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REPORTS

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CERTIFIED MAIL
RETURN RECEIPT NO. 7099 3400 0017 1737 1841

February 9, 2010

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

RE: **Investigation and Characterization Report**
BD Jct. P-30 Site (NMOCD Case No. 1R0426-124)
T21S-R37E-Section 30, Unit Letter P
Lea County, New Mexico

Mr. Hansen:

As agent for Rice Operating Company (ROC), Trident Environmental is submitting this *Investigation and Characterization Report* for the above-referenced site in accordance with 19.15.29 NMAC and the OCD-approved *Investigation and Characterization Plan* (December 26, 2007, Attachment A). The investigation demonstrated that the chloride and total dissolved solids (TDS) concentrations in groundwater at the site are marginally above WQCC standards; however, approximately four more quarters of monitoring data are needed to determine if the cause is due to regional impact from an unknown offsite source(s) and/or if the former junction box contributed to groundwater conditions. A site location map is shown in Figure 1.

Procedures for Soil Borings and Monitoring Well

Using an air rotary drilling rig, five soil borings were completed on June 4, 2008, to delineate vadose zone conditions. On June 16, 2009, one monitoring well (MW-1) was installed using an air rotary drilling rig to assess groundwater conditions. Soil samples were collected at five-foot intervals for the soil borings and at ten-foot intervals for the monitoring well and field titrated to analyze for chloride content. Select duplicate samples were submitted to Cardinal Laboratories for comparison with field values. Groundwater was encountered at approximately 95 feet below ground surface (bgs). The monitoring well was developed and sampled for two quarters pursuant to OCD guidelines.

The lithologic logs and well construction diagram are included in Attachment B. Laboratory analytical reports and chain of custody documentation is provided in Attachment C.



FIGURE 1
SITE LOCATION MAP

BD Jct. P-30 Site
T21S - R37E - Section 30, Unit P
RICE *Operating Company*



Vadose Zone Sampling Results

The chloride concentrations measured at each soil boring are summarized in the table and profile below. A site map with the soil boring locations is shown in Figure 2 below.

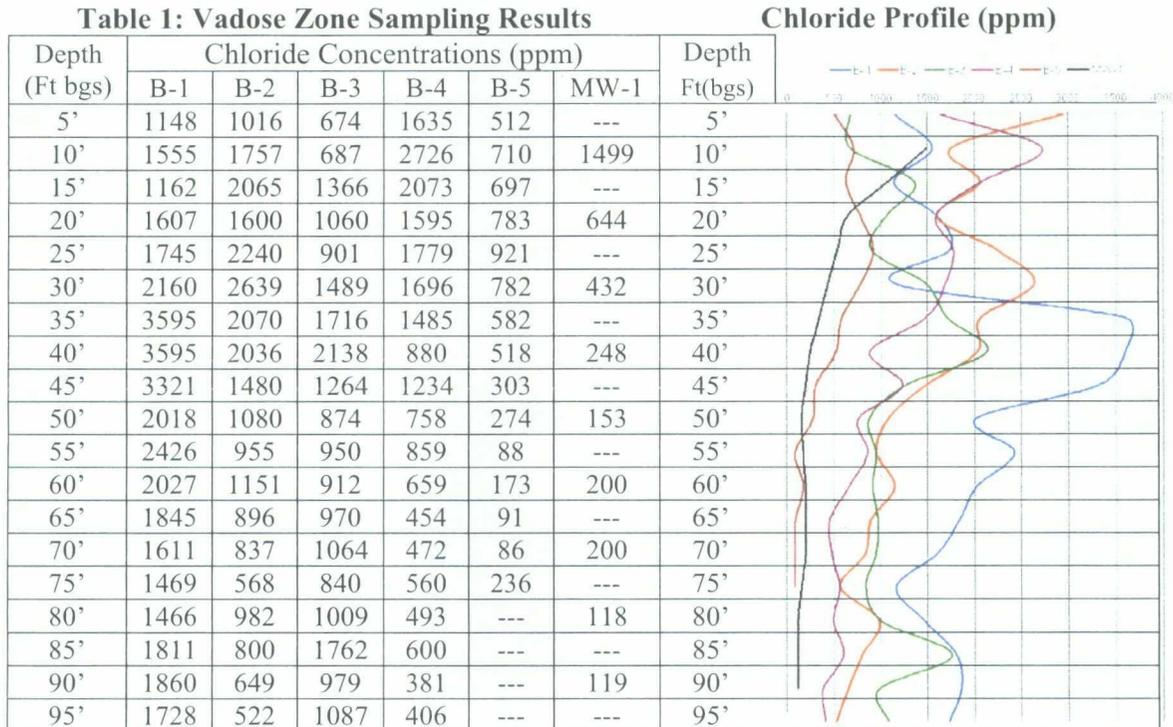
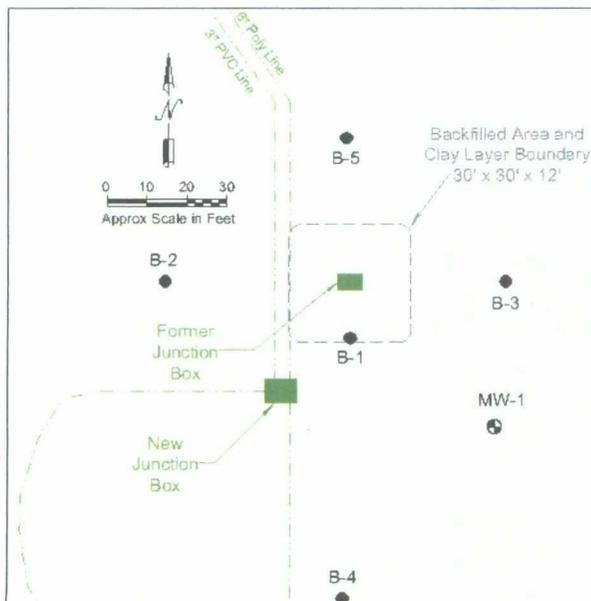


Figure 2: Site Map



Groundwater Conditions

Groundwater sampling results at monitoring well MW-1 are summarized in Table 2 below.

