

1R - 460

**GENERAL  
CORRESPONDENCE**

**YEAR(S):**  
2008 - 2009

RECEIVED

2008 DEC 16 PM 12 43



1R460

CERTIFIED MAIL  
RETURN RECEIPT NO. 7099 3400 0017 1737 1964

December 10, 2008

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

RE: **Notification of Groundwater Impact**  
**EME A-12 Leak Site (NMOCD Case No. 1R0460)**  
**T20S-R36E-Section 12, Unit Letter A**  
**Lea County, New Mexico**

Mr. Hansen:

On behalf of Rice Operating Company (ROC), Trident Environmental (Trident) notifies the Director of the New Mexico Oil Conservation Division (OCD), Environmental Bureau, of groundwater impact at the above-referenced site in accordance with 19.15.29 NMAC.

In accordance with the OCD-approved *Investigation and Characterization Plan* (ICP) to investigate potential groundwater concerns at this site near Monument, four soil borings and three monitoring well installations were conducted on July 2, 2008. Groundwater was encountered at approximately 32 feet below ground surface (bgs). The wells were developed and sampled pursuant to OCD guidelines. A site location map, maps showing the groundwater monitoring results, and the survey plat are attached. In addition, copies of the monitoring well construction diagrams and laboratory reports for groundwater analyses are attached.

After two quarters of groundwater sampling and laboratory analysis it has been confirmed that chloride and total dissolved solids (TDS) exceed the Water Quality Control Commission (WQCC) standards at the site. Chloride and TDS concentrations are known to be elevated on a regional scale in this area near Monument as is clearly evidenced by the elevated chloride and TDS concentrations in the upgradient monitoring well (MW-2) at this site.

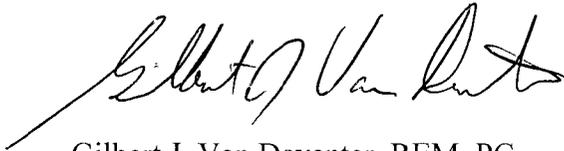
EME A-12 Leak Site  
T20S-R36E-Sec 12, Unit A  
Lea County, New Mexico

Groundwater sampling of the monitoring wells will be continued on a quarterly basis. Upon receiving a directive from OCD, Trident will submit a *Corrective Action Plan* (CAP) to address any contribution of contaminants of concern from the release.

