

1R - 428-66

**GENERAL
CORRESPONDENCE**

YEAR(S):

2006

R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

December 21, 2006

Wayne Price
Environmental Bureau Chief
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

2006 DEC 26 AM 10 09

RE: **E-32-2 Junction Box Site (NMOCD CASE #: 1R0428-66)**

Dear Wayne

On behalf of Rice Operating Company (ROC), R.T. Hicks Consultants, Ltd. is submitting this request to close the regulatory file for the above referenced site. The investigation demonstrated that neither salt nor hydrocarbons are present at the site in concentrations that warrant further action.

Background

The NMOCD-approved investigation characterization plan (ICP), included as Attachment A to this letter, provides the location of this site and background information.

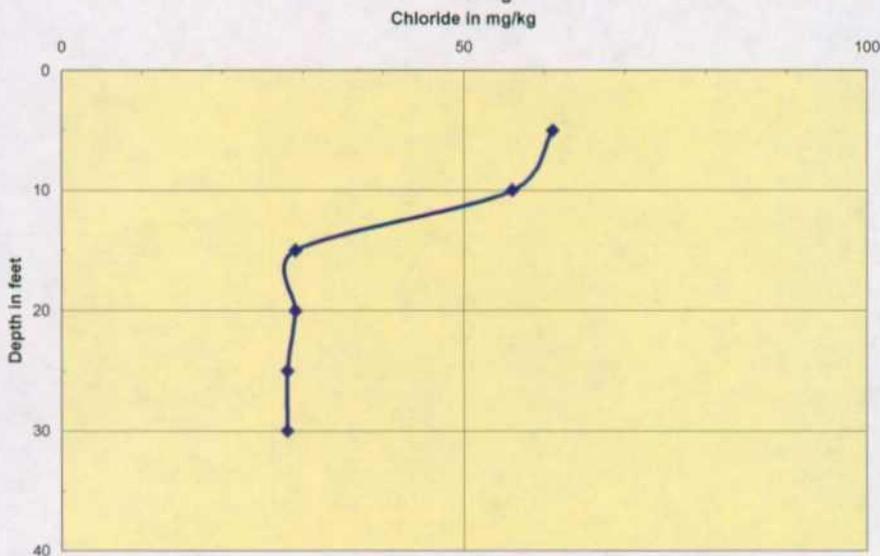
Field Program

As a part of the approved ICP, one soil boring was advanced immediately adjacent to the former junction box on May 4, 2006. The well log and field data

(Attachment B) show that chloride field tests indicated no impact to the vadose zone. Field chloride concentrations ranged from a maximum of 61 ppm at 5 ft bgs to 28 ppm at the 25 ft and 30 ft sample depths. PID readings indicated 0 ppm throughout the boring. The chloride concentration vs. depth profile is displayed in Figure 1.

The laboratory reports (Appendix C) support the findings described above. Laboratory results in Appendix D also confirm that the backfill placed in the excavation of the former junction box is clean fill.

Figure 1: Chloride Concentration v. Depth for E-32-2 Junction Box Site Soil Boring



December 21, 2006

Page 2

Recommendations

We conclude that further action under Rule 116 is not necessary. With the placement of clean backfill, ROC has mitigated any impact caused by past operations such that the site does not and will not endanger fresh water, public health or the environment. We respectfully request closure of the regulatory file associated with this site.

ROC has reviewed and approved this submission. Please contact Kristin Pope of ROC if you have any questions or comments. Attachment D is the final closure form for your files.

Sincerely,
R.T Hicks Consultants, Ltd.

Randall T. Hicks
Principal

Copy: Kristin Pope, ROC
NMOCD Hobbs

Attachment A
Investigation
Characterization Plan

R. T. HICKS CONSULTANTS, LTD.

1909 Brunson Ave ▲ Midland TX 79701 ▲ 432.638.8740 ▲ Fax: 413.403.9968

CERTIFIED MAIL - RETURN RECEIPT NO. 7099 3400 0017 1737 2367

January 20, 2006

Mr. Wayne Price
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**RE: Investigation Characterization Plan: T18S R38E: E-33-1 Junction Box,
B-32 Boot, E-32-1 Junction Box, E-32-2 Junction Box, F-33 Vent**

Hobbs Salt Water Disposal System

Dear Mr. Price:

On behalf of Rice Operating Company, please accept this submission as our Initial Characterization Plan (ICP) for the five (5) sites referenced above within the Hobbs Salt Water Disposal System (Plate 1).