Table 2: Groundwater Monitoring Results (MW-1)

Sample Date	Depth to Groundwater (feet BTOC)	Chloride (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
07/27/09	97.89	392	1,180	< 0.001	< 0.001	< 0.001	< 0.003
10/16/09	97.86	364	1,130	< 0.001	< 0.001	< 0.001	< 0.003
WQCC Standards:		250	1,000	0.01	0.75	0.75	0.62

Conclusions and Recommendations

After two quarters of groundwater sampling and laboratory analysis, it has been confirmed that chloride and TDS marginally exceed the WQCC standards at the site; however, approximately four more quarters of monitoring data are needed to determine if the groundwater is regionally impacted from an unknown offsite source(s) and/or if the former junction box contributed to groundwater conditions. After four more quarters of groundwater sampling, Trident will submit a *Termination Request* if it is determined that the impact is from upgradient regional sources or a *Corrective Action Plan* (CAP) to address any contribution of constituents of concern from the former junction box.

ROC is the service provider (agent) for the Blinebry Drinkard (BD) Salt Water Disposal System and has no ownership of any portion of the pipelines, wells, or facilities. The BD System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis. Environmental remediation projects of this magnitude require System Parties AFE approval and work begins as funds are received.

Please feel free to call me at 432-638-8740 or Hack Conder at 575-393-9174, if you have any questions.

Sincerely,



Gilbert J. Van Deventer, REM, PG
Trident Environmental - Project Manager

cc: Hack Conder (Rice Operating Co., Hobbs NM))

enclosures: Investigation and Characterization Plan, lithologic logs and well construction diagram, laboratory analytical reports

Attachment A

Investigation and Characterization Plan
(December 26, 2007)



CERTIFIED MAIL
RETURN RECEIPT NO. 7099 3400 0017 1737 2152

December 26, 2007

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

**RE: INVESTIGATION & CHARACTERIZATION PLAN
BD Jct. P-30 Site
T21S-R37E-Section 30, Unit Letter P**

Mr. Hansen:

RICE Operating Company (ROC) has retained Trident Environmental to address potential environmental concerns at the above-referenced site. ROC is the service provider (agent) for the Blinebry-Drinkard (BD) SWD System and has no ownership of any portion of the pipeline, well, or facility. The System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. Environmental projects of this magnitude require System Partner AFE approval and work begins as funds are received. In general, project funding is not forthcoming until NMOCD approves the work plan. Therefore, your timely review of this submission is requested.

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

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

Each site shall have three submissions or a combination of:

1. This Investigation and Characterization Plan (ICP) is a proposal for data gathering and site characterization and assessment.
2. Upon evaluating the data and results from this ICP, a recommended remedy will be submitted in a Corrective Action Plan (CAP).
3. Finally, after implementing the remedy, a closure report with final documentation will be submitted.

BACKGROUND

The Jct. P-30 site is located at township 21 south, range 37 east, section 30, unit letter P approximately two miles west of Eunice, NM as shown on the attached Site Location Map (Figure 1). According to the Lea County Tax Assessor's Office, the land is owned by Nymeyer Properties. Land in the site area is primarily utilized for crude oil production and pasture land for cattle grazing.

Groundwater in the site area occurs within the High Plains aquifer under water table (unconfined) conditions (Hart & McAda, 1985) at a depth of approximately 95 feet bgs. The saturated portion of the aquifer is estimated to be 50 ft thick at the site (Nicholson and Clebsch, 1961).

PREVIOUS WORK

The P-30 junction box was rebuilt at a location approximately 30 feet to the south of its former location as part of the Pipeline Replacement/Upgrade Program. Between June 12 and June 21, 2006, a 30 feet wide by 30 feet long area was excavated to a depth of 12 feet below ground surface (bgs). During the course of excavation activities, soil samples were collected at one-foot intervals to a depth of 12 feet bgs. All soil samples were tested for chloride content using field-adapted Method 9253 (QP-03) and headspace readings were recorded using a Mini-RAE Model 76 photoionization detector (PID). Figures 2 and 3 depict the soil sample locations and provide a summary of the field chloride tests, PID readings, and laboratory analytical results. Chloride levels and PID readings did not conclusively decline vertically within the perimeter of the excavation.

Following the characterization of the soil, the excavated soil was blended and returned to the excavation up to a depth of 6 feet bgs. A 1-foot thick compacted clay barrier was installed to prevent potential downward migration of any residual contaminants and the remaining soil was placed above the clay. An identification plate was placed on the surface to mark the location of the former junction box and the clay barrier.

Notice of potential groundwater impact was sent to the NMOCD on October 13, 2006. A Junction Box Disclosure Report (attached) was submitted to the OCD with the 2006 annual reports.

RECOMMENDATION FOR FURTHER ACTIONS

The replacement of the junction box has minimized the threat of additional impact from the vadose zone, however further investigation and characterization of the site is necessary to delineate the vadose zone below twelve feet and evaluate the potential for groundwater impact. The additional assessment is also necessary to assist ROC in selecting the appropriate soil and/or groundwater remedy.

Task 1 Evaluate Concentrations of Constituents of Concern in the Vadose Zone

Subsurface soil samples for characterization of the lateral and vertical extent of hydrocarbon- and chloride-impacted soil will be collected at a maximum of 5-foot intervals using a drilling rig in accordance with the procedures explained in QP-02, QP-03, and QP-07 (attached). Soil samples will be field-tested for chloride content using the titration method. If there are indications of hydrocarbon-impact, samples will also be collected for headspace analysis using an organic vapor meter (OVM), which will be calibrated to assume a benzene response factor. Select samples with OVM headspace readings above 100 ppm will also be analyzed

for benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8021B, and gas and diesel range organics (GRO and DRO) using EPA Method 8015 to determine TPH concentrations.

The following concentrations of analytes will be used to delineate the lateral and vertical extent of impact to the vadose zone:

- o 100 ppm OVM, and/or 10 mg/kg benzene and 50 mg/kg BTEX
- o 1,000 ppm chloride

Task 2 Evaluate Concentrations of Constituents of Concern in the Groundwater

If we detect evidence of groundwater impact, one monitoring well will be placed in the area with the greatest potential for groundwater impact, in accordance with EPA and industry standards and developed by bailing with a rig or hand bailer, or pumping with a submersible pump to remove fine-grained sediment disturbed during drilling and to ensure collection of representative samples. If data suggest ground water impairment two quarters of ground water monitoring will be conducted to confirm any initial result. If groundwater impact is confirmed, additional monitoring wells may be installed to determine the local groundwater gradient direction and lateral extent of groundwater impact. Groundwater samples will be collected in accordance with procedures explained in QP-04 and QP-05 (attached), and analyzed for BTEX, major ions, and total dissolved solids (TDS).

