1R - 428-49

REPORTS

DATE:

9-24-08

R. T. HICKS CONSULTANTS, LTD.
PO Box 7624 ▲ Midland, Texas 79708 ▲ 432.528.3878 ▲ Fax: 432.689.4578

September 24, 2008

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

RE: **Hobbs SWD System E-29 Vent Site (NMOCD CASE #: 1R428-49)**

Dear Mr. Hansen:

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 in the vadose zone in quantities that represent a threat to ground water quality.

Background
The Hobbs SWD E-29 Vent Site is located west-northwest of the city of Hobbs at T-18-S, R-38-E, Section 29, in Unit E as shown in Plate 1. The NMOCD-approved Investigation Characterization Plan (ICP), dated April 4, 2008 is provided as Attachment A to this letter and includes information from the December 2002 investigation.

Field Program
As a part of the approved ICP, ROC installed and sampled four 12-foot deep backhoe trenches on June 17, 2008 to delineate the vertical and horizontal extent of chlorides and hydrocarbons in the soil. The trenches encountered broken to soft caliche interbedded with greenish-brown to light brown fine grained unconsolidated sand.

Plate 2 is a summary map prepared by Hicks Consultants that presents the results of the field chloride analyses, hydrocarbon screening data, and laboratory results. Field screening of the chloride levels in the soil were all below 180 mg/kg. The highest "laboratory confirmed" chloride concentration (112 mg/kg) was encountered twelve feet below the surface at the location of the former junction box. None of the chloride concentrations exceed the NMOCD Small Landfarm closure performance standard (500 mg/kg) described in Rule 19.15.36.16(E).

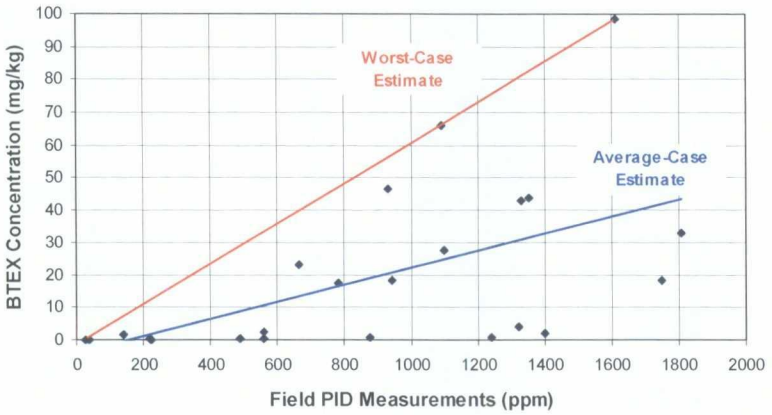
Field screening of hydrocarbons in the soil indicate that the PID levels are less than 115 ppm below a depth of 7 feet across the site. The highest concentration (713 ppm PID) was encountered at a location five feet north of the former junction box and a depth of 3 feet below the surface. PID levels at this location decrease with depth and are less than 100 ppm below 7 feet.

Soil samples for laboratory analyses were recovered at the 12-foot depth in each of the four trenches. Only the sample from the east trench contained detectable hydrocarbons (0.178 mg/kg Total BTEX) and none of the samples contained detectable benzene. Attachment B provides the laboratory reports for chloride and hydrocarbon field data verification samples.

Results

An estimate of the total BTEX concentrations has been prepared using PID and laboratory data from several ROC sites in the Hobbs SWD system. The general relationship between field PID readings and Total BTEX concentrations is shown in Figure 1 below:

Figure 1
Total BTEX vs PID Levels (Hobbs SWD)



Using this chart, the maximum field PID from the E-29 site (713 ppm) would be representative of a BTEX concentration of between 15 mg/kg (average-case) and 42 mg/kg (worst-case), neither of which exceed the NMOCD Small Landfarm closure performance standard of 50 mg/kg for Total BTEX.

Figure 2
Composite BTEX Profile
Hobbs E-29 Junction Site

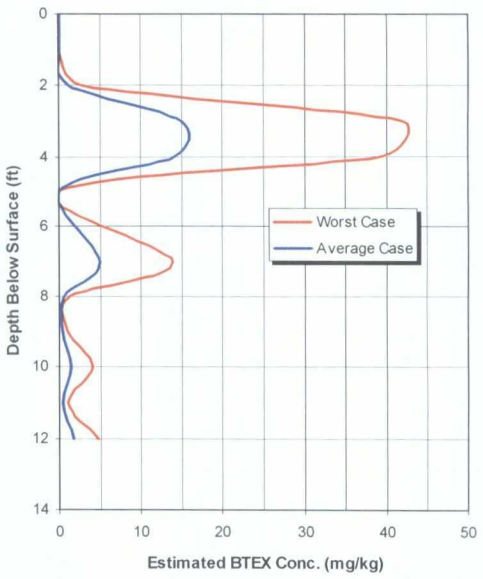


Figure 2 is a composite hydrocarbon concentration profile using the highest PID readings from each of the sampling trenches, then converting them to worst-case and average-case Total BTEX concentrations using equations that describe the lines in Figure 1. It indicates that the hydrocarbon-impacted soil has not significantly migrated below the pipeline depth and therefore would not likely become a threat to the underlying ground water, located at a depth of approximately 60 feet below the surface.