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

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

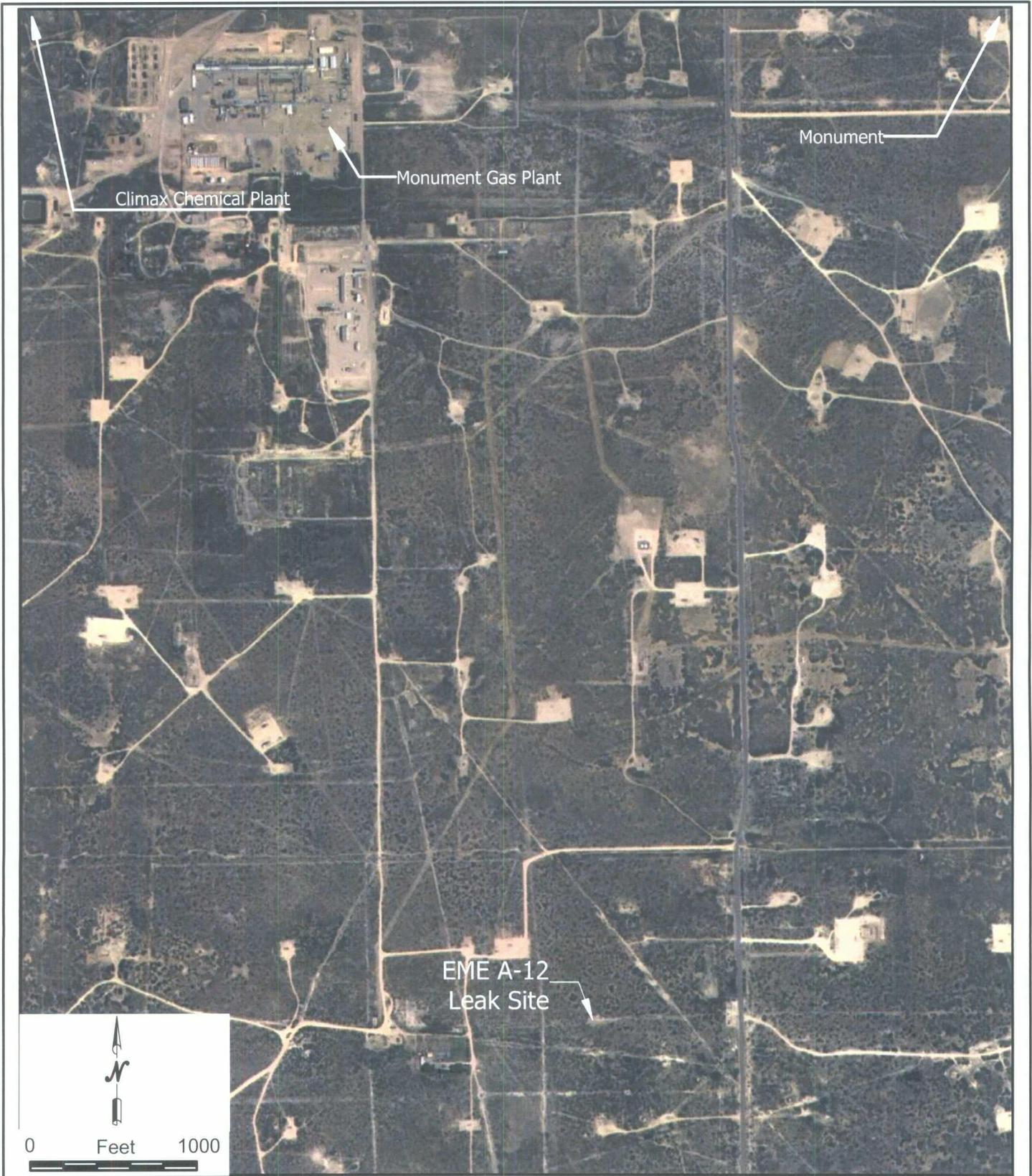
Sincerely,



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

cc: Hack Conder (Rice Operating Co.)

*enclosures: site location map, groundwater maps, survey plats, well construction diagrams, laboratory analytical reports*



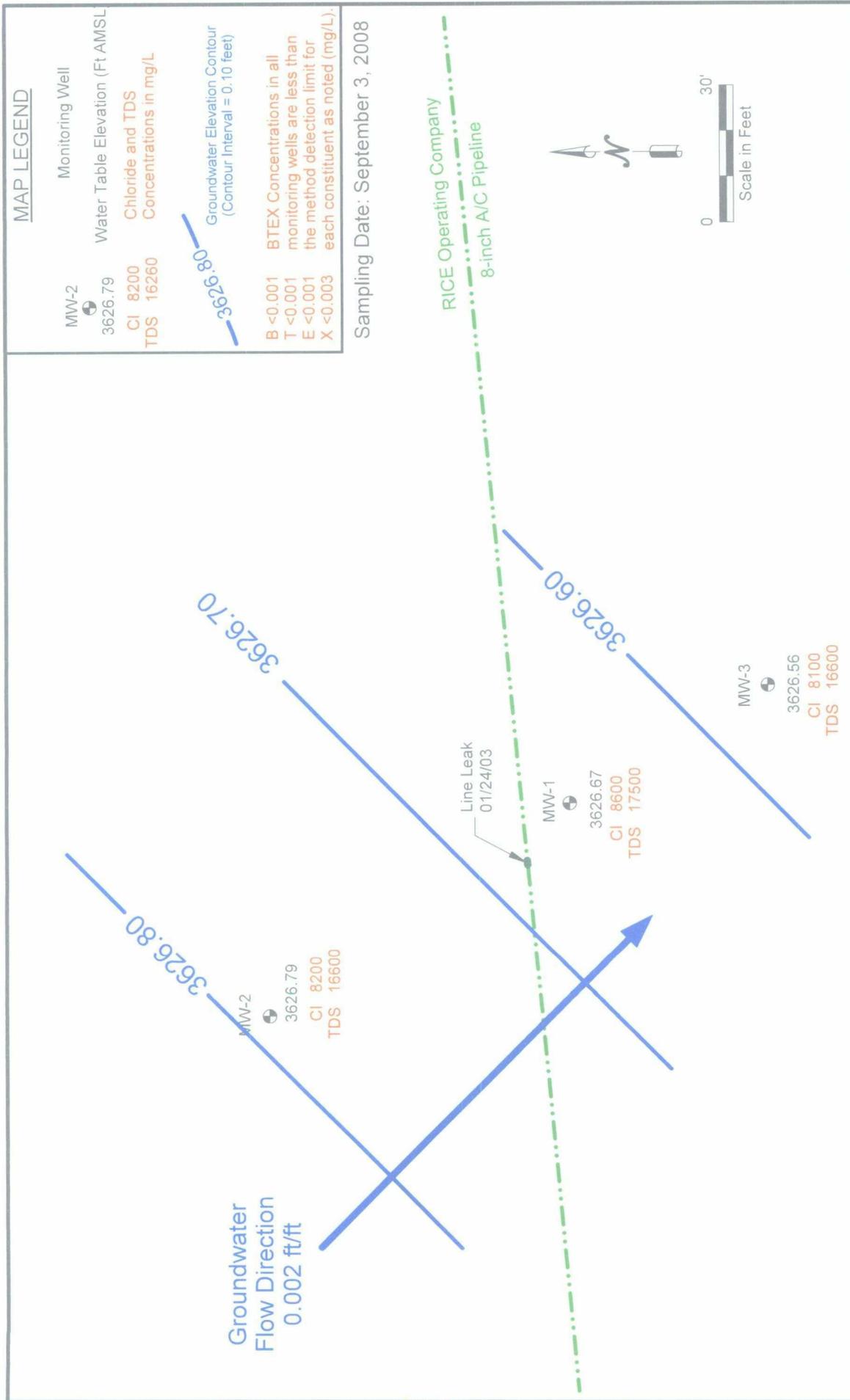
EME A-12 Leak Site  
T20S - R36E - Section 12 - Unit A  
**RICE** *Operating Company*

