1R- 428-44

REPORTS

DATE:

March 2008

RECEIVED March 2008



F-29-1a Vent Section 29, T18S, R38E

Closure Report

NMOCD Case #: 1R428-44

R. T. Hicks Consultants, Ltd.

901 Rio Grande Blvd. Suite F-142 Albuquerque, NM 87501

R. T. HICKS CONSULTANTS, LTD.

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

March 27, 2008

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

RE: F-29-1a Vent, Section 29, T18S, R38E, unit "F"

Hobbs SWD System Abandonment

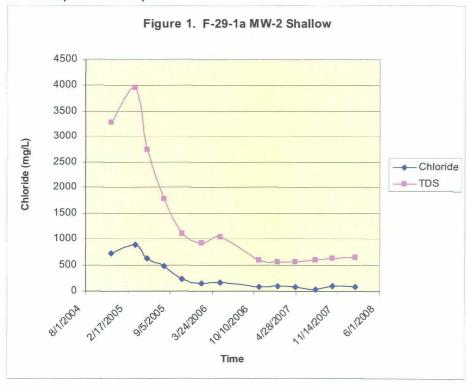
Closure Report

NMOCD Case #: 12428-44

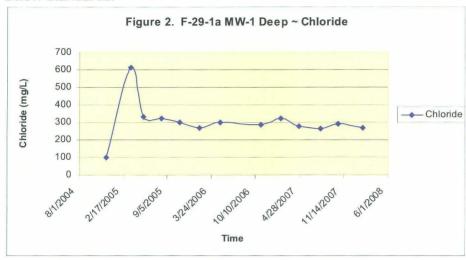
Dear Mr. Hansen:

This letter and appendices are the final Closure Report for the F-29-1a Vent site referenced above. The NMOCD approved Corrective Action Plan (Section 8.3.2, page 14) calls for restoration of the ground surface and re-vegetation, which was completed August 1, 2006.

Figure 1 shows that chloride concentrations since monitoring began in December 2004 in MW-2 (shallow) at the site. The last eight quarters in this well are all below 250 mg/L, TDS concentrations have been below 1,000 mg/L with the exception of a concentration of 1,040 mg/L in May of 2006. We believe this TDS anomaly is reflective of natural fluctuation and laboratory uncertainty.



As discussed in previous submissions (page 3 of the November 2005 CAP), water quality in monitoring well F-29-1a MW-1 (deep) is above WQCC Standards due to regional (up gradient) sources not associated with the F-29-1a site. Chloride and TDS in the deep well at the site are shown in Figures 2 and 3. Concentrations for both chloride and TDS remain slightly above or below standards.





In November of 2005, at the time of our writing of the CAP, we could find no evidence to link chloride in ground water to releases from the site. It appeared that the concentrations of chloride in the shallow well at the site in 2005 were also due to regional sources.

However, ground water data in the shallow well over the past three years show a decline in TDS which suggests that minor leakage could have occurred at the site and the subsequent eight quarters of low TDS ground water are due to:

- Cessation of minor releases of produced water with the abandonment of the Hobbs SWD system in 2002,
- Installation of an effective vegetative cap at the site per our Corrective Action Plan in 2006 plus,
- Natural dilution and dispersion in the aquifer.

We have completed the NMOCD approved Corrective Action Plan and observed eight quarters of ground water below WQCC standards in the shallow well at F-29-1a and respectfully request NMOCD approve site closure in writing.

Appendix A includes the junction box closure form. Appendix B provides photographs of the revegetation at the site in 2006 and 2008. Appendix C includes copies of previous submissions and correspondence. As noted in the CAP, ROC plans to leave the well at this site in until it is no longer needed. We will notify NMOCD prior to plugging and abandoning this monitor well.

Thank you for your attention to this matter.

Sincerely,

R.T. Hicks Consultants, Ltd.

Katie Lee

Project Scientist

Katie Lee

Copy: Rice Operating Company

Hobbs NMOCD Office



Jct. Box Final Report

R. T. Hicks Consultants, Ltd. 901 Rio Grande Blvd. Suite F-142

Albuquerque, NM 87501

RICE OPERATING COMPANY JUNCTION BOX FINAL REPORT

BOX LOCATION

	SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX D	MENSIONS	- FEET
	Hobbs	F-29-1A vent	F	29	185	38E	Lea	Length	Width	Oepth
								no box	System Abar	ndonment
	Depth to Groun	ST. ndwater	58 00 4	feet Date Co.	NMOCD	SITE ASSI 8/1/2006	ESSMENT F	KANKING S D Witness	CORE:	10 no 0.317 feet
	Soil Disposed	20	cubic ya	rds Of	fsite Facility	Sund	iance	Location	Eul	nice, NM
G	eneral Descripti	on of Remedial		This site was	a junction box	that was elin	ninated as part	of the Hobbs	SWD System	n abandonment.
For	a summary of rem	ediation activities	at this junction	box site, refe	r to the Closure	e Report subm	nitted by R.T. I	ticks Consult	ants of Albuq	uerqua.
									<u> </u>	
	***************************************		·							- Addition
	17.7								enclosi	ures: closure repor
	I HERE	BY CERTIFY T		NFORMATI	ON ABOVE VLEDGE AN	IS TRUE A		ETE TO TH	E BEST O	F MY
SIT	E SUPERVISOR			R. T. Hicks	: Consultants		Albuquero	rue, NM		
RE	PORT ASSEMBLE	ED BY K	<u>ínstin Famis Po</u>	o p e	SIGNATURE	<u>K</u>	15//3	1.	· .	Pope
	ſ	DATE	3/19/2008		TITLE		F	Project Scienti	st	



Photo documentation of Re-vegetation

R. T. Hicks Consultants, Ltd. 901 Rio Grande Blvd. Suite F-142

Albuquerque, NM 87501

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

Appendix B - Photo documentation of Re-Vegetation at F-29-1a Vent

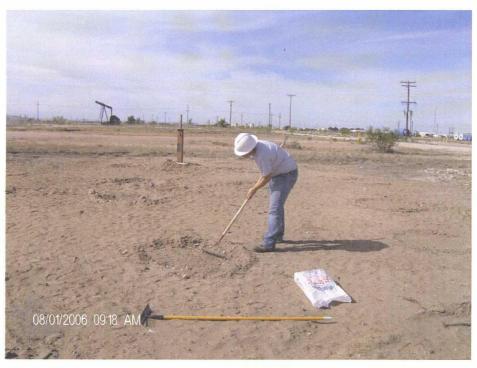


Figure 1: View of F-29-1a showing re-seeding in August of 2006



Figure 2: View of F-29-1a showing re-vegetation in September of 2006

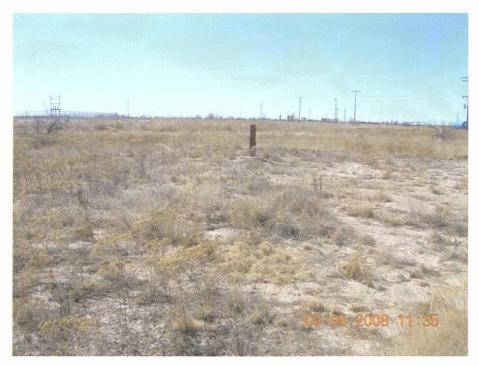


Figure 3: View of F-29-1a showing re-vegetation in March of 2008



Previous Submissions & Correspondence

R. T. Hicks Consultants, Ltd. 901 Rio Grande Blvd. Suite F-142

Albuquerque, NM 87501

R. T. HICKS CONSULTANTS, LTD.

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

September 21, 2006

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

RE:

Hobbs SWD Abandonment Program – Closure Request

F-29-1a, NMOCD Case #1R0428

Dear Mr. Price:

As you may recall, in November of 2005 we submitted a Corrective Action Plan for this site proposing restoration of the ground surface and re-vegetation of the vadose zone. As the attached photos demonstrate, these restoration efforts have been successful. We also attach data associated with the continued monitoring at the site. We conclude that ground water has not been impacted by any releases at the F-29-1a site and request that you close it without inclusion in Rule 19 as we discussed in February of this year.

Finally, we propose semi-annual monitoring of the well at this site for use as a data point for our continued work at the F-29 SWD site nearby. If you have any questions or concerns, please do not hesitate to contact us. Please note that we have included previous relevant correspondence, disclosure reports and previously submitted reports for the F-29-1a site as a Closure Report.

Sincerely,

R.T. Hicks Consultants, Ltd.

Katie Lee

Staff Scientist

Katie Lee

Copy: Rice Operating Company

---- Original Message -----

From: Price Wayne EMNRD

To: Randall Hicks

Cc: Kristin Farris Pope ; katie@rthicksconsult.com Sent: Wednesday, February 15, 2006 4:50 PM

Subject: RE: Hobbs F-29-1A

OCD hereby approves of the corrective action plan with the following conditions:

- 1. Notify the OCD Santa Fe office and the OCD District office at least 48 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and/or split samples during OCD's normal business hours.
- 2. Submit a final closure request with photo documentation upon completion of remedial work.

Please be advised that NMOCD approval of this plan does not relieve ROC of Responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve ROC of responsibility for compliance with any other federal, state, or local laws and/or regulations.

R. T. HICKS CONSULTANTS, LTD.

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

February 13, 2006

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

RE: Hobbs SWD Abandonment Program

F-29-1a, NMOCD Case #1R0428

Dear Mr. Price:

This submission responds to your February 2, 2006 email where you wrote:

"Pursuant to the technical meeting held in Hobbs on Feb 01, 2006, the OCD hereby approves of ROC's request for OCD to withdraw its requirement for an abatement plan for the F-29-1A vent site. OCD hereby rescinds the request for an abatement plan pursuant to Rule 19 with the following conditions:

- 1. The Current on site monitor well shall remain for future monitoring in the F-29 area.
- 2. ROC shall submit a corrective action plan within 30 days."

We ask that you accept the November 12, 2005 Corrective Action Plan as our final submittal for this site to satisfy your second condition outlined above. This November 2005 CAP states on page 14:

8.3.2 PROPOSED VADOSE ZONE CLOSURE

Restoration of the ground surface and re-vegetation is the vadose zone Corrective Action Plan for the site.

We believe the data and analysis presented in the report support this approach.

ROC plans to employ the monitoring well at the F-29-1a site for a variety of reasons and will continue quarterly sampling this well throughout 2006. With eight quarters of data, we can identify any seasonal water quality variations. After completion of the eight quarterly monitoring events in late 2006, ROC may propose annual or semi-annual sampling for this well. Please contact me or Kristin Farris Pope of ROC if you have any questions regarding this submission.

Sincerely,

R.T. Hicks Consultants, Ltd.

Randall T. Hicks

Principal

Copy: Rice Operating Company

From: Price, Wayne, EMNRD [mailto:wayne.price@state.nm.us]

Sent: Thursday, February 02, 2006 2:05 PM **To:** Carolyn Doran Haynes; enviro@leaco.net

Cc: R@rthicksconsult.com; Gil Van Deventer; Sanchez, Daniel J., EMNRD; Sheeley, Paul, EMNRD;

Johnson, Larry, EMNRD

Subject: Hobbs F-29-1A vent UL F sec 29-Ts18s-R38e 1R0428-44

Dear Ms. Haynes:

Pursuant to the technical meeting held in Hobbs on Feb 01, 2006, the OCD hereby approves of ROC's request for OCD to withdraw its requirement for an abatement plan for the F-29-1A vent site. OCD hereby rescinds the request for an abatement plan pursuant to Rule 19 with the following conditions:

- The Current on site monitor well shall remain for future monitoring in the F-29 area.
- 2. ROC shall submit a corrective action plan within 30 days.

Please be advised that NMOCD approval of this request does not relieve ROC of Responsibility should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve ROC of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Wayne Price
Oil Conservation Div.
1220 S. Saint Francis
Santa Fe New Mexico 87505

phone: 505-476-3487 fax: 505-476-3462

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R. T. HICKS CONSULTANTS, LTD.

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

November 14, 2005

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

RE: Hobbs SWD Abandonment Program F-29-1a, NMOCD Case #1R0428

Dear Mr. Price:

On behalf of Rice Operating Company, R. T. Hicks Consultants, Ltd. is submitting this Vadose Zone Corrective Action Plan to permit closure of the F-29-1a Junction Box. This voluntary submittal principally addresses the vadose zone at the F-29-1a Junction Box, and supports our July 11, 2005 letter requesting to delay submission of a Stage 1 & 2 Abatement Plan until we meet with NMOCD staff to discuss the site. While we have not had the opportunity to meet with NMOCD regarding our June letter, we have conducted additional research, and included our findings in this vadose zone closure plan. As stated in this report, we have found no evidence that links a release from the F-29-1a Junction Box to the observed ground water impairment of the on-site monitoring well cluster.

We suggest at the future NMOCD meeting we discuss approaches to address ground water quality issues. This may include an addition well, continued monitoring, chemical ion analysis between existing monitor well data, and NMOCD recommendations. We believe that this analysis is needed prior to concluding the F-29-1a site should be included in a Rule 19 process.

After your review of this Corrective Action Plan and before NMOCD prepares a written response, we would like the opportunity to meet with you to discuss this report and work together to develop an appropriate path forward to resolve the ground water quality issue.

Sincerely,

R.T. Hicks Consultants, Ltd.

Randall T. Hicks

Principal

Copy:

Rice Operating Company

R. T. HICKS CONSULTANTS, LTD.

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

July 11, 2005

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

RE: Jct. F-29-1A UL F Sec 29, T18S, R38E NMOCD Case # not assigned

Dear Mr. Sanchez

In your letter of May 5, 2005, NMOCD required Rice Operating Company (ROC) to submit an abatement plan for the above-referenced site on or before July 15, 2005. The data collected thus far at the F-29-1a junction box are inconclusive as to whether the junction box operations have impacted ground water.

We respectfully request an extension of 120 days for submission of a Stage 1 Abatement Plan.

Before the submittal of a Stage 1 Abatement Plan we would appreciate a meeting with NMOCD to discuss the data collected thus far and approaches to the characterization of the F-29-1a Junction Box site and the >250 ppm chloride concentration observed at the F-29-1a monitoring well.

We thank you in advance for permitting us the time to allow an informed decision regarding the applicability of Rule 19 to the F-29-1a junction box site.

Sincerely,

R.T. Hicks Consultants, Ltd.

Randall Hicks Principal

Copy:

Kristin Pope, Rice Operating Company

November 12, 2005

Corrective Active Plan F-29-1a Junction Site

Prepared for:

Rice Operating Company 122 West Taylor Hobbs, NM 88240

1.0 EXECUTIVE SUMMARY

This Vadose Zone Corrective Action Plan presents the results of the characterization activities performed by R.T. Hicks Consultants (Hicks Consultants) and Rice Operating Company (ROC) at the F-29-1a Junction site. Based on field data, laboratory results, and predictive modeling, the vadose zone closure calls for restoration and re-vegetation of the ground surface and creation of a slight crown over the former junction box site to promote surface runoff. Using highly conservative input data, HYDRUS-1D modeling of this scenario predicts that future chloride concentrations in ground water will be less than 20 ppm above background concentrations (100 ppm). This proposed vadose zone closure is protective of ground water quality, human health and the environment.

Ground water in the two well cluster at the site exceeds the numerical standards for chloride, sulfate and total dissolved solids. Evidence suggests that the F-29-1a site is not the cause of this condition.

The Hobbs Salt Water Disposal System (SWD), which managed produced water from the late 1950s to the present, is now closed. Future releases from the system are not possible. Closure of facilities like the F-29-1a Junction within Hobbs SWD followed the August 6, 2004 NMOCD approved junction box closure plan. This plan calls for delineation of any impact from these sites during the closure process and states:

If 12-feet vertical delineation at the source reveals Target Concentrations for TPH or BTEX will not meet NMOCD guidelines or TPH and BTEX will meet guidelines but there is not a significant decline vs. depth in chloride concentration, the site-impact is judged to be outside the scope of this work plan and will become a risk-based corrective action (RBCA) project site.

The F-29-1a Junction site meets this criteria and this report describes characterization activities that are consistent with the NMOCD-approved workplan for this site. The characterization activities show that regulated hydrocarbons concentrations in the vadose zone are less than the screening levels employed by the New Mexico Environment Department. Field and laboratory analyses also show that chloride ion concentration in soil is less than 200 ppm and less than 125 ppm below 15-feet. Ground water samples from the well cluster installed at the site exceed the numerical standards for the state of New Mexico.

2.0 SUMMARY AND CONCLUSIONS

2.1 DATA SUMMARY

- 1. The F-29-1a Junction site is located in Section 29, T18S, R 38E, on the west side of Hobbs, New Mexico. This junction is part of the Hobbs Salt Water Disposal System.
- 2. R.T. Hicks Consultants supervised field activities at the F-29-1a Junction site in November 2004. In addition to general reconnaissance identified in the NMOCD-approved work plan, this included supervising the borehole sampling of the vadose zone from ground surface to ground water and drilling to a total depth of 102-feet followed by installation of a monitoring well cluster at the site
- 3. Due to the dry and unconsolidated nature of the sand-silt material, the split spoon was unable to hold samples of the vadose zone from below 35-feet to the capillary fringe. Throughout this depth interval, samples from cuttings were collected instead. This is the only material deviation from the NMOCD-approved workplan.
- 4. Field analyses of headspace organic vapors measured readings above 1,000 ppm in soil samples from 11-feet bgs to 31-feet bgs. Below 31-feet bgs, readings remained at approximately 400 ppm to 59-feet bgs. Samples from 11-feet bgs, the highest PID reading, and 59-feet bgs, at the capillary fringe, were sent for laboratory analysis of BTEX.
- 5. Laboratory analyses confirm that regulated petroleum hydrocarbons are not present above screening levels employed by the Petroleum Storage Tank Bureau of the New Mexico Environment Department.
- 6. Chloride concentrations from the boring do not exceed 200 ppm. Chloride concentrations below 15-feet are less than 125 ppm.
- 7. Work by ROC and an NMOCD Consultant document regional ground water quality impairment in the area of the F-29-1a Junction site.

8. Ground water samples from the well cluster installed at the site show chloride, sulfate and TDS concentrations above the New Mexico numerical standards. However, no evidence from the soil boring and analytical program links chlorides in ground water to any potential past releases from the F-29-1a Junction Box.

2.2 CONCULSIONS

- 1. HYDRUS-1D modeling of current conditions indicates that the residual chloride with concentrations greater than 100 ppm in the upper vadose zone would slowly migrate vertically creating a peak chloride concentration in ground water that is less than 120 mg/L.
- 2. This predicted minimal impact of 20 mg/L above background is observed in the model predictions from the present through 29 years from now with a peak concentration predicted 22 years from now. Chloride concentration in the aquifer are indistinguishable from background concentrations for all later times.
- 3. No evidence supports a conclusion that produced water releases from the F-29-1a Junction site migrated to ground water. All evidence supports a conclusion that any released regulated hydrocarbons have biodegraded to acceptable levels. All evidence supports a conclusion that any released brine was removed during the junction box closure.
- 4. Sampling, predictive modeling and the proposed vadose zone Corrective Action Plan shows that constituents of concern in the vadose zone will not with reasonable probability impact ground water or surface water, in excess of the numerical ground water standards through leaching, percolation, or other transport mechanisms, or as the water table elevation fluctuates.

2.3 PROPOSED VADOSE ZONE CLOSURE

After the proposed surface restoration and re-vegetation, the site will meet the criteria for closure. Closure of the regulatory file with respect to the vadose zone is possible for the F-29-1a Junction site.

3.0 INVESTIGATION

The F-29-1a Junction was a component of the Hobbs salt water disposal (SWD) system. With the abandonment of the system in 2002, Rice Operating Company (ROC) excavated and removed the F-29-1a junction and the uppermost 10-12-feet of the vadose zone. At the time of the field investigation, the excavation was filled with a sand-clay caliche. Appendix A presents additional information regarding the Hobbs SWD system.

3.1 SITE LOCATION AND LAND USE

Appendix A includes a regional location map showing the location of the site relative to selected other components of the Hobbs SWD system and public roads. Plate 1 is an aerial photograph of the site when it was active, taken between 1996 and 1998. Plotted on Plate 1 is the location of the monitoring well at the site, the nearby monitoring wells at the ROC F-29 SWD site, and the Truck By-Pass. As shown in Plate 1, the land use of the area is residential, commercial and oil production.

3.2 WATER WELL INVENTORY

Appendix B presents the locations and other data for wells within the Office of the State Engineer database for the area within 1-mile of the F-29-1a junction box site and the adjacent area.

3.3 CHARACTERIZATION ACTIVITIES

In November, 2004, R. T. Hicks Consultants, ROC, and Eades Drilling mobilized to conduct an exploratory drillings at the site and a background soil boring. The location of the borehole at the site is within two feet of the marking plate. Drilling commenced with collection of two foot long split spoon samples at 5-foot intervals. Appendix A presents the results of the background soil boring.

From 0-35 feet below land surface, split spoon samples were taken at 5-foot intervals. The dry and unconsolidated nature of the sand-silt below a depth of 35-feet caused loss of sample during retrieval of the split spoon. Continued attempts to collect split spoon samples below 35-feet were unsuccessful until a depth of 56-feet below ground surface (bgs). Due to increased soil moisture at this depth, samples were collected with the split spoon to near ground water at 59-feet bgs. In the interval between 35-feet bgs and 55-feet bgs, samples were collected from cuttings. This is the only material deviation from the NMOCD-approved workplan.

In the field, ROC evaluated samples from each depth for chloride and used the heated headspace method to measure total organic vapors by PID. Samples were submitted to the laboratory from depths showing the highest field chloride and PID measurements (11-feet bgs) and from the capillary fringe (59-feet bgs).

4.0 REGIONAL GEOLOGY AND HYDROGEOLOGY

Appendix A describes the hydrogeology of the Hobbs SWD system area.

5.0 CHARACTERISTICS OF THE VADOSE ZONE

The upper vadose zone profile at the site is composed primarily of a very fine-grained sand-silt with a series of caliche layers. As shown in Plate 2, the top 13- feet consist of sand, clay and loose caliche. This material appears to be imported fill in the excavation.

From 13-feet bgs to 18-feet bgs exists a caliche formed in a tan sand-silt. The caliche from 18-feet bgs to 21-feet bgs is well indurated. Several additional 'hard' layers lie between 21-feet and 24-feet bgs. Below this, the very fine-grained sand-silt is reddish tan. One-foot thick caliche layers are at 36-feet bgs and at 48-feet bgs. The bit penetrated moist sediment at 59-feet bgs. Problems with borehole collapse in the saturated zone resulted in Eades completing the rest of the boring with water as the drilling medium rather than air.

ROC staff performed field chloride measurements every five feet starting at 6-feet bgs as detailed earlier and presented in Appendix C and Figure 1. Because of difficulty in collecting sufficient material of the well indurated caliche layer at 22-feet bgs, an additional sample was collected at this depth to assist in verifying the result. At 6-feet bgs, within the imported fill, field tests identified the peak field chloride measurement of 203 mg/kg. Below this depth, chloride measurements declined. Field measurements above 100 mg/kg do not exist below 16-feet bgs. Field chloride measurements obtained from the nearby background soil boring

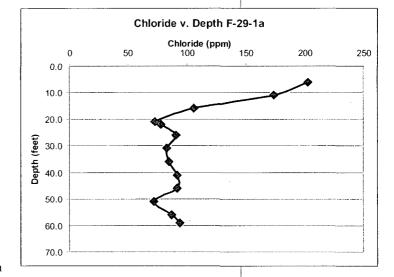


Figure 1. Chloride measurements.

(see Appendix A) are essentially the same as measurements below 11-feet bgs obtained from this boring.

Field PID measurements attained a maximum of approximately 1,600 ppm at 11-feet bgs (Appendix C), within the imported fill. In all samples from 11-feet bgs to 31-feet bgs, PID readings exceeded 1,000 ppm. Below 31-feet bgs, readings remained at approximately 400 ppm to 59-feet bgs.

Samples from 11-feet bgs and 59-feet bgs were sent for laboratory analysis of BTEX. The Laboratory did not detect petroleum hydrocarbon constituents of concern (see Appendix C).

5.1 EXTENT AND MAGNITUDE OF CONSTITUENTS OF CONCERN IN THE VADOSE ZONE

The boring program demonstrates that constituents of concern do not exist in the vadose zone in concentrations that warrant additional investigation. Although PID readings exceeded 1,000 ppm from 11- to 31-feet bgs, the laboratory did not detect regulated hydrocarbon constituents. The presence of vapors and/or discoloration of samples and the absence of regulated hydrocarbon constituents are very common. As explained in Appendix A, after cessation of constant input of produced water to the subsurface, natural volatilization and biodegradation effectively remove these constituents.

Natural processes do not remove chloride or sulfate from the environment. Dilution and dispersion in the vadose zone reduce concentrations of these constituents, but the mass released at a site is unchanged over time. At the F-29-1a site, vadose zone concentrations of chloride (which is an effective tracer of produced water releases) are very low. The fact that vadose zone samples exhibit PID readings greater than 1,000 ppm demonstrate that produced water affected the samples and therefore the boring was placed correctly to determine the extent and magnitude of any produced water release. Low chloride concentrations are not unusual at sites where residual asphaltic hydrocarbons fill the pore space and minimize the transport of produced water. See Appendix A and the next section of this report for a more detailed description of this phenomenon.

6.0 CHARACTERISTICS OF THE SATURATED ZONE

The borehole was completed at a depth of 102-feet by drilling with water from 59-feet bgs to 102-feet bgs. The cuttings consisted of a fine grained sand-silt. Two nested wells were installed. The deep well (F-29-1a B-2-1) is screened between 99-feet and 94-feet bgs. The 20-foot shallow well screen (F-29-1a B-2-2) straddles the water table with the top of the screen at a depth of 52 feet (Plate 2).

Appendix A presents a more detailed discussion of hydraulic gradient and hydraulic conductivity of the saturated zone. Appendix A shows the hydraulic gradient of the area is 0.0063. Assuming a hydraulic conductivity of 45 ft/day (Musharrafieh and Chudnoff, 1999), ground water flux is calculated as 8.6 cm/day. Direction of flow is to the southeast (Appendix A, Plate A-4).

6.1 GROUND WATER QUALITY

The ground water chemistry of the monitor well cluster over the past four quarters is shown in Figure 2. After the first sampling event, the chloride concentration rose, as did the chloride concentration of the shallow well. Over the past three quarters, Figure 2 shows that the shallow well consistently exhibits a higher chloride concentration than the deeper well. Sulfate and TDS follow a similar pattern.

Hydrocarbon constituents of concern were below laboratory detection limits (Appendix C) in all ground water sampling events.

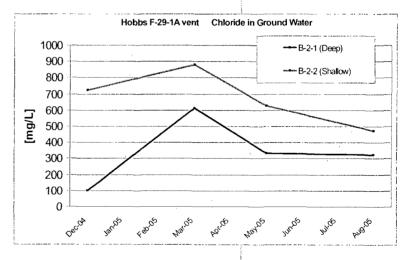


Figure 2. Ground water chemistry.

6.2 EXTENT AND MAGNITUDE OF SULFATE AND CHLORIDE IN THE SATURATED ZONE

Appendix A provides a description of the regional ground water hydrogeology and quality.

7.0 CONCEPTUAL MODEL OF SUBSURFACE PRODUCED WATER RELEASE

Junctions within the gravity-flow pipelines of the system consisted of a T-intersection of pipes within a wooden catchment box containing the junction. Due to the nature of junctions in these systems, a surge of produced water and entrained hydrocarbons could cause a failure of the pipe connection seals and releases of produced water. The conceptual model presented in Appendix A discusses how produced water releases generally occur within gravity driven water disposal systems, such as the Hobbs SWD. The conceptual model relies upon eyewitness accounts of recent releases and observations of subsurface chemistry.

From discussions with individuals familiar with these systems and from field inspection of the surface soils at the site, periodic leaks that occurred at the F-29-1a junction site were probably effectively contained within the junction box and shallow vadose zone and chloride did not migrate below the depth excavated by ROC (about 10-feet).

This conclusion is fully supported by the data. Note from the boring log shown in Plate 2 that the fine-grained caliche zone between 16-22-feet and the very fine sand between 22- and 31-feet below ground surface shows evidence of hydrocarbon intrusion as relatively high PID measurements and an observation of hydrocarbon odor in the samples. Yet both field and laboratory analyses returned chloride results below 200 ppm. Laboratory results of the vadose zone also showed that regulated hydrocarbon constituents were below the detection limits. These data create a chloride and hydrocarbon common chemical "signature" in the vadose zone that supports the conceptual model described in Appendix A where petroleum hydrocarbons in released produced water clog the pores of the upper vadose zone and the interior of the junction box creating a very low permeability asphaltic liner in the box and a low permeability zone below the box.

Over time, the regulated constituents that were once present in the crude oil degrade or volatilize. Because the asphaltic crude now occupies much of the pore space of the upper vadose zone, the mass of residual produced water in these samples is quite low, which results in the reported low chloride concentrations. While analyses of cuttings can produce reliable chloride concentrations (i.e. from 35- to 56-feet below

grade) PID readings from air-rotary cuttings do not permit an accurate evaluation of the penetration of hydrocarbons into the vadose zone. Low PID readings from split-spoon core samples at the capillary fringe do confirm that hydrocarbons did not penetrate the entire vadose zone.

8.0 VADOSE ZONE CLOSURE PLAN

8.1 METHODS OF EVALUATION

The unsaturated flow model HYDRUS-1D simulated flow through the vadose zone. This output became the input to a simple ground water mixing model that predicts chloride concentration in a hypothetical well immediately down gradient of the site. Section 3.0 of Hendrickx and Others, *Modeling Study of Produced Water Release Scenarios*, (2005), provides a general description of this modeling approach (see References Section at the end of this document).

For subsurface releases like those within the Hobbs SWD System, the model uses a chloride profile (Figure 1) that is representative of the subsurface analyse in lieu of attempting to re-create the specific release history for the model input. The present chloride load within the soil profile is the result of all previous events at the site and is based upon field observation and analysis, not supposition. This is the most accurate modeling approach considering the available data available.

8.2 INPUT FOR SIMULATIONS

HYDRUS-1D employed a constructed soil profile based upon the results from this site and five other borings completed within Section 29 (see Appendix A).

Input data include very conservative dispersion lengths because of recent experience with similar soils south of Lovington, New Mexico. Standard practice calls for employing a dispersion length that is 10% of the model length. For each lithologic unit identified in Appendix A the model used an assumed dispersion length that was always less than 6 % of the model thickness (Table 1 presents the specific dispersion lengths for each lithology).

Table 1. HYDRUS-1D Dispersion Lengths

HYDRUS-1D calculated the initial soil moisture of the Section 29 soil profile by running a simulation for 45 years using the weather data from the Pearl Weather station on a dry soil

	Hydrus Profile 2 (excavated)									
Material	Description	Length (cm)	Dispersion (cm)	%of Profile length						
1	Sandy Loam	30	50	2.778						
2	Caliche-sand	60	30	1.667						
3	Caliche	90	10	0.556						
4	Sand-silt	1070	100	5.556						
5	Loamy sand	550	100	5.556						

column. Based upon experience with soils in this area, it is important that HYDRUS simulation experiments of different remedial strategies start with an initial estimated "steady state" soil moisture content. Because the simulation of the initial condition predicted only minimal changes in the moisture content profiles after year 30 of the initial simulation, the initial condition moisture content created by 45 years if weather data is more than sufficient. HYDRUS-1D used soil profiles hydrated in this manner in all simulations of chloride movement discussed later in this report.

As mentioned earlier, HYDRUS-1D used the observed (measured) chloride concentrations into the hydrated soil profile. Between samples, the profile employed linearly interpolated chloride concentrations based upon the field data generated by ROC personnel for all cells of the model. Because the site contained the junction of two lines, the effected area is small.

For weather data in the predictive modeling, HYDRUS-1D used Hobbs data from November 2003 to December 2004 plus an additional 45 years from the Pearl Weather Station, approximately 11 miles west of the Hobbs Airport. The Pearl Weather Station is the closest station to the I-29 Vent site featuring sufficiently complete weather data for the HYDRUS-1D input files. Only the more recent data from the Hobbs Airport is complete enough for HYDRUS-1D input.

As mentioned earlier, the calculated ground water flux is 8.6 cm/day.

Table 2: Input Parameters for Simulation Modeling

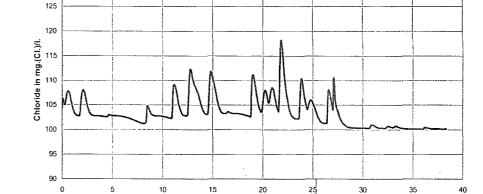
Input Parameter	Source			
Vadose Zone Thickness - 60 feet	F-29-1a Field Data			
Vadose Zone Texture (Plate 2 and Appendix A)	F-29-1a Field Data			
Dispersion Length - <6% of model length	Professional judgement			
Climate	2004 Hobbs, NM data and Pearl Weather Station Data			
Soil Moisture	HYDRUS-1D initial condition simulation			
Initial soil chloride concentration profile	From ROC Field Measurements			
Length of release parallel to ground water flow - 15 feet	Field Estimate			
Background Chloride in Ground Water - 100 ppm	Chemical Analysis			
Ground Water Flux - 8.6 cm/day	Calculated from published data			
Aquifer Thickness - 10-feet	From Well Chloride data at the F-29-1a Site			

Field data at the F-29-1a site show that the aquifer is greater than 40-feet thick in this area. Due to vertical differences in hydrochemical signature at the F-29-1a site well cluster, restrictions to vertical flow must exist within the Ogallala aquifer of Section 29 (see Appendix A). Accordingly, the modeling experiment restricted aquifer thickness in the mixing model to 10-feet, which could cause an over-estimation of the chloride concentration in the imaginary monitoring well.

8.3 VADOSE ZONE CORRECTIVE ACTION PLAN

8.3.1 ALTERNATIVES EXAMINED

Using the input data described above, theHYDRUS-1D and ground water mixing model predict that no impairment of ground water will occur at this site (Figure 3). For this simulation, the modeling experiment assumed that vegetation is not present at the site. This is the "current condition" modeling experiment.



Time in Years

Figure 3. Chloride Concentration in the Aquifer at the F-29-1a Site

As field chloride data demonstrate, impacts at this site are marginally

greater than background, so one would expect an insignificant impact to ground water quality. As shown on Figure 3, chloride concentration in the aquifer attains a maximum of less than 120 ppm approximately 22 years from now. The effect of this minimal chloride load is no longer distinguishable 29 years from now. Because the normal variation in chloride concentration from the wells at the F-29-1a site is much greater than 20 mg/L, the predicted chloride impact to ground water is too small to be discerned.

Because the modeling of current conditions did not predict ground water impairment, simulation of other potential remedies was not necessary.

8.3.2 PROPOSED VADOSE ZONE CLOSURE

Restoration of the ground surface and re-vegetation is the vadose zone Corrective Action Plan for the site.

Because chloride and hydrocarbon concentrations in the vadose zone show a very limited impact from the site, the model predicts and field data support a conclusion that past releases from the F-29-1a Junction Box did not impair ground water quality. With implementation of this Corrective Action Plan, residual constituents of concern in the vadose zone will not impair ground water quality.

8.3.3 PROPOSED VADOSE ZONE MONITORING PLAN
Because the laboratory did not detect regulated hydrocarbons, post closure monitoring is not necessary.

The residual chloride concentrations in the vadose zone are relatively low. Moreover, predictive modeling employing "conservative" input parameters do not predict a measurable increase in ground water chloride concentration. Therefore, post vadose zone closure monitoring is not necessary.

8.3.4 CRITERIA FOR CLOSURE OF THE VADOSE ZONE REGULA-TORY FILE

Sampling and predictive modeling show that constituents of concern in the vadose zone will not with reasonable probability contaminate ground water or surface water, in excess of the numerical ground water standards through leaching, percolation, or other transport mechanisms, or as the water table elevation fluctuates.

9.0 REFERENCES

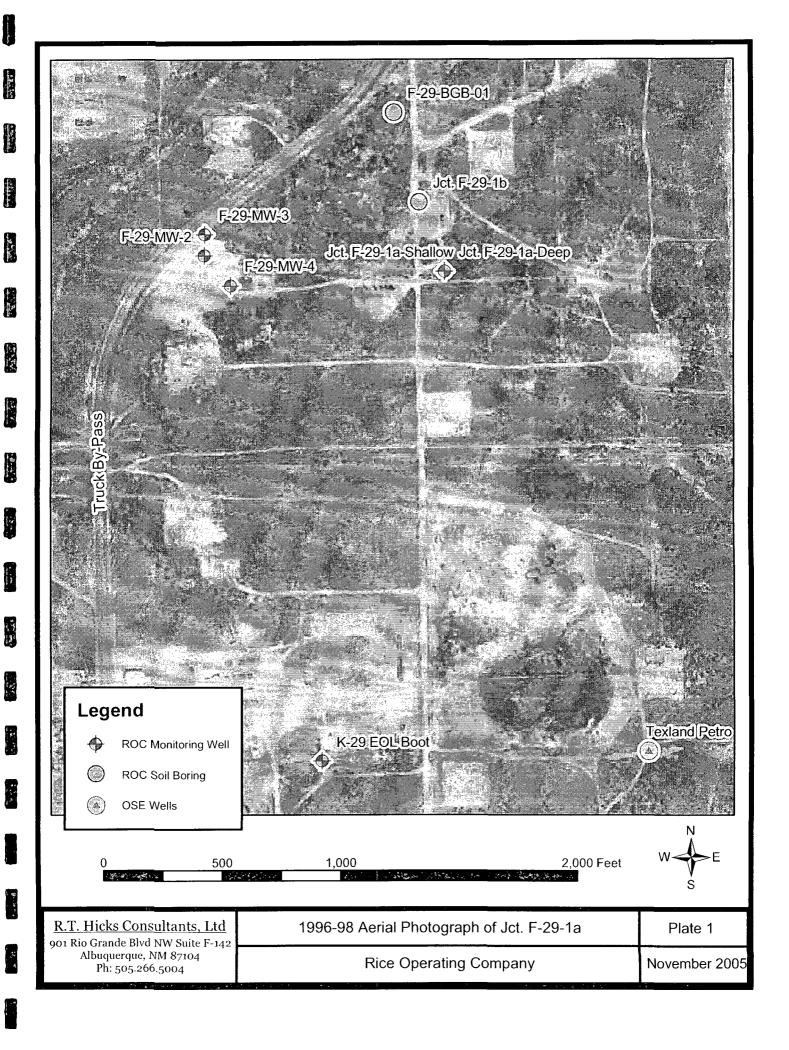
Ash, S.R., 1963, Ground water conditions in northern Lea County, U.S. Geological Survey Hydrologic Investigations Atlas HA-62

Intera Incorporated, July 8, 2003, Windmill Oil Site Ground Water Sampling Results, prepared for the New Mexico Oil Conservation Division, 3 pp.

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PLATES



	Logger	lavid Hamilton	· · · · · ·	Client:			Well ID:			
		avid Hamilton Eades Drilling			perating	Compar	าง	well ib.		
Drilling	Method:	Air Rotary		Project Name:	perating	Compai	iy			
	tart Date:	11/3/2004		Hobbs F-29-1A			F-20-1a R 2-1 (00 foot)			
	End Date:	11/6/2004		Location:				9-1a B-2-1 (99 fe 9-1a B-2-2 (72 fe		
				T18S R38E] [-2	9-1a B-2-2 (72 te	et)	
				Sed	ction 29,	Unit F				
Donth									Field data	
Depth (feet)	Description	n Litt	hology	Comments	We	ell Constru	uction	Depth	Chloride mg/kg	PID
0.0	Surface, 0 - 1 fe	20000000	Ĭ			3003 3300000	Cement, 0			
2.0						8 🕮	3 feet))
4.0	Caliche, clay, sand , moist, 1	- 13 feet. Some								
6.0	hydrocarbon imp	677207						6.0	203	547
8.0 10.0								11.0	474	1575
12.0								11.0	174	1575
14.0	Caliche, fine grained sand	, silt, light tan,								
16.0	13 - 18 feet							16.0	106	1060
18.0	Caliche, well indurated,	18 - 21 feet		Some odor						}
20.0	Caliche with some well ind	lurated layers,						21.0	73	1242
22.0	21 - 24 feet	*****						22.0	78	1290
24.0							Hydrated bentonite,	00.0	0.1	4000
26.0 28.0	Very fine grained sand, silt, I	light reddish tan		At 30 feet:			3-50 feet	26.0	91	1006
30.0	24 - 36 feet	iight reddisir tan,		Some hydrocarbon				31.0	83	1290
32.0				impact,					33	
34.0				strong odor						[
36.0	Some caliche, 36 - 3	36.5 feet						36.0	85	403
38.0										
40.0 42.0	Very fine grained sand, s							41.0	92	432
44.0	36.5 - 48 feet	t								
46.0								46.0	92	354
48.0	Caliche layer, 48 - 4	18.5 feet								
50.0					\sqcup			51.0	72	527
52.0 54.0	Very fine grained sand, si	ilt, tan - red,			Н			50.0	07	
56.0	48.5 - 59 feet			•	$ \cdot $		56.0	87	479	
58.0				At 59 feet:	lΠ		Sand	59.0	94	414
60.0				Bore collapsing,			Sand, 50-74 feet			L
62.0				Probe is wet.			Screen			
64.0				Drilled with water	ЫЦ		52-72 feet			
66.0 68.0				below 59 feet	IН					
70.0					H					
72.0					"					
74.0										
76.0										
78.0	Very fine grained sand, s	ilt, tan - red,								
80.0 82.0	59 - 102 feet						Hydrated bentonite,			
84.0							74-92 feet			
86.0										
88.0										
90.0										
92.0						НЛ	Sand,			
94.0						$\mathbb{H}^{\mathbb{N}}$	92-99 feet Screen 94			
98.0				Slump filled hole		H	99 feet			
100.0				from 99-102 feet			Slump			
102.0		E					F			
	D.T. III.	34			_					
	R.T. Hicks Consu 901 Rio Grande Blvd 1			Hobl	os F-29-	1A Site			Plate 2	
ŀ	Albuquerque, N	M 87104		B.F **					• • • • • • • • • • • • • • • • • • • •	_
	505-266-5	004		Monitoring Well Boring Septembe					September 2005	



1.0 CONCEPTUAL MODEL OF SUBSURFACE PRODUCED WATER RELEASES

The Hobbs SWD System operated at a capacity of about 40,000 barrels/day from the late 1950s to the late 1980s. During the past decade, about 1,000 barrels/day flowed through the system until operations ceased in 2002.

People familiar with the site suggest that soil staining and other evidence of produced water leakage at various sites typically dates to the time when the system was operating at capacity. Accidental releases to the environment at many sites ceased in the 1990s and natural restoration has mitigated the effects of any past releases. At most release sites, no vegetation stress that can be attributed to past releases exists.

The System operated by gravity flow of produced water through pipelines, junction boxes, boots, tanks and disposal through injection into wells. Releases occur periodically due to gradual failures of seals, overflow of vent lines, or sudden and accidental releases. The length of time that produced water flows to the subsurface was short for sudden and accidental releases or vent overflow incidents. A failure of a seal or a small crack in a pipeline may have allowed a release to the subsurface for months or longer. Because of the efforts of ROC to routinely identify system failures and because the flow in the Hobbs SWD System materially declined during the past decade, only minor subsurface releases occurred in the Hobbs SWD System until operations ceased in 2002.

The distribution of constituents of concern (primarily chloride, secondarily BTEX) in the surface soil and vadose zone is different for each release scenario. Releases of relatively large water volumes over long periods create saturated conditions between the release site and ground water. Where this type of release occurs, borehole data show a relatively constant chloride concentration of 2-4 times background concentration throughout the vadose zone. Due to the natural processes of sorption and biodegradation, petroleum hydrocarbons may not impact ground water even at sites where large volumes were released over long periods.

Episodic releases of small volumes of produced water will not always create saturation of the vadose zone. Where episodic releases occur in junction boxes or similar enclosures, spills of produced water and entrained crude oil infiltrate the vadose zone. After the spill ceases and the

produced water drains into the vadose zone, the entrained crude oil follows similar paths as the produced water with the difference that the higher viscosity and surface tension limits the depth of infiltration. After deposition of the oil within the near surface vadose zone pore spaces, volatilization of the lighter hydrocarbons from the crude oil and the aging process in general causes the formation of an asphaltic-sand that reduces or eliminates subsequent infiltration through that same flow path.

This conceptual model of produced water releases accounts for the distribution of chloride and regulated hydrocarbons observed at this and others salt water disposal systems. The depth of penetration of produced water depended primarily upon the size and frequency of releases, how quickly crude filled the pore spaces and reduced permeability, and the nature of the subsurface. At some sites, these three factors allowed produced water to penetrate less than 10 feet. At other sites where a relatively large volume of produced water entered the subsurface, penetration to depths greater than 10 feet occurred due to unsaturated and saturated flow.

Because the system operated under gravity flow, the produced water releases were generally episodic, being caused by temporary over-pressuring at a given location (e.g. a vent). The lack of constant pressure within the system typically caused releases of relatively small volumes. If the total volume released was relatively small, then one could observe relatively high chloride concentrations in the unsaturated zone with no impairment of ground water quality.

Improved operational and environmental practices of the 1980s and 1990s plus the clogged pore spaces caused by previously released crude caused saturated flow conditions, which may have existed at some sites, to change to much slower unsaturated flow. With this type of release, one could observe high concentrations of constituents throughout the vadose zone but no current impairment of ground water quality.

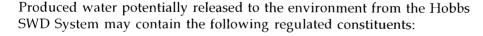
Impairment of ground water quality occurs only where the mass of constituents of concern in produced water entered ground water at a sufficient rate to overwhelm natural dilution and dispersion. Therefore, high concentrations of constituents in the vadose zone are not the only factor that determines if ground water is impaired; it is the flux (e.g. flow) of these constituents to ground water. However, if a soil column contains only low concentrations of constituents, then one may conclude that there is insufficient mass of constituents to impair ground water quality regardless of the flux.

In the absence of vadose zone saturation, the arid climate of New Mexico creates such a low flux to ground water that one can observe sequestration of the constituents of concern in the upper vadose zone (10-

20 feet below land surface) for many years. Borehole data from these types of releases show high concentrations of chloride below the release site and a relatively sharp decline in chloride concentration to background conditions with depth. If the release is not recent, natural processes can reduce the concentrations of any residual hydrocarbons and eliminate any environmental risk to ground water. Figure 1 presents schematic representations of field chloride analyses that are common for saturated and unsaturated release scenarios.

In summary, sites where chloride or other constituents of concern penetrated deep into the vadose zone probably experienced long-

term releases of relatively large volumes of water; or crude was not released with the water and the filling of soil pores with asphaltic material did not occur. Where penetration of the vadose zone was less than 20-30 feet, the release was episodic and consisted of a relatively small volume of fluid.



- · Benzene
- · Ethylbenzene
- ·Toluene
- ·Xylenes
- · Naphthalenes
- · Total Dissolved Solids
- · Chloride
- · Sulfate

Because the fate and transport of released chloride is essentially identical to that of TDS and sulfate, soil samples can be evaluated for chloride

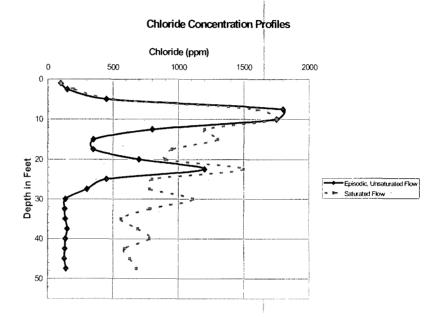


Figure 1. Schematic representations of field chloride analyses that are common for the two different release scenarios.

only; and one may remain confident that concentrations of chloride will indicate the presence of similar concentrations of other non-hydrocarbon constituents.

The regulated hydrocarbon constituents can behave independently of each other due to different rates of biodegradation and sorption. Field measurements of total organic vapors are very useful in providing a qualitative measure of the concentration of volatile organic constituents (e.g. benzene) in soil, and therefore, this field measurement is employed to identify which samples will undergo laboratory analysis.

2.0 HYDROGEOLOGY OF SECTION 29

2.1 CHARACTERISTICS OF THE VADOSE ZONE IN SECTION 29 Plate A-1 with Table A-1 shows:

- The location of monitoring wells and soil borings installed by ROC within Section 29,
- · Private supply wells sampled by ROC,
- · Supply wells with water sample data from by Intera's (2003), and
- Water supply wells that have lithologic information in Exhibit A 1 collected from the Office of the State Engineer (OSE).

Plate A-2 is the well log from the F 29-1a site, which is typical of the area. As is common in the Ogallala Formation throughout the High Plains, caliche dominates the uppermost vadose zone from 5-feet below surface to a depth of more than 20-feet. Below the caliche horizon, the boring penetrated tan and red very fine-grained sand and silt to the water table. Interbedded with the sand and silt are thin layers of caliche. The water table was intercepted between 60- and 65-feet.

