AP - 008

STAGE 1 & 2 REPORTS

DATE: July 14, 2004

JUNCTION I-9

Stage 2 Abatement Report

Rice Operating Company
Hobbs, New Mexico

ARCADIS

Infrastructure, buildings, environment, communications

ARCADIS

Sharon E. Hall
Site Evaluation Department Manager

Junction I-9 Stage 2 Abatement Report
Rice Operating Company
Hobbs, New Mexico

Prepared for:
Rice Operating Company

Prepared by:
ARCADIS G&M, Inc.
1004 N. Big Spring Street
Suite 300
Midland,
Texas 79701
Tel 432.687.5400
Fax 432.687.5401

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1. Introduction

The subject site is a former pipeline connection point on the Rice Operating Company (ROC) Hobbs Salt Water Disposal System. The pipeline transports produced water from oil and gas leases to a permitted well for disposal by subsurface injection. The site is located in southwest Hobbs, New Mexico approximately 0.6 miles south of the intersection of Grimes Street and Stanolind Road (Section 9, T19S-R38E, Lea County) (Figure 1).

2. Site History

A pipeline leak was discovered and repaired at the subject site on June 5, 1998. Notification of an unauthorized release was submitted to the New Mexico Oil Conservation Division (NMOCD) District I Office located in Hobbs, New Mexico. A Stage I Abatement Plan was submitted to the NMOCD on January 19, 1999. Interim abatement site activities including assessment of impacts to soil and groundwater and excavation of impacted soil were conducted from August 24, 1998 to September 2, 1999. Recovery of phase-separated hydrocarbons (PSH) from groundwater has been conducted from January 18 to May 7, 1999. A total of four monitor wells, one recovery well and nine boreholes was installed at the subject site. A Stage 1 Abatement Plan report detailing the results of the Stage 1 Abatement investigation was submitted to the NMOCD on September 10, 1999.

A Stage 2 Abatement Plan Proposal was submitted to the NMOCD on January 10, 2000. Following requests for additional information from the NMOCD, three Revised Stage 2 Abatement Plan proposals were submitted. (December 13, 2000, March 31, 2001 and December 13, 2001). A final Stage 2 Abatement Plan Proposal revision was requested by ROC on April 5, 2004 and approved by the NMOCD on June 4, 2004.

Copies of the plan, revisions and NMOCD approvals are on file at the NMOCD office in Santa Fe. The approved Stage 2 Abatement Plan Proposal is as follows:

- Sampling monitor wells 1, 3, 4 and the McNeil well quarterly for four quarters and analyzing for benzene, toluene, ethylbenzene and xylenes (BTEX), general quality and New Mexico Water Quality Control Commission (WQCC) metals. Based on sample results for four quarters, the sampling frequency will be reviewed and may be revised.

- Sampling will be discontinued when eight quarters of sample results indicate that BTEX concentrations are below WQCC Title 20, Chapter 6, Part 2 standards.

- Excavation of soils in the area where hydrocarbons were detected in groundwater until the soil associated with the PSH is removed. When groundwater is encountered, excavation will be discontinued just below the depth where groundwater is encountered.

- Installation of a 12-15" compacted clay layer that meets or exceeds 95% of a Proctor Test ASTM-D-98 and permeability equal to or less than 1×10^{-7} cm/sec over the area excavated to groundwater. The liner extended 10 feet in all directions beyond the excavated area.

- Following backfilling, installation of a 12-15" compacted clay layer that meets or exceeds 95% of a Proctor Test ASTM-D-98 and permeability equal to or less than 1×10^{-7} cm/sec over the entire excavated area at a depth of 6-7 feet below ground surface (bgs).

- Excavation of soils exceeding total petroleum hydrocarbon (TPH), BTEX, benzene and chloride concentrations of 100 milligrams per kilogram (mg/kg), 50 mg/kg, 10 mg/kg and 250 mg/kg, respectively.

- Backfilling of blended soils not exceeding TPH, BTEX, benzene and chloride concentrations of 100 mg/kg, 50 mg/kg, 10 mg/kg and 1,099 mg/kg, respectively.

- Grading of the site to prevent ponding of rain water.

3. Geology and Hydrogeology

The Ogallala Formation is the principal source of groundwater in the subject area. Depth to groundwater in Lea County ranges from approximately 12 to approximately 300 feet bgs. The Ogalllala consists of predominantly coarse fluvial conglomerate and sandstone and fine-grained Eolian siltstone and clay. Where present in the subject area, the Ogallala unconformably overlies Triasssic redbeds. The regional and site groundwater gradient is to the south/southeast.

Depth to groundwater at the subject site is approximately 36 bgs. Groundwater elevations measured in the monitor wells at the subject site are shown in Table 1.

Table 1
GROUNDWATER ELEVATIONS
Junction I-9 Site
HOBBS, NEW MEXICO

MONITORING WELL	TOP OF CASING (feet)*	DATE	DEPTH TO GROUNDWATER (feet)*	WATER ELEVATION (feet)*
MW-1	3595.37	01/12/99	31.75	3563.62
MW-1	3595.37	01/16/99	32.04	3563.33
MW-1	3595.37	08/31/99	29.03	3566.34
MW-1	3595.37	03/02/04	36.78	3558.59
MW-2	3595.58	01/12/99	31.82	3563.76
MW-2	3595.58	01/16/99	32.04	3563.54
MW-2	3595.58	08/31/99	28.89	3566.69
MW-2	3595.58	03/02/04	Dry	-
MW-3	3595.62	01/12/99	30.58	3565.04
MW-3	3595.62	01/06/99	31.85	3563.77
MW-3	3595.62	08/31/99	26.24	3569.38
MW-3	3595.62	03/02/04	35.58	3560.04
MW-4	3595.15	09/02/99	28.98	3566.17
MW-4	3595.15	03/02/04	36.80	3558.35

*Based on survey data provided by Rice Operating Company. Used surveyed benchmark = top of casing on MW-3.

4. Stage 2 Abatement Field Activities

Stage 2 Abatement field activities were conducted between September 15, 2000 and October 3, 2000 and September 26, 2003 and February 4, 2004. Stage 2 Abatement field activities included sampling of three monitoring wells and an agricultural well, excavation of impacted soils, installation of an upper and lower liner and backfilling and grading of the site. All field activities were performed in accordance with the Stage 2 Abatement Plan Proposal and revisions as approved by the NMOCD. Photographs of field activities are included in Appendix A.

4.1 Soil Excavation

Stage 2 excavation activities were performed at the site between September 15, 2000 and October 3, 2000 and September 26, 2003 and February 4, 2004. Excavation activities were continued in the area where hydrocarbons were detected on the groundwater until the soil associated with the PSH was removed. Soil in this area was excavated to 30-32' bgs. When groundwater was encountered, excavation was discontinued just below the depth where groundwater was encountered in order to maintain safe and practical excavation of soils. PSH was recovered with absorbent material where possible. Soil excavation continued until no visible staining of the soils occurred and no photoionization detecter (PID) readings were observed. Soil samples were collected to confirm that impacted soils had been removed and that TPH, BTEX, benzene and chloride concentrations did not exceed the concentrations as approved for the Stage 2 Abatement Plan. Confirmation sample results and PID readings are shown in Table 2. The area of excavation and sample locations are shown in the figures included in Appendix B. Laboratory analysis is included in Appendix B.

A 12-15" compacted clay layer was installed according to NMOCD clay layer specifications (meet or exceed 95% of a Proctor Test ASTM-D-698 an permeability equal to or less than 1 x 10^{-7} cm/sec) over the area excavated to the groundwater interface in order to inhibit downward migration of constituents and to protect the groundwater interface that was exposed. Once the excavation was backfilled, an additional compacted clay layer was installed (to NMOCD specifications) approximately 6-7 feet below bgs over the entire excavation in order to inhibit downward migration of potential constituents in soils below the compacted clay layer. Liner design specifications were submitted to the OCD on March 30, 2001. Proctor and Density test results are included in Appendix C.

Approximately 11,000 loose cubic yards of impacted soils were disposed at an NMOCD-approved facility during initial Stage 2 Abatement activities. All remaining excavated soils, between 70,000 and 80,000 cubic yards, were blended with overburden/replacement soils and returned to the excavation as backfill. TPH, BTEX, benzene and chloride concentrations in the blended backfill material did not exceed the concentrations as approved for the Stage 2 Abatement Plan.

Following excavation the site was graded to prevent ponding of water and seeded with 11 pounds of Homsted, 11 pounds of Reclaimation mix and 2 pounds of salt bush.

4.2 Sampling of Monitor Wells

A total of four monitor wells and one recovery well were installed in the subject area. An additional existing well referred to as the McNeil well has been added to the monitor well sampling program. Monitor well MW-2 was dry and, therefore, not sampled in the March 2004 sampling event. The recovery well was removed during excavation activities. Well locations are shown in the figures included in Appendix B.

Groundwater samples were collected from MW-1, MW-2 and MW-3 on January 16, 1999 and analyzed for volatile organics, semi-volatile organics, general chemistry and metals using USEPA Methods 8260, 8270C, 325.3, 4500, 150.1, 120.1, 375.4, 160.1, and 6010B.

MW-1 and MW-2 were resampled on July 7, 1999 to determine if BTEX concentrations were representative of downgradient aquifer conditions. The groundwater samples were submitted for analysis for BTEX using USEPA Method 8021B.

MW-4 was sampled on September 2, 1999 and analyzed for volatile organics, semi-volatile organics, general chemistry and metals using USEPA Methods 8260, 8270C, 325.3, 4500, 150.1, 120.1, 375.4, 160.1 and 6010B.

MW-1, MW-3, MW-4 and the McNeil well were sampled on March 2, 2004 and analyzed for volatile organics, gasoline range organics, diesel range organics and total hydrocarbon, die organics, general chemistry and metals using USEPA Methods 8260B, 8015M, 310.2M, 340.1, 325.3, 4500, 150.1, 120.1, 375.4, 160.1 and 7470A and 6010B. Laboratory analysis for March 2, 2004 sampling event is included in Appendix B. Groundwater analytical results are summarized in Table 3.

Benzene was detected in the samples collected from MW-1 and MW-2 on January 16, 1999 and July 7, 1999 at a concentration of 0.008 milligrams per liter (mg/L), 0.017 mg/L, 0.262 mg/L and 0.289 mg/L, respectively. Toluene was detected in the samples collected from MW-1 on July 7, 1999 at a concentration of 0.01 mg/L. Ethylbenzene was detected in the samples collected from MW-1 and MW-2 on January 16, 1999 and July 7, 1999 at a concentration of 0.032 mg/L, 0.007 mg/L, 0.286 mg/L and 0.061 mg/L, respectively. Xylenes were detected in the samples collected from MW-1 and MW-2 on January 16, 1999 and July 7, 1999 at a concentration of 0.012 mg/L, 0.012 mg/L, 0.131 mg/L and 0.008 mg/L, respectively. 1,2,4-trimethylbenzene was detected

in the January 1999 sample collected from MW-1 at a concentration of 0.007 mg/L. No other analyzed organic compounds were detected.

Naturally-occurring inorganic analytes (metals, chlorides, pH, sulfate, TDS, calcium, potassium, bicarbonate, manganese and sodium) were detected in the groundwater samples collected from MW-1, MW-2, MW-3 and MW-4.

No hydrocarbons (TPH or BTEX) were detected in any of the wells during the March 2004 groundwater sampling event. Metals analysis indicates a decrease in metals concentrations since the July and September 1999 sampling. Aluminum and lead were detected at concentrations in excess of New Mexico Water Quality Control Commission (WQCC) standards; however, the concentrations of these compounds have decreased since the wells were last sampled. Boron was detected at a concentration in excess of the WQCC standard. Boron has not previously been analyzed. Total dissolved solids and sodium were detected at a concentration above the WQCC standard, and chlorides were detected above the WQCC standard in one well, MW-3.

No free product is evidenced at the site. During excavation activities the site was excavated to groundwater in the source area. No product was evidenced in the excavation.

5. Conclusions

Soils exceeding TPH, BTEX, benzene and chloride concentrations of 100 mg/kg, 50 mg/kg, 10 mg/kg and 250 mg/kg, respectively have been excavated and two clay liners installed as described in this report. Backfill material (blended soils) concentrations did not exceed TPH, BTEX, benzene and chloride concentrations of 100 mg/kg, 50 mg/kg, 10 mg/kg and 1,099 mg/kg, respectively. The site has been graded to prevent ponding of rainwater.

No hydrocarbons (TPH or BTEX) were detected in any of the wells during the March 2004 groundwater sampling event. Metals analysis indicates a decrease in metals concentrations since the July and September 1999 sampling. Aluminum and lead were detected at concentrations in excess of WQCC standards; however, the concentrations of these compounds have decreased since the wells were last sampled. Boron was detected at a concentration in excess of the WQCC standard. Boron has not previously been analyzed. Total dissolved solids and sodium were detected at a concentration

above the WQCC standard, and chlorides were detected above the WQCC standard in one well, MW-3.

No free product is evidenced at the site. During excavation activities the site was excavated to groundwater in the source area. No measurable product was evidenced in the excavation.

ROC will continue groundwater sampling of Monitor Well 1, 3, 4 and the McNeil well quarterly for four quarters and analyze for BTEX, general quality and WQCC metals. Based on sample results for four quarters the sampling frequency will be reviewed and may be revised.

Sampling will be discontinued when eight quarters of sample results indicate that BTEX concentrations are below WQCC Title 20, Chapter 6, Part 2 standards.

6. References

Groundwater Handbook; United States Environmental Protection Agency, Office of Research and Development, Center for Environmental Research Information; 1992.

Hydrology and Hydrochemistry of the Ogallala Aquifer, Southern High Plains, Texas Panhandle and Eastern New Mexico; Report Number 177; Bureau of Economic Geology; 1988.

Hydrogeochemistry and Water Resources of the Lower Dockum Group in the Texas Panhandle and Eastern New Mexico; Report Number 161; Bureau of Economic Geology; 1986.

New Mexico Water Quality Control Commission, Title 20 Chapter 6, Part 2, Subpart I.

Junction I-9 Release Site, Stage 1 Abatement Report (Site Assessment Investigation); ARCADIS Geraghty and Miller; September 10, 1999

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Table 2
Soil Analytical Results

Date	Lab Number	Comment	Lab GRO	Lab DRO	Lab CL	Field PID	Field Cl	Benzene	Toluene	Ethyl Benzene	Total Xylenes
2/5/2004	H8435	Surface 5pt Comp	<10	<10	144			N/A	N/A	N/A	N/A
1/29/2004	H8420	1st 5' lift after clay liner @ 8' S. 1/2	<10	<10	112	NW 4.0	104	N/A	N/A	N/A	N/A
"						NE 4.8		N/A	N/A	N/A	N/A
"						Center 3.6		N/A	N/A	N/A	N/A
"						SW 6.0		N/A	N/A	N/A	N/A
"						SE 5.3		N/A	N/A	N/A	N/A
1/26/2004	H8407	1st 5' lift after clay liner @ 8' N. 1/2	<10	<10	176	3.4	183	N/A	N/A	N/A	N/A
"						2.9		N/A	N/A	N/A	N/A
"						2.7		N/A	N/A	N/A	N/A
"						2.2		N/A	N/A	N/A	N/A
"						2.3		N/A	N/A	N/A	N/A
1/12/2004	H8347	N 1/2 4th 5' lift	<10	<10	128	NE 3.3	126	N/A	N/A	N/A	N/A
"						NW 6.9		N/A	N/A	N/A	N/A
"						Center 3.6		N/A	N/A	N/A	N/A
"						SE 4.8		N/A	N/A	N/A	N/A
"						SW 2.0		N/A	N/A	N/A	N/A
1/6/2004	H8331	S 1/2 4th 5' lift	<10	<10	96	SE 13.8	105	N/A	N/A	N/A	N/A
"						NE 1.4		N/A	N/A	N/A	N/A
"						Center 4.5		N/A	N/A	N/A	N/A
"						NW 3.5		N/A	N/A	N/A	N/A
"						SW 9.3		N/A	N/A	N/A	N/A
12/30/2003	H8307	N. 3rd 5' lift comp	<10	<10	80	SE 5.3	129	N/A	N/A	N/A	N/A
"						NE 5.8		N/A	N/A	N/A	N/A
"						Center 10.3		N/A	N/A	N/A	N/A
"						SW 15.0		N/A	N/A	N/A	N/A
"						NW 3.3		N/A	N/A	N/A	N/A
12/23/2003	H8289	S. 3rd 5' lift by MW #1	<10	<10	80	NW 3.4	101	N/A	N/A	N/A	N/A
"						NE 3.3		N/A	N/A	N/A	N/A
"						Center 10.9		N/A	N/A	N/A	N/A
"						SE 3.6		N/A	N/A	N/A	N/A
"						SW 37.2		N/A	N/A	N/A	N/A
12/17/2003	H8265	S. 2nd 5' lift by MW #1	<10	34.2	96	NE 4.8	156	N/A	N/A	N/A	N/A

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Table 2
Soil Analytical Results

Date	Lab Number	Comment	Lab GRO	Lab DRO	Lab CL	Field PID	Field Cl	Benzene	Toluene	Ethyl Benzene	Total Xylenes
"						NW 5.2		N/A	N/A	N/A	N/A
"						Center 9.3		N/A	N/A	N/A	N/A
"						SE 6.3		N/A	N/A	N/A	N/A
"						SW 3.0		N/A	N/A	N/A	N/A
12/11/2003	H8246	S. 1st 5' lift 4th clay liner	<10	<10	128	3.2	101	N/A	N/A	N/A	N/A
"						3.5		N/A	N/A	N/A	N/A
"						3.8		N/A	N/A	N/A	N/A
"						3.7		N/A	N/A	N/A	N/A
"						1.9		N/A	N/A	N/A	N/A
12/9/2003	H8236	2nd lift 3rd clay liner	<10	<10	176	2.1	82	N/A	N/A	N/A	N/A
12/5/2003	H8230-1	S. wall 2pt comp	<10	<10	144			N/A	N/A	N/A	N/A
"	H8230-2	S. end @ GW @ 36'	<10	<10	80			N/A	N/A	N/A	N/A
"	H8230-3	5pt comp S. end bttm	<10	<10	96			N/A	N/A	N/A	N/A
12/4/2003	H8223-1	E. wall 5pt comp N. 1/2	<10	<10	80	1.1	115	N/A	N/A	N/A	N/A
"						0.5		N/A	N/A	N/A	N/A
"						0.4		N/A	N/A	N/A	N/A
"						0.6		N/A	N/A	N/A	N/A
"						1.3		N/A	N/A	N/A	N/A
12/4/2003	H8223-2	E. wall 5pt comp S. 1/2	<10	<10	112	4.4	95	N/A	N/A	N/A	N/A
"						0.5		N/A	N/A	N/A	N/A
"						1.1		N/A	N/A	N/A	N/A
"						0.5		N/A	N/A	N/A	N/A
"						1.3		N/A	N/A	N/A	N/A
12/2/2003	H8214	5pt comp 3rd liner 1st 5' lilft	<10	<10	160	34.5	180	N/A	N/A	N/A	N/A
11/21/2003	H8202-1	4pt comp @ GW 36'	<10	<10	112	1.7	105	N/A	N/A	N/A	N/A
"	H8202-2	5pt base comp @ 30'	<10	<10	144	1.8	177	N/A	N/A	N/A	N/A
11/6/2003	H8148	GW backfill S. end	<10	<10	96			N/A	N/A	N/A	N/A
10/31/2003	H8133-1	S. wall comp E. end	<10	<10	32	2.5	110	N/A	N/A	N/A	N/A
"	H8133-2	S. wall comp W. end	<10	<10	16	2.6	105	N/A	N/A	N/A	N/A
10/30/2003	H8129	S. @ GW 36'	<10	<10	48	6.1	203.44	N/A	N/A	N/A	N/A
10/24/2003	H8113	Water table backfill	<10	<10	160	0.2		N/A	N/A	N/A	N/A
10/21/2003	H8102-1	7pt comp @ GW 36'	<10	28.8	80			<0.005	<0.005	<0.005	<0.015

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Table 2
Soil Analytical Results

Date	Lab Number	Comment	Lab GRO	Lab DRO	Lab CL	Field PID	Field Cl	Benzene	Toluene	Ethyl Benzene	Total Xylenes
"	H8102-2	W. wall S. 1/2 5pt comp	<10	16.7	96			<0.005	<0.005	<0.005	<0.015
"	H8102-3	W. wall N. 1/2 5pt comp	<10	<10	64			<0.005	<0.005	<0.005	<0.015
10/1/2003	H8053-1	Btm #1	<10	<10	64	1.3	200	<0.005	<0.005	<0.005	<0.015
"	H8053-2	Btm #2	<10	<10	64	1	234	<0.005	<0.005	<0.005	<0.015
"	H8053-3	Btm #3	<10	<10	253	2.5	366	<0.005	<0.005	<0.005	<0.015
"	H8053-4	Btm #4	<10	<10	448	2.3	680	<0.005	<0.005	<0.005	<0.015
"	H8053-5	Btm #5	<10	<10	112	0.7	231	<0.005	<0.005	<0.005	<0.015
	Lab ID	ELOT									
11/26/2003	0308006-01	N. wall E. 1/2 comp	<10	<10	<20			N/A	N/A	N/A	N/A
"	0308006-02	N. wall W. 1/2 comp	<10	<10	21.3			N/A	N/A	N/A	N/A
10/6/2003	0307653-01	1st lift #1	<10	26.4	35.4	1.3	185.55	N/A	N/A	N/A	N/A
"	0307653-02	1st lift #2	<10	<10	53.2	2	147.46	N/A	N/A	N/A	N/A
"	0307653-03	1st lift #3	<10	<10	35.4	0.7	360.89	N/A	N/A	N/A	N/A
"	0307653-04	1st lift #4	<10	12.1	35.4	1.5	153.76	N/A	N/A	N/A	N/A
"	0307653-05	1st lift #5	<10	18.9	35.4	1.7	154.46	N/A	N/A	N/A	N/A
"	0307653-06	W. wall bttm #6	<10	11.6	106	18.1	176.45	N/A	N/A	N/A	N/A
"	0307653-07	W. wall bttm #7	<10	<10	<20	1.6	162.35	N/A	N/A	N/A	N/A
"	0307653-08	W. wall bttm #8	<10	<10	<20	6.6	114.96	N/A	N/A	N/A	N/A
"	0307653-09	W. wall bttm #9	71.4	401	1770	96	2044.36	N/A	N/A	N/A	N/A

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS

Well Name	MW-1			MW-2		MW-3		MW-4		McNeil Well
Date Sampled	1/16/1999	7/7/1999	3/2/2004	1/16/1999	7/7/1999	1/16/1999	3/2/2004	9/2/1999	3/2/2004	3/2/2004
Compound Name	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
VOCs										
Benzene	0.008	0.262	ND	0.017	0.289	ND	ND	ND	ND	ND
Bromobenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Bromochloromethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Bromodichloromethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Bromoform	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Bromomethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
n-butylbenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
sec-butylbenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
tert-butylbenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Carbon tetrachloride	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Chlorobenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Chlorodibromomethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Chloroethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Chloroform	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Chloromethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2-Chlorotoluene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
4-Chlorotoluene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,2-Dibromoethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Dibromomethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,2-Dichlorobenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,3-Dichlorobenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,4-Dichlorobenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Dichlorodifluoromethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,1-Dichloroethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,2-Dichlorethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,1-Dichloroethene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
cis-1,2-dichloroethene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
trans-1,2-dichloroethene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,2-Dichloropropane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,3-Dichloropropane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2,2-Dichloropropane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,1-Dichloropropene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Ethylbenzene	0.032	0.286	ND	0.007	0.061	ND	ND	ND	ND	ND
Hexachlorobutadiene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Isopropylbenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
p-isopropytoluene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Methylene chloride	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Naphthalene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
n-propylbenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Styrene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,1,1,2-Tetrachloroethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Tetrachloroethene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Toluene	ND	0.01	ND	ND	<0.005	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,1,1-Trichloroethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,1,2-Trichloroethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Trichloroethene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Trichlorofluoromethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,2,3-Trichloropropane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,2,4-Trimethylbenzene	0.007	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,3,5-Trimethylbenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Vinyl chloride	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Xylenes, total	0.012	0.131	ND	0.012	0.008	ND	ND	ND	ND	ND
Acetone	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Carbon disulfide	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Vinyl acetate	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2-Butanone	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,2-Dichloroethene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2-Chloethylvinylether	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
4-Methyl-2-pentanone	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
cis-1,3-dichloropropene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
trans-1,3-dichloropropene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2-Hexanone	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Methyl tert butyl ether	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
SVOCs										
Acenaphthene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS

Well Name	MW-1			MW-2		MW-3		MW-4		McNeil Well
Date Sampled	1/16/1999	7/7/1999	3/2/2004	1/16/1999	7/7/1999	1/16/1999	3/2/2004	9/2/1999	3/2/2004	3/2/2004
Compound Name	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Acenaphthylene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA
Aniline	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Anthracene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Benzo(a)anthracene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA
Benzo(b)fluoranthene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA
Benzo(k)fluoranthene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA
Benzo(a)pyrene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA
Benzoic acid	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Benzo(g,h,i)perylene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA
Benzyl alcohol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
4-Bromophenylphenyl ether	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Butybenzylphthalate	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
di-n-butyl phthalate	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Carbazole	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
4-Chloroaniline	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
bis(2-chloroethoxy)methane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
bis(2-chloroethyl)ether	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
bis(2-chloroisopropyl)ether	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
4-Chloro-3-methylphenol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2-Chloronaphthalene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2-Chlorophenol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
4-Chlorophenylphenyl ether	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Chrysene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA
Dibenz(a,h)anthracene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA
Dibenzofuran	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,2-Dichlorobenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,3-Dichlorobenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,4-Dichlorobenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
3,3-Dichlorobenzidine	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2,4-Dichlorophenol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Diethylphthalate	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2,4-Dimethylphenol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Dimethyl phthalate	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2,4-Dinitrophenol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2,4-Dinitrotoluene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2,6-Dinitrotoluene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,2-Diphenylhydrazine	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Fluoranthene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA
Fluorene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA
Hexachlorobenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Hexachlorobutadiene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Hexachloroethane	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Hexachlorocyclopehtadiene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA
Isophorone	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2-Methylnaphthalene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2-Methylphenol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
4-Methylphenol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Naphthalene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA
2-Nitroaniline	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
3-Nitroaniline	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
4-Nitroaniline	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Nitrobenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2-Nitrophenol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
4-Nitrophenol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
N-nitrosodiphenylamine	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
N-nitroso-di-n-propylamine	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Di-n-octyl phthalate	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Pentachlorophenol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Phenanthrene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA
Phenol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Pyrene	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA
Pyridine	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2,4,5-Trichlorophenol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
2,4,6-Trichlorophenol	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA
Gasoline Range C6-C12	NA	NA	ND	NA	NA	NA	ND	NA	ND	ND
Diesel Range >C12-C35	NA	NA	ND	NA	NA	NA	ND	NA	ND	ND
TPH C6-C35	NA	NA	ND	NA	NA	NA	ND	NA	ND	ND