Figure 1  
Site Location Map  
(2005 Aerial)



EME A-12 Leak Site  
 T20S - R36E - Section 12, Unit A  
**RICE Operating Company**

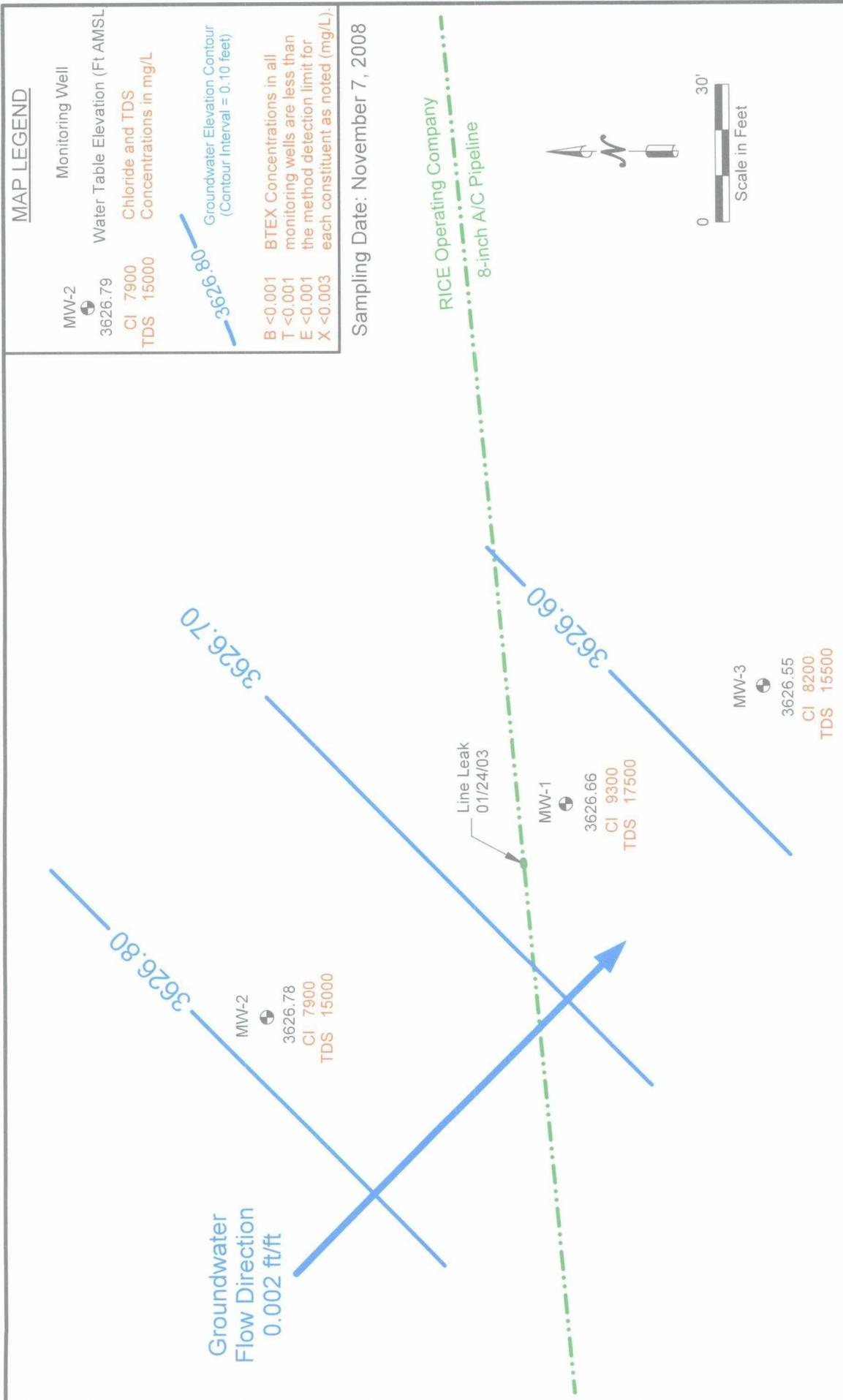
FIGURE 2  
 GROUNDWATER GRADIENT AND  
 CHLORIDE, TDS, & BTEX  
 CONCENTRATION MAP