Drillers' logs on file with the OSE and published descriptions of the upper Ogallala Formation (Nicholson and Clebsch, 1961; Ash, 1963) generally agree with the lithologic profile presented in Plate A-2. Beneath the thin layer of topsoil, caliche is present in the uppermost vadose zone to a depth of 24-28-feet. Below this caliche layer, several supply well logs report penetration of a clay/shale zone, which was not observed in the F-29-1a boring but may exist elsewhere in Section 29. As Plate A-2 shows, lithologic logs describe very fine grained sand and silt with thin layers of caliche between the surface and a depth of 24-feet and primarily a sand-silt to the total depth (102-feet). In the supply well logs, "sandstone" (which R.T. Hicks Consultants describes as "caliche") dominates the upper vadose zone to depth of about 25-feet; "sand" (which R.T. Hicks Consultants describes as "very fine grained sand-silt") dominates the lower vadose zone to a depth of about 65-feet.

Plate A-3 (see Composite Profile 1), which is a composite lithologic profile based upon available data, is considered to adequately represent the texture of the vadose zone and upper saturated zone throughout Section 29. The driller's logs that describe a clay/shale zone below the uppermost caliche suggest the uppermost vadose zone could be locally finer-grained than described in Plate A-2.

Plate A-3 also contains a second composite profile representing an excavated soil profile in Section 29, which is representative of sites where ROC removed portions of the upper vadose zone during the abandonment program. In this profile, the upper 19-feet (the maximum reach of a backhoe) of sand and caliche is replaced with a loamy sand. As the loamy sand has a higher hydraulic conductivity than the caliche and sand it replaces, overstating depth of excavation is conservative of ground water quality from a modeling viewpoint.

2.2 CHARACTERISTICS OF THE SATURATED ZONE IN SECTION 29

The saturated zone is the Ogallala Aquifer. Plate A-2 characterizes the saturated zone as well-sorted, fine-grained sand with thin layers of caliche and cemented sand, so the single well log on file at the OSE that extends to the top of the "Red Bed" (Dockum Group) does not describe a basal sand and gravel unit that is characteristic of the Ogallala throughout Lea County and the High Plains in general (Nicholson and Clebsch, 1961). The basal sand and gravel unit is probably present throughout the area, despite the lack of site-specific evidence.

Based upon the lithology of the saturated zone, the number and spacing of supply wells, and the size and use of several of these wells (e.g. 12 inches or more), the hydraulic conductivity of the saturated zone in Section 29 is similar to that observed for the Ogallala Aquifer throughout the general area. McAda (1984) simulated water level declines using a two-dimensional digital model and employed hydraulic conductivity values of 51-75 feet/day (1.9 E-4 to 2.8 E-4 m/s) in the area. More recently, Musharrafieh and Chudnoff (1999) employed values for hydraulic conductivity within this area of interest between 81 and 100 ft/day for their simulation. According to Freeze and Cherry (1979), these values correspond to clean sand, which agrees with the site lithologic description of the saturated zone.

For the Hobbs System sites, the saturated hydraulic conductivity of the uppermost saturated zone is assumed as 75 feet/day.

To create a potentiometric surface map for the site, USGS gauging data from 2001-2002 was employed. Table A-1 presents the water level data, and Plate A-4 is the result. Ground water flows east-southeast in Section 29 under a hydraulic gradient of approximately 0.0036. Locally, within Section 29, ground water flows east. In general, ground water flow in Section 29 is concluded to be east-southeast with a hydraulic gradient of 0.003.

Plate A-5 presents two hydrographs of nearby USGS wells showing that ground water elevations near Section 29 have decreased by 10-feet since

1985. Plate A-1 shows the locations of these two wells: near the airport and at the southern city limit of Hobbs.

2.3 GROUND WATER QUALITY IN SECTION 29

Data submitted to NMOCD by ROC data and data from the Intera report (2003) indicated no petroleum hydrocarbons were detected in ground water during that sampling event. Chloride ion is above the Water Quality Control Commission standard of 250 mg/L in many samples within and up gradient of Section 29. Plate A-6 presents the chloride concentrations in 2003 for wells sampled by Intera (2003) and ROC.

As Plate A-6 of this report and Figure 4 of the 2003 Intera report show, chloride concentration in Section 29 generally ranges between about 85 ppm and 140 ppm. Within Section 29, eight wells exceed the Water Quality Control Commission ground water standard of 250 ppm chloride. These wells are geographically distributed throughout Section 29. Plate A-6 also shows that two wells north of Section 29 and two wells west of the investigated sites also exceed the numerical standard. Up gradient and down gradient from wells that exceed the 250 ppm chloride standard are other wells that fall within the 85-140 ppm range that typifies Section 29.

The variation in chloride concentration expressed in map view (Plate A-6) might be explained if well screen intervals were known for these domestic supply wells. Unfortunately, well construction data for most of the sampled wells does not exist.

3.0 REFERENCES

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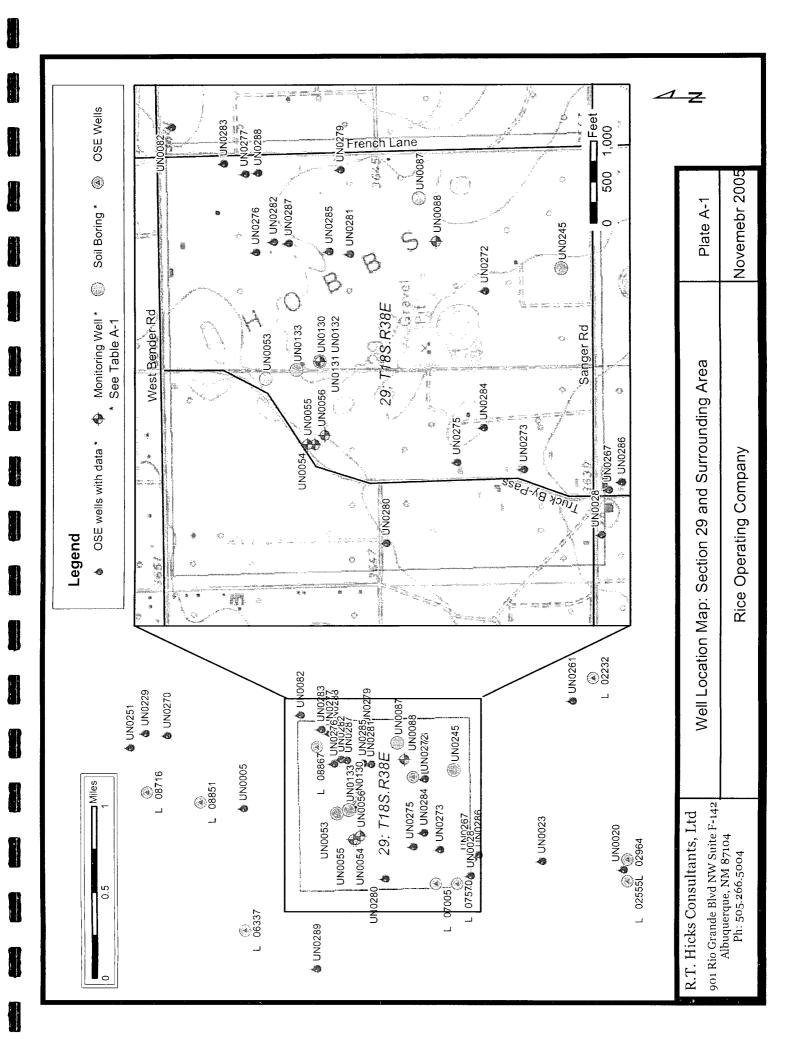
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Map ID	Well Name	X UTM83	Y UTM83	System	Location	Unit Letter	Well Type
UN0005	AA Oil Field Services	671456	3622866		Sec 20, T18S, R38E	٦	OSE Well
UN0020	Bowlarama	670888	3619268		T18S.	Σ	OSE Well
UN0023	Bulldog Tool Co.	670964	3620040		T18S,	L	OSE Well
UN0028	Cat House Water Well	670826	3620715		T18S,	۵	OSE Well
UN0053	F-29-BGB-01	671407	3621969	ROC Hobbs		Ь	Soil Boring
UN0054	F-29-MW-2	671163	3621786	ROC Hobbs		ш	Monitoring Well
UN0055	F-29-MW-3	671164	3621813	ROC Hobbs		ш	Monitoring Well
0N0056	F-29-MW-4	671197	3621748	ROC Hobbs		ш	Monitoring Well
UN0082	Hobbs Diesel Co.	672343	3622328		Sec 28, T18S, R38E	۵	OSE Well
UN0087	I-29 EOL Boot	672076	3621394	ROC Hobbs	T18S,	_	Soil Boring
UN0088	1-29 Vent	671917	3621330	ROC Hobbs		_	Monitoring Well
UN0130	Jct, F-29-1a	671472	3621766	ROC Hobbs		u.	Soil Boring
UN0131	Jct. F-29-1a-Deep (SWD B-2-1)	671472	3621766	ROC Hobbs	Sec 29, T18S, R38E	ட	Monitoring Well
UN0132	Jct. F-29-1a-Shallow (SWD B-2-2)	671472	3621766	ROC Hobbs	Sec 29, T18S, R38E	ш	Monitoring Well
UN0133	Jct. F-29-1b (SWD B-1)	671440	3621854	ROC Hobbs	Sec 29, T18S, R38E	д	Soil Boring
UN0229	Mac Truck Co.	672169	3623794			A	OSE Well
UN0245	O-29 Vent	671818	3620861	ROC Hobbs	Sec 29, T18S, R38E	0	Soil Boring
UN0251	Oil Field Rental Services	672031	3623935		Sec 20, T18S, R38E	A	OSE Well
UN0261	Pan American Petro	672478	3619756			7	OSE Well
UN0267	Smith's International	670994	3620689		Sec 32, T18S, R38E	۵	OSE Well
UN0270	Stoebr Wire Co	672147	3623586			Ι	OSE Well
UN0272	Texland Petro (aka. WO-005)	671734	3621152			ſ	OSE Well
UN0273	Two State Tank Rental Co.	671070	3621007			M	OSE Well
UN0275	WO-001	671096	3621258	Windmill Oil	Sec 29, T18S, R38E	Х	OSE Well
UN0276	WO-003	671878	3622011	Windmill Oil	Sec 29, T18S, R38E	А	OSE Well
UN0277	WO-004	672167	3622050	Windmill Oil	Sec 29, T18S, R38E	А	OSE Well
UN0279	WO-006	672183	3621695	Windmill Oil		I	OSE Well
UN0280	WO-007	962029	3621523	Windmill Oil		Ш	OSE Well
UN0281	MO-009	671872	3621659	Windmill Oil		I	OSE Well
UN0282	WO-010	671917	3621945	Windmill Oil		A	OSE Well
UN0283	WO-011	672206	3622132	Windmill Oil	T18S,	Α	OSE Well
UN0284	WO-012	671224	3621157	Windmill Oil	T18S,	メ	OSE Well
UN0285	WO-013	671881	3621737	Windmill Oil	T18S,	エ	OSE Well
UN0286	WO-014	671023	3620640	Windmill Oil	T18S,	۵	OSE Well
UN0287	WO-022	671911	3621889	Windmill Oil	-1	Τ.	OSE Well
UN0288	WO-024	660064	3622003	Windmill Oil	Sec 29, 1185, R38E	∢ 0	OSE Well
1 06660	MORAN OIL PROD & DRILLING CORP. Defen (#)	669335	3622615	5	Sec 10 1185 P38F	מ	OSE WEI
L 06337	10	670313	3622837				OSE Well
L 08716	Ĭõ,	671608	3623764		T18S.		OSE Well
L 08851		671514	3623260		T18S.		OSE Well
L 08867	BIG HORN TANK RENTAL L 08867	672040	3622160		Sec 29, T18S, R38E		OSE Well
L 07570	SOUTHWESTERN DRILLING MUD L 07570	670753	3620830		Sec 29, T18S, R38E		OSE Well
L 07005	07005	670753	3621030		Sec 29, T18S, R38E		OSE Well
L 11176	1	671752	3621246		Sec 29, T18S, R38E		OSE Well
L 02395	_	669522	3622018		1		OSE Well
L 05849	RATION L	669729	3621615		T18S,		OSE Well
L 02964	BAKER OIL TOOLS INC. L 02964	670982	3619217		Sec 32, T18S, R38E		OSE Well
L 02555		670782	3619217				OSE Well
L 02232	CONTINENTAL TANKE INC. L 02232	672697	3619546		Sec 33, T18S, R38E		OSE Well

PLATES



Logger:	David Hamilton	Client:	Well ID:
Driller:	Eades Drilling	Rice Operating Company	· ·
Drilling Method:	Air Rotary		
Start Date:	11/3/2004		F-29-1a B-2-1 (99 feet),
End Date:	11/6/2004	Location:	F-29-1a B-2-2 (72 feet)
		T18S R38E	
		Section 29, Unit F	

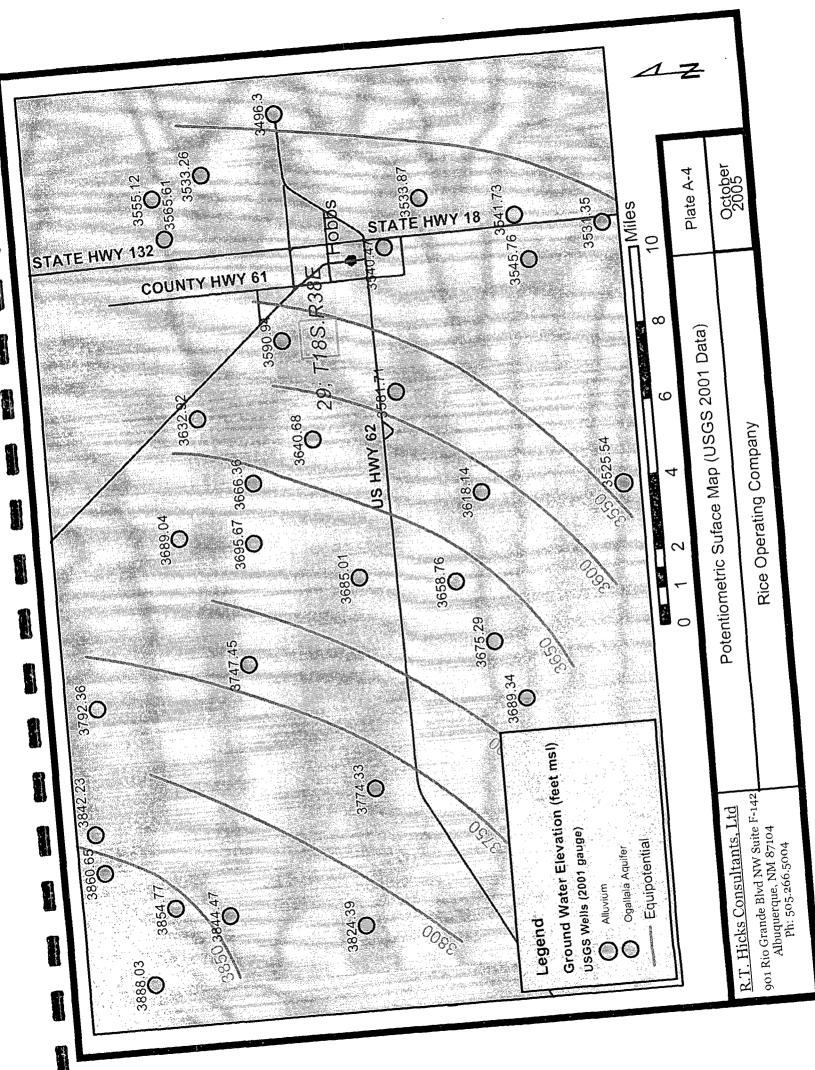
	= nu bate. 11/0/2004		Location.	T18S R38E	1 -20-14 B-2 2 (72 1664)			
				tion 29, Unit F				
			I			Ī	=:	
Depth (feet)	Description	Lithology	Comments	Well Constru	etion	Depth	Field data Chloride mg/kg	PID
0.0	Surface, 0 - 1 feet	Littiology	Comments	000000000000000000000000000000000000000	Cement, 0	· ·	Citionae mg/kg	
2.0	Sariace, 6 - 1 leet				3 feet			
4.0	0.11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.							
6.0	Caliche, clay, sand , moist, 1 - 13 feet, Some hydrocarbon impact					6.0	203	547
8.0	.,,					ŀ		
10.0						11.0	174	1575
12.0 14.0	Caliche, fine grained sand, silt, light tan,							
16.0	13 - 18 feet					16.0	106	1060
18.0	Caliche, well indurated , 18 - 21 feet		Some odor					
20.0	Caliche with some well indurated layers,					21.0	73	1242
22.0	21 - 24 feet					22.0	78	1290
24.0 26.0					Hydrated bentonite,	26.0	91	1006
28.0	Very fine grained sand, silt, light reddish tan,		At 30 feet:		3-50 feet	20.0	91	1000
30.0	24 - 36 feet		Some hydrocarbon			31.0	83	1290
32.0			impact,					
34.0			strong odor					
36.0	Some caliche, 36 - 36.5 feet					36.0	85	403
38.0 40.0						41.0	92	432
42.0	Very fine grained sand, silt, tan - red,					41.0	32	432
44.0	36.5 - 48 feet							
46.0						46.0	92	354
48.0	Caliche layer, 48 - 48.5 feet						70	507
50.0 52.0				HHIII		51.0	72	527
54.0	Very fine grained sand, silt, tan - red,			HHIII		56.0	87	479
56.0	48.5 - 59 feet							
58.0			At 59 feet:		Sand,	59.0	94	414
60.0			Bore collapsing,	-H 1111	50-74 feet Screen	,		
62.0 64.0			Probe is wet. Drilled with water	$^{\circ}$ H I I $^{\circ}$	52-72 feet			
66.0			below 59 feet	HHIII				
68.0				HIII				
70.0								
72.0								
74.0								
76.0 78.0								
80.0	Very fine grained sand, silt, tan - red, 59 - 102 feet				Hydrated			
82.0	55 - 102 leet				bentonite,			
84.0					74-92 feet			
86.0								
88.0 90.0								
92.0					Sand.	†		
94.0					92-99 feet			
96.0				\square	Screen 94 99 feet			
98.0			Slump filled hole					
100.0 102.0			from 99-102 feet		Slump	J		
102.0	l							
	R.T. Hicks Consultants, Ltd		Ushi	s F-29-1A Site			Plate A-2	.
	901 Rio Grande Blvd NW Suite F-14	2	Hobi	DS F-29-1A SITE			riate A-Z	
	Albuquerque, NM 87104 505-266-5004		Monito	ring Well Borin	g		September 2005	
L	303-200-3004		Monitoring Well Boring September 2005					

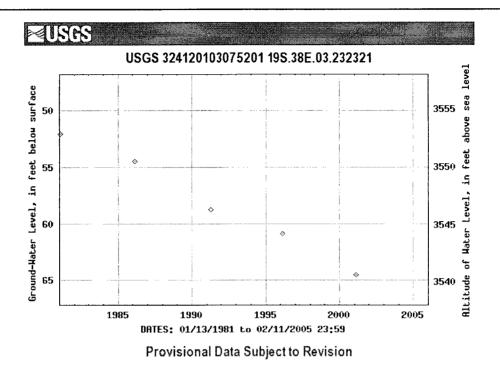
	Client:	
HYDRUS-1D Profiles	Rice Operating Company	
	Location:	
	T18S R38E	
	Section 29	

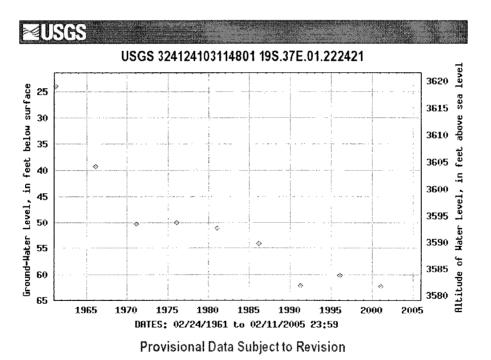
· Cy · Samuel

					2224344
Depth		Current		Excavated	Depth
(feet)	Description	Profile	Description	Profile	(feet)
0.0	Sandy loam, 0 - 2 feet		Sandy loam 0-1 feet		0.0
2.0					2.0
4.0					4.0
6.0					6.0
8.0	Sand, caliche, 2-17 feet		Loamy sand, 1-19 feet		8.0
10.0			Loanly Sand, 1-19 leet		10.0
12.0					12.0
14.0					14.0
16.0	Caliche, 17-19 feet				16.0
18.0	Sand, silt 19-20feet		Sand, silt 19-20feet		18.0
20.0	Caliche, 20-22 feet		Caliche, 20-22 feet		20.0
22.0					22.0
24.0					24.0
26.0	28.0		Sand, silt 22-34 feet		26.0
28.0			Janu, 311 22-34 1661		28.0
30.0					30.0
32.0		il # 10 feet and project in the second			32.0
34.0	Caliche, 34-35 feet		Caliche, 34-35 feet		34.0
36.0					36.0
38.0	Sand, silt, 35-45 feet		Sand, silt, 35-45 feet		38.0
40.0	Carra, one, 00 40 1000		Guria, sik, so 45 leet		40.0
42.0					42.0
44.0	Sand , caliche, 45-47 feet		Sand , caliche, 45-47 feet		44.0
46.0					46.0
48.0					48.0
50.0					50.0
52.0	Sand, silt, 47-59 feet		Sand, silt, 47-59 feet		52.0
54.0					54.0
56.0					56.0
58.0	At Commence .				58.0
60.0					60.0
I					

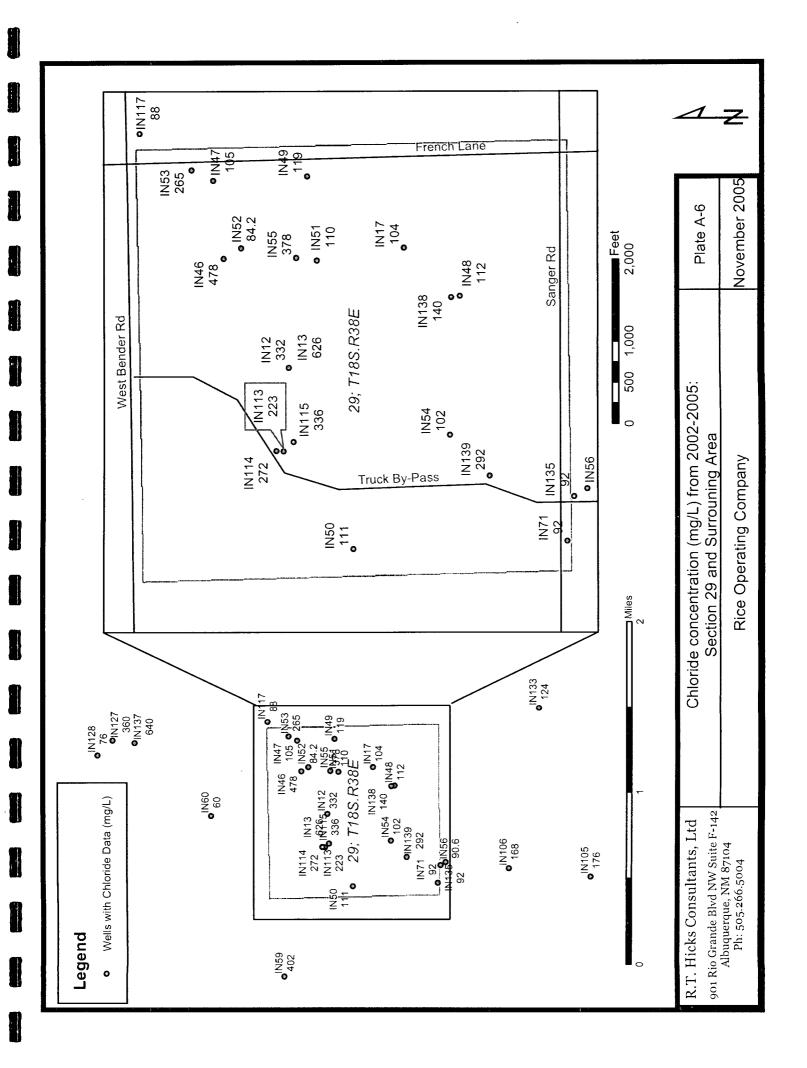
R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142	Section 29 Sites	Plate A-3
Albuquerque, NM 87104 505-266-5004	Hydrus Profiles Developed from Exploratory Borings	October 2005
	<u> </u>	







	USGS Hydrographs	Plate A-5
R.T. Hicks Consultants, Ltd. 901 Rio Grande Blvd. NW, Suite F-142 Albuquerque, New Mexico 87104	Rice Operating Company	October 2005





WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1

Section	1		(A)	Owner of wel	1 HORAI	CIL PROD.	A DRIFFING	COSE.
-			Stree	et and Numbe	F 30% 1	1919		
-			City	HOBBS			State	h.H.
				was drilled i		mit No. 2-60 4 of Section 1		is located in the SRge. 38E
<u></u>	-				ractor Al	FOTT BROS.		ise No. D-46
			Street	et and Numbe	вох о	53 7	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TO THE PERSON NAMED IN COLUMN T	W. W
			— City	FOBBS			State	N to
			1	ing was com	menced	MARCH 23		19_70
100 1000	da ar esta :	<u> </u>	Drill	ing was comp	leted	MAROH 23		19 70
							T per deservati	8 9 3,66 659 9 6 6 20 '
Elevatio	on at top o	f casing i	n feet abo	ve sea level	ow:		oth of well 1 ter upon comple	
		n is suan	ow or ari	esian shall	- 1	,	rer akan sambia	Maria de la companya
Section			10000	1,7+5,5,27 pt 1, 3 t	and the second	RING STRATA		
N8.	Depth i	To To	Thicknes Feet		Þ	escription of Water	r-Bearing Formatio	<u> </u>
· 1 ···	48	92	4.4	esnd	water			
2	114	120	6	s∺n¢	water			
3						**		
4								
- 5								
Section	3			RECO	ORD OF CA	ASING		
	Pounds	Thre	ade	Depth			Perfo	rations
Dia jo	rounds it.	in	\	op Bottom	_ Feet	Type Shoe	From	To
7 .	23	10) 1	120	120	nene	75:	120'
					1:			
	!				1	1		
	1	<u> </u>	1'		1		1 1427512 22 22 27 27	
Section	4			ECORD OF M	nddiike V	ND CEMENTING		
Dep mora	th in Feet To	Diam Hole i		Tons No.	Sacks of ement		Methods Used	
		1				A 100 part April America	Reconstruction (Contract	The terminal and the state of t
						5	7-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	
1		1:	1		- 1 · · · · · · · · · · · · · · · · · ·			
Section	5		i	PLU	eging re	CORD	to a commence of the contract of	
1	of Pluggin	Contra	tor				License No	
4	and Numb		····		C.ty_		State	
	Clay used		Ton	s of Roughage	used	Tý	pe of roughage	
111111111111111111111111111111111111111	g method		!		<u> </u>		igged	19
Pluggin	g approve	l by:			1	Cement Plu	gs were placed as	follows:
	.i !					Depth of P	lug No. o	f Sacks Used
7,1600				sin Stipe sor		From	Го	Dacas Oscu
3345	FOR US	e of STA		EER ONLY		220 22 23	eduries Searmanners	
qer e	124-d*** 1.	13/11375	wallian	a tiyit ti Xvi	1 (10 AA) / 1	7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Tel, e for the reference was	- 1:
Date	Received.	75-0	16 35 6	संसं एका ^{-/}				
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	0	668	06	Use	001) Locatio	in No /8, 38	19.33.23
rue N	0	<u>~ ~ ~</u>	<u> </u>	COSE				

Form Wilesia

WELL RECORD

INSTRUCTIONS: This form should be executed in irriplicate, preferably typewritten, and submitted in the nessest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible arises any well is drilled, repaired or despened. When this form is used as a plugging record, only Section 1d and Section 5 need be completed.

File No.	PROTECTION OF THE PROPERTY OF	Marianakan atawa	Use	raisani pi	entricate		ocation No		errendingingeren
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Section 6	J		LOG	of∳w	ELL				
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3112m 5			brown bries	1		tight Thek	***************************************		
	114	2	52.0011	1					
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From	-i	ikole in in	orth -	-		i-l-i- iiiii			
- Digital	- E4E	Manageter i	Tubs No. 6s Clay Cap					p ings <u>c</u>tuy	
-Section :		SECORD OF AUGUNG AND CRASMING						<u> </u>	
<u></u>									
	<u></u> i			-					
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<u> </u>	Depth in F	67 5,000	7075 B7		Descri	mien of l	Astor-geren	goneause za	
Section 2			PERCRAL WA	156-56	AENA	a sieki y	<u>, </u>		
	į.	shallow or	1					នូមជ្រឹបអស ឧស	Ci:
			qibove see tevel						
The unders	agned here	by certifies (ve described	hat, to the best of l well's was country	nis kn 345	owled	ge and b	ener, the	toregoing is	a true and cor-
	1		elling was comed	reeq					19
	. ! .		ry			E francis	Well I	riller (G	
	/ ~	1/ /3	THE PARTIES.	7		e in a talan name a . T			
	h	<u> </u>							e <i>Mu.</i>
	ļ	ļ.,							
ļ			el! was drilled und	5r F.6	remit.	140		and .	n located in the
	;		•						**************************************
		4	 Craner of well reet and Number 						
Section 1		``	A Y Common and security						,

.. TOPINI, THE . DIRICE END.

SHELL OIL CO., MOF EY 1 #10

FORM WR-23
FIELD ENGR. LOG

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section	1				a be tomp	and a section of		diameter and	
	T							COMPANY, In	
								State	
				-					is located in th
							·	Twp. 18 S	
-								Licen	
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	<u> </u>	0						State	
			.	•				10	
	1: 1			Drilling v	vas compli	eted		June 10	19 68
,	Plat of 640								,
								oth of well <i>110</i>	
State w	hether w	ell is shal	low o	r artesian	shall	ow	Depth to wa	ter upon complet	tion 40
Section	2			PRIN	ICIPAL WA	ATER-BEAR	NE STRATA		
No.	Depth	in Feet	Th	ickness in	}	De	scription of Water	-Bearing Formation	
190.	From	To		Feet]	-			
1	40	88	Τ,	28	eond.	. water	•		
2	92	110		18	80NG				
3	20	1220	+-	40	10.5.50				
4		-	+		<u> </u>				·
5		 	+-		 			<u>-</u>	
		1			1 .				<u></u>
Section	3				RECOR	RD OF CA	SING		
Dia	Pound	1		Depth Fest Type Shoe					rations
in.	ft.	ir		Top	Bottom	ļ		From	То
7	21		2	0	91_	91	open	₫ 8.3	91.0
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	<u> </u>			1	<u> </u>	1]	<u> </u>	1
Section	4 .			RECOR	D OF MUI	DDĮŅG AN	ND CEMENTING		
Dept	h in Feet	Diam	eter	Tons	No. Sa	acks of		25 12 - J- 27-03	
From	То	Hole i	n in.	Clay	Cen	nent		Methods Used	
			· .			·			., .,
				<u> </u>					-
Section	E				PLUGE	SING REC	ORD.		
		- Contra	 					License No.	
								License No. State	
								e of roughage	
			-	Tons of a			A CONTRACTOR OF THE PROPERTY O		
	g method							gged	
Piuggan	g approve	ed by.						s were placed as	TOHOWS:
. • *				Basin Sur	ervisor	No	Depth of P	No. of	Sacks Used
			71	Basin Sup		7		-	
	FOR U	SE OF STA	TE In	IGINEER O	NLY		-		
Dete	havine C	USENDE)) : 						
Date	Received	77.3	# Z	186 0	76!	_			,
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						January			the secretary of the second section of the section of the second section of the
	/ .	633	-		TTee /	0 61	O Tambia	No 18:38.	101153

LOG OF WELL

	in Feet	Thickness in Feet	Color	Type of Material Encountered
From	То	m rect		
o	e	в		surface soil
6	21	15		caltone
21	żo	19		sand, tight
30	88	28		sand, water
8	92	24		eand, tight
		18		sand
9.2	110			04/7-
				
				in the second se
			·	
	 			
·				
			1	
)			

The undersigned hereby certifies that, to the	e best of his	knowledge	and belief,	the	foregoing is a true an	d cor-
rect record of the above described well.	•	f	2.7		/	
			· 2		16 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<u>.</u> *.

L-6337 back

Well Della

STATE ENGINEER OFFICE WELL RECORD

FIELD ENGR. LOG

Section 1. GENERAL INFORMATION

	StateI										
					and is located						
a	_ 4 3/2	MAWW 16	V € % of S	Section _20	Township	Range	38-E	N.M.P.M			
b. Tract	No8_	of Map N	lo	of t	he First Un	it of Colle	ge Park	Industr			
	ivision, record				-						
		· · ·			N.M. Coordinate S	System					
-						_ License No					
ldress	P.O. Bo	0x_637,	Hobbs, 1	<u>New Mexi</u>	co 88240						
illing Began	_3/23/82	2 Co	mpleted _3;	/24/82	Type tools	Cable	_ Size of hole.	8½ in			
evation of la	nd surface or			at w	vell is	[t. Total depth of	well 1.	30 st			
mpleted wel	ll is 🕎	shallow 🔲	artesian.		Depth to water	upon completion of	f well	4911			
		S	ection 2. PRI	NCIPAL WAT	ER-BEARING ST	RATA					
Depth From	in Feet To	Thickne in Feel		Description of Water-Bearing Formation Estimat (gallons p							
49	92	43	Sar	ıd							
					·						
		1									
	<u> </u>	1									
	T 5 .	T		 	D OF CASING						
Diameter (inches)	Pounds per foot	Threads per in.	Тор	n in Feet Bottom	Length (feet)	Type of Shoe	From	To To			
c = 10	17	Welded	0	132	132	None	54	132			
6 5/8	1	MeTueu	U	134	1.3.2	QOTE	7.4	1			
								 			
								<u> </u>			
	in Feet	Sec Hole		,	DING AND CEMI						
Denth	То	Diameter			of Cement	Method	of Placement				
From		1									
			1								
From	actor			on 5. PLUGGI	ING RECORD						
From gging Contr.				on 5. PLUGGI		Depth in Fe		ubic Feet			
gging Contri dress				on 5. PLUGGI	No.			ubic Feet f Cement			
From gging Contributess gging Methor te Well Plugs	od			on 5. PLUGGI	No. 1 2						
From Igging Contri Idress Igging Metho	od				No.						

	Section 6, LOG OF HOLE										
	in Feet	Thickness	Color and Type of Material Encountered								
From	То	in Feet	The state of the s								
0	3	3	Surface soil								
3	26	23	Caliche								
26	49	23	Sand-tight								
49	92	43	Sand-water								
92	110	18	Sand-tight								
110	_118	88	Sand-rock								
118	130	12	Sand								
			·								
			·								
	-										

Section 7. REMARKS AND ADDITIONAL INFORMATION

L- 8716 back

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Murrell Oblatt

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to appropriate district office of the State Engineer. A should be executed in triplicate, preferably typewritten, and submitted to appropriate district office of the State Engineer. A should be executed in triplicate, preferably typewritten, and submitted to appropriate district office possible when any well is drilled, repaired or deepene. When this form is used as a plugging record, only Section 1(a) and Section need be completed.

STATE ENGINEER OFFICE WELL RECORD

EIELD ENGR. LOG

Section 1. GENERAL INFORMATION

Street or	well A Post Office Add State	iress 14	16 W. Bro	adway			Оwле			
Well was drilled	l under Permit ?	ło	L-8	851	and	is locate	d in the:			
a	<u> </u>	SW 1/4 A	<u>IE</u> ½ of Se	ction2	0т	wnship_	_18S Rai	nge <u>38E</u>	й.	M.P.N
b. Tract	9 No	of Map No.		O	f the					
c. Lot No Subdiv	o o vision, recorded	of Block No	Lec	aoi	f the _ County	2 Uni	t College	Park Ind	ustrial	
		feet, Y=		fee	t, N.M. C	oordinate	System			
(B) Drilling C	Contractor	Lavry's	Drilling	3			License No	WD882		
							140			
							tricone			
Elevation of lar	nd surface or			at	well is		ft. Total depth	of well	0	ft
Completed well	lis ଯ sha	allow 🗀 . a					r upon completion	of well	54	ft
Depth	in Feet	Sec Thickness	tion 2. PRIN				· · · · · · · · · · · · · · · · · · ·	Estim	ated Yield	
From	To	in Feet	1	Jeschption	of Water	-Bearing	Formation	(galions	per minut	e)
54	120	66	sa	nd & sa	ndston	2		28		
<u>:</u>										:
						,				·
L			Section	n 3. RECO	RD OF C	ASING				
Diameter	Pounds	Threads	Depth	in Feet	1	ength	Type of Sho	e	Perforation	
(inches)	per foot	per in.	Top	Botton		feet)	-	Fre	om '	То
J~2	100100		-1	120	- 12	1.		100	12	20.
					.					
	.									
		Section	on 4. RECOF	RD OF MU	DDING A	ND CEN	MENTING			•
Depth i	n Feet To	Hole Diameter	Sack of Mu	. 1	Cubic F of Cem	. 1	Metho	d of Placeme	ent	
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			, , , , , ,						-	
Iluanina Contra	ctor		Section	n 5. PLUG	GING RE	CORD				
ddress		<u> </u>				No.	Depth in I		Cubic F	
lugging Method late Well Pluggi	deded		140			1	Тор	Bottom	of Ceme	ent
lugging approv	ed by:					<u>2</u> 3				
		State Engi	neer Represe	ntative		4				
			FOR USE	OFSTATE	ENGINE	ER ONI	.Y .			
ate Received	July 9, 1	1982		.: 	rad		FWL _		EGI	
	 T_9951			. QI			18.3	38.20.231		
File No	L-8851			Use	D & S		Location No			75

			Section 6. LOG OF HOLE	
Depth i		Thickness	Color and Type of Material Encountered	
From	То	in Feet		
0	2	2	topsoil	
2	38	36	caliche	
38	60	22	sand & sandstone	
60	68	8	hard red rock sand & sandstone	
68	120	52	sand, think layers of sandstone	
			·	
			·	
<u>:</u>			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	* 1 * 1 * 2 %
				44
		For the same	:	·.
				<u> </u>
}				

Section 7. REMARKS AND ADDITIONAL INFORMATION

L-8851

Driller

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is rive and correct record of the above described hole.

Driller

RUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to appropriate district office of the State Engineer. Al ons, except Section 5, shall be answered as completely and accurate possible when any well is drilled, repaired or deepenee. Then this form is used as a plugging record, only Section 1(a) and Section by seed be completed.

STATE ENGINEER OFFICE WELL RECORD

HELD ENGR. LOG

Section 1. GENERAL INFORMATION

(A) Owner of	well	Big Ho	rn Tank	Rental		Own	r's Well No			
Street or	Post Office Ad State	dress 2139 F	nench VI NM 8824	10						
		·								
Well was drilled	l under Permit	No,L	8867		and is located	in the:				
a,	_ ¼ ¼	_NE ¼	NE. 14 of S	ection2	9 Township	18S Ra	nge <u>38E</u>	N.M.P.I		
b, Tract	No	_ of Map No.		of	the					
c. Lot N	0,	of Block No		of l	the					
	vision, recorded									
d X=		feet Y=		feet.	N.M. Coordinate S	System		Zone i		
								Gran		
B) Drilling (Contractor	Larr	y's Drit	Ling		_ License No	UD882			
ddress		2601	W. Beno	ler	Hobbs, NA	88240				
	7-9-89		7-1	0-82	Type tools					
Orilling Began		Comp	oleted		iype tooisi	outton_bct_	Size of F	101c 1		
levation of lar	nd surface or _			at v	well is	_ ft. Total depth	of well	120 f		
Completed wel	lis V et	nallow 🔲 a	rtesian.		Depth to water	upon completion	of well	52f		
	7							,		
	·		tion 2. PRIN	CIPAL WAT	TER-BEARING ST	RATA	1 7 .:	***		
Depth From	To	Thickness in Feet		of Water-Bearing F	ormation		ated Yield per minute)			
60	108	48	sar	28						
					. ,					
						. '				
						· · · · · · · · · · · · · · · · · · ·		٠,		
							I			
		· · · · · · · · · · · · · · · · · · ·	Section	on 3. RECOR	D OF CASING					
Diameter (inches)	Pounds per foot	Threads per in.	Depth Top	in Feet Bottom	Length (feet)	Type of Sho	oe I	Perforations om To		
(,,,,,,,,,,	F	F	10µ	BOTTOM			- 110	, ,		
5½	160PVC		0	120	120		101	0 120		
	·			-						
		L L.		1						
Depth	in Feet	Section Hole			Cubic Feet					
From	То	Diameter	of M		of Cement	Metho	od of Placeme	ent		
· · · · · · · · · · · · · · · · · · ·						· · · · · · · · · · · · · · · · · · ·		 		
			Section	on 5. PLUGG	ING RECORD					
lugging Contra	ector	4				D	T			
lugging Metho	d				No.	Depth in Top	Bottom	Cubic Feet of Cement		
	ed		٠.		1					
lugging approv	red by:			÷	3					
•		State Engi	ncer Repres	entative	4					
	~	**************************************	EOB 116E	OF STATE	ENGINEER ONLY					
ate Received	August	23, 1982	. OR OSE							
	., 0	-		Qua	ad	FWL _		FSL		
File NoL	-8867			Use	D & S	nestion No	18.38.29.	22244		

	. Section 6. LOG OF HOLE										
	in Feet	Thickness	Color and Type of Material Encountered								
From	То	in Feet									
0	27	27	caliche								
27	33	6	gray clay								
33	35	2	hard red rock								
35 m	47	12	sand								
47	-63	16	sand & sandstone								
63	67	4 · · ·	hard red rock								
67	108	41	sand & sandstone								
108	120	12	hard red rock								
			* **								
	1										
ATEX											
			State of the Assessment of the State of the								
			:								
			1 3 F41 (1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								

Section 7. REMARKS AND ADDITIONAL INFORMATION

L-8867

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to " appropriate district office of the State Engineer, All ons, except Section 5, shall be answered as completely and accurate. drilled, repaired or deepene. en this form is used as a plugging record, only Section 1(a) and Section 5 od be completed.

ossible when any well is

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section	1			(A) Oum	er of wall	Two	rate Cank	(Rantol	Co.	
							2305			
			1				os,			(azico
				•			nit No. L-700			
							4 of Section2			
	+			(B) Drill	ing Contra	actorC	R. Mussle	vhite_	_ License 1	70.5000
				Street and	l Number.	30	DR 56	. p. 1. 54345.		
	-						Fobbs,			ferico
	1.			Drilling v	vas comm	enced	Oct. 14.			19.72
<u> </u>	<u> </u>			Drilling w	vas comple	eted	Cet. 18,	· · · · · · · · · · · · · · · · · · ·		19.72
	Plat of 640	-							3.50	
							Total de			
State w.	hether we	ell is sh	allow o	r artesian	12118 T T OA	<u></u>	Depth to w	ater upon c	:ompletion	<u></u>
Section	2	·		PRIN	ICIPAL WA	ATER-BEAL	RING STRATA			
No.		in Feet	Thi	ickness in Feet		· , D	escription of Wate	er-Bearing Fo	ormation	
	From	То		reei				·		
I .	60	. 150	<u> </u> -	90	Sond,	sand	rock			
2										
3			}							
4										
5										
Section	2				DECO!	D OF CA	SINC			
	1			De			1	T	Perforation	
Dia in.	Pounds ft.	Th	reads in	Top	Bottom	Feet	Type Shoe	From		To .
5	13	 	 3	0	150	150	none	110		150
			<u>. </u>	1 2	1		1.01.0	1 11/		_1:,1:,1
										
				1				1		** ************************************
				nroon	D OF 188	NO. 10	ID OF ITALIC			
Section				.			4D CEMENTING			
Prom	h in Feet		meter in in.	Tons Clay	1 '	No. Szeks of Cement Methods Used		Used		
	+									
	 	-		 			······			
		<u> </u>								******
					1			-	-	,
						pro				
Section :						HNG REC				
								•		
	-						Ту		-	
							Date Plu			
Plugging	g approved	d by:					Cement Plu	gs were pla	iced as foll	ows:
				Tionin Cum		N	Depth of I		No. of Sac	ks Used
				Basin Sun	LET ATOM.	-	From	To		
	FOR US	11 ()1		manatu.	.,,,,,					
Tr. 1		394	Elf OL	IE ENGINE	ĀTR					
Date	Received.			0C1 5t		-				
		Ĩ2	עצו ס.	10 200			<u> </u>			
	,	_	_		;		Contract Con			
File No	5/	100	25		Use D	TC.	Locatio	on No. 18	238.2	9.331
~ ~ ~ # 10										#

TOE OF METT

	in Feet	Thickness		Type of Material Encountered
From	То	in Feet	Color	Type of Material Encountered
<u> </u>	. 2	2	Brown .	Soil & rock
2	27	25	White	Caliche & rock
27	37	10	Crev	Sandy shale
37	43	66	11	Sand rock
43	60	17	Red	Sand
60	140	69	5,	Sand, sand rock shells
140	150	10	Grey	Sard, course
			-	
				· .
• • • •				
7.7.				

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

1 - 7005 hack

Well Drille

STATE ENGINEER OFFICE WELL RECORD

FIELD ENGR. L.E.

Section 1, GENERAL INFORMATION

Street o	r Post Office A	outhweste: ddress P.O idland, Te	. Box a	2477			Ow	vner's Well No.		
Well was drille	d under Permi	1 No. L-7	570			and is located	in the:			
a	_ % <u>SW</u>	4 SW 4 S	1 % of S	ection	29	_ Township _	18S	Range3	8E	N.M.P.M
b. Tract	No	of Map No.			of the .					
c. Lot h	No	of Block No			of the_					
Subd	ivision, record	ed in <u>Lea</u>	****		Co	ounty.				
d. X= _ the _		feet, Y=		fe	et, N.N	f. Coordinate	System			
(B) Drilling	Contractor	Abbott B	cos.				License No.	WD-4.6		
AddressF	O. Box	637, Hob	os, Nev	v Nevi	CD	88240				
Drilling Began	6/21/	76 Comp	leted	5/22/7	76 .	Type tools	Cable	Size of	hole_8	<u>1</u> 2in.
Elevation of la	and surface or				at well	is	ft. Total der	oth of well_1	22	ft.
Completed we		shallow 🗀 ar								
		Sect	ion 2. PRIN	ICIPAL W	ATER	BEARING ST	RATA			
Depth From	in Feet To	Thickness in Feet		Descriptio	on of W	ater-Bearing F	formation		nated Yie s per min	
48	122	74								
40	155	1 1 1								
		-	-							
				·						
					• •					
	T 5 .	T =			ORDO	F CASING	Γ	· .	Darf-u-ti	
Diameter (inches)	Pounds per foot	Threads per in.	Тор	in Feet Botte	om	Length (feet)	Type of S	Shoe Fr	Perforations From To	
6 5/8	15	welded	0	122	2	122	none	7	9 :	122
L	J	Section	n 4 RFCO	RD OF M	אומסטו	NG AND CEM	ENTING			
	in Feet	Hole Diameter	Sac	ks	Cut	oic Feet		thod of Placen	nent	
From	То	Diameter	of M		. 01	Cement	 		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
L	<u></u>									
			Section	on 5. PLU	GGINC	RECORD				
Plugging Contr Address				:		<u> </u>	Denth	in Feet	T 0.1:-	F1
Plugging Meth	odb					No.	Тор	Bottom	Cubic of Ce	
Date Well Plug Plugging appro	-	-				- <u>1</u>			 	
	· ————	State Engir	neer Repres	entative		34				
		· · · · · · · · · · · · · · · · · · ·			TE EM	GINEER ONL	v			
(. Date Received			LOV OSE		Quad		FWL		154	
	u‡+ ∗*	2500°			· · ·		Location No.			
File No		,		Use			Location No. 🗀	- 18 J	· · · · · · · ·	

Section 6. LOG OF HOLE									
Depth From	in Feet To	Thickness in Feet	Color and Type of Material Encountered						
0	2	2	Surface soil						
2	35	33	Caliche						
35	48	1.3	Sand-tight						
48	116	68	Sand-water						
116	122	6	Sand-tight						
			1						
-									
		:							
	1 -								
			i						
	STATE ENSINEER OFFICE	Section 7	L-7570 back						

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

INSTRUCTIONS: This fo of the State Engineer, A: vould be executed in triplicate, preferably typewritten; and submitted to appropriate district office tions, except Section 5, shall be answered as completely and accurate to possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section: need be completed.