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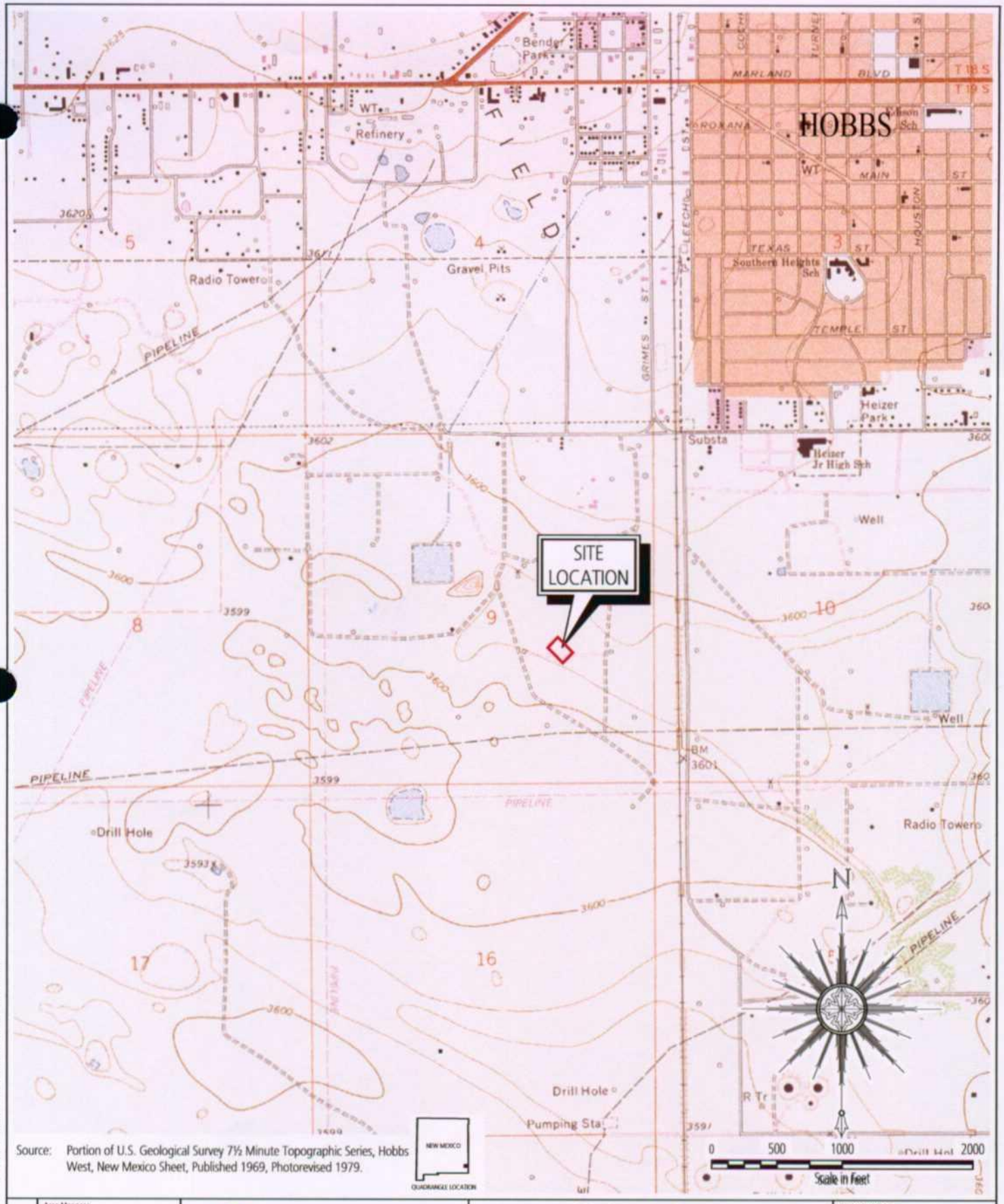
TABLE 3
GROUNDWATER ANALYTICAL RESULTS

Well Name	MW-1			MW-2		MW-3		MW-4		McNeil Well
Date Sampled	1/16/1999	7/7/1999	3/2/2004	1/16/1999	7/7/1999	1/16/1999	3/2/2004	9/2/1999	3/2/2004	3/2/2004
Compound Name	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
General Chemistry										
Resistivity	0.74	NA	NA	0.58	NA	0.53	NA	0.0009	NA	NA
Specific Gravity	0.982	NA	NA	0.985	NA	0.996	NA	NA	NA	NA
Chloride	128	NA	195	230	NA	195	319	100	164	81.5
Carbonate ($CaCO_3$)	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND
Bicarbonate ($CaCO_3$)	332	NA	478	322	NA	370	380	220	264	185
Hydroxide Alkalinity	NA	NA	ND	NA	NA	NA	ND	NA	ND	ND
pH	7.29	NA	7.22	7.51	NA	7.51	6.99	NA	7.03	7.52
Sulfate	318	NA	440	372	NA	483	499	180	367	69.2
Total dissolved solids	890	NA	1720	1190	NA	1340	1320	770	1040	468
Calcium	727	NA	72.8	578	NA	1255	94.4	93	100	25.9
Potassium	3	NA	4.45	30	NA	8	2.7	2.4	1.85	2.95
Sodium	144	NA	244	171	NA	310	200	124	129	104
Specific Conductance	NA	NA	1870	NA	NA	NA	1740	NA	1380	724
Fluoride	NA	NA	1.57	NA	NA	NA	1.91	NA	1.89	1.03
Nitrate as N	NA	NA	0.2	NA	NA	NA	0.1	NA	0.2	0.4
Metals										
Silver	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND
Aluminum	12.3	NA	.7	16.5	NA	32.7	15.7	3.1	1.14	0.0491
Arsenic	0.019	NA	ND	0.025	NA	0.028	0.0127	0.03	ND	0.0467
Barium	0.87	NA	0.446	0.970	NA	3.91	1.87	0.11	0.0932	0.0543
Boron	NA	NA	1.38	NA	NA	NA	0.999	NA	0.592	0.127
Cadmium	ND	NA	ND	ND	NA	ND	ND	ND	0.0134	ND
Cobalt	ND	NA	J[0.0008]	ND	NA	ND	0.0047	ND	ND	ND
Chromium	ND	NA	J[0.0024]	0.02	NA	0.03	0.0139	ND	ND	ND
Copper	0.02	NA	0.0044	0.02	NA	0.02	ND	0.03	ND	ND
Iron	9.34	NA	5.58	11.6	NA	26.4	13.8	2.4	1.06	0.0609
Mangnesium	NA	NA	28.1	NA	NA	NA	38.8	NA	31.2	3.93
Mercury	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND
Manganese	0.214	NA	0.0741	0.288	NA	0.535	0.458	0.03	0.0524	0.0221
Molybdenum	ND	NA	ND	ND	NA	0.03	ND	0.02	ND	ND
Nickel	0.02	NA	ND	ND	NA	0.05	ND	0.1	ND	ND
Lead	0.005	NA	ND	0.007	NA	0.013	ND	0.008	ND	ND
Selenium	ND	NA	ND	ND	NA	ND	ND	0.02	ND	ND
Zinc	0.05	NA	0.098	0.04	NA	0.04	0.0342	0.04	0.0863	0.0331

All results are reported in milligrams per liter (mg/L)
NA - Not analyzed
ND - Not detected



Source: Portion of U.S. Geological Survey 7½ Minute Topographic Series, Hobbs West, New Mexico Sheet, Published 1969, Photorevised 1979.

NEW MEXICO
QUADRANGLE LOCATION

Area Manager: A. Schmidt	ARCADIS	Rice Operating Company Junction I-9 Release Site, 09-T19S-R38E, Hobbs SWD System Abatement	Project Number: MT000643.0001
Project Manager: S. Hall	1004 North Big Spring Street Suite 300 Midland, TX 79701-3383 Tel: 432-687-5400 Fax: 432-687-5401 www.arcadis-us.com	Site Location Map Lea County, New Mexico	Drawing Date: 09 July 2004
Task Manager: S. Hall			Figure: 1
Technical Review: S. Tischer			

Appendix A

Photographs

Excavation to groundwater in area where PSH was detected.

Excavation to groundwater in area where PSH was detected.

Excavation to groundwater in area where PSH was detected.

Installation of lower liner.

Installation of lower liner.

Excavation of sidewalls.

Backfilling over lower liner.

Backfilling over lower liner.

Backfilling.

Backfilling.

Installation of upper liner.

Proctor testing of upper liner.

Proctor testing of upper liner.

Backfilling over upper liner.

Backfilling over upper liner.

Site grading.

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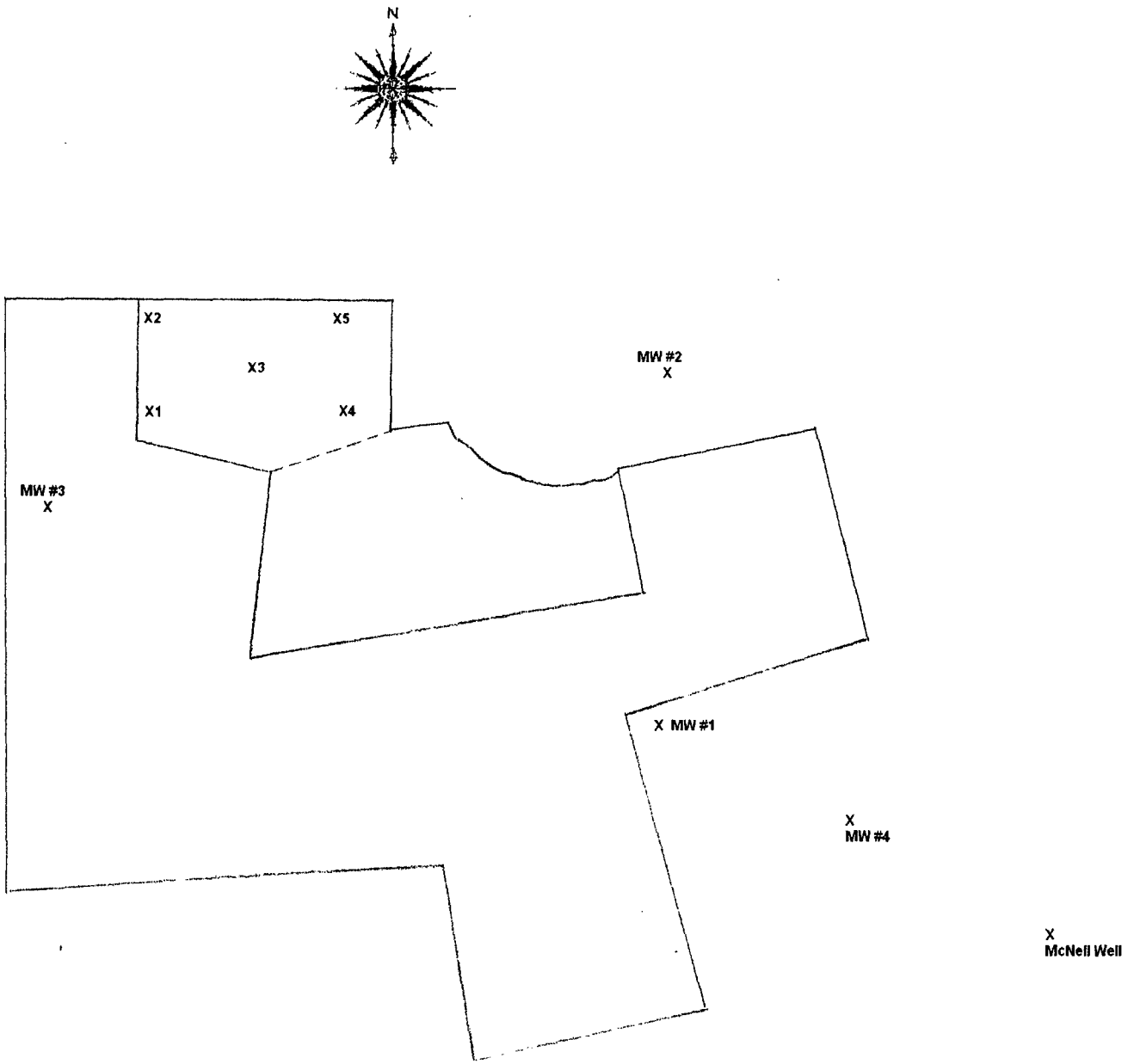
Appendix B

Laboratory Analytical Results

10/1/03
Hobbs I-9 Sample Points Prior to Clay Liner Installation
Lab #H8053 #1 - #5



Date	File Location	Compiler	Project Manager	Area Manager
July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
				Checked
				R. Rascon

Rice Operating Company
Junction I-9 State 2 Remediation
Sampling Points

Figure 2A

RICE OPERATING COMPANY
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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

Receiving Date: 10/01/03
Reporting Date: 10/02/03
Project Number: HOBBS I-9
Project Name: HOBBS I-9
Project Location: NOT GIVEN

Sampling Date: 10/01/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		10/01/03	10/01/03	10/02/03
H8053-1	H-I-9 SP #1 BTM	<10.0	<10.0	64
H8053-2	H-I-9 SP #2	<10.0	<10.0	64
H8053-3	H-I-9 SP #3	<10.0	<10.0	253
H8053-4	H-I-9 SP #4	<10.0	<10.0	448
H8053-5	H-I-9 SP #5	<10.0	<10.0	112
Quality Control		802	761	1050
True Value QC		800	800	1000
% Recovery		100	95.1	105
Relative Percent Difference		1.7	7.4	6.7

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

Chemist

10/2/03
Date

COPY

H8053A.XLS

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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

Receiving Date: 10/01/03
Reporting Date: 10/02/03
Project Number: HOBBS I-9
Project Name: HOBBS I-9
Project Location: NOT GIVEN

Sampling Date: 10/01/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		10/01/03	10/01/03	10/01/03	10/01/03
H8053-1	H-I-9 SP #1 BTM	<0.005	<0.005	<0.005	<0.015
H8053-2	H-I-9 SP #2	<0.005	<0.005	<0.005	<0.015
H8053-3	H-I-9 SP #3	<0.005	<0.005	<0.005	<0.015
H8053-4	H-I-9 SP #4	<0.005	<0.005	<0.005	<0.015
H8053-5	H-I-9 SP #5	<0.005	<0.005	<0.005	<0.015
Quality Control		0.105	0.099	0.090	0.273
True Value QC		0.100	0.100	0.100	0.300
% Recovery		105	98.8	90.4	90.9
Relative Percent Difference		6.2	<0.1	1.8	0.1

METHOD: EPA SW-846 8260

Chemist

10/2/03
Date

COPY

CARDINAL LABORATORIES, INC.

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page ____ of ____

Company Name:	RICE OPER. CO.	BILL TO	PO #:
Project Manager:	KRISTIN FARRIS	Company:	
Address:	122 W. TAYLOR	Attn:	
City:	HOBBS State: NM Zip: 88240	Address:	
Phone #:		City:	
Fax #:		State:	Zip:
Project #:	Hobbs I-9 Project Owner:	Phone #:	
Project Name:	Hobbs I-9	Fax #:	
Project Location:			

FOR LAB USE ONLY				MATRIX						PRES.			SAMPLING		ANALYSIS REQUEST		
LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID:	ICE / COOL	OTHER:	DATE	TIME	TPH 8015M	BTEX	Cl-
H8053-1	H-I-9 SP#1 BTM	G	P			✓					✓		10-1-03	1000	✓	✓	✓
-2	SP#2	G	P			✓					✓			1015	✓	✓	✓
-3	SP#3	G	P			✓					✓			1030	✓	✓	✓
-4	SP#4	G	P			✓					✓			1045	✓	✓	✓
-5	SP#5	G	P			✓					✓		↓	1100	✓	✓	✓

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 the client for the 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 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.

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

Sampler Relinquished:	Date: 10-1-03	Received By:	Phone Result ☐ Yes ☐ No Additional Fax #:
Roy R. Rascon	Time: 1200		Fax Result: ☐ Yes ☐ No
Relinquished By:	Date: 10/1/03	Received By: (Lab Staff)	REMARKS: PLEASE FAX
	Time:	Amy Hill	COPY
Delivered By: (Circle One)	Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other:			

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020

RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE
AIR
LOT NO: 02-2230
EXP. DATE: 11-20-04
METER READING
ACCURACY: 100.1

SERIAL NO: 104412
100 PPM
BALANCE
FILL DATE: 5-20-03
ACCURACY: 100PPM ± 2%

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9	19S	R38E

SAMPLE	PID RESULT	SAMPLE	PID RESULT
Sample Point #1	1.3 PPM		
#2	1.0 PPM		
#3	2.5 PPM		
#4	2.3 PPM		
#5	.7 PPM		

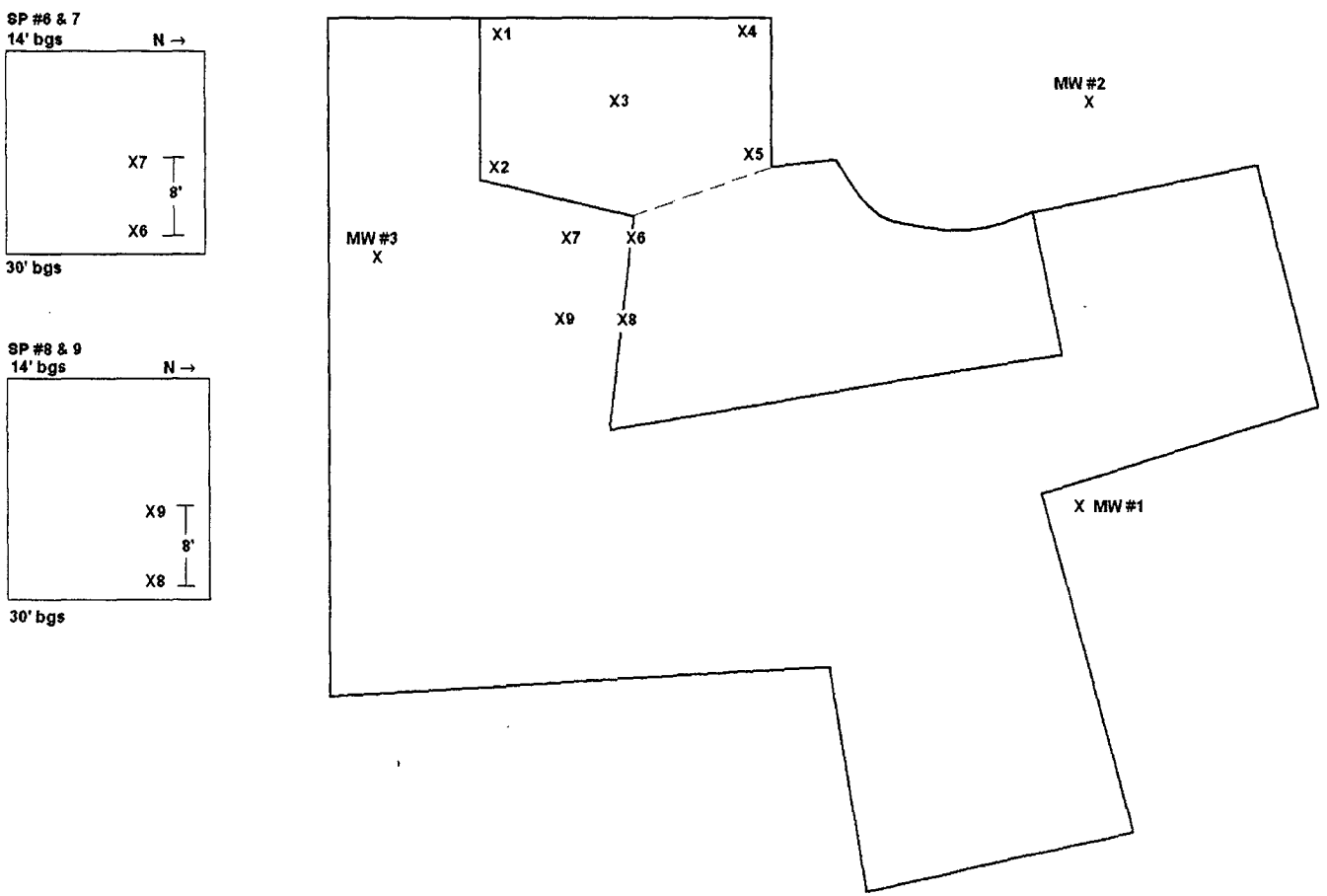
I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Roy R. Rascon
Signature

10-1-03
Date

COPY

10/6/03
Lab #G0307653
1st 5' lift after clay liner @ 30' bgs & sample points #6 - #8



Area Manager C. Haynes			
Project Manager R. Rascon	Checked R. Rascon		
Complier S. Hicks	Rice Operating Company Junction I-9 State 2 Remediation Sampling Points		Figure 2AB
File Location Drawing/ROC			
Date July 7, 2004			

RICE OPERATING COMPANY

122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471

ANALYTICAL REPORT

Prepared for:

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

Project: Hobbs Jct. I-9

PO#:

Order#: G0307653

Report Date: 10/08/2003

Certificates
US EPA Laboratory Code TX00158

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ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

Rice Operating
122 W. Taylor
Hobbs, NM 88240
505-397-1471

Order#: G0307653
Project:
Project Name: Hobbs Jct. I-9
Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0307653-01	1st 5' Lift #1	SOIL	10/3/03 11:30	10/6/03 8:00	Plastic Bag	ice
	Lab Testing: 8015M Chloride	Rejected: No		Temp: 4.0 C		
0307653-02	1st 5' Lift #2	SOIL	10/3/03 11:45	10/6/03 8:00	Plastic Bag	ice
	Lab Testing: 8015M Chloride	Rejected: No		Temp: 4.0 C		
0307653-03	1st 5' Lift #3	SOIL	10/3/03 12:00	10/6/03 8:00	Plastic Bag	ice
	Lab Testing: 8015M Chloride	Rejected: No		Temp: 4.0 C		
0307653-04	1st 5' Lift #4	SOIL	10/3/03 12:15	10/6/03 8:00	Plastic Bag	ice
	Lab Testing: 8015M Chloride	Rejected: No		Temp: 4.0 C		
0307653-05	1st 5' Lift #5	SOIL	10/3/03 12:30	10/6/03 8:00	Plastic Bag	ice
	Lab Testing: 8015M Chloride	Rejected: No		Temp: 4.0 C		
0307653-06	West Wall Btm #6	SOIL	10/3/03 13:00	10/6/03 8:00	Plastic Bag	ice
	Lab Testing: 8015M Chloride	Rejected: No		Temp: 4.0 C		
0307653-07	West Wall Btm #7	SOIL	10/3/03 13:10	10/6/03 8:00	Plastic Bag	ice
	Lab Testing:	Rejected: No		Temp: 4.0 C		

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

Rice Operating
122 W. Taylor
Hobbs, NM 88240
505-397-1471

Order#: G0307653
Project:
Project Name: Hobbs Jct. I-9
Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
	8015M Chloride					
0307653-08	West Wall 8' FB #8	SOIL	10/3/03 13:20	10/6/03 8:00	Plastic Bag	ice
	Lab Testing:	**Rejected:** No		**Temp:** 4.0 C		
	8015M Chloride					
0307653-09	West Wall 8' FB #9	SOIL	10/3/03 13:30	10/6/03 8:00	Plastic Bag	ice
	Lab Testing:	**Rejected:** No		**Temp:** 4.0 C		
	8015M Chloride					

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ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0307653
Project:
Project Name: Hobbs Jct. I-9
Location: None Given

Lab ID: 0307653-01
Sample ID: 1st 5' Lift #1

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		10/7/03	1	1	JLH	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	26.4	10.0
TOTAL, C6-C35	26.4	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	96%	70	130
1-Chlorooctadecane	101%	70	130

Lab ID: 0307653-02
Sample ID: 1st 5' Lift #2

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		10/7/03	1	1	JLH	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	94%	70	130
1-Chlorooctadecane	102%	70	130

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0307653
Project:
Project Name: Hobbs Jct. I-9
Location: None Given

Lab ID: 0307653-03
Sample ID: 1st 5' Lift #3

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		10/7/03	1	1	JLH	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	102%	70	130
1-Chlorooctadecane	113%	70	130

Lab ID: 0307653-04
Sample ID: 1st 5' Lift #4

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		10/7/03	1	1	JLH	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	12.1	10.0
TOTAL, C6-C35	12.1	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	95%	70	130
1-Chlorooctadecane	99%	70	130

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0307653
Project:
Project Name: Hobbs Jct. I-9
Location: None Given

Lab ID: 0307653-05
Sample ID: 1st 5' Lift #5

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		10/7/03	1	1	JLH	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	18.9	10.0
TOTAL, C6-C35	18.9	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	85%	70	130
1-Chlorooctadecane	88%	70	130

Lab ID: 0307653-06
Sample ID: West Wall Btm #6

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		10/7/03	1	1	JLH	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	11.6	10.0
TOTAL, C6-C35	11.6	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	79%	70	130
1-Chlorooctadecane	81%	70	130

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0307653
Project:
Project Name: Hobbs Jct. I-9
Location: None Given

Lab ID: 0307653-07
Sample ID: West Wall Btm #7

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		10/7/03	1	1	JLH	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	84%	70	130
1-Chlorooctadecane	88%	70	130

Lab ID: 0307653-08
Sample ID: West Wall 8' FB #8

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		10/7/03	1	1	JLH	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	90%	70	130
1-Chlorooctadecane	96%	70	130

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0307653
Project:
Project Name: Hobbs Jct. I-9
Location: None Given

Lab ID: 0307653-09
Sample ID: West Wall 8' FB #9

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		10/7/03	1	1	JLH	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	**71.4**	10.0
DRO, >C12-C35	**401**	10.0
TOTAL, C6-C35	**472**	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	**109%**	**70**	**130**
1-Chlorooctadecane	**123%**	**70**	**130**

Approval: Celey D. Keene 10/9/03
Raland K. Tuttle, Lab Director, QA Officer — Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

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DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Kristin Farris
ice Operating
122 W. Taylor
Hobbs, NM 88240

Order#: G0307653
Project:
Project Name: Hobbs Jct. I-9
Location: None Given

Lab ID: 0307653-01
Sample ID: 1st 5' Lift #1

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	35.4	mg/kg	1	20	9253	10/7/03	SB

Lab ID: 0307653-02
Sample ID: 1st 5' Lift #2

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	53.2	mg/kg	1	20	9253	10/7/03	SB

Lab ID: 0307653-03
Sample ID: 1st 5' Lift #3

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	35.4	mg/kg	1	20	9253	10/7/03	SB

Lab ID: 0307653-04
Sample ID: 1st 5' Lift #4

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	35.4	mg/kg	1	20	9253	10/7/03	SB

Lab ID: 0307653-05
Sample ID: 1st 5' Lift #5

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	35.4	mg/kg	1	20	9253	10/7/03	SB

Lab ID: 0307653-06
Sample ID: West Wall Btm #6

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	106	mg/kg	1	20	9253	10/7/03	SB

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0307653
Project:
Project Name: Hobbs Jct. I-9
Location: None Given

Lab ID: 0307653-07
Sample ID: West Wall Btm #7

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	<20	mg/kg	1	20	9253	10/7/03	SB

Lab ID: 0307653-08
Sample ID: West Wall 8' FB #8

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	<20	mg/kg	1	20	9253	10/7/03	SB

Lab ID: 0307653-09
Sample ID: West Wall 8' FB #9

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	1770	mg/kg	1	20	9253	10/7/03	SB

Approval: Celey D. Keene 10/9/03
Raland K. Tuttle, Lab Director, QA Officer — Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

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RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS I, LTD. 12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0307653

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0007064-01			<20		
MS SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0307648-01	1030	500	1540	102.%	
MSD SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0307648-01	1030	500	1560	106.%	1.3%
SRM SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0007064-04		5000	4960	99.2%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8015M

Order#: G0307653

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0007072-02			<10.0		
MS SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0307653-01	26.4	952	1046	107.1%	
MSD SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0307653-01	26.4	952	1027	105.1%	1.8%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0007072-05		1000	1008	100.8%	

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763

Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Kristin Farris
Company Name: RICE Operating Co.
Company Address: 122 W. Taylor
City/State/Zip: Hobbs, NM 88240
Telephone No: (505) 393-9174
Fax No: (505) 397-1471
Sampler Signature: Kristin Farris / Roy R. Rascon

Project Name: Hobbs JcT I-9
Project #:
Project Loc:
PO #:

631 1278

0307653

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Water	Sludge	Soil	Other (specify):	TDS / CL / SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	Cl-	RUSH TAT (Pre-Schedule)	Standard TAT
01	1st 5' Lift #1	10-3-03	1130	1	✓									✓					✓					✓		
02	#2	↓	1145	1	✓									✓					✓					✓		
03	#3		1200	1	✓									✓					✓					✓		
04	#4		1215	1	✓									✓					✓					✓		
05	#5		1230	1	✓									✓					✓					✓		
06	West Wall Btm #6		100	1	✓									✓					✓					✓		
07	" " #7		110	1	✓									✓					✓					✓		
08	West Wall 8' FB #8		120	1	✓									✓					✓					✓		
09	" " #9	↓	130	↓	✓									✓					✓					✓		

Special Instructions:

COPY

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	10/3/03	19:42	Received by ELOT: Kim Anderson	10/6/03	0800

Sample Containers Intact? (Y) N
Temperature Upon Receipt:
Laboratory Comments:
4°C
Plastic Bag
~~4 oz glass~~

RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE 100 PPM
AIR BALANCE
LOT NO: 02-2230 FILL DATE: 5-20-03
EXP. DATE: 11-20-04 ACCURACY: 100 ppm +- 2%
METER READING
ACCURACY: 101.1