The information gathered from tasks 1 and 2 will be evaluated and utilized to design a soil and/or ground water remedy if needed. The remedy that offers the greatest environmental benefit while causing the least environmental impairment will be selected. Such recommendations and findings will be presented to NMOCD in a subsequent Corrective Action Plan (CAP). When evaluating any proposed remedy or investigative work, ROC will confirm that there is a reasonable relationship between the benefits created by the proposed remedy or assessment and the economic and social costs.

We appreciate the opportunity to work with you on this project. Please feel free to call me at 432-638-8740 or Kristin Pope at 505-393-9174, if you have any questions.

Sincerely,



Gilbert J. Van Deventer, REM, PG
Trident Environmental - Project Manager

cc: CDH, JSC, KFP, file

enclosures: site location and sampling maps, disclosure report, photos, and sampling procedures

Attachment B

**Lithologic Logs
And
Monitoring Well Construction Diagram**



LITHOLOGIC LOG

SOIL BORING NO.: **B-1**
 SITE ID: BD Jct. P-30 Site
 CONTRACTOR: Harrison & Cooper Inc.
 DRILLING METHOD: Air Rotary
 START DATE: 06/03/08
 COMPLETION DATE: 06/04/08

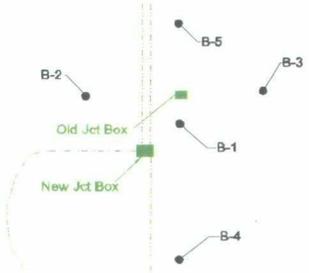
TOTAL DEPTH: 95 Feet
 CLIENT: *RICE Operating Company*
 COUNTY: Lea
 STATE: New Mexico
 LOCATION: T21S-R37E-Sec 30-Unit P
 FIELD REP.: G. Van Deventer / L. Weinheimer

COMMENTS: Located 15 ft south of of former junction box location (marker plate).

PHOTO AT LEFT: Facing south showing drilling at B-1 (background) & plate marking former junction box (foreground).
 Boring was backfilled and plugged with bentonite upon completion of sampling.

USCS	PATTERN	Sample			Chloride (ppm)		PID (ppm)	LITHOLOGIC DESCRIPTION Color, Grain size, Sorting, Rounding, Consolidation, Moisture, other distinguishing features
		Depth	Time	Type	Field	Lab		
SM		5						Fine sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium to poorly sorted, subangular/subrounded, unconsolidated, dry, no odor.
SC			1537	Split Spoon	1148		0	Clayey sand; moderate reddish brown (10R 4/6); fine-medium grained; moderately well sorted and subangular grains.
		10						Fine sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium to poorly sorted, subangular/subrounded, unconsolidated, dry, no odor.
SM			1539	Split Spoon	1555		8	Fine sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium to poorly sorted, subangular/subrounded, unconsolidated, dry, no odor.
		15						Very fine- fine-grained sand, grayish orange pink (5YR 7/2), medium to poorly sorted, subangular/subrounded, unconsolidated, dry, no odor.
		20						
SM/CAL	c c c c c c c c c c c c		1547	Split Spoon	1607		0	Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), some calcium carbonate in matrix, mostly unconsolidated with some indurated caliche, dry, no odor.
SM		25	158	Cuttings	1745			Fine sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium sorted, subangular/subrounded, unconsolidated, dry, no odor.
		30						Fine- to medium grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), with some calcium carbonate in matrix. Sand grains are medium sorted, subangular/subrounded, mostly unconsolidated with some indurated caliche, dry, no odor.
SM/CAL	c c c c c c c c c c c c c c c c c c		1559	Cuttings	2160			
		35	1600	Cuttings	3595	4280		Fine sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium sorted, subangular/subrounded, mostly unconsolidated with some indurated caliche, dry, no odor.
SM		40	1602	Cuttings	3595	3840		Fine sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), moderately well sorted, subangular/subrounded, unconsolidated, dry, no odor.
		45	1604	Cuttings	3321			Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.
SW		50	1606	Cuttings	2018			Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.

LITHOLOGIC LOG



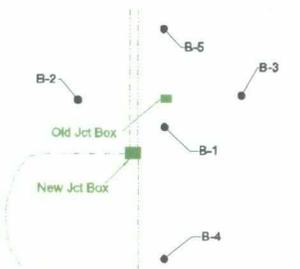
SOIL BORING NO.: **B-1 (continued)**
 SITE ID: BD Jct. P-30 Site
 CONTRACTOR: Harrison & Cooper Drilling Inc.
 DRILLING METHOD: Air Rotary
 START DATE: 06/03/08
 COMPLETION DATE: 06/04/08

TOTAL DEPTH: 95 Feet
 CLIENT: RICE Operating Company
 COUNTY: Lea
 STATE: New Mexico
 LOCATION: T21S-R37E-Sec 30-Unit P
 FIELD REP.: G. Van Deventer / L. Weinheimer

COMMENTS: Located 15 ft south of of former junction box location (marker plate).
 Boring was backfilled and plugged with bentonite upon completion of sampling.

USCS	PATTERN	Sample			Chloride (ppm)		PID (ppm)	LITHOLOGIC DESCRIPTION Color, Grain size, Sorting, Rounding, Consolidation, Moisture, other distinguishing features
		Depth	Time	Type	Field	Lab		
SW	[Yellow shaded pattern]	55	1624	Cuttings	2426			Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.
		60	1625	Cuttings	2027			Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.
		65	1626	Cuttings	1845			Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.
		70	1627	Cuttings	1611			Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.
		75	0836	Cuttings	1469			Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.
		80	0838	Cuttings	1466			Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.
		85	0841	Cuttings	1811			Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.
		90	0843	Cuttings	1860			Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.
		95	0845	Cuttings	1728	1700		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded, unconsolidated, slightly moist, no odor.
		100						

LITHOLOGIC LOG



SOIL BORING NO.: **B-2 (continued)**
 SITE ID: BD Jct. P-30 Site
 CONTRACTOR: Harrison & Cooper Drilling Inc.
 DRILLING METHOD: Air Rotary
 START DATE: 06/04/08
 COMPLETION DATE: 06/04/08

TOTAL DEPTH: 95 Feet
 CLIENT: *RICE Operating Company*
 COUNTY: Lea
 STATE: New Mexico
 LOCATION: T215-R37E-Sec 30-Unit P
 FIELD REP.: G. Van Deventer / L. Weinheimer

COMMENTS: Located approximately 46 feet west of former junction box location (marker plate).
 Boring was backfilled and plugged with bentonite upon completion of sampling.