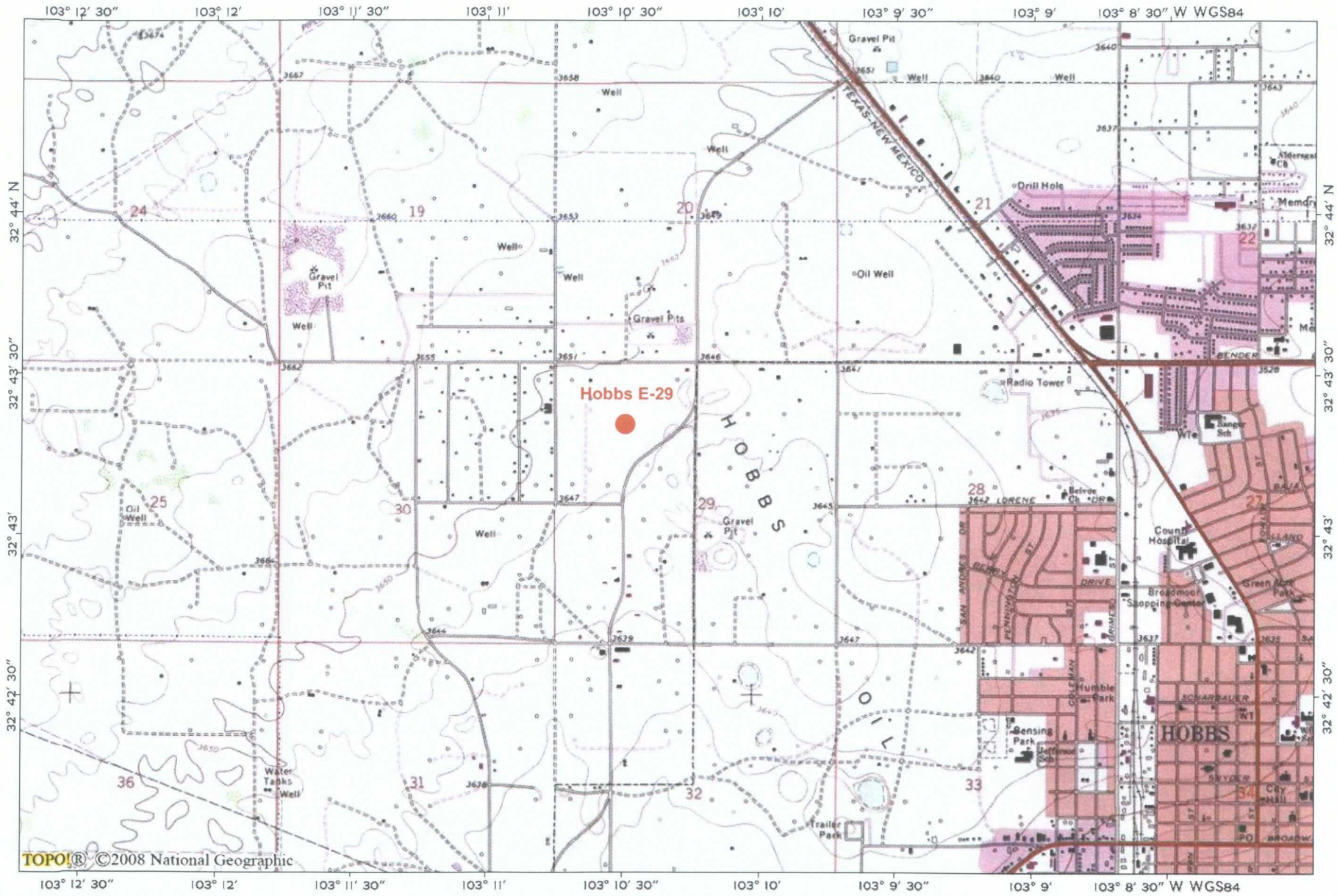
Recommendations
We conclude, based on these results that this site is in compliance with the mandates of Rule 116 such that the small amounts of remaining hydrocarbon and chloride-impacted soil do not and will not endanger public health or the environment and do not present a threat to fresh water. We respectfully request NMOCD give notification of closure of the regulatory file for this site in writing.

Please contact us at our office or Hack Conder of ROC if you have any questions concerning this submission.

Sincerely,
R.T Hicks Consultants, Ltd.