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	~~PW~~ I	9	19	38

1st 5' Lift 5 1/2 BTTM @ Approx 29' after Clay Liner

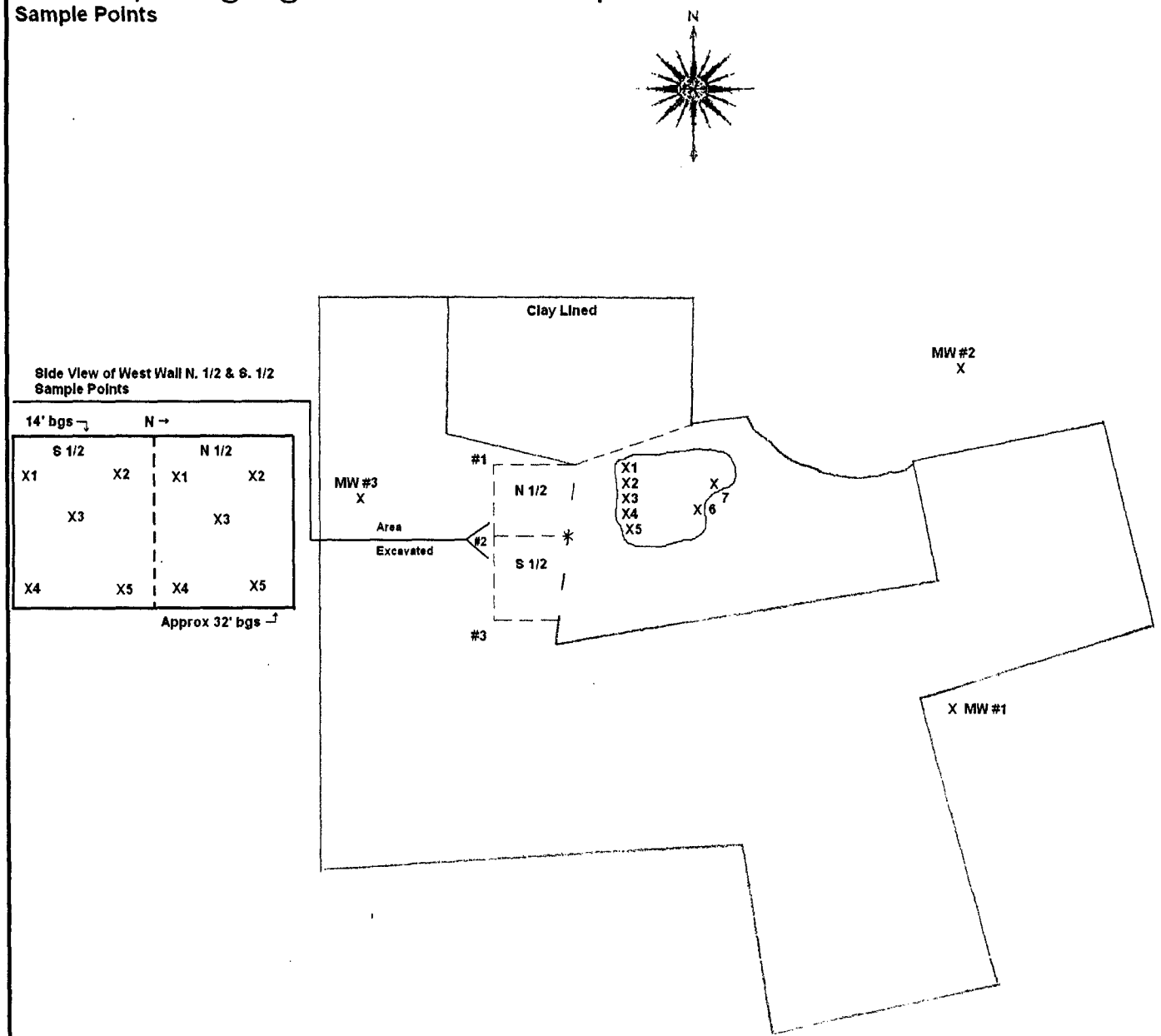
SAMPLE	PID RESULT	SAMPLE	PID RESULT
1	1.3		
2	2.0		
3	0.7		
4	1.5		
5	1.7		
West Wall Bottom @ 8'		Above From	Bottom
6	18.1	7	1.6
8	6.6	9	96.0

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Roy K. Kitson — Signature
Environ. Project Leader — Title
10-6-03 — Date

COPY

10/21/03
Lab #H8102 #1 - #3
7-Point Sample Loc. @ 36' @ Groudwater & West Wall Comp
Sample Points



Area Manager C. Haynes			
Project Manager R. Rascon	Checked R. Rascon		
Complier S. Hicks	Figure 2B		
File Location Drawing/ROC	Rice Operating Company Junction I-9 State 2 Remediation Sampling Points		
Date July 7, 2004			

RICE OPERATING COMPANY
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ROY R. RASCON
122 W. TAYLOR
HOBBS, NM 88240
FAX TO:

Receiving Date: 10/21/03
Reporting Date: 10/22/03
Project Number: NOT GIVEN
Project Name: HOBBS JCT I-9
Project Location: HOBBS SYSTEM

Sampling Date: 10/20/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		10/21/03	10/21/03	10/21/03	10/21/03
H8102-1	7 PT GW @ 36' COMP.	<0.005	<0.005	<0.005	<0.015
H8102-2	WWS 1/2 5 PT COMP	<0.005	<0.005	<0.005	<0.015
H8102-3	WWN 1/2 5 PT COMP	<0.005	<0.005	<0.005	<0.015
Quality Control		0.107	0.099	0.094	0.276
True Value QC		0.100	0.100	0.100	0.300
% Recovery		107	99.3	93.9	92.2
Relative Percent Difference		6.1	0.6	6.6	8.5

METHOD: EPA SW-846 8260

Chemist

10/22/03
Date

H8102B.XLS

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CARDINAL LABORATORIES

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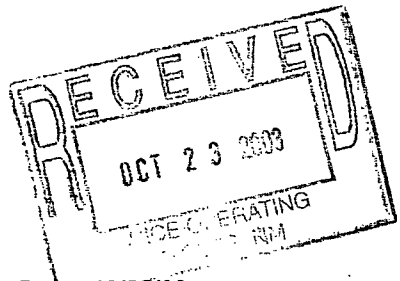
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240



ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ROY R. RASCON
122 W. TAYLOR
HOBBS, NM 88240
FAX TO:

Receiving Date: 10/21/03
Reporting Date: 10/22/03
Project Number: NOT GIVEN
Project Name: HOBBS JCT I-9
Project Location: HOBBS SYSTEM

Sampling Date: 10/20/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		10/21/03	10/21/03	10/21/03
H8102-1	7 PT GW @ 36' COMP.	<10.0	28.8	80
H8102-2	WWS 1/2 5 PT COMP	<10.0	16.7	96
H8102-3	WWN 1/2 5 PT COMP	<10.0	<10.0	64
Quality Control		761	816	960
True Value QC		800	800	1000
% Recovery		95.1	102	96.0
Relative Percent Difference		1.9	3.6	8.3

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

Chemist

10/22/03
Date

H8102A.XLS

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CARDINAL LABORATORIES, INC.

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page____ of____

		BILL TO	
Company Name:	RICE OPER. CO.	P.O. #:	
Project Manager:	Roy R. RASCON	Company:	
Address:	122 W. TAYLOR	Attn:	
City:	Hobbs State: NM Zip: 88240	Address:	
Phone #:	393-9174 Fax #:	City:	
Project #:	Hobbs JCT I-9 Project Owner:	State: Zip:	
Project Name:		Phone #:	
Project Location:	Hobbs System	Fax #:	
Sampler Name:	Roy R. RASCON		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Cl-	TPH 8015 M	BTEX
H8102-1	TPT GW @ 36' Comp.	C	P			✓					✓		10-20-03	3:45	✓	✓	✓
-2	WWS ½ 5PT Comp	C	P			✓					✓		10-20-03	4:10	✓	✓	✓
-3	WW N ½ 5PT Comp	C	P			✓					✓		10-20-03	4:00	✓	✓	✓

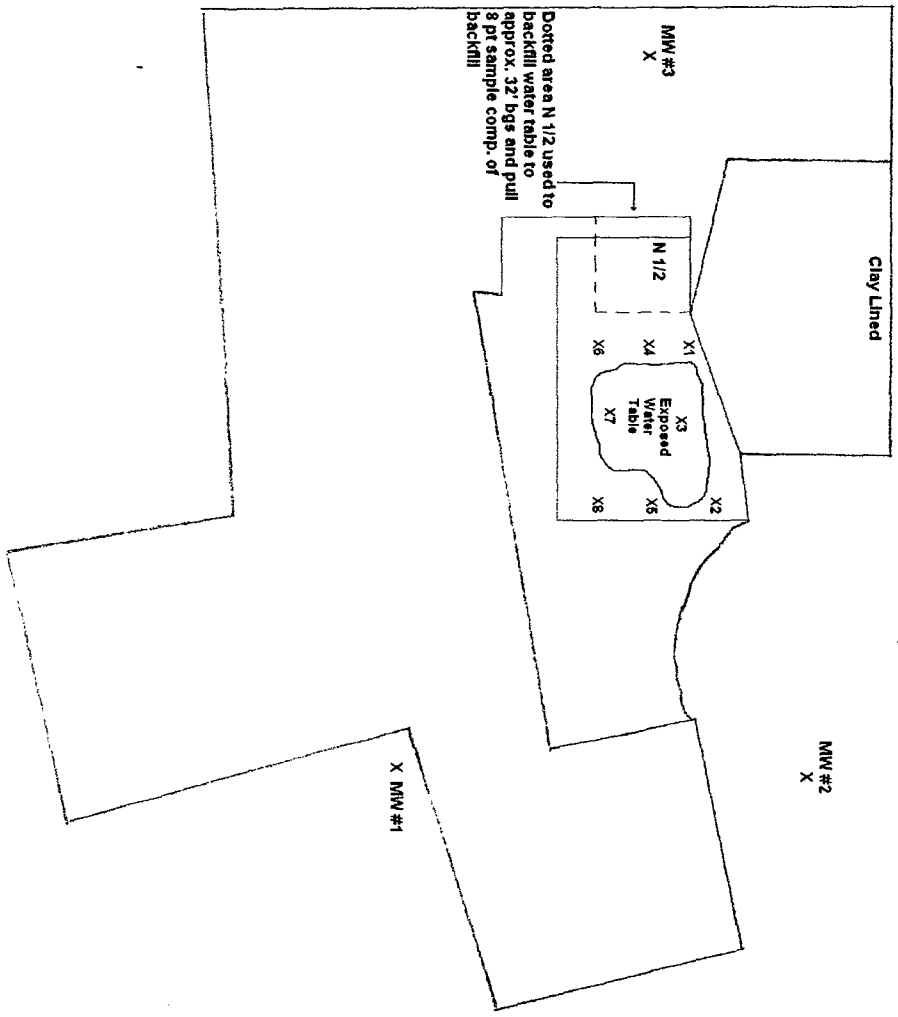
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 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.

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

Sampler Relinquished: Roy R. RASCON	Date: 10-21-03 Time: 10:00	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By: (Lab Staff) Amy Hill	Fax Result: ☑ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: ☑ Yes ☐ No Intact: ☐ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: COPY

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

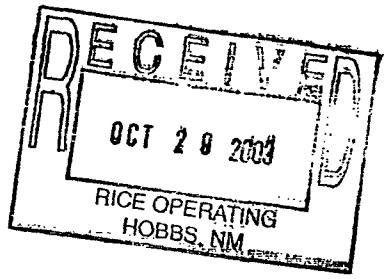
10/24/03 Wate Table Backfill from West Wall
Lab # H8113
8 pt comp. west wall after backfill



RICE OPERATING COMPANY	Date	File Location	Complier	Project Manager	Area Manager
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471	July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
	Rice Operating Company Junction I-9 State 2 Remediation Sampling Points				Checked R. Rascon
					Figure 2C

ARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240



ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ATTN: ROY R. RASCON
122 W. TAYLOR
HOBBS, NM 88240
FAX TO:

Receiving Date: 10/24/03
Reporting Date: 10/27/03
Project Number: NOT GIVEN
Project Name: HOBBS JCT. I-9
Project Location: NOT GIVEN

Sampling Date: 10/24/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		10/27/03	10/27/03	10/27/03
H8113-1	HOBBS I-9 WATER TABLE	<10.0	<10.0	160
	BACKFILL			
Quality Control		754	793	1020
True Value QC		800	800	1000
% Recovery		94.2	99.2	102
Relative Percent Difference		2.8	10.0	5.9

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

Chemist

10/27/03
Date

COPY

H8113.XLS

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Page ____ of ____

Company Name: RICE OPER. CO.	BILL TO
Project Manager: Roy R. RASCON	P.O. #:
Address: 122 W. TAYLOR	Company:
City: Hobbs State: N.M. Zip: 88240	Attn:
Phone #: Fax #:	Address:
Project #: Hobbs JCT I-9 Project Owner:	City:
Project Name:	State: Zip:
Project Location:	Phone #:
Sampler Name: Roy R. RASCON	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	ANALYSIS REQUEST: TPH 8015 M.	Cl
H8113-1	Hobbs I-9 WATER table Backfill	C	1			✓					✓		10-24-03	1450	✓	✓

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 the client for the 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 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.

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

Sampler Relinquished: Roy R. RASCON	Date: 10-24-03 Time: 2:50	Received By:	Phone Result: ☐ Yes ☐ No
Relinquished By:	Date: Time:	Received By: (Lab Staff) Amy Hill	Fax Result: ☑ Yes ☐ No
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Temp. °C ☑ Yes ☐ No (Intact?)	Checked By: (Initials)	REMARKS: COPY

† Cardinal cannot accept verbal changes. Please fax written changes to (915) 673-7020.

RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE 100 PPM
AIR BALANCE
LOT NO: 02-2230 FILL DATE: 5-20-03
EXP. DATE: 11-20-04 ACCURACY: 100 PPM +- 2%
METER READING
ACCURACY: 100.1

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I9	I	9	19S	38E

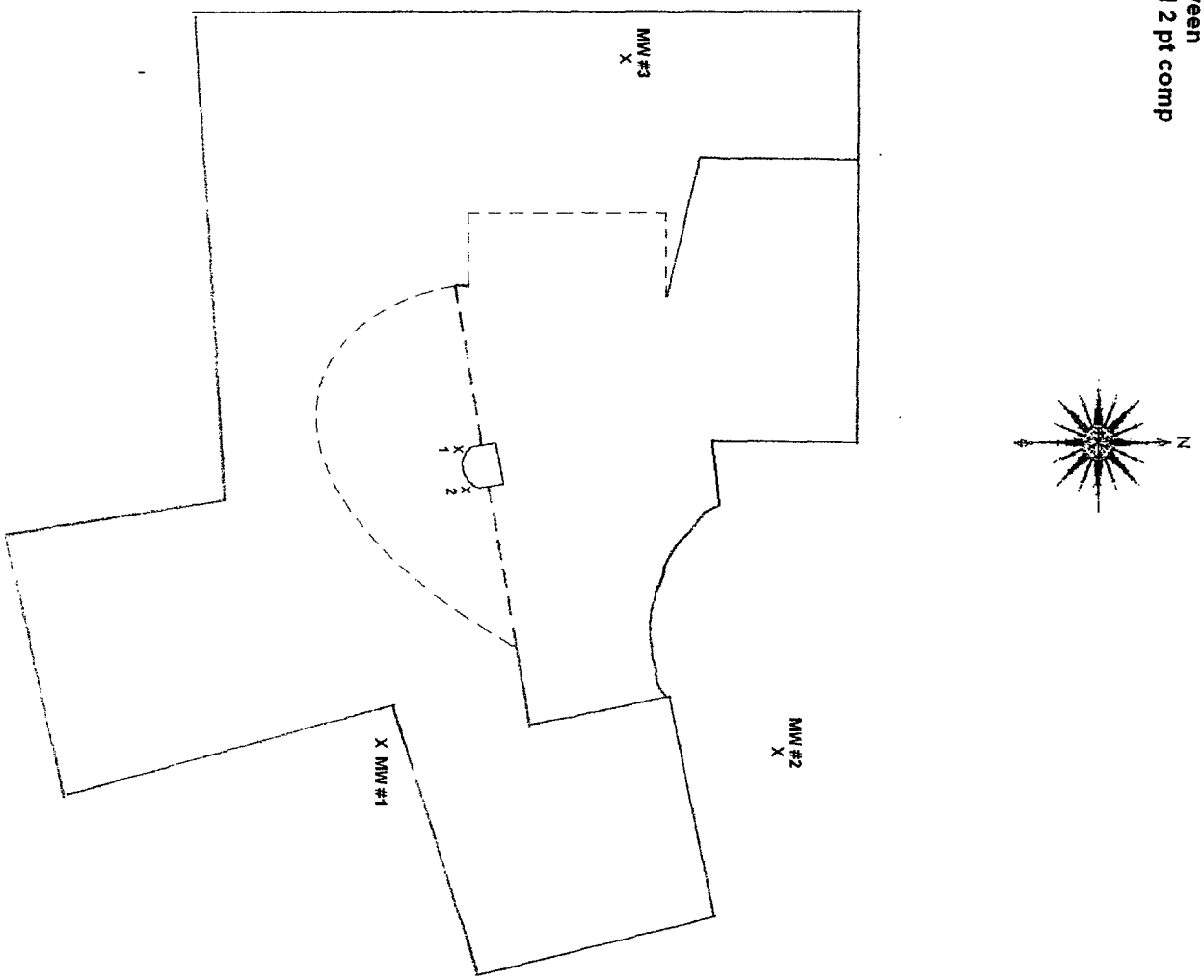
SAMPLE	PID RESULT	SAMPLE	PID RESULT
@ 36' BGS S. WALL @ WATER TABLE	25.2		
@ 32 BGS E. WALL BY P/L E. SLOPE	1010		
8 PT. WATER TABLE BACKFILL	.02		

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Roy R. Rascon — Signature
Environ. Project Leader — Title
10-24-03 — Date

COPY

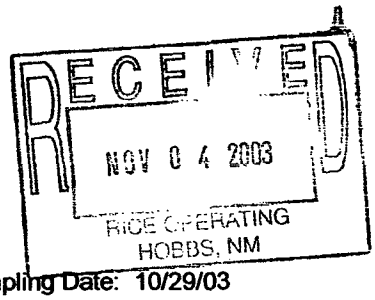
10/30/03
Lab #H8129
Hobbs I-9 Sample point of last water table
area open @ 36' sampled between
sandstone (rock) & water level 2 pt comp



RICE OPERATING COMPANY	Date	File Location	Complier	Project Manager	Area Manager
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471	July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
	Rice Operating Company Junction I-9 State 2 Remediation Sampling Points				Checked R. Rascon
					Figure 2D

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240



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

Receiving Date: 10/30/03
Reporting Date: 10/31/03
Project Number: NOT GIVEN
Project Name: HOBBS JCT I-9
Project Location: NOT GIVEN

Sampling Date: 10/29/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC/HM

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		10/30/03	10/30/03	10/31/03
H8129-1	HOBBS I-9 S. @ WATER TABLE 36'	<10.0	<10.0	48
Quality Control		754	793	1020
True Value QC		800	800	1000
% Recovery		94.2	99.2	102
Relative Percent Difference		2.8	10.0	5.9

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

Chemist

10/31/03
Date

H8129.XLS

COPY

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Page ____ of ____

Company Name: KICE OPER. CO.	BILL TO
Project Manager: 122 W. TAYLOR Roy R. RASCON	P.O. #:
Address:	Company:
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: 393-9174 Fax #:	Address:
Project #: Project Owner:	City:
Project Name: Hobbs JCT I-9	State: Zip:
Project Location:	Phone #:
Sampler Name: Roy R. RASCON	Fax #:

FOR LAB USE ONLY				MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH 8015M	Cl-
H8129-1	Hobbs I-9 S. @ Water Table 36'	C	2			✓					✓		10-29-03	300	✓	✓

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Sampler Relinquished: Roy R. RASCON	Date: 10-30-03 Time: 1020	Received By:	Phone Result: ☐ Yes ☐ No
Relinquished By:	Date: Time:	Received By: (Lab Staff) Amy Hill	Fax Result: ☐ Yes ☐ No
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Temp. °C: Intact? ☐ Yes ☐ No	Checked By: (Initials)	REMARKS: Composite @ LAB

COPY

† Cardinal cannot accept verbal changes. Please fax written changes to (915) 673-7020.

RICE OPERATING COMPANY
122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE 100 PPM
AIR BALANCE
LOT NO: 02-2230 FILL DATE: 5-20-03
EXP. DATE: 11-20-04 ACCURACY: 100 PPM +- 2%
METER READING
ACCURACY: 99.8

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9	19S	R38E

SAMPLE	PID RESULT	SAMPLE	PID RESULT
SP#1	6.1		
SP#2	6.8		

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Ray R. Roscon — Signature
Environ. Project Leader — Title
10-30-03 — Date

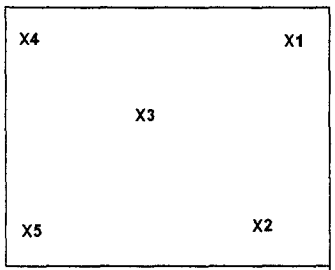
COPY

10/31/03
Lab #H8133 #1 - #2
S. wall comp E. end
S. wall comp W. end

SOUTH WALL SIDE VIEW
WEST END

APPROX. 14' BGS

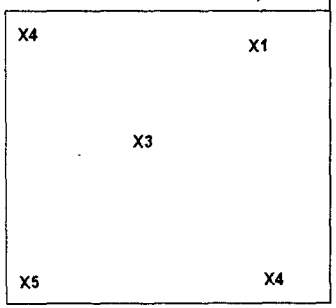
W ⟶



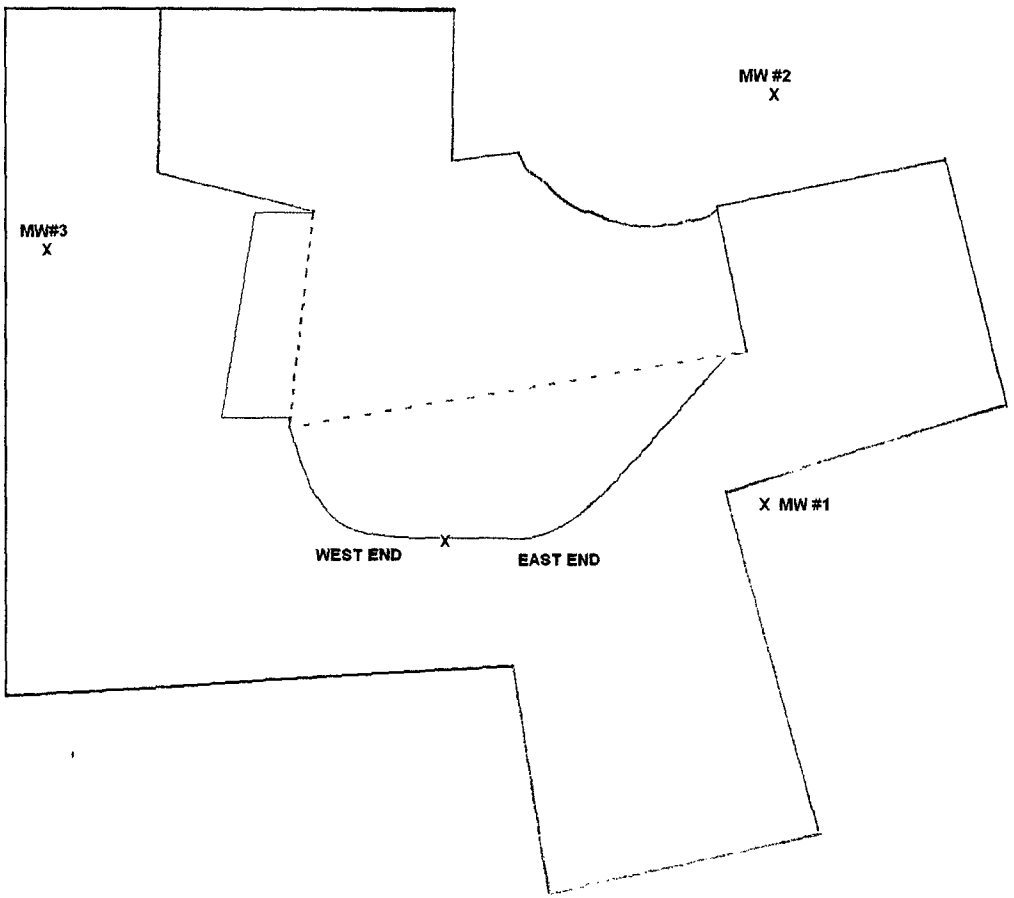
APPROX. 32' BGS

SOUTH WALL SIDE VIEW EAST END

APPROX. 14' BGS W ⟶



APPROX. 32' BGS



Area Manager	C. Haynes
Checked	R. Rascon
Project Manager	R. Rascon
Complier	S. Hicks
File Location	Drawing/ROC
Date	July 7, 2004

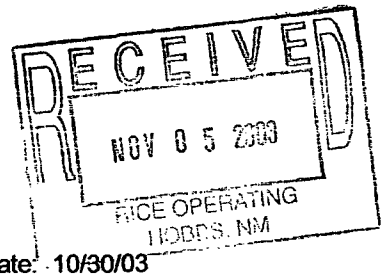
Rice Operating Company
Junction I-9 State 2 Remediation
Sampling Points

Figure 2F

RICE OPERATING COMPANY
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240



ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ATTN: ROY R. RASCON
122 W. TAYLOR
HOBBS, NM 88240
FAX TO: (505) 393-9174

Receiving Date: 10/31/03
Reporting Date: 11/04/03
Project Owner: RICE
Project Name: HOBBS JCT I-9
Project Location: NOT GIVEN

Sampling Date: 10/30/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC/HM

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		10/31/03	10/31/03	10/31/03
H8133-1	S. WALL COMP. EAST END	<10.0	<10.0	32
H8133-2	S. WALL COMP. WEST END	<10.0	<10.0	16
Quality Control		779	818	950
True Value QC		800	800	1000
% Recovery		97.4	102	95.0
Relative Percent Difference		1.5	1.1	6.9

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl: Std. Methods 4500-ClB
*Analysis performed on a 1:4 w:v aqueous extract.

Chemist

11/04/03
Date

COPY

H8133.XLS

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Page____ of____

Company Name: Rice OPER. Co.	BILL TO
Project Manager: Roy R. RASCON	P.O. #:
Address: 122 W TAYLOR	Company:
City: Hobbs State: N.M. Zip: 88240	Attn:
Phone #: 393-9174 Fax #:	Address:
Project #: Hobbs JCT I-9 Project Owner: RICE	City:
Project Name:	State: Zip:
Project Location:	Phone #:
Sampler Name: Roy R. RASCON	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	TPH 8015 M	C1-
H8133-1	S. Wall Comp. East End	C	G			✓					✓		10-30-03	1200	✓	✓
-2	S. Wall Comp. West End	C	G			✓					✓		10-30-03	1210	✓	✓

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

Sampler Relinquished: Roy R. RASCON	Date: 10-31-03 Time: 900	Received By:	Phone Result: ☐ Yes ☐ No
Relinquished By:	Date: Time:	Received By: (Lab Staff)	Fax Result: ☑ Yes ☐ No
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Temp. °C: cool Intact? ☒ Yes ☐ No	Checked By: (Initials)	REMARKS:

COPY

† Cardinal cannot accept verbal changes. Please fax written changes to (915) 673-7020.

RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE 100 PPM
AIR BALANCE
LOT NO: 02-2230 FILL DATE: 5-20-03
EXP. DATE: 11-20-04 ACCURACY: 100 PPM +- 2%
METER READING
ACCURACY: 100.1

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I 9	I	9	19S	38E

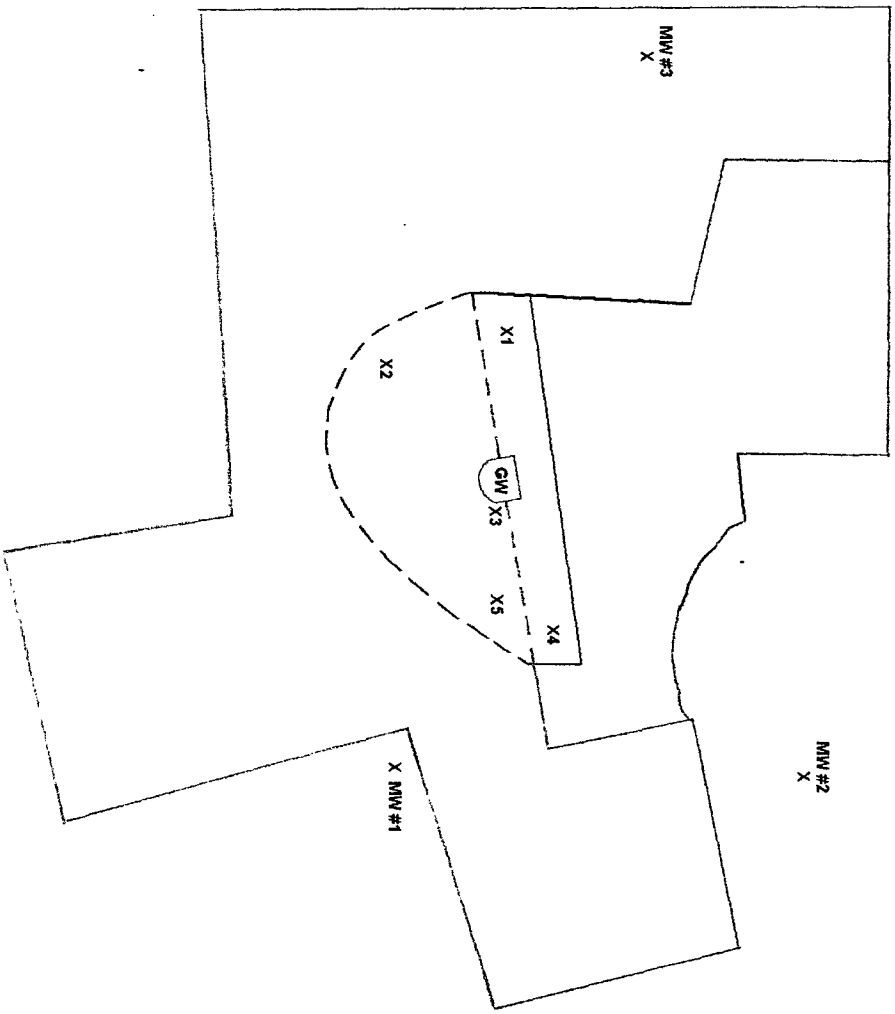
SAMPLE	PID RESULT	SAMPLE	PID RESULT
S. WALL RAMP	139		
N. WALL @ 32' BGS	279		
E. WATER HOLE @ 36'	9.9		
S. WALL W. END	2.6		
S. WALL E. END	2.5		

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Ray L. Roscoe — Signature
Environ. Project Leader — Title
10-31-03 — Date

COPY

11/6/03
Lab # H8148
Groundwater backfill south end 5 pt comp



RICE OPERATING COMPANY	Date	File Location	Complier	Project Manager	Area Manager
122 W. Taylor Hobbs. New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471	July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
	Rice Operating Company Junction I-9 State 2 Remediation Sampling Points				Checked R. Rascon Figure 2E

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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

Receiving Date: 11/06/03
Reporting Date: 11/07/03
Project Number: NOT GIVEN
Project Name: HOBBS JCT I-9
Project Location: HOBBS SYSTEM

Sampling Date: 11/05/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		11/05/03	11/05/03	11/06/03
H8148-1	WATER TABLE BACKFILL S. END	<10.0	<10.0	96
Quality Control		783	807	950
True Value QC		800	800	1000
% Recovery		97.8	101	95.0
Relative Percent Difference		2.0	5.1	6.9

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

Chemist

11/7/03
Date

COPY

H8148.XLS

CARDINAL LABORATORIES, INC.

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page____ of____

Company Name:	RICE OPER. Co.	BILL TO	PO #:
Project Manager:	Roy R. Rascon	Company:	
Address:	122 W. TAYLOR	Attn:	
City:	Hobbs State: NM Zip: 88240	Address:	
Phone #:	393-9174	City:	
Fax #:		State: Zip:	
Project #:	Hobbs JCT I-9 Project Owner:	Phone #:	
Project Name:		Fax #:	
Project Location:	Hobbs System		

FOR LAB USE ONLY				MATRIX						PRES.			SAMPLING		ANALYSIS REQUEST												
LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID:	ICE / COOL	OTHER:	DATE	TIME	TPH 8015M	Cl-											
H8148-1	Water table Backfill S. End	C	P			✓					✓		11-5-03	11:40	✓	✓											

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 the client for the 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 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.

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

Sampler Relinquished: Roy R. Rascon	Date: 11-6-03 Time: 0915	Received By:	Phone Result ☐ Yes ☐ No Additional Fax #:
Relinquished By:	Date: Time:	Received By: (Lab Staff) Amy Hill	Fax Result: ☑ Yes ☐ No
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials)

REMARKS:

COPY

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE 100 PPM
AIR BALANCE
LOT NO: 02-2230 FILL DATE: 5-20-03
EXP. DATE: 11-20-04 ACCURACY: 100 PPM + - 2%
METER READING
ACCURACY: 100.1

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I 9	I	9	19S	38E

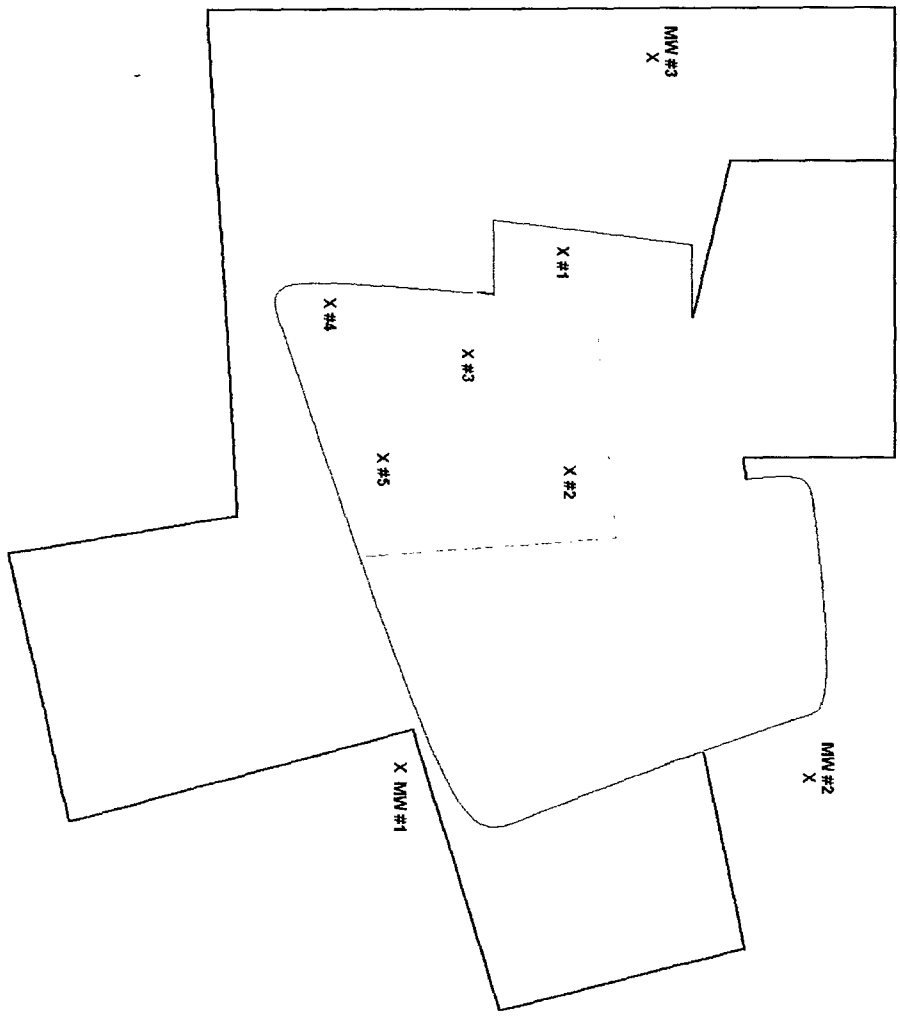
SAMPLE	PID RESULT	SAMPLE	PID RESULT
S. WALL RAMP	139		
N. WALL @ 32' BGS	279		
E. WATER HOLE @ 36'	9.9		
S. WALL W. END	2.6		
S. WALL E. END	2.5		

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Ray L. Roscoe — Signature
Environ. Project Leader — Title
10-31-03 — Date

COPY

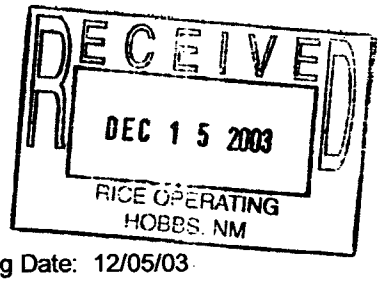
12/9/03
Lab #H8236
2nd 5' lift 3rd clay liner 5 pt comp



RICE OPERATING COMPANY	Date	File Location	Complier	Project Manager	Area Manager
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471	July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
	Rice Operating Company Junction I-9 State 2 Remediation Sampling Points				Checked R. Rascon
					Figure 2K

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240



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

Receiving Date: 12/09/03
Reporting Date: 12/10/03
Project Owner: RICE
Project Name: HOBBS JCT I-9
Project Location: NOT GIVEN

Sampling Date: 12/05/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC/AH

LAB NUMBER SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE	12/09/03	12/09/03	12/09/03
H8236-1 2nd LIFT 3rd CLAY LINER	<10.0	<10.0	176
Quality Control	795	833	940
True Value QC	800	800	1000
% Recovery	99.4	104	94.0
Relative Percent Difference	10.7	9.5	7.4

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

Burgess J.A. Cooke
Chemist

12/10/03
Date

COPY

H8236.XLS

CARDINAL LABORATORIES, INC.

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page____ of ____

Company Name: RICE OPER. CO.	BILL TO
Project Manager: ROY R. RASCON	P.O. #:
Address: 122 W TAYLOR	Company:
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: 393-9174 Fax #:	Address:
Project #: Hobbs JCT E-9 Project Owner: RICE	City:
Project Name:	State: Zip:
Project Location:	Phone #:
Sampler Name: Ray R. RASCON	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH 8015M	Cl
48236-1	2nd Lift 3rd Clay Liner	C	G			✓					✓		12-5-03	330	✓	✓

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 the client for the 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 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.

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

Sampler Relinquished: Ray	Date: 12-9-03 Time: 10:10	Received By:	
Relinquished By:	Date: 12/09/03 Time: 10:12AM	Received By: (Lab Staff)	

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

COPY

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

Sample Condition Cool	Intact	CHECKED BY: (Initials)
☒ Yes ☐ No	☑ Yes ☐ No	

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

RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE
100 PPM
AIR
BALANCE
LOT NO: 02-2230
FILL DATE: 5-20-03
EXP. DATE: 11-20-04
ACCURACY: 100 PPM +- 2%
METER READING
ACCURACY: 100.2

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9	19	38

2nd 5' Lift 3rd Clay Liner

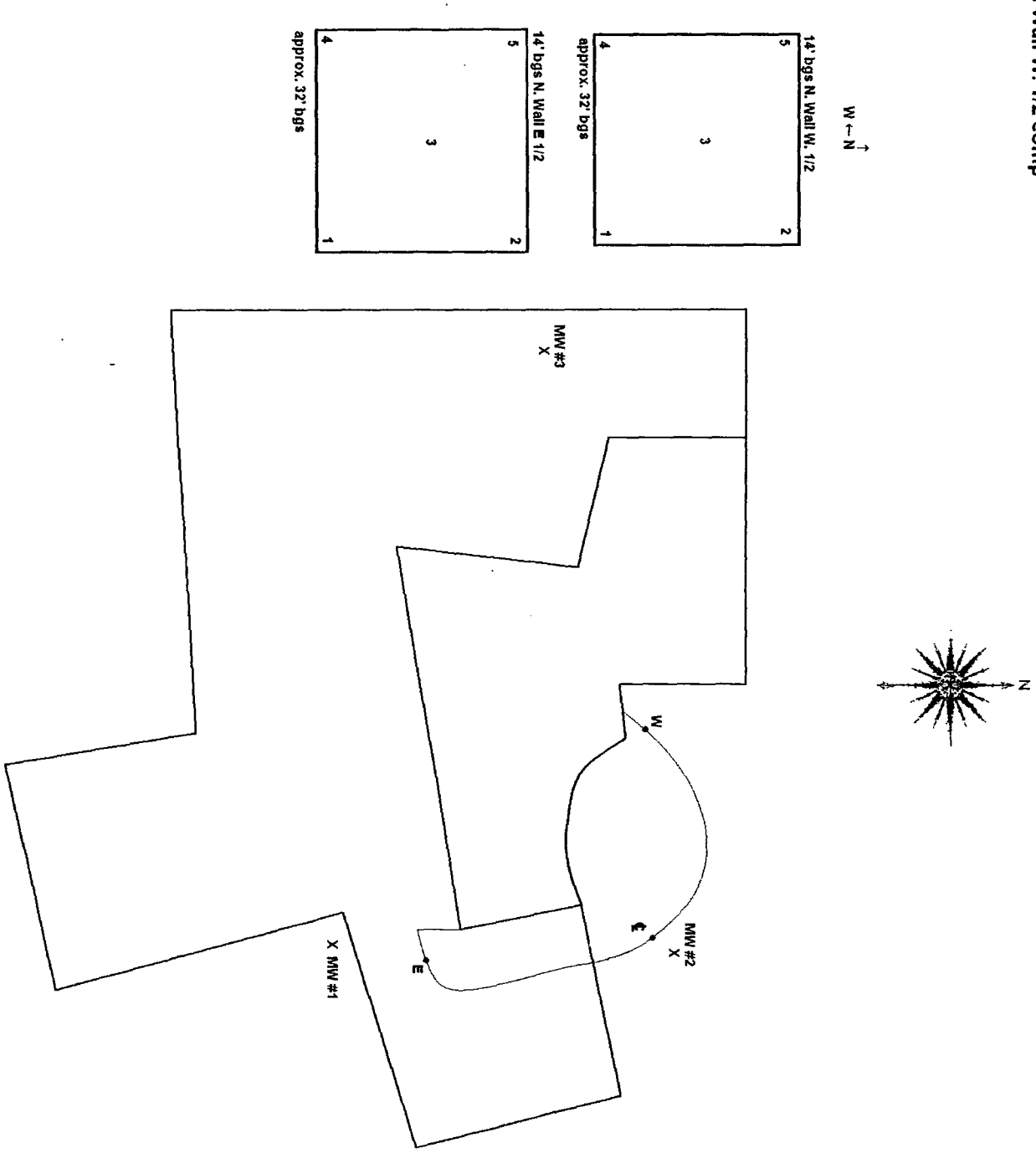
SAMPLE	PID RESULT	SAMPLE	PID RESULT
#1	3.2		
#2	3.6		
#3	4.3		
#4	2.6		
#5	3.6		
Comp 1-5	2.1		

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Roy R. Larson — Signature
Environ Project Leader — Title
12-9-03 — Date

COPY

11/20/03
Lab # 0308006-1 & 0308006-2
N Wall E. 1/2 comp
N Wall W. 1/2 comp



RICE OPERATING COMPANY	Date	File Location	Complier	Project Manager	Area Manager
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471	July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
Rice Operating Company Junction I-9 State 2 Remediation Sampling Points					Checked R. Rascon Figure 2AA

ANALYTICAL REPORT

Prepared for:

Roy Rascon
Rice Operating
122 West Taylor
Hobbs, NM 88240

Project:	Hobbs Jct. I-9
PO#:	
Order#:	G0308006
Report Date:	11/26/2003

Certificates
US EPA Laboratory Code TX00158

COPY

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

Rice Operating
122 West Taylor
Hobbs, NM 88240
505-397-1471

Order#: G0308006
Project:
Project Name: Hobbs Jct. I-9
Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0308006-01	N Wall E. 1/2 Comp.	SOIL	11/20/03 14:25	11/20/03 20:30	4 oz glass	ice
	Lab Testing: 8015M Chloride	**Rejected:** No		**Temp:** 4.0 C		
0308006-02	N Wall W. 1/2 Comp.	SOIL	11/20/03 14:10	11/20/03 20:30	4 oz glass	ice
	Lab Testing: 8015M Chloride	**Rejected:** No		**Temp:** 4.0 C		

COPY

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Roy Rascon
Rice Operating
122 West Taylor
Hobbs, NM 88240

Order#: G0308006
Project:
Project Name: Hobbs Jct. I-9
Location: None Given

Lab ID: 0308006-01
Sample ID: N Wall E. 1/2 Comp.

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		11/21/03	1	1	JLH	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	94%	70	130
1-Chlorooctadecane	84%	70	130

Lab ID: 0308006-02
Sample ID: N Wall W. 1/2 Comp.

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		11/21/03	1	1	JLH	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	91%	70	130
1-Chlorooctadecane	84%	70	130

Approval: Raland K Tuttle 11-26-03
Raland K. Tuttle, Lab Director, QA Officer — Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

COPY

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Roy Rascon		Order#:	G0308006
Rice Operating		Project:	
122 West Taylor		Project Name:	Hobbs Jct. I-9
Hobbs, NM 88240		Location:	None Given

Lab ID: 0308006-01
Sample ID: N Wall E. 1/2 Comp.

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	<20.0	mg/kg	1	20	9253	11/23/03	SB

Lab ID: 0308006-02
Sample ID: N Wall W. 1/2 Comp.

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	21.3	mg/kg	1	20	9253	11/23/03	SB

Approval: Raland K Tuttle 11-26-03
Raland K. Tuttle, Lab Director, QA Officer — Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

COPY

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS I, LTD. 12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8015M

Order#: G0308006

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0007537-02			<10		
MS SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0308006-01	0	952	845	88.8%	
MSD SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0308006-01	0	952	865	90.9%	2.3%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0007537-05		1000	928	92.8%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0308006

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0007529-01			<12.0		
MS SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0307976-21	1180	500	1620	88.%	
MSD SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0307976-21	1180	500	1630	90.%	0.6%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0007529-04		5000	5000	100.%	

En[illegible]onmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763

Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Roy R. Rascon

Company Name: Rice Oper. Co.

Company Address: 122 W. Taylor

City/State/Zip: Hobbs, N.M. 88240

Telephone No: 505-393-9174

Fax No: 505-397-1471

Sampler Signature: Roy R. Rascon

Project Name: Hobbs JCT I-9

Project #:

Project Loc:

PO #:

0308006

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TDS (CL) SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RUSH TAT (Pre-Schedule)	Standard TAT
01	N Wall E. 1/2 Comp.	11-20-03	~~2:25~~ 2:10	1	✓									✓		✓			✓						
02	N Wall W. 1/2 Comp.	11-20-03	2:10	1	✓									✓		✓			✓						

TCLP:
TOTAL:

COPY

Special Instructions: Please Fax Results

Relinquished by:	Date	Time	Received by:	Date	Time
Roy R. Rascon	11-20-03	3:05			
Relinquished by: [signature]	11/20	2030	Received by ELOT: [signature]	11-20-03	2030

Sample Containers Intact? Y N
Temperature Upon Receipt:
Laboratory Comments:
[illegible] 4°C

RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL-NO: PGM 761S
SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE
100 PPM
AIR
BALANCE
LOT NO: 02-2230
FILL DATE: 5-20-03
EXP. DATE: 11-20-04
ACCURACY: 100 PPM +- 2%
METER READING
ACCURACY: 100.5

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9	19	38

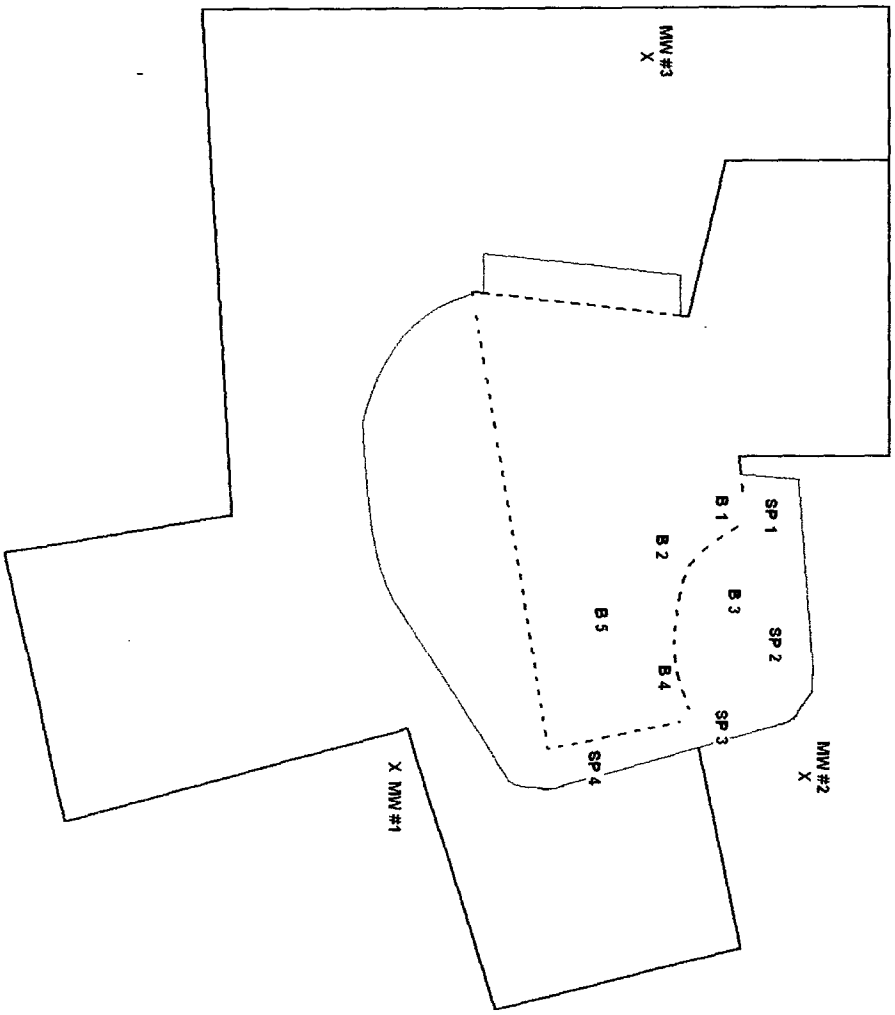
SAMPLE	PID RESULT	SAMPLE	PID RESULT
1	1.1	1	0.9
2	1.6	2	1.2
3	1.1	3	1.2
4	2.1	4	1.7
5	1.6	5	1.3
N. WALL W.		N. WALL E. 1/2	
1/2 5 PT		5 PT Comp.	
Comp			

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Ray R. Rascon — Signature
Environ. Project Leader — Title
11-20-03 — Date

COPY

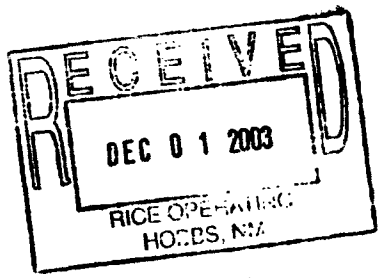
11/21/03
Lab #H8202 #1 - #2
Base sample points @ approx 32' and
4 pt comp @ GW 36'



RICE OPERATING COMPANY	Date	File Location	Complier	Project Manager	Area Manager
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471	July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
	Rice Operating Company Junction I-9 State 2 Remediation Sampling Points				Checked R. Rascon Figure 2G

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240



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

Receiving Date: 11/21/03
Reporting Date: 11/24/03
Project Number: NOT GIVEN
Project Name: HOBBS JCT I-9
Project Location: NOT GIVEN

Sampling Date: 11/21/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC/AH

LAB NO. SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE	11/21/03	11/21/03	11/24/03
H8202-1 4 PT COMP. @ WATER TABLE 36'	<10.0	<10.0	112
H8202-2 5 PT BASE COMP. @ 30'	<10.0	<10.0	144
Quality Control	777	837	1000
True Value QC	800	800	1000
% Recovery	97.2	105	100
Relative Percent Difference	7.3	6.1	2.0

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

Chemist

11/24/03
Date

COPY

H8202.XLS

CARDINAL LABORATORIES, INC.

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page____ of____

		BILL TO	
Company Name:	RICE OPER. Co.	P.O. #:	
Project Manager:	Roy R. RASCON	Company:	
Address:	122 W. TAYLOR	Attn:	
City:	Hobbs State: NM Zip: 88240	Address:	
Phone #:	393-9174 Fax #: 397-1471	City:	
Project #:	Hobbs JCT I-9 Project Owner:	State: Zip:	
Project Name:		Phone #:	
Project Location:		Fax #:	
Sampler Name:	Roy R. RASCON		

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH 8015 M	Cl-
H22202-1	4 Pt Comp @ Water table 36'	C	G			✓					✓		11-21-03	0930	✓	✓
-2	SPT Base Comp @ 30'	C	G			✓					✓		11-21-03	1045	✓	✓

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 the client for the 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 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.

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

Sampler Relinquished: Roy R. RASCON	Date: 11-21-03 Time: 737	Received By:	
Relinquished By:	Date: 11/21/2003 Time: 2:05PM	Received By: (Lab Staff)	

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

COPY

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

Sample Condition		CHECKED BY: (Initials)
Cool: ☒ Yes ☐ No	Intact: ☒ Yes ☐ No	

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

RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE 100 PPM
AIR BALANCE
LOT NO: 02-2230 FILL DATE: 5-20-03
EXP. DATE: 11-20-04 ACCURACY: 100 PPm +- 2%
METER READING
ACCURACY: 100.1

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I 9	I	9	19S	38E

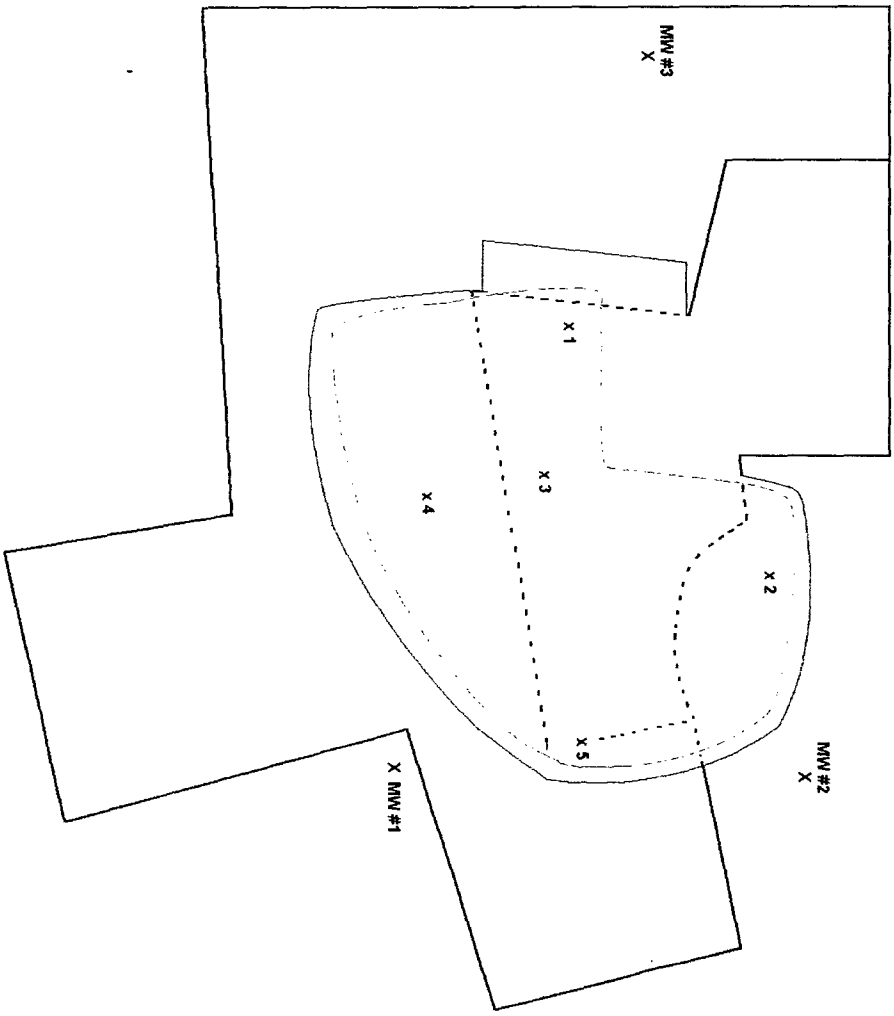
SAMPLE	PID RESULT	SAMPLE	PID RESULT
5 Pt. Base Comp.	1.8		
@ 30'			
4 PT. Comp. ~~Comp.~~	~~1.8~~ RER		
@ GW 36'	1.7		

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Roy R. Pascoe — Signature
Environ. Project Leader — Title
11-~~21~~-03 — Date

COPY

12/2/03
Lab #H8214
1st 5' backfill lift after 3rd clay liner sample points 1 - 5



RICE OPERATING COMPANY	Date	File Location	Complier	Project Manager	Area Manager
122 W. Taylor Hobbs. New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471	July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
	Rice Operating Company Junction I-9 State 2 Remediation Sampling Points				Checked R. Rascon
					Figure 2H

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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

Receiving Date: 12/02/03
Reporting Date: 12/04/03
Project Owner: RICE
Project Name: HOBBS JCT I-9
Project Location: NOT GIVEN

Sampling Date: 12/02/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		12/04/03	12/04/03	12/03/03
H8214-1	5 PT COMP. 3rd LINER 1st 5' LEFT	<10.0	<10.0	160
Quality Control		764	779	1010
True Value QC		800	800	1000
% Recovery		95.5	97.4	101
Relative Percent Difference		0.8	0.5	1.0

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

Chemist

12/4/03
Date

COPY

H8214.XLS

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page____ of____

Company Name: RICE OPER. Co.
Project Manager: Roy R. Rascon
Address: 122 W. TAYLOR
City: Hobbs State: N.M. Zip: 88240
Phone #: 393-9174 Fax #: 397-1471
Project #: Hobbs JCT I-9 Project Owner: Rice
Project Name:
Project Location:
Sampler Name: Roy R. Rascon