STATE ENGINEER OFFICE WELL RECORD

Section 1. GENERAL INFORMATION

(A) Owner Street City ar	of well or Post Office nd State	Texland Address Fort Wor	Petrolei 777 mair th Tx 76	um- Hobbs 1 street 5102	LLC suite 32	Own	er's Well No.	1
Well was dril	led under Pern	sit No, L-	11 176	Explore	and is locat	ed in the:		
a.S.E	%NW	· ¼ ¼	SE % of	Section 29	Township	18 south R	inge <u>38 e</u> i	n.m.p.)
b. Trac	ct No,	of Map l	No	of t	he			
c. Lot	No	_ of Block N	o	of the	he			
								1794
d. X= _ the _		feet, Y=_		feet, 1	N.M. Coordinal	te System		Zone i Gran
(B) Drilling	Contractor_	Robins	on Drill	ing	.,	License No	√ D 1498	3 .
AddressPO	BOX 1495	Semi	nole TX	79360				
Drilling Began	7-31-0	<u> I</u> сь	mpleted <u>8-</u>	3-01	Type tools_	Rotary	Size of	hole 18 in
Elevation of la	and surface or			at we	ell is	ft. Total depth	of well	220 ft
Completed we	ell is 🗵	shallow 🗀	artesian.		Depth to water	er upon completion	of well	65 rt
		•			R-BEARING S	,		•
	in Feet	Thickne in Fee		Description of	Water-Bearing	Formation		nated Yield per minute)
From	То	· ·		· · · · ·		· · · · · · · · · · · · · · · · · · ·		1503 1703
111	210	99	San	d & Grave	2]		Unknown	
		-						N. C.
	i					· · · · · · · · · · · · · · · · · · ·		
				!				<u></u>
	7	1 22 12		on 3. RECORD	T	· · · · · · · · · · · · · · · · · · ·		Perforations
Diameter (inches)	Pounds per foot	Threads per in.	Тор	Bottom	Length (feet)	Type of Sho	Fro	
12 3/4		Welded	+1	220	221	none	125	215
					-			
•		7	ion 4. RECOI		NG AND CEM	ENTING		
Depth i From	To	Hole Diameter	Sack of Mi		bic Feet Cement	· Method	of Placeme	nt
						-		
				ŀ				
			Castin	s 5. PLUGGIN	CRECORD		, , , , , , , , , , , , , , , , , , , ,	
lugging Contra	ctor N/A		361101			•		
ddresslugging Method					No.	Depth in Fe	eet Bottom	Cubic Feet of Cement
ate Well Plugge	d						JOHOM	or cement
lugging approve		State Ene	ineer Denrace	ntative	3			
		JIAIC EIIG	ineer Represei					./
ate Received (8/10/01		FOR USE (OF STATE EN	GINEER ONLY	\mathcal{P}_{c}	51595	4
				Quad _	_	FWL		SL
File No.	-11,17	6		Usc 5R	<u>U</u>	ocation No. 18	38.29.	41443

			;505 62.	3
Dani	th in E	Thickness		=
		in Feet	Color and Type of Mate, countered	.,
0	2	2	TOpsoil	
2	4	2	Rock	_
4	18	14	Calichi	
18	21	3	Rock	
21	28	7	Calichi	
28	52	24	Sandy clay with Rock Ledges	
52	108	56	Sand with sandstone streaks	
108	111	3	Rock	
_111	210	99	Sand&Gravel	
210	215	5	· Sandy&acilav	
21.5	220	5	Red Bed	
		 		
	}	ļ		
	ļ	-		
	ļ	ļ		_
	<u> </u>			_
· .		<u> </u>	·	
	ļ			
				_
				_
				_
				_
				-
		`.		_
	From 0 2 4 18 21 28 52 108 111 210	0 2 2 4 4 18 18 21 21 28 28 52 52 108 108 111 111 210 210 215	From To in Feet 0 2 2 2 4 2 4 18 14 18 21 3 21 28 7 28 52 24 52 108 56 108 111 3 111 210 99 210 215 5	Depth in F. Thickness is Feet Topsoil

Section 7. REMARKS AND ADDITIONAL INFORMATION

L-11176 back

ı

The undersigned hereby certifies that, to the best of his knewledge and belief, the foregoing is a true and correct record of the abor described hole.

Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

WELL RECORD

Street or P. O	<u></u>	<u>war i</u>	},	City and Si	ate Europeant,	11, 1,	
1. Well location	n and des	eription:	The Shallow well (shallow or artesian)	is located	in <u>31 4</u>		<u>i</u>
14	% of Se	ction	OC Township	<u> 18 S</u> ,	Range 16 5	; Elev	ation o
casing above	o sea lev	el,	feet; dlameter	of hole,	7 inches; to	otal depth,	_37
depth to wat	ier upon e	ompletion	, <u>30</u> feet; dr	lling was co	mmenced	-31-53	
and complete	ed	€-32 <u>-</u>	; na	ne of drillir	g contractor	.E. Euss	Lows
		; Ad	dress, Bor 56, Not	on, 4	; Driller's Li	cense No	
2. Principal W	eter-beerii	ng Strain:	:				
. Р	Depth in	Pect To	Thickness	1	description of Water-d	earing Formati	lon
No. 1 35		70	<i>3</i> 5	i ed €	one course	-	
No. 2 75	on Polic	55	10	Hed a	sand course h	ard	
No. 3 85		<i>4</i> 7	3	ited c	end course h	ard	
No. 4							
No. 5			.,,,,,				
3. Casing Reco	rd:				:		
	Pounds	Тыгелда	Depth of Casing or Lines	Feet of		re	rjoration
	44	per inch	Top Bottom	Casing	Type of Shoe	From	
	per 11.	_	200				
	20	10			rione	57	8
		_			Gone	57	3
		_			150118	57	
		_		<u>87</u>		57	
		_				57	
In Inches	20	10		57			
1. If above con-	20)	10		d, give loca	ition:		4.
In Inches	20)	10	old well to be abandone	d, give loca	ition:		4,
1. If above con-	20)	10	old well to be abandone	d, give loca	ition:		4.
A. If above con-	287	10	old well to be abandone	d, give loca	ation:	ess of plugg	ding con
A. If above con-	287	10	old well to be abandone	d, give loca	ation:	ess of plugg	ding con
A. If above con-	287	10	old well to be abandone , Range, 19	d, give loce	ation:	ess of plugg	ding con
A. If above con-	287	10	old well to be abandone , Range, 19	d, give loca	ition:	ed:	ding con
A. If above con-	287	10	old well to be abandone , Range, 19	d, give loca	ition:	ed:	ding con
A. If above con-	287	10	old well to be abandone , Range, 19	d, give loca	ition:	ed:	ding con
A. If above con-	287	10	old well to be abandone , Range , 19	d, give loca	ition:	ed:	ding con

L-2395 CK EUP

.- 5. Log of Well:

Depth Prom	in Feet To	Thickness in feet	Description of Formation
6	i.	ž	Soil
3.	6	5	Closchie rock herd
· ·	ر از	24	Cleachin
30	<u>5</u> 5	5	cami chalo
_30	70	22章 35	fied cand course.
70	75	<u></u>	Rock : Wasrtoate
75	<i>0</i> 5	10	Fad send course hard
_ 85	97	3	ed stad course hard
			·
		, .	
			Aller Control of the

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

Instructions

This form shall be executed, preferably typewritten, in triplicate and filed with the State Engineer's Office at Roswell, New Mexico, within 10 days after drilling has been completed. Data on water-bearing strata and on all formations encountered should be as complete and accurate as possible.

L-2395 back

FIELD ENGR. LOG

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section				(A) Own	er of well	Ame	rada	Petrole	um Cor	р.	
				Street and		[]ra	wer D	ىند ا			بنار شد
		1		City						State N	ew Mexico
				Well was	drilled ur	ader Po	ermit N	Io L-584	9	and	is located in th
				SE //	3.B ¹ /4		10 W	Section. 3	Tw	182	Rge38 E
			_	(B) Drill	ing Contra	actor	Da Ha	Mussle	wnite	Licen	se NoWD99
Ì		1		Street and	l Number.		BOY 2	0		بد .	ىند
	-			City				Hoppa,		State Ne	w Mexico 19.66
		.	. [Drilling v	vas comm	enced.	Rep.	10,			19.66
L	77) + 6 640			Drilling w	as comple	eted	reb.	12,	·		1966
	Plat of 640			1	Un	ıkown		Total de		38	•
Elevatio	n at top o	casing i	n iee	t apove se	a level Shallow		TN	epth to wa	bru or w	e11 -	3 <i>L</i>
State w	nether wei	ii is snaii	om o	r artesian				eptn to wa	ter upon	compiet	1011 24
Section	2			PRIN	ICIPAL WA	ATER-BE	ARING	STRATA			
No.	Depth in	To To	Thi	ckness in Feet			Descript	ion of Wate	r-Bearing	Formation	ı
1	34	38	1	+	Sand &	san	d roo	k			
		······						<u> </u>			
3									·	···	
4			 		-						
5		· · · · · · · · · · · · · · · · · · ·									·
			}							i.	
Section	3				RECOR	D OF C	CASING				·
Dia	Pounds	Threa	ds	Dej	·	Feet	T	ype Shoe		Perfor	ations
in.	. ft.	is		Top	Bottom	<u></u>			Per	m	То
5/8	18	none	-	0	20	20	No	ne	None		
				<u> </u>			_				
				ļ		<u> </u>	_				
	1			1	<u> </u>	<u> </u>	!				
Section ·	4			RECOR	D OF MUD	DING	AND C	EMENTING			
	h in Feet	Diame		Tons	No. Sa				Method	s Used	
From	To	Hole in	ın.	Clay	Cem			ats .			
0	20	8			l½ yd	18.	Dump	remix	around	casin	g
					_						
	_								· · · · · · · · · · · · · · · · · · ·		
	1 .	1:			<u> </u>						
Section !	5				PLUGG	ING R	ECORD				•
	f Plugging	Contract	or					<u> </u>	Lice	nce No	
	g method u										
	approved						-	ement Plug			
	-FF	J -				Г		Depth of P			
	:			Basin Sup			No. !		o	No. of	Sacks Used
	ברי זייי	OFF	i di di	CINEER	n v						
	FUR USE			GINEER O	AT" I						
Date	Received	dellah:	rt di	alivillar	<u> </u>						
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	0				2.7	,	THE PARTY OF THE PARTY OF THE PARTY.				
		0119			17-10/	and .		Location	n No 18	.38.3	0:194

Section 6

LOG OF WELL

Dection 6				OI WEEK
Depth	in Feet	Thickness	Color	Type of Material Encountered
From	To	in Feet	Color	Type of Material Encountered
0	2	2	Brown	Soil & rock
2	5	3	White	Calione rook
5	20	15 🛷	White	Caliche
20	25	5	White	Caliche rook -
25	29	4	Gray	Sandy shale & caliche rock
29	38	9	Grey	Sand & sand rock
			-	
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<u> </u>				
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		. **	1.17	1.
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	· · · · · · · · · · · · · · · · · · ·		,	
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				. 4

The undersigned hereby certifies that, to the ect record of the above described well	best of his	knowledge and	belief,	the foregoing	is a true	and cor
rect record of the above described well		A Y			12	1.75

1-5849 back

Woll Driller

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

1		(A) Ov	vner of well.	Bake	r Oil Tools,	Ino.	
		1					
		W.E.	14 S.W. 14	S. W. V	of Section3	2_Twp1	85 Rge. 38%
 		— (B) Dr	illing Contra	actor 0	R. Musalewhi	te Lic	ense No. WD 99
		Street a	end Number_		ox 56		
 		City	Hobbs, 🗷			State .	New Mextao
		Drilling	was comm	enced	Se	pt. 10	19 55
<u> </u>		Drilling	was comple	ted		pt. 11	1955
							100
hether wel	l is shall	ow or artesia	n STRAIL	I OW	Depth to wa	ter upon comp	letion
2		PF	RINCIPAL WA	TER-BEAR	ING STRATA		
Depth in	Feet	ł.	1	Des	cription of Water	-Bearing Format	ion
From	То	Feet					
40	80	40	Sant a	sand r	ook		
		<u> </u>					
3				D OF CAS	ING		
Pounds	1			Feet	Type Shoe		forations To
 				200	G-11		
18	- 8	- 0	100	100	001100	70	100
1	<u> </u>			!			<u> </u>
<u> </u>		RECO	ORD OF MUD	DING AN	D CEMENTING		
in Feet			No. Sa	cks of		Wathada Haad	
То	Hole in	in. Clay	Cem	ent		Mechous Usea	
<u> </u>					····		
<u>i</u>	<u> </u>		<u> </u>		···		
:			PHICC	INC DECC	חפה		
	<i>a .</i> .					7: 37	
		lons or					19
Clay used					Date Piu	ggea	. 19
Clay used method u	sed				C DI		
Clay used	sed			·	.Cement Plug	s were placed a	
Clay used method u	sed			No.	Depth of Pi	ug No	
Clay used method u	sed	Basin S	upervisor		Depth of Pi	ug No	es follows:
Clay used method u approved	by:		upervisor		Depth of Pi	ug No	es follows:
Clay used method used approved FOR USE	by:	Basin S	upervisor		Depth of Pi	ug No	es follows:
Clay used method u approved	by:	Basin S	upervisor		Depth of Pi	ug No	es follows:
Clay used method used approved FOR USE	by:	Basin S	upervisor ONLY:		Depth of Pi	ug No	es follows:
Clay used method used approved FOR USE	by:	Basin S E ENGINEER	upervisor ONLY:		Depth of Pi	o No.	es follows:
	Depth in From 40 3 Pounds ft. 18 18 18 19 19 19 19 19	Depth in Feet From To 40 80 Pounds ft. in 18 8	Street a City Well w Well w See (B) Dr Street a City Drilling Drilling Drilling Drilling Drilling Drilling Oralling Drilling Drilling Oralling Oralling Drilling Oralling Oral	Street and Number City Hobbs. Well was drilled ur Freet Street and Number. Street and Number. City Hobbs. Drilling was common	Street and Number Box City Hobbs, Well was drilled under Perm Ws Fay, S.W. y,	Street and Number Box 1295 City Hobbs, Well was drilled under Permit No. L-296 Ex. 14 S.W. 14 S.W. 14 of Section. 3 (B) Drilling Contractor. O.R. Musklewit Street and Number. Box 56 City Hobbs, E Drilling was commenced. Security Drilling was completed Security Total deference well is shallow or artesian. Shallow Depth to was seen level. Total deference well is shallow or artesian. Shallow Depth to was permit no Feet Thickness in From To Feet Some Security Bescription of Water Feet Too Some Bottom Feet Type Shoe fit. in Top Bottom Feet Type Shoe in Feet Diameter Tons No. Sacks of Cement To Hole in in. Clay Cement Plugging Contractor. Plugging Contractor.	rether well is shallow or artesian

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The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well

Well Driller

L-2964 back

WELL RECORD

	Street or P. O.Pra	wer D	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, City and Sta	ateHo.bbsN	ew Hexic	0
	1. Well location and	description:	The Shallow or artest	well is located	in SW		· · · · · · · · · · · · · · · · · · ·
\sim	_S.W	Section 32	Town	ship 18 S	, Range 38	E; Elevat	ion of top
\bigcirc	casing above sea	level,	feet; diamete	er of hole,8	inches; tot	al depth, .11	6 f
	depth to water up	on completion	,34 fee	et; drilling was con	nmenced	June 2	5, 19
	and completed	Ju	ne 25, 1954 ;	name of drilling co	ontractor Ed.	B. Burke	
	Box 306	; A	ddress, Eobbs.,	New Mexico	Driller's	License No. W	D-111
	2. Principal Water-l	bearing Strate	a:				
	Depti From	b in Peet	Thickness	Descrip	ption of Water-Deart	ng Formation	
	No. 1 54	85	31	Wate	ar Sand		-
	No. 2 101 3	16 116	15	Wate	er Sand	· ·	
	No. 3	-					·
-	No. 4 No. 5	· · · · · · · · · · · · · · · · · · ·		:			
	110. 0	1		:		<u> </u>	
	3. Casing Record: Diameter Por in mohes per	onds Threz r ft. per in	ich Top E	or Liner Feet of Casing 3 113	Type of Shee	From Perf	oration To
	Diameter Por in highes per 6 5/8 20	10	O 11		collar	85	113
	Diameter Por in highes per 6 5/8 20	10	0 11 from 0 to 5	3 113	collar	85	113
	Diameter Por in Inches Per 6 5/8 20 Get 4. If above construction	10 10 emented :	O 11 from 0 to 5	3 113	collar on:	85	113
0	Diameter Por in hiches Per 6 5/8 20 Get 4. If above construct of Section	10 10 emented tition replaces Town	O 11 from 0 to 5	7	on:	85	113
0	Diameter Por in hiches Per 6 5/8 20 Get 4. If above construct of Section	10 10 emented tition replaces Town	from 0 to 5	7. Judon ed, give location	on:	85 	113
0	Diameter in hiches per 6 5/8 20 Gettion	10 10 emented tion replaces Town	O 11 from 0 to 5	7 Indoned, give location	on:	85 	113
0	Diameter in hiches per 6 5/8 20 Gettion	10 10 emented tion replaces Town	O 11 from 0 to 5	7 113 doned, give location	on:	85 	113
0	Diameter in hiches per 6 5/8 20 Gettion	10 10 emented tion replaces Town	O 11 from 0 to 5	7 113 doned, give location	collar	85 	113
0	Diameter in hiches per 6 5/8 20 Gettion	10 10 emented tion replaces Town	O 11 from 0 to 5	7 113 doned, give location	on:	85 	g contrac

L - 2555 back

5. Log of Well:

Depth From	in feet To	Thickness in frei	kpesf feel Description of Formation					
. 0	4	4	Top Soil					
4	25	21	Caliche					
25	34	9	Fack Sand					
34	39	5	Water Sand (weak)					
39	54	15	Pack Sand					
54	ි ප්ර	31	Water Sand					
85	94	9	Hard Sand Rock					
94	101	7	Tight Sand					
101	116	15	Water Sand					
			4.79					
			n with					
		·						
			35 × 18 35 × 17 37 a × 1					
in the second								
	-							

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and

correct record of the above described well. (5-38-32-333)

Instructions

This form shall be executed, preferably typewritten, in triplicate and filed with the State Engineer's Office at Roswell, New Mexico, within 10 days after drilling has been completed. Data on water-bearing strata and on all formations encountered should be as complete and accurate as possible.

WELL RECORD

		1953					Vo0V	
Name of permitte	e, Joe	P. Dutton	·:					
treet or P.O.CONTi	nental T	ank Co.	City	and State	Hobb	s.,Nev	-Mex	ico
. Well location and		(shallow or urt	estur)			_		
SW	of Section	3.3 To	wnship_18	South	Range 38.	East	; Elev	ation of tor
casing above sea	level,	feet; diame	ter of hole, .	7	inches;	total dep	: Łh,	1121
depth to water up	on completion,	50 re	et; drilling w	as comme	nced	June 2	23	19_53
and completedJ	une 23	19.53	: 110; ; name of di	illing cont	ractor	Ed. B.	Bur	ke
Box 637	:::::::::::::::::::::::::::::::::	5. n. s Address,Ho	bbs, Nei	v Mexi	CO; Dr.	iller's Lic	ense No	_ _WD-111
. Principal Water-be		dece here	t Artwi		Ž.	į.	•	å4)
. Depr From	h in Feet To	Thickness	raudini.	Descrip	tion of Wate		rmation	.:\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
No. 1 63	70		V	ater s	sand			., .
No. 2 76	88	12	2 (2 (2) 2)	later_s	A	÷		
No. 3	112	10		later_s				
No. 4 .								
No. 5								
in inches per	indo Dirends ft. per inch	Depth of Casing Top		Feet of Casing	Type of S	hoe	From	arations To
Diameter Pou			111	Feet of Casing	Type of 5		From	orations To
Diameter Pou in inches per	ft. per inch	Тор	111	111			From	To
Diameter Pou	ft. per inch	Тор	111	111			From	To
Diameter Pou in inches per	ft. per inch	Тор	111	111			From	To
Diameter Pou in inches per	ft. per inch	Тор	111	111			From	To
Diameter Pou	7 8	0 O	111	111 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			89	ro
Dlameter Pour In Inches Per 1	7 8	O O O O O O O O O O O O O O O O O O O	111 doned, give le	Desirg	none	, ddress of	89	To
Dlameter Pour in inches per 5½ 1′	7 8	O O O O O O O O O O O O O O O O O O O	111 doned, give le	Desirg	none	, ddress of	89	To
Dlameter Pour in inches per 5½ 1′	7 8	O O O O O O O O O O O O O O O O O O O	111 doned, give le	Desirg	none	, ddress of	89	To
Dlameter Pour in inches per 5½ 1′	7 8	O O O O O O O O O O O O O O O O O O O	1111 doned, give la	Dealing 111 Deceilon:	none	, ddress of	89	To III
Dlameter Pour in Inches Per in	7 8	Well to be abanco	1111 doned, give la	Dealing 111 Deceilon:	none	, ddress of	89	To III
Dlameter Pour in Inches Per in	7 8	Well to be abanco	1111 doned, give la	Dealing 111 Deceilon:	none	, ddress of	89	To III
Dlameter Pour in Inches Per in	7 8	Well to be abanco	1111 doned, give la	Dealing 111 Deceilon:	none	, ddress of	89	To III
Dlameter Pour in Inches Per in	7 8	Well to be abanco	1111 doned, give la	Dealing 111 Deceilon:	none	, ddress of	89	To III
Dlameter Pour in Inches Per in	7 8	Well to be abanco	1111 doned, give la	Dealing 111 Deceilon:	none	ddress of	89	To III

· mil :

5. Log of Well:

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. Log of We	•••				Distribution of	والبال		
Depth From	In feet To	Thickness in feet			Description	n of Formation	es liber	
0 (:-	11			Top so			, ·	<u></u>
1	22 70%	21		calich	е	· · · · · · · · · · · · · · · · · · ·		
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38	42	4	'	hard s	and roc	<u>k</u>		
1.2	63	21		pack s	and		· · ·	
63 1.02-00	70	7		water :		5.4	ا د کا کیما دی	
70 70	76	6 6	CO : W	bard s	and rocl	k		, ,t: Ko
76	88	12	1	water :	sand			
88	102	4		tight:	sand			
102	112	1000	zəlb-	water :	sand	<i>ت</i> ر		
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The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

Instructions

This form shell be executed, preferably typewritten, in triplicate and filed with the State Engineer's Office at Roswell, New Mexico, within 10 days after drilling has been completed. Data on water-bearing strata and on all formations encountered should be as complete and accurate as possible.



Appendix B - locations and other data for wells in OSE database

Loc_ID USE_DIV	USE_DIV OWNER	Site_ID	SOURCE	TWS	TWS RNG SEC Q Q	SEC [C	$\frac{\alpha}{2}$	-	UTM_ZON X_	K_UTM83
L 06660 PRO	MORAN OIL PROD & DRILLING CORP	L 06660 (E)	Shallow	188	38E	19	8	3	13	669335
L 06337 PRO	INC. CAPITAN DRILLING COMPANY	L 06337	Shallow	188	38E	19	4	2	13	670313
L 08716 SAN	OIL FIELD RENTAL SERVICE CO.	L 08716	Shallow	18S	38E	20	7	-	13	671608
L 08851 SAN	A.A. OILFIELD	L 08851	Shallow	18S	38E	20	2	3	13	671514
L 08867 SAN	BIG HORN TANK RENTAL	L 08867	Shallow	18S	38E	59	2	2	13	672040
L 06570 PRO	MORAN OIL PROD & DRILLING CORP	L 06570 (E)	Shallow	18S	38E	29	8	3	13	670753
L 07570 DOM	SOUTHWESTERN DRILLING MUD	L 07570	Shallow	18S	38E	59	က	3	13	670753
L 07005 SAN	TWO-STATE TANK RENTAL CO	L 07005	Shallow	18S	38E	29	8	3	13	670753
L 11176	TEXLAND PETROLEUM-HOBBS, LLC	L 11176	Shallow	188	38E	29	4	1	13	671752
L 02395 PRO	AMERADA PETROLEUM CORPORATION	L 02395	Shallow	18S	38E	30	_	2	13	669522
L 05849 PRO	AMERADA PETROLEUM CORPORATION	L 05849	Shallow	18S	38E	30	-	4	13	669729
L 05818 PRO	AMERADA PETROLEUM CORPORATION	L 05818	Shallow	18S	38E	30		4	13	669729
L 06245 SAN	SONNY'S OIL FIELD SERVICE INC.	L 06245	Shallow	188	38E	32	<u></u>	0	13	671069
L 02964 DOM	INC. BAKER OIL TOOLS	L 02964	Shallow	188	38E	32	က	3	13	670982
L 02555 DOM	SKELLY OIL COMPANY	L 02555	Shallow	188	38E	32	8	3	13	670782
L 06574 PRO	PAN AMERICAN PETROLEUM	L 06574 (E)	Shallow	188	38E	33	-	3	13	672380
L 02232 DOM	CONTINENTAL TANKE INC.	L 02232	Shallow	188	38E	33	က	0	13	672697
L 03516 PRO	CACTUS DRILLING COMPANY	L 03516 APPR	Shallow	188	38E	34	3	3	13	674109

Appendix B - locations and other data for wells in OSE database

3622615 3/23/1970	100 0011 01	100		
L	3/23/19/0 Sec 19, 118S, 38E	OSE Well	120	48
	6/10/1968 Sec 19, T18S, 38E	OSE Well	110	40
3623764 3/23/1982	3/23/1982 Sec 20, T18S, 38E	OSE Well	130	49
3623260 7/1/1982	7/1/1982 Sec 20, T18S, 38E	OSE Well	120	54
3622160 7/9/1982	7/9/1982 Sec 29, T18S, 38E	OSE Well	120	52
3620830 8/5/1969	8/5/1969 Sec 29, T18S, 38E	OSE Well	110	54
3620830 6/21/1976	6/21/1976 Sec 29, T18S, 38E	OSE Well	122	48
3621030 10/14/1972	Sec 29, T18S, 38E	OSE Well	150	20
3621246 7/31/2001	Sec 29, T18S, 38E	OSE Well	220	9
3622018 8/31/1953	Sec 30, T18S, 38E	OSE Well	87	30
3621615 2/10/1966	Sec 30, T18S, 38E	OSE Well	38	34
3621615 12/15/1965	Sec 30, T18S, 38E	OSE Well	32	32
3620325 12/29/1967	Sec 32, T18S, 38E	OSE Well	150	34
3619217 9/10/1955	Sec 32, T18S, 38E	OSE Well	100	30
3619217 6/25/1954	Sec 32, T18S, 38E	OSE Well	116	34
3620050 8/18/1969	Sec 33, T18S, 38E	OSE Well	120	52
3619546 6/23/1953	Sec 33, T18S, 38E	OSE Well	112	56
3619372 8/21/1956	Sec 34, T18S, 38E	OSE Well	106	45
	- - -	10.14/19/2 Sec 29, 1185, 38E 10.10/14/19/2 Sec 29, 1185, 38E 10.10/1966 Sec 30, 7185, 38E 10.10/1965 Sec 30, 7185, 38E 10.10/1965 Sec 30, 7185, 38E 10.10/1965 Sec 32, 7185, 38E 10.10/1955 Sec 32, 7185, 38E 10.10/1955 Sec 32, 7185, 38E 10.10/1955 Sec 32, 7185, 38E 10.10/1955 Sec 33, 7185, 38E 10.10/1955 Sec 33, 7185, 38E 10.10/1955 Sec 33, 7185, 38E 10.10/1955 Sec 33, 7185, 38E	7/31/2001 Sec 29, 1185, 38E 7/31/2001 Sec 29, 1185, 38E 8/31/1953 Sec 30, 7185, 38E 2/10/1966 Sec 30, 7185, 38E 12/29/1967 Sec 32, 7185, 38E 9/10/1955 Sec 32, 7185, 38E 6/25/1954 Sec 32, 7185, 38E 8/18/1969 Sec 32, 7185, 38E 8/18/1969 Sec 33, 7185, 38E 6/23/1953 Sec 33, 7185, 38E 8/21/1956 Sec 34, 7185, 38E	7/31/2001 Sec 29, 1185, 38E OSE Well 7/31/2001 Sec 29, T185, 38E OSE Well 8/31/1953 Sec 30, T185, 38E OSE Well 2/10/1966 Sec 30, T185, 38E OSE Well 12/15/1965 Sec 30, T185, 38E OSE Well 12/29/1967 Sec 32, T185, 38E OSE Well 9/10/1955 Sec 32, T185, 38E OSE Well 6/25/1954 Sec 32, T185, 38E OSE Well 8/18/1969 Sec 33, T185, 38E OSE Well 6/23/1953 Sec 33, T185, 38E OSE Well 8/21/1956 Sec 34, T185, 38E OSE Well



Bore: J _c + F ₂ 9-J 4 F Sec. 29 T /8 th Cl. 203	R 38 PID		13 671472 F 3621769 V
F Sec. 29 T 18 ith Cl. 203	R 38 PID	Máp Datum Nad83	
ih Cl.	PID.		723 7 7 7 6 7 78
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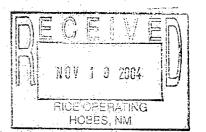


Rice Operating Co. 122 W: Taylor Hobbs NM, 88240 Project Number: None Given Project Manager: Kristin Pope Fax: (505) 397-1471

Reported:
11/12/04 16:01

ANALYTICAL REPORT FOR SAMPLES

Sample 10		Laboratory ID Matrix	Date Sampled	Date Received
SB@IIIfe		4K10005 ₇ 01 Solid	1 1/03/04 00:00	11/10/04 07:50
SB @ 39-ft.		4K10005-02 Solid	11/03/04 00:00	11/10/04 07:50



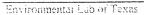


Rice Operating Co. 122 W. Taylor Hobbs NM, 88240 Project Number: None Given Project Manager: Kristin Pope Fax: (503) 397-1471 Reported: 11/12/04 16:01

Organics by GC Environmental Lab of Texas

Analyte	Result		Reporting. Limit	Units	Dilution	Batch	Prepared .	Analyzed	Method	Notes
SB @ 11 ft. (4K10005-01) Solid								, r		
Benzene	ND		0.0250	mg/kg drỳ	25	EK41203	1]/11/04	14/11/04	EPA 8021B	
Toluene.	NÓ	1	0.0250	` 4 ,	ë.	n	11	at	n,	
Ethylbenzene	`ND		0.0250		31	р	7	Ħ	4	
Xylene (p/m)	ND		0.0250	Ð	. 8	В	3	ti.	· in	
Xylene (o)	ND		0.0250	ń	0	28	u	./	**	
Surrogate: a.a.aTrifluorotoluene			82,2 %	80- i	120	,,	86	D	*	. Anna and a
Surrogate: 4-Bromojluorobenzene			92.9%	8Ò-1	12Ô .	4		e*	p	
Gasoline Range Organics C6-C12	ND		10.0	mg/kg/dry	<u>.</u>	EK40906	11/10/04	11/11/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND		6,01	P,		11	*3	ž*	, n .	
Total Hydrocarbon C6-C35	ND		10.0		1.54		*	,	н	
Sukrogate: 1-Chlorooctane:			93.2 %	70-7	130	e in	37	ø	27	
Surrogate: I-Chlorooctadecane	* * *		103 %	70-3	130	`. #	"	**	v	
SB @ 59 ft. (4K10005-02) Solid			: .		**					
Benzene	, ND		0.0250	mg/kg dry	25	EX41203	. 14/11/04	11/11/04	EPA 8021B	
Toluene	ND	j.	0.0250	* "	i*	**	34	39	r.	
Ethylbenzene	NE)	0.0250	*1	**	0	**	:9	н	
Xýfene (p/m)	NE)	0:0250		-4			и,	, a	
Xylene (o)	NE)	0.0250	a				e:	n'	
Surrogate: a.a.ä-Trifluorotoliiene			95.5 %	80-	120	t.	.,	a	p	
Surrogate: 4-Bromofluorobenzene			99.4%	80-	120	, ,		и	et	
Oasoline Range Organics C6-C12.	NI)	10.0	mg/kg dry	1	EK40906.	11/10/04	11/11/04	EPA 8015M	
Diesel Range Organics >C12-C35	. NÌ)	. 10.0	12	**	:1	,	ø	4t ²	
Total Hydrocarbon C6-C35	ַוא אַנ)	.10.0	. *	a			7:		
Surrogate: 1-Chloroociane			90.8 %	70-	130	.,	41	ef		
Surrogaie: 1-Chlorooctadecane			104 %	70-	130 .	53	e	24		





The resigns in this report apply to the samples analyzed in decorpance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 2 of 9

Rice Operating Co. 122 W. Taylor Hobbs NM, 38240 Project: F-29-1A Project: Number: None Given

Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported: 11/12/04 16:01

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

Anaiyle	Result	Leparting Limit Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB @ 11 ft. (4K10005-01) Solid		Y. C.				A A A A A A A A A A A A A A A A A A A	\$1.5 m	
Chloride	213 17.0	20.0 mg/kg Wet-	2	EK41209 EK41101	11/10/04 11/10/04	11/11/03 11/11/04	SW/846 9253	
SB @ 59 ft. (4K10005-02) Solid			~ ************************************		. Notes in	ita Lista karangan	·	
Chloride % Moisture	74:4 7.0	20.0 mg/kg Wet	C	EK41209 EK41101	11/10/04	11/11/04	SW 846 9253 % calculation	





R. T. HICKS CONSULTANTS, LTD.

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

January 24, 2008

Wayne Price Oil Conservation Division 1220 S. St. Francis Drive Santa Fe, NM 87505

RE:

2007 Annual Ground Water Monitoring Report F-29-1A Vent, Sec 29, T18S, R38E, Unit "F"

NMOCD Case #: None

Dear Mr. Wayne Price:

R.T. Hicks Consultants, Ltd is pleased to submit the 2007 Annual Ground Water Monitoring Report for the F-29-1A Vent site located in the Hobbs Salt Water Disposal System (SWD). This report consists of the following sections:

- 1. A table summarizing all laboratory results, depth to ground water and other pertinent data associated with ground water sampling at the site, including this past year.
- 2. Graphs showing chemical concentration over time for chloride, TDS, and sulfate.
- 3. Laboratory data sheets associated with the routine sampling for 2007.
- 4. Site Survey

A Corrective Action Plan was submitted to NMOCD on November 14, 2005. On February 15, 2006, NMOCD approved the Closure Report on the condition the monitoring wells remain active. A Closure Report will be submitted in the spring of 2008.

Thank you for your consideration of this annual summary information. The attached CD contains an electronic copy of this report. If you have any questions, please contact us at 505-266-5004, or Kristin Farris Pope at ROC, 505-393-9174.

Sincerely,

R.T. Hicks Consultants, Ltd.

Randall T. Hicks

Principal

Copy: Hobbs NMOCD office; Rice Operating Company

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F-29-1A Vent	.			Table 1	: chemis	Table I: chemistry over time	ne			
Well Name Date	Date	DTW (ft)	DTW (ft) Chloride (mg/L) Sulfate (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	EthylBenzene (mg/L)	TDS (mg/L) Benzene (mg/L) Toluene (mg/L) EthylBenzene (mg/L) Tolul Xylenes (mg/L) Comments	Comments
MW-1 (Deep)	12/2/2004	60.74	100	*No Results	465	<0.001	<0.001	<0.001	<0.001	clear; no odor
MW-1 (Deep)	3/22/2005	60.10	613	154	930	<0.001	<0.001	<0.001	<0.001	gray; no odor
MW-1 (Deep)	5/19/2005	60.13	332	84.5	1260	<0.001	<0.001	<0.001	<0.001	
MW-1 (Deep)	8/9/2005	60.22	322	75.7	1080	<0.001	<0.001	<0.001	×0.001	
MW-1 (Deep)	11/1/2005	60.45	300	63.2	986	<0.001	<0.0001	<0.001	<0.001	clear; no odor
MW-1 (Deep)	1/31/2006	80.54	270	58.1	1000	<0.001	<0.001	<0.001	<0.001	clear; no odor
MW-1 (Deep)	5/2/2006	60.61	298	62.9	966	<0.001	<0.001	<0.001	<0.001	
MW-1 (Deep)	11/3/2006	60.79	285	86.1	866	<0.001	<0.001	<0.001	<0.001	Clear no odor
MW-1 (Deep)	1/31/2007	60.75	325	104	826	<0.001	<0.001	<0.001	-0.001	Clearl
MW-1 (Deep)	4/26/2007	60.83	279	95.7	850	<0.001	<0.001	<0.001	<0.001	clear no odor
MW-1 (Deep)	8/1/2007	61.10	263	102	1160	<0.001	<0.001	<0.001	<0.002	
MW-1 (Deep)	10/19/2007	61 09	292	130	1047	<0.001	<0.001	<0.001	<0.003	Clear No odor
		:			:					

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Table

F-29-1A Vent					: chemis	chemistry over time	ne			
	Date	DTW (ft)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Вепгене (тg/L)	Toluene (mg/L)	EthylBenzene (mg/L)	TDS (mg/L) Benzene (mg/L) Toluene (mg/L) EthylRenzene (mg/L) Total Xylenes (mg/L) Comments	Соттенія
	12/2/2004	60.64	725	*No Results	3280	<0.001	<0.001	<0.001	<0.001	gray, no odor
	3/22/2005	80:08	879	1780	3960	<0.001	<0.001	<0.001	<0.001	gray; no odor
MW-2 (Shallow)	5/19/2005	10,09	929	788	2750	<0.001	<0.001	<0.001	<0.001	
MW-2 (Shallow)	8/9/2005	60.14	470	475	1780	<0.001	<0.001	<0.001	<0.001	
MW-2 (Shallow)	11/1/2005	26.34	226	218	1100	<0.001	<0.001	<0.001	<0.001	Clear; no odor
MW-2 (Shallow)	1/31/2006	60.42	144	58.1	924	<0,001	<0.001	<0.001	<0.001	
MW-2 (Shallow)	5/2/2006	60.50	160	153	1040	<0.001	<0.001	<0.001	<0.001	
MW-2 (Shallow)	11/3/2006	69.69	79.6	111	285	<0.001	<0.001	<0.001	<0.001	Clear no odar
MW-2 (Shallow)	1/31/2007	60.63	98.2	125	556	<0.001	<0.001	<0.001	<0.001	Clear/
MW-2 (Shallow)	4/26/2007	60.63	89.4	107	556	<0.001	<0.001	<0.001	<0.001	clear no odor
MW-2 (Shallow)	8/1/2007	86.09	27.2	XX	592	<0.001	<0.001	<0.001	<0.002	Clear No Odor
MW-2 (Shallow)	10/19/2007	86,09	100	125	624	<0.001	<0.001	<0.001	<0.003	opo
	:								The state of the s	



Analytical Report

Prepared for:

Kristin Farris-Pope Rice Operating Co. 122 W. Taylor Hobbs, NM 88240

Project: Hobbs Jct. F-29-1A
Project Number: None Given

Location: T18S R38E Sec29F Lea Co., NM

Lab Order Number: 7B01021

Report Date: 02/13/07

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

ANALYTICAL REPORT FOR SAMPLES

Sample ID Laboratory ID Matrix Date Sampled Date Received Monitor Well #1- Deep 7B01021-01 Water 01/31/07 10:20 02-01-2007 15:42

Monitor Well #2- Shallow 7B01021-02 Water 01/31/07 09:45 02-01-2007 15:42

122 W. Taylor Hobbs NM, 88240 Project: Hobbs Jct. F-29-1A

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (7B01021-01) Wa	iter								
Benzene	ND	0.00100	mg/L	1	EB70703	02/07/07	02/09/07	EPA 8021B	
Toluene	ND	0.00100	"	•	11	"	"		
Ethylbenzene	ND	0.00100	11		**	"	"	"	
Xylene (p/m)	ND	0.00100	111		**	"		n	
Xylene (o)	ND	0.00100	**			*		н	
Surrogate: a,a,a-Trifluorotoluene		86.2 %	80-1	20	"	"	,,	"	
Surrogate: 4-Bromofluorobenzene		91.4 %	80-1	20	"	"	n	"	
Monitor Well #2- Shallow (7B01021-02)	Water								
Benzene	ND	0.00100	mg/L	1	EB70703	02/07/07	02/09/07	EPA 8021B	
Toluene	ND	0.00100		11	,,	11	**	*	
Ethylbenzene	ND	0.00100	н	"	*	11	•	11	
Xylene (p/m)	ND	0.00100	u	**	"		**	11	
Xylene (o)	ND	0.00100	"	**	"	r	**	19	
Surrogate: a,a,a-Trifluorotoluene		86.0 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.0 %	80-1	20	"	"	"	"	

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (7B01021-01) Water								
Total Alkalinity	164	2.00	mg/L	1	EB70209	02/02/07	02/02/07	EPA 310.1M	
Chloride	325	5.00	"	10	EB70208	02/02/07	02/03/07	EPA 300.0	
Total Dissolved Solids	826	10.0		1	EB70302	02/02/07	02/03/07	EPA 160.1	
Sulfate	104	5.00	•	10	EB70208	02/02/07	02/03/07	EPA 300.0	
Monitor Well #2- Shallow (7B01021	-02) Water								
Total Alkalinity	228	2.00	mg/L	1	EB70209	02/02/07	02/02/07	EPA 310.1M	
Chloride	98.2	5.00	"	10	EB70208	02/02/07	02/03/07	EPA 300.0	
Total Dissolved Solids	556	10.0	"	1	EB70302	02/02/07	02/03/07	EPA 160.1	
Sulfate	125	5.00	n	10	EB70208	02/02/07	02/03/07	EPA 300.0	

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240

Project Number: None Given Project Manager: Kristin Farris-Pope

Total Metals by EPA / Standard Methods **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (7B01021-01) Water									
Calcium	138	4.05	mg/L	50	EB70612	02/06/07	02/06/07	EPA 6010B	
Magnesium	26.9	0.360		10	•	**	**	"	
Potassium	3.85	0.600	"	**	,	11	n		
Sodium	84.3	2.15	,,	50	,,	"	"	"	
Monitor Well #2- Shallow (7B01021-02) Water	r								
Calcium	27.5	0.810	mg/L	10	EB70612	02/06/07	02/06/07	EPA 6010B	
Magnesium	15.0	0.360	•			*	n	н	
Potassium	2.68	0.600	**	*	"			**	
Sodium	124	2.15	11	50	"	"	n	**	

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

Organics by GC - Quality Control Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB70703 - EPA 5030C (GC)	, , , , , , , , , , , , , , , , , , ,	2,701	25			, \ \			III	
Blank (EB70703-BLK1)				Prepared: 0	'2/07/07 At	nalyzed: 02	/10/07			
Benzene	ND	0.00100	mg/L				., 10, 0,			
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0,00100	,,							
Xylene (p/m)	ND	0.00100	17							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a.a-Trifluorotoluene	₹1.0		ng/l	50.0		82.0	80-120			
Surrogate: 4-Bromofluorohenzene	43.5		,,	50.0		87.0	80-120			
LCS (EB70703-BS1)				Prepared: 0	2/07/07 Ar	nalyzed: 02	/09/07			
Benzene	0.0524	0.00100	mg/L	0.0500		105	80-120			
Toluene	0.0527	0.00100	**	0.0500		105	80-120			
Ethylbenzene	0.0524	0.00100	"	0.0500		105	80-120			
Xylene (p/m)	0.111	0.00100	"	0.100		111	80-120			
Xylene (o)	0.0478	0.00100	"	0.0500		95.6	80-120			
Surrogate: a,a,a-Triffnorotoluene	47.2		ug/l	50.0		94.4	80-120			
Surrogate: 4-Bromofluorobenzene	53.0		"	50.0		106	80-120			
Calibration Check (EB70703-CCV1)				Prepared: 0	2/07/07 Ar	nalyzed: 02	/10/07			
Benzene	55.4		ug/l	50.0		111	80-120			
Toluene	53.4		"	50.0		107	80-120			
Ethylbenzene	53.1		,,	50.0		106	80-120			
Xylene (p/m)	110		"	100		110	80-120			
Xylene (o)	46.7		"	50.0		93.4	80-120			
Surrogate: a,a,a-Trifluorotoluene	46.8			50.0		93.6	80-120			
iurrogate: 4-Bromofluorohenzene	55.8		"	50.0		112	80-120			
Matrix Spike (EB70703-MS1)	Sou	rce: 7B01020-0	01	Prepared: 0	2/07/07 Ar	nalyzed: 02	/09/07			
Benzene	0.0598	0.00100	mg/L	0.0500	ND	120	80-120			
foluene	0.0587	0.00100	*	0.0500	ND	117	80-120			
Ethylbenzene	0.0579	0.00100	"	0.0500	ND	116	80-120			
(ylene (p/m)	0.125	0.00100	"	0.100	ND	125	80-120			
Kylene (o)	0.0550	0.00100	**	0.0500	ND	110	80-120			
urrogate: a,a,a-Trifluorotoluene	51.3	-	ug I	50.0		103	80-120			

Surrogate: 4-Bromofluorohenzene

117

80-120

Fax: (505) 397-1471

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Project: Hobbs Jct. F-29-1A

122 W. Taylor

Hobbs NM, 88240

Project Number: None Given

Project Manager: Kristin Farris-Pope

Organics by GC - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC			
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EB70703 - EPA 5030C (GC)										
Matrix Spike Dup (EB70703-MSD1)	Sour	rce: 7B01020-	01	Prepared: 0	02/07/07 A	nalyzed: 02	2/10/07			
Benzene	0.0598	0.00100	mg/L	0.0500	ND	120	80-120	0.00	20	
Toluene	0.0593	0.00100	•	0.0500	ND	119	80-120	1.69	20	
Ethylbenzene	0.0599	0.00100		0.0500	ND	120	80-120	3.39	20	
Xylene (p/m)	0.128	0.00100	o	0.100	ND	128	80-120	2.37	20	M
Xylene (o)	0.0562	0.00100	**	0.0500	ND	112	80-120	1.80	20	
Surrogate: a,a,a-Trifluorotoluene	52.6		ug·I	50.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	60.3		"	50.0		121	80-120			S-0

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

General Chemistry Parameters by EPA / Standard Methods - Quality Control **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EB70208 - General Preparation (WetChem)									
Blank (EB70208-BLK1)				Prepared: ()2/02/07 Aı	nalyzed: 02	2/03/07			
Sulfate	0.459	0.500	mg/L							В,
Chloride	ND	0.500	"							
LCS (EB70208-BS1)				Prepared: (02/02/07 Aı	nalyzed: 02	/03/07			
Chloride	10.7	0.500	mg/L	0.01		107	80-120			
Sulfate	11.6	0.500	"	10.0		116	80-120			
Calibration Check (EB70208-CCV1)				Prepared: ()2/02/07 Aı	nalyzed: 02	2/03/07			
Chloride	10.5		mg/L	10.0		105	80-120			
Sulfate	11.8			10.0		118	80-120			
Duplicate (EB70208-DUP1)	Source	ce: 7B01017-	10	Prepared: (02/02/07 Ai	nalyzed: 02	2/03/07			
Sulfate	93.0	5.00	mg/L		96.4			3.59	20	
Chloride	127	5.00	п		132			3.86	20	
Duplicate (EB70208-DUP2)	Sour	ce: 7B01020-	02	Prepared: (02/02/07 Ai	nalyzed: 02	2/03/07			
Chloride	2220	50.0	mg/L		2240			0.897	20	
Sulfate	2410	50.0	**		2400			0.416	20	
Matrix Spike (EB70208-MS1)	Sour	ce: 7B01017-	01	Prepared: (02/02/07 Ai	nalyzed: 02	2/03/07			
Sulfate	204	5.00	mg/L	100	96.4	108	80-120			
Chloride	240	5.00	**	100	132	108	80-120			
Matrix Spike (EB70208-MS2)	Sour	ce: 7B01020-	02	Prepared: (02/02/07 Ai	nalyzed: 02	2/03/07			
Sulfate	3500	50.0	mg/L	1000	2400	110	80-120			
Chloride	3330	50.0	*	1000	2240	109	80-120			

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

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

L.		Reporting		Spike	Source	A/REC	%REC	DDC	RPD	N F :
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EB70209 - General Preparation (Wet	Chem)									
Blank (EB70209-BLK1)				Prepared &	Analyzed:	02/02/07				
Total Alkalinity	ND	2.00	mg/L							
Duplicate (EB70209-DUP1)	Sou	rce: 7B01016-	01	Prepared &	Analyzed:	02/02/07				
Total Alkalinity	310	2.00	mg/L		314			1.28	20	
Reference (EB70209-SRM1)				Prepared &	k Analyzed:	02/02/07				
Total Alkalinity	246		mg/L	250		98.4	90-110			
Batch EB70302 - Filtration Preparation										
Blank (EB70302-BLK1)				Prepared: 0	02/02/07 A	nalyzed: 02	/03/07			
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (EB70302-DUP1)	Sou	rce: 7B01016-	01	Prepared: 0	02/02/07 A	nalyzed: 02	7/03/07			
Total Dissolved Solids	1920	10.0	mg/L		1840			4.26	20	
Duplicate (EB70302-DUP2)	Sou	rce: 7B01020-	01	Prepared: 0	02/02/07 A	nalyzed: 02	/03/07			
Total Dissolved Solids	6280	10.0	mg/L		5700			9.68	20	

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Fax: (505) 397-1471

Hobbs NM, 88240

Project Number: None Given Project Manager: Kristin Farris-Pope

Total Metals 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 EB70612 - 6010B/No Digestion			··.·	. · ·			<u></u>			
Blank (EB70612-BLK1)				Prepared &	t Analyzed:	02/06/07				
Calcium	ND	0.0810	mg/L							
Magnesium	ND	0.0360	*							
Potassium	ND	0.0600	•							
Sodium	ND	0.0430	"							
Calibration Check (EB70612-CCV1)				Prepared &	Analyzed:	02/06/07				
Calcium	1.79		mg/L	2.00		89.5	85-115			
Magnesium	1.98		,,	2.00		99.0	85-115			
Potassium	1.80		**	2.00		90.0	85-115			
Sodium	1.74		"	2.00		87.0	85-115			
Duplicate (EB70612-DUP1)	Sou	rce: 7B01016-	01	Prepared &	Analyzed:	02/06/07				
Calcium	172	4.05	mg/L		176			2.30	20	
Magnesium	111	1.80	*		109			1.82	20	
Potassium	17.0	0.600			16.8			1.18	20	
Sodium	306	4.30			305			0.327	20	

Rice Operating Co.