Rice Operating Company (ROC) is the service provider (operator) for the Hobbs Saltwater Disposal System and has no ownership of any portion of pipeline, well, or facility. A consortium of oil producers who own the Hobbs System (System Partners); provide all operating capital on a percentage ownership/usage basis. Major projects require System Partner authorization for expenditures (AFE) approval and work begins as funds are received. We will implement the work outlined herein after NMOCD approval and subsequent authorization from the System Partners.

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

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

The last criteria employed when evaluating any proposed remedy or investigative work is confirming that there is a reasonable relationship between the benefits created by the proposed remedy or assessment and the economic and social costs.

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 evaluation of 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.

**Task 1 Evaluate Chloride and BTEXN Concentrations in Soil at Five Sites,
Evaluate Ground Water Quality if Necessary**

We will follow the same protocol for characterization of the unsaturated zone at the five new ROC sites listed below.

- E-33-1 Junction Box
- B-32 Boot
- E-32-1 Junction Box
- E-32-2 Junction Box
- F-33 Vent

At each of the above-referenced sites, we will locate the sampling borehole as close as practical to the suspected release source. Earlier, we inspected each of the five sites nominated in this ICP and identified the boring location before the sites were backfilled and re-graded. Due to our recent experience with difficulties encountered in the installation of well clusters in this area, we plan to employ hollow-stem auger drilling techniques for sampling.

We will screen each sample in the field for chlorides and volatile organic compounds using the methods described in QP-03 and QP-07 (attached), respectively. Soil lithology and the presence of any observed staining or odor will be recorded. For any site, if we detect evidence of leakage within 15 feet of the water table (e.g. field chloride greater than 250 ppm in soil samples) we will complete the boring as a monitoring well in accordance with NMOCD Guidance. If three soil samples taken at 5-foot intervals test below 250 ppm chloride and below 100 ppm total volatile organic compounds, we will terminate the boring. However, all borings will penetrate at least 30 feet of the vadose zone.

Task 2 Evaluate Chloride and Hydrocarbon Flux from the Vadose Zone to Ground Water

We anticipate that one or all of the five sites selected for borehole investigation will show evidence of seepage from the source to a depth of more than 15-feet. For these sites, excavation and disposal of released material can cause more environmental damage than it cures. For such sites, we propose to employ HYDRUS-1D and a simple ground water mixing model to evaluate the potential of any residual chloride and hydrocarbon mass in the vadose zone to impair ground water quality above WQCC Standards. We have selected these two constituents for simulation modeling because each of these constituents is typically found in produced water and each is specifically regulated by New Mexico ground water regulations (WQCC). We will also employ vadose zone hydrocarbon migration predictive tools commonly employed by NMED in their PST program.

Task 3 Provide Investigative Results and/or Corrective Action Plan

Because the Hobbs SWD System no longer carries produced water, additional releases of produced water to ground water are highly unlikely. If modeling shows that the residual chloride and hydrocarbon mass in the vadose zone poses a no threat to ground water quality, we will prepare a report that makes this demonstration and request site closure.

If simulation experiments suggest that residual constituents pose a threat to ground water quality or if the field program demonstrates impairment, we will expand upon the HYDRUS-1D model predictions described above to develop a remedy for the vadose zone. If necessary, we will simulate:

1. Excavation, disposal and replacement of clean soil to remove the chloride and hydrocarbon mass,
2. Installation of a low permeability barrier to minimize natural infiltration,
3. Surface grading and seeding to eliminate any ponding of precipitation and promote evapotranspiration, thereby minimizing natural infiltration, and
4. A combination of the above potential remedies.

We will select the vadose zone remedy that offers the greatest environmental benefit while causing the least environmental damage. If data suggest that the site has contributed chloride or hydrocarbons to ground water and caused ground water impairment, we will notify NMOCD and work collaboratively to determine the appropriate path forward.