USCS	PATTERN	Sample			Chloride (ppm)		LITHOLOGIC DESCRIPTION Color, Grain size, Sorting, Rounding, Consolidation, Moisture, other distinguishing features
		Depth	Time	Type	Field	Lab	
SW	[Yellow shaded area]						Fine-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded,, unconsolidated, dry, no odor.
		55	0953	Cuttings	955		Fine-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded,, unconsolidated, dry, no odor.
		60	0954	Cuttings	1151		Fine-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded,, unconsolidated, dry, no odor.
		65	0955	Cuttings	896		Fine-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded,, unconsolidated, dry, no odor.
		70	0956	Cuttings	837		Fine-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded,, unconsolidated, dry, no odor.
		75	0958	Cuttings	568		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded,, unconsolidated, dry, no odor.
		80	0959	Cuttings	982		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded,, unconsolidated, dry, no odor.
		85	1032	Cuttings	800		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded,, unconsolidated, dry, no odor.
		90	1034	Cuttings	649		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded,, unconsolidated, dry, no odor.
		95	1036	Cuttings	522	320	Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded,, unconsolidated, slightly moist, no odor.
		100					

LITHOLOGIC LOG

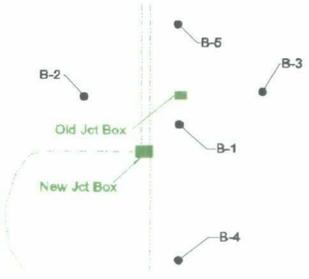


SOIL BORING NO.: **B-3** TOTAL DEPTH: 95 Feet
 SITE ID: BD Jct. P-30 Site CLIENT: **RICE Operating Company**
 CONTRACTOR: Harrison & Cooper Inc. COUNTY: Lea
 DRILLING METHOD: Air Rotary STATE: New Mexico
 START DATE: 06/04/08 LOCATION: T21S-R37E-Sec 30-Unit P
 COMPLETION DATE: 06/04/08 FIELD REP.: G. Van Deventer / L. Weinheimer

COMMENTS: Located 40 ft east of former junction box location (marker plate).
 PHOTO AT LEFT: View facing east showing plugged B-2 in foreground and drilling B-3 in background.
 Boring was backfilled and plugged with bentonite upon completion of sampling.

USCS	PATTERN	Sample			Chloride (ppm)		LITHOLOGIC DESCRIPTION Color, Grain size, Sorting, Rounding, Consolidation, Moisture, other distinguishing features
		Depth	Time	Type	Field	Lab	
SC	[Yellow]		1110				
		5	1113	Cuttings	674		Silty clayey sand, moderate reddish brown (10R 4/6), fine- to medium-grained sand, moderately well sorted, subrounded, unconsolidated, dry, no odor.
SW	[Light Yellow]						
		10	1114	Cuttings	687		Fine- medium-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium sorted, subrounded/subangular, unconsolidated except for some mildly indurated caliche; dry, no odor.
SM	[Yellow]						
		15	1116	Cuttings	1366		Fine- to medium-grained sand, light brown (5YR 5/6), moderately well sorted, subrounded, unconsolidated, dry, no odor.
		20	1117	Cuttings	1060		Very fine- to fine-grained sand, light brown (5YR 6/4), medium sorted, subrounded, unconsolidated, dry, no odor.
SM	[Yellow]						
		25	1121	Cuttings	901		Very fine- to fine-grained sand, light brown (5YR 6/4), medium sorted, subrounded/subangular, unconsolidated, dry, no odor.
SM/CAL	[Yellow with 'c' markers]						
		30	1122	Cuttings	1489		Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), with 5-10% calcium carbonate in matrix, unconsolidated except for some indurated caliche, dry, no odor.
		35	1123	Cuttings	1716		Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), with 5-10% calcium carbonate and caliche in matrix, unconsolidated, dry, no odor.
		40	1124	Cuttings	2138	2920	Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), with 5-10% calcium carbonate and caliche in matrix, unconsolidated, dry, no odor.
		45	1304	Cuttings	1264		Fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), with <5% calcium carbonate in matrix, unconsolidated except for some indurated caliche, dry, no odor.
		50	1305	Cuttings	874		Fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), with <5% calcium carbonate in matrix, unconsolidated except for some indurated caliche, dry, no odor.

LITHOLOGIC LOG



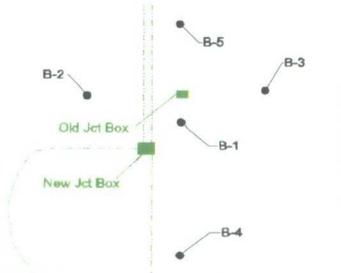
SOIL BORING NO.: B-3 (continued)	TOTAL DEPTH: 95 Feet
SITE ID: BD Jct. P-30 Site	CLIENT: <i>RICE Operating Company</i>
CONTRACTOR: Harrison & Cooper Drilling Inc.	COUNTY: Lea
DRILLING METHOD: Air Rotary	STATE: New Mexico
START DATE: 06/04/08	LOCATION: T21S-R37E-Sec 30-Unit P
COMPLETION DATE: 06/04/08	FIELD REP.: G. Van Deventer / L. Weinheimer

COMMENTS: Located 40 ft east of former junction box location (marker plate).
Boring was backfilled and plugged with bentonite upon completion of sampling.