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

Lab I.D. (FOR LAB USE ONLY)	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CRUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER :	PRESERV: ACID/BASE:	PRESERV: ICE / COOL	PRESERV: OTHER :	SAMPLING: DATE	SAMPLING: TIME	ANALYSIS REQUEST: TPH 8015 M	ANALYSIS REQUEST: Cl
H8214-1	5PT Comp. 3Rd Wuer 1st 5' L.P.t	C	G			✓					✓		12-2-03	230	✓	✓

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

Sampler Relinquished: Roy R. Rascon Date: 12-2-03 Time: 3 20
Received By:
Relinquished By: Date: 12/02/03 Time: 3:20
Received By: (Lab Staff) [signature]

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

Sample Condition
Cool: ☒ Yes ☐ No
Intact: ☒ Yes ☐ No

CHECKED BY: (Initials)

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

COPY

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RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: ~~104412~~ RRR 104490
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE 100 PPM
AIR BALANCE
LOT NO: 02-2230
FILL DATE: 5-20-03
EXP. DATE: 11-20-04
ACCURACY: 100 PPM +- 2%
METER READING
ACCURACY: 99.7

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I 9	9	I	19S	38E

SAMPLE	PID RESULT	SAMPLE	PID RESULT
1st 5' Lift	34.5		
Comp. 3rd			
Clay Liner			

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

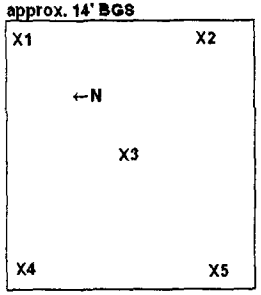
Roy R. Rasco — Signature
Environ. Project Leader — Title
12-2-03 — Date

COPY

12/4/03
Lab #H8223 #1 & #2
E. Wall 5pt comp N 1/2
E. Wall 5pt comp S 1/2

Side view of E. wall N. 1/2

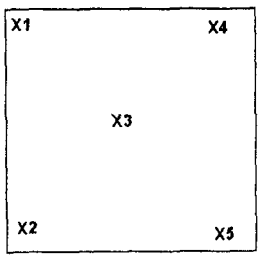
approx. 14' BGS



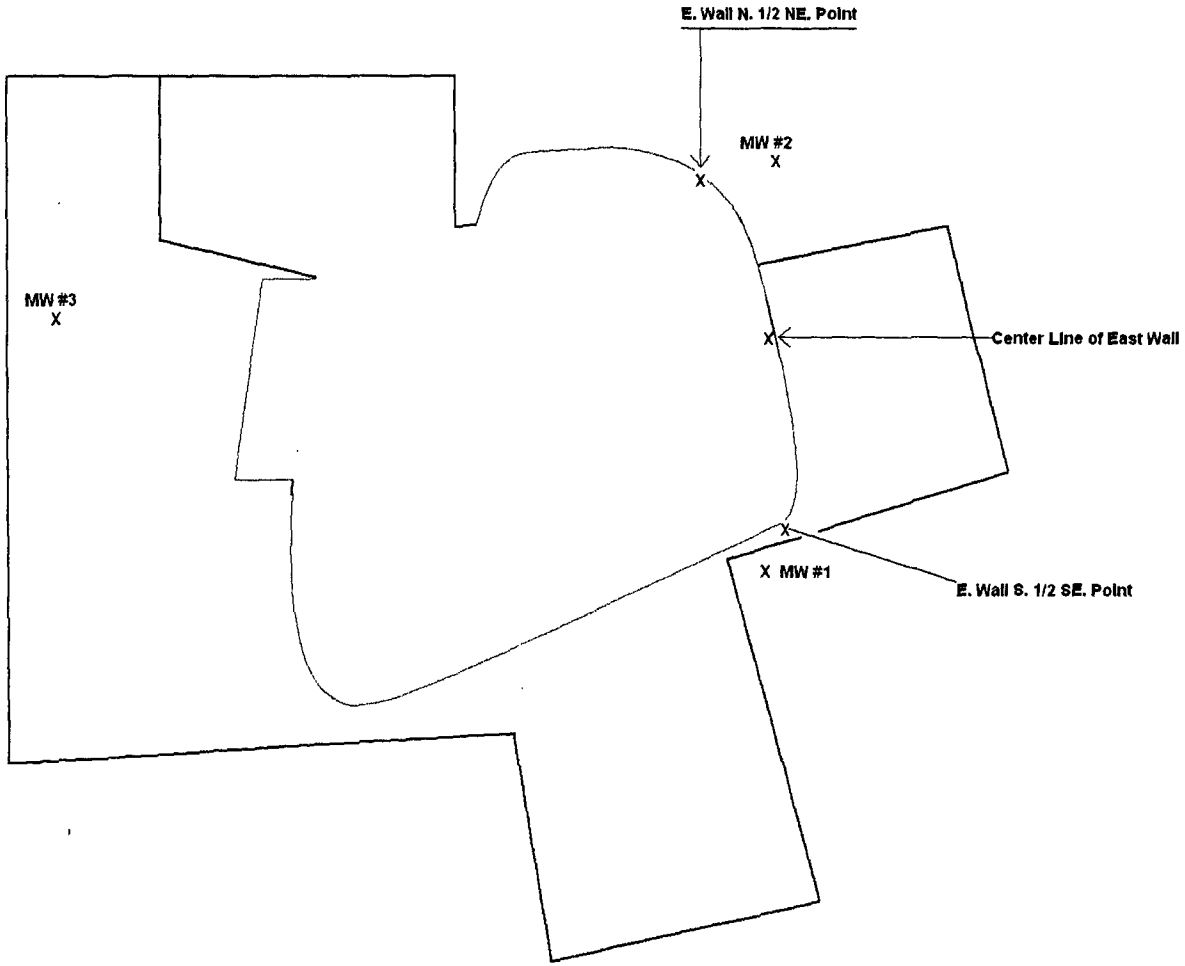
approx. 32' BGS

Side view of E. wall S 1/2

approx. 14' bgs ←N



approx. 32' bgs



Date	File Location	Complier	Project Manager
July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon

Rice Operating Company
Junction I-9 State 2 Remediation
Sampling Points

Area Manager C. Haynes
Checked R. Rascon
Figure #1

RICE OPERATING COMPANY
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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

Receiving Date: 12/04/03
Reporting Date: 12/05/03
Project Owner: RICE
Project Name: HOBBS JCT I-9
Project Location: NOT GIVEN

Sampling Date: 12/04/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		12/04/03	12/04/03	12/04/03
H8223-1	E. WALL 5 PT COMP N 1/2	<10.0	<10.0	80
H8223-2	E. WALL 5 PT COMP S 1/2	<10.0	<10.0	112
Quality Control		764	779	1010
True Value QC		800	800	1000
% Recovery		95.5	97.4	101
Relative Percent Difference		0.8	0.5	1.0

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

Chemist

12/5/03
Date

COPY

H8223.XLS

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page____ of ____

Company Name: RICE OPER Co.	**BILL TO**
Project Manager: Roy R. RASCON	P.O. #:
Address: 122 W. TAYLOR	Company:
City: Hobbs, State: N.M Zip: 88240	Attn:
Phone #: 393-9174 Fax #: 397-1471	Address:
Project #: Hobbs JCT I-9 Project Owner: RICE	City:
Project Name:	State: Zip:
Project Location:	Phone #:
Sampler Name: Roy R. RASCON	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER :	PRESERV: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	TIME	ANALYSIS REQUEST: TPH 8015 M	Cl-
H8223-1	E.WALL SPT Comp N 1/2	C	G			✓					✓		12-4-03		✓	✓
-2	" " S 1/2	C	G			✓					✓		12-4-03		✓	✓

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Sampler Relinquished: Roy R. RASCON	Date: 12-4-03 Time: 330	Received By:	
Relinquished By:	Date: 12/04/2003 Time:	Received By: (Lab Staff)	

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

Sample Condition Cool	Intact	CHECKED BY: (Initials)
☒ Yes ☐ No	☒ Yes ☐ No	

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

COPY

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RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE 100 PPM
AIR BALANCE
LOT NO: 02-2230 FILL DATE: 5-20-03
EXP. DATE: 11-20-04 ACCURACY: 100 PPM +- 2%
METER READING
ACCURACY: 99.8

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9	19	38

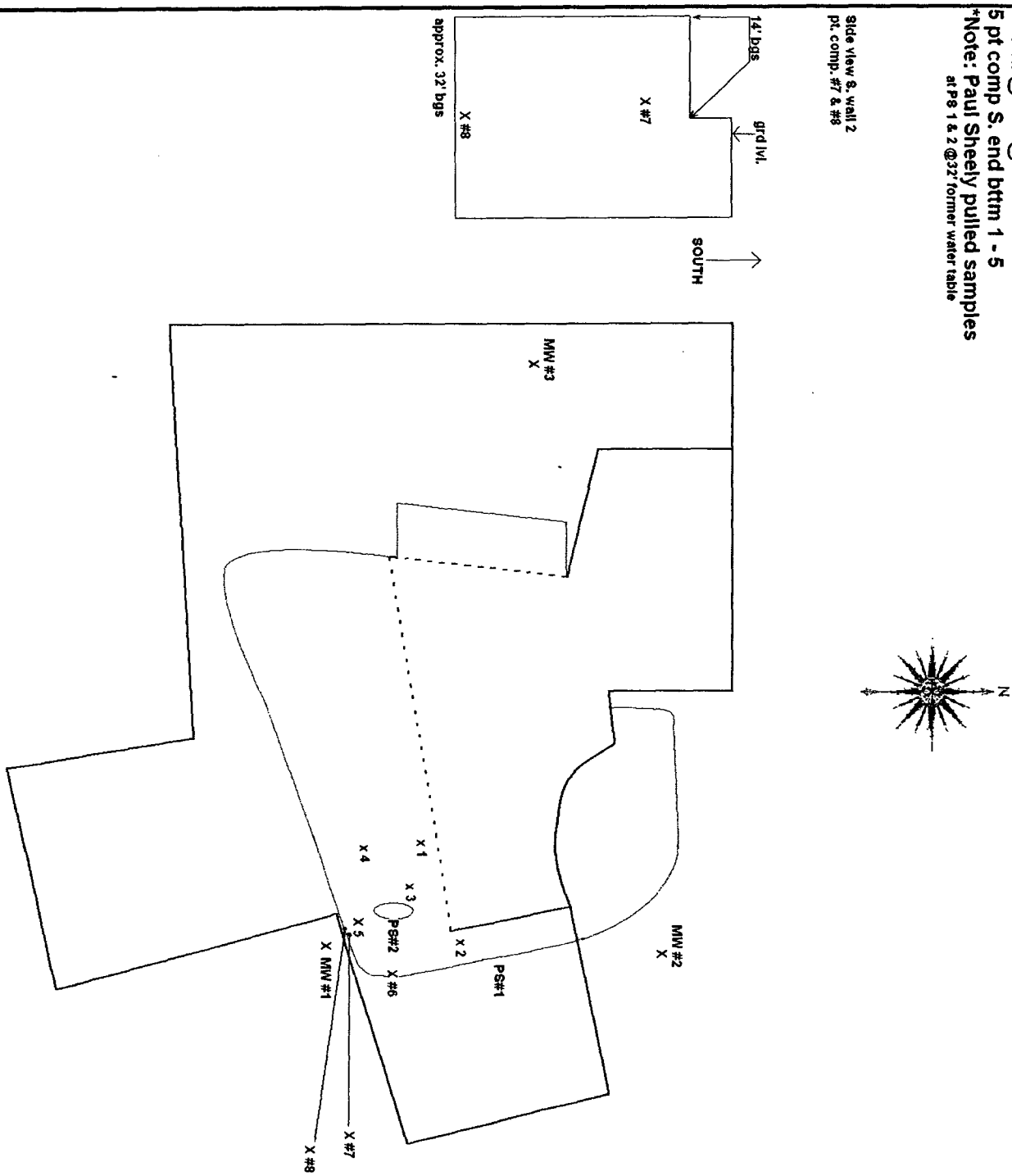
SAMPLE	PID RESULT	SAMPLE	PID RESULT
East WALL S ½		East WALL N ½	
5Pt Comp		5 PT Comp.	
1	4.4	1	1.1
2	0.5	2	0.5
3	1.1	3	0.4
4	0.5	4	0.6
5	1.3	5	1.3

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Roy R Rasco — Signature
Environ. Project Leader — Title
12-4-03 — Date

COPY

12/5/03
Lab #H8230 #1 - #3
S. wall 2 pt comp SP #7 & #8
S. end @ GW @ 37' SP #6
5 pt comp S. end bttm 1 - 5
*Note: Paul Sheely pulled samples
at PS 1 & 2 @32' former water table



RICE OPERATING COMPANY	Date	File Location	Complier	Project Manager	Area Manager
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471	July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
	Rice Operating Company Junction I-9 State 2 Remediation Sampling Points				Checked R. Rascon
					Figure 2J

CARDINAL LABORATORIES

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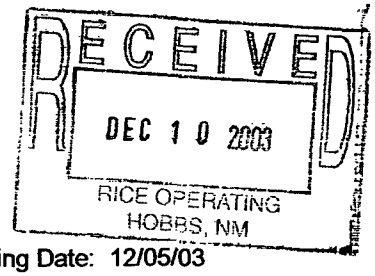
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240



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

Receiving Date: 12/05/03
Reporting Date: 12/08/03
Project Owner: RICE
Project Name: HOBBS JCT I-9
Project Location: NOT GIVEN

Sampling Date: 12/05/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		12/05/03	12/05/03	12/08/03
H8230-1	S. WALL 2 PT COMP.	<10.0	<10.0	144
H8230-2	S. END @ G.W. @ 36'	<10.0	<10.0	80
H8230-3	5 PT COMP. S. END BTTM.	<10.0	<10.0	96
Quality Control		738	752	940
True Value QC		800	800	1000
% Recovery		92.2	94.0	94.0
Relative Percent Difference		1.8	6.0	7.4

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

Chemist

12/9/03
Date

COPY

H8230.XLS

CARDINAL LABORATORIES, INC.

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page____ of____

Company Name:	RICE OPER. Co.	BILL TO	
Project Manager:	Roy R. RASCON	P.O. #:	
Address:	122 W. TAYLOR	Company:	
City:	Hobbs, State: N.M. Zip: 88240	Attn:	
Phone #:	393-9174 Fax #: 397-1471	Address:	
Project #:	Hobbs JCT I-9 Project Owner: RICE	City:	
Project Name:		State: Zip:	
Project Location:		Phone #:	
Sampler Name:	Roy R. RASCON	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH 8015M	Cl										
HE230-1	S. WALL 2PT COMP.	C	G			✓					✓		12-5-03	1030	✓	✓										
-2	S. End @ G.W. @ 36'	G	G			✓					✓		12-5-03	0945	✓	✓										
-3	5PT COMP. S. End BTTM	C	G			✓					✓		12-5-03	0930	✓	✓										

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

Sampler Relinquished:	Date: 12-5-03	Received By:	
Roy R. RASCON	Time: 4:10		
Relinquished By:	Date: 12/05/2003	Received By: (Lab Staff)	
	Time: 4:10 PM		

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

Sample Condition		CHECKED BY: (Initials)
Cool	Intact	
☒ Yes ☐ No	☒ Yes ☐ No	

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

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RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE
AIR
LOT NO: 02-2230
EXP. DATE: 11-20-04
METER READING
ACCURACY: 100.0

SERIAL NO: 104412

100 PPM
BALANCE
FILL DATE: 5-20-03
ACCURACY: 100 ppm +-2%

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9	19	38

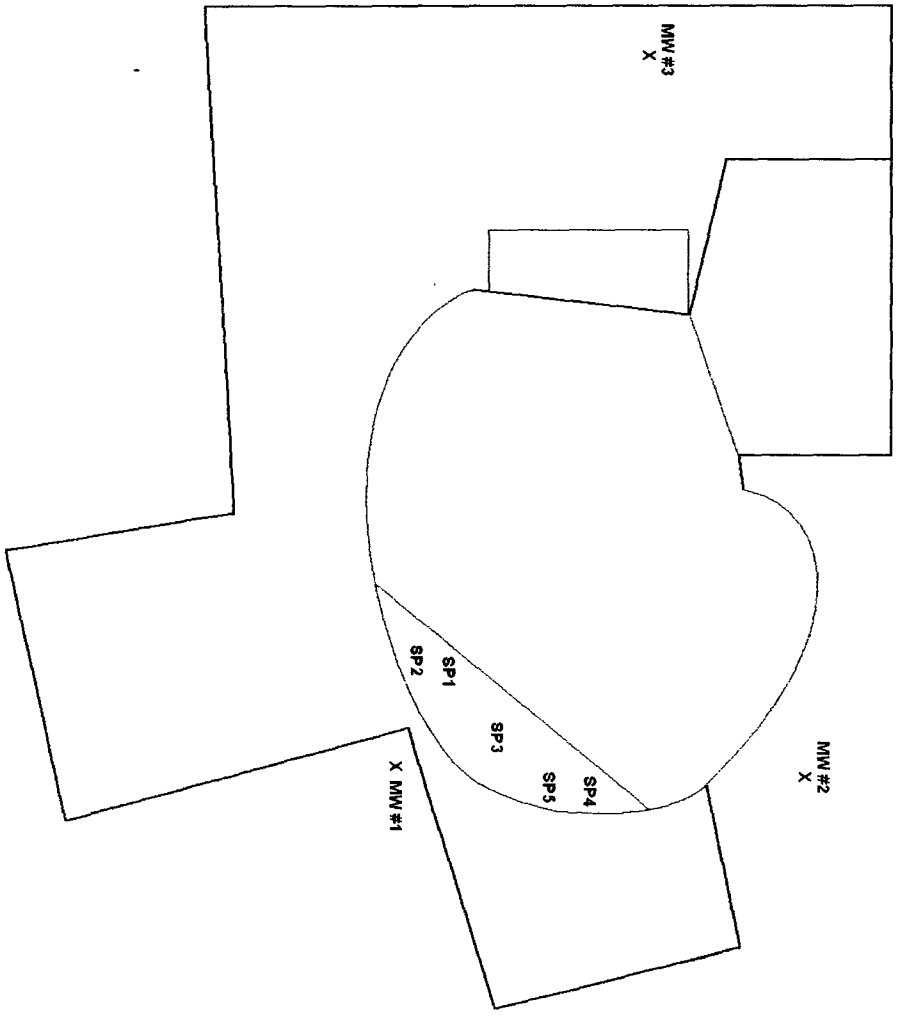
SAMPLE	PID RESULT	SAMPLE	PID RESULT
#1	20.8		
#2	3.7		
#3	16.6		
#4	6.5		
#5	31.7		
#6	5.9		
#7	2.2		
#8	2.0		

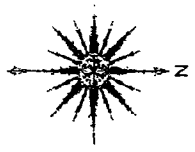
I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Roy A. Rascon — Signature
Environ. Project Leader — Title
12-5-03 — Date

COPY

12/11/03
Lab #H8246 #1
1st Backfill 5' lift south side after bttm clay liner





RICE OPERATING COMPANY
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471

Date	File Location	Complier	Project Manager	Area Manager
July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes

Rice Operating Company
Junction I-9 State 2 Remediation
Sampling Points

Checked
R. Rascon
Figure 2M

CARDINAL LABORATORIES

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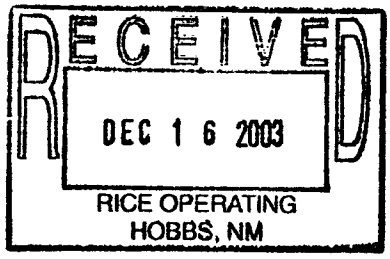
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240



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

Receiving Date: 12/11/03
Reporting Date: 12/15/03
Project Owner: RICE
Project Name: HOBBS JCT I-9
Project Location: NOT GIVEN

Sampling Date: 12/11/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		12/11/03	12/11/03	12/12/03
H8246-1	S. 1st 5' LIFT 4th CLAY LINER	<10.0	<10.0	128
Quality Control		795	833	940
True Value QC		800	800	1000
% Recovery		99.4	104	94.0
Relative Percent Difference		10.7	9.5	7.4

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

Chemist

12/15/03
Date

COPY

H8246.XLS

CARDINAL LABORATORIES, INC.

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page ____ of ____

Company Name:	RICE OPER. Co.	BILL TO	
Project Manager:	Roy R. RASCON	P.O. #:	
Address:	122 W. TAYLOR	Company:	
City:	Hobbs State: NM Zip: 88240	Attn:	
Phone #:	393-9174 Fax #: 397-1471	Address:	
Project #:	Hobbs JCT I-9 Project Owner: RICE	City:	
Project Name:		State: Zip:	
Project Location:		Phone #:	
Sampler Name:	Roy R. RASCON	Fax #:	

ANALYSIS REQUEST: TPH 8015M; CL

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	TPH 8015M	CL
H8246-1	S. 1ST 5' LSH 4TH Clay LINER	C	G			✓					✓		12-11-03	245	✓	✓

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

Sampler Relinquished: Roy R. RASCON	Date: 12-11-03 Time:	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 12/11/03 Time: 4:20P	Received By: (Lab Staff)	Fax Result: ☑ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: ☒ Yes ☐ No Intact: ☒ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: COPY

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

RICE OPERATING COMPANY
122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 7615 SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE 100 PPM
AIR BALANCE
LOT NO: 02-2230 FILL DATE: 5-20-03
EXP. DATE: 11-20-04 ACCURACY: 100 PPM +- 2%
METER READING
ACCURACY: 99.9

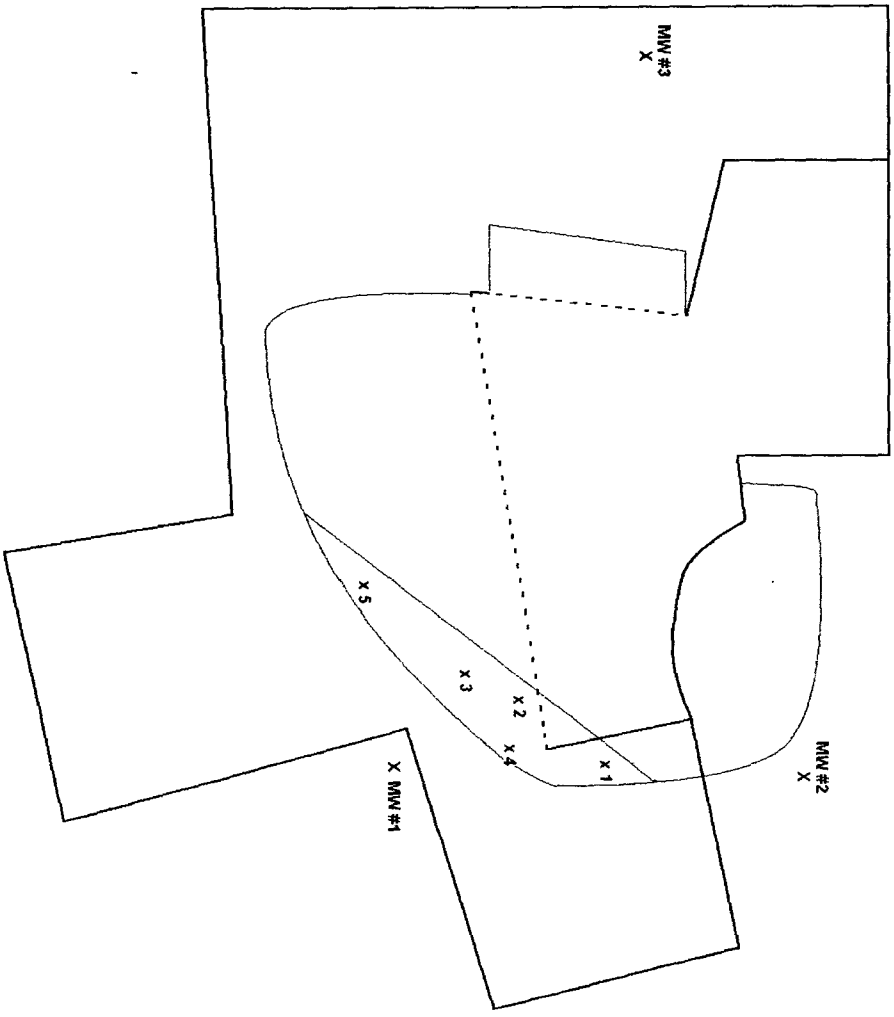
SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9	19	38

SAMPLE	PID RESULT	SAMPLE	PID RESULT
1	3.2		
2	3.5		
3	3.8		
4	3.7		
5	1.9		

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Ray R. Rascon — Signature
Environ. Project Leader — Title
12-11-03 — Date

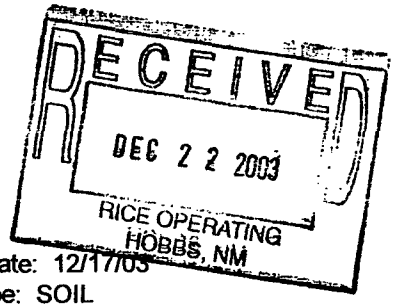
12/17/03
Lab # H8265
S. end 2nd 5' lift by MW #1



RICE OPERATING COMPANY	Date	File Location	Complier	Project Manager	Area Manager
122 W. Taylor Hobbs. New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471	July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
	Rice Operating Company Junction I-9 State 2 Remediation Sampling Points				Checked R. Rascon
					Figure 21

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240



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

Receiving Date: 12/17/03
Reporting Date: 12/19/03
Project Number: NOT GIVEN
Project Name: HOBBS JCT I-9
Project Location: NOT GIVEN

Sampling Date: 12/17/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		12/18/03	12/18/03	12/18/03
H8265-1	S. 2nd 5' LIFT BY MW #1	<10.0	34.2	96
Quality Control		744	810	940
True Value QC		800	800	1000
% Recovery		93.0	101	94.0
Relative Percent Difference		6.7	1.2	7.4

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

Chemist

12/19/03
Date

COPY

H8265.XLS

CARDINAL LABORATORIES, INC.

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page____ of ____

Company Name:	RICE OPER. Co.	BILL TO	
Project Manager:	ROY R. RASCON	P.O. #:	
Address:	122 W TAYLOR	Company:	
City:	Hobbs State: N.M. Zip: 88240	Attn:	
Phone #:	393-9174 Fax #: 397-1471	Address:	
Project #:	Hobbs JCT I-9 Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:		Phone #:	
Sampler Name:	ISRAEL JUAREZ	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: 8015 M TPH	Cl⁻
H8265-1	S. 2nd S' Left by MW #1	C	G			✓					✓		12-17-03	3:50	✓	✓

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 the client for the 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 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.