Proposed Schedule

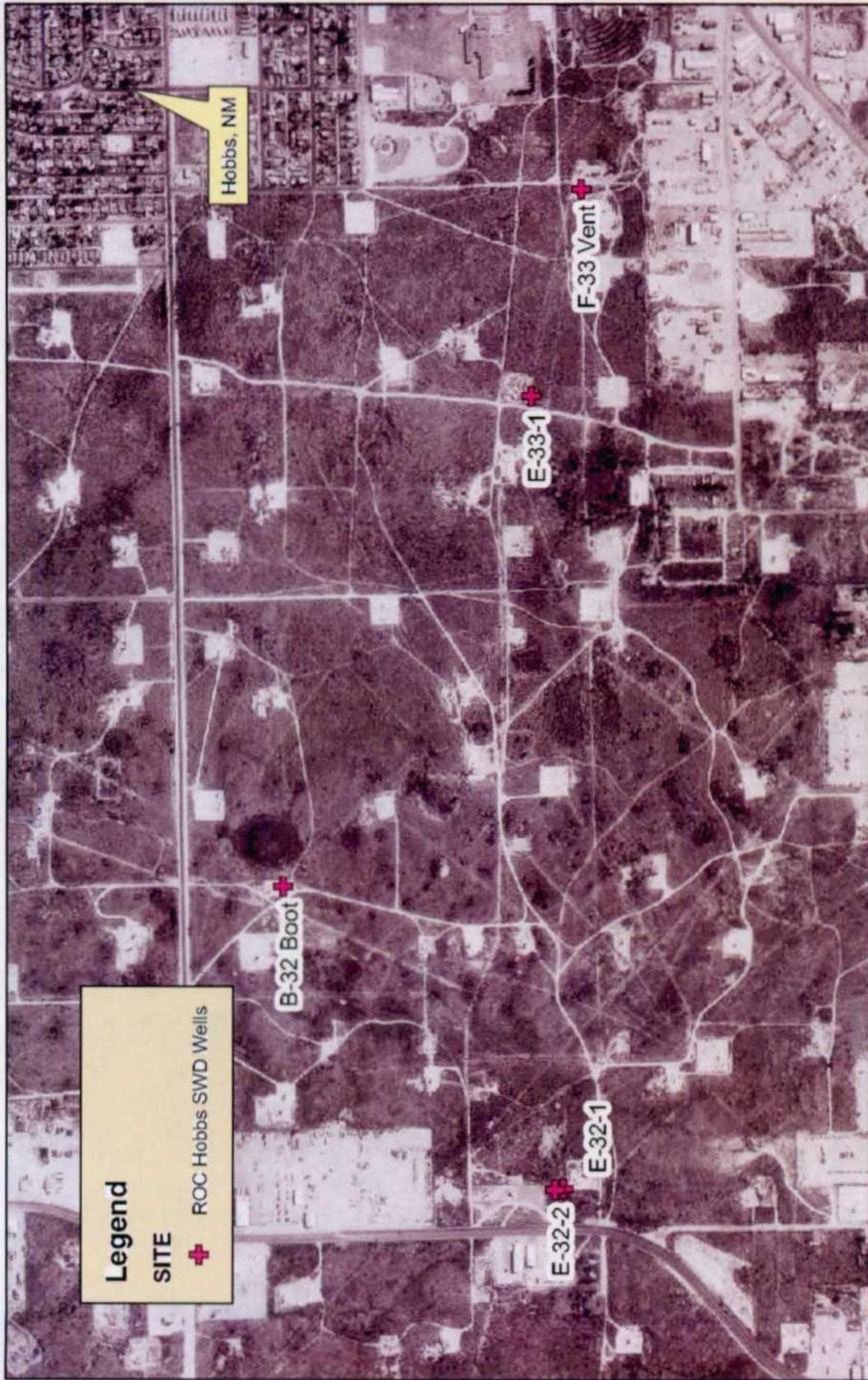
With NMOCD's approval of this work plan, we can perform the field activities at these sites in February or March. In late April or May, we plan to deliver any individual Correction Action Plans to address residual constituents in the vadose zone and any reports requesting site closure. If data suggest ground water impairment we plan to conduct two quarters of ground water monitoring to confirm any initial result then meet with NMOCD to develop an appropriate path forward. Your approval to move forward with this work plan will facilitate approval of expenditures by the System Partners.