USCS	PATTERN	Sample			Chloride (ppm)		LITHOLOGIC DESCRIPTION Color, Grain size, Sorting, Rounding, Consolidation, Moisture, other distinguishing features
		Depth	Time	Type	Field	Lab	
SW	[Yellow shaded pattern]						Fine- to medium-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium sorted, subrounded, unconsolidated, dry, no odor.
		55	1306	Cuttings	950		Fine- to medium-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium sorted, subrounded, unconsolidated, dry, no odor.
		60	1307	Cuttings	912		Fine- to medium-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		65	1309	Cuttings	970		Fine- to medium-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		70	1310	Cuttings	1064		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		75	1314	Cuttings	840		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		80	1315	Cuttings	1009		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		85	1317	Cuttings	1762		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		90	1318	Cuttings	979		Fine- to medium-grained sand, light brown (5YR 6/4), well sorted, rounded/subrounded, unconsolidated, dry, no odor.
		95	1319	Cuttings	1087	1220	Fine- to medium-grained sand, light brown (5YR 6/4), well sorted, rounded/subrounded, unconsolidated, slightly moist, no odor.
						Boring terminated at 95 ft (close to groundwater depth).	
		100					

LITHOLOGIC LOG									
				SOIL BORING NO.: B-4 SITE ID: BD Jct. P-30 Site CONTRACTOR: Harrison & Cooper Inc. DRILLING METHOD: Air Rotary START DATE: 06/04/08 COMPLETION DATE: 06/04/08			TOTAL DEPTH: 95 Feet CLIENT: <i>RICE Operating Company</i> COUNTY: Lea STATE: New Mexico LOCATION: T21S-R37E-Sec 30-Unit P FIELD REP.: G. Van Deventer / L. Weinheimer		
				COMMENTS: Located 82 ft south of former junction box location (marker plate). PHOTO AT LEFT: View facing north showing plugged B-4 in foreground and drilling B-5 in background. Boring was backfilled and plugged with bentonite upon completion of sampling.					
USCS	PATTERN	Sample			Chloride (ppm)		LITHOLOGIC DESCRIPTION Color, Grain size, Sorting, Rounding, Consolidation, Moisture, other distinguishing features		
		Depth	Time	Type	Field	Lab			
SC	[Yellow]		1350						
		5	1354	Cuttings	1635		Clayey sand, moderate reddish brown (10R 4/6), fine- to medium-grained sand, moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.		
		10	1355	Cuttings	2726	2920	Clayey sand, moderate reddish brown (10R 4/6), fine- to medium-grained sand, moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.		
SW	[Light Yellow]	15	1356	Cuttings	2073		Fine-grained sand, light brown (5YR 5/6), moderately well sorted, subrounded/rounded, mostly unconsolidated with some indurated rock up to 1/2", dry, no odor.		
		20	1357	Cuttings	1595		Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium sorted, subrounded/subangular, mostly unconsolidated with some indurated rock up to 1", dry, no odor.		
SM/CAL	[Yellow with 'c' marks]	25	1401	Cuttings	1779		Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium sorted, subrounded/subangular, mostly unconsolidated with some indurated rock up to 1/4", dry, no odor.		
		30	1402	Cuttings	1696		Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium sorted, subrounded/subangular, mostly unconsolidated with some indurated rock up to 1/4", dry, no odor.		
		35	1403	Cuttings	1485		Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium sorted, subrounded/subangular, unconsolidated, dry, no odor.		
SM	[Yellow]	40	1404	Cuttings	880		Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium sorted, subrounded/subangular, unconsolidated, dry, no odor.		
		45	1405	Cuttings	1234		Fine-grained sand, light brown (5YR 5/6), medium sorted, subrounded, unconsolidated, dry, no odor.		
SW	[Light Yellow]	50	1406	Cuttings	758		Fine- to medium-grained sand, light brown (5YR 5/6), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.		

LITHOLOGIC LOG



SOIL BORING NO.: **B-4 (Continued)**
 SITE ID: BD Jct. P-30 Site
 CONTRACTOR: Harrison & Cooper Drilling Inc.
 DRILLING METHOD: Air Rotary
 START DATE: 06/04/08
 COMPLETION DATE: 06/04/08

TOTAL DEPTH: 95 Feet
 CLIENT: *RICE Operating Company*
 COUNTY: Lea
 STATE: New Mexico
 LOCATION: T21S-R37E-Sec 30-Unit P
 FIELD REP.: G. Van Deventer / L. Weinheimer

COMMENTS: Located 82 ft south of former junction box location (marker plate).
 Boring was backfilled and plugged with bentonite upon completion of sampling.

USCS	PATTERN	Sample			Chloride (ppm)		LITHOLOGIC DESCRIPTION Color, Grain size, Sorting, Rounding, Consolidation, Moisture, other distinguishing features
		Depth	Time	Type	Field	Lab	
SW	[Yellow shaded column]						Fine- to medium-grained sand, light brown (5YR 5/6), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		55	1407	Cuttings	859		Fine- to medium-grained sand, light brown (5YR 5/6), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		60	1408	Cuttings	659		Fine- to medium-grained sand, light brown (5YR 5/6), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		65	1409	Cuttings	454		Fine- to medium-grained sand, light brown (5YR 5/6), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		70	1410	Cuttings	472		Fine- to medium-grained sand, light brown (5YR 5/6), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		75	1411	Cuttings	560		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		80	1413	Cuttings	493		Fine-grained sand, grayish orange pink (5YR 7/2), medium sorted, subrounded, unconsolidated, dry, no odor.
		85	1415	Cuttings	600		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		90	1416	Cuttings	381		Fine- to medium-grained sand, light brown (5YR 6/4), well sorted, rounded/subrounded, unconsolidated, dry, no odor.
		95	1417	Cuttings	406	304	Fine- to medium-grained sand, light brown (5YR 6/4), well sorted, rounded/subrounded, unconsolidated, slightly moist, no odor.
						Boring terminated at 95 ft (close to groundwater depth).	
		100					



LITHOLOGIC LOG

SOIL BORING NO.: **B-5**
 SITE ID: BD Jct. P-30 Site
 CONTRACTOR: Harrison & Cooper Inc.
 DRILLING METHOD: Air Rotary
 START DATE: 06/04/08
 COMPLETION DATE: 06/04/08

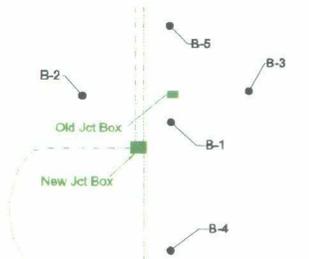
TOTAL DEPTH: 95 Feet
 CLIENT: *RICE Operating Company*
 COUNTY: Lea
 STATE: New Mexico
 LOCATION: T21S-R37E-Sec 30-Unit P
 FIELD REP.: G. Van Deventer / L. Weinheimer

COMMENTS: Located 37 ft north of former junction box location (marker plate).
 PHOTO AT LEFT: View facing south showing plugged B-5 in foreground.