Dale T Littlejohn
Geologist

Copy: Hack Conder, ROC
NMOCD Hobbs



NAT GEO MAPS

Plate 1

Rice Operating Company

Hobbs E-29 Junction Box

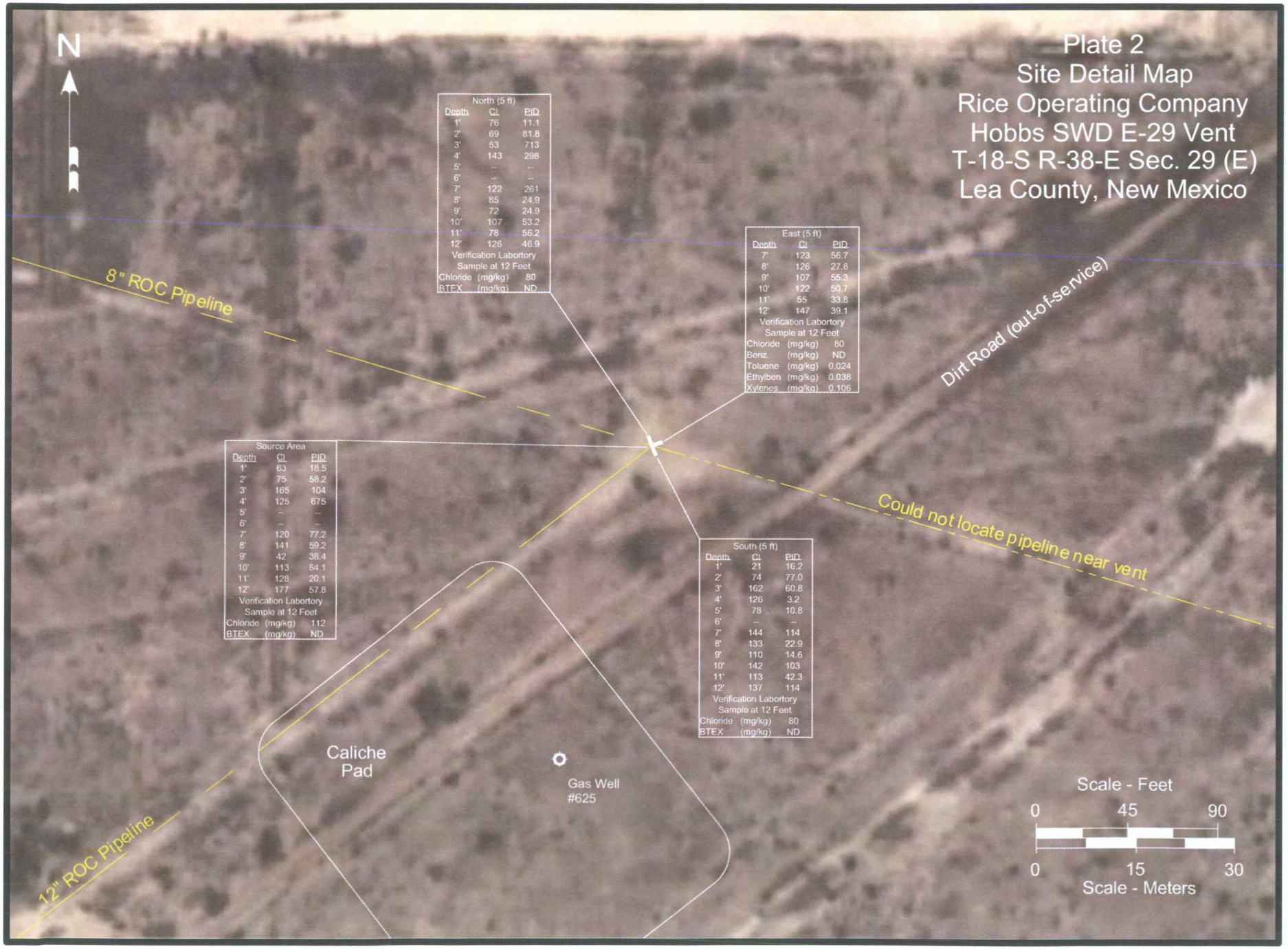

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Plate 2
Site Detail Map
Rice Operating Company
Hobbs SWD E-29 Vent
T-18-S R-38-E Sec. 29 (E)
Lea County, New Mexico
North (5 ft)
Depth Cl PID
1' 76 11.1
2' 69 81.8
3' 53 713
4' 143 298
5' -- --
6' -- --
7' 122 261
8' 85 24.9
9' 72 24.9
10' 107 53.2
11' 78 56.2
12' 126 46.9
Verification Labortory
Sample at 12 Feet
Chloride (mg/kg) 80
BTEX (mg/kg) ND
East (5 ft)
Depth Cl PID
7' 123 56.7
8' 126 27.6
9' 107 55.3
10' 122 50.7
11' 55 33.8
12' 147 39.1
Verification Labortory
Sample at 12 Feet
Chloride (mg/kg) 80
Benz. (mg/kg) ND
Toluene (mg/kg) 0.024
Ethylben (mg/kg) 0.038
Xylenes (mg/kg) 0.106
Source Area
Depth Cl PID
1' 63 18.5
2' 75 58.2
3' 165 104
4' 125 675
5' -- --
6' -- --
7' 120 77.2
8' 141 59.2
9' 42 38.4
10' 113 84.1
11' 128 20.1
12' 177 57.8
Verification Labortory
Sample at 12 Feet
Chloride (mg/kg) 112
BTEX (mg/kg) ND
South (5 ft)
Depth Cl PID
1' 21 16.2
2' 74 77.0
3' 162 60.8
4' 126 3.2
5' 78 10.8
6' -- --
7' 144 114
8' 133 22.9
9' 110 14.6
10' 142 103
11' 113 42.3
12' 137 114
Verification Labortory
Sample at 12 Feet
Chloride (mg/kg) 80
BTEX (mg/kg) ND
8" ROC Pipeline
Dirt Road (out-of-service)
Could not locate pipeline near vent
Caliche Pad
Gas Well #625
12" ROC Pipeline
Scale - Feet
0 45 90
0 15 30
Scale - Meters