Sincerely,
R.T. Hicks Consultants, Ltd.

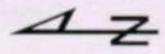
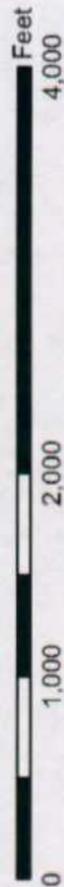


Gilbert Van Deventer
Project Manager

cc: Chris Williams, NMOCD Hobbs District Office
Carolyn Haynes, Rice Operating Company - Hobbs
Kristin Pope, Rice Operating Company - Hobbs
Randy Hicks, R. T. Hicks Consultants, Ltd. - Albuquerque



Source Map: USGS 7.5' Quad; Hobbs West



R.T. Hicks Consultants, Ltd
 901 Rio Grande Blvd NW Suite F-142
 Albuquerque, NM 87104
 Ph: 505.266.5004

Site Location Map

Plate 1

Rice Operating Company: Investigation Characterization Plan

July 07, 2005

Rice Operating Company

QUALITY PROCEDURE

**Sampling and Testing Protocol
Chloride Titration Using .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 10 grams of reverse osmosis water to the soil sample and shake for 20 seconds.
- 4.3 Allow the sample to set for a period of 5 minutes or until the separation of soil and water.
- 4.4 Carefully pour the free liquid extract from the sample through a paper filter into a clean plastic cup if necessary.

Rice Operating Company

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^oF). 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 an Environmental Instruments 13471 OVM / Datalogger or a similar PID-type instrument. (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 conduct BTEX Speciation in accordance with QP-02 and QP-06. **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.**

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.
- 5.3 If the sample contains any sulfides (hydrogen or iron sulfides are common to oilfield soil samples) add 2-3 drops of hydrogen peroxide (H_2O_2) to mixture.
- 5.4 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.
- 5.5 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.

Attachment B
Soil Boring Log

LITHOLOGIC LOG

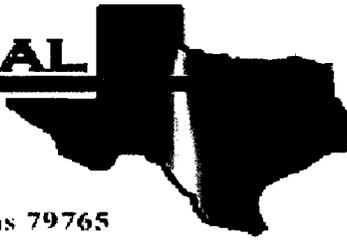


MONITOR WELL NO.: B-1	TOTAL DEPTH: 30 Feet
SITE ID: Hobbs E-32-2 Junction Box	CLIENT: RICE Operating Company
CONTRACTOR: Atkins Engineering	COUNTY: Lea
DRILLING METHOD: Hollow Stem Auger	STATE: New Mexico
START DATE: 05/04/06	LOCATION: T18S-R38E-Sec 32-Unit E
COMPLETION DATE: 05/04/06	FIELD REP.: G. Van Deventer / M. Franks
COMMENTS: Located immediately above to former junction box location. Site was previously excavated and backfilled with remediated soil.	

USCS	Sample			Blowcounts (blows - in)	Chloride (ppm)	PID (ppm)	LITHOLOGIC DESCRIPTION: LITHOLOGY, COLOR, GRAIN SIZE, SORTING, ROUNDING, CONSOLIDATION, DISTINGUISHING FEATURES
	Depth	Time	Type				
SM							Silty loam, moderate yellowish brown (10YR 5/4), dry.
CAL/SM	5	1525	Cuttings	NA	61	0	Sandy caliche, very pale orange (10YR 8/2), hard, dry
	10	1530	Split Spoon	50 - 7"	56	0	Sandy caliche, very pale orange (10YR 8/2), hard, dry Grading to
SS/ CAL	15	1540	Split Spoon	50 - 7"	29	0	Calicic fine-grained sand. Sand component is pale yellowish brown (10 YR 8/2), fine-grained, subangular, moderately well sorted, dry. Calicic matrix is very pale orange (10 YR 8/2).
	20	1550	Split Spoon	50 - 10"	29	0	Light brown (5 YR 5/6) fine sand, unconsolidated, subangular, well sorted.
SW	25	1600	Cuttings	NA	28	0	Light brown (5 YR 5/6) fine sand, unconsolidated, subangular, well sorted.
	30	1610	Cuttings	NA	28	0	Light brown (5 YR 5/6) fine sand, unconsolidated, subangular, well sorted. Bottom of boring at 30 feet below ground surface.
	35						
	40						