Boring was backfilled and plugged with bentonite upon completion of sampling.

USCS	PATTERN	Sample		Chloride (ppm)		LITHOLOGIC DESCRIPTION Color, Grain size, Sorting, Rounding, Consolidation, Moisture, other distinguishing features	
		Depth	Time	Field	Lab		
SC	[Yellow background]	1520					
		5	1521	Cuttings	512		Clayey sand, moderate reddish brown (10R 4/6), fine- to medium-grained sand, moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
SM/CAL	[Yellow background with 'c' symbols]	10	1522	Cuttings	710		Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium sorted and subrounded, with ~5-10% calcium carbonate in matrix. Unconsolidated except for some indurated caliche, dry, no odor.
		15	1524	Cuttings	697	1340	Very fine- to fine-grained sand, grayish orange pink (5YR 7/2) and very pale orange (10YR 8/2), medium sorted and subrounded, with ~5-10% calcium carbonate in matrix. Unconsolidated except for some indurated caliche, dry, no odor.
		20	1525	Cuttings	783		Very fine- to fine-grained sand, grayish orange pink (5YR 7/2) and very pale orange (10YR 8/2), medium sorted and subrounded, with ~5-10% calcium carbonate in matrix. Unconsolidated except for some indurated caliche, dry, no odor.
		25	1526	Cuttings	921	1340	Very fine- to fine-grained sand, grayish orange pink (5YR 7/2) and very pale orange (10YR 8/2), medium sorted and subrounded, with ~5-10% calcium carbonate in matrix. Unconsolidated except for some indurated caliche, dry, no odor.
		30	1528	Cuttings	782		Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2) with ~5-10% calcium carbonate in matrix. Sand grains are medium sorted, subrounded, unconsolidated except for some indurated caliche, dry, no odor.
		35	1529	Cuttings	582		Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2) with ~5-10% calcium carbonate in matrix. Sand grains are medium sorted, subrounded, unconsolidated except for some indurated caliche, dry, no odor.
		40	1530	Cuttings	518		Very fine- to fine-grained sand, grayish orange pink (5YR 7/2) and very pale orange (10YR 8/2), medium sorted and subrounded, with < 5% calcium carbonate in matrix. Unconsolidated except for some indurated caliche, dry, no odor.
		45	1531	Cuttings	303		Very fine- to fine-grained sand, grayish orange pink (5YR 7/2) and very pale orange (10YR 8/2), medium sorted and subrounded, with ~5% calcium carbonate in matrix. Unconsolidated except for some indurated caliche, dry, no odor.
SW	[Orange background]	50	1532	Cuttings	274		Fine-grained sand, light brown (5YR 6/4), moderately sorted, subrounded, unconsolidated, dry, no odor.

LITHOLOGIC LOG



SOIL BORING NO.: B-5 (Continued)	TOTAL DEPTH: 95 Feet
SITE ID: BD Jct. P-30 Site	CLIENT: <i>RICE Operating Company</i>
CONTRACTOR: Harrison & Cooper Drilling Inc.	COUNTY: Lea
DRILLING METHOD: Air Rotary	STATE: New Mexico
START DATE: 06/04/08	LOCATION: T21S-R37E-Sec 30-Unit P
COMPLETION DATE: 06/04/08	FIELD REP.: G. Van Deventer / L. Weinheimer

COMMENTS: Located 37 ft north of former junction box location (marker plate).
 Boring was backfilled and plugged with bentonite upon completion of sampling.

USCS	PATTERN	Sample			Chloride (ppm)		LITHOLOGIC DESCRIPTION Color, Grain size, Sorting, Rounding, Consolidation, Moisture, other distinguishing features
		Depth	Time	Type	Field	Lab	
SW	[Yellow shaded pattern]						Fine-grained sand, light brown (5YR 6/4), moderately sorted, subrounded, unconsolidated, dry, no odor.
		55	1533	Cuttings	88		Fine- to medium-grained sand, light brown (5YR 6/4) and grayish orange pink (5YR 7/2), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		60	1534	Cuttings	173		Fine- to medium-grained sand, light brown (5YR 6/4) and grayish orange pink (5YR 7/2), medium sorted, subrounded/rounded, unconsolidated, dry, no odor.
		65	1535	Cuttings	91		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		70	1540	Cuttings	86		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		75	1545	Cuttings	236		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		80	1547	Cuttings	*		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		85	1552	Cuttings	*		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		90	1553	Cuttings	*		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
		95	1554	Cuttings	*	32	Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, subrounded/rounded, unconsolidated, dry, no odor.
				100			

* Soil boring was continued to 95 ft to provide soil lithology. Samples were not field tested for chloride since concentrations decreased to less than 250 ppm from 50 to 75 ft. Bottom sample collected for chloride analysis by laboratory.

LITHOLOGIC LOG



SOIL BORING NO.: MW-1	TOTAL DEPTH: 110 Feet
SITE ID: BD Jct. P-30 Site	CLIENT: <i>RICE Operating Company</i>
CONTRACTOR: Harrison & Cooper Inc.	COUNTY: Lea
DRILLING METHOD: Air Rotary	STATE: New Mexico
START DATE: 06/16/09	LOCATION: T21S-R37E-Sec 30-Unit P
COMPLETION DATE: 06/16/09	FIELD REP.: G. Van Deventer

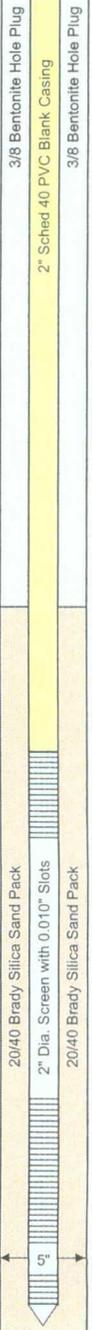
COMMENTS: Located ~ 47 ft southeast of former junction box location (marker plate).
 PHOTO AT LEFT: View facing northwest showing drilling at monitoring well MW-1.