ATTACHMENT A
Investigation Characterization Plan

R. T. HICKS CONSULTANTS, LTD.
901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

April 4, 2008

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

RE: Investigation & Characterization Plan
Hobbs Salt Water Disposal System: A-6 Vent, E-29 Vent, Jct. E-33-2, Jct L-30, K-29 EOL, Jct. O-29-1 Vent, P-29 Vent
T18S, R38E, Sections 29, 30, 33 and T19S, R38E Section 6

Dear Mr. Hansen:

On behalf of Rice Operating Company (ROC), R.T. Hicks Consultants, Ltd. is pleased to submit this Investigation & Characterization Plan (ICP) for the seven junction box and vent sites within the Hobbs Salt Water Disposal System referenced above. Plate 1 is a map showing the sites relative to major roads in the area. Plate 2 shows the sites, nearby USGS monitoring wells and a regional potentiometric surface map.

The work elements proposed to characterize these sites sufficiently to develop and appropriate corrective action plan are presented below.

1. ROC will identify and document the location of all current and historic equipment and pipelines associated with each site.
2. ROC will use a backhoe with a 12-foot vertical reach to install a series of sampling trenches in order to recover soil samples and delineate the lateral extent (and potentially the vertical extent) of impacted soil.
3. If characterization by the backhoe is insufficient to define the extent and magnitude of past releases, ROC and Hicks Consultants will use a drilling rig to install one soil boring at the center of the source area to delineate the vertical extent of chloride in the soil.
4. Soil samples employed for delineation will be obtained from regular intervals below ground surface.
5. Representative soil samples will be sent to a laboratory to allow for verification of the field results.
6. General soil texture descriptions will be provided for each sample trench or boring.
7. The criteria to delineate the extent of impact during trenching as well as in a soil boring is 5 point chloride decline vs. depth, or:
   a. After three consecutive samples demonstrate <250 ppm chloride using field analyses and <100ppm total hydrocarbon vapors using the

headspace method (see attached ROC Quality Procedure in Appendix A), or

b. After five consecutive samples show a decreasing trend of chloride and hydrocarbons and the last sample shows chloride < 250 ppm and total hydrocarbon vapors <100 ppm (Appendix A).
c. Soil boring to capillary fringe should neither (a) or (b) apply

8. If the boring penetrates the capillary fringe, a monitoring well will be completed with a 2 or 4" diameter 25 feet down gradient from the source for use during possible corrective actions. Plate 2 presents a potentiometric surface map for the site area.
9. If field analysis of hydrocarbon vapors and observations of staining show that hydrocarbon impact is unlikely at the site or below 20-feet, collection of samples from cuttings may be substituted for split spoon sampling (chloride only).

The ROC trench characterization will be employed to identify the lateral extent of chloride at each site, if possible. If trenching does not fully characterize the lateral extent of chloride at each site, boreholes will be advanced 20 feet beyond the furthest trenches where the soil data has an average chloride concentration greater than 1,000 mg/kg. The total depth of borings installed to characterize lateral extent shall be 20 feet below ground surface with soil samples for delineation taken at 5 foot intervals.

Rice Operating Company (ROC) is the service provider (agent) 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. The Hobbs SWD system is in abandonment.

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.
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.

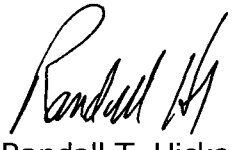
Each site shall have three submissions or a combination of:

1. This Investigation and Characterization Plan (ICP), which is a proposal for data gathering, and site characterization and assessment (this submission).
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.

Following the site characterization described above, a Corrective Action Plan with the data and analysis supportive of a procedure for site closure will be submitted. Quality Procedures for characterization work are provided in Appendix A.