Project: Hobbs Jct. F-29-1A

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
MI	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
В	Analyte is found in the associated blank as well as in the sample (CLP B-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike

	R. S. Berrin		
Report Approved By:	All the second of the second o	Date:	2/13/2007

Brent Barron, Laboratory Director/Corp. Technical Director Celey D. Keene, Org. Tech Director Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer Jeanne Mc Murrey, Inorg. Tech Director

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

Dup

Duplicate

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

A Xenco Laboratories Company

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Phone: 432-563-1800 Odessa, Texas 79765 Fax: 432-563-1713

TAT bisbrist × × FedEx Lone Star NPDES Project Loc: T18S R38E Sec29 F ~ Lea County New Mexico ပ္ SUST (Pre-Schedule) 24, 48, 72 hrs 0 7 SEESS > Total Dissolved Solids × ☐ TRRP M.A.O.N Project Name: Hobbs Junction F-29-1A Custody seals on cooler(s) Sample Containers Intact? Labels on container(s) Custody seals on container(s) Sample Hand Delivered by Sample Client Rep 7 by Courier? UPS VOCs Free of Headspace? emperature Upon Receipt: × BTEX 8021B/5030 Laboratory Comments. XStandard Metals: As Ag Ba Cd Cr Pb Hg Se TCLP 101AL: SAR / ESP / CEC × Anions (Ci, SO4, Alkalinity) PO #: Project #: Cations (Ca. Mg, Na, K) Report Format: 1842 3001 XT 9001 XT Hdd 10:21 E lime 80158 WS108 1.814 HST 8€ 3€ POINED 2-1-07 Date Office (Specify) rozanne@valornet.com None (1) 1 Liter HDPE rozanne@valornet.com COZSZ6N HOSM (505) 397-1471 *OS^zH HCl (2) 40 ml glass vials N N HNO \times - Xarai mirman chall#, of Containers က benetitiered Fax No: e-mail: 10:20 mfranks@riceswd.com 9:45 Time Sampled kpope@riceswd.com Received by ELO1 1/31/2007 1/31/2007 Date Sampled Ending Depth Hobbs, New Mexico 88240 12:00 RICE Operating Company ime ime me インジ Rozanne Johnson (505)631-9310 Beginning Depth kpope@riceswd.com 122 W. Taylor Street Kristin Farris Pope 2-1-07 20-1-2 Date (505) 393-9174 FIELD CODE 180102 Monitor Well #2-Shallow Please email to: Monitor Well #1-Deep Company Address: Sampler Signature: Project Manager: Company Name Felephone No: City/State/Zip: Special Instructions: (tab use only) # ORDER 3 P LAB # (tab use only)

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client:(() 0.			
Date/ Time: 2-1-07 15: 12			
Lab ID#: 1/3/1621			
Initials:			
Williams, Ov			•
Sample Receipt (Checklist		
			Client Initials
#1 Temperature of container/ cooler?	Yes	No	4.0 °C
#2 Shipping container in good condition?	Yes	No	
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present
#4 Custody Seals intact on sample bottles/ container?	Yes	No	Not Present
#5 Chain of Custody present?	Yes	No	
#6 Sample instructions complete of Chain of Custody?	Y/es	No	
#7 Chain of Custody signed when relinquished/ received?	Yes.	No	
#8 Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid
#9 Container label(s) legible and intact?	Yes	No	Not Applicable
#10 Sample matrix/ properties agree with Chain of Custody?	Yes	No	
#11 Containers supplied by ELOT?	Yes	No	
#12 Samples in proper container/ bottle?	Yes	No	See Below
#13 Samples properly preserved?	Yes	No	See Below
#14 Sample bottles intact?	Yes	No	
#15 Preservations documented on Chain of Custody?	Yes.	No	
#16 Containers documented on Chain of Custody?	Yes	No	
#17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below
#18 All samples received within sufficient hold time?	Yes	No	See Below
#19 Subcontract of sample(s)?	Yes	No	(Not Applicable)
#20 VOC samples have zero headspace?	Yes)	No	Not Applicable
Variance Docum			
Contact: Contacted by:			
Contact: Contacted by:			Date/ Time:
Regarding:			
Corrective Action Taken:		·	
		·	
Check all that Apply: See attached e-mail/ fax Client understands and would Cooling process had begun st	fike to proc	eed with	analysis



Analytical Report

Prepared for:

Kristin Farris-Pope Rice Operating Co. 122 W. Taylor Hobbs, NM 88240

Project: Hobbs Jct. F-29-1A Project Number: None Given

Location: T18S R38E Sec29 F ~ Lea County New Mexico

Lab Order Number: 7D26011

Report Date: 05/07/07

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well # 1- Deep	7D26011-01	Water	04/26/07 11:00	04-26-2007 16:25
Monitor Well # 2- Shallow	7D26011-02	Water	04/26/07 10:05	04-26-2007 16:25

122 W. Taylor Hobbs NM, 88240 Project: Hobbs Jct. F-29-1A

Project Number: None Given

Project Manager: Kristin Farris-Pope

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well # 1- Deep (7D26011-01) Wat	er								
Benzene	ND	0,00100	mg/L	1	ED73007	04/30/07	05/01/07	EPA 8021B	
Toluene	ND	0.00100	,,		**	н	"	D.	
Ethylbenzene	ND	0.00100		*	**	н	n	n	
Xylene (p/m)	ND	0.00100		**	14	**	Ħ	n	
Xylene (o)	ND	0.00100			"	"	n		
Surrogate: a.a.a-Trifluorotoluene		108 %	80-1	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	80-1	120	"	"	"	U	
Monitor Well # 2- Shallow (7D26011-02) V	Vater								
Benzene	ND	0.00100	mg/L	1	ED73007	04/30/07	05/01/07	EPA 8021B	
Toluene	ND	0.00100	D.	"	н	**	**	"	
Ethylbenzene	ND	0.00100		**	**	*	"	**	
Xylene (p/m)	ND	0.00100	••	**	"	*	**	"	
Xylene (o)	ND	0.00100	"	**	,,	**	19	**	
Surrogate: a,a,a-Trifluorotoluene		108 %	80-	120	"	"	,,	n	
Surrogate: 4-Bromofluorobenzene		97.6 %	80-	120	n	"	"	n	

Fax: (505) 397-1471

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given
Project Manager: Kristin Farris-Pope

Hobbs NM, 88240 Project Mai

Fax: (505) 397-1471

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well # 1- Deep (7D26011-0	01) Water								
Total Alkalinity	160	2.00	mg/L	1	ED73002	04/30/07	04/30/07	EPA 310.1M	
Chloride	279	5.00	,,	10	EE70307	05/03/07	05/03/07	EPA 300.0	
Total Dissolved Solids	850	10.0	"	1	EE70209	04/27/07	05/02/07	EPA 160.1	
Sulfate	95.7	5.00	11	10	EE70307	05/03/07	05/03/07	EPA 300.0	
Monitor Well # 2- Shallow (7D260)	11-02) Water	· <u>·</u> · · · ·							
Total Alkalinity	232	2.00	mg/L	1	ED73002	04/30/07	04/30/07	EPA 310.1M	
Chloride	89.4	5.00		10	EE70307	05/03/07	05/03/07	EPA 300.0	
Total Dissolved Solids	556	10.0	"	ì	EE70209	04/27/07	05/02/07	EPA 160.1	
Sulfate	107	5.00	"	10	EE70307	05/03/07	05/03/07	EPA 300.0	

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Hobbs NM, 88240

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Total Metals by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well # 1- Deep (7D26011-01) W	ater				·				
Calcium	181	4.05	mg/L	50	ED72704	04/27/07	04/27/07	EPA 6010B	
Magnesium	25.5	0.360	•	10		**	v	er .	
Potassium	4.45	0.600	••	"	,	**			
Sodium	86.4	2.15	**	50	"	"		v	
Monitor Well # 2- Shallow (7D26011-02)	Water								
Calcium	67.6	4.05	mg/L	50	ED72704	04/27/07	04/27/07	EPA 6010B	
Magnesium	14.9	0.360		10		**	"	в	
Potassium	2.03	0.600	**	н	,,	U	"	ь	
Sodium	117	2.15	**	50	"	**	"	ь	

Rice Operating Co. Project: Hobbs Jct. F-29-1A

122 W. TaylorProject Number:None GivenHobbs NM, 88240Project Manager:Kristin Farris-Pope

Fax: (505) 397-1471

Organics by GC - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch ED73007 - EPA 5030C (GC)										
Blank (ED73007-BLK1)				Prepared &	Analyzed	: 04/30/07				
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	n							
Ethylbenzene	ND	0.00100	*							
Xylene (p/m)	ND	0.00100.0	•							
Xylene (o)	ND	0.00100	**							
Surrogate: a,a,a-Trifluorotoluene	51.7		ug/l	50.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	52.3		"	50.0		105	80-120			
LCS (ED73007-BS1)				Prepared &	. Analyzed	: 04/30/07				
Benzene	0.0564	0.00100	mg/L	0.0500		113	80-120			
Toluene	0.0571	0.00100	**	0.0500		114	80-120			
Ethylbenzene	0.0575	0.00100	**	0.0500		115	80-120			
Xylene (p/m)	0.106	0.00100	**	0.100		106	80-120			
Xylene (o)	0.0575	0.00100	**	0.0500		115	80-120			
Surrogate: a,a,a-Trifluorotoluene	55.4	·	ug·l	50.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	54.8		"	50.0		110	80-120			
Calibration Check (ED73007-CCV1)				Prepared: 0)4/30/07 A	analyzed: 05	5/01/07			
Benzene	0.0547		mg/L	0,0500		109	80-120			
Toluene	0.0555		"	0.0500		111	80-120			
Ethylbenzene	0.0550		11	0.0500		110	80-120			
Xylene (p/m)	0.102			0.100		102	80-120			
Xylene (o)	0.0566		,,	0.0500		113	80-120			
Surrogate: a,a,a-Trifluorotoluene	53.8		ug I	50.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	53.8		"	50.0		108	80-120			
Matrix Spike (ED73007-MS1)	Sou	rce: 7D26012-	01	Prepared: 0)4/30/07 A	nalyzed: 05	5/01/07			
Benzene	0.0565	0.00100	mg/L	0.0500	ND	113	80-120			
Toluene	0.0568	0.00100	**	0.0500	ND	114	80-120			
Ethylbenzene	0.0549	0.00100	17	0.0500	ND	110	80-120			
Xylene (p/m)	0.105	0.00100	**	0.100	ND	105	80-120			
Xylene (o)	0.0577	0.00100	**	0.0500	ND	115	80-120			
Surrogate: a.a.a-Trifluorotoluene	54.0		ug l	50.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	53.6		"	50.0		107	80-120			

Rice Operating Co. Project: Hobbs Jct. F-29-1A

122 W. TaylorProject Number:None GivenHobbs NM, 88240Project Manager:Kristin Farris-Pope

Fax: (505) 397-1471

Organics by GC - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch ED73007 - EPA 5030C (GC)

Matrix Spike Dup (ED73007-MSD1)	Sour	rce: 7D26012-	01	Prepared: 0-	4/30/07 A	nalyzed: 0	5/01/07		
Benzene	0.0542	0.00100	mg/l.	0.0500	ND	108	80-120	4.52	20
Toluene	0.0551	0.00100		0.0500	ND	110	80-120	3.57	20
Ethylbenzene	0.0561	0.00100		0.0500	ND	112	80-120	1.80	20
Xylene (p/m)	0.102	0.00100	*	0.100	ND	102	80-120	2.90	20
Xylene (o)	0.0557	0.00100	**	0.0500	ND	H	80-120	3.54	20
Surrogate: a,a,a-Trifluorotoluene	52.7		ug/l	50.0		105	80-120		
Surrogate: 4-Bromofluorobenzene	52.8		"	50.0		106	80-120		

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Fax: (505) 397-1471

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch ED73002 - General Preparation	on (WetChem)									
Blank (ED73002-BLK1)				Prepared &	de Analyzed					
Total Alkalinity	ND	2.00	mg/L							
LCS (ED73002-BS1)				Prepared &	analyzed:	04/30/07				
Total Alkalinity	0.00	2.00	mg/L				85-115			
Bicarbonate Alkalinity	180	2.00	n	200		90.0	85-115			
Duplicate (ED73002-DUP1)	Sou	rce: 7D26006	-01	Prepared &	2 Analyzed:					
Total Alkalinity	214	2.00	mg/L		218			1.85	20	
Bicarbonate Alkalinity	0.00	2.00	n		0.00				20	
Reference (ED73002-SRM1)				Prepared &	Analyzed	04/30/07				
Total Alkalinity	256		mg/L	250		102	90-110			
Batch EE70209 - General Preparation	on (WetChem)									
Blank (EE70209-BLK1)				Prepared: 04/27/07 Analyzed: 05/02/07						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (EE70209-DUP1)	Sou	rce: 7D26007-	-01	Prepared:	04/27/07 A	nalyzed: 05	5/02/07			
Total Dissolved Solids	1500	10.0	mg/L		1470			2.02	20	
Duplicate (EE70209-DUP2)	Sou	rce: 7D26009-	-01	Prepared: 04/27/07 Analyzed: 05/02/07						
Total Dissolved Solids	712	10.0	mg/L		684			4.01	20	
Batch EE70307 - General Preparation	on (WetChem)									
Blank (EE70307-BLK1)				Prepared &	& Analyzed:	05/03/07				
Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	"							

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE70307 - General Preparation (WetChem)									
LCS (EE70307-BS1)		Prepared & Analyzed: 05/03/07								
Chloride	9.62	0.500	mg/L	10.0		96.2	80-120			
Sulfate	10.0	0.500		10.0		100	80-120			
Calibration Check (EE70307-CCV1)				Prepared &	Analyzed:	05/03/07				
Sulfate	11.6		mg/L	10.0		116	80-120			
Chloride	8.93		"	10.0		89.3	80-120			
Duplicate (EE70307-DUP1)	Sourc	e: 7 D2 6006-	26006-01 Prepared & Analyzed: 05/03/07							
Sulfate	342	12.5	mg/L		339			0.881	20	
Chloride	941	50.0	"		917			2.58	20	
Duplicate (EE70307-DUP2)	Source	e: 7D26010-	-01	Prepared &	Analyzed:	05/03/07				
Sulfate	74.1	5.00	mg/L		75.5			1.87	20	
Chloride	93.1	5.00	"		94.3			1.28	20	
Matrix Spike (EE70307-MS1)	Source	e: 7D26006-	-01	Prepared &	Analyzed:	05/03/07				
Sulfate	728	12.5	mg/L	250	339	156	80-120			М
Matrix Spike (EE70307-MS2)	Source	e: 7D26010-	-01	Prepared & Analyzed: 05/03/07						
Chloride	278	5.00	mg/L	100	94.3	184	80-120			M
Sulfate	204	5.00	"	100	75.5	128	80-120			М
Matrix Spike (EE70307-MS3)	Sourc	e: 7D26006-	-01	Prepared & Analyzed: 05/03/07						
Chloride	1800	50.0	mg/L	1000	917	88.3	80-120			

Project: Hobbs Jct. F-29-1A

122 W. Taylor Hobbs NM, 88240

Potassium

Sodium

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Total Metals by EPA / Standard Methods - Quality Control **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch ED72704 - 6010B/No Digestion			.,,,,							
Blank (ED72704-BLK1)				Prepared &	k Analyzed:	04/27/07				
Calcium	ND	0.0810	mg/L							
Magnesium	ND	0.0360	,,							
Potassium	ND	0.0600	,,							
Sodium	ND	0.0430	,,							
Calibration Check (ED72704-CCV1)				Prepared &	¿ Analyzed:	04/27/07				
Calcium	2.13		mg/L	2.00		106	85-115			
Magnesium	2.15		,,	2.00		108	85-115			
Potassium	2.14		**	2.00		107	85-115			
Sodium	1.98		**	2.00		99.0	85-115			
Duplicate (ED72704-DUP1)	Source: 7D23010-01 Prepared & A					04/27/07				
Calcium	44.1	0.810	mg/L		42.4			3.93	20	
Magnesium	43.0	0.360			42.4			1.41	20	

22.1

40.8

2.68

2.66

20

20

22.7

41.9

0.600

0.430

Rice Operating Co.

Project: Hobbs Jct. F-29-1A

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

Notes and Definitions

MI	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
đry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dun	Dunlingto

	Ban Euron		
Report Approved By:	Contract to the contract to th	Date:	5/7/200

Brent Barron, Laboratory Director/Corp. Technical Director Celey D. Keene, Org. Tech Director Raland K. Tuttle, Laboratory Consultant James Mathis, QA/QC Officer Jeanne Mc Murrey, Inorg. Tech Director