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

Sampler Relinquished:	Date:	Received By:	
	Time:		
Relinquished By: Israel Juarez	Date: 12/17/2003 Time: 4:30 PM	Received By: (Lab Staff)	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: ☒ Yes ☐ No Intact: ☒ Yes ☐ No	CHECKED BY: (Initials)	

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

COPY

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

RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: ~~104412~~ 104490 RDR
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE 100 PPM
AIR BALANCE
LOT NO: 02-2230 FILL DATE: 5-20-03
EXP. DATE: 11/28/04 ACCURACY: 100 PPM ± 2%
METER READING
ACCURACY: 100.1

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9	19	38

S. 2nd Left 5' By MW #1

SAMPLE	PID RESULT	SAMPLE	PID RESULT
#1 NE	4.8		
#2 NW	5.2		
#3 center	9.3		
#4 SE	6.3		
#5 SW	30.0		

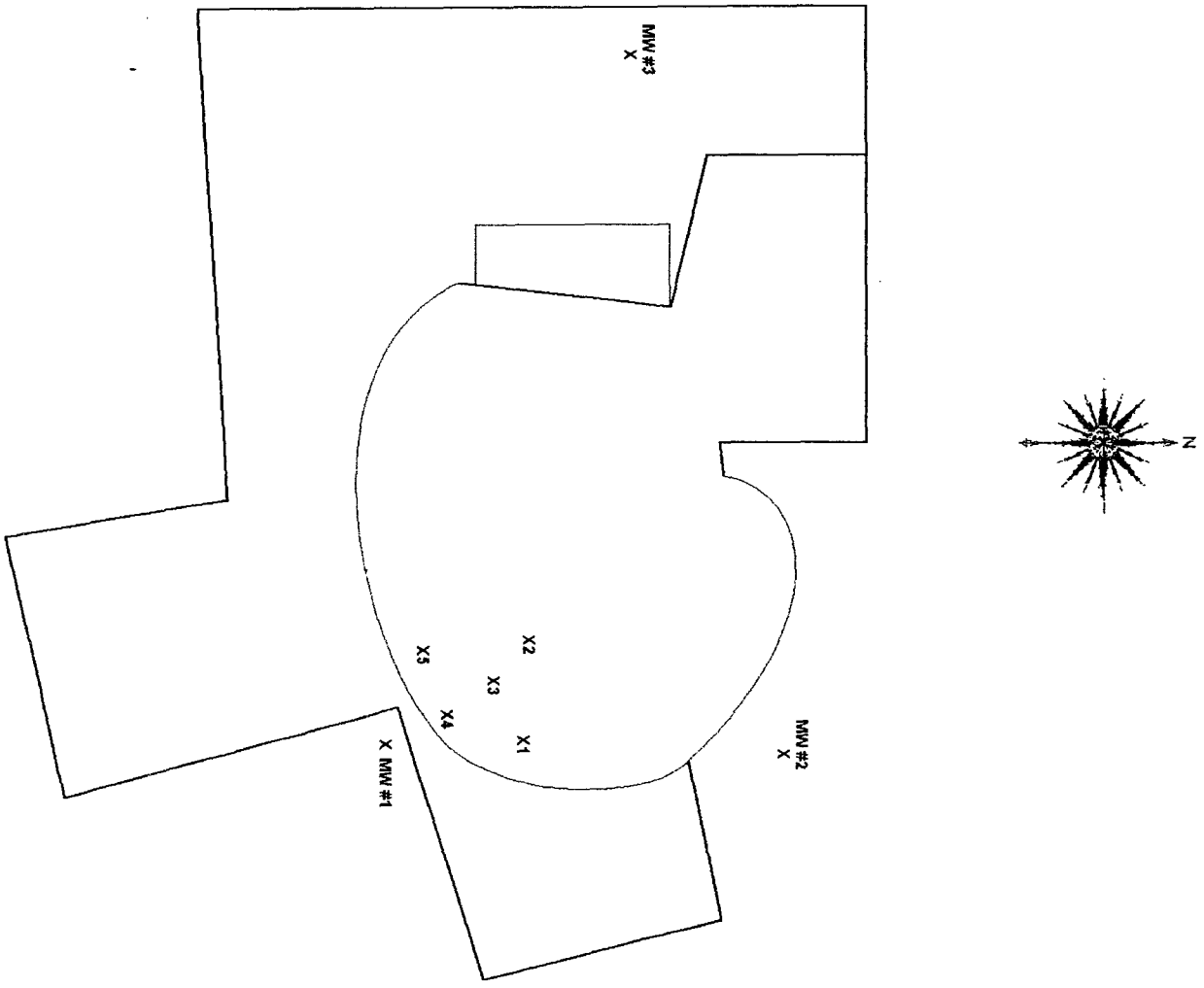
I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Roy R. Rascon
Signature

12-17-03
Date

COPY

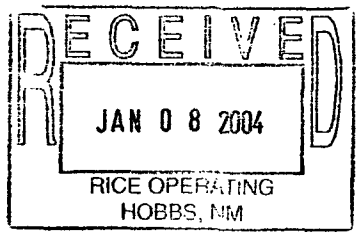
12/23/03
Lab #H8289
S. 5' lift by MW #1



RICE OPERATING COMPANY	Date	File Location	Complier	Project Manager	Area Manager
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471	July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
	Rice Operating Company Junction I-9 State 2 Remediation Sampling Points				Checked R. Rascon
					Figure 2N

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240



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

Receiving Date: 12/23/03
Reporting Date: 01/06/04
Project Number: NOT GIVEN
Project Name: HOBBS JCT I-9
Project Location: NOT GIVEN

Sampling Date: 12/23/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC/HM

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		01/06/04	01/06/04	12/24/03
H8289-1	S. 3rd 5' LIFT BY MW-1	<10.0	<10.0	80
Quality Control		712	742	940
True Value QC		800	800	1000
% Recovery		89.0	92.8	94.0
Relative Percent Difference		3.4	2.3	7.4

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

Chemist

1/6/03
Date

COPY

H8289.XLS

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Page____ of ____

Company Name: RICE Operating	BILL TO
Project Manager: Kristin Farris	P.O. #:
Address: 122 W Taylor	Company: RICE
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: 393-9174 Fax #: 397-1471	Address:
Project #: Project Owner:	City:
Project Name: Hobbs Jct I-9	State: Zip:
Project Location:	Phone #:
Sampler Name: Israel Juarez	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST												
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH 8015 M	CL											
H8289-1	S 3rd 5th Lift by MWI	C	6			✓					✓		12-23-03	12:45	✓	✓											

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

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

Sampler Relinquished: Israel Juarez	Date: 12-23-03 Time:	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 12/23/03 Time: 2:05	Received By: (Lab Staff) Amy Hill	Fax Result: ☒ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: Fax to RICE

COPY

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

RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE
100 PPM
AIR
BALANCE
LOT NO: 02-2230
FILL DATE: 5-20-03
EXP. DATE: 11-20-04
ACCURACY: 1 2%
METER READING
ACCURACY: 100.4

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9	19	38

SAMPLE	PID RESULT	SAMPLE	PID RESULT
NE	3.3		
NW	3.4		
at Center	10.9		
SE	3.6		
SW	37.2		

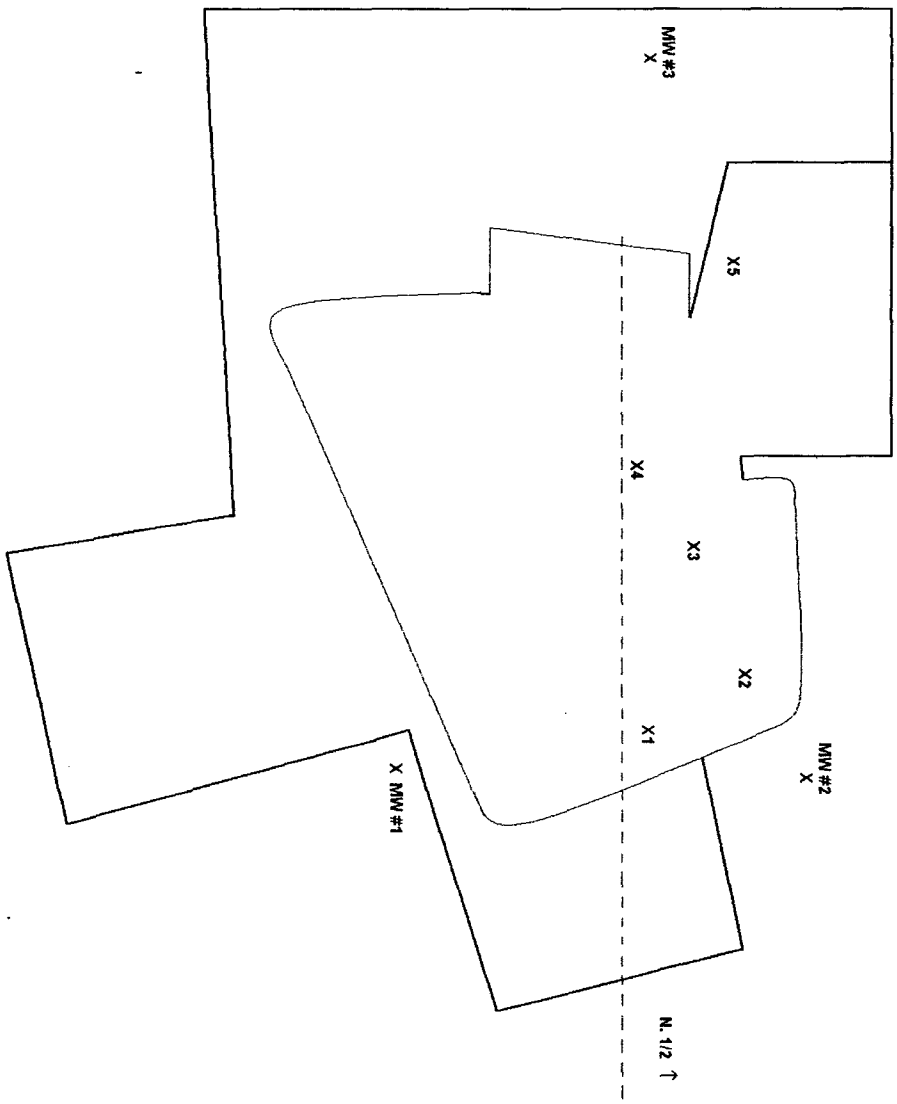
I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Israel Juarez
Signature

12-23-03
Date

COPY

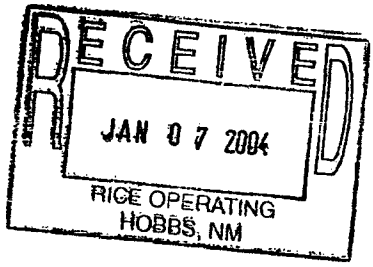
12/30/03
Lab #H8307
N. 3rd 5' comp



RICE OPERATING COMPANY	Date	File Location	Complier	Project Manager	Area Manager
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471	July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
	Rice Operating Company Junction I-9 State 2 Remediation Sampling Points				Checked R. Rascon
					Figure 2S

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240



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

Receiving Date: 12/30/03
Reporting Date: 01/05/04
Project Number: NOT GIVEN
Project Name: HOBBS JCT I-9
Project Location: NOT GIVEN

Sampling Date: 12/30/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC/HM

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		01/02/04	01/02/04	12/31/03
H8307-1	N. 3rd 5' COMP	<10.0	<10.0	80
Quality Control		759	799	940
True Value QC		800	800	1000
% Recovery		94.8	99.8	94.0
Relative Percent Difference		3.1	7.7	1.4

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

Chemist

1/5/04
Date

COPY

H8307.XLS

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Page____ of____

Company Name:	RICE Operating	BILL TO	
Project Manager:	Kristin Farris RRR Roy R. Rascon	P.O. #:	
Address:	122 W Taylor	Company:	RICE
City:	Hobbs State: NM Zip: 88240	Attn:	
Phone #:	393-9174 Fax #: 397-1471	Address:	
Project #:	Hobbs JCT I-9 Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:		Phone #:	
Sampler Name:	Roy R. Rascon	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	8015M TPH	Cl										
H8307-1	N. 3rd 5' Comp	C	G			✓					✓		12-30-03	330	✓	✓										

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

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

Sampler Relinquished:	Date: 12-30-03	Received By:	
Roy R. Rascon	Time: 4:40		
Relinquished By:	Date:	Received By: (Lab Staff)	
	Time:	Amy Hill	

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

Fax to RICE

COPY

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

Sample Condition		CHECKED BY: (Initials)
Cool	Intact	
☑ Yes ☐ No	☑ Yes ☐ No	

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

RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE 100 PPM
AIR BALANCE
LOT NO: 02-7230 FILL DATE: 5-20-03
EXP. DATE: 11-20-04 ACCURACY: 100 PPM +-2%
METER READING
ACCURACY: 99.7

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9	19	38

N. 3rd 5' Lft Comp

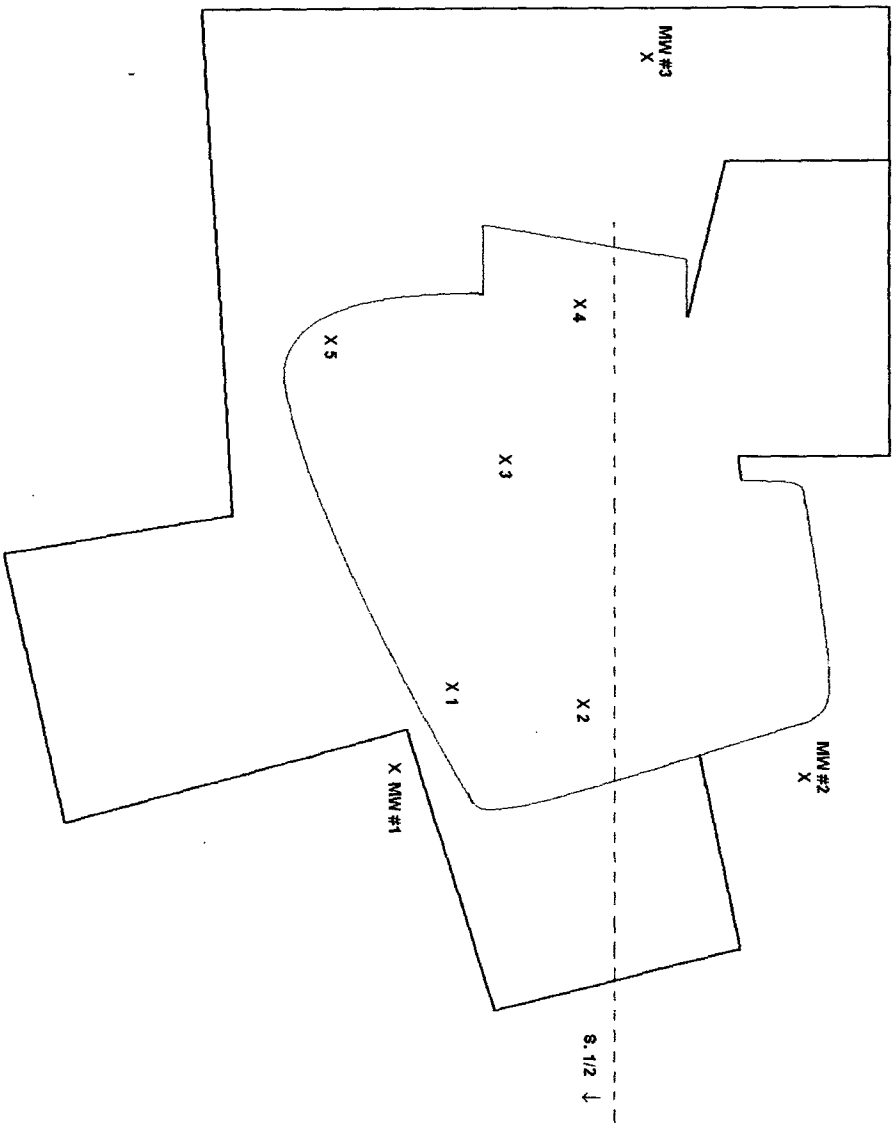
SAMPLE	PID RESULT	SAMPLE	PID RESULT
1	5.3		
2	5.8		
3	10.3		
4	15.0		
5	3.3		

COPY

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Ray A Lasson — Signature
Environ. Project Leader — Title
12-30-03 — Date

1/6/04
Lab #H8331
4th 5' lift S 1/2



RICE OPERATING COMPANY
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471

Date	File Location	Complier	Project Manager	Area Manager
July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes

Rice Operating Company
Junction I-9 State 2 Remediation
Sampling Points

Checked
R. Rascon

Figure 2R

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

RECEIVED
JAN 09 2004
RICE OPERATING
HOBBS, NM

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

Receiving Date: 01/06/04
Reporting Date: 01/07/04
Project Owner: RICE
Project Name: HOBBS JCT I-9
Project Location: NOT GIVEN

Sampling Date: 01/06/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		01/06/04	01/06/04	01/07/04
H8331-1	4th 5' LIFT S.1/2	<10.0	<10.0	96
Quality Control		712	742	1010
True Value QC		800	800	1000
% Recovery		89.0	92.8	101
Relative Percent Difference		3.4	2.3	7.0

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

Chemist

1/7/04
Date

COPY

H8331.XLS

CARDINAL LABORATORIES, INC.

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page____ of____

Company Name: RICE Operating Company	BILL TO
Project Manager: Kristin Farris ROY R. RASCON	P.O. #:
Address: 122 W. Taylor	Company: RICE
City: Hobbs, State: NM Zip: 88240	Attn:
Phone #: 393-9174 Fax #: 397-1471	Address:
Project #: Hobbs JCT I-9 Project Owner: RICE	City:
Project Name:	State: Zip:
Project Location:	Phone #:
Sampler Name: Roy R. RASCON	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	8015M TPH	Cl									
H8331-1	4th 5' Lift S. Y2	G	1			✓					✓		1-6-04	230	✓	✓									

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 the client for the 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 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.

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

Sampler Relinquished: Roy R. RASCON	Date: 1-6-03 Time:	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 01/06/2004 Time: 3:45P	Received By: (Lab Staff)	Fax Result: ☑ Yes ☐ No Add'l Fax #:
			REMARKS: PLEASE FAX

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

Sample Condition Cool	Intact	CHECKED BY: (Initials)
☑ Yes ☐ No	☑ Yes ☐ No	

COPY

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

RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE 100 PPM
AIR BALANCE
LOT NO: #02-2230
FILL DATE: 5-20-03
EXP. DATE: 11-20-04
ACCURACY: 100± 2%
METER READING
ACCURACY: 99.7

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9	19	38

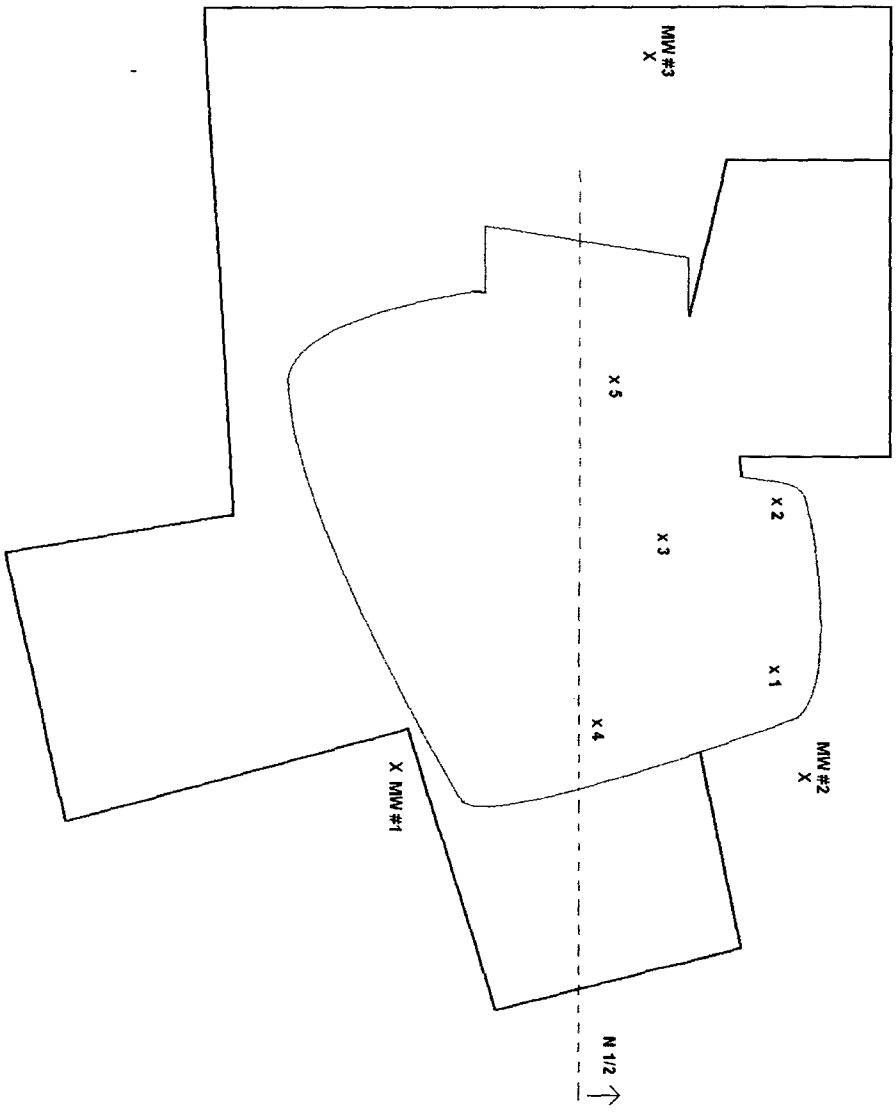
SAMPLE	PID RESULT	SAMPLE	PID RESULT
SP#1	13.8		
SP#2	1.4		
SP#3	4.5		
SP#4	3.5		
SP#5	9.3		
PID Readings			
for 4th 5' Lift			
on S. Side of			
hole			

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Roy L. Larson
Signature

1-6-04
Date

1/12/04
Lab #H8347
N 1/2 4th 5' lift



RICE OPERATING COMPANY
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471

Date	File Location	Complier	Project Manager	Area Manager
July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes

Rice Operating Company
Junction I-9 State 2 Remediation
Sampling Points

Checked
R. Rascon
Figure 2T

ARDINAL LABORATORIES

PHONE (325) 673-7001 | 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 | 101 E. MARLAND • HOBBS, NM 88240

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

Receiving Date: 01/12/03
Reporting Date: 01/13/03
Project Owner: RICE
Project Name: HOBBS JCT I-9
Project Location: NOT GIVEN

Sampling Date: 01/12/04
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		01/12/04	01/12/04	01/12/04
H8347-1	N. 1/2 4th 5' LIFT	<10.0	<10.0	128
Quality Control		772	780	980
True Value QC		800	800	1000
% Recovery		96.5	97.5	98.0
Relative Percent Difference		0.5	2.6	3.0

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

Chemist

1/13/04
Date

COPY

H8347.XLS

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Page ____ of ____

Company Name:	RICE Operating
Project Manager:	~~Kristin Farris~~ Roy R. Rascon
Address:	122 W Taylor
City:	Hobbs State: NM Zip: 88240
Phone #:	393-9174 Fax #: 397-1471
Project #:	Hobbs JCT I-9 Project Owner: RICE
Project Name:	
Project Location:	
Sampler Name:	Israel Juarez

BILL TO

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

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	8015M TPH	Cl
H8347-1	N. ½ 4th 5" Lift	C	G			✓					✓		1-12-04		✓	✓

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

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

Sampler Relinquished:	Date: 1-12-04 Time: 11:00	Received By:	
Relinquished By: Israel Juarez	Date: Time:	Received By: (Lab Staff) Burgess A Cash	

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

Sample Condition		CHECKED BY: (Initials)
Cool	Intact	
☒ Yes ☐ No	☒ Yes ☐ No	

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

REMARKS: Fax to RICE

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

COPY

RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE
100 PPM
AIR
BALANCE
LOT NO: 02-2230
FILL DATE: 5-20-03
EXP. DATE: 11-20-04
ACCURACY: 100 PPM +- 2%
METER READING
ACCURACY: 99.7

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9	19	38

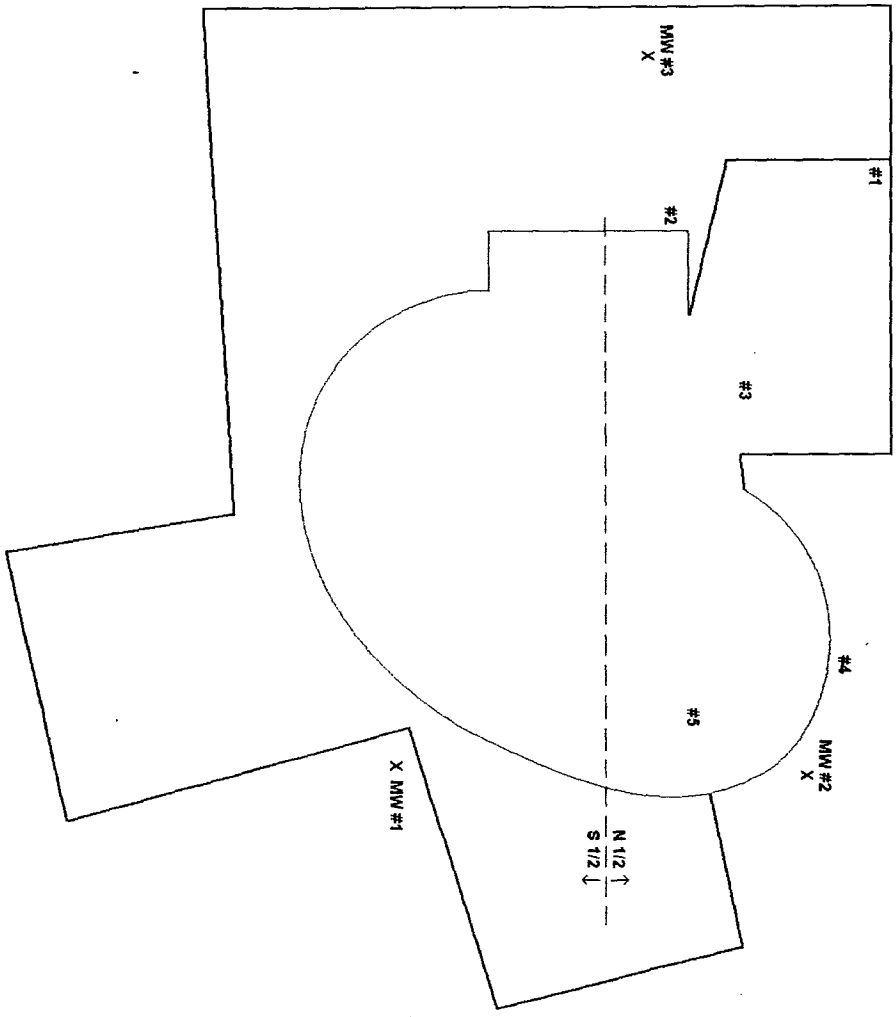
N 1/2 4th 5' Lift

SAMPLE	PID RESULT	SAMPLE	PID RESULT
1 NE	3.3		
2 NW	6.9		
3 Center	3.6		
4 SE	4.8		
5 S.W	2.0		
		COPY	

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Ray R. Rasco — Signature
Environ. Project Leader — Title
1-12-04 — Date

1/26/03
Lab #H8407
1st 5' lift after clay liner @ 8' bgs N 1/2



RICE OPERATING COMPANY	Date	File Location	Complier	Project Manager	Area Manager
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471	July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
	Rice Operating Company Junction I-9 State 2 Remediation Sampling Points				Checked R. Rascon
					Figure 20

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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

Receiving Date: 01/27/04
Reporting Date: 01/28/04
Project Number: NOT GIVEN
Project Name: HOBBS JCT I-9
Project Location: NOT GIVEN

Sampling Date: 01/27/04
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		01/27/04	01/27/04	01/27/04
H8407-1	1st 5' AFTER CLAY LINER 8 BGS N 1/2	<10.0	<10.0	176
Quality Control		733	774	1000
True Value QC		800	800	1000
% Recovery		91.7	96.8	100
Relative Percent Difference		1.3	2.5	1.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl^-: Std. Methods 4500-ClB
*Analysis performed on a 1:4 w:v aqueous extract.

Chemist

1/28/04
Date

COPY

H8407.XLS

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Page____ of ____

Company Name:	RICE Operating	BILL TO	
Project Manager:	~~Kristin Farris~~ Roy R. Rascon	P.O. #:	
Address:	122 W Taylor	Company:	RICE
City:	Hobbs State: NM Zip: 88240	Attn:	
Phone #:	393-9174 Fax #: 397-1471	Address:	
Project #:	Hobbs JCTI-9 Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:		Phone #:	
Sampler Name:	Roy R. Rascon	Fax #:	

ANALYSIS REQUEST: 8015m TPH; Cl

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	8015m TPH	Cl
18407-1	1st 5' After Clay Liner SBGS N Y2	C	G			✓							1-26-04	300P	✓	✓

NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the services. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable 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.