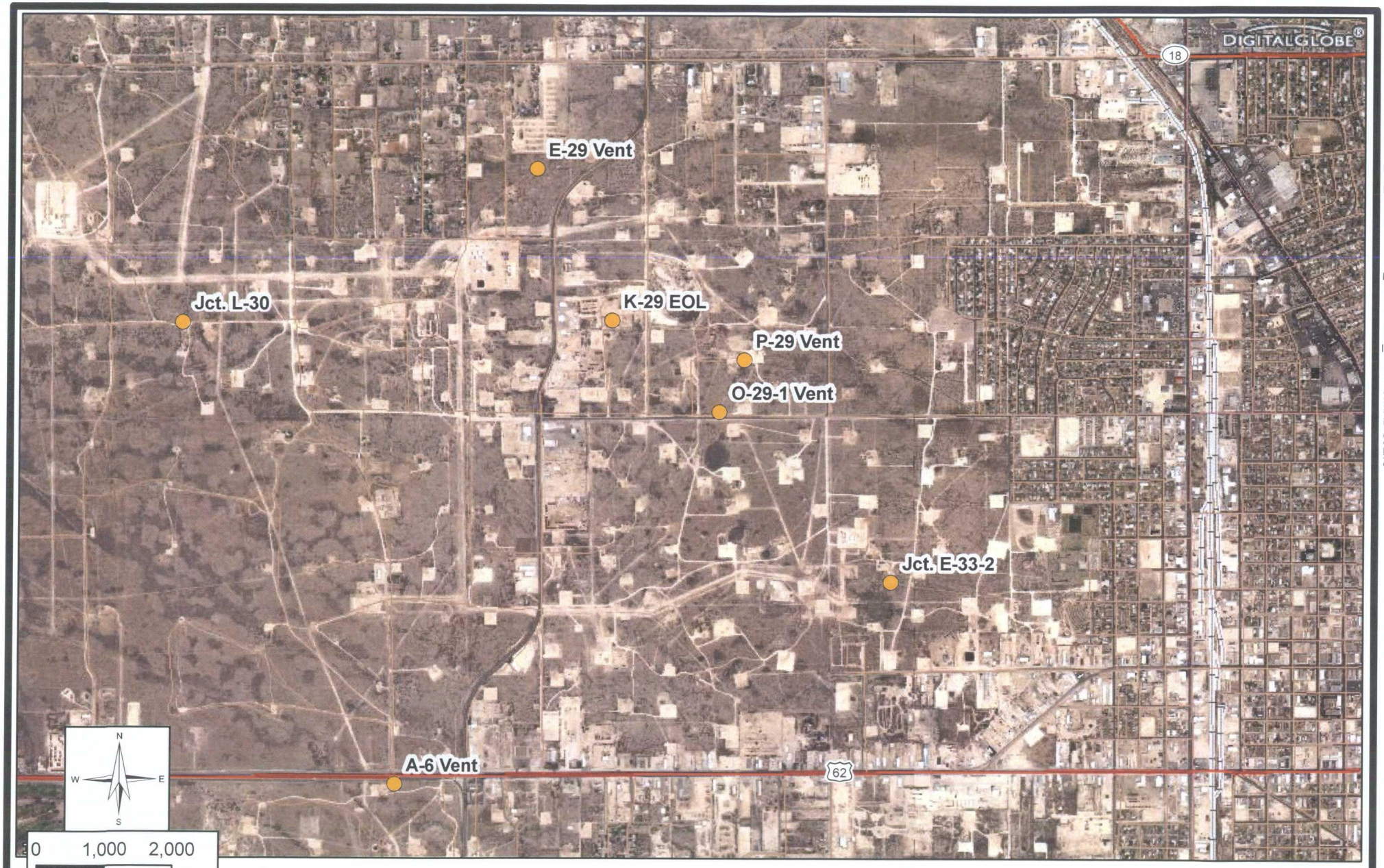
If you have any questions or comments regarding this ICP, please contact Kristin Pope of Rice Operating Company as she has reviewed and approved this submission.

Sincerely,
R.T. Hicks Consultants, Ltd.