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

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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Phone: 432-563-1800 Fax: 432-563-1713	Hobbs Junction F-29-1A	-	E. E. S.		Ĕ				·	······································	10		<u> </u>	_	<u> </u>	<u> </u>					_	Sample Containers Intact?	Labelsion container(s) Custody seals on container(s) Custody saals on container(s)	Ž	<u>.</u>
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	bope	×		40			K				ritqoQ gniba	3		<u> </u>				*************		İ		****			Π
		ompar	ট	0 882		1.9310/					diqaQ gninniga	в						***************************************				E C C		100 P	Time
	Kristin Farris Pope	RICE Operating Company	122 W. Taylor Street	Hobbs, New Mexico 88240	3-9174	Rozanne Johnson (505)631-9310		•••••	•••••	- COLOCOLOGO CONTRACTOR CONTRACTO											799740000000000000000000000000000000000	kpope@riceswd.com jpurvis@riceswd.com	Date //24/07	4-22-01	Date
	Kristin F	RICEOR		Hobbs. 7	(505) 393-9174						100 C	dex.	valio.		(4)					eri i a i fotopianimi ri i emposemboso, incisso	**************************************		**************************************	maen	-
	Project Manager	Company Name	Company Address:	City/State/Zip:	Telephone No:	Sampler Signature:			100200	28.05%	ü	Monitor Well #1-Deep	Monitor Well #2-Shallow		NA) (A) - (A) A) A		**************************************			NASA GIRRANGANANANANANANANANANANANANANANANANANA	mental de la company de la com	> Please email to:	12 12 10 2 10 2 10 2 10 2 10 2 10 2 10	July 1	
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Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client:	Rice				
Date/ Time:	4-76-07 4:25				
.ab ID#:	7026011				
nitials:	or L				
	Sample Receipt	Checklist		Clien	t Initials
‡1 Tempera	ature of container/ cooler?	Yes	No	I.O °C	
#2 Shipping	container in good condition?	Yes	Nο		
	Seals intact on shipping container/ cooler?	Yes	No	Not Present	
***************************************	Seals intact on sample bottles/ container?	YĒS)	No	Not Present	
······································	Custody present?	Yes	No		
46 Sample	instructions complete of Chain of Custody?	১ বৈর	No		
	Custody signed when relinquished/ received?	Yes	No		
~~~~~~~~~ <del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>	Custody agrees with sample label(s)?	∠Υẽ₃ I	No	ID written on Cont./ Lid	
	er label(s) legible and intact?	Nes l	No	Not Applicable	
≢10 Sample	matrix/ properties agree with Chain of Custody?	ðY€s	No		
	ers supplied by ELOT?	Yes	No		
	s in proper container/ bottle?	(CBA)	No	See Below	
****	es properly preserved?	<i>পু</i> ছ ছ ১	No	See Below	
	bottles intact?	868	No		
	vations documented on Chain of Custody?	(Yes	No		
16 Contair	ners documented on Chain of Custody?	(Yes)	No		
	ent sample amount for indicated test(s)?	Yes	No	See Below	
······································	ples received within sufficient hold time?	(Yes}	No	Sec Below	
19 Subcor	ntract of sample(s)?	Yes	No	ENGL Applicables	
#20 VOC sa	amples have zero headspace?	\ \alpha \ \ align*	No	Not Applicable	
Contact; Regarding;	Variance Docu  Contacted by:	mentation		Date/ Time:	
Corrective A	ction Taken:				
Check all the	at Apply:  See attached e-mail/ fax  Client understands and wot  Cooling process had begun				u uzan errezolatu errezolatu errezolatu errezolatu errezolatu errezolatu errezolatu errezolatu errezolatu erre

# **Analytical Report 287160**

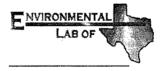
for

Rice Operating Co.

Project Manager: Kristin Pope

**Hobbs Junction F-29-1A** 

13-AUG-07



12600 West I-20 East Odessa, Texas 79765

A Xenco Laboratories Company

NELAC certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America





13-AUG-07

Project Manager: Kristin Pope

Rice Operating Co.
122 West Taylor
Hobbs, NM 88240

Reference: XENCO Report No: 287160

**Hobbs Junction F-29-1A** 

Project Address: T18S R38E Sec29 F E ~ Lea County New Mexico

#### Kristin Pope:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 287160. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 287160 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

**Brent Barron** 

Respectful

**Odessa Laboratory Director** 

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# Certificate of Analysis Summary 287160 Rice Operating Co., Hobbs, NM



Project Name: Hobbs Junction F-29-1A

Project Id:

Aug-02-07 12:50 pm Date Received in Lab

Contact: Kristin Pope

13-AUG-07 Report Date:

Project Location: T18S R38E Sec29 F E ~ Lea County New

Brent Barron, II Project Manager:

	Lab Id:	287160-0	01	287160-0	002		
Analysis Requested	Field Id:	Monitor Well #	1-Deep	Monitor Well # 2	2-Shallow		
717miyoto requestes	Depth:						
	Matrix:	WATE	₹	WATE	WATER		
	Sampled:	Aug-01-07	10:25	Aug-01-07	09:10		
Aller Pre '4 Law ED A 210.1	Extracted:						
Alkalinity by EPA 310.1	Analyzed:	Aug-07-07	13:00	Aug-07-07	13:00		
	Units/RL:	mg/L	RL	mg/L	RL		
Alkalinity, Total (as CaCO3)		188	4.00	240	4.00		
BTEX by EPA 8021B	Extracted:	Aug-02-07	16:55	Aug-02-07	16:55		
BIEA Dy EFA 8021B	Analyzed:	Aug-05-07	19:23	Aug-05-07	19:44		
	Units/RL:	mg/L	RL	mg/L	RL		
Benzene		ND	0.0010	ND	0.0010		
Toluene		ND	0.0010	ND	0.0010		
Ethylbenzene		ND	0.0010	ND	0.0010		
m,p-Xylene		ND	0.0020	ND	0.0020		
o-Xylene		ND	0.0010	ND	0.0010		
Total Xylenes		ND		ND			
Total BTEX		ND		ND			i
Inorganic Anions by EPA 300	Extracted:						
inoiganie illions sy 21 il evo	· Analyzed:	Aug-07-07	11:48	Aug-07-07	11:48		
	Units/RL:	mg/L	RL	mg/L	RL		1
Chloride		263	10.0	27.2	5.00		
Sulfate		102	10.0	26.2	5.00		
Metals per ICP by SW846 6010B	Extracted:						!
niceus per let sy sword doord	Analyzed:	Aug-03-07	14:39	Aug-03-07	14:39		
	Units/RL:	mg/L	RL	mg/L	RL		
Calcium		197	0.100	76.8	0.100		<u> </u>
Magnesium		18.5	0.010	12.4	0.010		
Potassium		3.52	0.500	2.23	0.500	·	
Sodium		69.1	0.500	111	0.500		
Residue, Filterable (TDS) by EPA	Extracted:			1			
160.1	Analyzed:	Aug-06-07		Aug-06-07			i
	Units/RL:	mg/L	RL	mg/L	RL	,	
Total dissolved solids		1160	5.00	592	5.00		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.

Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America

Odessa Laboratory Director

# XENCO Laboratories

### Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte.

  The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.

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# Form 2 - Surrogate Recoveries



Project Name: Hobbs Junction F-29-1A

Work Order #: 287160

Project ID:

1

Lab Batch #: 701934

Sample: 287160-001 / SMP

Batch:

Matrix: Water

Units: mg/L	SU	SURROGATE RECOVERY STUDY								
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery % R [D]	Control Limits % R	Flags					
Analytes			[~]							
4-Bromofluorobenzene	0.0436	0.0500	87	80-120						

Lab Batch #: 701934

Sample: 287160-002 / SMP

Batch: 1

Matrix: Water

Units: mg/L	SU	SURROGATE RECOVERY STUDY								
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits % R	Flags					
Analytes			[D]							
4-Bromofluorobenzene	0.0403	0.0500	81	80-120						

Lab Batch #: 701934

Sample: 287160-002 S / MS

Batch:

Matrix: Water

Units: mg/L	SU	SURROGATE RECOVERY STUDY								
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
Analytes			[D]							
4-Bromofluorobenzene	0.0495	0.0500	99	80-120						

Lab Batch #: 701934

**Sample:** 287160-002 SD / MSD

Batch:

Matrix: Water

Units: mg/L	SU	SURROGATE RECOVERY STUDY								
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
Analytes			[D]							
4-Bromofluorobenzene	0.0457	0.0500	91	80-120						

Lab Batch #: 701934

**Sample:** 497877-1-BKS / BKS

Batch:

Matrix: Water

Units: mg/L	SU	SURROGATE RECOVERY STUDY								
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
Analytes			{ <b>D</b> }							
4-Bromofluorobenzene	0.0497	0.0500	99	80-120						

^{**} Surrogates outside limits: data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution Surrogate Recovery [D] = 100 * A / B



# Form 2 - Surrogate Recoveries



Project Name: Hobbs Junction F-29-1A

Work Order #: 287160

Project ID:

Lab Batch #: 701934

Sample: 497877-1-BLK / BLK

Batch:

Matrix: Water

Units: mg/L	SURROGATE RECOVERY STUDY									
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
Analytes			[D]							
4-Bromofluorobenzene	0.0467	0.0500	93	80-120						

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution Surrogate Recovery [D] = 100 * A / B All results are based on MDL and validated for QC purposes.



#### **Blank Spike Recovery**



Project Name: Hobbs Junction F-29-1A

Work Order #: 287160

Project ID:

Lab Batch #: 701789

Sample: 701789-1-BKS

Matrix: Water

**Date Analyzed:** 08/07/2007

**Date Prepared:** 08/07/2007

Analyst: WRU

Batch #:

Reporting Units: mg/L	Batch #: 1	BLANK /	BLANK SPI	KE REC	COVERY	STUDY
Alkalinity by EPA 310.1	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits % R	Flags
Analytes			[C]	[D]		
Alkalinity, Total (as CaCO3)	ND	200	194	97	80-120	

Lab Batch #: 701934

**Sample:** 497877-1-BKS

Matrix: Water

**Date Analyzed:** 08/05/2007

**Date Prepared:** 08/04/2007

Analyst: CELKEE

1 RLANK /BLANK SPIKE RECOVERY STUDY

Reporting Units: mg/L	Batch #: 1	BLANK /BLANK SPIKE RECOVERY STUDY							
BTEX by EPA 8021B	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike % R	Control Limits %R	Flags			
Analytes			[C]	[D]					
Benzene	ND	0.0500	0.0512	102	70-125				
Toluene	ND	0.0500	0.0531	106	70-125				
Ethylbenzene	ND	0.0500	0.0573	115	71-129				
m,p-Xylene	ND	0.1000	0.1029	103	70-131				
o-Xylene	ND	0.0500	0.0554	111	71-133				

Lab Batch #: 701864

**Sample:** 701864-1-BKS

Matrix: Water

**Date Analyzed:** 08/07/2007

**Date Prepared:** 08/07/2007

Analyst: IRO

Reporting Units: mg/L

1 BLANK /BLANK SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300  Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.03	90	90-110	
Sulfate	ND	10.0	9.63	96	90-110	

Lab Batch #: 701571

**Date Prepared:** 08/03/2007

**Sample:** 701571-1-BKS

Matrix: Water

**Date Analyzed:** 08/03/2007 Reporting Units:

Analyst: LATCOR

Reporting Units: mg/L	Batch #:	BLANK /	BLANK SPI	KE REC	COVERY	STUDY
Metals per ICP by SW846 6010B	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	(/-)	[5]	[C]	[D]	/0 K	
Calcium	ND	2.00	1.83	92	75-125	
Magnesium	ND	2.00	2.08	104	75-125	
Potassium	ND	2.00	2.28	114	75-125	
Sodium	ND	2.00	1.94	97	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.



# Form 3 - MS Recoveries



Project Name: Hobbs Junction F-29-1A

**Work Order #:** 287160

**Lab Batch #:** 701864 **Date Analyzed:** 08/07/2007

QC-Sample ID: 287159-003 S

Project ID:

Date Prepared:

08/07/2007

Analyst: IRO

Batch #:

ı#: 1 Matrix: Water

Reporting Units: mg/L	MATI	RIX / MA	TRIX SPIKE	E RECO	VERY STU	JDY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	548	250	862	126	90-110	Х

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference [E] = 200*(C-A)/(C+B)All Results are based on MDL and Validated for QC Purposes



# Form 3 - MS / MSD Recoveries



Project Name: Hobbs Junction F-29-1A

Work Order # 287160

Lab Batch ID: 701934

Date Analyzed: 08/05/2007

QC-Sample ID: 287160-002 S **Date Prepared:** 08/04/2007

Batch #:

Project ID:

l Matrix: Water CELKEE Analyst:

Reporting Units: mg/L		√W	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	/MATF	IX SPIK	E DUPLICA	TE REC	VERY S	STUDY		
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Sample	S	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u> </u>	(D)	Added [E]	Result [F]	%R [G]	%	% <b>R</b>	%RPD	
Benzene	ΩN	0.0500	0.0510	102	0.0500	0.0510	102	0	70-125	25	
Toluenc	QN	0.0500	0.0528	901	0.0500	0.0528	106	0	70-125	25	
Ethylbenzene	ΩN	0.0500	0.0573	115	0.0500	0.0562	112	3	71-129	25	
m.p-Xylene	QN	0.1000	0.1023	102	0.1000	0.0994	66	3	70-131	25	
o-Xylene	ΩN	0.0500	0.0554	Ξ	0.0500	0.0536	107	4	71-133	25	

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference RPD = 200*(D-G)/(D+G)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected. J = Present Below Reporting Limit. B = Present in Blank, NR = Not Requested. J = Interference, NA = Not ApplicableN  $\approx$  See Narrative, EQL = Estimated Quantitation Limit



## Sample Duplicate Recovery



**Project Name: Hobbs Junction F-29-1A** 

Work Order #: 287160

Lab Batch #: 701789 **Date Analyzed:** 08/07/2007

Date Prepared:

08/07/2007

Analyst: WRU

Project ID:

QC- Sample ID: 287122-001 D

Batch #:

Matrix: Water

Reporting Units: mg/L

Inits: mg/L	SAMPLE /	SAMPLE	DUPLIC	ALE REC	OVERY
Alkalinity by EPA 310.1	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
al (as CaCO3)	216	216	0	20	

Lab Batch #: 701571

Alkalinity, Total (as CaCO3)

**Date Analyzed:** 08/03/2007

08/03/2007 Date Prepared:

Analyst: LATCOR

QC- Sample 1D: 287179-001 D

Batch #:

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

F	1 3.1	O			0.2
Metals per ICP by SW846 6010B  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Calcium	301	285	5	25	
Magnesium	120	134	11	25	
Potassium	20.1	15.8	24	25	
Sodium	284	265	7	25	

Lab Batch #: 701790

**Date Analyzed:** 08/06/2007 QC-Sample ID: 287122-001 D Date Prepared:

08/06/2007

Analyst: IRO

porting Unite: mg/l

Batch #: 1 Matrix: Water

Reporting Units: mg/L	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Residue, Filterable (TDS) by EPA 160.1	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Total dissolved solids	754	784	4	30	

Lab Batch #: 701790

**Date Analyzed:** 08/06/2007

Date Prepared: 08/06/2007 Analyst: IRO

QC-Sample ID: 287348-002 D

Batch #:

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

Residue, Filterable (TDS) by EPA 160.1  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total dissolved solids	6250	6290	1	30	

# **Environmental Lab of Texas**

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Odessa, Texas 79765

Phone: 432-563-1800 Fax: 432-563-1713

TAT brebnet2 × NPDES Project Loc: T18S R38E Sec29 F ~ Lea County New Mexico RUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ z zzz z z z CO CO V? FedEx Total Dissolved Solids TRRP ALO:R.M. Hobbs Junction F-29-1A H Custody seals on container(s) Custody seals on cooler(s) by Sampler/Client Rep. ? by Courier? UPS × × Temperature Upon Receipt: 9TEX 80218/5030 VOCs Free of Headspace? Sample Containers Intact? Laboratory Comments Sample Hand Delivered selitatovimas Labets on container(s) X Standard Metals: As Ag Ba Cd Cr Pb Hg Se TCLP: SAR / ESP / CEC Anions (Cl. SO4, Alkalinity) Project Name: PO # Cations (Ca. Mg. Na. K) Project #: Report Format: 3 91.6 9001 XT 2001 XT Hal Time M2108 1.814 80128 Hat Matrix 88 § CW = Groundwater SasoivSoild Ç king Water SL=Sludge Date 1 Other (Specify) rozanne@valornet.com Preservation & # of Containers 9 00 Mone (1) 1 Liter HDPE Na₂S₂O₃ rozanne@valornet.com HOSN (505) 397-1471 *08⁷H N N HCI (2) 40 ml glass vials CONH 931 × Total # of Containers 3 3 perelli Fillered e-mail: Fax No: 10:25 9:10 Time Sampled 255 kpope@riceswd.com Received by ELO Raelyn Gardner 8/1/2007 8/1/2007 Received by Received by Date Sampled Ending Depth Hobbs, New Mexico 88240 9:15 Š au E Ë RICE Operating Company Rozanne Johnson (505)631-9310 Beginning Depth kpope@riceswd com 122 W. Taylor Street Kristin Farris Pope 8/2/07 (505) 393-9174 FIELD CODE Please email to: Monitor Well #2-Shallow Monitor Well #1-Deep Sampler Signature: Company Address: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: (lab use only) ORDER #: Raelyn Gardn 20 (Yino seu dei) # 8A 0

# Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Crient: File			
Date/ Time: 8 · 2 · 07 17 · 50			
ab ID#: 287160			
nitials: GL			
Sample Receipt	Checklist		
			Client Initials
1 Temperature of container/ cooler?	Yes	No	1,5 °C
2 Shipping container in good condition?	Yes	No	
3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present
4 Custody Seals intact on sample bottles/ container?	Yes	No	Not Present
5 Chain of Custody present?	Yes	No	
Sample instructions complete of Chain of Custody?	Yes	No	
7 Chain of Custody signed when relinquished/ received?	Yes )	No	
8 Chain of Custody agrees with sample label(s)?	Yes )	No	ID written on Cont./ Lid
9 Container label(s) legible and intact?	Yes	No	Not Applicable
10 Sample matrix/ properties agree with Chain of Custody?	Yes )	No	
11 Containers supplied by ELOT?	Yes	No	
12 Samples in proper container/ bottle?	Yes	No	See Below
13 Samples properly preserved?	XES	No	See Below
14 Sample bottles intact?	Xes	No	
15 Preservations documented on Chain of Custody?	Yes	No	
16 Containers documented on Chain of Custody?	Yes	No	
17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below
18 All samples received within sufficient hold time?	Yes	No	See Below
19 Subcontract of sample(s)?	Yes	No	Not Applicable )
#20 VOC samples have zero headspace?	Yes	No	Not Applicable
Variance Docus  Contact: Contacted by:  Regarding:	mentation		Date/ Time:
Corrective Action Taken:			
Check all that Apply:  See attached e-mail/ fax Client understands and wou Cooling process had begun			



PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR RICE OPERATING COMPANY ATTN: KRISTIN FARRIS-POPE 122 W. TAYLOR STREET HOBBS, NM 88240 FAX TO: (575) 397-1471

Receiving Date: 10/22/07 Reporting Date: 10/26/07

Project Number: NOT GIVEN
Project Name: HOBBS JUNCTION F-29-1A

Project Location: T18S-R38E-SEC29 F~LEA COUNTY, NM

Sampling Date: 10/19/07 Sample Type: WATER

Sample Condition: COOL & INTACT

Sample Received By: SB Analyzed By: HM/KS

		Na	Ca	Mg	K	Conductivity	T-Alkalinity
LAB NUMBER	SAMPLE ID	(mg/L)	(mg/L)	(mg/L)	(mg/L)	( <i>u</i> S/cm)	(mgCaCO ₃ /L)
ANALYSIS DA	TE:	10/26/07	10/25/07	10/25/07	10/25/07	10/24/07	10/24/07
H13553-1	M.W. #1~DEEP	84	174	22.6	2.65	1,472	168
H13553-2	M.W. #2~SHALLOW	105	71.9	17.7	1.11	955	212
Quality Control		NR	49.2	51.6	2.73	1,386	NR
True Value QC		NR	50.0	50.0	3.00	1,404	NR
% Recovery		NR	98.4	103	91.0	98.7	NR
Relative Percer	nt Difference	NR	< 0.1	< 0.1	6.7	1.3	NR
METHODS:			3500-Ca-D		8049	120.1	310.1
		CI_	SO ₄	$CO^3$	HCO ₃	рН	TDS
p		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(s.u.)	(mg/L)
ANALYSIS DAT	ΓE:	10/25/07	10/26/07	10/24/07	10/24/07	10/24/07	10/24/07
H13553-1	M.W. #1~DEEP	292	130	0	205	7.37	1,047
H13553-2	M.W. #2~SHALLOW	100	125	0	259	7.55	624
Quality Control		500	23.5	NR	1000	6.97	NR
True Value QC	<u> </u>	500	25.0	NR	1000	7.00	NR
% Recovery		100	93.9	NR	100	99.6	NR
Relative Percen	t Difference	2.0	12.5	NR	1.2	0.1	NR
METHODS:		SM4500-CI-B	375.4	310.1	310.1	150.1	160 1

Chemist Suprobo

)ate



PHONE (505) 393-2326 - 101 E. MARLAND - HOBBS, NM 88240

ANALYTICAL RESULTS FOR RICE OPERATING COMPANY ATTN: KRISTIN FARRIS-POPE

122 WEST TAYLOR HOBBS, NM 88240 FAX TO: (575) 397-1471

Receiving Date: 10/22/07

Reporting Date: 10/24/07

Project Number: NOT GIVEN

Project Name: HOBBS JUNCTION F-29-1A

Project Location: T18S R38E SEC29 F - LEA COUNTY, NM

Sampling Date: 10/19/07 Sample Type: WATER

Sample Condition: COOL & INTACT

Sample Received By: SB

Analyzed By: CK

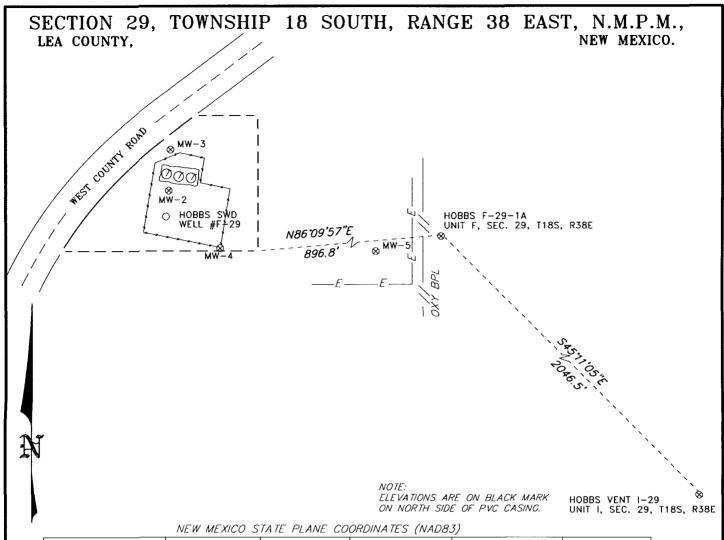
LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DAT	E	10/23/07	10/23/07	10/23/07	10/23/07
H13553-1	MONITOR WELL #1 - DEEP	<0.001	<0.001	<0.001	<0.003
H13553-2	MONITOR WELL #2 - SHALLOW	<0.001	<0.001	<0.001	<0.003
		0.400		0.400	
Quality Control		0.106		0.102	0.310
True Value QC		0.100		0.100	0.300
% Recovery		106	101	102	103
Relative Percent	t Difference	1.8	1.0	1.9	1.0

METHOD: EPA SW-846 8021B

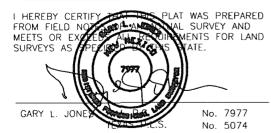
Chemisi

10/26/07

Page 1 of 1



WELL	NORTHING	EASTING	LA TITUDE	LONGITUDE	ELEVATION
MW-2	627819.025	898021.191	N 32°43′14.0"	W 10310'24.9"	3645.71'
MW-3	627908.779	898025.082	N 32*43'14.9"	W 103'10'24.8"	3645.76'
MW 4	627693.822	898134.408	N 32°43'12.7"	W 10310'23.6"	3645.76
MW 5	627687.313	898477.159	N 32'43'12.7"	W 103'10'19.5"	3646.74' PVC 3644.37'-GRND
HOBBS F-29-1A MARK ON NORTH SIDE OF NORTH 2" PVC	627753.789	899029.184	N 32*43'13.2"	W 10370'13.1"	3648.89' 3645.5'-GRND
HOBBS F-29-1A MARK ON NORTH SIDE OF SOUTH 2" PVC	627753.579	899029.160	N 32*43'13.2"	W 10310'13.1"	3648.76' 3645.5'-GRND
HOBBS VENT 1-29 MARK ON NORTH SIDE OF 2" PVC	626311.386	900480.915	N 32.42′58.8″	W 103'09'56.3"	3650.65' 3647.6'-GRND



BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

 W.O. Number: RICE
 Drawn By:
 K. GOAD

 Date: 02-11-2005
 Disk: KJG CD#4 - RICEB.DWG

200 0 200 400 FEET

### RICE OPERATING COMPANY

REF: MONITOR WELLS

MONITOR WELLS LOCATED IN

SECTION 29, TOWNSHIP 18 SOUTH, RANGE 38 EAST,

N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: VARIES Sheet 1 of 1 Sheets

# R. T. HICKS CONSULTANTS, LTD.

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

February 12, 2007

Wayne Price Oil Conservation Division 1220 S. St. Francis Drive Santa Fe, NM 87505

RE:

2006 Annual Ground Water Monitoring Report F-29-1A Vent, Sec 29, T18S, R38E, Unit "F"

NMOCD Case #: Pending

Dear Mr. Wayne Price:

R.T. Hicks Consultants, Ltd is pleased to submit the 2006 Annual Ground Water Monitoring Report for the F-29-1A Vent site located in the Hobbs Salt Water Disposal System (SWD). This report consists of the following sections:

- 1. A table summarizing all laboratory results, depth to ground water and other pertinent data associated with ground water sampling at the site, including this past year.
- 2. Graphs showing chemical concentration vs. time for chloride and TDS.
- 3. Laboratory data sheets associated with the routine sampling for 2006.

The Correction Action Plan was submitted to NMOCD on February 15, 2006. NMOCD approved the Closure Report on condition the monitoring wells remain active. ROC will submit a Final Closure Report in early 2007.

Thank you for your consideration of this annual summary information. The attached CD contains an electronic copy of the annual report. If you have any questions, please contact us at 505-266-5004, or Kristin Farris Pope at ROC, 505-393-9174.

Sincerely,

R.T. Hicks Consultants, Ltd.

Randall T. Hicks

Principal

Copy: Hobbs NMOCD office; Rice Operating Company

Table 1: chemistry over time

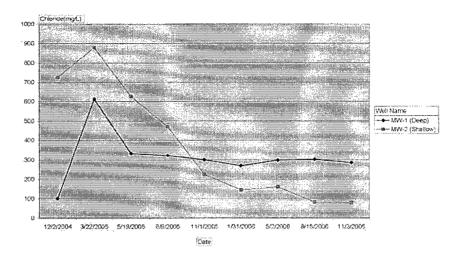
F-29-1A Vent

																		Parties as a second complete a second control of the second contro
Comments	clear; no odor	gray; no odor			clear; no odor	clear; no odor		clear; no odor	Clear no odor	gray, no odor	gray; no odor			Clear, no odor			Clear; no odor	Clear no odor
Total Nytenes (ug/L)	<0.001	<0,001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0,001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EthylBenzene (ug/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene (ug/L)	<0,001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Benzene (ug/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TDS (mg/L)	465	930	1260	1080	986	1000	966	1060	998	3280	3960	2750	1780	1100	924	1040	578	592
Sulfate (mg/L)	*No Resuits	154	84.5	75.7	63.2	58.1	62.9	80.7	86.1	*No Results	1780	788	475	218	58.1	153	104	111
Chloride (mg/L)	100	613	332	322	300	270	298	302	285	725	879	626	470	226	144	160	81.9	79.6
DTW (ft)	60.74	60.10	60.13	60.22	60.45	60.54	60.61	86.09	60.79	60.64	80.08	60.04	60.14	60.34	60.42	60.50	98.09	69.09
Date	12/2/2004	3/22/2005	5/19/2005	8/9/2005	11/1/2005	1/31/2006	5/2/2006	8/15/2006	11/3/2006	12/2/2004	3/22/2005	5/19/2005	8/9/2005	11/1/2005	1/31/2006	5/2/2006	8/15/2006	11/3/2006
Well Name	MW-1 (Deep)	MW-1 (Deep)	MW-1 (Deep)	MW-1 (Deep)	MW-1 (Deep)	MW-1 (Deep)	MW-1 (Deep)	MW-1 (Deep)	MW-1 (Deep)	MW-2 (Shallow)	MW-2 (Shailow)	MW-2 (Shallow)	MW-2 (Shallow)	MW-2 (Shallow)				

# Ground Water Quality at F-29-1a Vent

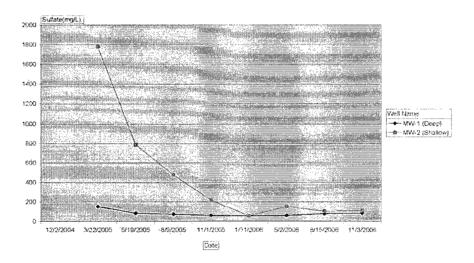
Site Name F-29-1A Vent

#### Chloride Over Time



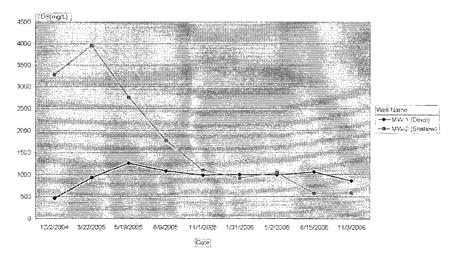
Site Name F-29-14 Vent

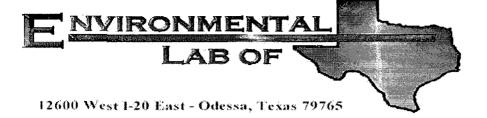
**Sulfate Over Time** 



Site Hame F-29-1A Venti

TDS Over Time





# Analytical Report

#### **Prepared for:**

Kristin Farris-Pope Rice Operating Co. 122 W. Taylor Hobbs, NM 88240

Project: Hobbs Jct. F-29-1A Project Number: None Given Location: Lea County

Lab Order Number: 6B02006

Report Date: 02/16/06

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 02/16/06 17:36

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #1 Deep	6B02006-01	Water	01/31/06 09:50	02/02/06 09:00
Monitor Well #2 Shallow	6B02006-02	Water	01/31/06 09:15	02/02/06 09:00

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 02/16/06 17:36

#### Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 Deep (6B02006-01) Wa	ter								
Benzene	ND	0.00100	mg/L	1	EB60910	02/09/06	02/10/06	EPA 8021B	
Toluene	ND	0.00100	,,	**	"	•		"	
Ethylbenzene	ND	0.00100	"	**	"	"	"	<b>1</b>	
Xylene (p/m)	ND	0.00100	**	**		"	"	n	
Xylene (o)	ND	0.00100		*	"	11		и	
Surrogate: a,a,a-Trifluorotoluene	87.5 %	80-1	20	"	"	" .	"		
Surrogate: 4-Bromofluorobenzene	80.8 %	80-1	120	"	"	"	"		
Monitor Well #2 Shallow (6B02006-02) V	Vater								
Benzene	ND	0.00100	mg/L	1	EB60910	02/09/06	02/10/06	EPA 8021B	
Toluene	ND	0.00100	"	*		ь		**	
Ethylbenzene	ND	0.00100	"	Ü		n		n	
Xylene (p/m)	ND	0.00100	,,	"			"	*1	
Xylene (o)	ND	0.00100	,,				"	n	
Surrogate: a,a,a-Trifluorotoluene		92.8 %	80-1	120	и	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.5 %	80-1	120	n	"	n	"	

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 02/16/06 17:36

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 Deep (6B02006-01)	Water								
Total Alkalinity	140	2.00	mg/L	1	EB60901	02/08/06	02/08/06	EPA 310.1M	
Chloride	270	5.00	"	10	EB60614	02/04/06	02/06/06	EPA 300.0	
Total Dissolved Solids	1000	5.00	"	1	EB60302	02/02/06	02/02/06	EPA 160.1	
Sulfate	58.1	5.00		10	EB60614	02/04/06	02/06/06	EPA 300.0	
Monitor Well #2 Shallow (6B02006-	02) Water								
Total Alkalinity	238	2.00	mg/L	1	EB60901	02/08/06	02/08/06	EPA 310.1M	
Chloride	144	5.00	н	10	EB60614	02/04/06	02/06/06	EPA 300.0	
Total Dissolved Solids	924	5.00	•	1	EB60302	02/02/06	02/02/06	EPA 160.1	
Sulfate	156	5.00	**	10	EB60614	02/04/06	02/06/06	EPA 300.0	

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 02/16/06 17:36

#### Total Metals by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 Deep (6B02006-01) Water									
Calcium	179	0.500	mg/L	50	EB60903	02/08/06	02/09/06	EPA 200.7	
Magnesium	21.4	0.0100		10	"	"	"	97	
Potassium	5.89	0.0500		1	»	**	,		
Sodium	68.4	0.500	,	50	v			и	
Monitor Well #2 Shallow (6B02006-02) Water	r								
Calcium	63.2	0.500	mg/L	50	EB60903	02/08/06	02/09/06	EPA 200.7	
Magnesium	16.8	0.0100	*	10	"	н	ii.	"	
Potassium	2.47	0.0500		1	**	"	и	**	
Sodium	254	0.500	"	50	"	"	**	H	

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

**Reported:** 02/16/06 17:36

# Organics by GC - Quality Control Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
	- Tesult	2	0,,,,,	20.01	7,00011	////	2			1.0100
Batch EB60910 - EPA 5030C (GC)										
Blank (EB60910-BLK1)				Prepared: 0	)2/09/06 A	nalyzed: 02	/10/06			
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	<b>n</b>							
Ethylbenzene	ND	0.00100	,							
Xylene (p/m)	ND	0.00100	,,							
Xylene (o)	ND	0.00100								
Surrogate: a,a,a-Trifluorotoluene	34.5		ug/l	40.0		86.2	80-120	-		
Surrogate: 4-Bromofluorobenzene	32.1		"	40.0		80.2	80-120			
LCS (EB60910-BS1)				Prepared: 0	)2/09/06 A	nalyzed: 02	2/10/06			
Benzene	0.0457	0.00100	mg/L	0.0500		91.4	80-120	-		
Toluene	0.0496	0.00100	н	0.0500		99.2	80-120			
Ethylbenzene	0.0498	0.00100	"	0.0500		99.6	80-120			
Xylene (p/m)	0.100	0.00100		0.100		100	80-120			
Xylene (o)	0.0570	0.00100		0.0500		114	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.2		ug'l	40.0		88.0	80-120	<del></del>		
Surrogate: 4-Bromofluorobenzene	32.5		"	40.0		81.2	80-120			
LCS Dup (EB60910-BSD1)				Prepared: 0	)2/09/06 A	nalyzed: 02	/14/06			
Benzene	0.0568	0.00100	mg/L	0.0500		114	80-120	22.0	20	QR-0
Toluene	0.0584	0.00100		0.0500		117	80-120	16.5	20	
Ethylbenzene	0.0507	0.00100	,,	0.0500		101	80-120	1.40	20	
Xylene (p/m)	0.0982	0.00100		0.100		98.2	80-120	1.82	20	
Xylene (o)	0.0513	0.00100	**	0.0500		103	80-120	10.1	20	
Surrogate: a,a,a-Trifluorotoluene	39.4		ug4	40.0		98.5	80-120			· · · · · · · · · · · · · · · · · · ·
Surrogate: 4-Bromofluorohenzene	32.5		"	40.0		81.2	80-120			
Calibration Check (EB60910-CCV1)				Prepared: 0	)2/09/06 Ai	nalyzed: 02	2/13/06			
Benzene	55.0		ug/J	50.0		110	80-120	<del>-</del>		
Toluene	57.5			50.0		115	80-120			
Ethylbenzene	52.8		"	50.0		106	80-120			
Xylene (p/m)	103		**	100		103	80-120			
Xylene (o)	56.6		n	50.0		113	80-120			
Surrogate: a,a,a-Trifluorotoluene	43.5		"	40.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	32.4		"	40.0		81.0	80-120			

Rice Operating Co.Project:Hobbs Jct. F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope02/16/06 17:36

# Organics by GC - Quality Control

# **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

# Batch EB60910 - EPA 5030C (GC)

Matrix Spike (EB60910-MS1)	Sour	rce: 6B08024-	01	Prepared: 0	2/09/06 A	nalyzed: 02	2/10/06
Benzene	0.0426	0.00100	mg/L	0.0500	ND	85.2	80-120
Toluene	0.0449	0.00100	**	0.0500	ND	89.8	80-120
Ethylbenzene	0.0432	0.00100		0.0500	ND	86.4	80-120
Xylene (p/m)	0.0841	0.00100	"	0.100	ND	84.1	80-120
Xylene (o)	0.0416	0.00100	**	0.0500	ND	83.2	80-120
Surrogate: a,a,a-Trifluorotoluene	38.7		нд/І	40.0		96.8	80-120
Surrogate: 4-Bromofluorobenzene	47.0		"	40.0		118	80-120

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given

Project Manager: Kristin Farris-Pope

Reported: 02/16/06 17:36

# 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
		Limit	Oillia	Level	Result	/orCC	Cames		Cont	140163
Batch EB60302 - General Preparation (V	VetChem)									
Blank (EB60302-BLK1)				Prepared &	Analyzed:	02/02/06				
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EB60302-DUP1)	Source	ce: 6B01010-	01	Prepared &	: Analyzed:					
Total Dissolved Solids	790	5.00	mg/L		794			0.505	5	
Batch EB60614 - General Preparation (V	VetChem)									
Blank (EB60614-BLK1)	· cichemj			Prepared: (	)2/04/06 A	nalvzed: 0	2/06/06			
Chloride	ND	0.500	mg/L	riepaieu: (	02/04/00 A	naryzeu. Uz	2/00/00			
Sulfate	ND	0.500	,,							
LCS (EB60614-BS1)		Prepared: 02/04/06 Analyzed: 02/06/06								
Sulfate	8.40		mg/L	10.0		84.0	80-120			
Chloride	8.99		"	10.0		89.9	80-120			
Calibration Check (EB60614-CCV1)				Prepared: (	02/04/06 A	nalyzed: 02	2/06/06			
Chloride	8.93		mg/L	10.0		89.3	80-120			
Sulfate	8.63			10.0		86.3	80-120			
Duplicate (EB60614-DUP1)	Source	ce: 6B01010-	01	Prepared: (	)2/04/06 A	nalyzed: 02	2/06/06			
Chloride	224	5.00	mg/L		206			8.37	20	
Sulfate	72.9	5.00			66.5			9.18	20	
Batch EB60901 - General Preparation (V	VetChem)									
Blank (EB60901-BLK1)	<del></del>			Prepared &	Analyzed:	02/08/06				
Total Alkalinity	ND	2.00	mg/L							

Rice Operating Co.Project:Hobbs Jct. F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope02/16/06 17:36

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EB60901 - General Preparation	on (WetChem)									
LCS (EB60901-BS1)				Prepared &	Analyzed:	02/08/06				
Bicarbonate Alkalinity	210	2.00	mg/L	200		105	85-115			
Duplicate (EB60901-DUP1)	Sour	ce: 6B01010-	01	Prepared &	analyzed:	02/08/06				
Total Alkalinity	192	2.00	mg/L		191			0.522	20	
Reference (EB60901-SRM1)				Prepared &	k Analyzed:	02/08/06				
Total Alkalinity	96.0		mg/L	100		96.0	90-110			

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240

Project Number: None Given
Project Manager: Kristin Farris-Pope

**Reported:** 02/16/06 17:36

# Total Metals by EPA / Standard Methods - Quality Control Environmental Lab of Texas

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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EB60903 - 6010B/No Digestion										
Blank (EB60903-BLK1)				Prepared:	02/08/06 A	nalyzed: 02	2/09/06			
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100								
Potassium	ND	0.0500								
Sodium	ND	0.0100	•							
Calibration Check (EB60903-CCV1)				Prepared:	02/08/06 A	nalyzed: 02	2/09/06			
Calcium	2.06		mg/L	2.00		103	85-115			
Magnesium	2.05		ir	2.00		102	85-115			
Potassium	1.92			2.00		96.0	85-115			
Sodium	1.90		IF	2.00		95.0	85-115			
Duplicate (EB60903-DUP1)	Sou	rce: 6B01010-	-01	Prepared:	02/08/06 A	nalyzed: 02	2/09/06			
Calcium	62.1	0.0100	mg/L		61.2			1.46	20	
Magnesium	43.5	0.0100	**		44.8			2.94	20	
Potassium	10.3	0.500	•		10.4			0.966	20	
Sodium	161	0.500	**		157			2.52	20	

Rice Operating Co.	Project: 1	Hobbs Jct. F-29-1A	Fax: (505) 397-1471
122 W. Taylor	Project Number: N	None Given	Reported:
Hobbs NM, 88240	Project Manager: 1	Kristin Farris-Pope	02/16/06 17:36

### **Notes and Definitions**

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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

	Kaland Khub		
Report Approved By:	Raidin C 180	Date:	2/16/2006

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director

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.

Peggy Allen, QA Officer

# Environmental Lab of Texas

12600 West I-20 East Odessa, Texas 79765

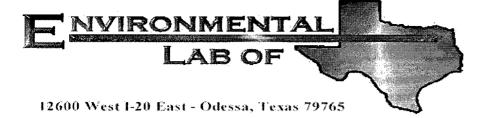
Phone: 432-563-1800 Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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ž.	Company Name RICE Operating Company	Company Address: 122 W. Taylor Street	city/State/Zip: Hobbs, New Mexico 88240	Telephone No: (505) 393-9174	Sampler Signature: ROZANNE JOHNSON (505) 631-9				3 ( ) ( )		3			$\mathbb{I}$	ी				Suc:		1	ill of	ų.
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# Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

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ontainer labels legible and intact?    Cost   No	Chain of custody agrees with sample label(s)			
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amples procefly preserved?    Yes   No	sample Matrix and procerties same as on chain of custody?		No	
ample bottles intact?    Yes   No	Samples in procer container/bottle?	\ Y€5	l No	
reservations documented on Chain of Custody?  Ontainers documented on Chain of Custody?  If Sal No undifficient sample amount for indicated test?  If samples received within sufficient hold time?  OC samples have zero headspace?  Variance Documentation:  Contact Person:  Contact Person:  Date/Time:  Contacted by:  Corrective Action Taken:	samples properly preserved?	Yes	No	
ontainers documented on Chain of Custody?  Ves I No Unflicited test?  Ill sample amount for indicated test?  Ill samples received within sufficient hold time?  OC samples have zero headspace?  Variance Documentation:  Contact Person:  Date/Time:  Contacted by:  Regarding:  Corrective Action Taken:		1 Yæ3	No	
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OC samples have zero headspace?  Variance Documentation: Contact Person: - Date/Time: Contacted by: Regarding:  Corrective Action Taken:			<del></del>	
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Variance Documentation: Contact Person: Date/Time: Contacted by: Regarding:  Corrective Action Taken:	Other observations:			
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Contact Person: Date/Time: Contacted by: Contacted by: Corrective Action Taken:				
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# Analytical Report

# Prepared for:

Kristin Farris-Pope Rice Operating Co. 122 W. Taylor Hobbs, NM 88240

Project: Hobbs Jct. F-29-1A Project Number: None Given Location: Lea County

Lab Order Number: 6E04010

Report Date: 05/09/06

Rice Operating Co.ProjectHobbs Jct. F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope05/09/06 14:23

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #1- Deep	6E04010-01	Water	05/02/06 10:40	05/04/06 10:50
Monitor Well #2- Shallow	6E04010-02	Water	05/02/06 09:05	05/04/06 10:50

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported: 05/09/06 14:23

# Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Monitor Well #1- Deep (6E04010-01) W:	iter								
Benzene	ND	0.00100	mg/L	1	EE60404	05/04/06	05/04/06	EPA 8021B	
Toluene	ND	0.00100	"	•	**	14	n	rt .	
Ethylbenzene	ND	0.00100	*	•	*	"	*	*	
Xylene (p/m)	ND	0.00100	,		H	17	"	"	
Xylene (o)	ND	0.00100	•	"	u	"	**	*	
Surrogate: a.a.a-Trifluorotoluene		96.8 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.5 %	80-1	20	"	"	"	"	
Monitor Well #2- Shallow (6E04010-02)	Water								
Benzene	ND	0.00100	mg/L	1	EE60404	05/04/06	05/04/06	EPA 8021B	
Toluene	ND	0.00100		"	**	n		**	
Ethylbenzene	ND	0.00100	**	"	**	tr	**	•	
Xylene (p/m)	ND	0.00100	*	"	0	U		ø	
Xylene (o)	ND	0.00100	"		*	,,	H		
Surrogate: a,a,a-Trifluorotoluene		94.2 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.5 %	80-1	20	"	"	"	"	

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 05/09/06 14:23

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (6E04010-01) Wa	ter								
Total Alkalinity	137	2.00	mg/L	1	EE60814	05/09/06	05/09/06	EPA 310.1M	
Chloride	298	5.00		10	EE60507	05/04/06	05/04/06	EPA 300.0	
Total Dissolved Solids	996	5.00		1	EE60816	05/05/06	05/08/06	EPA 160.1	
Sulfate	62.9	5.00	н	10	EE60507	05/04/06	05/04/06	EPA 300.0	
Monitor Well #2- Shallow (6E04010-02)	Water								
Total Alkalinity	251	2.00	mg/L	ì	EE60814	05/09/06	05/09/06	EPA 310.1M	
Chloride	160	5.00		10	EE60507	05/04/06	05/04/06	EPA 300.0	
Total Dissolved Solids	1040	5.00	,,	1	EE60816	05/05/06	05/08/06	EPA 160.1	
Sulfate	153	5.00	"	10	EE60507	05/04/06	05/04/06	EPA 300.0	

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 05/09/06 14:23

# Total Metals by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 - Deep (6E04010-01) W	ater			-					
Calcium	173	0.500	mg/L	50	EE60811	05/08/06	05/08/06	EPA 200.7	
Magnesium	24.8	0.0100	**	10	"	н	**		
Potassium	2.43	0.500		**	u	**	**	,,	
Sodium	47.1	0.100	19	*	**	**		н	
Monitor Well #2- Shallow (6E04010-02)	Water								
Calcium	72.1	0.100	mg/L	10	EE60811	05/08/06	05/08/06	EPA 200.7	
Magnesium	20.5	0.0100		**	**	n	•	н	
Potassium	2.78	0.500	H	"	"	n	11		
Sodium	138	0.500	н	50	•				

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

Reported: 05/09/06 14:23

# Organics by GC - Quality Control Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Result	Cimit	Units	Level	Result	%KEC	Limits	KPD	Limit	Notes
Batch EE60404 - EPA 5030C (GC)										
Blank (EE60404-BLK1)	Prepared & Analyzed: 05/04/06									
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	*							
Ethylbenzene	ND	0.00100	**							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	36.7		ug:I	40.0		91.8	80-120			
Surrogate: 4-Bromofluorobenzene	33.6		n	40.0		84.0	80-120			
LCS (EE60404-BS1)				Prepared 8	k Analyzed:	05/04/06				
Benzene	0.0536	0.00100	mg/L	0.0500		107	80-120			
Toluene	0.0531	0.00100		0.0500		106	80-120			
Ethylbenzene	0.0509	0.00100		0.0500		102	80-120			
Xylene (p/m)	0.117	0.00100	17	0.100		117	80-120			
Xylene (o)	0.0573	0.00100		0.0500		115	80-120			
Surrogate: a,a,a-Trifluorotoluene	39.3		ug·l	40.0		98.2	80-120			
Surrogate: 4-Bromofluorobenzene	39.5		n	40.0		98.8	80-120			
Calibration Check (EE60404-CCV1)				Prepared: (	05/04/06 Ar	alyzed: 05	/05/06			
Benzene	50.2		ug/l	50.0		100	80-120			
Toluene	49.3		**	50.0		98.6	80-120			
Ethylbenzene	53.0		**	50.0		106	80-120			
Xylene (p/m)	105		••	100		105	80-120			
Nylene (o)	52.4		**	50.0		105	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.3		"	40.0		88.2	80-120			
Surrogate: 4-Bromofluorobenzene	38.2		"	40.0		95.5	80-120			
Matrix Spike (EE60404-MS1)	Sou	rce: 6E03003-	01	Prepared &	Analyzed:	05/04/06				
Benzene	0.0626	0.00100	mg/L	0.0500	0.00562	114	80-120			
Гошене	0.0534	0.00100	<b>32</b>	0.0500	ND	107	80-120			
Ethylbenzene	0.0534	0.00100		0.0500	0.000825	105	80-120			
Xylene (p/m)	0.120	0.00100		0.100	ND	120	80-120			
Xylene (o)	0.0577	0.00100	1*	0.0500	ND	115	80-120			
Surrogate: a,a,a-Trifluorotoluene	36.6		ug T	40.0		91.5	80-120			
Surrogate: 4-Bromofluorohenzene	38.6		u	40 0		96.5	80-120			

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 05/09/06 14:23

# Organics by GC - Quality Control Environmental Lab of Texas

											Ĺ
		Reporting		Spike	Source		%REC		RPD		ı
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	ĺ

# Batch EE60404 - EPA 5030C (GC)

Matrix Spike Dup (EE60404-MSD1)	Sou	rce: 6E03003-	01	Prepared &	& Analyzed: (	05/04/06			
Benzene	0.0617	0.00100	mg/L	0.0500	0.00562	112	80-120	1.77	20
Toluene	0.0526	0.00100	**	0.0500	ND	105	80-120	1.89	20
Ethylbenzene	0.0532	0.00100		0.0500	0.000825	105	80-120	0.00	20
Xylene (p/m)	0.117	0.00100	**	0.100	ND	117	80-120	2.53	20
Xylene (o)	0.0565	0.00100	"	0.0500	ND	113	80-120	1.75	20
Surrogate: a,a,a-Trifluorotolnene	40.9		ug4	40.0		102	80-120		
Surrogate: 4-Bromofluorobenzene	40.0		"	40.0		100	80-120		

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

**Reported:** 05/09/06 14:23

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE60507 - General Preparation (V	VetChem)									
Blank (EE60507-BLK1)				Prepared &	: Analyzed:	05/04/06				
Chloride	ND	0.500	mg/L						·	
Sulfate	ND	0.500	*							
LCS (EE60507-BS1)				Prepared &	: Analyzed:	05/04/06				
Chloride	9.99	0.500	mg/L	10.0		99.9	80-120			
Sulfate	8.53	0.500	"	10.0		85.3	80-120			
Calibration Check (EE60507-CCV1)				Prepared &	Analyzed:	05/04/06				
Chloride	10.4		mg/L	10.0		104	80-120			
Sulfate	9.15		"	10.0		91.5	80-120			
Duplicate (EE60507-DUP1)	Sou	Source: 6D28002-02		Prepared &	: Analyzed:	05/04/06				
Sulfate	52.7	0.500	mg/L		53.3			1.13	20	
Chloride	62.0	0.500	"		62.1			0.161	20	
Batch EE60814 - General Preparation (V	VetChem)									
Blank (EE60814-BLK1)				Prepared &	Analyzed:	05/09/06				
Fotal Alkalinity	ND	2.00	mg/L							
LCS (EE60814-BSI)				Prepared &	Analyzed:	05/09/06				
Bicarbonate Alkalinity	214	2.00	mg/L	200		107	85-115			
Duplicate (EE60814-DUP1)	Sou	rce: 6E04009-	01	Prepared &	Analyzed	05/09/06				
Total Alkalinity	209	2.00	mg/L		208			0.480	20	
Reference (EE60814-SRM1)				Prepared &	: Analyzed:	05/09/06				
Fotal Alkalinity	96.0		mg/L	100		96.0	90-110			

 Rice Operating Co.
 Project:
 Hobbs Jct. F-29-1A
 Fax: (505) 397-1471

 122 W. Taylor
 Project Number:
 None Given
 Reported:

 Hobbs NM, 88240
 Project Manager:
 Kristin Farris-Pope
 05/09/06 14:23

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE60816 - Filtration Preparation										
Blank (FF60816-BLK1)				Prepared: (	05/05/06 A	nalyzed: 05	/08/06			

Duplicate (EE60816-DUP1)	Source: 61	E04009-0	01	Prepared: 05/05/06 Analyzed: 05/08/06			
Total Dissolved Solids	940	5,00	mg/L	904	3.90	5	

mg/L

5.00

ND

Total Dissolved Solids

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

**Reported:** 05/09/06 14:23

# Total Metals by EPA / Standard Methods - Quality Control Environmental Lab of Texas

Amakus	D la	Reporting	11	Spike	Source	0/1000	%REC	D.D.D.	RPD	NI
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE60811 - 6010B/No Digestion										
Blank (EE60811-BLK1)				Prepared &	: Analyzed:	05/08/06				
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	,,							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Calibration Check (EE60811-CCV1)				Prepared &	: Analyzed:	05/08/06				
Calcium	2.20		mg/L	2.00		110	85-115			
Magnesium	2.28		**	2.00		114	85-115			
Potassium	1.74		*	2.00		87.0	85-115			
Sodium	1.84		"	2.00		92.0	85-115			
Duplicate (EE60811-DUP1)	Sou	rce: 6E04009-	01	Prepared &	: Analyzed:	05/08/06				
Calcium	130	0.500	mg/L		128			1.55	20	
Magnesium	22.5	0.0100	"		23.2			3.06	20	
Potassium	4.11	0.0500	1*		4.32			4.98	20	
Sodium	87.6	0.100			88.0			0.456	20	

Rice Operating Co.Project:Hobbs Jct. F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope05/09/06 14:23

### **Notes and Definitions**

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:	Kaland KJulis	Date:	5/9/2006
			=

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.

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# Environmental Lab of Texas

12600 West I-20 East Odessa, Texas 79765

Phone: 432-563-1800 Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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Project Name: Hobbs Jct. F-29-1A		긔				2	9	Metals: As Ag Ba Cd Cr Pb Hg S	1										Sample Containers Intact? Labels on container? Custody Seals: Containers Temperature Upon Receipt	Laboratory Comments		
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				Fax No: (505) 397-1471	//				0	١				ļ					PLEASE Email RESULTS TO: kpope@riceswd.com & mfranks@riceswd.com		100	
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ge u	S.	dre	ite/Z	ne l	natu	ᇤ			Monitor Well #1~Deep	Monitor Well #2 ~ Shallow									_	1	LK.	E.
Ma	Jany	y Ad	city/state/Zip: Hobbs, New Mexico 88240	pho	Sigr				ि	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1,37	13.	3,5	30		.83	ŻΝ		iž	$\mathcal{N}$	Y K	, J.
Project Manager: Kristin Farris Pope	company Name RICE Operating Company	Company Address: 122 W. Taylor Street	C <u>i</u> ły	Telephone No: (505) 393-9174	sampler signature: Rozanne Johnson (505) 631-931		į												ji /	M	ے ا	$\backslash  $
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# Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client: RICO UP.				
Date/Time: 5/4/04 (0:50				
Order #: 10E04010				
nitials:				
Sample Receipt				<del></del>
emperature of container/cooler?	Yes	No	0.5	
Shipping container/cooler in good condition?	YES	No	Makanin	
Custody Seals intact on shipping container/cooler?	755	No	Not present	_
Custody Seals intact on sample bottles?	Kess	No No	Not present	
Chain of custody present?	(ES	No	<del></del>	!
Sample Instructions complete on Chain of Custody?	Yes	No		<del>_</del>
hain of Custody signed when relinquished and received? hain of custody agrees with sample label(s)		No		<del></del>
Container labels legible and intact?	Yes	No		_
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ample Matrix and properties same as on chain of custody?  lamples in proper container/bottle?  amples properly preserved?	XBS	No		
amples in proper container bottle:	Yes	No		<b></b> }
Sample bottles intact?	Yes	No		<del></del> {
reservations documented on Chain of Custody?	755	No		_ <del>_'</del>
ontainers documented on Chain of Custody?	(ES	No		—— <u>:</u> i
sufficient sample amount for indicated test?	æş	No		<del></del> j
All samples received within sufficient hold time?	(83	No		
OC samples have zero headspace?	(ES)	No	Not Apolicable	<del>~</del> i
Other observations:				
Variance Docur	nentatio	on:		,
ontact Person: Date/Time:			Contacted by:	
regarding:				
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Corrective Action Taken:				
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# Analytical Report

# **Prepared for:**

Kristin Farris-Pope Rice Operating Co. 122 W. Taylor Hobbs, NM 88240

Project: Hobbs Jct. F-29-1A Project Number: None Given Location: Lea County