Attachment C
Laboratory Analyses

E NVIRONMENTAL
LAB OF



12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Kristin Farris-Pope

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: Jct. E-32-2 (UNO145)

Project Number: Hobbs Abandonment

Location: T18S, R38E, Sec. 32, Unit Letter E

Lab Order Number: 6E11007

Report Date: 05/16/06

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

Project: Jct. E-32-2 (UNO145)
Project Number: Hobbs Abandonment
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471
Reported:
05/16/06 17:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-1 (30')	6E11007-01	Soil	05/04/06 16:10	05/10/06 17:50

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

Project: Jct. E-32-2 (UNO145)
Project Number: Hobbs Abandonment
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:
05/16/06 17:37

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1 (30") (6E11007-01) Soil									
Chloride	50.5	5.00	mg/kg	10	EE61225	05/12/06	05/12/06	EPA 300.0	

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

Project: Jct. E-32-2 (UNO145)
Project Number: Hobbs Abandonment
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:
05/16/06 17:37

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 EE61225 - Water Extraction										
Blank (EE61225-BLK1)				Prepared & Analyzed: 05/12/06						
Chloride	ND	0.500	mg/kg							
LCS (EE61225-BS1)				Prepared & Analyzed: 05/12/06						
Chloride	9.96	0.500	mg/kg	10.0		99.6	80-120			
Calibration Check (EE61225-CCV1)				Prepared & Analyzed: 05/12/06						
Chloride	10.9		mg/kg	10.0		109	80-120			
Duplicate (EE61225-DUP1)		Source: 6E05006-03		Prepared & Analyzed: 05/12/06						
Chloride	2920	50.0	mg/kg		2870			1.73	20	
Duplicate (EE61225-DUP2)		Source: 6E11006-02		Prepared & Analyzed: 05/12/06						
Chloride	284	12.5	mg/kg		284			0.00	20	
Matrix Spike (EE61225-MS1)		Source: 6E05006-04		Prepared & Analyzed: 05/12/06						
Chloride	3160	50.0	mg/kg	1000	2100	106	75-125			
Matrix Spike (EE61225-MS2)		Source: 6E11019-01		Prepared & Analyzed: 05/12/06						
Chloride	984	10.0	mg/kg	200	699	142	75-125			S-07

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

Project: Jct. E-32-2 (UNO145)
Project Number: Hobbs Abandonment
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471
Reported:
05/16/06 17:37

Notes and Definitions

S-07 Recovery outside Laboratory historical or method prescribed limits.
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: 5/16/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

Variance / Corrective Action Report – Sample Log-In

Client: Pico Op.
 Date/Time: 5/10/06 17:50
 Order #: 6E11007
 Initials: OK

Sample Receipt Checklist

	Yes	No	
Temperature of container/cooler?			O.C. 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)	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:

Attachment D
Closure Form

RICE OPERATING COMPANY
JUNCTION BOX CLOSURE REPORT

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
Hobbs	jct. E-32-2	E	29	18S	38E	Lea	no box—System abandonment		

LAND TYPE: BLM _____ STATE _____ FEE LANDOWNER Occidental Petroleum (OXY) OTHER _____

Depth to Groundwater 65 feet NMOCD SITE ASSESSMENT RANKING SCORE: 10

Date Started 11/15/2002 Date Completed 5/4/2006 NMOCD Witness no

Soil Excavated 12 cubic yards Excavation Length 8 Width 3 Depth 13 feet

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

General Description of Remedial Action:

This junction box was addressed according to the OCD-approved Investigation & Characterization

Plan submitted by R.T. Hicks Consultants on January 20, 2006. After OCD approval, a soil boring was conducted at the box site in May 2006.

A December 2006 letter by Hicks requests closure of this junction box site and is attached to this form.

enclosures: Closure letter from Hicks (Dec. 2006)

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

REPORT ASSEMBLED BY Kristin Farris Pope SIGNATURE _____

DATE 12/18/2006 TITLE Project Scientist