Randall T. Hicks
Principal

Copy: Rice Operating Company



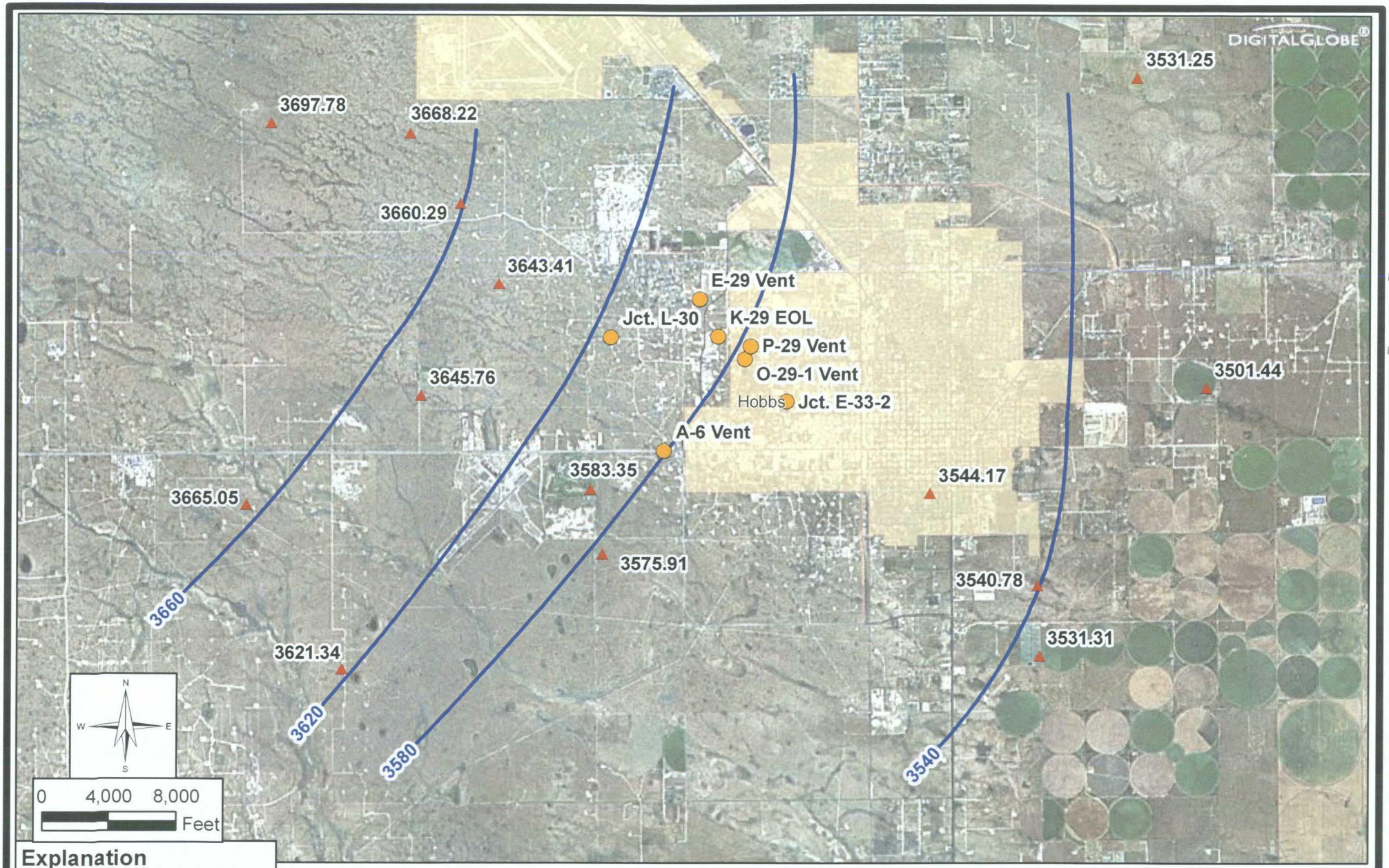
Explanation

ICP Site (Hobbs System)

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Site Environs Relative to Hobbs, NM	Plate 1
	Rice Operating Company: Hobbs System Investigation & Characterization Plan	April 2008

3/7/2008

S:/PROJECTS/ROC/ICPS_03_2008/PLATE1_ROADMAP_HOBBS.MXD 802//3



Explanation

- USGS gauging station with ground water elevation (1996)
- ICP Site (Hobbs System)
- Potentiometric Surface (USGS 1996)

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

Regional Potentiometric Surface (USGS 1996)

Rice Operating Company: ICP Hobbs System

Plate 2

April 2008

S:/PROJECTS/ROC/ICPS_03_2008/PLATE2_POTENTIO_HOBBS.MXD 802/3

3/7/2008

R. T. HICKS CONSULTANTS, LTD.
901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

Appendix A

Rice Operating Company

QUALITY PROCEDURE - 03
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. Ifnecessary, prepare a composite san1ple 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 large 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.

5.0 Titration Procedure

5.1 Using a graduated pipette, remove 10 m1 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 10 ml pipette, carefully add 0.282 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:

$$\frac{0.282 \times 35{,}450 \times \text{ml } AgNO_3}{\text{ml water extract}} \times \frac{\text{grams of water in mixture}}{\text{grams of soil in mixture}}$$

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.

Appendix A
ICP- A-6 Vent, E-29 Vent, Jct. E-33-2, Jct L-30, K-29 EOL, Jct. O-29-1 Vent, P-29 Vent

Rice Operating Company

QUALITY PROCEDURE -07
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° 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 an Environmental Instruments 13471 OVM / Datalogger or a similar pro-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-O2 and QP-O6. If the reading is 100 ppm or less, NMOCD BTEX guideline has been met and no further testing fur 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 OPERATING COMPANY
JUNCTION BOX FINAL REPORT

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
Hobbs	E-29	E	29	18 S	38 E	Lea	no box	XXX	XXX

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

Depth to Groundwater <50 feet NMOCD SITE ASSESSMENT RANKING SCORE: _____

Date Started 12/5/2002 Date Completed 12/20/2002 OCD Witness No

Soil Excavated 0 cubic yards Excavation Length n/a Width n/a Depth n/a feet

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

FINAL ANALYTICAL RESULTS: **Sample Date** 12/5/2002 **Sample Depth** 3'

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
SIDEWALLS	<0.005	<0.005	<0.005	0.021	<10.0	33.1	64
BOTTOM	<0.005	<0.005	<0.005	<0.015	<10.0	<10.0	80
REMEDIATED	n/a	n/a	n/a	n/a	n/a	n/a	n/a

General Description of Remedial Action: This junction box is part of the Hobbs system abandonment, therefore a new box is not required. The site did not exhibit any visible signs of impact. Field tests of bottom and wall composite samples found impact below NMOCD guidelines. The box lumber was removed and the hole was backfilled with clean soil and contoured to the surrounding landscape.