Lab Order Number: 6H18011

Report Date: 08/28/06

Project: Hobbs Jct. F-29-1A

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

# ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #1- Deep	6Н18011-01	Water	08/15/06 08:40	08-18-2006 10:20
Monitor Well #2- Shallow	6Н18011-02	Water	08/15/06 10:05	08-18-2006 10:20

122 W. Taylor Hobbs NM, 88240 Project: Hobbs Jct. F-29-1A

Project Number: None Given Project Manager: Kristin Farris-Pope Fax: (505) 397-1471

# Organics by GC

# **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (6H18011-01) W	ater								
Benzene	ND	0.00100	mg/L	1	EH62121	08/21/06	08/21/06	EPA 8021B	
Toluene	ND	0.00100	"	"		**	n	10	
Ethylbenzene	ND	0.00100	**			n	*	и	
Xylene (p/m)	ND	0.00100	**	**	**	•	ro e		
Xylene (o)	ND	0.00100	**	"	v	P	u	u	
Surrogate: a,a,a-Trifluorotoluene		95.5 %	80-1	20	,,	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.2 %	80-1	120	n .	"	"	п	
Monitor Well #2- Shallow (6H18011-02)	Water								
Benzene	ND	0.00100	mg/Ł	ı	EH62121	08/21/06	08/21/06	EPA 8021B	
Toluene	ND	0.00100	"	"	**	"	H	19	
Ethylbenzene	ND	0.00100	"	n	10	**	"	17	
Xylene (p/m)	ND	0.00100	н	u		ii .	"	ч	
Xylene (o)	ND	0.00100	**	"	"	"	11		
Surrogate: a,a,a-Trifluorotoluene	,	102 %	80-1	120	"	,,		"	
Surrogate: 4-Bromofluorobenzene		109 %	80-1	120	n	"		,,	

Project: Hobbs Jct. F-29-1A

122 W. Taylor Hobbs NM, 88240 Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

# General Chemistry Parameters by EPA / Standard Methods

# **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (6H18011-01	) Water								
Total Alkalinity	158	2.00	mg/L	1	EH62128	08/21/06	08/21/06	EPA 310.1M	
Chloride	302	5.00	"	10	EH62101	08/21/06	08/21/06	EPA 300.0	
Total Dissolved Solids	1060	10.0	**	1	EH62303	08/18/06	08/22/06	EPA 160.1	
Sulfate	80.7	5.00	**	10	EH62101	08/21/06	08/21/06	EPA 300.0	
Monitor Well #2- Shallow (6H18011	-02) Water								
Total Alkalinity	234	2.00	mg/L	Ī	EH62128	08/21/06	08/21/06	EPA 310.1M	
Chloride	81.9	5.00		10	EH62101	08/21/06	08/21/06	EPA 300.0	
Total Dissolved Solids	578	10.0		I	EH62303	08/18/06	08/22/06	EPA 160.1	
Sulfate	104	5.00	**	10	EH62101	08/21/06	08/21/06	EPA 300.0	

Rice Operating Co. Project: Hobbs Jct. F-29-1A

122 W. TaylorProject Number:None GivenHobbs NM, 88240Project Manager:Kristin Farris-Pope

# Total Metals by EPA / Standard Methods

# **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (6H18011-01) Wate	r								
Calcium	154	4.05	mg/L	50	EH62313	08/23/06	08/23/06	EPA 200.7	
Magnesium	24.5	0.360		10	**	,,	n	"	
Potassium	2.88	0.600	"	,,	**	"	"	••	
Sodium	70.5	0.430	*	н	*1	••	и	v	
Monitor Well #2- Shallow (6H18011-02) W	ater								
Calcium	49.0	0.810	mg/L	10	EH62313	08/23/06	08/23/06	EPA 200.7	
Magnesium	13.3	0.360		"	**	0	н	**	
Potassium	1.76	0.600			**	11	n	11	
Sodium	145	2.15	,,	50	**		*1	n	

Fax: (505) 397-1471

Rice Operating Co. Project: Hobbs Jct. F-29-1A Fax: (505) 397-1471

122 W. TaylorProject Number:None GivenHobbs NM, 88240Project Manager:Kristin Farris-Pope

# Organics by GC - Quality Control Environmental Lab of Texas

Prepared   No		RPD	p.p	%REC	0/5	Source	Spike		Reporting		
Prepare	t Notes	Limit	RPD	Limits	%REC	Result	Level	Units	Limit	Result	Analyte
Remark   ND											Batch EH62121 - EPA 5030C (GC)
Tollene				3/22/06	nalyzed: 08	8/21/06 A	Prepared: 0				Blank (EH62121-BLK1)
ND								mg/L	0.00100	ND	Benzene
Xylene (p/m)         ND         0.00100         "           Xylene (o)         ND         0.00100         "           Surrogane: a,a,a-Trifluorotalinene         40.3         ug²4         40.0         101         80-120           LCS (EH62121-BS1)         "Prepared & Analyzed: 08/21/06           Benzene         0.0460         0.00100         mg/L         0.0500         92.0         80-120           Toluene         0.0503         0.00100         "         0.0500         92.6         80-120           Hylene (p/m)         0.113         0.00100         "         0.0500         92.6         80-120           Xylene (p/m)         0.113         0.00100         "         0.0500         92.6         80-120           Xylene (p/m)         0.113         0.00100         "         0.0500         92.6         80-120           Xylene (p/m)         0.113         0.00100         "         0.0500         92.2         80-120           Entrylene (e/m)         45.0         0.0100         "         40.0         112         80-120           Elhylbenzene         48.7         ug/l         50.0         115         80-120           Elhylbenzene         57.3								**	0.00100	ND	Toluene
Xylene (o)         ND         0.00100         ***           Surrogate: a, a, a-Trifluorotoluene         40.3         ug²¹         40.0         101         80-120           Exerogate: 4-Bromofluorobenzene         36.7         "         40.0         91.8         80-120           ECS (EH62121-BS1)         Prepared & Analyzed: 08/21/06           Benzene         0.0460         0.00100         mg²¹         0.0500         92.0         80-120           Toluene         0.0503         0.00100         "         0.0500         92.6         80-120           Kylene (pfan)         0.113         0.00100         "         0.0500         92.6         80-120           Xylene (o)         0.0565         0.0100         "         0.0500         92.6         80-120           Xylene (o)         0.0565         0.0100         "         0.0500         113         80-120           Surrogate: a, a, a-Trifluorotoluene         32.7         ug¹         40.0         92.2         80-120           Enizene         48.7         ug²         50.0         97.4         80-120           Benzene         48.7         ug²         50.0         115         80-120           Sylene (pfm)									0.00100	ND	Ethylbenzene
Surrogate: a, a, o-Trifluorololinene         40.3         ug'l 40.0         101 80-120           Surrogate: +Bromofluorobenzene         36.7         " 40.0         91.8 80-120           LCS (EH62121-BS1)         Prepared & Analyzed: 08/21/06           Benzene         0.0460         0.00100 mg/L         0.0500         92.0 80-120           Toluene         0.0463         0.00100 " 0.0500         92.6 80-120           Kylene (p/m)         0.113 0.00100 " 0.0500         92.6 80-120           Kylene (p/m)         0.013 0.00100 " 0.0500         113 80-120           Surrogate: a, a, a-Trifluorololuene         39.7 ug/l 40.0         40.0         192 80-120           Surrogate: 4-Bromofluorobenzene         45.0         " 40.0         192 80-120           Calibration Check (EH62121-CCV1)         Prepared: 08/21/06 Analyzed: 08/22/06           Benzene         48.7         ug/l 50.0         97.4 80-120           Toluene         52.3         " 50.0         115 80-120           Ethylbenzene         57.3         " 50.0         115 80-120           Kylene (p/m)         114         " 100         114 80-120           Kylene (p/m)         114         " 100         114 80-120           Surrogate: 4-Bromofluorobenzene         38.3         " 40								"	0.00100	ND	Xylene (p/m)
Surrogate: 4-Bromofluorobenzene   36.7   " 40.0   91.8   80-120								10	0.00100	ND	Xylene (o)
Description   Prepared & Analyzed: 08/21/06	<del></del>			80-120	101		40.0	ug/l		40.3	Surrogate: a,a,a-Trifluorotoluene
Benzene				80-120	91.8		40.0	"		36.7	Surrogate: 4-Bromofluorobenzene
Toluene         0.0503         0.00100         " 0.0500         101 80-120           Ethylbenzene         0.0463         0.00100         " 0.0500         92 6 80-120           Xylene (p/m)         0.113         0.00100         " 0.0500         113 80-120           Xylene (o)         0.0565         0.00100         " 0.0500         113 80-120           Surrogate: a.a,a-Trifhorotolinene         39.7         ug l 40.0         99.2 80-120           Calibration Check (EH62121-CCV1)         Prepared: 08/21/06 Analyzed: 08/22/06           Benzene         48.7         ug/l 50.0         97.4 80-120           Toluene         52.3         " 50.0         105 80-120           Ethylbenzene         57.3         " 50.0         115 80-120           Xylene (p/m)         114         " 100         114 80-120           Xylene (o)         57.6         " 50.0         115 80-120           Surrogate: 4-Bromofluorotolinene         44.7         " 40.0         112 80-120           Surrogate: 4-Bromofluorobenzene         38.3         " 40.0         95.8 80-120           Matrix Spike (EH62121-MS1)         Source: 6H18007-01         Prepared: 08/21/06 Analyzed: 08/22/06					08/21/06	Analyzed:	Prepared &				LCS (EH62121-BS1)
Ethylbenzene         0.0463         0.00100         " 0.0500         92.6         80-120           Xylene (p/m)         0.113         0.00100         " 0.100         113         80-120           Xylene (o)         0.0565         0.00100         " 0.0500         113         80-120           Surrogate: a,a,a-Triflnorotolinene         39.7         ug.l         40.0         99.2         80-120           Calibration Check (EH62121-CCV1)         Prepared: 08/21/06         Analyzed: 08/22/06         80-120           Benzene         48.7         ug/l         50.0         97.4         80-120           Toluene         52.3         " 50.0         97.4         80-120           Ethylbenzene         57.3         " 50.0         115         80-120           Xylene (p/m)         114         " 100         114         80-120           Xylene (o)         57.6         " 50.0         115         80-120           Surrogate: a,a,a-Triflnorotolinene         44.7         " 40.0         112         80-120           Surrogate: 4-Bromoflnorobenzene         38.3         " 40.0         95.8         80-120           Surrogate: 4-Bromoflnorobenzene         38.3         " 40.0         95.8         80-120				80-120	92.0		0.0500	mg/l.	0.00100	0.0460	Benzene
Xylene (p/m)         0.113         0.00100         "         0.100         113         80-120           Xylene (o)         0.0565         0.00100         "         0.0500         113         80-120           Surrogate: a.a.a-Triffnorotolnene         39.7         ug l         40.0         99.2         80-120           Calibration Check (EH62121-CCV1)         Prepared: 08/21/06 Analyzed: 08/22/06           Benzene         48.7         ug/l         50.0         97.4         80-120           Toluene         52.3         "         50.0         105         80-120           Ethylbenzene         57.3         "         50.0         115         80-120           Xylene (p/m)         114         "         100         114         80-120           Xylene (o)         57.6         "         50.0         115         80-120           Surrogate: a.a.a-Trifluorotoluene         44.7         "         40.0         12         80-120           Matrix Spike (EH62121-MS1)         Source: 6H18007-01         Prepared: 08/21/06 Analyzed: 08/22/06           Benzene         0.0464         0.00100         mg/L         0.0500         ND         92.8         80-120				80-120	101		0.0500	**	0.00100	0.0503	Toluene
Xylene (o)         0.0565         0.00100         " 0.0500         113         80-120           Surrogate: a.a.a-Trifluorotolnene         39.7         ug·l         40.0         99.2         80-120           Surrogate: 4-Bromofluorobenzene         45.0         " 40.0         112         80-120           Calibration Check (EH62121-CCV1)         Prepared: 08/21/06         Analyzed: 08/22/06           Benzene         48.7         ug/l         50.0         97.4         80-120           Toluene         52.3         " 50.0         105         80-120           Ethylbenzene         57.3         " 50.0         115         80-120           Xylene (p/m)         114         " 100         114         80-120           Xylene (o)         57.6         " 50.0         115         80-120           Surrogate: a.a.a-Trifluorotolnene         44.7         " 40.0         112         80-120           Surrogate: 4-Bromofluorobenzene         38.3         " 40.0         95.8         80-120           Matrix Spike (EH62121-MS1)         Source: 6H18007-01         Prepared: 08/21/06         Analyzed: 08/22/06           Benzene         0.0464         0.00100         mg/L         0.0500         ND         92.8         80-120				80-120	92.6		0.0500	"	0.00100	0.0463	Ethylbenzene
Surrogate: a,a,a-Trifluorotoluene         39.7         ug l         40.0         99.2         80-120           Surrogate: 4-Bromofluorobenzene         45.0         "         40.0         112         80-120           Calibration Check (EH62121-CCV1)         Prepared: 08/21/06         Analyzed: 08/22/06           Benzene         48.7         ug/l         50.0         97.4         80-120           Toluene         52.3         "         50.0         105         80-120           Ethylbenzene         57.3         "         50.0         115         80-120           Xylene (p/m)         114         "         100         114         80-120           Xylene (o)         57.6         "         50.0         115         80-120           Surrogate: a,a,a-Trifluorotolinene         44.7         "         40.0         112         80-120           Surrogate: +Bromofluorobenzene         38.3         "         40.0         95.8         80-120           Matrix Spike (EH62121-MS1)         Source: 6H18007-01         Prepared: 08/21/06         Analyzed: 08/22/06           Benzene         0.0464         0.00100         mg/L         0.0500         ND         92.8         80-120				80-120	113		0.100	**	0.00100	0.113	Xylene (p/m)
Surrogate: 4-Bromofluorobenzene         45.0         " 40.0         112         80-120           Calibration Check (EH62121-CCV1)         Prepared: 08/21/06 Analyzed: 08/22/06           Benzene         48.7         ug/l         50.0         97.4         80-120           Toluene         52.3         " 50.0         105         80-120           Ethylbenzene         57.3         " 50.0         115         80-120           Xylene (p/m)         114         " 100         114         80-120           Nylene (o)         57.6         " 50.0         115         80-120           Surrogate: a,a,a-Trifluorotolnene         44.7         " 40.0         112         80-120           Surrogate: 4-Bromofluorobenzene         38.3         " 40.0         95.8         80-120           Matrix Spike (EH62121-MS1)         Source: 6H18007-01         Prepared: 08/21/06         Analyzed: 08/22/06           Benzene         0.0464         0.00100         mg/L         0.0500         ND         92.8         80-120				80-120	113		0.0500	"	0.00100	0.0565	Xylene (o)
Calibration Check (EH62121-CCV1)         Prepared: 08/21/06 Analyzed: 08/22/06           Benzene         48.7         ug/l         50.0         97.4         80-120           Toluene         52.3         " 50.0         105         80-120           Ethylbenzene         57.3         " 50.0         115         80-120           Xylene (p/m)         114         " 100         114         80-120           Xylene (o)         57.6         " 50.0         115         80-120           Surrogate: a,a,a-Trifluorotolnene         44.7         " 40.0         112         80-120           Surrogate: +Bromofluorobenzene         38.3         " 40.0         95.8         80-120           Matrix Spike (EH62121-MS1)         Source: 6H18007-01         Prepared: 08/21/06         Analyzed: 08/22/06           Benzene         0.0464         0.00100         mg/L         0.0500         ND         92.8         80-120				80-120	99.2		40.0	ug·l		39.7	Surrogate: a,a,a-Trifluorotolnene
Benzene         48.7         ug/l         50.0         97.4         80-120           Toluene         52.3         "         50.0         105         80-120           Ethylbenzene         57.3         "         50.0         115         80-120           Xylene (p/m)         114         "         100         114         80-120           Xylene (o)         57.6         "         50.0         115         80-120           Surrogate: a,a,a-Trifluorotoluene         44.7         "         40.0         112         80-120           Surrogate: 4-Bromofluorobenzene         38.3         "         40.0         95.8         80-120           Matrix Spike (EH62121-MS1)         Source: 6H18007-01         Prepared: 08/21/06         Analyzed: 08/22/06           Benzene         0.0464         0.00100         mg/L         0.0500         ND         92.8         80-120				80-120	112		40.0	п		45.0	Surrogate: 4-Bromofluorobenzene
Benzene         48.7         ug/l         50.0         97.4         80-120           Toluene         52.3         "         50.0         105         80-120           Ethylbenzene         57.3         "         50.0         115         80-120           Xylene (p/m)         114         "         100         114         80-120           Xylene (o)         57.6         "         50.0         115         80-120           Surrogate: a,a,a-Trifluorotoluene         44.7         "         40.0         112         80-120           Surrogate: 4-Bromofluorobenzene         38.3         "         40.0         95.8         80-120           Matrix Spike (EH62121-MS1)         Source: 6H18007-01         Prepared: 08/21/06         Analyzed: 08/22/06           Benzene         0.0464         0.00100         mg/L         0.0500         ND         92.8         80-120				3/22/06	nalyzed: 08	8/21/06 Ai	Prepared: 0				Calibration Check (EH62121-CCV1)
Ethylbenzene       57.3       " 50.0       115       80-120         Xylene (p/m)       114       " 100       114       80-120         Xylene (o)       57.6       " 50.0       115       80-120         Surrogate: a,a,a-Trifluorotolnene       44.7       " 40.0       112       80-120         Surrogate: 4-Bromofluorobenzene       38.3       " 40.0       95.8       80-120         Matrix Spike (EH62121-MS1)       Source: 6H18007-01       Prepared: 08/21/06 Analyzed: 08/22/06         Benzene       0.0464       0.00100       mg/L       0.0500       ND       92.8       80-120								ug/l		48.7	
Xylene (p/m)         114         "         100         114         80-120           Xylene (o)         57.6         "         50.0         115         80-120           Surrogate: a,a,a-Trifhorotolinene         44.7         "         40.0         112         80-120           Surrogate: +Bromofluorobenzene         38.3         "         40.0         95.8         80-120           Matrix Spike (EH62121-MS1)         Source: 6H18007-01         Prepared: 08/21/06         Analyzed: 08/22/06           Benzene         0.0464         0.00100         mg/L         0.0500         ND         92.8         80-120				80-120	105		50.0	,,		52.3	Toluene
Xylene (o)         57.6         " 50.0         115         80-120           Surrogate: a,a,a-Trifhorotolnene         44.7         " 40.0         112         80-120           Surrogate: 4-Bromofluorobenzene         38.3         " 40.0         95.8         80-120           Matrix Spike (EH62121-MS1)         Source: 6H18007-01         Prepared: 08/21/06         Analyzed: 08/22/06           Benzene         0.0464         0.00100         mg/L         0.0500         ND         92.8         80-120				80-120	115		50.0	n		57.3	Ethylbenzene
Surrogate: a,a,a-Trifluorotoluene				80-120	114		100	"		114	Xylene (p/m)
Surrogate: 4.8cmofluorobenzene         38.3         " 40.0         95.8 80-120           Matrix Spike (EH62121-MS1)         Source: 6H18007-01         Prepared: 08/21/06 Analyzed: 08/22/06           Benzene         0.0464         0.00100 mg/L         0.0500 ND         92.8 80-120				80-120	115		50,0	17		57,6	Xylene (o)
Matrix Spike (EH62121-MS1)         Source: 6H18007-01         Prepared: 08/21/06 Analyzed: 08/22/06           Benzene         0.0464         0.00100 mg/L         0.0500 ND         92.8         80-120				80-120	112		40.0			44.7	Surrogate: a,a,a-Trifluorotoluene
Benzene 0.0464 0.00100 mg/L 0.0500 ND 92.8 80-120				80-120	95.8		40.0	"		38.3	Surrogate: 4-Bromofluorobenzene
· ·				3/22/06	nalyzed: 08	8/21/06 Aı	Prepared: 0	01	ırce: 6H18007-	Sou	Matrix Spike (EH62121-MS1)
Toluene 0.0550 0.00100 " 0.0500 ND 110 80-120				80-120	92.8	ND	0.0500	mg/L	0.00100	0.0464	Benzene
				80-120	110	ND	0.0500		0.00100	0.0550	Toluene
Ethylbenzene 0.0554 0.00100 " 0.0500 ND 111 80-120				80-120	111	ND	0.0500	**	0.00100	0.0554	Ethylbenzene
Xylene (p/m) 0.117 0.00100 " 0.100 ND 117 80-120				80-120	117	ND	0.100	*1	0.00100	0.117	Xylene (p/m)
Xylene (o) 0.0575 0.00100 " 0.0500 ND 115 80-120				80-120	115	ND	0.0500	**	0.00100	0.0575	Nylene (o)
Surrogate: a,a,u-Trifluorotolnene 41.8 ug l 40.0 l04 80-120		<del>-</del>		80-120	104		40.0	ug T		41.8	Surrogate: a,a,a-Trifluorotoluene
Surrogate: 4-Bromofluorobenzene 46.5 " 40.0 116 80-120				80-120	116		40.0	"		46.5	Surrogate: 4-Bromofluorobenzene

Rice Operating Co. Project: Hobbs Jct. F-29-1A Fax: (505) 397-1471

122 W. TaylorProject Number:None GivenHobbs NM, 88240Project Manager.Kristin Farris-Pope

# Organics by GC - Quality Control

### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

# Batch EH62121 - EPA 5030C (GC)

Matrix Spike Dup (EH62121-MSD1)	Sour	rce: 6H18007-	-01	Prepared: 0	8/21/06 A	nalyzed: 0	8/22/06		
Benzene	0.0473	0.00100	mg/L	0.0500	ND	94.6	80-120	1.92	20
Toluene	0.0535	0.00100	•	0.0500	ND	107	80-120	2.76	20
Ethylbenzene	0.0549	0.00100		0.0500	ND	110	80-120	0.905	20
Xylene (p/m)	0.120	0.00100	**	0.100	ND	120	80-120	2.53	20
Xylene (o)	0.0583	0.00100	н	0.0500	ND	117	80-120	1.72	20
Surrogate: a,a,a-Trifluorotoluene	42.9		ug4	40.0		107	80-120		
Surrogate: 4-Bromofluorobenzene	46.4		"	40.0		116	80-120		

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

General Chemistry Parameters by EPA / Standard Methods - Quality Control **Environmental Lab of Texas** 

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Blank (EH62101-BLK1)				Prepared &	Analyzed	08/21/06				
Sulfate	ND	0.500	mg/L							
Chloride	ND	0.500	**							
LCS (E1162101-BS1)				Prepared &	: Analyzed	08/21/06				
Sulfate	8.51	0.500	mg/L	10.0		85.1	80-120			
Chloride	10.0	0.500	**	10.0		100	80-120			
Calibration Check (EH62101-CCV1)				Prepared &	Analyzed	08/21/06				
Sulfate	8.34		mg/L	10.0		83.4	80-120			
Chloride	10.2			10.0		102	80-120			
Duplicate (EH62101-DUP1)	Source	e: 6H18007-	-01	Prepared &	Analyzed	08/21/06				
Sulfate	76.3	5.00	mg/L		65.9			14.6	20	
Chloride	105	5.00	"		98.9			5.98	20	
Duplicate (EH62101-DUP2)	Source	e: 6H18013-	04	Prepared &	: Analyzed:	08/21/06				
Sulfate	331	5.00	mg/L		336			1.50	20	
Chloride	138	5.00	'n		136			1.46	20	
Matrix Spike (EH62101-MS1)	Source	e: 6H18007-	-01	Prepared &	: Analyzed:	08/21/06				
Sulfate	172	5.00	mg/L	100	65.9	106	80-120			
Chloride	210	5.00	n	100	98.9	111	80-120			
Matrix Spike (EH62101-MS2)	Sourc	e: 6H18013-	04	Prepared &	. Analyzed:	08/21/06				
Sulfate	422	5.00	mg/L	100	336	86.0	80-120			-
Chloride	224	5.00		001	136	88.0	80-120			

Fax: (505) 397-1471

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

# General Chemistry Parameters by EPA / Standard Methods - Quality Control **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EH62128 - General Preparation (Wet	Chem)									
Blank (EH62128-BLK1)				Prepared &	k Analyzed:	08/21/06				
Total Alkalinity	ND	2.00	mg/L							
LCS (EH62128-BS1)				Prepared &	k Analyzed:	08/21/06				
Total Alkalinity	178		mg/L	200		89.0	85-115			
Duplicate (EH62128-DUP1)	Sou	rce: 6H18007-	-01	Prepared &	k Analyzed:	08/21/06				
Total Alkalinity	186	2.00	mg/L		186			0.00	20	
Reference (EH62128-SRM1)				Prepared &	analyzed:	08/21/06				
Total Alkalinity	248		mg/L	250		99.2	90-110			
Batch EH62303 - Filtration Preparation										
Blank (EH62303-BLK1)				Prepared: 0	08/18/06 Ai	nalyzed: 08	1/22/06			
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (EH62303-DUP1)	Sou	rce: 6H18007-	-01	Prepared: 0	08/18/06 Ar	nalyzed: 08	3/22/06			
Total Dissolved Solids	556	10.0	mg/L		526			5.55	5	R
Duplicate (EH62303-DUP2)	Sou	rce: 6H18013-	04	Prepared &	k Analyzed:	08/18/06				
Total Dissolved Solids	808	10.0	mg/L		930			14.0	5	

Fax: (505) 397-1471

Rice Operating Co. Project: Hobbs Jet. F-29-1A Fax: (505) 397-1471

122 W. TaylorProject Number:None GivenHobbs NM, 88240Project Manager:Kristin Farris-Pope

# Total Metals by EPA / Standard Methods - Quality Control

# **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EH62313 - 6010B/No Digestion										
Blank (EH62313-BLK1)				Prepared &	Analyzed	08/23/06				
Calcium	ND	0.0810	mg/L							
Magnesium	ND	0.0360	**							
Potassium	ND	0.0600								
Sodium	ND	0.0430	н							
Calibration Check (EH62313-CCV1)				Prepared &	: Analyzed:	08/23/06				
Calcium	1.96		mg/L	2.00		98.0	85-115			
Magnesium	2.01		**	2.00		100	85-115			
Potassium	1.76			2.00		88.0	85-115			
Sodium	1.96		"	2.00		98.0	85-115			
Duplicate (EH62313-DUP1)	Sou	rce: 6H15005-	04	Prepared &	Analyzed:	08/23/06				
Calcium	44.4	0.810	mg/L		45,9			3.32	20	
Magnesium	48.1	0.360	**		49.3			2.46	20	
Potassium	42.9	0.600	**		42.6			0.702	20	
Sodium	44.4	0.430			43.5			2.05	20	

Rice Operating Co.

Project: Hobbs Jct. F-29-1A

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

### **Notes and Definitions**

R5	RPD is outside of historic values
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

	Kaland KJulus		
Report Approved By:	- Radane is	Date:	8/28/2006

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.

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# Environmental Lab of Texas 12600 West I-20 East Phone: 432-563-1800 Odessa, Texas 79765 Fax: 432-563-1713

12600 West I-20 East Odessa, Texas 79765

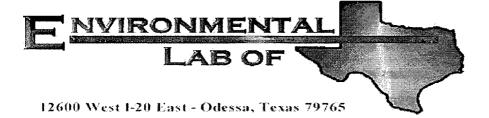
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Taylor Street   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record   Project Record	Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Project 6c   Pro

# Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

lient: KICC DP-			
ate/ Time: 8/18/06 10-70			
ыD#: lett18011			
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			
tials: UC			
Sample Receipt	Chacklict		
Sample Receipt	CHECKIISE		Client Initial
Temperature of container/ cooler?	Yes	No	4.0 °C
Shipping container in good condition?	Yes	No	
Custody Seals intact on shipping container/ cooler?	Xes	No	Not Present
Custody Seals intact on sample bottles/ container?	Yes	No	Not Present
Chain of Custody present?	Yes	No	Not / resent
Sample instructions complete of Chain of Custody?	Ves	No	
Chain of Custody signed when relinquished/ received?	Yes	No	
Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid
Container label(s) legible and intact?	Yes	No	Not Applicable
O Sample matrix/ properties agree with Chain of Custody?	Yes	No	
11 Containers supplied by ELOT?	(es	No	
2 Samples in proper container/ bottle?	Yes	No	See Below
3 Samples properly preserved?	Yes	No	See Below
14 Sample bottles intact?	/es	No	
15 Preservations documented on Chain of Custody?	Yes	No	
	Yes	No	
16 Containers documented on Chain of Custody?  17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below
18 All samples received within sufficient hold time?	Yes	No	See Below
	Yes	No	Not Applicable
19 VOC samples have zero headspace?			The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s
Variance Docum	nentation		
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legarding:			
orrective Action Taken:			
		· Ai, · · · · · · · ·	
Check all that Apply: See attached e-mail/ fax			
Client understands and would	d like to prov	raad wiith	analysis
Cooling process had begun s			· · · · · · · · · · · · · · · · · · ·



# Analytical Report

# **Prepared for:**

Kristin Farris-Pope Rice Operating Co. 122 W. Taylor Hobbs, NM 88240

Project: Hobbs Jct. F-29-1A Project Number: None Given

Location: T18S R38E Sec 29 F- Lea County, NM

Lab Order Number: 6K08007

Report Date: 11/15/06

Project: Hobbs Jct. F-29-1A

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

# ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory 1D	Matrix	Date Sampled	Date Received
Monitor Well #1- Deep	6K08007-01	Water	11/03/06 09:35	11-08-2006 14:50
Monitor Well #2- Shallow	6K08007-02	Water	11/03/06 10:15	11-08-2006 14:50

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### Organics by GC

### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (6K08007-01) W				Diunon	Batch	riepared	Allalyzeu	Method	ivotes
Benzene	ND	0.00100	mg/L	1	EK60808	11/10/06	11/10/06	EPA 8021B	
Toluene	ND	0.00100	n		"	*	н	,,	
Ethylbenzene	ND	0.00100	**		**	11		*	
Xylene (p/m)	ND	0.00100	ь		"	"	n	**	
Xylene (o)	ND	0.00100	п	ж		**		"	
Surrogate: a,a,a-Trifluorotoluene		89.0 %	80-1	20	n	"	"	n	
Surrogate: 4-Bromofluorobenzene		82.0 %	80-1	20	"	"	n	"	
Monitor Well #2- Shallow (6K08007-02)	Water								
Benzene	ND	0.00100	mg/L	1	EK60808	11/10/06	11/10/06	EPA 8021B	
Toluene	ND	0.00100			*	"	**	**	
Ethylbenzene	ND	0.00100					11	**	
Xylene (p/m)	ND	0.00100	· ·	n	11	*		**	
Xylene (o)	ND	0.00100	н		"	**		н	
Surrogate: a,a,a-Trifluorotoluene		88.0 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.0 %	80-1	20	"	"	"	"	

122 W. Taylor

Hobbs NM, 88240

Project: Hobbs Jct. F-29-1A

Project Number: None Given

Project Manager Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (6K08007-01) Wa	ter								
Total Alkalinity	152	2.00	mg/L	1	EK61307	11/14/06	11/14/06	EPA 310.1M	
Chloride	285	5.00		10	EK60911	11/09/06	11/09/06	EPA 300.0	
Total Dissolved Solids	866	10.0		1	EK61306	11/09/06	11/10/06	EPA 160.1	
Sulfate	86.1	5.00	"	10	EK60911	11/09/06	11/09/06	EPA 300.0	
Monitor Well #2- Shallow (6K08007-02)	Water								
Total Alkalinity	228	2.00	mg/L	1	EK61307	11/14/06	11/14/06	EPA 310.1M	
Chloride	79.6	5.00		10	EK60911	11/09/06	11/09/06	EPA 300.0	
Total Dissolved Solids	592	10.0		1	EK61306	11/09/06	11/10/06	EPA 160.1	
Sulfate	111	5.00	71	10	EK60911	11/09/06	11/09/06	EPA 300.0	

122 W. Taylor Hobbs NM, 88240 Project: Hobbs Jct. F-29-1A

Project Number: None Given

Project Manager Kristin Farris-Pope

Fax: (505) 397-1471

### Total Metals by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (6K08007-01)	Water								
Calcium	166	4.05	mg/L	50	EK60919	11/09/06	11/09/06	EPA 6010B	
Magnesium	23.5	0.360		10	10	n	n	п	
Potassium	3.30	0.600		"	,,	0	19	n	
Sodium	77.6	0.430	,,	*	**	**	n	n	
Monitor Well #2- Shallow (6K08007-	02) Water								
Calcium	53.8	0.810	mg/L	10	EK60919	11/09/06	11/09/06	EPA 6010B	
Magnesium	13.7	0.360			*	**	"	+1	
Potassium	1.88	0.600	**	*1	,,	D	n	n	
Sođium	124	2.15	**	50		n	H	×	

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

### **Organics by GC - Quality Control Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK60808 - EPA 5030C (GC)										
Blank (EK60808-BLK1)				Prepared: 1	11/08/06 Ai	nalvzed: 11	1/10/06			
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100								
Ethylbenzene	ND	0.00100								
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	**							
Surrogate: a,a,a-Trifluorotoluene	40.3		ug/I	40.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	33.5		"	40.0		83.8	80-120			
LCS (EK60808-BS1)				Prepared: 1	11/08/06 Ai	nalvzed: 11	1/10/06			
Benzene	0.0525	0.00100	mg/L	0.0500		105	80-120			
Toluene	0.0458	0.00100		0.0500		91.6	80-120			
Ethylbenzene	0.0457	0.00100		0.0500		91.4	80~120			
Xylene (p/m)	0.0919	0.00100		0.100		91.9	80-120			
Xylene (o)	0.0448	0.00100	**	0.0500		89.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.2		ug I	40.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	41.5		"	40.0		104	80-120			
Calibration Check (EK60808-CCV1)				Prepared: 1	11/08/06 Ai	nalyzed: 11	1/11/06			
Benzene	50.9		ug/J	50.0		102	80-120			
Toluene	45.0		•	50.0		90.0	80-120			
Ethylbenzene	46.8		**	50.0		93.6	80-120			
Xylene (p/m)	90.9		**	100		90.9	80-120			
Xylene (o)	45.4		"	50.0		90.8	80~120			
Surrogate: a,a,a-Trifhiorotolnene	39.9		n	40.0		99.8	80-120			
Surrogate: 4-Bromofluorobenzene	39.0		"	40.0		97.5	80-120			
Matrix Spike (EK60808-MS1)	Sou	ırce: 6K06005-	-01	Prepared: 1	11/08/06 Ai	nalyzed: 11	1/10/06			
Benzene	0.0503	0.00100	mg/L	0.0500	ND	101	80-120			
Гопиене	0.0458	0.00100	**	0.0500	ND	91.6	80-120			
Ethylbenzene	0.0473	0.00100	**	0.0500	ND	94.6	80-120			
Xylene (p/m)	0.0939	0.00100	"	0.100	ND	93.9	80-120			
Xylene (o)	0.0465	0.00100	"	0.0500	ND	93.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.9		ug·l	40.0		97.2	80-120			
Surrogate: 4-Bromofluorobenzene	43.4		"	40.0		108	80-120			

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240

Project Number: None Given
Project Manager: Kristin Farris-Pope

### Organics by GC - Quality Control Environmental Lab of Texas

1		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

### Batch EK60808 - EPA 5030C (GC)

Matrix Spike Dup (EK60808-MSD1)	Sour	rce: 6K06005-	-01	Prepared: 1	1/08/06 A	nalyzed: 1	1/10/06		
Benzene	0.0518	0.00100	mg/L	0.0500	ND	104	80-120	2.93	20
Toluene	0.0465	0.00100		0.0500	ND	93,0	80-120	1.52	20
Ethylbenzene	0.0478	0.00100	H	0.0500	ND	95.6	80-120	1.05	20
Xylene (p/m)	0.0983	0.00100	•	0.100	ND	98.3	80-120	4.58	20
Xylene (o)	0.0494	0.00100	"	0.0500	ND	98.8	80-120	6.05	20
Surrogate: a,a,a-Trifluorotoluene	41.8		ng T	40.0		104	80-120		
Surrogate: 4-Bromofluorohenzene	43.7		"	40.0		109	80-120		

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

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

	···									
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK60911 - General Preparation (	WetChem)									
Blank (EK60911-BLK1)				Prepared &	Analyzed:	11/09/06				
Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	*							
LCS (EK60911-BS1)				Prepared &	Analyzed:	11/09/06				
Chloride	10.9	0.500	mg/L	10.0		109	80-120		-	
Sulfate	10.1	0,500	"	10.0		101	80-120			
Calibration Check (EK60911-CCV1)				Prepared &	Analyzed:	11/09/06				
Chloride	10.8		mg/L	10.0		108	80-120			
Sulfate	1.01		n	10.0		101	80-120			
Duplicate (EK60911-DUP1)	Sou	rce: 6K08007-	-01	Prepared &	Analyzed:	11/09/06				
Sulfate	86.2	5.00	mg/L		86.1			0.116	20	
Chloride	283	5.00			285			0.704	20	
Duplicate (EK60911-DUP2)	Sou	rce: 6K09002	-01	Prepared &	Analyzed:	11/09/06				
Sulfate	1650	20.0	mg/L		1590			3.70	20	
Chloride	248	20.0	n		239			3.70	20	
Matrix Spike (EK60911-MS1)	Sou	rce: 6K08007-	-01	Prepared &	: Analyzed:	11/09/06				
Sulfate	184	5.00	mg/L	100	86.1	97.9	80-120			
Chloride	404	5.00		100	285	119	80-120			
Matrix Spike (EK60911-MS2)	Sou	rce: 6K09002	-01	Prepared & Analyzed: 11/09/06						
Chloride	655	20.0	mg/L	400	239	104	80-120			

1960

20.0

Sulfate

1590

92.5

80-120

400

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

General Chemistry Parameters by EPA / Standard Methods - Quality Control **Environmental Lab of Texas** 

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK61306 - Filtration Preparat	tion							·		
Blank (EK61306-BLK1)				Prepared:	11/09/06 A	.nalyzed: 11	/10/06			
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (EK61306-DUP1)	Sour	rce: 6K07002	-01	Prepared:	11/09/06 A	nalyzed: 11	/10/06			
Total Dissolved Solids	10400	10.0	mg/L		9240			11.8	5	S-0
Duplicate (EK61306-DUP2)	Sour	rce: 6K08010-	-02	Prepared:	11/09/06 A	.nalyzed: 11	/10/06			
Total Dissolved Solids	24600	10.0	mg/L		23600			4.15	5	
Batch EK61307 - General Preparatio	on (WetChem)			Drawarad 8	h Anglygad	. 11/14/04	<u>,</u>			
Blank (EK61307-BLK1) Total Alkalinity	ND	2.00	mg/L	riepareu &	k Analyzed	. 11/14/00				
LCS (EK61307-BS1)	7.12	2.00	5 2	Prepared &	Ł Analyzed	: 11/14/06				
Bicarbonate Alkalinity	192	2.00	mg/L	200		96.0	85-115			
Duplicate (EK61307-DUP1)	Sour	rce: 6K08007-	-01	Prepared &	Ł Analyzed	11/14/06				
Total Alkalinity	150	2.00	mg/L		152		<del></del>	1.32	20	
Reference (EK61307-SRM1)				Prepared &	k Analyzed:	: 11/14/06				
Total Alkalinity	248		mg/L	250		99.2	90-110			

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

### Total Metals 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 EK60919 - 6010B/No Digestion										
Blank (EK60919-BLK1)				Prepared &	Analyzed:	11/09/06				
Calcium	ND	0.0810	mg/L							
Magnesium	ND	0.0360	n							
Potassium	ND	0.0600	"							
Sodium	ND	0.0430	"							
Calibration Check (EK60919-CCV1)				Prepared &	. Analyzed:	11/09/06				
Calcium	2.28		mg/L	2.00		114	85-115			
Magnesium	2.14			2.00		107	85-115			
Potassium	1.87		n	2.00		93.5	85-115			
Sodium	2.04		n	2.00		102	85-115			
Duplicate (EK60919-DUP1)	Sou	rce: 6K08007-	-01	Prepared &	Analyzed:	11/09/06				
Calcium	164	4.05	mg/L		166			1.21	20	
Magnesium	23.5	0.360	**		23.5			0.00	20	
Potassium	3.34	0.600	*		3.30			1.20	20	
Sodium	77.5	0.430	н		77.6			0.129	20	

Rice Operating Co.

122 W. Taylor
Hobbs NM, 88240

Project Number: None Given

Project Manager Kristin Farris-Pope

Fax: (505) 397-1471

Kristin Farris-Pope

### **Notes and Definitions**

S-08 Value outside Laboratory historical or method prescribed QC 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

	Kaland KJulis		
Report Approved By:	Racancho	Date:	11/15/2006

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director

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

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Peggy Allen, QA Officer

Dup

Duplicate

# Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

9. 78.6

Phone: 432-563-1800 Fax: 432-563-1713 Odessa, Texas 79765 12600 West I-20 East

× TAT brishnet2 × □ NPDES Project Loc: T18S R38E Sec29 F ~ Lea County New Mexico ပ္ RUSH TAT (Pre-Schedde) 24, 48, 72 hrs S × Total Dissolved Solids TRRP A.O.R.M. Project Name: Hobbs Junction F-29-1A H всі Labels on container(s) Custody seals on container(s) by Sampler/Client Rep. ? by Certrier? UPS Laboratory Comments: Sample Containers Intact? Temperature Upon Receipt: VOCs Free of Headspace? Custody seals on cooler(s) Sample Hand Delivered × BLEX 80518/2030 of BLEX 8560 volatiles X Standard Metals: As Ag Ba Cd Cr Pb Hg Se TOTAL **2YBIESPICEC** × Anions (Cl. SO4, Alkalinity) # 0d Project #: Cations (Ca, Mg, Na, K) Report Format: 9001 XI 9001 XT Нат 11/8/06 17/0 lime шe 89168 MS108 1.814 Hall ME-Non-Potable Specify Other ĕ 8€ Oate Date Other (Specify) rozanne@valornet.com None (1) 1 Liter HDPE €Q²S²BN rozanne@valornet.com HO6N (505) 397-1471 'OS'H 2 HCI (S) 40 wi Blazz vials N HMO² × ന ന Total #. of Containers Received by ELOT: perefit Filtered Fax No: e-mail: 10:15 mfranks@riceswd.com 9:35 Time Sampled kpope@riceswd.com 11/3/2006 11/3/2006 Received by: Received by: Date Sampled dtqs@ pnibn∃ Hobbs, New Mexico 88240 C. Time RICE Operating Company ine Sampler Signature: Rozanne Johnson (505)631-9310 Beginning Depth kpope@riceswd.com 122 W. Taylor Street 11-8-00 Kristin Farris Pope (505) 393-9174 FIELD CODE Monitor Well #2-Shallow Please email to: Monitor Well #1-Deep Company Address: Project Manager: Company Name Telephone No: ORDER #: UT () City/State/Zip: Special Instructions: Relinquished by: (lab use only) 50 (klno esu del) # 8A

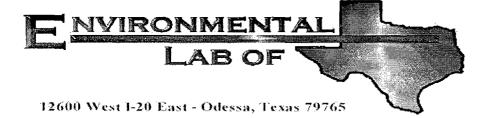
### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In Client: Date/ Time: Lab ID#: Alnitials: Sample Receipt Checklist Client Initials Temperature of container/ cooler? Yes No 0.5 Yes Shipping container in good condition? No Custody Seals intact on shipping container/ cooler? Xes No Not Present Custody Seals intact on sample bottles/ container? y es No Not Present Chain of Custody present? Yes, No Sample instructions complete of Chain of Custody? No Yes Chain of Custody signed when relinquished/ received? Yeş No Chain of Custody agrees with sample label(s)? No Yes ID written on Cont./ Lid Container label(s) legible and intact? Yes No Not Applicable #10, Sample matrix/ properties agree with Chain of Custody? No Y,<del>25</del>2 #11 Containers supplied by ELOT? No Yes Samples in proper container/ bottle? Yes. No See Below #13 Samples properly preserved? Yeş No See Below Sample bottles intact? Yeş No Preservations documented on Chain of Custody? No Yēs, #16 Containers documented on Chain of Custody? Yes, No Sufficient sample amount for indicated test(s)? No Yes See Below #18 All samples received within sufficient hold time? Yes No See Below #19 VOC samples have zero headspace? No Not Applicable X<del>e</del>s Variance Documentation Contact: Contacted by: Date/ Time: Regarding: Corrective Action Taken:

See attached e-mail/ fax

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event

Check all that Apply:



## Analytical Report

### **Prepared for:**

Kristin Farris-Pope Rice Operating Co. 122 W. Taylor Hobbs, NM 88240

Project: Hobbs Jct. F-29-1A Project Number: None Given Location: Lea County

Lab Order Number: 6B02006

Report Date: 02/16/06

Rice Operating Co.ProjectHobbs Jct. F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope02/16/06 17:36

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #1 Deep	6B02006-01	Water	01/31/06 09:50	02/02/06 09:00
Monitor Well #2 Shallow	6B02006-02	Water	01/31/06 09:15	02/02/06 09:00

Rice Operating Co.ProjectHobbs Jct. F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope02/16/06 17:36

### Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 Deep (6B02006-01) Wa	ter								
Benzene	ND	0.00100	mg/L	1	EB60910	02/09/06	02/10/06	EPA 8021B	
Toluene	ND	0.00100	"		**	п	n	"	
Ethylbenzene	ND	0.00100	"		**	н	**	n	
Xylene (p/m)	ND	0.00100	**		n		"	"	
Xylene (o)	ND	0.00100	**		n		n	*	
Surrogate: a,a,a-Trifluorotoluene		87.5 %	80-12	0	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		80.8 %	80-12	0	"	"	n	n	
Monitor Well #2 Shallow (6B02006-02) V	Vater								
Benzene	ND	0.00100	mg/L	1	EB60910	02/09/06	02/10/06	EPA 8021B	
Toluene	ND	0.00100			**	17	n		
Ethylbenzene	ND	0.00100	"	•	**	l <del>y</del>	•		
Xylene (p/m)	ND	0.00100	**	"	,,	H		**	
Xylene (o)	ND	0.00100	"	*	*	n	"	"	
Surrogate: a,a,a-Trifluorotoluene		92.8 %	80-12	0	"	,,	"	n n	
Surrogate: 4-Bromofluorobenzene		90.5 %	80-12	0	"	"	"	"	

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 02/16/06 17:36

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 Deep (6B02006-01) V	Water								
Total Alkalinity	140	2.00	mg/L	1	EB60901	02/08/06	02/08/06	EPA 310.1M	
Chloride	270	5.00		10	EB60614	02/04/06	02/06/06	EPA 300.0	
Total Dissolved Solids	1000	5.00		1	EB60302	02/02/06	02/02/06	EPA 160.1	
Sulfate	58.1	5.00	0	10	EB60614	02/04/06	02/06/06	EPA 300.0	
Monitor Well #2 Shallow (6B02006-0	2) Water								
Total Alkalinity	238	2.00	mg/L	1	EB60901	02/08/06	02/08/06	EPA 310.1M	
Chloride	144	5.00	**	10	EB60614	02/04/06	02/06/06	EPA 300.0	
Total Dissolved Solids	924	5.00		1	EB60302	02/02/06	02/02/06	EPA 160.1	
Sulfate	156	5.00		10	EB60614	02/04/06	02/06/06	EPA 300.0	

Rice Operating Co.ProjectHobbs Jct. F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope02/16/06 17:36

### Total Metals by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 Deep (6B02006-01) Water									
Calcium	179	0.500	mg/L	50	EB60903	02/08/06	02/09/06	EPA 200.7	
Magnesium	21.4	0.0100	**	10	"	0	ь	· ·	
Potassium	5.89	0.0500	"	1	"		H	"	
Sodium	68.4	0.500	17	50	ņ	"	.,	U	
Monitor Well #2 Shallow (6B02006-02) Water	_								
Calcium	63.2	0.500	mg/L	50	EB60903	02/08/06	02/09/06	EPA 200.7	
Magnesium	16.8	0.0100		10	н	*		n	
Potassium	2.47	0.0500	•	1	*			**	
Sodium	254	0.500	**	50	"	**	n	n	

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor

Project Number: None Given

Reported: 02/16/06 17:36

Hobbs NM, 88240 Project Manager: Kristin Farris-Pope

### **Organics by GC - Quality Control Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EB60910 - EPA 5030C (GC)		_								
Blank (EB60910-BLK1)				Prepared: (	02/09/06 A	nalyzed: 02	2/10/06			
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	*							
Ethylbenzene	ND	0.00100								
Xylene (p/m)	ND	0.00100	**							
Xylene (o)	ND	0.00100								
Surrogate: a,a,a-Trifluorotoluene	34.5		ugI	40.0		86.2	80-120			
Surrogate: 4-Bromofluorobenzene	32.1		"	40.0		80.2	80-120			
LCS (EB60910-BS1)				Prepared: 0	)2/09/06 Ai	natyzed: 02	2/10/06			
Benzene	0.0457	0.00100	mg/L	0.0500		91.4	80-120			
Toluene	0.0496	0.00100	**	0.0500		99.2	80-120			
Ethylbenzene	0.0498	0.00100		0.0500		99.6	80-120			
Xylene (p/m)	0.100	0.00100	**	0.100		100	80-120			
Xylene (o)	0.0570	0.00100	••	0.0500		114	80-120		•	
Surrogate: a,a,a-Trifluoroioluene	35.2		ug I	40.0		88.0	80-120			
Surrogate: 4-Bromofluorobenzene	32.5		"	40.0		81.2	80-120			
LCS Dup (EB60910-BSD1)				Prepared: (	02/09/06 A	nalyzed: 02	2/14/06			
Benzene	0.0568	0.00100	mg/L	0.0500		114	80-120	22.0	20	QR-02
Toluene .	0.0584	0.00100		0.0500		117	80-120	16.5	20	
Ethylbenzene	0.0507	0.00100	**	0.0500		101	80-120	1.40	20	
Xylene (p/m)	0.0982	0.00100	n	0.100		98.2	80-120	1.82	20	
Xylene (o)	0.0513	0.00100	**	0.0500		103	80-120	10.1	20	
Surrogate: a,a,a-Trifluorotoluene	39.4		ug I	40.0		98.5	80-120			
Surrogate: 4-Bromofluorobenzene	32.5		"	40.0		81.2	80-120			
Calibration Check (EB60910-CCV1)				Prepared: (	02/09/06 Ai	nalyzed: 02	2/13/06			
Benzene	55.0		ug/l	50.0		110	80-120			
Toluene	57.5		n	50.0		115	80-120			
Ethylbenzene	52.8			50.0		106	80-120			
Xylene (p/m)	103		*	100		103	80-120			
Xylene (o)	56.6			50.0		113	80-120			
Surrogate: a,a,a-Trifluoroioluene	43.5		"	40.0		109	80-120			
Surrogate: 4-Bromofluorohenzene	32.4		"	40.0		81.0	80-120			

Project: Hobbs Jct. F-29-1A

Project Number: None Given

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 02/16/06 17:36

Organics by GC - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EB60910 - EPA 5030C (GC)

Matrix Spike (EB60910-MS1)	Sour	rce: 6B08024-	01	Prepared: 03	Prepared: 02/09/06 Analyzed: 02/10/06						
Benzene	0.0426	0.00100	mg/L	0.0500	ND	85.2	80-120				
oluene	0.0449	0.00100	**	0.0500	ND	8,9,8	80-120				
Ethylbenzene	0.0432	0.00100	*1	0.0500	ND	86.4	80-120				
Kylene (p/m)	0.0841	0.00100	"	0.100	ND	84.1	80-120				
(ylene (o)	0.0416	0.00100	"	0.0500	ND	83.2	80-120				
Surrogate: a,a,a-Trifluorotoluene	38.7		ng/l	40.0		96.8	80-120				
urrogate: 4-Bromofluorobenzene	47.0		"	40.0		118	80-120				

Project Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 02/16/06 17:36

## General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

	р. 1.	Reporting	T looks	Spike	Source	0/BEC	%REC	RPD	RPD	Notes
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	KPD	Limit	notes
Batch EB60302 - General Preparation (	VetChem)					_				
Blank (EB60302-BLK1)				Prepared &	& Analyzed	02/02/06				
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EB60302-DUP1)	Sou	rce: 6B01010-	01	Prepared &	& Analyzed	02/02/06				
Total Dissolved Solids	790	5.00	mg/l.		794			0.505	5	
Batch EB60614 - General Preparation (	WetChem)									
Blank (EB60614-BLK1)				Prepared: (	02/04/06 A	nalyzed: 02	2/06/06			
Chloride	ND	0,500	mg/L							
Sulfate	ND	0.500	"							