USCS	PATTERN	Sample			Chloride (ppm)		LITHOLOGIC DESCRIPTION Color, Grain size, Sorting, Rounding, Consolidation, Moisture, other distinguishing features		
		Depth	Time	Type	Field	Lab			
SM	[Yellow background]	5					Fine sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium to poorly sorted, subangular/subrounded, unconsolidated, dry, no odor.		Cement
		10	1620	Cuttings	1499	1820	Fine sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), medium to poorly sorted, subangular/subrounded, unconsolidated, dry, no odor.		
		15							
SM/CAL	[Yellow background with 'c' symbols]	20	1622	Cuttings	644		Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), some calcium carbonate in matrix, mostly unconsolidated with some indurated caliche, dry, no odor.		3/8 Bentonite Hole Plug
		25							2" Sched 40 PVC Blank Casing
		30	1625	Cuttings	432		Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), some calcium carbonate in matrix, mostly unconsolidated with some indurated caliche, dry, no odor.		3/8 Bentonite Hole Plug
		35							
SW	[Yellow background]	40	1628	Cuttings	248		Very fine- to fine-grained sand, very pale orange (10YR 8/2) and grayish orange pink (5YR 7/2), some calcium carbonate in matrix, mostly unconsolidated with some indurated caliche, dry, no odor.		
		45							
		50	1630	Cuttings	153		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.		

Continued on next page

MW-1 LITHOLOGIC LOG (Continued)

USCS	PATTERN	Sample			Chloride (ppm)		LITHOLOGIC DESCRIPTION Color, Grain size, Sorting, Rounding, Consolidation, Moisture, other distinguishing features
		Depth	Time	Type	Field	Lab	
		55					
		60	1632	Cuttings	200		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.
		65					
		70	1634	Cuttings	200		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.
		75					
SW		80	1636	Cuttings	118		Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.
		85					
		90	1638	Cuttings	119	16	Fine- to medium-grained sand, light brown (5YR 6/4), moderately well sorted, rounded/subrounded, unconsolidated, dry, no odor.
		95					Groundwater encountered at approximately 95 ft below ground surface
		100					
		105					
		110					



Bottom of monitoring well at 110 ft bgs

Attachment C

Laboratory Analytical Reports

and

Chain of Custody Documentation



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES

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

BILL TO ANALYSIS REQUEST

Company Name: Rice Operating Company
 Project Manager: Hack Conder
 Address: 122 West Taylor
 City: Hobbs State: NM Zip: 88240
 Phone #: 393-9174 Fax #: 397-1471
 Project #: Project Owner:
 Project Name: BD jct. P-30
 Project Location: BD jct. P-30
 Sampler Name: Lara Weinheimer/Damell Mitchell

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	MATRIX			PRESERV.		DATE	TIME	Chlorides
			GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER:			
H4980-1	SB #1 @ 40'	1	✓		✓	✓	6/4/08	4:00	✓	
-2	SB #1 @ 95'	1	✓		✓	✓	6/4/08	5:45	✓	
-3	SB #2 @ 30'	1	✓		✓	✓	6/4/08	9:10	✓	
-4	SB #2 @ 95'	1	✓		✓	✓	6/4/08	10:34	✓	
-5	SB #3 @ 40'	1	✓		✓	✓	6/4/08	11:24	✓	
-6	SB #4 @ 10'	1	✓		✓	✓	6/4/08	1:55	✓	

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Relinquished By: L. Weinheimer Date: 6-13-08
 Time: 9:55 am
 Received By: Misty LeBut
 Date: _____ Time: _____
 Relinquished By: _____ Date: _____ Time: _____

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other:

Sample Condition:
 Cool Intact
 Yes No

CHECKED BY: (Initials)
MLB

Phone Result: Yes No
 Fax Result: Yes No
 Add'l Phone #: _____
 Add'l Fax #: _____

REMARKS:
 email results
 Hconder@riceswd.com; jpurvis@riceswd.com;
 Lweinheimer@rice.swd.com

* client needs samples back after testing

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



ARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Rice Operating Company		BILL TO		ANALYSIS REQUEST												
Project Manager: Hack Conder		P.O. #:														
Address: 122 West Taylor		Company:														
City: Hobbs		Attn:														
Phone #: 393-9174		Address:														
Project #:		City:														
Project Name: BD jct. P-30		State:														
Project Location: BD jct. P-30		Phone #:														
Sampler Name: Lara Weinheimer/Darnell Mitchell		Fax #:														
FOR LAB USE ONLY																
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	PRESERV.	SAMPLING	DATE	TIME
H15005-1	SB #5 @ 25'	6	1	✓						✓					6-4-98	3:26
-2	SB #3 @ 45'	6	1	✓						✓					6-4-98	11:30
-3	SB #5 @ 45'	6	1	✓						✓					6-4-98	3:49
-4	SB #1 @ 35'	6	1	✓						✓					6-3-98	3:59
-5	SB #4 @ 45'	6	1	✓						✓					6-4-98	2:15

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Relinquished By: **L. Weinheimer** Date: 6-18-98
 Received By: *[Signature]* Date: 10-25

Relinquished By: _____ Date: _____
 Received By: _____ Date: _____

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other: _____

Sample Condition
 Cool Intact
 Yes No
 Yes No

CHECKED BY: *[Signature]*

Phone Result: Yes No Add'l Phone #:
 Fax Result: Yes No Add'l Fax #:
 REMARKS:
 email results
 Hconder@riceswd.com; jpurvis@riceswd.com;
 Lweinheimer@rice.swd.com

* Lara needs samples returned



**ARDINAL
LABORATORIES**

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

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

Receiving Date: 06/17/09
Reporting Date: 06/18/09
Project Number: NOT GIVEN
Project Name: BD JCT. P-30
Project Location: T21S R37E SECTION 30 P LEA CO., NM

Analysis Date: 06/18/09
Sampling Date: 06/16/09
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AB
Analyzed By: AB

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17647-1	MW-1 (10')	1,820
H17647-2	MW-1 (90')	16
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-Cl/B

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



Chemist



Date

H17647 RICE

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ARDINAL LABORATORIES
 101 East Mariland, Hobbs, NM 88240
 (575) 393-2326 Fax (575) 393-2476

BILL TO		ANALYSIS REQUEST											
Company Name: Rice Operating Co Project Manager: Hank Conder / Ann Weinheimer Address: 122 W. Taylor City: Hobbs State: NM Zip: 88240 Phone #: 575-393-9174 Fax #: Project #: Project Name: BO Sect P-30 Project Location: TRIS R37E Section 30P Lea County NM Sampler Name: Gil Van Deventer		P.O. #: Company: Rice Operating Attn: Hank Conder Address: 122 W. Taylor City: Hobbs State: NM Zip: 88240 Phone #: 575-393-9174 Fax #:		MATRIX GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER		PRESERV ACID/BASE ICE / COOL OTHER		SAMPLING DATE TIME					
Lab I.D. MW-1(10) -2 MW-1(90)		1 1		6-16-09 6-16-09		1620 1638							