CHLORIDE FIELD TESTS

LOCATION	DEPTH	ppm
Bottom Comp.	3'	117
Wall Comp.	N/A	122

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

DATE December 26, 2002 PRINTED NAME D.E. Anderson

SIGNATURE _____ TITLE Projects Leader - Environmental

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ATTN: KRISTIN FARRIS
122 W. TAYLOR
HOBBS, NM 88240
FAX TO: (505) 397-1471

Receiving Date: 12/05/02
Reporting Date: 12/09/02
Project Number: 737
Project Name: E-29 JCT.
Project Location: HOBBS, NM

Sampling Date: 12/05/02
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		12/06/02	12/06/02	12/06/02
H7288-1	BOTTOM COMP.	<10.0	<10.0	80
H7288-2	WALL COMP.	<10.0	33.1	64
Quality Control		784	743	980
True Value QC		800	800	1000
% Recovery		98.0	92.9	98.0
Relative Percent Difference		2.0	3.1	3.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl^-: Std. Methods 4500-Cl^-B
*Analyses performed on 1:4 w:v aqueous extracts.

Chemist

12/9/02
Date

H7288A.XLS

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ATTN: KRISTIN FARRIS
122 W. TAYLOR
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/05/02
Reporting Date: 12/09/02
Project Number: 737
Project Name: E-29 JCT.
Project Location: HOBBS, NM

Sampling Date: 12/05/02
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

LAB NO.	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		12/06/02	12/06/02	12/06/02	12/06/02
H7288-1	BOTTOM COMP.	<0.005	<0.005	<0.005	<0.015
H7288-2	WALL COMP.	<0.005	<0.005	<0.005	0.021
Quality Control		0.095	0.091	0.091	0.264
True Value QC		0.100	0.100	0.100	0.300
% Recovery		94.6	91.2	90.6	88.2
Relative Percent Difference		0.8	0.4	4.1	4.1

METHOD: EPA SW-846 8260

Chemist

12/9/02
Date

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES, INC.
2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

Page ____ of ____

Company Name:	RICE Operating
Project Manager:	Kristin Farris
Address:	122 W. Taylor
City:	Hobbs State: NM Zip: 88240
Phone #:	393-9174 Fax #: 397-1471
Project #:	137 Project Owner:
Project Name:	E-29 jct.
Project Location:	Hobbs
Sampler Name:	K. Farris

BILL TO

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING DATE	TIME	8015 M DRO/GRO	BTEX	CL-
7288-1	Bottom Comp.@ '	C	1			X					X		120502	—	+	+	+
-2	Wall Comp.	C	1			X					X		"	—	+	+	+

NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the s. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, s or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fee.

Sampler Relinquished:	Date: 120502 Time: 1600	Received By:	
Kristin Farris Relinquished By:	Date: 12/5/08 Time: 9:15	Received By: (Lab Staff)	Amy Hill
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: Yes / No — Intact: Yes / No	CHECKED BY: (Initials)	

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

ATTACHMENT B

Laboratory Reports and Chain-of-Custody Documentation

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: HACK CONDER
122 WEST TAYLOR
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 06/19/08
Reporting Date: 06/24/08
Project Number: NOT GIVEN
Project Name: HOBBS E-29 VENT
Project Location: HOBBS E-29 VENT

Analysis Date: 06/19/08
Sampling Date: 06/17/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl^- (mg/kg)
H15015-1	5' NORTH TRENCH @ 12'	80
H15015-2	5' EAST TRENCH @ 12'	80
H15015-3	5' SOUTH TRENCH @ 12'	80
H15015-4	SOURCE TRENCH @ 12'	112
Quality Control		490
True Value QC		500
% Recovery		98.0
Relative Percent Difference		2.0
METHOD: Standard Methods		4500-Cl B

Note: Analyses performed on 1:4 w:v aqueous extracts.

