is critical in order to produce a representative, composite sample from a respective study area (such as an excavation face or bottom). Field technicians typically take four or five “grab” samples from excavation walls and/or bottom and send each of these to a laboratory for analysis of the composite, or mixed, sample. It would be far simpler, however, to composite such samples in the field. This study was undertaken to determine if field compositing produced results substantially different than laboratory compositing for the analysis of BTEX. Data were provided by Rice Operating Company encompassing 22 sampling locations over the period of 2004 through 2008.

A comparison of lab-composited soil samples versus field-composited soil samples revealed a close correspondence for total BTEX between the two methods (Figure 1).

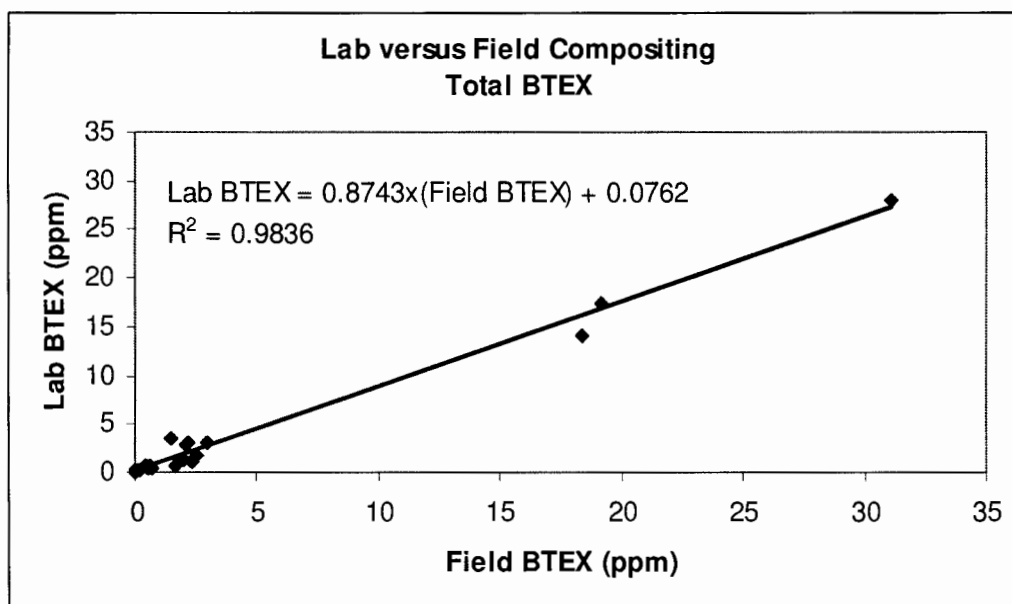


Figure 1 - Laboratory versus field-composited soil samples analyzed for BTEX.

The high R² value (0.9836) of the best-fit statistical regression line indicates a high degree of reliability in using the field-compositing method over the range of values observed. Below a “field-composited BTEX” value of 0.61 ppm the “lab-composited BTEX” values are slightly lower. However, above a field-composited BTEX value of 0.61 the lab-composited values run slightly lower. In other words, the field-composited values tended to produce slightly higher BTEX numbers above the point at which BTEX concentrations become significant.

There is a reason for this. BTEX is volatile and quickly biodegradable. The compositing and “packaging” of soil samples in the field minimize the handling and aeration that occur in the laboratory. Thus, field-composited soil samples lose less BTEX to evaporation and/or biodegradation prior to laboratory analysis. In other words, the field compositing and packaging of soil samples better preserves sample integrity, and for this reasons would appear to represent the better method of procuring soil samples for subsequent analysis of BTEX.

¹ Prepared 03-12-09 by L. Peter Galusky, Jr. of Texerra.

L. Peter Galusky, Jr. Ph.D., P.G.

Texerra LLC

**20055 Laredo Lane Monument, CO 80132
Tel: 719-339-6791 E-mail: lpg@texerra.com**

March 25th, 2014

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

Re: Comparison of 2013 Laboratory versus Field Measured Soil Chloride Values
Rice Operating Company, Junction Box Upgrade Work Plan

Mr. Lowe:

The attached comparison and analysis of 2013 laboratory versus field measured soil chloride values is submitted in support of Rice Operating Company's (ROC's) Junction Box Upgrade Work Plan to ensure the quality of their field analysis program.

In brief, this work indicates that Rice's 2013 field chloride measurement efforts provided a reasonable qualitative approximation of the laboratory-measured (and presumed true) values.

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

Please call me if you have any questions or wish to discuss this study.