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

Sampler Relinquished: Roy R. Rascon	Date: 1-26-04 Time:	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 01/26/2004 Time: 345P	Received By: (Lab Staff)	Fax Result: ☒ Yes ☐ No Add'l Fax #:
			REMARKS: Fax to RICE
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: ☒ Yes ☐ No Intact: ☒ Yes ☐ No	CHECKED BY: (Initials)	

COPY

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

RICE OPERATING COMPANY
122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: ~~104412~~ 104490
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE 100 PPM
AIR BALANCE
LOT NO: #02-2230 FILL DATE: 5-20-03
EXP. DATE: 11-20-04 ACCURACY: 100 ± 2%
METER READING
ACCURACY: 100.0

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9		

1st 5' After Clay Liner @ 8' BGS N 1/2

SAMPLE	PID RESULT	SAMPLE	PID RESULT
#1	3.4		
#2	2.9		
#3	2.7		
#4	2.2		
#5	2.3		
Cl- Field test Composite 183 PPM			

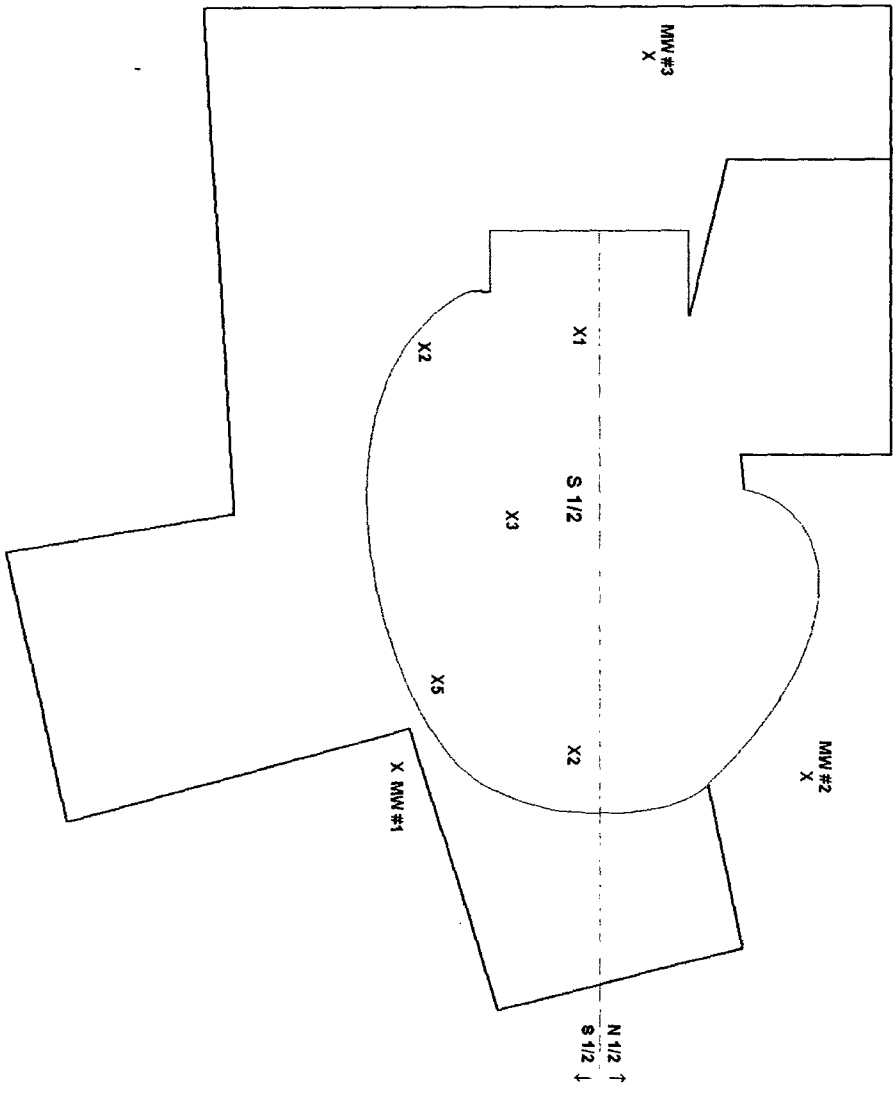
I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Roy R. Larson
Signature

1-26-04
Date

COPY

1/29/04
Lab #H8420
1st 5' lift after caly liner @ 8' bgs S. 1/2



RICE OPERATING COMPANY
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471

Date	File Location	Complier	Project Manager	Area Manager
July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes

Rice Operating Company
Junction I-9 State 2 Remediation
Sampling Points

Checked
R. Rascon
Figure 2P

ARDINAL
LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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

Receiving Date: 01/29/04
Reporting Date: 01/30/04
Project Number: NOT GIVEN
Project Name: HOBBS JCT. I-9
Project Location: NOT GIVEN

Sampling Date: 01/29/04
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		01/29/04	01/29/04	01/29/04
H8420-1	FIRST 5' LIFT AFTER CLAY	<10.0	<10.0	112
	LINER @ 8' S ½ RRR 2-2-04			
Quality Control		733	774	1020
True Value QC		800	800	1000
% Recovery		91.7	96.8	102
Relative Percent Difference		1.3	2.5	2.0

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

Burgess J. Cooke
Chemist

1/30/04
Date

COPY

H8420.XLS

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Page____ of____

Company Name: RICE Operating	BILL TO
Project Manager: Kristin Farris	P.O. #:
Address: 122 W Taylor	Company: RICE
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: 393-9174 Fax #: 397-1471	Address:
Project #: Project Owner:	City:
Project Name: Hobbs Jct. I-9	State: Zip:
Project Location:	Phone #:
Sampler Name: Israel Juarez	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH 8015 M	Cl										
1-18420-1	First 5ft Lift after clayliner @ 8ft	C	1			✓					✓		1-29-04	1:00	✓	✓										

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

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

Sampler Relinquished: Israel Juarez	Date: 1-29-04 Time:	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 1/29/04 Time: 2:20	Received By: (Lab Staff) Amy Hill	Fax Result: ☒ Yes ☐ No Add'l Fax #:
			REMARKS: Fax to RICE
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: ☑ Yes ☐ No Intact: ☐ Yes ☐ No	CHECKED BY: (Initials)	

COPY

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

RICE OPERATING COMPANY

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE
AIR
LOT NO: 02-2230
EXP. DATE: 11-20-04
METER READING
ACCURACY: 99.7

SERIAL NO: 104412
100 PPM
BALANCE
FILL DATE: 5-20-03
ACCURACY: 100 ppm +- 2%

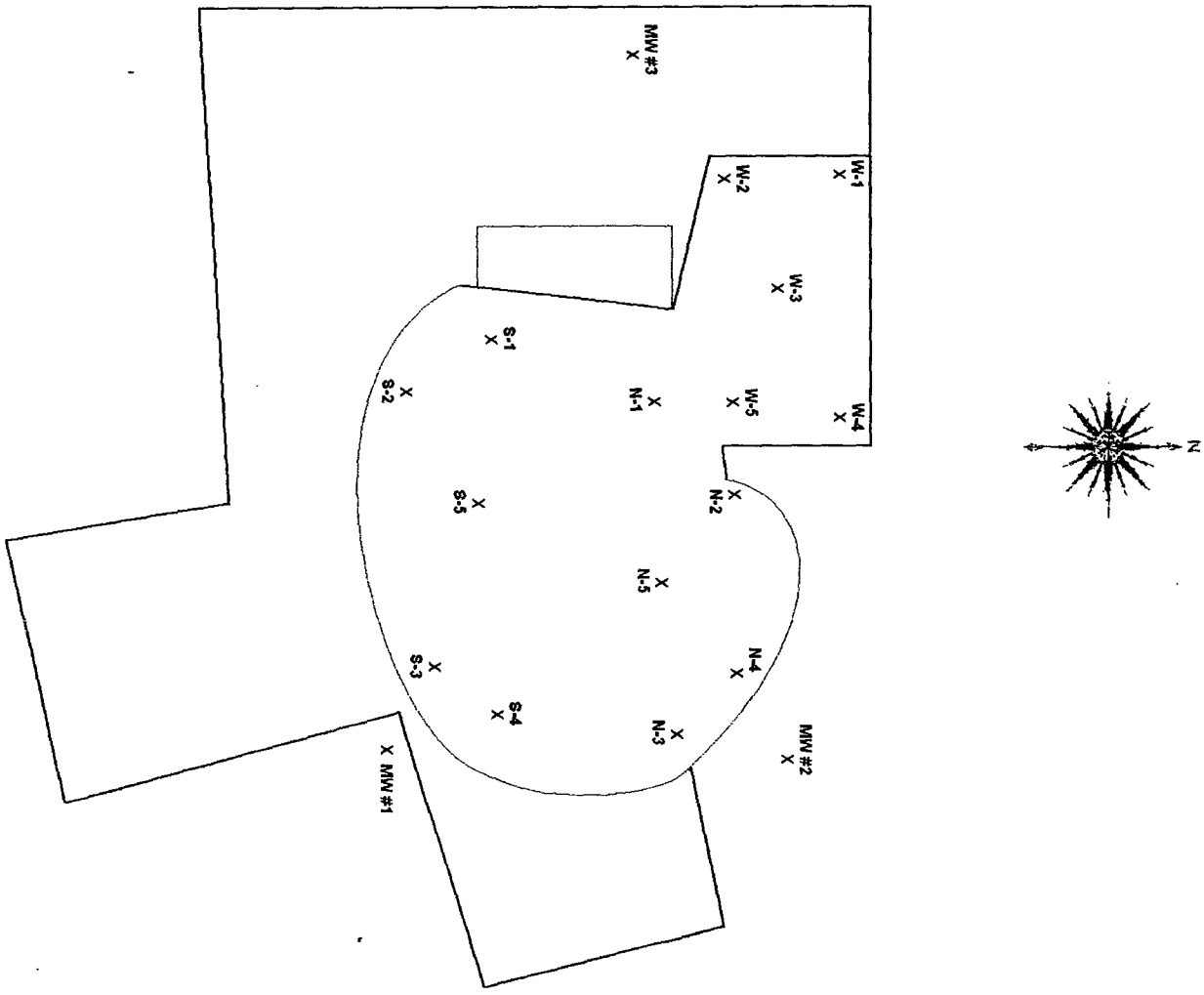
SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9	19	38

SAMPLE	PID RESULT	SAMPLE	PID RESULT
1 N.W.	4.0		
2 N.E.	4.8		
3 Center	3.6		
4 S.W.	6.0		
5 S.E.	5.3		

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Ray L. Rascon — Signature
Environ Project Leader — Title
1-29-04 — Date

2/5/04
Lab #H8435
Surface 5pt comp



RICE OPERATING COMPANY	Date	File Location	Complier	Project Manager	Area Manager
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471	July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
	Rice Operating Company Junction I-9 State 2 Remediation Sampling Points				Checked R. Rascon
					Figure 20

RICE OPERATING COMPANY
122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
SERIAL NO: 104412
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE 100 PPM
AIR BALANCE
LOT NO: 02-2230 FILL DATE: 5-20-03
EXP. DATE: 11-20-04 ACCURACY: 100 PPM +- 2%
METER READING
ACCURACY: 100.0

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
Hobbs	I-9	I	9	19	38

Final Lift Surface Samples

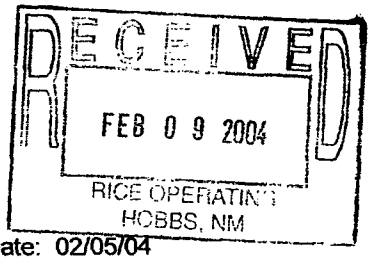
SAMPLE	PID RESULT	SAMPLE	PID RESULT
West Comp	~~3.5 RRR~~	S. Comp	
1	~~2.3 RRR~~ 3.5	1	4.6
2	~~2.3 RRR~~ 2.3	2	2.8
3	~~4.5 RRR~~ 2.3	3	3.9
4	~~1. RRR~~ 4.5	4	1.5
5	1.7	5	2.7
North Comp			
1	3.5		
2	4.5		
3	3.2		
4	2.1		
5	1.8		

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Ray R. Watson — Signature
Environ. Project Leader — Title
2-5-04 — Date

CARDINAL LABORATORIES

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



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

Receiving Date: 02/05/04
Reporting Date: 02/06/04
Project Number: NOT GIVEN
Project Name: I-9
Project Location: HOBBS, NM

Sampling Date: 02/05/04
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		02/05/04	02/05/04	02/06/04
H8435-1	SURFACE LIFT COMP.	<10.0	<10.0	144
Quality Control		733	774	1020
True Value QC		800	800	1000
% Recovery		91.7	96.8	102
Relative Percent Difference		1.3	2.5	2.0

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

Chemist

2/6/04
Date

COPY

H8435.XLS

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Page____ of____

Company Name: RICE Operating	BILL TO
Project Manager: Kristin Farris	P.O. #:
Address: 122 W Taylor	Company: RICE
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: 393-9174 Fax #: 397-1471	Address:
Project #: Project Owner:	City:
Project Name: I-9	State: Zip:
Project Location: Hobbs	Phone #:
Sampler Name:	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Chlorides	TPH 8015M
H8435-1	Surface Lift Comp	C				X					X		2/5/04	1000	X	X

COPY

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

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

Sampler Relinquished: J. Scott	Date: 2/5/04 Time: 300	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 2/5/04 Time: 3:15	Received By: (Lab Staff) Amy Hill	Fax Result: ☒ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: Fax to RICE

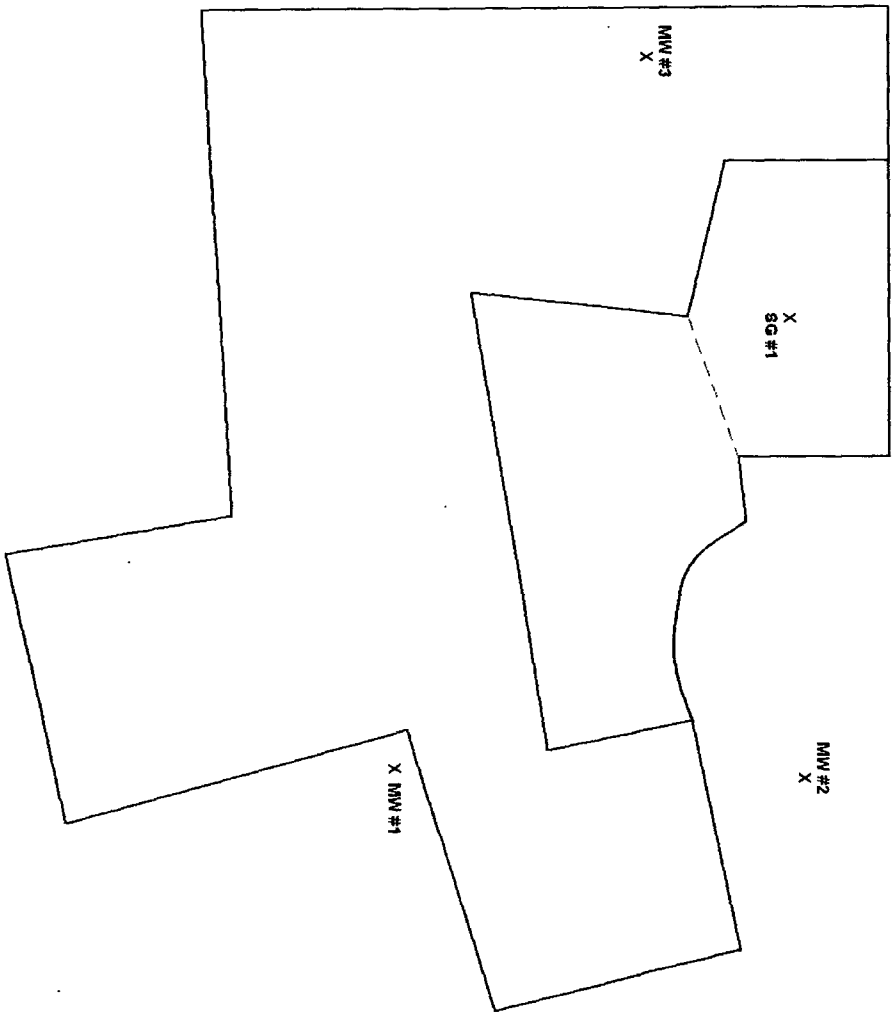
† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

ARCADIS

Appendix C

Proctor and Density Test

10/2/03 Pettigrew & Associates, P.A.
Lab #03 6177
1st clay liner density test @ 30'



RICE OPERATING COMPANY	Date	File Location	Complier	Project Manager	Area Manager
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471	July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
Rice Operating Company Junction I-9 State 2 Remediation Sampling Points					Checked R. Rascon
					Figure 2Y

LABORATORY TEST REPORT

PETTIGREW and ASSOCIATES, P.A.
1110 N. GRIMES
HOBBS, NM 88240
(505) 393-9827

AASHTO R18

DEBRA P. HICKS, P.E./L.S.I.
WILLIAM M. HICKS, III, P.E./P.S.

To:	Rice Operating Corporation Attn: Carolyn Haynes 122 W. Taylor Hobbs, NM 88240	**Material:**	Red Clay
		Test Method:	ASTM: D 2922
Project:	Hobbs Junction I-9		
Date of Test:	October 2, 2003	**Depth:**	34' Below Finished Subgrade

Test No.	Location	Dry Density % Maximum	% Moisture	Depth
SG-1	N. Section of Pit - 30' S. & 15' E. of the NW Corner	100.3	18.1	

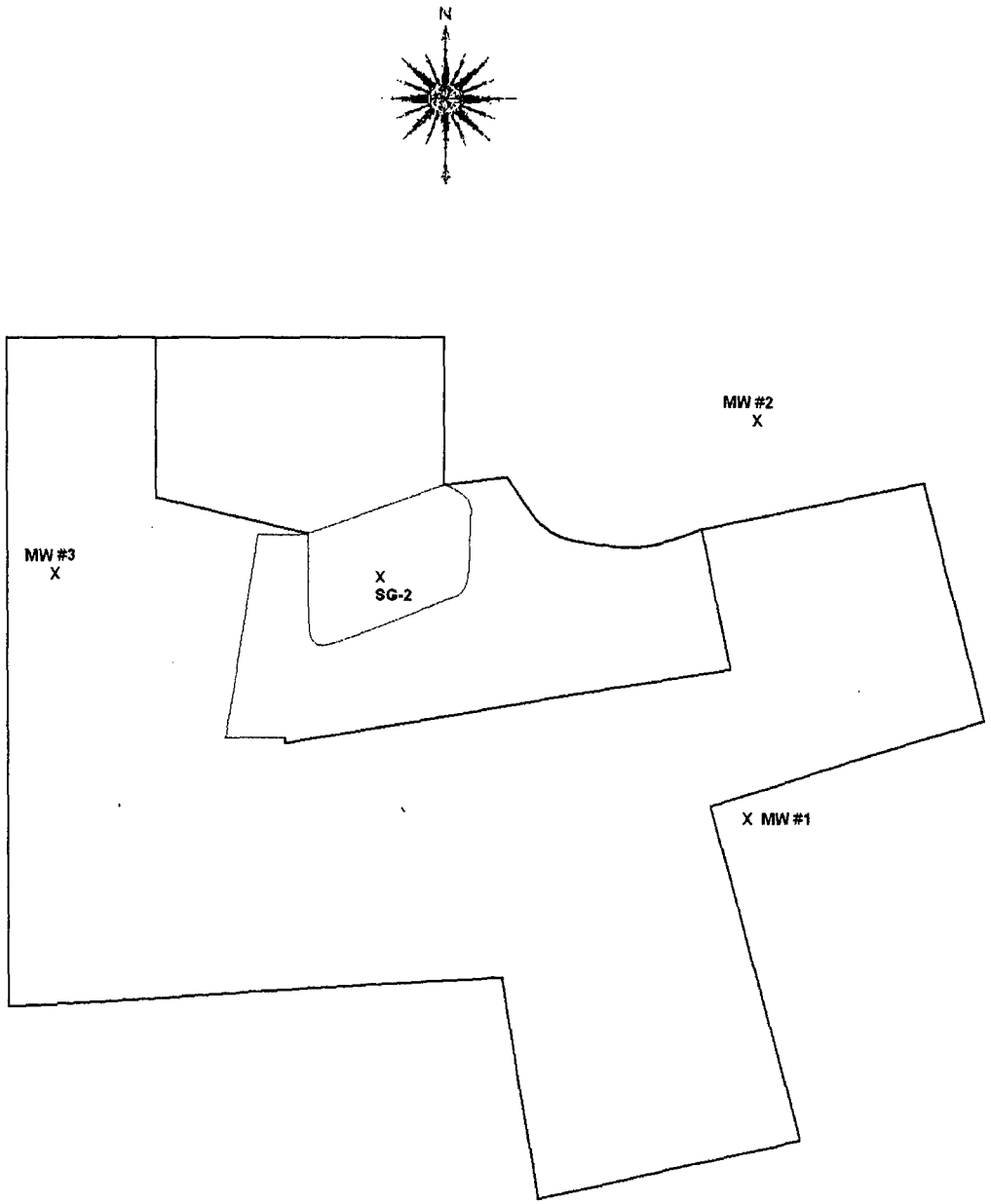
Control Density:	107.2 ASTM: D 698	**Optimum Moisture:**	18.0%
Required Compaction:	95%		
Lab No.:	03 6177		
Copies To:	Rice Operating		

PETTIGREW and ASSOCIATES

BY: _____ S.E.

COPY

10/28/03 Pettigrew & Associates, P.A.
Lab #03 6568
2nd clay liner density test @ 30'



RICE OPERATING COMPANY
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471

Date	File Location	Complier	Project Manager	Area Manager
July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haymes

Rice Operating Company
Junction I-9 State 2 Remediation
Sampling Points

Checked	Figure 2X
R. Rascon	

LABORATORY TEST REPORT

PETTIGREW and ASSOCIATES, P.A.

1110 N. GRIMES
HOBBS, NM 88240
(505) 393-9827

AASHTO R18

DEBRA P. HICKS, P.E./L.S.I.
WILLIAM M. HICKS, III, P.E./P.S.

To:	Rice Operating Corporation Attn: Carolyn Haynes 122 W. Taylor Hobbs, NM 88240	**Material:**	Red Clay
		Test Method:	ASTM: D 2922
Project:	Hobbs Junction I-9		
Date of Test:	October 28 2003	**Depth:**	Finished Subgrade

Test No.	Location	Dry Density % Maximum	% Moisture	Depth
SG-2	Pit - Center of Excavation	100.8	20.1	

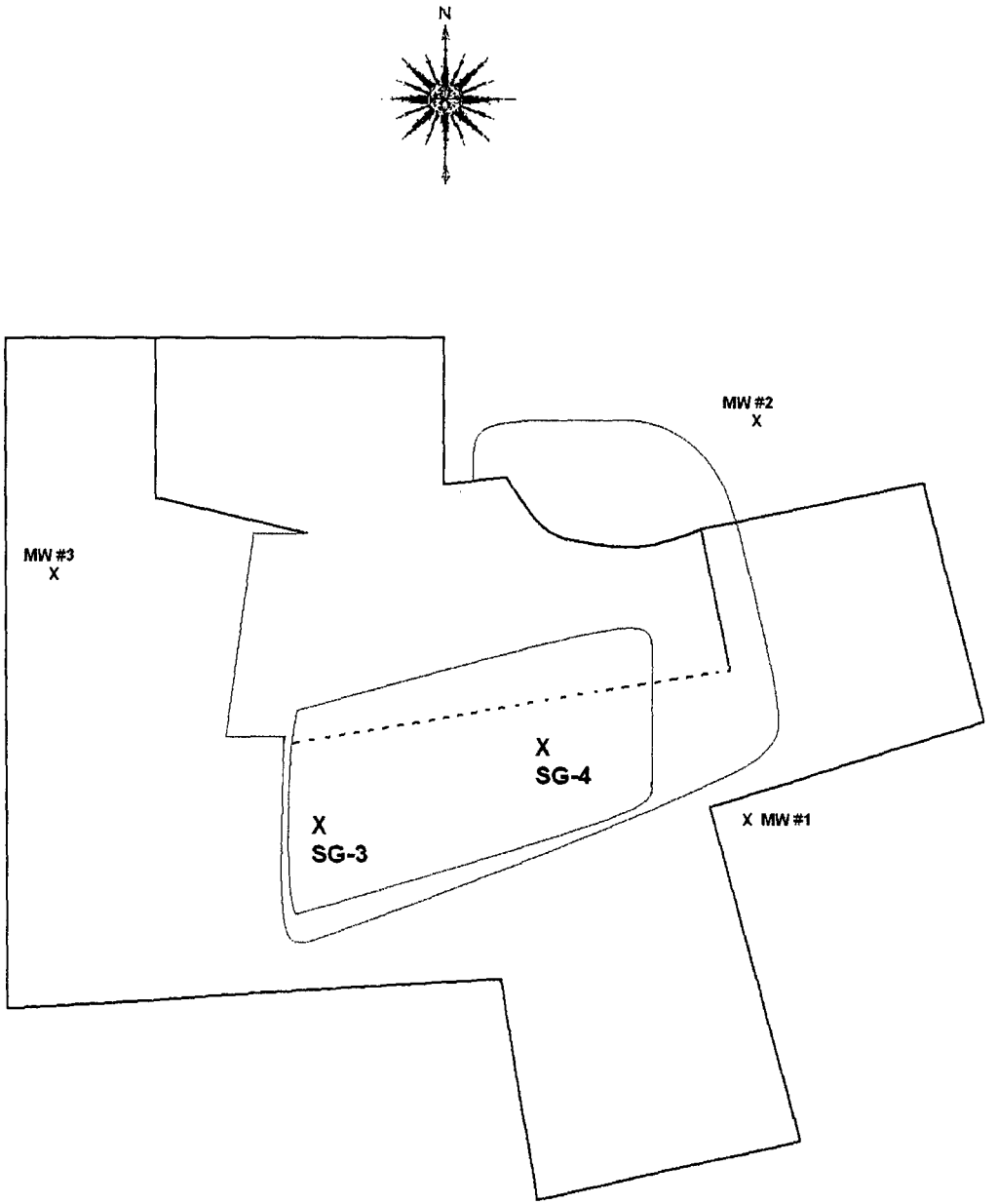
Control Density:	103.9 ASTM: D 698	**Optimum Moisture:**	21.4%
Required Compaction:	95%		
Lab No.:	03 6568		
Copies To:	Rice Operating		

PETTIGREW and ASSOCIATES

BY:

COPY

12/1/03 Pettigrew & Associates, P. A.
Lab #03 7128-7129
3rd clay liner density test @ 30'



RICE OPERATING COMPANY
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471

Date	File Location	Complier	Project Manager	Area Manager
July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes
				Checked
				R. Rascon

Rice Operating Company
Junction I-9 State 2 Remediation
Sampling Points

Figure 2W

LABORATORY TEST REPORT

PETTIGREW and ASSOCIATES, P.A.
1110 N. GRIMES
HOBBS, NM 88240
(505) 393-9827

DEBRA P. HICKS, P.E./L.S.I.
WILLIAM M. HICKS, III, P.E./P.S.

AASHTO R18

To:	Rice Operating Corporation Attn: Carolyn Haynes 122 W. Taylor Hobbs, NM 88240	**Material:**	Red Clay
		Test Method:	ASTM: D 2922
Project:	Hobbs Junction I-9		
Date of Test:	December 1, 2003	**Depth:**	13' Below Finished Subgrade

Test No.	Location	Dry Density % Maximum	% Moisture	Depth
SG-3	Pit - 50' N. & 35' W. of the SE Corner	105.0	16.7	
SG-3	Pit - 45' N. & 25' E. of the SW Corner	102.6	18.5	

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RICE OPERATING
HOBBS, NM

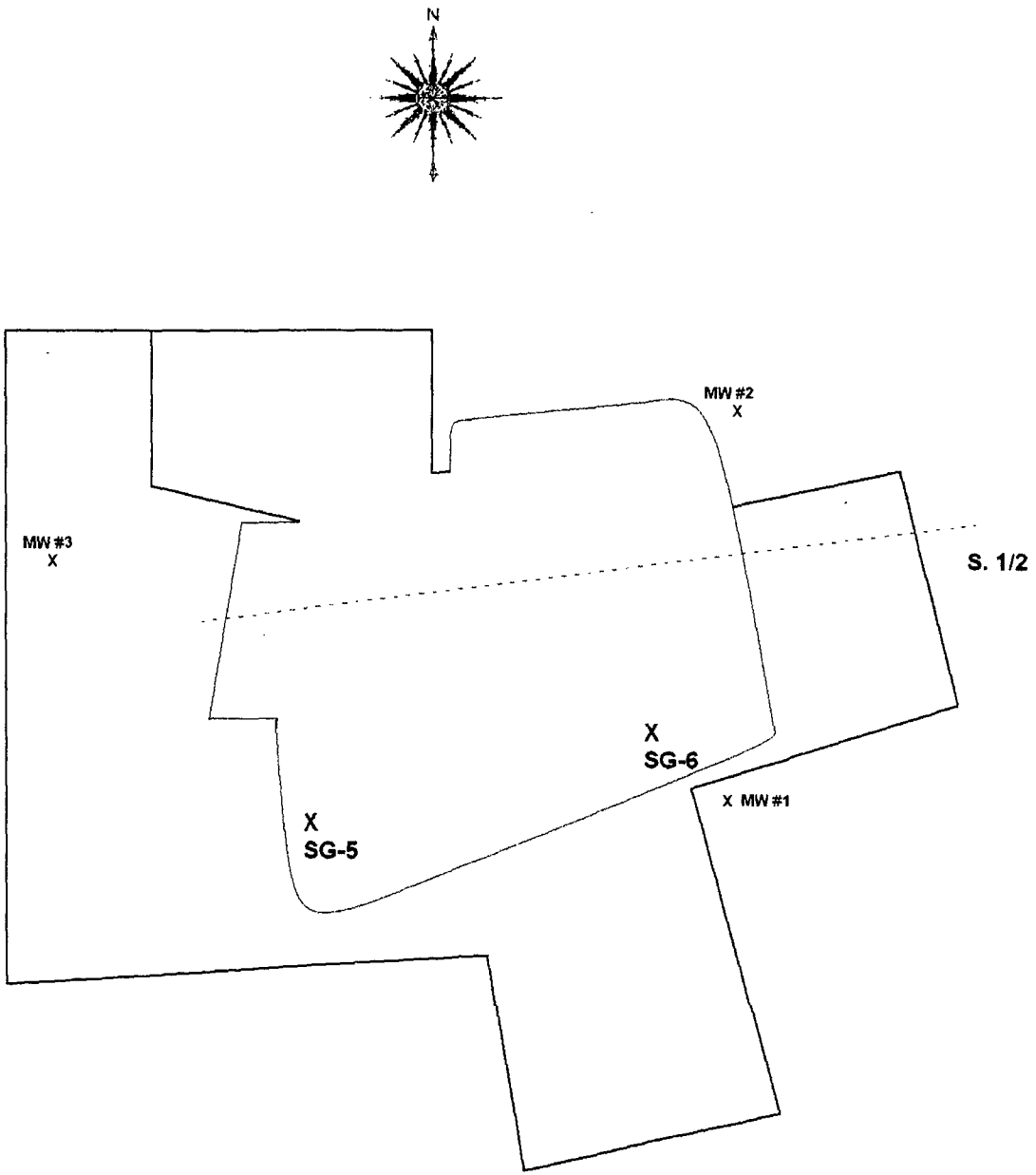
Control Density:	104.2 ASTM: D 698	**Optimum Moisture:**	23.1%
Required Compaction:	95%		
Lab No.:	03 7128-7129		
Copies To:	Rice Operating		

PETTIGREW and ASSOCIATES

BY: S.E.T.