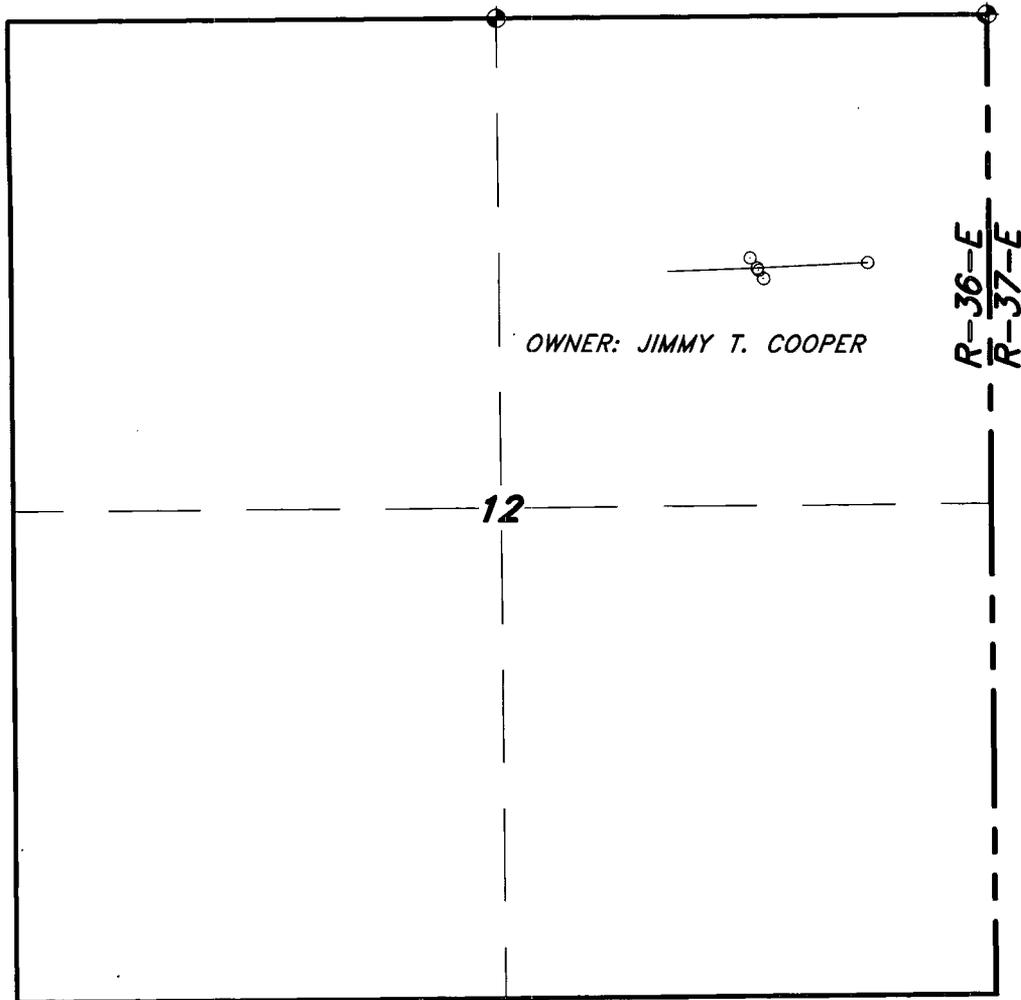


EME A-12 Leak Site  
 T20S - R36E - Section 12, Unit A  
**RICE** *Operating Company*

FIGURE 3  
 GROUNDWATER GRADIENT AND  
 CHLORIDE, TDS, & BTEX  
 CONCENTRATION MAP



SECTION 12, TOWNSHIP 20 SOUTH, RANGE 36 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.



OWNER: JIMMY T. COOPER

NOTE:  
ELEVATIONS ARE ON BLACK MARK  
ON NORTH SIDE OF PVC CASING.

NEW MEXICO STATE PLANE COORDINATES (NAD83)

WELL	NORTHING	EASTING	LATITUDE	LONGITUDE	ELEV. PVC	ELEV. GRND	ELEV. CON.
MW #1 4"	580371.896	858593.710	32°35'28.601"	103°18'11.744"	3660.89'	3658.48'	3658.73'
MW #2 2"	580437.975	858546.854	32°35'29.259"	103°18'12.284"	3661.33'	3659.08'	3659.40'
MW #3 2"	580328.288	858619.267	32°35'28.167"	103°18'11.444"	3659.49'	3657.66'	3657.96'

1000 0 1000 2000 FEET



SCALE: 1" = 1000'

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED FROM FIELD NOTES ON AN ACTUAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.



GARY L. JONES, N.M.P.S. No. 7977  
REGISTERED PROFESSIONAL LAND SURVEYOR, TEXAS No. 5074

**RICE OPERATING COMPANY**

REF: EME A-12

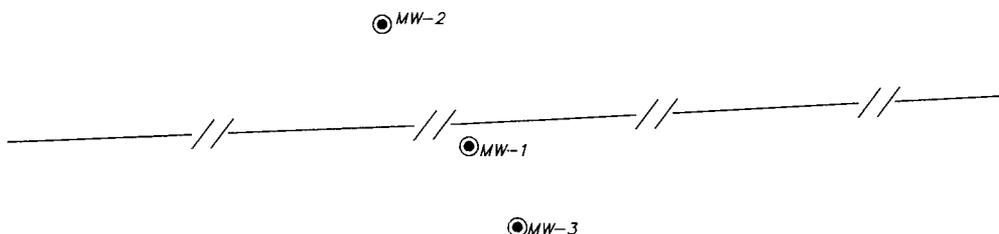
MONITOR WELLS LOCATED IN  
SECTION 12, TOWNSHIP 20 SOUTH, RANGE 36 EAST,  
N.M.P.M., LEA COUNTY, NEW MEXICO.