Sincerely,



L. Peter Galusky, Jr. Ph.D.
Principal

Copy: Glenn VonGonten, NMOCD; Rice Operating Company
Attachment: As noted, above.

Rice Operating Company
Comparison of Laboratory to Field Measured Soil Chloride Concentrations
Based upon 2013 Field Data

A representative sample of 29 pairs of laboratory versus field measured soil chloride values was compared to determine how well field measurements matched laboratory measurements. It is assumed that laboratory measurements better represent the “true” values due to the controlled environment that a laboratory provides. A simple plot of the laboratory versus field measured soil chloride values is given below (Figure 1).

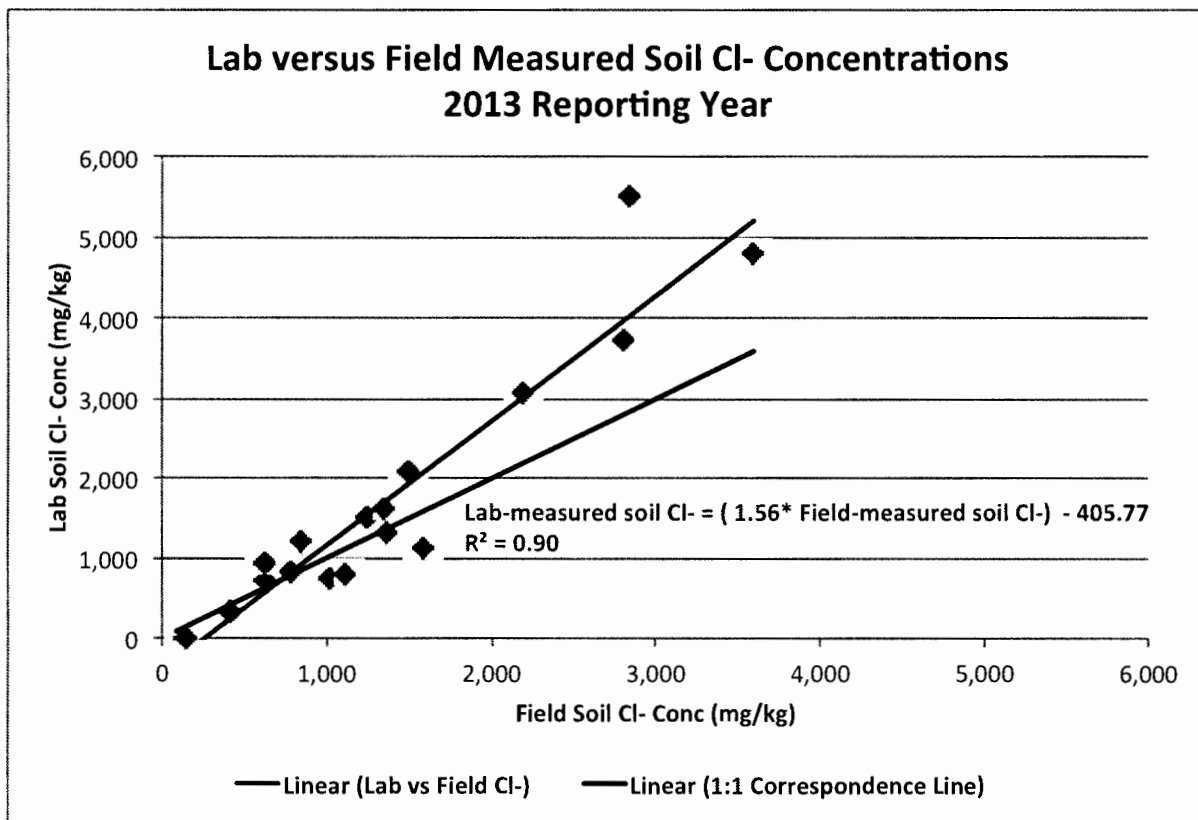


Figure 1 – Laboratory versus field measured soil chloride measurements (n = 29 paired sets).

A straight line fit to the data confirms a general linear trend over a wide range of soil chloride concentrations, and the R^2 value (0.90) indicates that field measurements provide a reliable approximation of laboratory-measured values. Based on the best-fit line of lab vs field measured values, field measured values overestimate lab measure values below a field measured value of 723 mg/kg and above this underestimate the lab-measured values. This is indicated in the graph where the (blue) best-fit line of lab vs field measured chlorides crosses the (black) line which would indicate a 1:1 correspondence.

Junction Box Upgrade Program Closure/Disclosure Submissions for 2013

Updated 3-31-14

BD	Closure	Disclosures	Closures	Disclosures
	4		4	
	8			8
EME				
Closure	11		11	
Disclosure	0			0
Total	23		15	8