COPY

12/10/03 Pettigrew & Associates, P.A.
Lab #03 7467-7467A
4th clay liner density test @ 30'



Date	File Location	Compiler	Project Manager
July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon

Rice Operating Company
Junction I-9 State 2 Remediation
Sampling Points

Area Manager	C. Haynes
Checked	R. Rascon

Figure 2V

RICE OPERATING COMPANY
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471

LABORATORY TEST REPORT

PETTIGREW and ASSOCIATES, P.A.

1110 N. GRIMES
HOBBS, NM 88240
(505) 393-9827

DEBRA P. HICKS, P.E./L.S.I.
WILLIAM M. HICKS. III, P.E./P.S.

AASHTO R18

To:	Rice Operating Corporation Attn: Carolyn Haynes 122 W. Taylor Hobbs, NM 88240	**Material:**	Red Clay
		Test Method:	ASTM: D 2922
Project:	Hobbs Junction I-9		
Date of Test:	December 10, 2003	**Depth:**	29' Below Finished Subgrade

Test No.	Location	Dry Density % Maximum	% Moisture	Depth
SG-5	Pit - 20' N. & 40' W. of the SE Corner	100.8	20.5	
SG-6	Pit - 10' S. & 15' W. of the NE Corner	101.0	18.6	

RECEIVED
DEC 15 2003
RICE OPERATING
HOBBS, NM

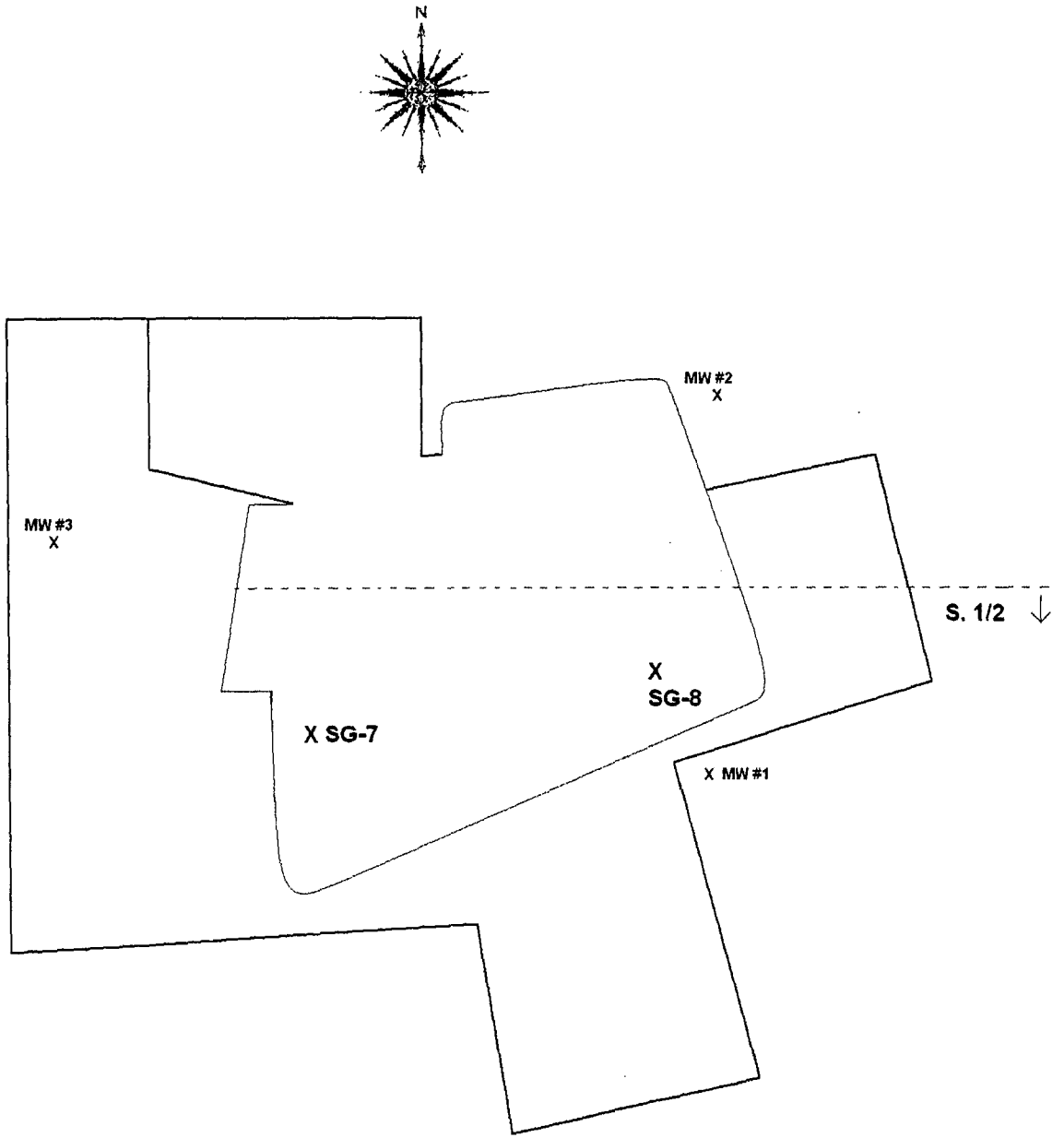
Control Density:	104.2 ASTM: D 698	**Optimum Moisture:**	23.1%
Required Compaction:	95%		
Lab No.:	03 7467-7467a		
Copies To:	Rice Operating		

PETTIGREW and ASSOCIATES

BY: [signature] S.E.T.

COPY

1/3/04 Pettigrew & Associates, P.A.
Lab #04 1275-1276
Top clay liner @ approx 6' to 7' bgs



Date	File Location	Complier	Project Manager
July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon

Rice Operating Company
Junction I-9 State 2 Remediation
Sampling Points

Area Manager	C. Haynes
Checked	R. Rascon

Figure 2U

RICE OPERATING COMPANY
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471

LABORATORY TEST REPORT

PETTIGREW and ASSOCIATES, P.A.
1110 N. GRIMES
HOBBS, NM 88240
(505) 393-9827

DEBRA P. HICKS, P.E./L.S.I.
WILLIAM M. HICKS, III, P.E./P.S.

To:	Rice Operating Corporation Attn: Carolyn Haynes 122 W. Taylor Hobbs, NM 88240	**Material:**	Red Clay
Project:	Hobbs Junction I-9	**Test Method:**	ASTM: D 2922
Date of Test:	January 13, 2004	**Depth:**	6 1/2' Below Finished Subgrade

Test No.	Location	Dry Density % Maximum	% Moisture	Depth
SG-7	Pit - 100' W. & 25' N. of tho SE Corner - S. Area	99.0	20.5	
SG-8	Pit - 50' W. & 30' N. of the SE Corner - S. Area	99.4	20.8	

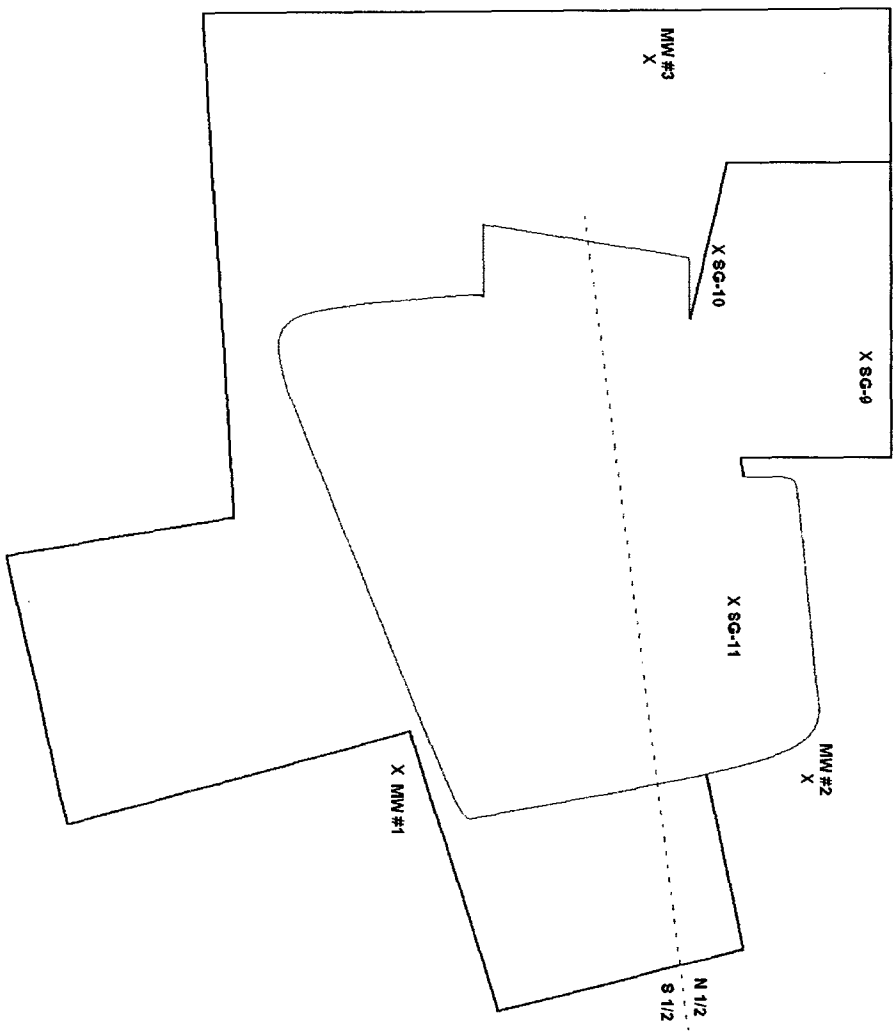
Control Density:	104.2 ASTM: D 698	**Optimum Moisture:**	21.4%
Required Compaction:	95%		
Lab No.:	04 1275-1276		
Copies To:	Rice Operating		

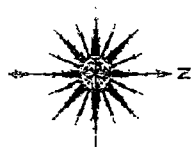
PETTIGREW and ASSOCIATES

BY:

COPY

1/20/04 Pettigrew & Associates, P.A.
Lab #03 1350-1352





RICE OPERATING COMPANY
122 W. Taylor Hobbs, New Mexico 88240 Tel: (505)393-9174 Fax: (505)397-1471

Date	File Location	Complier	Project Manager	Area Manager
July 7, 2004	Drawing/ROC	S. Hicks	R. Rascon	C. Haynes

Rice Operating Company
Junction I-9 State 2 Remediation
Sampling Points

Checked
R. Rascon

Figure 2Z

LABORATORY TEST REPORT

PETTIGREW and ASSOCIATES, P.A.
1110 N. GRIMES
HOBBS, NM 88240
(505) 393-9827

DEBRA P. HICKS, P.E./L.S.I.
WILLIAM M. HICKS, III, P.E./P.S.

To:	Rice Operating Corporation Attn: Carolyn Haynes 122 W. Taylor Hobbs, NM 88240	**Material:**	Red Clay
		Test Method:	ASTM: D 2922
Project:	Hobbs Junction I-9		
Date of Test:	January 20, 2004	**Depth:**	6' Below Finished Subgrade

Test No.	Location	Dry Density % Maximum	% Moisture	Depth
SG-9	W. Side of N. Half of Pit	95.9	24.4	
SG-10	N.W. Side of N. Half of Pit	99.8	19.4	
SG-11	E. Side of N. Half of Pit	99.5	18.9	

Control Density:	104.2 ASTM: D 698	**Optimum Moisture:**	21.4%
Required Compaction:	95%		
Lab No.:	03 1350-1352		
Copies To:	Rice Operating		

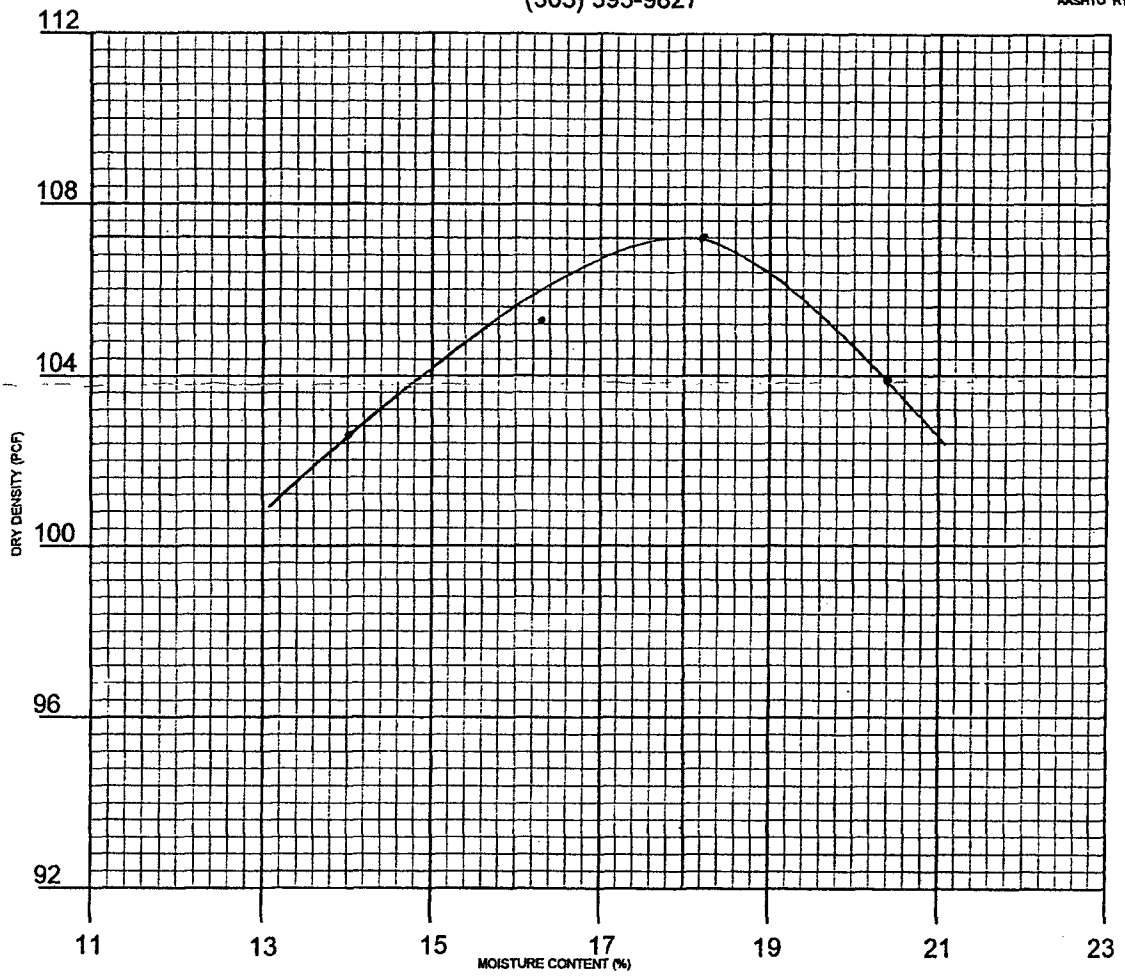
PETTIGREW and ASSOCIATES

BY: _____ S.E.I.

COPY

PETTIGREW and ASSOCIATES, P.A.
1110 N. GRIMES ST.
HOBBS, NM 88240
(505) 393-9827

AASHTO R18



CLIENT: Rice Operating PROJECT: General Information

SAMPLE LOCATION: Stockpile

SOIL DESCRIPTION: Red Clay (Wallach)

SOIL CLASSIFICATION: _____ TEST METHOD: ASTM: D 698

ATTERBERG: LL ___ PI ___ Sampled & Delivered 4/10/03

DATE: 4/11/03 LAB NO. 03-2271-2272

DRY WEIGHT LB/CU. FT. 107.2 MOISTURE CONTENT % 18.0

SIEVE ANALYSIS - % PASSING									

PETTIGREW and ASSOCIATES

COPIES: Rice

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PETTIGREW and ASSOCIATES, P.A.
1110 N. GRIMES ST.
HOBBS, NM 88240
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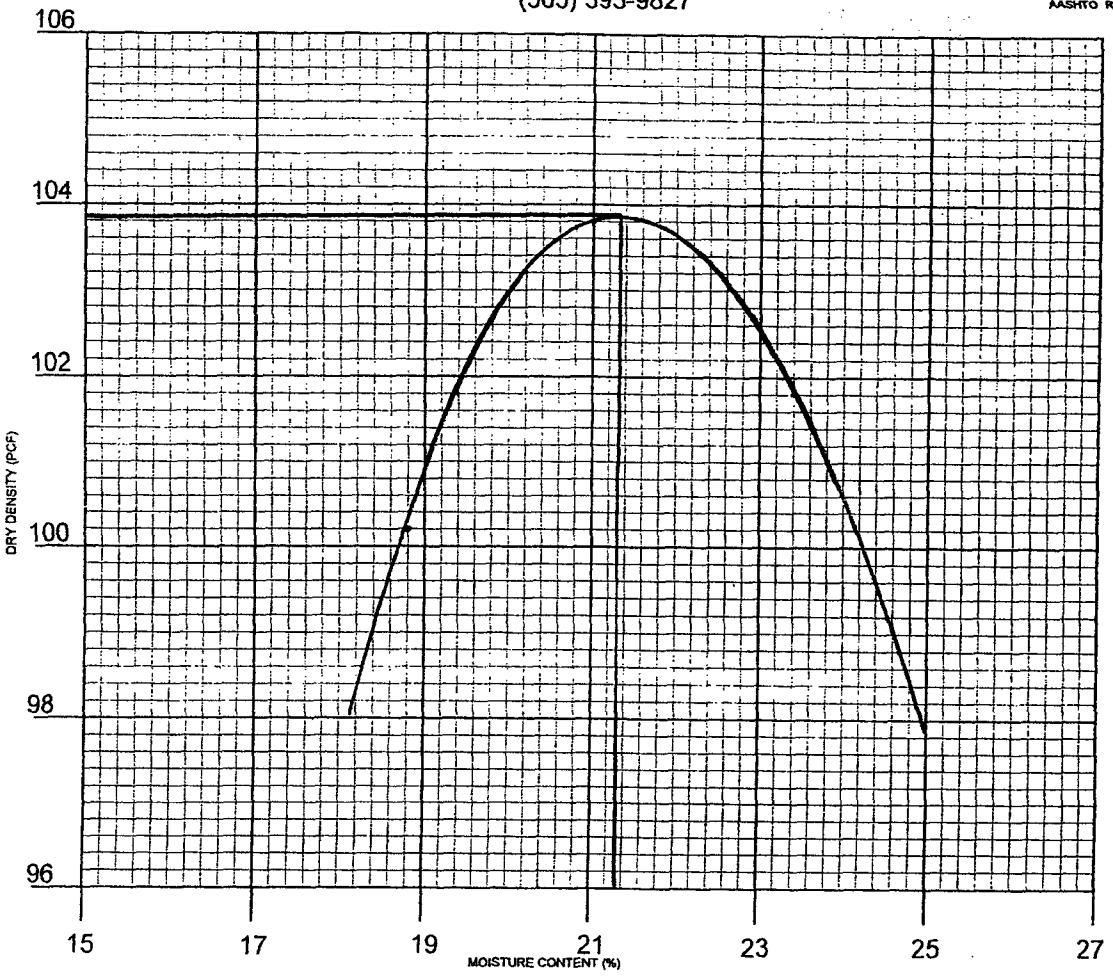
AASHTO R18



CLIENT: Rice Operating PROJECT: General Information

SAMPLE LOCATION: Stockpile at Wallach Pit

SOIL DESCRIPTION: Red Clay

SOIL CLASSIFICATION: _____ TEST METHOD: ASTM: D 698

ATTERBERG: LL ___ PI ___ Sampled & Delivered 10/20/03

DATE: 10/21/03 LAB NO. 03-6450-6452

Good for 6 months

DRY WEIGHT LB/CU. FT. 103.9 MOISTURE CONTENT % 21.4

SIEVE ANALYSIS - % PASSING									

PETTIGREW and ASSOCIATES

COPIES: Rice Operating

BY: Jason Reece E.E.T.

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LABORATORY TEST REPORT

PETTIGREW and ASSOCIATES, P.A.
1110 N. GRIMES
HOBBS, NM 88240
(505) 393-9827

DEBRA P. HICKS, P.E./L.S.I.
WILLIAM M. HICKS. III, P.E./P.S.

To:	Rice Operating Corporation Attn: Carolyn Haynes 122 W. Taylor Hobbs, NM 88240	**Material:**	Wallach Clay
Project:	General Information	**Test Method:**	Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter ASTM: D 5084 Method C
Date of Test:	November, 2003	**Location:**	Stockpile

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HOBBS, NM

Average Permeability	4.84E-07 cm/sec
Intial Length of Specimen	7.15 cm
Initial Diameter of Specimen	7.15 cm
Initial Water Content	20.7%
Initial Dry Unit Weight	99.3 pcf
Initial Volume	17.52 cu. in.
Permeant Liquid	Bottled Water
Magnitude of Total Back Pressure	64.9 psi
Effective Consolidation Stress	5 psi
Range of Hydraulic Gradient Used	12.4 to 8.2
Final Length of Specimen	7.12 cm
Final Diameter of Specimen	7.14 cm
Final Water Content	23.2%
Filnal Dry Unit Weight	100.0 pcf
Finai Volume	17.40 cu. in.
Degree of Saturation (Before & After Test)	84% and 96%
Specific Gravity used in Calculations of Saturation	2.625

Time Interval sec	K cm/sec	K ft./Yr.
61	4.84E-07	0.50
77	4.83E-07	0.50
92	4.85E-07	0.50
107	4.84E-07	0.50

Remolded to 95% of ASTM: D 698 and Optimum Moisture
ASTM: D 698 - 103.9 @ 21.4

Lab No.: 03 6841-6842

Copies To: Rice Operating

PETTIGREW and ASSOCIATES

BY: [signature] S.E.I.T.

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LABORATORY TEST REPORT
PETTIGREW and ASSOCIATES, P.A.
1110 N. GRIMES
HOBBS, NM 88240
(505) 393-9827

AASHTO R18

DEBRA P. HICKS, P.E./L.S.I.
WILLIAM M. HICKS. III, P.E./P.S.

To: Rice Operating Corporation
Attn: Carolyn Haynes
122 W. Taylor
Hobbs, NM 88240

Material: Red Byrd Clay

Project: General Information

Test Method: Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter
ASTM: D 5084
Method C

Date of Test: November, 2003

Location: Pit

Average Permeability	2.22E-09 cm/sec
Intial Length of Specimen	7.15 cm
Initial Diameter of Specimen	7.15 cm
Initial Water Content	21.6%
Initial Dry Unit Weight	100.3 pcf
Initial Volume	17.52 cu. in.
Permeant Liquid	Bottled Water
Magnitude of Total Back Pressure	65.1 psi
Effective Consolidation Stress	5 psi
Range of Hydraulic Gradient Used	15.0 to 3.9
Final Length of Specimen	7.17 cm
Final Diameter of Specimen	7.22 cm
Final Water Content	26.3%
Filnal Dry Unit Weight	98.0 pcf
Final Volume	17.91 cu. in.
Degree of Saturation (Before & After Test)	88% and 102%
Specific Gravity used in Calculations of Saturation	2.651

Time Interval sec	K cm/sec	K ft./Yr.
164701	2.21E-09	0.00
235804	2.23E-09	0.00
244742	2.20E-09	0.00
253995	2.23E-09	0.00

Remolded to 95% of ASTM: D 698 and Optimum Moisture
ASTM: D 698 - 104.2 @ 23.1

Lab No.: 03 6839-6840

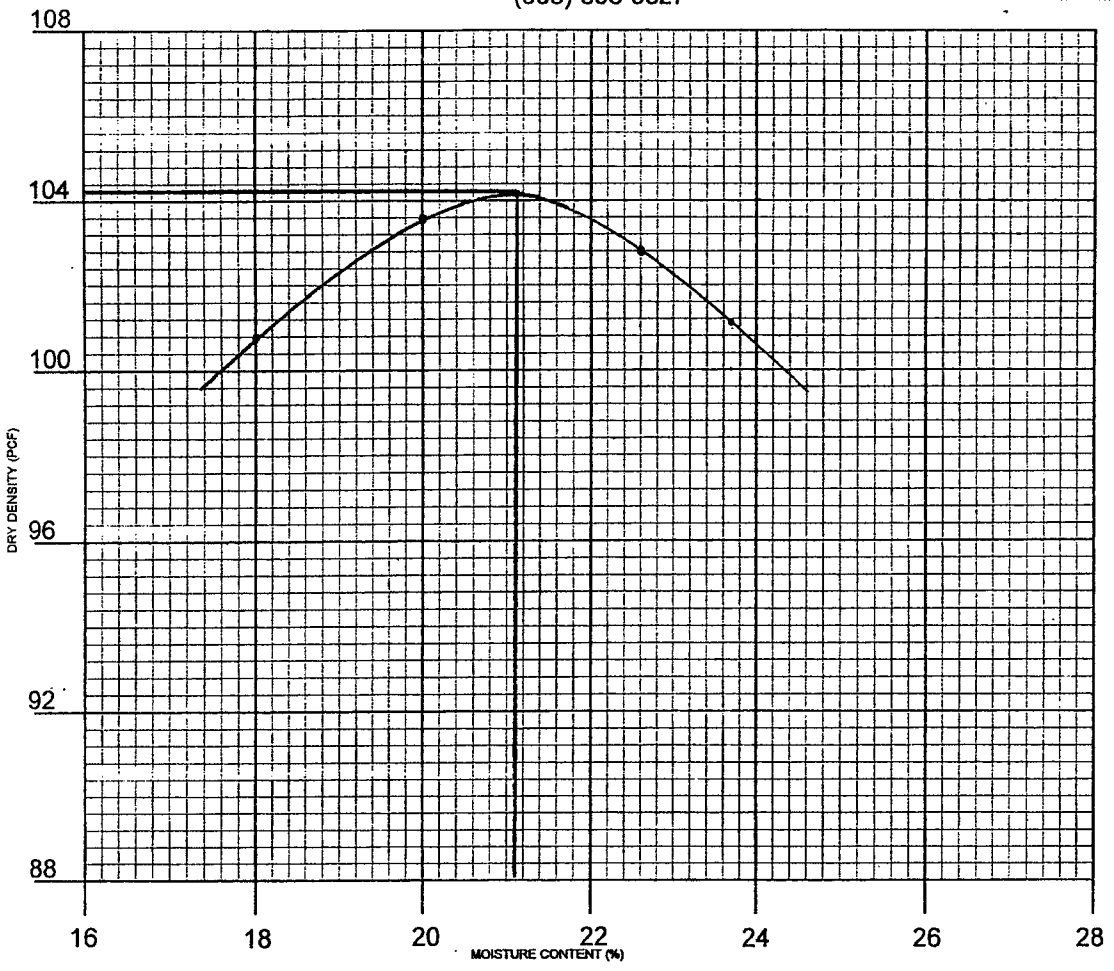
Copies To: Rice Operating

PETTIGREW and ASSOCIATES

BY: S.E.T.

PETTIGREW and ASSOCIATES, P.A.
1110 N. GRIMES ST.
HOBBS, NM 88240
(505) 393-9827

AASHTO R18



CLIENT: Rice Operating PROJECT: General Information

SAMPLE LOCATION: Stockpile at Byrd Pit

SOIL DESCRIPTION: Red Clay

SOIL CLASSIFICATION: _____ TEST METHOD: ASTM: D 698

ATTERBERG: LL ___ PI ___ Delivered 9/25/03

DATE: 9/26/03 LAB NO. 03-6040

DRY WEIGHT LB/CU. FT. 104.2 MOISTURE CONTENT % 23.1

SIEVE ANALYSIS - % PASSING									

PETTIGREW and ASSOCIATES

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