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

W.O. Number: 20110 Drawn By: J. M. SMALL

Date: 07-23-2008 Disk: JMS 20110 Survey Date: 07-22-2008 Sheet 1 of 2 Sheets

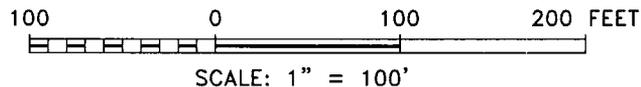
SECTION 12, TOWNSHIP 20 SOUTH, RANGE 36 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.



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NEW MEXICO STATE PLANE COORDINATES (NAD83)

WELL	NORTHING	EASTING	LATITUDE	LONGITUDE	ELEV. PVC	ELEV. GRND	ELEV. CON.
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED  
FROM FIELD NOTES OF AN ACTUAL SURVEY AND  
MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND  
SURVEYS AS SPECIFIED BY THIS STATE.



GARY L. JONES N.M.P.S. No. 7977  
REGISTERED PROFESSIONAL LAND SURVEYOR No. 5074

**RICE OPERATING COMPANY**

REF: EME A-12

MONITOR WELLS LOCATED IN  
SECTION 12, TOWNSHIP 20 SOUTH, RANGE 36 EAST,  
N.M.P.M., LEA COUNTY, NEW MEXICO.

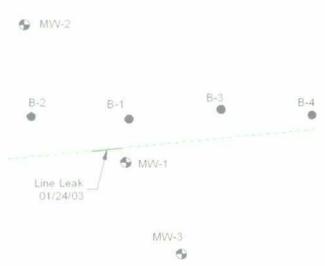
**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 20110 Drawn By: J. M. SMALL

Date: 07-23-2008 Disk: JMS 20110

Survey Date: 07-22-2008 Sheet 2 of 2 Sheets

## LITHOLOGIC LOG AND MONITORING WELL CONSTRUCTION DIAGRAM



MONITOR WELL NO.: <u>MW-1</u>	TOTAL DEPTH: <u>57</u> Feet
SITE ID: <u>EME A-12 Leak</u>	CLIENT: <u>RICE Operating Company</u>
CONTRACTOR: <u>Harrison &amp; Cooper, Inc.</u>	COUNTY: <u>Lea</u>
DRILLING METHOD: <u>Air Rotary</u>	STATE: <u>New Mexico</u>
START DATE: <u>07/02/08</u>	LOCATION: <u>T20S-R36E-Sec 12-Unit A</u>
COMPLETION DATE: <u>07/02/08</u>	FIELD REP.: <u>G. Van Deventer</u>
COMMENTS: <u>Monitoring well located ~15 ft southeast of leak source.</u>	
<u>Latitude 32° 35' 29.9" N, Longitude 103° 18' 9.5 W</u>	

Depth (ft)	Sample Time	Sample Type	Chloride (ppm)	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION:
						LITHOLOGY, COLOR, GRAIN SIZE, SORTING, ROUNDING, CONSOLIDATION, DISTINGUISHING FEATURES
5	1000	Split Spoon	114		SW	Fine sand, very pale orange (10YR 8/2) and grayish orange (10YR 7/4), subrounded, moderately sorted, unconsolidated, dry, no odor.
10	1003	Split Spoon	321		SW	Fine sand, very pale orange (10YR 8/2), subrounded, moderately sorted, unconsolidated, dry, no odor.
15	1006	Split Spoon	710		SW/CAL	Fine sand, very pale orange (10YR 8/2), with caliche, subrounded, moderately sorted, unconsolidated, dry, no odor. Lab chloride = 1170 mg/kg.
20	1010	Split Spoon	553		SW/CAL	Fine sand, very pale orange (10YR 8/2), with caliche, subrounded, moderately sorted, unconsolidated, dry, no odor.
25	1025	Split Spoon	716			Fine sand, light brown (5YR 5/6), subrounded/subangular, moderately sorted, dry, no odor.
30	1029	Split Spoon	616	36.7		Fine- to medium-grained sand, light olive gray (5Y 5/2), subrounded, moderately well sorted, unconsolidated, slightly moist, slight HC odor. Lab results in mg/kg: chloride = 976, Benzene <0.1, Toluene <0.1, Ethylbenzene = 0.161, Xylenes = 0.706, GRO = 358, DRO = 1140.
35						Fine- to medium-grained sand, pale yellowish brown (10YR 6/2), subrounded, moderately well sorted, unconsolidated, slightly moist.
40					SW	Fine- to medium-grained sand, light brown (5YR 5/6), subrounded, moderately well sorted, unconsolidated, moist.
45						Fine- to medium-grained sand, light brown (5YR 5/6), subrounded, moderately well sorted, unconsolidated, moist.
50						Fine- to medium-grained sand, light brown (5YR 5/6), subrounded, moderately well sorted, unconsolidated, moist.
55						Fine- to medium-grained sand, light brown (5YR 5/6), subrounded, moderately well sorted, unconsolidated, wet.
60						Bottom of monitoring well at 57 ft bgs