Chemist

06-24-08
Date

H15015 RICE

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
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122 WEST TAYLOR
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 06/19/08
Reporting Date: 06/25/08
Project Number: NOT GIVEN
Project Name: HOBBS E-29 VENT
Project Location: HOBBS E-29 VENT
Lab Number: H15015-1
Sample ID: 5' NORTH TRENCH @ 12'

Analysis Date: 06/24/08
Sampling Date: 06/17/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: CK

VOLATILES (mg/kg)	Sample Result	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.010	<0.002	0.057	114	0.050
Toluene	<0.010	<0.002	0.045	90.0	0.050
Ethylbenzene	<0.010	<0.002	0.050	100	0.050
m,p-Xylene	<0.020	<0.004	0.101	101	0.100
o-Xylene	<0.010	<0.002	0.053	106	0.050
Naphthalene	<0.025	<0.005	0.058	116	0.050

	% RECOVERY
Dibromofluoromethane	107
Toluene-d8	104
Bromofluorobenzene	91.3

METHODS: EPA SW-846 8260

Chemist

06/25/08
Date

CARDINAL LABORATORIES

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ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: HACK CONDER
122 WEST TAYLOR
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 06/19/08
Reporting Date: 06/25/08
Project Number: NOT GIVEN
Project Name: HOBBS E-29 VENT
Project Location: HOBBS E-29 VENT
Lab Number: H15015-2
Sample ID: 5' EAST TRENCH @ 12'

Analysis Date: 06/24/08
Sampling Date: 06/17/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: CK

VOLATILES (mg/kg)	Sample Result	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.010	<0.002	0.057	114	0.050
Toluene	0.024	<0.002	0.045	90.0	0.050
Ethylbenzene	0.038	<0.002	0.050	100	0.050
m,p-Xylene	0.071	<0.004	0.101	101	0.100
o-Xylene	0.035	<0.002	0.053	106	0.050
Naphthalene	<0.025	<0.005	0.058	116	0.050

	% RECOVERY
Dibromofluoromethane	110
Toluene-d8	106
Bromofluorobenzene	95.9

METHODS: EPA SW-846 8260

Chemist

06/25/08
Date

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: HACK CONDER
122 WEST TAYLOR
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 06/19/08
Reporting Date: 06/25/08
Project Number: NOT GIVEN
Project Name: HOBBS E-29 VENT
Project Location: HOBBS E-29 VENT
Lab Number: H15015-3
Sample ID: 5' SOUTH TRENCH @ 12'

Analysis Date: 06/24/08
Sampling Date: 06/17/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: CK

VOLATILES (mg/kg)	Sample Result	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.010	<0.002	0.057	114	0.050
Toluene	<0.010	<0.002	0.045	90.0	0.050
Ethylbenzene	<0.010	<0.002	0.050	100	0.050
m,p-Xylene	<0.020	<0.004	0.101	101	0.100
o-Xylene	<0.010	<0.002	0.053	106	0.050
Naphthalene	<0.025	<0.005	0.058	116	0.050

	% RECOVERY
Dibromofluoromethane	108
Toluene-d8	102
Bromofluorobenzene	92.7

METHODS: EPA SW-846 8260

Chemist

06/25/08
Date

CARDINAL LABORATORIES

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ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: HACK CONDER
122 WEST TAYLOR
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 06/19/08
Reporting Date: 06/25/08
Project Number: NOT GIVEN
Project Name: HOBBS E-29 VENT
Project Location: HOBBS E-29 VENT
Lab Number: H15015-4
Sample ID: SOURCE TRENCH @ 12'

Analysis Date: 06/24/08
Sampling Date: 06/17/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: CK

VOLATILES (mg/kg)	Sample Result	Method Blank	QC	%Recov.	True Value QC
Benzene	<0.010	<0.002	0.057	114	0.050
Toluene	<0.010	<0.002	0.045	90.0	0.050
Ethylbenzene	<0.010	<0.002	0.050	100	0.050
m,p-Xylene	<0.020	<0.004	0.101	101	0.100
o-Xylene	<0.010	<0.002	0.053	106	0.050
Naphthalene	<0.025	<0.005	0.058	116	0.050

	% RECOVERY
Dibromofluoromethane	107
Toluene-d8	105
Bromofluorobenzene	89.5

METHODS: EPA SW-846 8260

Chemist

06/25/08
Date

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name: Rice Operating Company	BILL TO
Project Manager: Hack Conder	P.O. #:
Address: 122 West Taylor	Company:
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: 393-9174 Fax #: 397-1471	Address:
Project #: Project Owner:	City:
Project Name: Hobbs E-29 vent	State: Zip:
Project Location: Hobbs E-29 vent	Phone #:
Sampler Name: Lara Weinheimer	Fax #:

ANALYSIS REQUEST: Chlorides, BTEX, Naphthalene

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV: ACID/BASE	ICE / COOL	OTHER :	SAMPLING: DATE	TIME
H15015-1	5' north trench @ 12'	G	1			✓					✓		6-17-08	2:52
-2	5' east trench @ 12'	G	1			✓					✓		6-17-08	3:57
-3	5' south trench @ 12'	G	1			✓					✓		6-17-08	2:57
-4	source trench @ 12'	G	1			✓					✓		6-17-08	2:54

Relinquished By: L. Weinheimer	Date: 6-19-08 Time: 9:25	Received By: Misty LeBeau	
Relinquished By:	Date: Time:	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials) MCAB	

Phone Result: ☐ Yes ☑ No Add'l Phone #:
Fax Result: ☐ Yes ☑ No Add'l Fax #:
REMARKS:

email results

Hconder@riceswd.com; jpurvis@riceswd.com; Lweinheimer@rice.swd.com