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Sampler Relinquished: Date: 6-17-09 Time: 3:20pm	Received By: Date: 6-17-09 Time: 3:20pm	Phone Result: <input type="checkbox"/> No Fax Result: <input type="checkbox"/> No Add'l Phone #: Add'l Fax #: REMARKS: Please email to: jara@riseswd.com and giles@trident-environmental.com
Relinquished By: 	Received By: 	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Temp. Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials)



ARDINAL LABORATORIES

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

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

Receiving Date: 07/29/09
Reporting Date: 07/31/09
Project Number: NOT GIVEN
Project Name: BD JUNCTION P-30
Project Location: T21S R37E SEC30 P ~ LEA CO., NM

Sampling Date: 07/27/09
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl ⁻ (mg/L)	SO ₄ (mg/L)	TDS (mg/L)
Analysis Date:		07/30/09	07/30/09	07/30/09
H17892-1	MONITOR WELL #1	392	90.6	1,180
Quality Control		500	38.5	NR
True Value QC		500	40.0	NR
% Recovery		100	96.3	NR
Relative Percent Difference		2.0	3.7	9.0
METHOD: Standard Methods, EPA		4500-ClB	375.4	160.1

Not accredited for chloride, sulfate and TDS.

Chris Meane
Chemist

08/05/09
Date

H17892 RICE

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

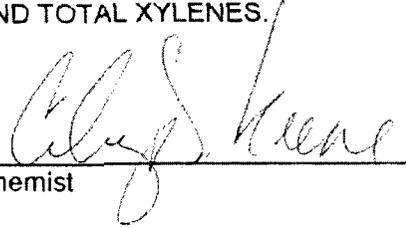
Receiving Date: 07/29/09
 Reporting Date: 08/04/09
 Project Number: NOT GIVEN
 Project Name: BD JUNCTION P-30
 Project Location: T21S-R37E-SEC30 P~ LEA CO., NM

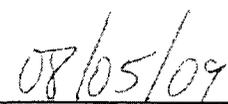
Sampling Date: 07/27/09
 Sample Type: WATER
 Sample Condition: COOL & INTACT
 Sample Received By: ML
 Analyzed By: ZL

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		08/03/09	08/03/09	08/03/09	08/03/09
H17892-1	MONITOR WELL #1	<0.001	<0.001	<0.001	<0.003
Quality Control		0.049	0.050	0.050	0.151
True Value QC		0.050	0.050	0.050	0.150
% Recovery		98.0	100	100	101
Relative Percent Difference		8.3	18.2	6.1	16.6

METHOD: EPA SW-846 8021 B

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.


 Chemist


 Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



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

Receiving Date: 10/16/09
 Reporting Date: 10/22/09
 Project Number: NOT GIVEN
 Project Name: BD JUNCTION P-30
 Project Location: T21S R37E SEC30 P ~ LEA CO., N.M.

Sampling Date: 10/16/09
 Sample Type: WATER
 Sample Condition: COOL & INTACT
 Sample Received By: CK
 Analyzed By: HM

LAB NO.	SAMPLE ID	Cl ⁻ (mg/L)	SO ₄ (mg/L)	TDS (mg/L)
Analysis Date:		10/19/09	10/21/09	10/19/09
H18522-1	MONITOR WELL #1	364	85.0	1,130
Quality Control		500	41.3	NR
True Value QC		500	40.0	NR
% Recovery		100	103	NR
Relative Percent Difference		< 0.1	13.2	8.5

METHOD: Standard Methods, EPA	4500-Cl B	375.4	160.1
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Not accredited for Chloride, Sulfate and TDS.

Cheryl Keene
 Chemist

10/26/09
 Date

H18522 RICE

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

Receiving Date: 10/16/09
 Reporting Date: 10/22/09
 Project Number: NOT GIVEN
 Project Name: BD JUNCTION P-30
 Project Location: T21S-R37E-SEC30 P~ LEA CO., NM

Sampling Date: 10/16/09
 Sample Type: WATER
 Sample Condition: COOL & INTACT
 Sample Received By: CK
 Analyzed By: ZL

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		10/20/09	10/20/09	10/20/09	10/20/09
H18522-1	MONITOR WELL #1	<0.001	<0.001	<0.001	<0.003
Quality Control		0.046	0.048	0.048	0.139
True Value QC		0.050	0.050	0.050	0.150
% Recovery		92.0	96.0	96.0	92.7
Relative Percent Difference		7.4	9.3	9.3	8.8

METHOD: EPA SW-846 8021

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.

Clay Keene
 Chemist

10/26/09
 Date

Gil Van Deventer

From: "Gil Van Deventer" <gilbertvandeventer@suddenlink.net>
"Hansen, Edward J., EMNRD" <edwardj.hansen@state.nm.us>
Cc: "Haskell Conder" <hconder@riceswd.com>; "Katie Jones" <kjones@riceswd.com>
Sent: Tuesday, February 09, 2010 11:27 AM
Attach: BD Jct. P-30 ICR.pdf
Subject: BD Jct. P-30 Site (1R0426-124) - Investigation and Characterization Report

To: Edward Hansen, New Mexico Oil Conservation Division - Environmental Bureau
Subject: Investigation and Characterization Report
Site Name: BD Jct. P-30 Site
NMOCD Case No.: 1R0426-124
Site Agent: RICE Operating Company
Site Location: T21S-R37E-Section 30, Unit Letter P, Lea County, New Mexico

Greetings Edward:

Attached is the *Investigation and Characterization Report* for the BD Jct. P-30 Site (1R0426-124). One complete hard copy and one copy on compact disk will be sent to you via USPS Certified Mail (# 7099 3400 0017 1737 1841) today. Please feel free to contact me at 432-638-8740, or Hack Conder at ROC (575-393-9174).

Thank you,
Gil

Gilbert J. Van Deventer, PG, REM
Trident Environmental
P. O. Box 7624, Midland TX 79708
Work/Mobile: 432-638-8740
413-403-9968
Home: 432-682-0727

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