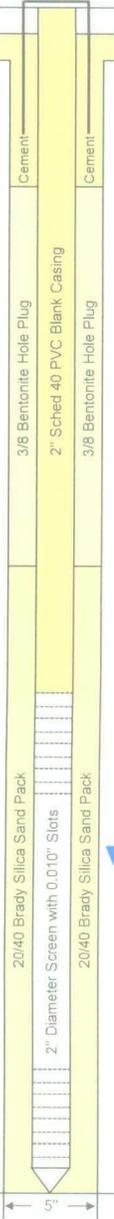


## LITHOLOGIC LOG AND MONITORING WELL CONSTRUCTION DIAGRAM



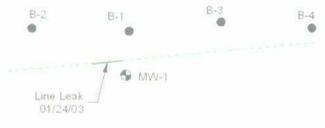
MONITOR WELL NO.: MW- 2	TOTAL DEPTH: 45 Feet
SITE ID: EME A-12 Leak	CLIENT: RICE Operating Company
CONTRACTOR: Harrison & Cooper, Inc.	COUNTY: Lea
DRILLING METHOD: Air Rotary	STATE: New Mexico
START DATE: 07/02/08	LOCATION: T20S-R36E-Sec 12-Unit A
COMPLETION DATE: 07/02/08	FIELD REP.: G. Van Deventer
COMMENTS: Monitoring well located ~66 ft northwest of leak source.	
Latitude 32° 35' 30.5" N, Longitude 103° 18' 9.9 W	

Depth (ft)	Sample		Chloride (ppm)	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION: LITHOLOGY, COLOR, GRAIN SIZE, SORTING, ROUNDING, CONSOLIDATION, DISTINGUISHING FEATURES
	Time	Type				
5	1214	Split Spoon	118	0	SW	Sandy loam, dark yellowish brown (10YR 4/2), subrounded, well sorted, unconsolidated, dry, no odor.
10	1217	Split Spoon	446	0	SM/CAL	Very fine sand with some calcium carbonate in matrix, pale yellowish brown (10YR 6/2). Sand grains are rounded/subrounded, well sorter, unconsolidated, dry, no odor.
15	1221	Split Spoon	596	0	CAL	Caliche, chalky white, moderately hard, dry, no odor.
20	1224	Split Spoon	780	0	SM/CAL	Caliche with some very fine sand, chalky white, moderately hard, dry, no odor.
25	1227	Cuttings	810		SW	Fine sand, very pale orange (10YR 8/2), with caliche, subrounded, moderately sorted, unconsolidated, dry, no odor. Lab chloride = 1340 mg/kg.
30	1229	Cuttings	984		SW	Fine sand, light brown (5YR 5/6), subrounded/subangular, moderately sorted, dry, no odor.
35	1232	Cuttings			SW	Fine- to medium-grained sand, light brown (5YR 5/6 and 5YR 5/6), subrounded, moderately well sorted, unconsolidated, no odor, moist.
40	1235				SW	Fine- to medium-grained sand, light brown (5YR 5/6), subrounded, moderately well sorted, unconsolidated, moist.
45	1240				SW	Fine- to medium-grained sand, light brown (5YR 5/6), subrounded, moderately well sorted, unconsolidated, wet.
50						Bottom of monitoring well at 45 ft bgs
55						
60						



## LITHOLOGIC LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

MW-2



MONITOR WELL NO.: MW-3

TOTAL DEPTH: 45 Feet

SITE ID: EME A-12 Leak

CLIENT: RICE Operating Company

CONTRACTOR: Harrison & Cooper, Inc.

COUNTY: Lea

DRILLING METHOD: Air Rotary

STATE: New Mexico

START DATE: 07/02/08

LOCATION: T20S-R36E-Sec 12-Unit A

COMPLETION DATE: 07/02/08

FIELD REP.: G. Van Deventer

COMMENTS: Monitoring well located ~66 ftsoutheast of leak source.

Latitude 32° 35' 29.3" N, Longitude 103° 18' 9.2 W

Casing / Plug / Pack	Sample		Chloride (ppm)	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION: LITHOLOGY, COLOR, GRAIN SIZE, SORTING, ROUNDING, CONSOLIDATION, DISTINGUISHING FEATURES
	Depth	Time				
Cement	5	1330 Split Spoon	88	0	SW	Sandy loam, dark yellowish brown (10YR 4/2), subrounded, well sorted, unconsolidated, dry, no odor.
3/8 Bentonite Hole Plug	10	1332 Split Spoon	91	0	SM/CAL	Fine sand and soft caliche in matrix, very pale orange (10YR 8/2), subrounded, well sorted, unconsolidated, dry, no odor.
2" Sched 40 PVC Blank Casing	15	1335 Split Spoon	757	0	SM/CAL	Fine sand and soft caliche in matrix, very pale orange (10YR 8/2) and grayish orange (10YR 7/4), subrounded, well sorted, unconsolidated, dry, no odor.
3/8 Bentonite Hole Plug	20	1336 Split Spoon	602	0	SW	Fine sand, light brown (5YR 5/6), subrounded/subangular, moderately sorted, dry, no odor.
20/40 Brady Silica Sand Pack	25	1340 Cuttings	444		SW	Fine sand, light brown (5YR 6/4) with subangular nodules of caliche. Sand grains are subrounded, moderately well sorted, unconsolidated, slightly moist, no odor.
2" Diameter Screen with 0.010" Slots	30	1342 Cuttings	821		SW/CAL	Fine sand, light brown (5YR 6/4), subrounded, moderately well sorted, unconsolidated, wet, no odor.
20/40 Brady Silica Sand Pack	35				SW	
5" Diameter Screen with 0.010" Slots	40				SW	
5" Diameter Screen with 0.010" Slots	45				SW	
5" Diameter Screen with 0.010" Slots	50				SW	
5" Diameter Screen with 0.010" Slots	55				SW	
5" Diameter Screen with 0.010" Slots	60				SW	