LCS (EB60614-BS1)				Prepared: (	02/04/06 A	nalyzed: 02	2/06/06			
Sulfate	8.40		mg/L	10.0		84.0	80-120			
Chloride	8.99		**	10.0		89.9	80-120			
Calibration Check (EB60614-CCV1)				Prepared: (	02/04/06 A	nalyzed: 02	2/06/06			
Chloride	8.93		mg/L	10.0		89.3	80-120			
Sulfate	8.63		H	10.0		86.3	80-120			
Duplicate (EB60614-DUP1)	Sou	rce: 6B01010-	01	Prepared: (	02/04/06 A	nalyzed: 02	2/06/06			
Chloride	224	5.00	mg/L		206			8.37	20	
Sulfate	72.9	5.00	и		66.5			9.18	20	
Batch EB60901 - General Preparation (V	VetChem)			,,,,		<u>.</u>				
Blank (EB60901-BLK1)				Prepared 8	c Analyzed	02/08/06				
Total Alkalinity	ND	2.00	mg/L			~				

Rice Operating Co.

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 02/16/06 17:36

240 Project Manager: Kristin Farris-Pope

General Chemistry Parameters by EPA / Standard Methods - Ou

### General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EB60901 - General Preparation	on (WetChem)									
LCS (EB60901-BS1)				Prepared &	Analyzed:	02/08/06				
Bicarbonate Alkalinity	210	2.00	mg/L	200		105	85-115			
Duplicate (EB60901-DUP1)	Sour	ce: 6B01010-	01	Prepared &	Analyzed:	02/08/06				
Total Alkalinity	192	2.00	mg/L		191			0.522	20	
Reference (EB60901-SRM1)				Prepared &	k Analyzed:	02/08/06				
Total Alkalinity	96.0		mg/L	100		96.0	90-110			

Rice Operating Co.

Project: Hobbs Jct. F-29-1A

Project Number: None Given

Reported:

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

Project Manager: Kristin Farris-Pope

### Total Metals by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EB60903 - 6010B/No Digestion										<i></i>
Blank (EB60903-BLK1)				Prepared: (	02/08/06 A	nalyzed: 02	2/09/06			
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	**							
Potassium	ND	0.0500	**							
Sodium	ND	0.0100	**							
Calibration Check (EB60903-CCV1)				Prepared: (	02/08/06 A	nalyzed: 02	1/09/06			
Calcium	2.06		mg/L	2.00		103	85-115			
Magnesium	2.05			2.00		102	85-115			
Potassium	1.92		**	2.00		96.0	85-115			
Sodium	1.90		n	2.00		95.0	85-115			
Duplicate (EB60903-DUP1)	Sou	rce: 6B01010-	01	Prepared: (	02/08/06 A	nalyzed: 02	2/09/06			
Calcium	62.1	0.0100	mg/L		61.2			1.46	20	
Magnesium	43.5	0.0100	**		44.8			2.94	20	
Potassium	10.3	0.500	"		10.4			0.966	20	
Sodium	161	0.500	**		157			2.52	20	

Fax: (505) 397-1471 Rice Operating Co. Project: Hobbs Jct. F-29-1A 122 W. Taylor Project Number: None Given Reported: Hobbs NM, 88240 Project Manager: Kristin Farris-Pope 02/16/06 17:36

### **Notes and Definitions**

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data. Analyte DETECTED DET ND Analyte NOT DETECTED at or above the reporting limit Not Reported NR Sample results reported on a dry weight basis drv RPD Relative Percent Difference LCS Laboratory Control Spike MS Matrix Spike Dup Duplicate

	Kaland Kitub			
Report Approved By:	Radan Cito-	Date:	2/16/2006	

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.

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# Environmental Lab of Texas

12600 West I-20 East Odessa, Texas 79765

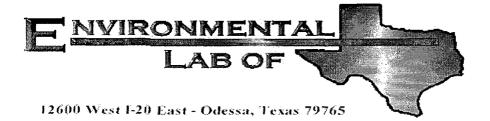
Phone: 432-563-1800 Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name: Hobbs Jct. F-29-1A		Lea County				Analyze For:	×		Mebls: As Ag Ba Cd Cr Pb Hg Sa Volatiles Somhvolatiles RCI NO.R.M. Total Dissolved Solids RUSH TAT (Pre-Schedule)	×	×					Sample Containers, Intact?  Labels on container?  Custody Seals: Contrarers / Coole  Temperature Upon Receipt	Laboratory Comments:	
Project Name: H	Project #:	Project Loc:	PO #:				TOLA		Soil (Specify):  SAR / ESP / CEC  Cations (Ca, Mg, Na, K)  Cations (Ca, Mg, Na, K)  Cations (Ca, Mg, Na, K)  Soil  Soil	×	×						Time	
								rative Matrix	H ₂ OO ₂ , None (1) 1 Liter HDPE Other ( Specify) Water Water	×	×					kpriceswd@valornet.com & mfranks@riceswd.com	Date	Date Date
				Fax No: (505) 397-147				Preservative	No. of Containers toe HOO, HO(2) 40 ml glass viols	3 ×	3 X	apalator de pre-	Distance of			et.com & mfrar	ς.	
ornet.com				Fax No:		1		?	bəlqms∂ əmiT	9:50	9:15					 eswd@vałorn	9 / "	WELOTIC TO THE
kpriceswd@valornet.com	yıny		240	I	) 631-9310	(			Date Sampled	1/31/2006	1/31/2006						Time Received by	S S S S S S S S S S S S S S S S S S S
Project Manager: Kristin Farris Pope	Company Name RICE Operating Company	Company Address: 122 W. Taylor Street	city/State/Zip: Hobbs, New Mexico 88240	Telephone No: (505) 393-9174	Sampler Signature: Rozanne Johnson (505) 631-9310		Email: rozanne@valornet.com		FIELD CODE	Monitor Well #1 Deep	Monitor Well #2 Shallow					PLEASE Email RESULTS TO:	Date	4 406 2 1706
Project Manag	Company Na	Company Addre	City/State/2	Telephone !	Sampler Signatu		Em		AB # (lab use only)	-	-02 Moi					Special Instructions:	Relipduished by	Relinquished of the 12% days

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

Olient: QCC Op.				
Date/Time: 2/2/06 9:00				
Prder#: LBOLOOCo				
Initials:				
Sample Receipt	Checkli	st		
Temperature of container/cooler?	Yes	No I	(, O C I	•
Shipping container/cooler in good condition?	YES	No		
Custody Seals intaction shipping container/cooler?	Yes	No	Nict present	
Custody Seals intact on sample bottles?	Yes	No	Not present 1	
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)	(B)	No		
Container labels legicle and intact?	Ves I	No		
Sample Matrix and procerties same as on chain of custody?	YES	No		
Samples in procer container/cottle?	YES	No	•	
Samples procedy preserved?	Yes	No		
Sample bottles intact?	Y€3	No		
Preservations documented on Chain of Custody?	Yes	No		
Containers documented on Chain of Custody?	Yes	No	į	
Sufficient sample amount for indicated test?	Ye=	No		
All samples received within sufficient hold time?	Yes	l. No		
VOC samples have zero headspace?	Yes	Nic	Not Applicable	
Other observations:				
Variance Docus Contact Person: Date/Time: Regarding:		<del></del>		,
Corrective Action Taken:				
			··· <del></del>	
	···			
· · · · · · · · · · · · · · · · · · ·				



## Analytical Report

### **Prepared for:**

Kristin Farris-Pope Rice Operating Co. 122 W. Taylor Hobbs, NM 88240

Project: Hobbs Jct. F-29-1A Project Number: None Given Location: Lea County

Lab Order Number: 6E04010

Report Date: 05/09/06

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 05/09/06 14:23

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #1- Deep	6E04010-01	Water	05/02/06 10:40	05/04/06 10:50
Monitor Well #2- Shallow	6E04010-02	Water	05/02/06 09:05	05/04/06 10:50

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 05/09/06 14:23

### Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (6E04010-01) Wa	ater								
Benzene	ND	0.00100	mg/L	1	EE60404	05/04/06	05/04/06	EPA 8021B	
Toluene	ND	0.00100			"	19	**	,	
Ethylbenzene	ND	0.00100		*	**	17	11		
Xylene (p/m)	ND	0.00100		**	"	W	н	"	
Xylene (o)	ND	0.00100	н	*	"	u .	п	"	
Surrogate: a,a,a-Trifluorotoluene		96.8 %	80-120	)	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.5 %	80-120	9	"	"	,	п	
Monitor Well #2- Shallow (6E04010-02)	Water								
Benzene	ND	0.00100	mg/L	1	EE60404	05/04/06	05/04/06	EPA 8021B	·
Toluene	ND	0.00100	10	R	*	*1		••	
Ethylbenzene	ND	0.00100	**	**		•	**		
Xylene (p/m)	ND	0,00100	,,	**	"	"	**	u.	
Xylene (o)	ND	0.00100	"	,,	"	н	**		
Surrogate: a,a,a-Trifluorotoluene		94.2 %	80-120	)	"	"	"	n	
Surrogate: 4-Bromofluorobenzene		86.5 %	80-120	9	"	"	"	"	

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported: 05/09/06 14:23

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (6E04010-01)	Water								
Total Alkalinity	137	2.00	mg/L	1	EE60814	05/09/06	05/09/06	EPA 310.1M	
Chloride	298	5.00	**	10	EE60507	05/04/06	05/04/06	EPA 300.0	
<b>Total Dissolved Solids</b>	996	5.00	h	1	EE60816	05/05/06	05/08/06	EPA 160.1	
Sulfate	62.9	5.00	n	10	EE60507	05/04/06	05/04/06	EPA 300.0	
Monitor Well #2- Shallow (6E04010-0	2) Water								
Total Alkalinity	251	2.00	mg/L	1	EE60814	05/09/06	05/09/06	EPA 310.1M	
Chloride	160	5.00		10	EE60507	05/04/06	05/04/06	EPA 300.0	
<b>Total Dissolved Solids</b>	1040	5.00	**	1	EE60816	05/05/06	05/08/06	EPA 160.1	
Sulfate	153	5.00	"	10	EE60507	05/04/06	05/04/06	EPA 300.0	

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 05/09/06 14:23

### Total Metals by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (6E04010-01) Wa	ter								
Calcium	173	0.500	mg/L	50	EE60811	05/08/06	05/08/06	EPA 200.7	
Magnesium	24.8	0.0100		10	"		н	10	
Potassium	2.43	0.500		"	**		"		
Sodium	47.1	0.100	**	"	н		n	O.	
Monitor Well #2- Shallow (6E04010-02) V	Water								
Calcium	72.1	0.100	mg/L	10	EE60811	05/08/06	05/08/06	EPA 200.7	
Magnesium	20.5	0.0100	,,	*	,,	**	"	11	
Potassium	2.78	0.500		**	н	"	"	n	
Sodium	138	0 500		50	n	**	11	11	

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

**Reported:** 05/09/06 14:23

### Organics by GC - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE60404 - EPA 5030C (GC)	·									
Blank (EE60404-BLK1)				Prepared &	Analyzed:	05/04/06				
Benzene	ND	0.00100	mg/L							
Tolnene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	**							
Xylene (p/m)	ND	0.00100								
Xylene (o)	ND	0.00100	**							
Surrogate: a,a,a-Trifluorotolnene	36.7		ug I	40.0		91.8	80-120			
Surrogate: 4-Bromofluorobenzene	33.6		"	40.0		84.0	80-120			
LCS (EE60404-BS1)				Prepared &	k Analyzed:	05/04/06				
Benzene	0,0536	0.00100	mg/L	0.0500		107	80-120			
Toluene	0.0531	0.00100	"	0.0500		106	80-120			
Ethylbenzene	0.0509	0.00100		0.0500		102	80-120			
Xylene (p/m)	0.117	0.00100		0.100		117	80-120			
Xylene (0)	0.0573	0.00100	"	0.0500		115	80-120			
Surrogate: a,a,a-Trifluorotoluene	39.3		ug l	40.0		98.2	80-120			
Surrogate: 4-Bromofluorobenzene	39.5		"	40.0		98.8	80-120			
Calibration Check (EE60404-CCV1)				Prepared (	05/04/06 Ar	nalyzed: 05	5/05/06			
Benzene	50.2		ug/l	50.0		100	80-120			
Toluene	49.3			50.0		98.6	80-120			
Ethylbenzene	53.0			50.0		106	80-120			
Xylene (p/m)	105			100		105	80-120			
Xylene (o)	52.4		"	50.0		105	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.3			40.0		88.2	80-120			
Surrogate: 4-Bromofluorobenzene	38.2		n	40.0		95.5	80-120			
Matrix Spike (EE60404-MS1)	Sou	ırce: 6E03003-	01	Prepared &	Analyzed:	05/04/06				
Benzene	0.0626	0.00100	mg/L	0.0500	0.00562	114	80-120			
Toluene	0.0534	0.00100		0.0500	ND	107	80-120			
Ethylbenzene	0.0534	0.00100	**	0.0500	0.000825	105	80-120			
Xylene (p/m)	0.120	0.00100	•	0.100	ND	120	80-120			
Xylene (o)	0.0577	0.00100	"	0.0500	ND	115	80-120			
Surrogate: a,a,a-Trifluorotoluene	36.6		ng I	40.0		91.5	80-120			
Surrogate: 4-Bromofluorohenzene	38.6		"	40.0		96.5	80-120			

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 05/09/06 14:23

### Organics by GC - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Matrix Spike Dup (EE60404-MSD1)	Sour	Prepared &	& Analyzed: (						
Benzene	0.0617	0.00100	mg/L	0.0500	0.00562	112	80-120	1.77	20
Toluene	0.0526	0.00100		0.0500	ND	105	80-120	1.89	20
Ethylbenzene	0.0532	0.00100		0.0500	0.000825	105	80-120	0.00	20
Xylene (p/m)	0.117	0.00100	**	0.100	ND	117	80-120	2.53	20
Xylene (o)	0.0565	0.00100		0.0500	ND	113	80-120	1.75	20
Surrogate: a,a,a-Trifluorotoluene	40.9		ng4	40.0		102	80-120		
Surrogate: 4-Bromofluorobenzene	40.0		"	40.0		100	80-120		

Project: Hobbs Jct. F-29-1A

Project Number: None Given

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 05/09/06 14:23

### General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		-								
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE60507 - General Preparation (V	VetChem)									
Blank (EE60507-BLK1)				Prepared &	Analyzed:	05/04/06				
Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	*							
LCS (EE60507-BS1)				Prepared &	Analyzed:	05/04/06				
Chloride	9.99	0.500	mg/L	10.0		99.9	80-120			
Sulfate	8.53	0.500	"	10.0		85.3	80-120			
Calibration Check (EE60507-CCV1)				Prepared &	Analyzed:	05/04/06				
Chloride	10.4		mg/L	10.0		104	80-120			
Sulfate	9.15		**	10.0		91.5	80-120			
Duplicate (EE60507-DUP1)	Sou	rce: 6D28002-	02	Prepared &	Analyzed:	05/04/06				
Sulfate	52.7	0.500	mg/L		53.3			1.13	20	
Chloride	62.0	0.500	"		62.1			0.161	20	
Batch EE60814 - General Preparation (V	VetChem)									
Blank (EE60814-BLK1)				Prepared &	Analyzed:	05/09/06				
Total Alkalinity	ND	2.00	mg/L							
LCS (EE60814-BS1)				Prepared &	: Analyzed:	05/09/06				
Bicarbonate Alkalinity	214	2.00	mg/L	200		107	85-115			
Duplicate (EE60814-DUP1)	Sou	rce: 6E04009-	01	Prepared &	Analyzed:	05/09/06				
Total Alkalinity	209	2.00	mg/L		208			0.480	20	
Reference (EE60814-SRM1)				Prepared &	Analyzed:	05/09/06				
Total Alkalinity	96.0		mg/L	100		96.0	90-110			

Rice Operating Co. 122 W. Taylor

Project: Hobbs Jct. F-29-1A

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471 Reported: 05/09/06 14:23

Hobbs NM, 88240

### General Chemistry Parameters by EPA / Standard Methods - Quality Control

### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE60816 - Filtration Preparation										

Blank (EE60816-BLK1)				Prepared: 05/05/06 Analyzed: 05/08/06			
Total Dissolved Solids	ND	5.00	mg/L				
Duplicate (EE60816-DUP1)	Source	e: 6E04009	-01	Prepared: 05/05/06 Analyzed: 05/08/06			
Total Dissolved Solids	940	5.00	mg/L	904	3.90	5	

Project: Hobbs Jct. F-29-1A

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported: 05/09/06 14:23

### Total Metals by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE60811 - 6010B/No Digestion										
Blank (EE60811-BLK1)				Prepared &	Analyzed:	05/08/06				
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100								
Potassium	ND	0.0500	**							
Sodium	ND	0.0100	**							
Calibration Check (EE60811-CCV1)				Prepared &	2 Analyzed:	05/08/06				
Calcium	2.20		mg/L	2.00		110	85-115			
Magnesium	2.28			2.00		114	85-115			
Potassium	1.74		n	2.00		87.0	85-115			
Sodium	1.84		**	2.00		92.0	85-115			
Duplicate (EE60811-DUP1)	Sou	rce: 6E04009-	01	Prepared &	Analyzed:	05/08/06				
Calcium	130	0.500	mg/L		128			1.55	20	
Magnesium	22.5	0.0100	**		23.2			3.06	20	
Potassium	4.11	0.0500	"		4.32			4.98	20	
Sodium	87.6	0.100	n		88.0			0.456	20	

Rice Operating Co.Project:Hobbs Jct. F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope05/09/06 14:23

### **Notes and Definitions**

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

	Kaland KJulis		
Report Approved By:	Racan C 10	Date:	5/9/2006

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.

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

# Environmental Lab of Texas

12600 West I-20 East Odessa, Texas 79765

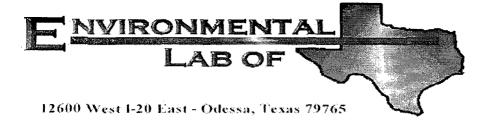
Phone: 432-563-1800 Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name: Hobbs Jct. F-29-1A	Project #:	Project Loc: Lea County	PO#:			Analyze For:	TCLP:		Soil Other (specify): TPH: 418.1 8015M 1005 1000 Calone (Ca, Mg, Na, K) Anions (Ct, SO4, CO3, HCO3) Anetals: As Ag Ba Cd Cr Pb Hg S Semivolatiles Cotal Dissolved Solids Otal Dissolved Solids Otal Dissolved Solids	X X X X	×					Sample, Containers, Intact?  Labels on container?  Custody, Seals, Container (Sole)  Temperature Upon Receipt:	Time Laboratory.Comments:	$\mathcal{L}_{\mathcal{O}}$
kpope@riceswd.com				Fax No: (505) 397-1471	310 / 47			Preservative Matrix	Date Sampled Time Sampled No. of Containers Ho. 23 40 ml glass viels Huo., Huo., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso., Aso	5/2/2006 10:40 3 X 2 1 X	5/2/2006 9:05 3 X 2 1 X					PLEASE Email RESULTS TO: kpope@riceswd.com & mfranks@riceswd.com	Received by Date Amer Styles Age	Received by ELOT.
Project Manager: Kristin Farris Pope kpope@	Company Name RICE Operating Company	company Address: 122 W. Taylor Street	City/State/Zip: Hobbs, New Mexico 88240	Telephone No: (505) 393-9174	sampler Signature: Rozanne Johnson (505) 631-931	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	Email: rozanne@valornet.com		LAB# (ab use only)	Monitor Well #1	Monitor Well #2 ~ Shallow					Special Instructions: PLEASE Email RESULTS	Relinquishes by Time F	Armann STylog 10,50

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

ient: LICO DD:				
etertime: 5/4/04 10:50				
ile/ fillic.				
rder#: 10E04010				
itials: W				
Sample Receipt	Chackli	iet		
mperature of container/cooler?	Yes	No I	0.5 01	
ripping container/cooler in good condition?	(E)	No		
ustody Seals intact on shipping container/cooler?	Y#5	No	Not present	
ustody Seals intact on sample bottles?	Xes	No	Not present	
hain of custody present?	YES	No	Tot present	
ample Instructions complete on Chain of Custody?	Yes	No		
hain of Custody signed when relinquished and received?	Yes	No		
hain of custody signed when reliniquished and received; hain of custody agrees with sample label(s)	YES I	No		
ontainer labels legible and intact?	Y06	No		
ample Matrix and properties same as on chain of custody?	XBS	No		
ample Matrix and properties same as on chair of custody? amples in proper container/bottle?	1 Zes	No	. 1	İ
amples properly preserved?	Yes	No		į
ample bottles intact?	Yes	No		l L
reservations documented on Chain of Custody?	/\tes	No		1
ontainers documented on Chain of Custody?	€ES	No		!
ortainers decumented on Chair of Custody: ufficient sample amount for indicated test?	) tes	No	 	1
All samples received within sufficient hold time?		l No		<u>(</u>
OC samples have zero headspace?	(2)	No	Not Apolicable	<u>i</u> 1
Other observations:		<del></del>		
				*
Variance Docu	mentatio	OB.		
ontact Person: Date/Time;		- · • •	Contacted by:	
regarding:			- Jastod by.	
keyarung.				
		·		
	<del></del>	<del></del>		
Corrective Action Taken:				
			<del></del>	
				- <del></del>
			<del></del>	



# Analytical Report

# Prepared for:

Kristin Farris-Pope Rice Operating Co. 122 W. Taylor Hobbs, NM 88240

Project: Hobbs Jct. F-29-1A Project Number: None Given Location: Lea County

Lab Order Number: 6H18011

Report Date: 08/28/06

Project: Hobbs Jct. F-29-1A Project Number: None Given

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #1- Deep	6Н18011-01	Water	08/15/06 08:40	08-18-2006 10:20
Monitor Well #2- Shallow	6Н18011-02	Water	08/15/06 10:05	08-18-2006 10:20

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

# Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Monitor Well #1- Deep (6H18011-01) W.	ater		,						
Benzene	ND	0.00100	mg/L	1	EH62121	08/21/06	08/21/06	EPA 8021B	
Toluene	ND	0.00100		,,		**	**	**	
Ethylbenzene	ND	0.00100	"	,,	**	n	**	**	
Xylene (p/m)	ND	0.00100	"		R	*	н	19	
Xylene (o)	ND	0.00100	D	*	14	**	и	"	
Surrogate: a,a,a-Trifluorotoluene		95.5 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.2 %	80-1	20	"	"	"	"	
Monitor Well #2- Shallow (61118011-02)	Water								
Benzene	ND	0.00100	mg/L	1	EH62121	08/21/06	08/21/06	EPA 8021B	
Toluene	ND	0.00100	•	*	"	"	"	19	
Ethylbenzene	ND	0.00100	"	**	*	0	"	,,	
Xylene (p/m)	ND	0.00100			,,	"	"	•	
Xylene (o)	ND	0.00100	**			"	"	и	
Surrogate: a,a,a-Trifluorotoluene		102 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	80-1	20	"	"	"	"	

Project: Hobbs Jct. F-29-1A

122 W. Taylor Hobbs NM, 88240 Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (6H18011-01	) Water								
Total Alkalinity	158	2.00	mg/L	1	EH62128	08/21/06	08/21/06	EPA 310.1M	
Chloride	302	5.00	**	10	EH62101	08/21/06	08/21/06	EPA 300.0	
<b>Fotal Dissolved Solids</b>	1060	10.0	"	1	EH62303	08/18/06	08/22/06	EPA 160.1	
Sulfate	80.7	5.00	**	10	EH62101	08/21/06	08/21/06	EPA 300.0	
Monitor Well #2- Shallow (61118011-	-02) Water								
Total Alkalinity	234	2.00	mg/L	I	EH62128	08/21/06	08/21/06	EPA 310.1M	
Chloride	81.9	5.00		10	EH62101	08/21/06	08/21/06	EPA 300.0	
Total Dissolved Solids	578	10.0		1	EH62303	08/18/06	08/22/06	EPA 160.1	
Sulfate	104	5.00		10	EH62101	08/21/06	08/21/06	EPA 300.0	

Project: Hobbs Jct. F-29-1A

122 W. Taylor Hobbs NM, 88240

Project Number: None Given Project Manager: Kristin Farris-Pope Fax: (505) 397-1471

# Total Metals by EPA / Standard Methods **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Monitor Well #1- Deep (6H180	11-01) Water								
Calcium	154	4.05	mg/L	50	EH62313	08/23/06	08/23/06	EPA 200,7	
Magnesium	24.5	0.360	v	10	*	и			
Potassium	2.88	0.600	"	**	P	ŋ			
Sodium	70.5	0.430	"	**	le.			Ü	
Monitor Well #2- Shallow (6111	8011-02) Water								
Calcium	49.0	0.810	mg/L	10	EH62313	08/23/06	08/23/06	EPA 200.7	
Magnesium	13.3	0.360		**	"	"	14		
Potassium	1.76	0.600	•	41	n	,,	"		
Sodium	145	2.15		50	н	**		"	

122 W. Taylor Hobbs NM, 88240 Project: Hobbs Jct. F-29-1A

Project Number: None Given

Fax: (505) 397-1471

Project Manager: Kristin Farris-Pope

# Organics by GC - Quality Control Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Result	Lima	Units	Level	Reşuit	76KEC	Limits	KID.	Limit	Notes
Batch EH62121 - EPA 5030C (GC)										
Blank (EH62121-BLK1)				Prepared: 0	08/21/06 A	nalyzed: 08	3/22/06			
Benzene	ND	0.00100	mg/L							
Foluene	ND	0.00100	**							
Ethylbenzene	ND	0.00100	**							
Xylene (p/m)	ND	0.00100	**							
Xylene (o)	ND	00100.0	**							
Surrogate: a,a,a-Trifluorotoluene	40.3		ug/l	40.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	36.7		"	40.0		91.8	80-120			
LCS (EH62121-BS1)				Prepared &	: Analyzed:	08/21/06				
Benzene	0.0460	0,00100	mg/L	0.0500		92.0	80-120			
Coluene	0.0503	0.00100	**	0.0500		101	80-120			
Ethylbenzene	0.0463	0.00100		0.0500		92.6	80-120			
Kylene (p/m)	0.113	0.00100	•	0.100		113	80-120			
(v) (v)	0.0565	0.00100		0.0500		113	80-120			
Surrogate: a,u,a-Trifluorotoluene	39.7		ug'l	40.0		99.2	80-120			
lurrogate: 4-Bromofluorobenzene	45.0		n	40.0		112	80-120			
Calibration Check (EH62121-CCV1)				Prepared: 0	98/21/06 Ai	nalyzed: 08	3/22/06			
Benzene	48.7		սց/1	50.0		97.4	80-120			
Coluene	52.3		"	50.0		105	80-120			
Ethylbenzene	57.3		"	50.0		115	80-120			
Kylene (p/m)	114		.,	100		114	80-120			
Kylene (o)	57.6			50.0		115	80-120			
Surrogate: a,a,a-Trifluorotolnene	44.7		"	40.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	38.3		"	40.0		95.8	80-120			
Matrix Spike (EH62121-MS1)	Sou	rce: 6H18007-	01	Prepared: 0	8/21/06 Aı	nalyzed: 08	3/22/06			
Benzene	0.0464	0.00100	mg/L	0.0500	ND	92.8	80-120			+ -++
Toluene	0.0550	0.00100	,,	0.0500	ND	110	80-120			
Ethylbenzene	0.0554	0.00100		0.0500	ND	111	80-120			
Kylene (p/m)	0.117	0.00100		0.100	ND	117	80-120			
Kylene (0)	0.0575	0.00100	**	0.0500	ND	115	80-120			
Surrogate: a,a,a-Trifluorotolnene	41.8		ug I	40.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	46.5		"	40.0		116	80-120			

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

# Organics by GC - Quality Control Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH62121 - EPA 5030C (GC)									7	
Matrix Spike Dup (EH62121-MSD1)	Sou	rce: 6H18007-	-01	Prepared: 0	08/21/06 Ai	nalyzed: 08	3/22/06			
Benzene	0.0473	0.00100	mg/L	0.0500	ND	94.6	80-120	1.92	20	
Toluene	0.0535	0.00100		0.0500	ND	107	80-120	2.76	20	
Ethylbenzene	0.0549	0.00100		0 0500	ND	110	80-120	0.905	20	
Xylene (p/m)	0.120	0.00100		0.100	ND	120	80-120	2.53	20	
Xylene (o)	0.0583	0.00100		0.0500	ND	117	80-120	1.72	20	
Surrogate: a,a,a-Trifluorotoluene	42.9		ng/l	40.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	46.4		n	40.0		116	80-120			

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

Reporting	Spike	Source	%REC	RPD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH62101 - General Preparation (	WetChem)									
Blank (EH62101-BLK1)				Prepared &	: Analyzed:	08/21/06				
Sulfate	ND	0.500	mg/L							
Chloride	ND	0.500	"							
LCS (EH62101-BS1)				Prepared &	: Analyzed:	08/21/06				
Sulfate	8.51	0.500	mg/L	10.0		85.1	80-120			
Chloride	10.0	0.500	н	10.0		100	80-120			
Calibration Check (EH62101-CCV1)				Prepared &	: Analyzed:	08/21/06				
Sulfate	8.34		mg/L	10.0		83.4	80-120		***************************************	
Chloride	10.2		"	10.0		102	80-120			
Duplicate (EH62101-DUP1)	Source	Source: 6II18007-01 P		Prepared &	: Analyzed:	08/21/06				
Sulfate	76.3	5.00	mg/L		65.9			14.6	20	
Thloride	105	5.00	"		98.9			5.98	20	
Duplicate (EH62101-DUP2)	Sourc	e: 6H18013-	-04	Prepared &	Analyzed:	08/21/06				
Sulfate	331	5.00	mg/L		336			1.50	20	
Chloride	138	5.00	"		136			1.46	20	
Matrix Spike (EH62101-MS1)	Sourc	e: 61118007-	-01	Prepared &	: Analyzed:	08/21/06				
Sulfate	172	5.00	mg/L	100	65.9	106	80-120			
Chloride	210	5.00	**	100	98.9	111	80-120			
Matrix Spike (EH62101-MS2)	Sourc	e: 6H18013-	04	Prepared &	: Analyzed:	08/21/06				
Sultate	422	5.00	mg/L	100	336	86.0	80-120			
Chloride	224	5.00		100	136	88.0	80-120			

Rice Operating Co. Project: Hobbs Jct. F-29-1A

122 W. Taylor Hobbs NM, 88240 Fax: (505) 397-1471

Project Number: None Given Project Manager: Kristin Farris-Pope

# 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
		Chilic	Cints	Level	Result	70ICEC	Linus	МЪ	Cilin	
Batch EH62128 - General Preparation (Wete	(nem)									
Blank (EH62128-BLK1)				Prepared &	Analyzed:	08/21/06				
Total Alkalinity	ND	2.00	mg/L							
LCS (EH62128-BS1)				Prepared &	Analyzed:	08/21/06				
Total Alkalinity	178		mg/L	200		89.0	85-115			
Duplicate (EH62128-DUP1)	Sou	rce: 6H18007-	01	Prepared &	Analyzed:	08/21/06				
Total Alkalinity	186	2.00	mg/L		186			0.00	20	
Reference (EH62128-SRM1)				Prepared &	Analyzed:	08/21/06				
Total Alkalinity	248		mg/L	250		99.2	90-110			
Batch EH62303 - Filtration Preparation										
Blank (EH62303-BLK1)				Prepared: (	08/18/06 A	nalyzed: 08	3/22/06			
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (E1162303-DUP1)	Sou	rce: 6H18007-	01	Prepared: (	08/18/06 A	nalyzed: 08	3/22/06			
Total Dissolved Solids	556	10.0	mg/L		526			5.55	5	R.
Duplicate (EH62303-DUP2)	Sou	rce: 6H18013-	04	Prepared &	: Analyzed:	08/18/06				
Total Dissolved Solids	808	10.0	mg/L		930			14.0	5	

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Sodium

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

# Total Metals by EPA / Standard Methods - Quality Control **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Blank (EH62313-BLK1)				Prepared & Analy:	zed: 08/23/06				
Calcium	ND	0.0810	mg/L						
Magnesium	ND	0.0360	19						
Potassium	ND	0.0600	n						
Sodium	ND	0.0430	"						
Calibration Check (EH62313-CCV1)				Prepared & Analy:	zed: 08/23/06				
Calcium	1.96		mg/L	2,00	98.0	85-115			
Magnesium	2.01		14	2.00	100	85-115			
Potassium	1.76			2.00	88.0	85-115			
Sodium	1.96		"	2.00	98.0	85-115			
Duplicate (EH62313-DUP1)	Sour	ce: 6H15005-	-04	Prepared & Analys	zed: 08/23/06				
Calcium	44.4	0.810	mg/L	45.9	)		3.32	20	
Magnesium	48.1	0.360		49.3	;		2.46	20	
Potassium	42.9	0.600		42.6			0.702	20	

43 5

2.05

20

44 4

0.430

Fax: (505) 397-1471

Rice Operating Co.

Project: Hobbs Jct. F-29-1A

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

#### Notes and Definitions

R5 RPD is outside of historic values DET Analyte DETECTED Analyte NOT DETECTED at or above the reporting limit ND NR Not Reported Sample results reported on a dry weight basis dry RPD Relative Percent Difference Laboratory Control Spike LCS MS Matrix Spike Duplicate Dup

	Kaland KJusus		
Report Approved By:	/200011 211	Date:	8/28/2006

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.

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# Environmental Lab of Texas

12600 West I-20 East Odessa, Texas 79765

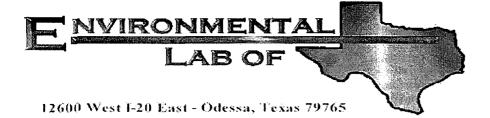
CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Phone: 432-563-1800 Fax: 432-563-1713

TAT bisbost2 (əlubədə&-ər**q) TAT** H&U*S* z 40 Project Name: Hobbs Junction F-29-1A Custody Seals Contamers / Code Total Dissolved Solids × × .M.R.O.1 SCI emperature Upon Receip Sample: Containers: Infact? Laboratory Comments: Lea County BTEX 80218/6030 × Labels on container? Septeronupe samelo Metals: As Ag Ba Cd Ct Pb Hg Se 15.P. TOTAL: Project Loc: PO # Project #: Anions (CI, SO4, CO3, HCO3) Cations (Ca. Mg, Na, K) × Time 5,37 TPH: 418.1 8015M 1005 1006 Officer (specify): lio2 3-18-06 PLEASE Email RESULTS TO: kpope@riceswd.com; mfranks@riceswd.com Sindge Oate × MATER Office (Specify) Mone (1) 1 Liter HDPE *OS*H Fax No: (505) 397-1471 HOBN HC! (2) 40 ml glass vials 2 N [€]ONH βO × No. of Containers 10:05 8:40 Time Sampled kpope@riceswd.com 8/15/2006 8/15/2006 Date Sampled Received P Sampter Signature: Rozanne Johnson (505) 631-9310 rozanne@valornet.com city/state/Zip: Hobbs, New Mexico 88240 company Name RICE Operating Company Email: rozanne@valornet.com Company Address: 122 W. Taylor Street Project Manager: Kristin Farris Pope FIELD CODE Telephone No: (505) 393-9174 Monitor Well #2-Shallow Monitor Well #1-Deep Special Instructions AB # (lab use only) Relinquished by: Relinquished by:

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

Client: RICL DC-				
Pate/ Time: 8/18/06 10:20 -				
ab ID#: 6418011				
Ne				
nitials:				
Sample Receipt	Checklist			
			Client Init	tials
1 Temperature of container/ cooler?	Yes	No	4.0 °C	$\neg$
2 Shipping container in good condition?	Yes	No		1
3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	$\neg$
4 Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
Chain of Custody present?	Yes	No		
Sample instructions complete of Chain of Custody?	Ve3	No		$\neg$
7 Chain of Custody signed when relinquished/ received?	Yes	No		_
3 Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	$\dashv$
Ontainer label(s) legible and intact?	Yes	No	Not Applicable	_
10 Sample matrix/ properties agree with Chain of Custody?	Yes	No		
11 Containers supplied by ELOT?	/es	No		
12 Samples in proper container/ bottle?	Ye⊊	No	See Below	_
13 Samples properly preserved?	Yes	No	See Below	
14 Sample bottles intact?	\(\frac{1}{2}\)es	No		
15 Preservations documented on Chain of Custody?	Yes	No		
16 Containers documented on Chain of Custody?	Ves	No		$\neg$
17 Sufficient sample amount for indicated test(s)?	7es	No	See Below	
18 All samples received within sufficient hold time?	Yes	No	See Below	
19 VOC samples have zero headspace?	Yes	No	Not Applicable	_
Variance Docum	nentation			
contact: Contacted by:			Date/ Time:	
Regarding:				
Corrective Action Taken:				
)		-		
heck all that Apply: See attached e-mail/ fax				
Client understands and would	d like to prod	ceed with	analysis	
Cooling process had begun s	•		•	



# Analytical Report

## **Prepared for:**

Kristin Farris-Pope Rice Operating Co. 122 W. Taylor Hobbs, NM 88240

Project: Hobbs Jct. F-29-1A Project Number: None Given

Location: T18S R38E Sec 29 F- Lea County, NM

Lab Order Number: 6K08007

Report Date: 11/15/06

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #1- Deep	6K08007-01	Water	11/03/06 09:35	11-08-2006 14:50
Monitor Well #2- Shallow	6K08007-02	Water	11/03/06 10:15	11-08-2006 14:50

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

## Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (6K08007-01) W:	ıter				Buten	. repured	1 11111/1111	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Benzene	ND	0.00100	mg/L	1	EK60808	11/10/06	11/10/06	EPA 8021B	
Toluene	ND	0.00100		"		te .	"	n	
Ethylbenzene	ND	0.00100	•	,	o	0	n	"	
Xylene (p/m)	ND	0.00100	19		v	0	n	n	
Xylene (o)	ND	0.00100	n	**	"	н	n	11	
Surrogate: a,a,a-Trifluorotoluene		89.0 %	80-1.	20	"	н	"	,	,
Surrogate: 4-Bromofluorohenzene		82.0 %	80-12	20	"	"	"	"	
Monitor Well #2- Shallow (6K08007-02)	Water								
Benzene	ND	0.00100	mg/L	ı	EK60808	11/10/06	11/10/06	EPA 8021B	-
Toluene	ND	0.00100	re .		•	u	H		
Ethylbenzene	ND	0.00100	ч	**	"		"	"	
Xylene (p/m)	ND	0.00100	u	**	"	"	•		
Xylene (o)	ND	0.00100	**	**		19	•	P	
Surrogate: a,a,a-Trifluorotoluene		88.0 %	80-1	20	"		,,	<i>n</i>	
Surrogate: 4-Bromofluorobenzene		93.0 %	80-1.	20	"	"	n	,,	

122 W. Taylor Hobbs NM, 88240 Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

# General Chemistry Parameters by EPA / Standard Methods

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (6K08007-01)	Water								
Total Alkalinity	152	2.00	mg/L	1	EK61307	11/14/06	11/14/06	EPA 310.1M	_
Chloride	285	5.00	н	10	EK60911	11/09/06	11/09/06	EPA 300.0	
Total Dissolved Solids	866	10.0	"	1	EK61306	11/09/06	11/10/06	EPA 160.1	
Sulfate	86.1	5.00	**	10	EK60911	11/09/06	11/09/06	EPA 300.0	
Monitor Well #2- Shallow (6K08007-0	02) Water								
Total Alkalinity	228	2.00	mg/L	1	EK61307	11/14/06	11/14/06	EPA 310.1M	
Chloride	79.6	5.00	"	10	EK60911	11/09/06	11/09/06	EPA 300.0	
Total Dissolved Solids	592	10.0		1	EK61306	11/09/06	11/10/06	EPA 160.1	
Sulfate	111	5.00		10	EK60911	11/09/06	11/09/06	EPA 300.0	

Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

# Total Metals by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1- Deep (6K08007-01) Water							•		
Calcium	166	4.05	mg/L	50	EK60919	11/09/06	11/09/06	EPA 6010B	
Magnesium	23.5	0.360	**	10	**	**	,,	n	
Potassium	3.30	0.600	**	••	*	**	n	ri.	
Sodium	77.6	0.430		"	u	v	11	n	
Monitor Well #2- Shallow (6K08007-02) Wat	ler								
Calcium	53.8	0.810	mg/L	10	EK60919	11/09/06	11/09/06	EPA 6010B	
Magnesium	13.7	0.360	**		"	#		"	
Potassium	1.88	0.600	**	*	**	n	,,		
Sodium	124	2.15	**	50	**	••	"	n	

Rice Operating Co. Project: Hobbs Jct. F-29-1A

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

# Organics by GC - Quality Control Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
	resuit	LIMII	UIMIS	Level	Result	/orec	Lillins		PIHIM	Notes
Batch EK60808 - EPA 5030C (GC)										
Blank (EK60808-BLK1)				Prepared: I	1/08/06 A	nalyzed: 11	/10/06			
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	••							
Ethylbenzene	ND	0.00100	**							
Xylene (p/m)	ND	0.00100								
Xylene (o)	ND	0.00100								
Surrogate: a,a,a-Trifhwrotoluene	40.3		ug I	40.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	33 5		"	40.0		83.8	80-120			
LCS (EK60808-BS1)				Prepared: 1	1/08/06 A	nalyzed: 11	/10/06			
Benzene	0.0525	0.00100	mg/L	0.0500		105	80-120			
Foluene	0.0458	0.00100	**	0.0500		91.6	80-120			
Ethylbenzene	0.0457	0.00100	•	0.0500		91.4	80-120			
Xylene (p/m)	0.0919	0.00100	"	0.100		91.9	80-120			
Xylene (o)	0.0448	0.00100		0.0500		89.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.2		ng/I	40.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	41.5		"	40.0		104	80-120			
Calibration Check (EK60808-CCV1)				Prepared: 1	1/08/06 A	nalyzed: 11	/11/06			
Benzene	50.9		ug/l	50.0		102	80-120			
Foluene	45.0			50.0		90.0	80-120			
Ethylbenzene	46.8			50.0		93.6	80-120			
Xylene (p/m)	90.9		"	100		90.9	80-120			
Xylene (o)	45.4		,	50,0		90.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	39.9		,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,			99.8	80-120			
Surrogate: 4-Bromofluorobenzene	39.0		"	40.0		97.5	80-120			
Matrix Spike (EK60808-MS1)	Sou	rce: 6K06005-	01	Prepared: 1	1/08/06 Ai	nalyzed: 11	/10/06			
Benzene	0.0503	0.00100	mg/L	0.0500	ND	101	80-120			
oluene oluene	0.0458	0.00100		0.0500	ND	91.6	80-120			
Ethylbenzene	0.0473	0.00100		0.0500	ND	94.6	80-120			
Kytene (p/m)	0.0939	0.00100		0.100	ND	93.9	80-120			
Kylene (o)	0.0465	0.00100	•	0.0500	ND	93.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.9		ug I	40.0		97.2	80-120		•• • • • • • • • • • • • • • • • • • • •	

Surrogate: 4-Bromofluorobenzene

108

80-120

40.0

43.4

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

# Organics by GC - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EK60808 -	EPA.	5030C	(GC)
-----------------	------	-------	------

Matrix Spike Dup (EK60808-MSD1)	Sou	Source: 6K06005-01			1/08/06 A				
Benzene	0.0518	0.00100	mg/L	0.0500	ND	104	80-120	2.93	20
Toluene	0.0465	0.00100	*	0.0500	ND	93.0	80-120	1.52	20
Ethylbenzene	0.0478	0,00100	**	0.0500	ND	95.6	80-120	1.05	20
Xylene (p/m)	0.0983	0.00100	**	0.100	ND	98.3	80-120	4.58	20
Xylene (o)	0.0494	0.00100	**	0.0500	ND	98.8	80-120	6.05	20
Surrogate: a,u,a-Trifluorotoluene	41.8		ng/l	40.0		104	80-120		
Surrogate: 4-Bromofluorohenzene	43.7		"	40.0		109	80-120		

Project: Hobbs Jct. F-29-1A Rice Operating Co.

122 W. Taylor Project Number: None Given Hobbs NM, 88240 Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

# General Chemistry Parameters by EPA / Standard Methods - Quality Control **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK60911 - General Preparation (W	(etChem)									
Blank (EK60911-BLK1)				Prepared &	Analyzed:	11/09/06				
Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500								
LCS (EK60911-BS1)				Prepared &	Analyzed:	11/09/06				
Chloride	10.9	0.500	mg/L	10.0		109	80-120		ARA LA COM.	
Sulfate	10.1	0.500	и	10.0		101	80-120			
Calibration Check (EK60911-CCV1)				Prepared &	Analyzed:	11/09/06		_		
Chloride	10.8		nıg/L	10.0		108	80-120			
Sulfate	10.1		,,	10.0		101	80-120			
Duplicate (EK60911-DUP1)	Source	e: 6K08007-	01	Prepared &	Analyzed:	11/09/06				
Sulfate	86.2	5.00	mg/L		86.1			0.116	20	
Chloride	283	5.00			285			0.704	20	
Duplicate (EK60911-DUP2)	Sourc	e: 6K09002-	01	Prepared &	: Analyzed:	11/09/06				
Sulfate	1650	20.0	mg/L		1590			3.70	20	
Chloride	248	20.0	**		239			3.70	20	
Matrix Spike (EK60911-MS1)	Sourc	e: 6K08007-	01	Prepared &	Analyzed:	11/09/06				
Sulfate	184	5.00	mg/L	100	86.I	97.9	80-120			
Chloride	404	5.00	**	100	285	119	80-120			
Matrix Spike (EK60911-MS2)	Sourc	e: 6K09002-	01	Prepared &	Analyzed:	11/09/06				
Chloride	655	20.0	mg/L	400	239	104	80-120			
Sulfate	1960	20.0		400	1590	92.5	80-120			

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK61306 - Filtration Preparation	on							_		
Blank (EK61306-BLK1)				Prepared:	11/09/06 A	nalyzed: 11	/10/06			
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (EK61306-DUP1)	Sour	ce: 6K07002-	-01	Prepared:	11/09/06 A	nalyzed: 11	/10/06			
Total Dissolved Solids	10400	10.0	mg/L		9240			11.8	5	S-08
Duplicate (EK61306-DUP2)	Sour	ce: 6K08010-	-02	Prepared:	11/09/06 A	nalyzed: 11	/10/06			
Total Dissolved Solids	24600	10.0	mg/L		23600			4.15	5	
Batch EK61307 - General Preparation	ı (WetChem)									
Blank (EK61307-BLK1)				Prepared &	k Analyzed:	11/14/06				
Total Alkalinity	ND	2.00	mg/L							
LCS (EK61307-BS1)				Prepared &	k Analyzed:	11/14/06				
Bicarbonate Alkalinity	192	2.00	mg/L	200		96.0	85-115			
Duplicate (EK61307-DUP1)	Sour	ce: 6K08007-	-01	Prepared &	k Analyzed:	11/14/06				
Total Alkalinity	150	2.00	mg/L		152			1.32	20	
Reference (EK61307-SRM1)				Prepared &	analyzed:	11/14/06				
Total Alkalinity	248		mg/L	250		99.2	90-110			

Sodium

Project: Hobbs Jct. F-29-1A

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

# Total Metals 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 EK60919 - 6010B/No Digestion										i i
Blank (EK60919-BLK1)				Prepared &	k Analyzed:	11/09/06				
Calcium	ND	0.0810	mg/L							
Magnesium	ND	0.0360								
Potassium	ND	0.0600								
Sodium	ND	0.0430	"							
Calibration Check (EK60919-CCV1)				Prepared 8	k Analyzed:	11/09/06				
Calcium	2.28		mg/L	2.00		114	85-115			
Magnesium	2.14			2.00		107	85-115			
Potassium	1.87		**	2.00		93.5	85-115			

2.00

102

85-115

Duplicate (EK60919-DUP1)	Source	e: 6K08007-	-01	Prepared & Analyzed: 11/09/06			
Calcium	164	4.05	mg/L	166	1.21	20	
Magnesium	23.5	0.360	"	23.5	0.00	20	
Potassium	3.34	0.600		3.30	1.20	20	
Sodium	77.5	0.430	,	77.6	0.129	20	

2.04

Rice Operating Co.

122 W. Taylor
Hobbs NM, 88240

Project Number: None Given
Project Manager: Kristin Farris-Pope

#### **Notes and Definitions**

Value outside Laboratory historical or method prescribed QC limits. S-08 DET Analyte DETECTED ND Analyte NOT DETECTED at or above the reporting limit NR Sample results reported on a dry weight basis dry RPD Relative Percent Difference Laboratory Control Spike LCS MS Matrix Spike Dup Duplicate

	Raland K Juliah		
Report Approved By:	Racan C No	Date:	11/15/2006

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director

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.

Peggy Allen, QA Officer

# Environmental Lab of Texas

Phone: 432-563-1800 Fax: 432-563-1713 CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12600 West I-20 East Odessa, Texas 79765

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Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-In Client: Date/ Time: Lab ID#: Initials: Sample Receipt Checklist Client Initials Yes No 0.5 Temperature of container/ cooler? Shipping container in good condition? Yes No Yes No Custody Seals intact on shipping container/ cooler? Not Present Custody Seals intact on sample bottles/ container? ¥es No Not Present No Chain of Custody present? yes, Sample instructions complete of Chain of Custody? No Yes Chain of Custody signed when relinquished/ received? No Y.eş Chain of Custody agrees with sample label(s)? Yes No ID written on Cont./ Lid Container label(s) legible and intact? Xes No Not Applicable #10, Sample matrix/ properties agree with Chain of Custody? No Y,25> Containers supplied by ELOT? No Yes Samples in proper container/ bottle? y⁄es No See Below Samples properly preserved? Yeş No See Below #14 Sample bottles intact? Yeş No #15 Preservations documented on Chain of Custody? Yes, No #16 Containers documented on Chain of Custody? No Yes, Sufficient sample amount for indicated test(s)? No Yes See Below #18 All samples received within sufficient hold time? Yes No See Below #19 VOC samples have zero headspace? )/es No Not Applicable Variance Documentation Contacted by: Date/ Time: Regarding: Corrective Action Taken:

See attached e-mail/ fax

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event

Check all that Apply:

## R.T. HICKS CONSULTANTS, LTD.

1909 Brunson Avenue • Midland, Texas 79701-6924 • 432.638.8740 • Fax: 413.403.9968

CERTIFIED MAIL.
RETURN RECIEPT NO. 7099 3400 0017 1737 2619

February 21, 2006

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

RE: 2005 ANNUAL GROUNDWATER MONITORING REPORT F-29-1A VENT, HOBBS ABANDONMENT SWD SYSTEM UNIT 'F', SEC. 29, T18S, R38E NMOCD CASE #1R0428

Mr. Price:

R. T. Hicks Consultants, Ltd. takes this opportunity to submit the 2005 Annual Groundwater Monitoring Report for the F-29-1A Vent site located in the Hobbs Salt Water Disposal (SWD) System. In your email on February 2, 2006, you withdrew the requirement for an abatement plan for the F-29-1A Vent site, under the conditions that the current on site monitor well remain for future monitoring in the area and that ROC shall submit documentation of closure activities. In 2006, Arc Environmental will sample the well and Environmental Lab of Texas of Odessa, Texas will continue to analyze the water samples. The Hobbs SWD System has been abandoned.

Thank you for your consideration concerning this annual summary of groundwater monitoring information. If you have any questions, do not hesitate to contact me at (423) 638-8740 or Kristin Farris Pope at (505) 393-9174.

Sincerely,

Gilbert J. Van Deventer, REM, PG

R. T. Hicks Consultants Ltd.

enclosures: Summary table & figure, analytical results

cc: LBG, CDH, KFP, RTH, file

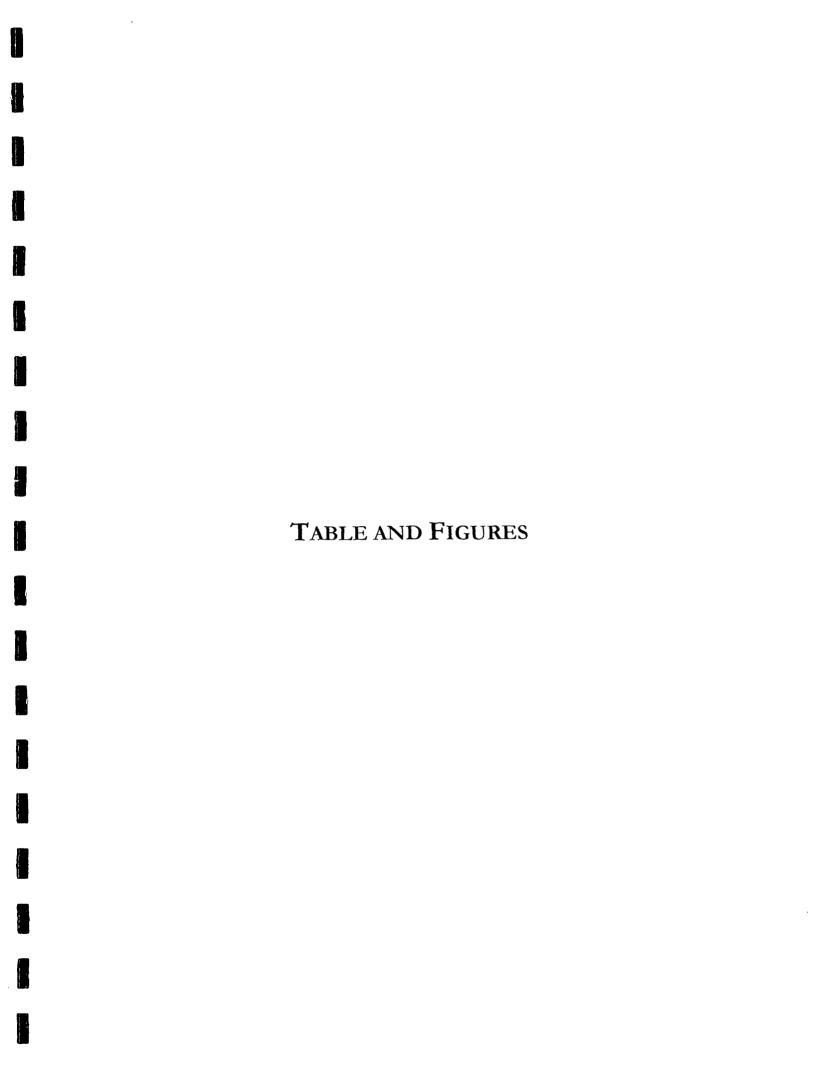


Table 1 Summary of Groundwater Sampling Results Hobbs Abandonment F-29-IA Vent Site

Monitoring Well	Sample Date	Depth to Groundwater (feet BTOC)	Total Depth (feet BTOC)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Nylene (mg/1
	12/2/04	60.64	74.80	725		3280	< 0.001	< 0.001	< 0.001	<0.001
MW-1 (Shallow)	3/22/05	60,08	74.80	879	1780	3960	<0.00}	<1).001	<0)(0))}	<0.001
	5/19/05	60,04	74,80	626	788	2750	<0.001	[181.(1>	<(),()()}	<0.001
	8/9/05	60.14	74.80	470	475	1780	<0.001	<0.001	<(1,(1))}	<0.001
	11/1/05	60.54	74.80	226	218	1100	<0.001	< 0.001	10(),()>	< 0.001
	1/31/06	60.42	74.80	144	58.1	924	<(),()()1	< 0.001	100.0>	<0.001
	12/2/04	60.74	102.57	100		465	<0.001	<0.001	<0.(00)]	<15(80)
	3/22/05	60.10	102.57	613	154	930	< 0.001	< 0.001	< 0.001	<0.001
NOW 1 TO	5/19/05	60.13	102.57	332	84.5	1260	< 0.001	< 0.001	<0.001	< 0.001
MW-1 (Deep)	8/9/05	60.22	102.57	322	75.7	1080	< 0.001	< 0.001	<0.001	<0.001
	11/1/95	60.45	102.57	300	63.2	986	< (0.001	<1),()()()[	< 0.001	<0,000
	1/31/06	60.54	102.57	270	58.1	1000	< 0.001	<0.001	< 0.001	<0.001
		W.C	CC Standards	250	600	1000	0.01	0.75	0.75	0.62

Total Dissolved Soilds (TDS), chloride, sulfate, and BTEX concentrations bised in millgrams per liter (mg/L) Values in boldface type indicate concentrations seed New Mexico Water Quality Commission (WQCC) standards. BTOC Bolow Topo of Soing — Indicates parameter was not analyzed.

Figure 1
TDS, Chloride, Sulfate, and Depth to Groundwater Values Versus Time Graph (Shallow MW-1)

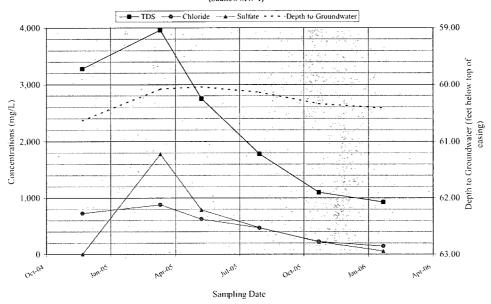
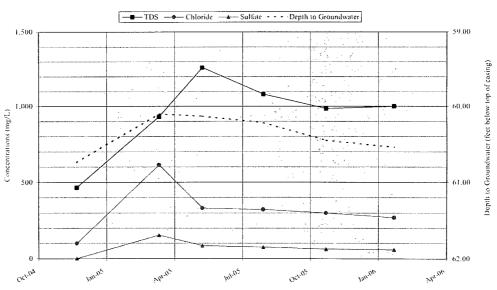


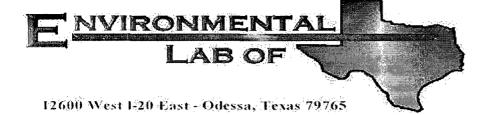
Figure 2 TDS, Chloride, Sulfate, and Depth to Groundwater Values Versus Time Graph (Deep MW-1)



# LABORATORY ANALYTICAL REPORTS

AND

**CHAINS OF CUSTODY** 



# **Analytical Report**

# Prepared for:

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

Project: Hobbs Vent F-29-1A Project Number: None Given Location: Hobbs/Lea County

Lab Order Number: 5C23007

Report Date: 04/05/05

Rice Operating Co.Project:Hobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Pope04/05/05 14:51

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SWB-1-1	5C23007-01	Water	03/22/05 15:35	03/23/05 08:00
SWB-1-2	5C23007-02	Water	03/22/05 15:10	03/23/05 08:00

Rice Operating Co.ProjectHobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM. 88240Project Manager:Kristin Pope04/05/05 14:51

# Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SWB-1-1 (5C23007-01) Water									
Benzene	ND	0.00100	mg/L	1	EC52804	03/24/05	03/24/05	EPA 8021B	
Toluene	ND	0.00100	н	"	b.	n	"	n	
Ethylbenzene	ND	0.00100	*	п	*	н	N	u	
Xylene (p/m)	ND	0.00100	D.	#	м	"	n	м	
Xylene (o)	ND	0.00100	*	н	м		п	"	
Surrogate: a,a,a-Trifluorotolucne		114%	80	120	,,	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.0 %	80	120	"	"	"	"	
SWB-1-2 (5C23007-02) Water									
Benzene	ND	0.00100	mg/L	1	EC52804	03/24/05	03/24/05	EPA 8021B	
Toluene	ND	0.00100	n	и	11	"	et	•	
Ethylbenzene	ND	0.00100	"	и	**	**	н	и	
Xylene (p/m)	ND	0.00100	n.	я	п	"	"	*	
Xylene (o)	ND	0.00100	**	н	н	"	и	n	
Surrogate: a.a,a-Trifluorotoluene		108 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		81.0 %	80	120	,,	"	"	"	

Rice Operating Co.Project:Hobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Pope04/05/05 14:51

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SWB-1-1 (5C23007-01) Water				<del>.</del>					
Total Alkalinity	144	2.00	mg/L	1	EC52908	03/23/05	03/23/05	EPA 310.2M	
Chloride	613	5.00	н	10	EC52513	03/24/05	03/24/05	EPA 300.0	
<b>Total Dissolved Solids</b>	930	5.00	"	1	EC52507	03/24/05	03/25/05	EPA 160.1	
Sulfate	154	5.00	*	10	EC52513	03/24/05	03/24/05	EPA 300 0	
SWB-1-2 (5C23007-02) Water									
Total Alkalinity	574	2.00	mg/L	1	EC52908	03/23/05	03/23/05	EPA 310.2M	
Chloride	879	25.0	11	50	EC52513	03/24/05	03/24/05	EPA 300.0	
Total Dissolved Solids	3960	5.00	"	1	EC52507	03/24/05	03/25/05	EPA 160.1	
Sulfate	1780	25.0	"	50	EC52513	03/24/05	03/24/05	EPA 300.0	

Rice Operating Co. Project: Hot