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

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

Receiving Date: 09/03/08  
Reporting Date: 09/08/08  
Project Number: NOT GIVEN  
Project Name: EME A-12 LEAK  
Project Location: T20S-R36E-SEC12 A-LEA CO., NM

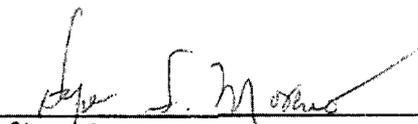
Sampling Date: 09/03/08  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: AB  
Analyzed By: HM/TR

LAB NUMBE SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity ( $\mu$ S/cm)	T-Alkalinity (mgCaCO <sub>3</sub> /L)
ANALYSIS DATE:	09/03/08	09/08/08	09/08/08	09/05/08	09/04/08	09/04/08
H15859-1 MONITOR WELL #1	4,140	1,100	522	21.1	22,200	272
H15859-2 MONITOR WELL #2	3,950	1,020	535	18.5	21,400	256
H15859-3 MONITOR WELL #3	3,880	1,060	498	16.8	21,100	260
Quality Control	NR	48.1	51.0	2.92	1,407	NR
True Value QC	NR	50.0	50.0	3.00	1,413	NR
% Recovery	NR	96.2	102	97.3	99.6	NR
Relative Percent Difference	NR	<0.1	4.9	2.0	0.1	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
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	Cl (mg/L)	SO <sub>4</sub> (mg/L)	CO <sub>3</sub> (mg/L)	HCO <sub>3</sub> (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:	09/05/08	09/05/08	09/04/08	09/04/08	9/042008	09/04/08
H15859-1 MONITOR WELL #1	8,600	1,490	0	332	6.58	17,500
H15859-2 MONITOR WELL #2	8,200	1,500	0	312	6.68	16,600
H15859-3 MONITOR WELL #3	8,100	1,420	0	317	6.67	16,600
Quality Control	500	42.4	NR	964	6.99	NR
True Value QC	500	40.0	NR	1000	7.00	NR
% Recovery	100	106	NR	96.4	100	NR
Relative Percent Difference	< 0.1	2.6	NR	3.7	0.3	NR

METHODS:	SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1
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Chemist

09-10-08  
Date

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



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

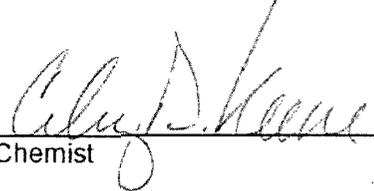
Receiving Date: 09/03/08  
Reporting Date: 09/08/08  
Project Number: NOT GIVEN  
Project Name: EME A-12 LEAK  
Project Location: T20S-R36E-SEC12 A ~ LEA CO., NM

Sampling Date: 09/03/08  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: AB  
Analyzed By: ZL

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		09/05/08	09/05/08	09/05/08	09/05/08
H15859-1	MONITOR WELL #1	<0.001	<0.001	<0.001	<0.003
H15859-2	MONITOR WELL #2	<0.001	<0.001	<0.001	<0.003
H15859-3	MONITOR WELL #3	<0.001	<0.001	<0.001	<0.003
Quality Control		0.044	0.048	0.049	0.154
True Value QC		0.050	0.050	0.050	0.150
% Recovery		88.0	96.0	98.0	103
Relative Percent Difference		8.8	14.0	11.7	12.7

METHOD: EPA SW-846 8021B

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

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date





**ARDINAL  
LABORATORIES**

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

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

Receiving Date: 11/10/08  
Reporting Date: 11/17/08  
Project Number: NOT GIVEN  
Project Name: EME A-12 LEAK  
Project Location: T20S-R36E-SEC12 A ~ LEA CO., NM

Sampling Date: 11/07/08  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: ML  
Analyzed By: ZL

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		11/17/08	11/17/08	11/17/08	11/17/08
H16292-1	MONITOR WELL #1	<0.001	<0.001	<0.001	<0.003
H16292-2	MONITOR WELL #2	<0.001	<0.001	<0.001	<0.003
H16292-3	MONITOR WELL #3	<0.001	<0.001	<0.001	<0.003
Quality Control		0.059	0.050	0.057	0.177
True Value QC		0.050	0.050	0.050	0.150
% Recovery		118	100	114	118
Relative Percent Difference		0.7	5.9	0.4	2.4