Project: Hobbs Vent F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given Project Manager: Kristin Pope Reported: 04/05/05 14:51

# Total Metals by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SWB-1-1 (5C23007-01) Water									
Calcium	168	1.00	mg/L	100	EC53102	03/29/05	03/30/05	EPA 6010B	
Magnesium	26.4	0.0100	"	10	*	*	в	я	
Sodium	114	0.100	*	"			ъ	n	
Potassium	9.22	0.100	"	2	EC53109	03/29/05	03/31/05	п	
SWB-1-2 (5C23007-02) Water									
Calcium	36.4	0.100	mg/L	10	EC53102	03/29/05	03/30/05	EPA 6010B	
Magnesium	41.9	0.0100	н			*	и		
Sodium	1840	10.0		1000	•	*	р	*	
Potassium	32.5	0.500		10	EC53109	03/29/05	03/31/05	н	

Fax: (505) 397-1471 Project: Hobbs Vent F-29-1A Rice Operating Co. 122 W. Taylor Project Number: None Given Reported: Hobbs NM, 88240 04/05/05 14:51

Project Manager: Kristin Pope

#### Organics by GC - Quality Control **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC52804 - EPA 5030C (GC)										
Blank (EC52804-BLK1)				Prepared &	Analyzed:	03/24/05				
Benzene	ND	0 00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0 00100	u							
Xylene (p/m)	ND	0.00100	n							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	19.8		ug/l	20.0		99.0	80-120			
Surrogate: 4-Bromofluorobenzene	17.3		"	20.0		86.5	80-120			
LCS (EC52804-BS1)				Prepared &	Analyzed:	03/24/05				
Benzene	100		ug/l	100		100	80-120			
Toluene	98.6		"	100		98.6	80-120			
Ethylbenzene	98.5		"	100		98.5	80-120			
Xylene (p/m)	201		17	200		100	80-120			
Xylene (o)	94.1		n	100		94.1	80-120			
Surrogate: a,a.a-Trifluorotoluene	22.2		"	20.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	16.5		"	20.0		82.5	80-120			
LCS Dup (EC52804-BSD1)				Prepared &	: Analyzed:	03/24/05				
Benzene	101		ug/l	100		101	80-120	0.995	20	
Toluene	99.0		*	100		99.0	80-120	0.405	20	
Ethylbenzene	97.8		u	100		97.8	80-120	0.713	20	
Xylene (p/m)	199		а	200		99.5	80-120	0.501	20	
Xylene (o)	99 5		is.	100		99.5	80-120	5.58	20	
Surrogate: a,a,a-Trifluorotoluene	22.3		**	20.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	16.5		"	20.0		82.5	80-120			
Calibration Check (EC52804-CCV1)				Prepared: (	)3/24/05 A	nalyzed: 03	/25/05			
Benzene	98.8		ug/l	100		98.8	80-120			
Toluene	95.7		"	100		95.7	80-120			
Ethylbenzene	97.6			100		97 6	80-120			
Nylene (p/m)	192		u	200		96.0	80-120			
Xylene (o)	103		a	100		103	80-120			
Surrogate: a, a, a-Trifluorotoluene	22.0		"	20.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	18.4		"	20.0		92.0	80-120			

Rice Operating Co.ProjectHobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Pope04/05/05 14:51

Organics by GC - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD		į
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	۱

Batch EC52804 - EPA 5030C (GC)

Matrix Spike (EC52804-MS1) Benzene	Source: 50	Source: 5C23005-01			Prepared: 03/24/05 Analyzed: 03/2		
	95.1	ug/l	100	ND	95 1	80-120	
Toluene	97.2	п	100	ND	97.2	80-120	
Ethylbenzene	89.2	n	100	ND	89.2	80-120	
Xylene (p/m)	183	U	200	ND	91.5	80-120	
Xylene (o)	93.3	n	100	ND	93 3	80-120	
Surrogate: a,a,a-Trifluorotoluene	22.0	"	20.0		110	80-120	
Surrogate: 4-Bromofluorobenzene	20.6	"	20.0		103	80-120	

Project: Hobbs Vent F-29-1A Rice Operating Co.

Project Number: None Given Project Manager: Kristin Pope Fax: (505) 397-1471 Reported: 04/05/05 14:51

General Chemistry Parameters by EPA / Standard Methods - Quality Control **Environmental Lab of Texas** 

	Reporting		Spike	Source		%REC		RPD	
Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Blank (EC52507-BLK1)				Prepared: 03/24/05 Analyzed: 03/25/05		
Total Dissolved Solids	ND	5 00	mg/L			
Duplicate (EC52507-DUP1)	Sourc	e: 5C23001-0	01	Prepared: 03/24/05 Analyzed: 03/25/05		
Total Dissolved Solids	1140	5.00	mg/L	1140	0 00	20
D. I. D. CEGETTA C. I. I. D	on (WetChem)					
Batch EC52513 - General Preparation	m (wetchen)					
· · · · · · · · · · · · · · · · · · ·	л (четенен)			Prepared & Analyzed: 03/24/05		
Batch EC52513 - General Preparation Blank (EC52513-BLK1) Sulfate	ND	0.500	mg/L	Prepared & Analyzed: 03/24/05		

Blank (EC52513-BLK2)				Prepared & Analyzed: 03/24/05
Chloride	ND	0.500	mg/L	
Sulfate	ND	0.500	"	

LCS (EC52513-BS1)		Prepared & Analyzed: 03/24/05						
Chloride	10.4	mg/L	10.0	104	80-120			
Sulfate	9.53	"	10.0	95.3	80-120			

LCS (EC52513-BS2)	Prepared & Analyzed: 03/24/05							
Chloride	10.5	mg/L	10 0	105	80-120			
Sulfate	9 80	п	10.0	98.0	80-120			
Calibration Check (EC52513-CCV1)			Prepared & Ana	dyzed: 03/24/05				

Chloride	10	0.6 mg/l	L 10	0 (	106	80-120
Sulfate	9.9	.93	10	0.0	99.3	80-120

122 W. Taylor

Analyte

Hobbs NM, 88240

Project: Hobbs Vent F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given Project Manager: Kristin Pope

Reported: 04/05/05 14:51

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Spike Source			%REC RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EC52513 - General Preparation (	WetChem)	· .								
Calibration Check (EC52513-CCV2)				Prepared &	Analyzed:	03/24/05				
Sulfate	9.80		mg/L	10.0		98 0	80-120			
Chloride	10.6		18	10.0		106	80-120			
Duplicate (EC52513-DUP1)	Sour	rce: 5C23001-	01	Prepared &	Analyzed:	03/24/05				
Chloride	216	5.00	mg/L		215			0.464	20	
Sulfate	216	5.00	"		215			0.464	20	
Duplicate (EC52513-DUP2)	Sour	rce: 5C23018-	-07	Prepared &	Analyzed:	03/24/05				
Chloride	1540	12.5	mg/L		1530			0.651	20	
Sulfate	163	12.5	и		163			0.00	20	
Batch EC52908 - General Preparation (	WetChem)									
Blank (EC52908-BLK1)				Prepared &	Analyzed:	03/23/05				
Total Alkalinity	ND	2.00	mg/L							
Calibration Check (EC52908-CCV1)				Prepared &	Analyzed:	03/23/05				
Carbonate Alkalinity	0.0500		mg/L	0.0500		100	80-120			
Duplicate (EC52908-DUP1)	Sour	rce: 5C22002-	-01	Prepared &	Analyzed:	03/23/05				
Total Alkalimity	221	2.00	mg/L		220			0.454	20	

Project: Hobbs Vent F-29-1A

122 W. Taylor

Project Number: None Given

Fax: (505) 397-1471

Reported: 04/05/05 14:51

Hobbs NM, 88240 Project Manager: Kristin Pope

#### Total Metals by EPA / Standard Methods - Quality Control Environmental Lab of Texas

	b t	Reporting	77 :	Spike	Source	A/DEC	%REC	מתח	RPD	<b>N</b> T
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EC53102 - 6010B/No Digestion										
Blank (EC53102-BLK1)				Prepared: (	03/29/05 A	Analyzed: 0	3/30/05			
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	н							
Sodium	ND	0.0100	n							
Calibration Check (EC53102-CCV1)				Prepared: (	03/29/05 A	Analyzed: 0	3/30/05			
Calcium	2 25		mg/L	2.00		112	85-115			
Magnesium	1.93		"	2.00		96.5	85-115			
Sodium	2 18		п	2.00		109	85-115			
Duplicate (EC53102-DUP1)	Sou	rce: 5C23001	-01	Prepared: (	03/29/05 A	Analyzed: 0:	3/30/05			
Calcium	47 7	0.100	mg/L		51.6			7.85	20	
Magnesium	62.7	0 0200	н		59.3			5.57	20	
Sodium	247	1.00			252			2 00	20	
Batch EC53109 - 6010B/No Digestion										
Blank (EC53109-BLK1)				Prepared:	03/29/05 A	Analyzed: 0	3/31/05			
Potassium	ND	0 0500	mg/L		-					
Calibration Check (EC53109-CCV1)				Prepared: (	03/29/05 A	Analyzed: 03	3/31/05			
Potassium	2.02		mg/L	2.00		101	85-115			
Duplicate (EC53109-DUP1)	Sou	rce: 5C23001-	-01	Prepared: (	03/29/05 A	Analyzed: 0	3/31/05			
Potassium	10.1	0 500	mg/L		10.7			5.77	20	

Rice Operating Co.ProjectHobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Pope04/05/05 14:51

#### **Notes and Definitions**

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

	Kaland K July		
Report Approved By:	Racar C 11-03/11	Date:	4/5/2005

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

Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Sanchez, Lab Tech.

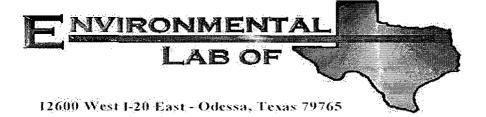
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If you have received this material in error, please notify us immediately at 432-563-1800.

TAT bisbosi2 2. 40 miglass with on the wishers alubanas ang) TAT H2U9 Lan County J. Bechset CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 2,50 N.A.O.N Project Name: Hobbs Uent Temperature Upon Receipt: 103 Sample Containers Intect? Laboratory Comments: X K WIEX HOST BROOK ON BLEX BYSO ーー「千つ子の」 Project Loc: Tholos 10.P 999788378VS OTAL PO #: Project #: Anions (Cl. 804, C03, HC03) 60.03 Cadona (Ca, Mg, Na, K) 00.90 BOOK 5001 MS108 1,814 HF Other (specify): 35.50 HO'S 03-23-05 Stringer Date Water Other (Specify) ensite of the sine 'OSTH HORN HCI HMO ディストロイング めのか BULLIUMAN col 173 No. of Containers イフスの から 0:00 baldma2 amiT 900 N80 3/22/15 3/22/05 Received by Date Sampled するでできる op cation * GCC S がある mission mental Lab of Texas Phone: 432-563-1800. Fax: 432-563-1713 RECES もなる とももの Fresh Amail analysis FIELD CODE ŧ NS 801 Telephone No: 5 5 1 1 Company Name Project Manager Company Address: Sampler Signature: City/State/Zlp: 12600 West I-20 East Odessa, Texas 79755 Special instructions: AB # (lab use only) 25 D Relinquished by

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

client <u>Pice Operating</u>			
Date/Time: 3/23/05 10:15			
Order#: 5023007			
Initials: Cle		÷	
Sample Receip	t Checklist	-	
Temperature of container/cooler?	Yes   No	0.5 01	
Shipping container/cooler in good condition?	(CE) No		
Custodi/ Seals intact on shipping container/cooler?	(YES) No	Not present	
Custody Seals intact on sample bottles?	(ES) No	Mot present	
Chain of custody present?	Mes No		
Sample Instructions complete on Chain of Gustody?	RES NO		
Chain of Custody signed when relinquished and received?	( es) No		
Chain of custody agrees with sample label(s)	Cres No		
Container labels legible and intact?	(Ves) No		
Sample Matrix and properties same as on chain of custody?	( No I		
Samples in proper container/bcit/e?	(Yes) No	· · · · · · · · · · · · · · · · · · ·	
Samples properly preserved?	NC NC		
Sample bottles intact?	TO NO	A THE RESERVE THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE	
Preservations documented on Chain of Custody?	(Pa) No		
Containers documented on Chain of Custody?	CES No		
Sufficient sample amount for incicated test?	TOTO NO	· · · · · · · · · · · · · · · · · · ·	
All samples received within sufficient hold time?	(ES) No		
MOC samples have zero headscade?	INTES No	Not Applicable	
Other observations:			arakat di pagaman kasar a pangan akanlapa dalah dari dari dari Malah dalah Mara Sarah Sakaba da Malah dari dari dari dari dari dari dari dari
Variance Docu Contact Person:		Contacted by:	
Regarding:	adapahan dari majara, sar manganin dikastangan dalah andar dari mengelah dari dari dari dari dari dari dari da	Plantonia (1924), i Australia de Brasileo de Judo Particio (1984).	a the second second second second second second second second second second second second second second second
Corrective Action Taken:			
	anga pangangan and nakala katala katala katala katala katala katala katala katala katala katala katala katala An anaka pandandan katala katala katala katala katala katala katala katala katala katala katala katala katala		and the second second second second second second second second second second second second second second seco
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## Analytical Report

#### Prepared for:

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

Project: Hobbs Vent F-29-1A Project Number: None Given Location: Hobbs

Lab Order Number: 5E23001

Report Date: 06/07/05

Rice Operating Co.Project:Hobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Pope06/07/05 14:10

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SWD B-1-1	5E23001-01	Water	05/19/05 09:47	05/20/05 18:00
SWD B-1-2	5E23001-02	Water	05/19/05 10:44	05/20/05 18:00

Rice Operating Co.Project:Hobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Pope06/07/05 14:10

#### Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SWD B-1-1 (5E23001-01) Water									
Benzene	ND	0.00100	mg/L	1	EE52313	05/23/05	05/23/05	EPA 8021B	
Toluene	ND	0.00100	"	п	и	"	H.	"	
Ethylbenzene	ND	0.00100	n	n	м	D D	и	"	
Xylene (p/m)	ND	0.00100	*		*	11	"	и	
Xylene (o)	ND	0.00100	*	n	"		n	u	
Surrogate: a,a,a-Trifluorotoluene		93.0 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.0 %	80-1	20	"	"	u	"	
SWD B-1-2 (5E23001-02) Water									
Benzene	ND	0.00100	mg/L	1	EE52313	05/23/05	05/23/05	EPA 8021B	
Toluene	ND	0.00100	п	n	н	**	n	п	
Ethylbenzene	ND	0.00100	<i>n</i>	п	н	n	н	а	
Xylene (p/m)	ND	0.00100	n	n	н	17	ri	п	
Xylene (0)	ND	0.00100	"	"	H.	17	н		
Surrogate: a,a,a-Trifluorotoluene		93.5 %	80-1	20	,,	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.0%	80-1	20	"	"	"	"	

Project: Hobbs Vent F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given Project Manager: Kristin Pope

Reported: 06/07/05 14:10

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SWD B-1-1 (5E23001-01) Water									
Total Alkalinity	142	2.00	mg/L	1	EE52509	05/24/05	05/24/05	EPA 310.2M	
Chloride	332	5.00	,	10	EE52503	05/24/05	05/24/05	EPA 300.0	
Total Dissolved Solids	1260	5.00		1	EE52507	05/23/05	05/23/05	EPA 160.1	
Sulfate	84.5	5.00	,	10	EE52503	05/24/05	05/24/05	EPA 300.0	
SWD B-1-2 (5E23001-02) Water									
Total Alkalinity	440	2.00	mg/L	1	EE52509	05/24/05	05/24/05	EPA 310.2M	
Chloride	626	25.0	**	50	EE52503	05/24/05	05/24/05	EPA 300.0	
Total Dissolved Solids	2750	5.00	н	1	EE52507	05/23/05	05/23/05	EPA 160.1	
Sulfate	788	25.0	11	50	EE52503	05/24/05	05/24/05	EPA 300.0	

Rice Operating Co.Project:Hobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Pope06/07/05 14:10

#### Total Metals by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SWD B-1-1 (5E23001-01) Water									
Calcium	130	0.500	mg/L	50	EE52518	05/25/05	05/25/05	EPA 6010B	
Magnesium	25.3	0.0100		10	н	и	b	и	
Potassium	5.92	0.0500	н	1	19	и	D	u .	
Sodium	85.9	0.100	н	10	b	N	11	п	
SWD B-1-2 (5E23001-02) Water									
Calcium	71.4	0.100	mg/L	10	EE52518	05/25/05	05/25/05	EPA 6010B	
Magnesium	31.0	0.0100	Þ	n	n	n	N	n	
Potassium	10.9	0.250	p	5	21	u.	,,	**	
Sodium	682	2.00	"	200	11	и	n	н	

Project: Hobbs Vent F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given Project Manager: Kristin Pope Reported: 06/07/05 14:10

#### Organics by GC - Quality Control Environmental Lab of Texas

	D 1	Reporting	T 7- 1-	Spike	Source	e pro	%REC	D.P.P.	RPD	<b>N</b> f :
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE52313 - EPA 5030C (GC)								_		
Blank (EE52313-BLK1)				Prepared &	Analyzed	05/23/05				
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	at .							
Ethylbenzene	ND	0.00100								
Xylene (p/m)	ND.	0.00100	н							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	18.3		ug/l	20.0		91.5	80-120			
Surrogate: 4-Bromofluorobenzene	21.1		"	20.0		106	80-120			
LCS (EE52313-BS1)				Prepared &	Analyzed:	05/23/05				
Benzene	94 6		ug/l	100		94.6	80-120			
Toluene	99.1		n	100		99.1	80-120			
Ethylbenzene	111		n	100		111	80-120			
Xylene (p/m)	224		n	200		112	80-120			
Xylene (o)	115		,,	100		115	80-120			
Surrogate: a, a, a-Trifluorotoluene	20.3		"	20.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	22.4		"	20.0		112	80-120			
Calibration Check (EE52313-CCV1)				Prepared: 0	05/23/05 A	nalyzed: 05	5/24/05			
Benzene	84.6		ug/l	100		84.6	80-120			
Toluene	92.8		н	100		92.8	80-120			
Ethylbenzene	91.1		n	100		91.1	80-120			
Xylene (p/m)	182		es .	200		910	80-120			
Xylene (o)	87.9		,	100		87.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	17.3		"	20.0		86.5	80-120			
Surrogate: 4-Bromofluorobenzene	19.4		"	20.0		97.0	80-120			
Matrix Spike (EE52313-MS1)	Sou	rce: 5E23008-	05	Prepared: 0	05/23/05 A	nalyzed: 05	5/24/05			
Benzene	92.0		ug/l	100	ND	92.0	80-120			
l'oluene	918		n	100	ND	91.8	80-120			
Ethylbenzene	90 0		tr	100	ND	90.0	80-120			
Nylene (p/m)	192		н	200	ND	96.0	80-120			
Xylene (o)	93.5			100	ND	93.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	18.3		"	20.0		91.5	80-120	<del>_</del> .	_	
Surrogate: 4-Bromofluorobenzene	22.8		"	20.0		114	80-120			

Rice Operating Co.ProjectHobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Pope06/07/05 14:10

#### Organics by GC - Quality Control Environmental Lab of Texas

-		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch EE52313 - EPA 5030C (GC)

Matrix Spike Dup (EE52313-MSD1)	Source: 51	Prepared: 0	Prepared: 05/23/05 Analyzed: 05/24/					
Benzene	92 6	ug/l	100	ND	92.6	80-120	0 650	20
Toluene	93.5	*	100	ND	93.5	80-120	1.83	20
Ethylbenzene	94.9	п	100	ND	94.9	80-120	5.30	20
Xylene (p/m)	187	н	200	ND	93.5	80-120	2.64	20
Xylene (o)	95.2	"	100	ND	95 2	80-120	1.80	20
Surrogate: a,a,a-Trifluorotoluene	18.0	"	20.0		90.0	80-120		
Surrogate: 4-Bromofluorobenzene	23.0	"	20.0		115	80-120		

Project: Hobbs Vent F-29-1A

Fax: (505) 397-1471

122 W. Taylor

Project Number: None Given Project Manager: Kristin Pope Reported: 06/07/05 14:10

Hobbs NM, 88240

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE52503 - General Preparation (V	VetChem)									
Blank (EE52503-BLK1)	·	<u> </u>		Prepared &	k Analyzed:	05/24/05				
Sulfate	ND	0.500	mg/L							
Chloride	ND	0.500	"							
LCS (EE52503-BS1)				Prepared &	Analyzed:	05/24/05				
Chloride	10.5		mg/L	10.0		105	80-120		,	
Sulfate	9 69		и	10.0		96.9	80-120			
Calibration Check (EE52503-CCV1)				Prepared &	Analyzed:	05/24/05				
Chloride	10.8		mg/L	10.0		108	80-120			
Sulfate	9.24		"	10 0		92 4	80-120			
Duplicate (EE52503-DUP1)	Sou	rce: 5E20008-	01	Prepared &	Analyzed:	05/24/05				
Chloride	345	10.0	mg/L		347			0.578	20	
Sulfate	462	10.0	н		478			3.40	20	
Batch EE52507 - Filtration Preparation		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
Blank (EE52507-BLK1)				Prepared &	Analyzed:	05/23/05				
Total Dissolved Solids	CIK	5.00	mg/L							
Duplicate (EE52507-DUP1)	Sou	rce: 5E19012-	01	Prepared &	Analyzed:	05/23/05				
Total Dissolved Solids	704	5.00	mg/L		699			0 713	20	
Batch E E52509 - General Preparation (V	VetChem)					шана				
Blank (EE52509-BLK1)				Prepared &	Analyzed:	05/24/05				
Total Alkalmity	ND	2.00	mg/L							

Project: Hobbs Vent F-29-1A

Fax: (505) 397-1471

122 W. Taylor

Project Number: None Given

**Reported:** 06/07/05 14:10

Hobbs NM, 88240

Project Manager: Kristin Pope

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EE52509 - General Preparation (WetChem)

Duplicate (EE52509-DUP1)	Source	Source: 5E19001-01			yzed: 05/24/05				
Total Alkalinity	215	2.00	mg/L	21	4		0.466	20	
Reference (EE52509-SRM1)				Prepared & Anal	yzed: 05/24/05				
Bicarbonate Alkalinity	230		mg/L	200	115	80-120		10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	

Project: Hobbs Vent F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240

Project Number: None Given Project Manager: Kristin Pope

Reported: 06/07/05 14:10

#### Total Metals by EPA / Standard Methods - Quality Control **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE52518 - 6010B/No Digestion										
Blank (EE52518-BLK1)				Prepared &	Analyzed:	05/25/05				
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	•							
Potassium	ND	0.0500	*							
Sodium	ND	0 0100	-							
Blank (EE52518-BLK2)				Prepared &	: Analyzed:	05/25/05				
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	,,							
Potassium	ND	0.0500	"							
Sodium	ND	0 0100	"							
Calibration Check (EE52518-CCV1)				Prepared &	: Analyzed:	05/25/05				
Calcium	1 86		mg/L	2.00		93.0	85-115			
Magnesium	2 10		n	2.00		105	85-115			
Potassium	1 93		"	2.00		96.5	85-115			
Sodium	2.18		P	2.00		109	85-115			
Duplicate (EE52518-DUP1)	Sou	rce: 5E19001-	01	Prepared &	: Analyzed:	05/25/05				
Calcium	51.6	0.500	mg/L		56 0			8.18	20	
Magnesium	26.4	0.0100	"		27.2			2.99	20	
Potassium	5.70	0.0500	"		5 69			0.176	20	
Sodium	109	0.100	μ		110			0.913	20	
Ouplicate (EE52518-DUP2)	Sou	rce: 5E24016-	01	Prepared &	: Analyzed:	05/25/05				
Calcium	90.2	0.100	mg/L		89.5			0.779	20	
vlagnesium	50 6	0.0100	н		50.5			0.198	20	
Potassium	10.7	0.500	п		11.0			2.76	20	
Sodium	244	0.500	,,		248			1.63	20	

Rice Operating Co.ProjectHobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Pope06/07/05 14:10

#### **Notes and Definitions**

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

	Kaland K Julius		
Report Approved By:	Racari C 180	Date:	6/7/2005

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

Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Sanchez, Lab Tech.

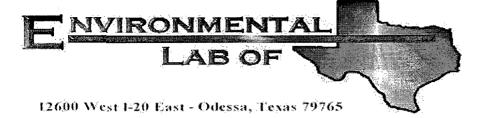
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If you have received this material in error, please notify us immediately at 432-563-1800.

cuerset on ce w iabeus rseals Section cool TAT prepriets Montae ary) TAT HEUR Project Name Hobbs Went F-29 155 CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Zhloc bwlazia 12421 a - 40 mugass The J MRO Temperature Lipon Receipt Laboratory Comments KON Semple Considers intect? - L HOPE × **BLEX 8031003030** Mounts An Ag Da Cd Cr Ph Hg Sa 290 / d62 / 8W Project Loc: Ŷ Autous (Cif GOA: GOS' HCOS) Propert # Cations (Ca. Mg, No. N. (SS) 9001 9001 MS100 1'911 Hid. Other (absorb). 1904 50.07.50 Smade 000160 10 100 CO 397-147 × 16164 Office (Specify) Metia "OSTH TREETYSEY. MACH KH Fex 180 / 10 SA SONH mernan (C) m Ho, of Containing 16 60 bakkmas amit 04nx CISTIN Y 28h 0 Environmental Lab of Texas I, Ltd Dalding ared ナルケアにい Tay low Deca halo 7616-868 10:00 Phone: 919-853-1800 Fax: 919-853-1713 20 FIELD CODE N S 12005 1 りん ī ďΩ  $\ll$ \ 03 03 Q3 \ Sampler Signature 一ついっているか Company Address: City/State/Zrp Telephone No: Project Manager: Company Name 12600 West I-20 East Odeska, Texas 78763 Special Instructions AB # (lab use only) とら 0

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

Client: Rice Operating				
Date/Time: 5/20/05 (8:00			•	
Order #: 5F2S001				•
Initials:	•			
Sample Receipt C	heckli	st		
Femicerature of container/cooler?	Yes	No	C C	
Shipping container/cooler in good condition?	(CES)			
Custody Seals intact on shipping container/cooler?	KEST		Not present	
Custody Seals intact on sample bottles?	XES	No	Not present	
Chain of custody present?	প্রেক্ত	No		
Sample Instructions complete on Chain of Custody?	Yes	No		
Chain of Custody signed when relinquished and received?	(P895)	No		
Chain of custody agrees with sample label(s)	OFES !	No		
Container labels legible and intact?	<u>₹895</u>			
Sample Matrix and properties same as on chain of custody?	(Ves)			
Samples in proper container/bottle?	(YES)			
Samples groberly preserved?	(FES)			
Sample bottles intact?	1000	No.	Annual of Management and Assert Page 1991	
Preservations documented on Chain of Custody?	pres		A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STA	
Containers documented on Chain of Custody? Sufficient sample amount for indicated test?	SASS I	No No		
All samples received within sufficient hold time?	27 93 27 23	No		
VCC samples have zero headspace?	XSS I	No	Not Applicable	
Other observations:	e en en en en en en en en en en en en en			
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Variance Docume	entatio	n:		
Contact Person: Date/Time:			Contacted by:	
Regarding			er	
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Corrective Action Taken:				
Conecave Action Taxes,				
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## **Analytical Report**

#### **Prepared for:**

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

Project: Hobbs Vent F-29-1A Project Number: None Given Location: Hobbs

Lab Order Number: 5H09005

Report Date: 08/24/05

Rice Operating Co.Project:Hobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Pope08/24/05 08:42

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #SWD B-1-1	5H09005-01	Water	08/09/05 08:50	08/09/05 15:12
Monitor Well #SWD B-1-2	5H09005-02	Water	08/09/05 09:20	08/09/05 15:12

Project: Hobbs Vent F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given Project Manager: Kristin Pope Reported: 08/24/05 08:42

#### Organics by GC Environmental Lab of Texas

		Reporting			<u> </u>				
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #SWD B-1-1 (5H09005-01	l) Water								
Benzene	ND	0.00100	mg/L	1	EH51001	08/10/05	08/10/05	EPA 8021B	
Toluene	ND	0.00100	**	U	и	#	н	"	
Ethylbenzene	ND	0.00100	и	п	n	#	п	u	
Xylene (p/m)	ND	0.00100	н	и	a	"			
Xylene (o)	ND	0.00100	μ	n	n	и	n	"	
Surrogate: a,a,a-Trifluorotoluene		93.1 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.0 %	80-1	20	"	**	,,	"	
Monitor Well #SWD B-1-2 (5H09005-02	2) Water								
Benzene	ND	0.00100	mg/L	1	EH51001	08/10/05	08/10/05	EPA \$021B	
Toluene	ND	0.00100	п	**	9	n	N		
Ethylbenzene	ND	0.00100	n	n	**	Ir	н	"	
Xylene (p/m)	ND	0.00100	,	n	и	n	н	"	
Xylene (o)	ND	0.00100	м	ø	H	n		μ	
Surrogate: a,a,a-Trifluorotoluene		86.7 %	80-1.	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.5 %	80-1	20	"	"	"	"	

Rice Operating Co.Project:Hobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Pope08/24/05 08:42

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #SWD B-1-1 (5110900	5-01) Water								
Total Alkalinity	140	2.00	mg/L	1	EH51207	08/10/05	08/10/05	EPA 310.2M	
Chloride	322	5.00	"	10	EH51906	08/15/05	08/15/05	EPA 300.0	
Total Dissolved Solids	1080	5.00	и	1	EH51002	08/10/05	08/11/05	EPA 160.1	
Sulfate	75.7	5.00	e	10	EH51906	08/15/05	08/15/05	EPA 300.0	
Monitor Well #SWD B-1-2 (5110900	5-02) Water								
Total Alkalinity	332	2.00	mg/L	1	EH51207	08/10/05	08/10/05	EPA 310.2M	
Chloride	470	12.5	*	25	EH51906	08/15/05	08/15/05	EPA 300.0	
Total Dissolved Solids	1780	5.00	*	1	EH51002	08/10/05	08/11/05	EPA 160.1	
Sulfate	475	12.5	,,	25	EH51906	08/15/05	08/15/05	EPA 300.0	

Project: Hobbs Vent F-29-1A

122 W. Taylor Hobbs NM, 88240 Project Number: None Given Project Manager: Kristin Pope Fax: (505) 397-1471

Reported: 08/24/05 08:42

#### Total Metals by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #SWD B-1-1 (5110900	5-01) Water								
Calcium	153	0.500	mg/L	50	EH51103	08/11/05	08/11/05	EPA 6010B	
Magnesium	24.7	0.0100	*	10	*	u u	D	n·	
Potassium	5.92	0.0500	,,	]	*	11	n	p.	
Sodium	81.4	0.100	11	10	Ħ	М	n	"	
Monitor Well #SWD B-1-2 (5110900	5-02) Water								
Calcium	142	0.500	mg/L	50	EH51103	08/11/05	08/11/05	EPA 6010B	
Magnesium	32.6	0.0100	*	10	"	N	*	n	
Potassium	6.92	0.250	*	5	h	н	*	n	
Sodium	477	2.00	**	200		н	"	n	

Rice Operating Co.Project:Hobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Pope08/24/05 08:42

#### Organics by GC - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EH51001 - EPA 5030C (GC)										·
Blank (EH51001-BLK1)				Prepared &	Analyzed:	08/10/05				
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	n							
Xylene (p/m)	ND	0.00100	n							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	98.2		ug/l	100		98.2	80-120			
Surrogate: 4-Bromofluorobenzene	89.7		"	100		89.7	80-120			
.CS (EH51001-BS1)				Prepared &	Analyzed:	08/10/05				
Benzene	89.3		ug/l	100		89.3	80-120	••••		_
l'oluene	92.2		n	100		92.2	80-120			
Ethylbenzene	91.4		n	100		914	80-120			
Xylene (p/m)	185		**	200		92.5	80-120			
Xylene (o)	85.5		ø	100		85.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	116		"	100		116	80-120			
Surrogate: 4-Bromofluorobenzenc	115		"	100		115	80-120			
Calibration Check (EH51001-CCV1)				Prepared &	: Analyzed:	08/10/05				
Benzene	97.2		ug/l	100		97.2	80-120			
Toluene	95.9		"	100		95.9	80-120			
Ethylbenzene	89.1		n	100		89.1	80-120			
Xylene (p/m)	1 <b>7</b> 9		"	200		89.5	80-120		•	
Nylene (o)	81 7		,,	100		817	80-120			
Surrogate: a,a,a-Trifluorotoluene	117		"	100		117	0-200			
Surrogate: 4-Bromofluorobenzene	117		"	100		117	0-200			
Matrix Spike (EH51001-MS1)	Sou	rce: 5H03013-	-01	Prepared: 0	08/10/05 A	nalyzed: 08	/11/05			
Benzene	98.7		ug/l	100	ND	98 7	80-120			
l'oluene	99.4		n	100	ND	99 4	80-120			
Ethylbenzene	99.9		,,	100	ND	99.9	80-120			
Xylene (p/m)	202		n	200	ND	101	80-120			
Nylene (o)	92.7		D	100	ND	92.7	80-120			
Surrogate: a,a,a-Trifluoroioluene	90.6		"	100		90.6	80-120		_	
Surrogate: 4-Bromofluorobenzene	103		**	100		103	80-120			

Rice Operating Co.Project:Hobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Pope08/24/05 08:42

#### Organics by GC - Quality Control Environmental Lab of Texas

Analyte	Result	Reporting Limit Unit	Spike Level	Source Result	%REC_	%REC Limits	RPD_	RPD Limit	Notes
Batch EH51001 - EPA 5030C (GC)									
Matrix Spike Dup (EH51001-MSD1)	Sourc	ee: 5H03013-01	Prepared:	08/10/05 A	nalyzed: 08	3/11/05			
Benzene	90.5	ug/]	100	ND	90 5	80-120	8.67	20	
Toluene	93.1	ı	100	ND	93.1	80-120	6.55	20	
Ethylbenzene	93.7	n	100	ND	93.7	80-120	6.40	20	
Xylene (p/m)	188	,,	200	ND	94.0	80-120	7.18	20	
Xylene (o)	87 9	n	100	ND	879	80-120	5.32	20	
Surrogate: a,a,a-Trifluorotaluene	86.9	"	100		86.9	80-120			
Surrogate: 4-Bromofluorobenzene	93.4	"	100		93.4	80-120			

Project: Hobbs Vent F-29-1A

Fax: (505) 397-1471

122 W. Taylor

Project Number: None Given

Reported: 08/24/05 08:42

Hobbs NM, 88240

Project Manager: Kristin Pope

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EH51002 - General Preparation (W	etChem)									
Blank (EH51002-BLK1)				Prepared: (	08/10/05 At	nalyzed: 08				
Total Dissolved Solids	ND	5 00	mg/L							
Duplicate (EH51002-DUP1)	Sour	ce: 5H09005-	-01	Prepared: (	)8/10/05 Aı	nalyzeď: 08	/11/05			
Total Dissolved Solids	1120	5.00	mg/L		1080			3.64	5	
Batch EH51207 - General Preparation (W	etChem)									
Blank (EH51207-BLK1)		·	-	Prepared &	Analyzed:	08/10/05				
Total Alkalinity	ND	2.00	mg/L							
Duplicate (EH51207-DUP1)	Sour	ce: 5H09005-	-01	Prepared &	Analvzed:	08/10/05				
				,						
Total Alkalinity	137	2.00	mg/L		140			2.17	20	
								2.17	20	
Total Alkalimity					140		80-120	2.17	20	
Total Alkalinity  Reference (EH51207-SRM1)	230		mg/L	Prepared &	140	08/10/05	80-120	2.17	20	
Total Alkalinity  Reference (EH51207-SRM1)  Bicarbonate Alkalinity	230		mg/L	Prepared &	140	08/10/05	80-120	2.17	20	
Total Alkalinity  Reference (EH51207-SRM1)  Bicarbonate Alkalinity  Batch EH51906 - General Preparation (W	230		mg/L	Prepared &	140 Analyzed:	08/10/05	80-120	2.17	20	
Total Alkalinity  Reference (EH51207-SRM1)  Bicarbonate Alkalinity  Batch EH51906 - General Preparation (W  Blank (EH51906-BLK1)	230 etChem)	2.00	mg/L	Prepared &	140 Analyzed:	08/10/05	80-120	2.17	20	
Total Alkalinity  Reference (EH51207-SRM1)  Bicarbonate Alkalinity  Batch EH51906 - General Preparation (W  Blank (EH51906-BLK1)  Sulfate	230 ctChem)	2.00	mg/L mg/L	Prepared &	140 Analyzed:	08/10/05 115 08/15/05	80-120	2.17	20	

10.0

9.43

Sulfate

94.3

80-120

Project: Hobbs Vent F-29-1A

Fax: (505) 397-1471

122 W. Taylor

Project Number: None Given

Reported: 08/24/05 08:42

Hobbs NM, 88240

Project Manager: Kristin Pope

### General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EH51906 - General Preparation (WetChem)

Calibration Check (EH51906-CCV1)	Prepared & Analyzed: 08/15/05								
Chloride	9.85		mg/L	10.0	98.5	80-120			
Sulfate	11.4		"	10.0	114	80-120			
Duplicate (EH51906-DUP1)	Source: 5H0		-02	Prepared & Anal	yzed: 08/15/05				
Chloride	202	5 00	mg/L	20	03		0 494	20	
Sulfate	122	5.00	п	1:	22		0.00	20	

Project: Hobbs Vent F-29-1A

122 W. Taylor

Project Number: None Given Project Manager: Kristin Pope Fax: (505) 397-1471

Reported: 08/24/05 08:42

Hobbs NM, 88240

Total Metals 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 EH51103 - 6010B/No Digestion										
Blank (EH51103-BLK1)				Prepared &	: Analyzed:	08/11/05				
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	n							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Calibration Check (EH51103-CCV1)				Prepared &	: Analyzed:	08/11/05				
Calcium	1.95		mg/L	2.00		97.5	85-115			
Magnesium	2.17		"	2.00		108	85-115			
Potassium	1.90		**	2.00		95 0	85-115			
Sodium	1 84		rr rr	2.00		92 0	85-115			
Duplicate (EH51103-DUP1)	Sou	rce: 5H09005-	-01	Prepared &	Analyzed:	08/11/05				
Calcium	148	0.500	mg/L		153			3.32	20	
Magnesium	24 3	0.0100	n		24.7			1.63	20	
Potassium	5 97	0.0500	"		5 92			0.841	20	
Sodium	80 0	0.100	п		81.4			1.73	20	

Rice Operating Co.Project:Hobbs Vent F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Pope08/24/05 08:42

#### **Notes and Definitions**

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

LCS Laboratory Control Spike

Relative Percent Difference

MS Matrix Spike

Dup Duplicate

RPD

Report Approved By: Reland K Juliah Date: 8/24/2005

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.

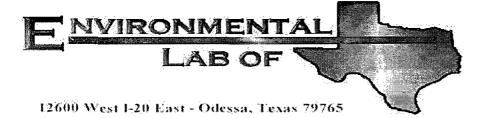
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TAT brebnsi2 Winborto 2-erg) TAT Haus Project Name: Hobbs Vent F-29 CHAIN OF GUSTODY RECORD AND ANALYSIS REQUEST 0 ご M.R.O. Temperature Upon Rebeipt: Sample Containers intact? Laboratory Comments: Project Loc. + Hobbs BLEX 90\$19\2030 at 81EX 9390 zemsiovimes. /omggaz Herals: As Ag Ba Cd Cr Pb Hg Se TOTAL 09074837366 00 project #: vious (Cl. 304, CO3, HCO3) Kinder and evaloristion (Si , Mg, Mg, Ma, IC) 9001 9001 WS108 1'817 Hd Other (specify): Mairix PGS atipag MASON. Ones (Sheeps) MOSES Preservative "OS"H HOWN HCI HINO FRINGOL No. of Containers 3 Time Sampled No. J. ちからたる。 4.4.0) Received by Date Sampled 30 8-1-2 Environmental Lab of Texas #500 0F Phone: 432-563-1800 Fax: 432-563-1713 T 3000 x 2-05 200 グルフ FIELD CODE 202.0 Telephone No: ( SS) LONGINE んできる Company Name Company Address: City/State/Zip: **SECOL** Project Manager: Sampler Signature: 12600 West I-20 East Odessa, Texas 79765 Special instructions: AB # (lab use only) かか Refinantished

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

Client: Pur DD.				
Date/Time: 6/9/05 15:12				
Order#; 5H09005				
Initials: CR				
Sample Receipt (	Sheckli	s†		
Temperature of container/cooler?	l Yes	No I	0.0	
Shipping centainer/cooler in good condition?	(ce)	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?	Yés \	No i		
Chain of Custody signed when relinquished and received?	YES	No I		
Chain of custody agrees with sample label(s)	Yes	No i		
Container labels legible and intact?	Ves	No		
Samble Matrix and properties same as on chain of custody?	Y(29)	No I		
Samples in procer container/bottle?	Yes.	No i		
Samples properly preserved?	Yesh	No		
Sample bottles intact?	1 YES			
Preservations documented on Chain of Custody?	Yes	No 1		
Containers decumented on Chain of Custody?	Yes	No !		
Sufficient sample amount for indicated test?	Yes	No.		
All samples received within sufficient hold time?  VOC samples have zero headspace?	Yes Yes	No No	Not Applicable	
AOO 2914/2162 USAS TOLE HEROPERCE:	1 (55)		TAUL ADDITION :	
Other observations: H09005-01-02 Rentral pH F9	8/ <b>3</b> /6	· · · · · · · · · · · · · · · · · · ·		
Variance Docum	5 5			
Contact Person: Date/Time: Regarding:		and the side of the part of the second of		
Regarding:  Corrective Action Takes:				
Corrective Action Taken:				



## **Analytical Report**

#### **Prepared for:**

Kristin Farris-Popc Rice Operating Co. 122 W. Taylor Hobbs, NM 88240

Project: Hobbs Jct. F-29-1A Project Number: None Given Location: Lea County

Lab Order Number: 5K02010

Report Date: 11/11/05

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

Reported: 11/11/05 12:15

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1 Deep	5K02010-01	Water	11/01/05 09:45	11/02/05 14:05
MW-2 Shallow	5K02010-02	Water	11/01/05 10:25	11/02/05 14:05

Rice Operating Co.Project:Hobbs Jct. F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope11/11/05 12:15

#### Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 Deep (5K02010-01) Water									
Benzene	ND	0.00100	mg/L	1	EK50810	11/08/05	11/09/05	EPA 8021B	
Toluene	ND	0.00100	"	п	*	п	п	"	
Ethylbenzene	ND	0.00100	lr.	п	ħ	и	й	,,	
Xylene (p/m)	ND	0.00100	11	"	п	a	e e	12	
Xylene (o)	ND	0.00100	"	n	*	**	п	"	
Surrogate: a,a,a-Trifluorotoluene		83.8 %	80-120		,,	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.0 %	80-12	20	n	"	"	"	
MW-2 Shallow (5K02010-02) Water									
Benzene	ND	0.00100	mg/L	1	EK50810	11/08/05	11/08/05	EPA 8021B	
Toluene	ND	0.00100	ы	п	h	п	10	"	
Ethylbenzene	ND	0.00100	**	41		H	D	"	
Xylene (p/m)	ND	0.00100		п	9	N	"	u u	
Xylene (o)	ND	0.00100	н	"	*	n	n	u .	
Surrogate: a,a,a-Trifluorotoluene		82.8 %	80-12	20	,,	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	80-12	20	**	"	,,	"	

Project: Hobbs Jct. F-29-1A Rice Operating Co. 122 W. Taylor

Hobbs NM, 88240

Project Number: None Given Project Manager: Kristin Farris-Pope Fax: (505) 397-1471

Reported: 11/11/05 12:15

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 Deep (5K02010-01) Water									
Total Alkalinity	140	4.00	mg/L	2	EK50912	11/09/05	11/09/05	EPA 310.2M	
Chloride	300	5.00	н	10	EK50703	11/04/05	11/07/05	EPA 300.0	
Total Dissolved Solids	986	5.00	b	1	EK50803	11/03/05	11/04/05	EPA 160.1	
Sulfate	63.2	5.00	n	10	EK50703	11/04/05	11/07/05	EPA 300.0	
MW-2 Shallow (5K02010-02) Water									
Total Alkalinity	274	4.00	mg/l.	2	EK50912	11/09/05	11/09/05	EPA 310.2M	
Chloride	226	5.00	n	10	EK50703	11/04/05	11/07/05	EPA 300.0	
Total Dissolved Solids	1100	5.00		1	EK50803	11/03/05	11/04/05	EPA 160.1	
Sulfate	218	5.00	н	10	EK50703	11/04/05	11/07/05	EPA 300.0	

Rice Operating Co.

Project: Hobbs Jct. F-29-1A

122 W. Taylor

Project Number: None Given

Project Number:None GivenReported:Project Manager:Kristin Farris-Pope11/11/05 12:15

Fax: (505) 397-1471

#### Total Metals by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M.W-1 Deep (5K02010-01) Water									
Calcium	141	0.500	mg/L	50	EK50907	11/09/05	11/09/05	EPA 200.7	
Magnesium	22.4	0.0100	н	10	u	*	м	н	
Potassium	5.70	0.0500	"	1	н	н	h	н	
Sodium	63.8	0.500		50	н	H	D	e	
MW-2 Shallow (5K02010-02) Water									
Calcium	64.6	0.500	mg/L	50	EK50907	11/09/05	11/09/05	EPA 200.7	
Magnesium	17.9	0.0100	н	10	н		20	**	
Potassium	4.31	0.250		5	*		м		
Sodium	278	0.500	*	50	h	11	11	11	

Hobbs NM, 88240

Project: Hobbs Jct. F-29-1A

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240

Project Number: None Given Project Manager: Kristin Farris-Pope

Reported: 11/11/05 12:15

#### Organics by GC - Quality Control **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK50810 - EPA 5030C (GC)										
Blank (EK50810-BLK1)				Prepared &	Analyzed:	11/08/05				
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100								
Ethylbenzene	ND	0.00100	n							
Xylene (p/m)	ND	0.00100	и							
Xylene (0)	ND	0.00100	**							
Surrogate: a,a,a-Trifluorotoluene	0.0332		"	0.0400		83.0	80-120			
Surrogate: 4-Bromofluorobenzene	0.0323		"	0.0400		80.8	80-120			
LCS (EK50810-BS1)				Prepared &	Analyzed:	11/08/05				
Benzene	0.0400	0 00100	mg/L	0.0500		80.0	80-120			
Toluene	0.0402	0.00100	"	0.0500		80.4	80-120			
Ethylbenzene	0.0400	0.00100	a	0.0500		80 0	80-120			
Xylene (p/m)	0.0813	0.00100	TF.	0.100		81.3	80-120			
Xylene (o)	0.0415	0.00100	"	0.0500		83.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	0.0347		"	0.0400		86.8	80-120			
Surrogate: 4-Bromofluorobenzene	0.0347		"	0.0400		86.8	80-120			
Calibration Check (EK50810-CCV1)				Prepared: 1	1/08/05 Aı	nalyzed: 11	/09/05			
Benzene	40 4		ug/l	50 0		80.8	80-120			
Toluene	40.9		,,	50 0		81.8	80-120			
Ethylbenzene	40.2		n	50.0		80.4	80-120			
Xylene (p/m)	80.9		a	100		80.9	80-120			
Xylene (0)	40 \$		17	50.0		816	80-120			
Surrogate: a,a,a-Trifluorotoluene	0.0346		mg/l.	0.0400		86.5	80-120			
Surrogale: 4-Bromofluorobenzene	0.0343		"	0.0400		85.8	80-120			
Matrix Spike (EK50810-MS1)	Sou	rce: 5K03003-	-01	Prepared: 1	1/08/05 Aı	nalyzed: 11	/09/05			
Benzene	0.0401	0.00100	mg/L	0.0500	ND	80.2	80-120			
Toluene	0.0409	0.00100	"	0.0500	ND	81.8	80-120			
Ethylbenzene	0 0401	0 00100	"	0.0500	ND	80.2	80-120			
Xylene (p/m)	0.0802	0 00100	41	0.100	ND	80.2	80-120			
Xylene (0)	0.0418	0.00100	11	0.0500	ND	83.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	0.0339		"	0.0400		84.8	80-120			
Surrogate: 4-Bromofluorobenzene	0.0344		,,	0.0400		86.0	80-120			

Rice Operating Co.Project:Hobbs Jet. F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope11/11/05 12:15

#### Organics by GC - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	I, imit	Notes

#### Batch EK50810 - EPA 5030C (GC)

Matrix Spike Dup (EK50810-MSD1)	Sou	Source: 5K03003-01			Prepared & Analyzed: 11/08/05				
Benzene	0 0401	0.00100	mg/L	0 0500	ND	80.2	80-120	0 00	20
Toluene	0 0407	0 00100	н	0.0500	ND	81.4	80-120	0.490	20
Ethylbenzene	0.0404	0.00100	u	0.0500	ND	80.8	80-120	0.745	20
Xylene (p/m)	0.0812	0.00100	a	0.100	ND	81.2	80-120	1 24	20
Xylene (o)	0 0424	0 00100	"	0.0500	ND	84.8	80-120	1 43	20
Surrogate: a,a,a-Trifluorotolucne	0.0335		- "	0.0400		83.8	80-120		
Surrogate: 4-Bromofluorobenzene	0.0381		"	0.0400		95.2	80-120		

Rice Operating Co.Project:Hobbs Jct. F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope11/11/05 12:15

## General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK50703 - General Preparation (	WetChem)									
Blank (EK50703-BLK1)				Prepared: 1	11/04/05 A	nalyzed: 11	/07/05			
Sulfate	ND	0.500	mg/L							
Chloride	ND	0.500	n							
LCS (EK50703-BS1)				Prepared: 1	11/04/05 A	nalyzed: 11	/07/05		_	
Sulfate	8 75		mg/L	10.0		87.5	80-120			
Chloride	8.00		**	10 0		80 0	80-120			
Calibration Check (EK50703-CCV1)				Prepared: 11/04/05 Analyzed: 11/07/05						
Chloride	8 13		mg/L	10.0		81.3	80-120			
Sulfate	8.85		a	10 0		88.5	80-120			
Duplicate (EK50703-DUP1)	Sou	rce: 5K02009-	-01	Prepared: 1	11/04/05 A	nalyzed: 11	/07/05			
Sulfate	105	10.0	mg/L		100			4 88	20	
Chloride	189	10.0	p		185			2.14	20	
Batch EK50803 - General Preparation (	WetChem)					_				
Blank (EK50803-BLK1)				Prepared: 1	11/03/05 A	nalyzed: 11	/04/05			
Total Dissolved Solids	ND	5.00	mg/L			-				
Duplicate (EK50803-DUP1)	Sou	rce: 5K02009-	01	Prepared: 1	11/03/05 A	nalyzed: 11	/04/05			
Total Dissolved Solids	736	5 00	mg/L		762			3.47	5	
Batch EK50912 - General Preparation (	WetChem)					_				ā:
				n 10		1 * /00/05				
Blank (EK50912-BLK1)				Prepared &	: Analyzed:	11/09/05				

Rice Operating Co.ProjectHobbs Jct. F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope11/11/05 12:15

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch FK50912 General Prepara	tion (WetChem)									

Batch EK50912 - General Preparation (WetChem)												
Duplicate (EK50912-DUP1)	Source	e: 5K0 <b>2</b> 009-	01	Prepared & Ana	alyzed: 11/09/05							
Total Alkalinity	206	4.00	mg/L		208		0.966	20				
Reference (EK50912-SRM1)	Prepared & Analyzed: 11/09/05											
Bicarbonate Alkalinity	229		mg/L	200	114	80-120						

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240 Project: Hobbs Jct. F-29-1A

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported: 11/11/05 12:15

#### Total Metals 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 EK50907 - 6010B/No Digestion											
Blank (EK50907-BLK1)		Prepared & Analyzed: 11/09/05									
Calcium	ND	0.0100	mg/L								
Magnesium	NID	0.00100	"								
Potassium	CIV.	0.0500	"								
Sodium	ND	0.0100	n								
Calibration Check (EK50907-CCV1)				Prepared &	Analyzed:	11/09/05					
Calcium	1 96		mg/L	2.00		98 0	85-115				
Magnesium	2 14		n	2.00		107	85-115				
Potassium	1.89		n	2.00		94 5	85-115				
Sodium	1.88			2.00		94 0	85-115				
Duplicate (EK50907-DUP1)	Sou	rce: 5K02009-	-01	Prepared &	Analyzed:	11/09/05					
Calcium	146	0.500	mg/L		136			7.09	20		
Magnesium	24.7	0.0100	,,		24.4			1 22	20		
Potassium	4.71	0.0500	P		4.79			1.68	20		
Sodium	87 3	0.500	"		85.0			2.67	20		

Rice Operating Co,ProjectHobbs Jct. F-29-1AFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope11/11/05 12:15

#### **Notes and Definitions**

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: Date:

11/11/2005

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director La Tasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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# Environmental Lab of Texas

12600 West I-20 East Odessa, Texas 79765

Phone; 432-563-1800 Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name: #2005 JCT. F-29-14	Project #:	Project Loc: Lea County	PO #.	**************************************	The system is the supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and supplies and	Analyze For	7074.		Standard TAT (Pre-Schedule) RUSH TAT (Pre-Schedule) RUSH TAT (Pre-Schedule) RUSH RAS TAROOS on BTEX 8250 RUSHS (Sol 1950) RUSH (ESP / CEC RUSH (ESP / CEC RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH (Sol 1950) RUSH	×	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX					Ceswd.com Sanpse Containers Intact?  Labeis on container?  Custody Seals: "portemers (#556)  Temperature Upon Receipt	Date Tree Laboratory Comments:	Date Time (1-poly (1/2/05 2:05
kpriceswd@valomet.com				Fax No. (505) 397-1471	1340 X & LOLD			Preservative	Date Sampled Time Sampled No. of Cortainers So Hvo. Hybo.	11-1 9:45 3 x x	11-1 10:25 3 K K		anne posses		And the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	O: kpriceswd@valornet.com & mfranks@riceswd.com	Received by:	Recoved by ELOT
Project Manager: Kristin Farris Pope kpricesy	Company Name RICE Operating Company	Company Address: 122 W. Taylor Street	citystate/2ip: Hobbs, New Mexico 88240	Telephone No: (505) 393-9174	Samplar Signature: Rozanne Johnson (505) 631-934	Email: 102 Stroe@owler Cott		والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والمواقعة والموا	S C C C C C C C C C C C C C C C C C C C	CO Montor Well # / Dec O	-02 " " 2 Stallow					Special Instructions: PLEASE Email RESULTS TO:		Deta Time

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

Client: P(C) 017.				
6/1-				
Date/Time: <u>U/2/05 2:05</u>				
Order #: 6202010				
order #				
Initials:				
DINGO.				
Sample Receipt	Checkli	st		
Temperature of container/cooler?	Yes	No	(O C	
Shipping container/cooler in good condition?	Yes 1	No	}	
Custody Seals intact on shipping container/cooler?	(es	No	Not present	
Custody Seals intact on sample bottles?	Ves	No.	Not present	
Chain of custody present?	(es	No		
Sample Instructions complete on Chain of Custody?	Yes	No		
Chain of Custody signed when relinquished and received?	Was I	No		
Chain of custody agrees with sample label(s)	(C)	No		
Container labels legible and intact?	1785 I	No		
Sample Matrix and properties same as on chain of custody?	(Fes. )	No		
Samples in proper container/bottle?	<b>₹</b> €3	No		
Samples properly preserved?	Xes	No		
Sample bottles intact?	7ès I	No		
Preservations documented on Chain of Custody?	/zes	No	(	
Containers documented on Chain of Custody?	725	No		
Sufficient sample amount for indicated test?	(Yes)	No		
All samples received within sufficient hold time?	¥€\$) \	No		
VOC samples have zero headspace?	Yes	No	Not Applicable	
Other observations:				
Variance Docu				
			Contacted by:	
Regarding:				
		**************************************		
Corrective Action Taken:				
			والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة	***************************************
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