METHOD: EPA SW-846 8260B

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

Clayton Keene  
Chemist

11/17/08  
Date

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



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LABORATORIES

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Reporting Date: 11/13/08  
Project Number: NOT GIVEN  
Project Name: EME A-12 LEAK  
Project Location: T20S-R36E-SEC12 A ~ LEA CO., NM

Sampling Date: 11/07/08  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: ML  
Analyzed By: HM/TR

LAB NUMBE SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity ( $\mu$ S/cm)	T-Alkalinity (mgCaCO <sub>3</sub> /L)
ANALYSIS DATE:	11/12/08	11/12/08	11/12/08	11/12/08	11/11/08	11/11/08
H16292-1 MONITOR WELL #1	4,210	1,440	535	22.2	22,700	260
H16292-2 MONITOR WELL #2	3,810	1,120	474	19.3	20,000	256
H16292-3 MONITOR WELL #3	3,920	1,100	522	21.1	20,700	276
Quality Control	NR	52.1	48.6	3.02	1,424	NR
True Value QC	NR	50.0	50.0	3.00	1,413	NR
% Recovery	NR	104	97.2	101	101	NR
Relative Percent Difference	NR	8.0	4.8	3.3	0.5	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
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LAB NUMBE SAMPLE ID	Cl (mg/L)	SO <sub>4</sub> (mg/L)	CO <sub>3</sub> (mg/L)	HCO <sub>3</sub> (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:	11/11/08	11/12/08	11/11/08	11/11/08	11/11/08	11/11/08
H16292-1 MONITOR WELL #1	9,300	1,560	0	317	6.66	17,500
H16292-2 MONITOR WELL #2	7,900	1,610	0	312	6.75	15,000
H16292-3 MONITOR WELL #3	8,200	1,550	0	337	6.72	15,500
Quality Control	500	45.1	NR	1000	7.03	NR
True Value QC	500	40.0	NR	1000	7.00	NR
% Recovery	100	113	NR	100	100	NR
Relative Percent Difference	2.0	4.1	NR	<0.1	0.1	NR

METHODS:	SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1
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*[Signature]*  
\_\_\_\_\_  
Chemist

*11-14-08*  
\_\_\_\_\_  
Date

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

# Cardinal Laboratories, Inc.

101 East Marland - Hobbs, New Mexico 88240  
 Tel (575) 393-2326  
 Fax (575) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

LAB Order ID # \_\_\_\_\_

**ANALYSIS REQUEST**  
 (Circle or Specify Method No.)

Turn Around Time - 24 Hours	
Chlorides	
Total Dissolved Solids	X
Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )	X
Cations (Ca, Mg, Na, K)	X
Moisture Content	
BOD, TSS, pH	
Pesticides 8081A/608	
PCBs 8082/608	
GCMS Semi Vol. 8270C/625	
GCMS Vol. 8260B/624	
RCI	
TCLP Pesticides	
TCLP Semi Volatiles	
TCLP Volatiles	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
PAH 8270C	
TPH 418.1/TX1005 / TX1005 Extended (C35)	
BTEX 80218/602	X
MTBE 80218/602	X

**BILL TO Company:**  
 RICE Operating Company  
 Address: 122 W Taylor Street - Hobbs, New Mexico 88240  
 Phone#: (575) 393-9174  
 Fax#: (575) 397-1471

**PO#**

**Company Name:**  
 RICE Operating Company  
 Address: 122 W Taylor Street - Hobbs, New Mexico 88240  
 Phone#: (575) 393-9174  
 Fax#: (575) 397-1471

**Project Name:**  
 EME A-12 Leak

**Project Location:**  
 T20S-R36E-Sec12 A ~ Lea County - New Mexico

**Sampler Signature:** Rozanne Johnson (575)631-8310  
 rozanne@valmet.com

LAB #	FIELD CODE	(G)rab or (C)omp	MATRIX			PRESERVATIVE METHOD				SAMPLING		
			WATER	SOIL	AIR	SLUDGE	HCL (2.40ml VOA)	HNO <sub>3</sub>	NaHSO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	ICE (1-Liter HDPE)	DATE (2008)
1116242-1	Monitor Well #1	G	X			2				1	11-7	9:55
-2	Monitor Well #2	G	X			2				1	11-7	7:20
3	Monitor Well #3	G	X			2				1	11-7	8:10

**Relinquished by:** Rozanne Johnson Date: 6-10-08 12:20  
 Received by: [Signature] Date: 11-10-08 12:20

**Relinquished by:** [Signature] Date: [ ] Time: [ ]  
 Received by: (Laboratory Staff) Date: [ ] Time: [ ]

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

**Sample Condition:**  
 Ccol: Yes  No   
 Inact: Yes  No

**CHECKED BY:** [Signature] (Initials)

**REMARKS:**

Phone Results: Yes No  
 Fax Results: Yes No  
 Additional Fax Number: \_\_\_\_\_

**Email Results to:**  
 hccorder@niceswd.com  
 iweinheimer@niceswd.com  
 rozanne@valmet.com