

1R - 427-162

REPORTS

DATE:

6-21-13

Rice Environmental Consulting & Safety

P.O. Box 2948 Hobbs, NM 88241

Phone 575.393.2967

CERTIFIED MAIL

RETURN RECEIPT NO. 7011 2000 0002 0285 5117.

June 21st, 2013

Mr. Edward Hansen

New Mexico Energy, Minerals, & Natural Resources

Oil Conservation Division, Environmental Bureau

1220 S. St. Francis Drive

Santa Fe, New Mexico 87505

RECEIVED

JUN 26 2013

Oil Conservation Division

1220 S. St. Francis Drive

Santa Fe, NM 87505

RE: Update Report

Rice Operating Company – EME SWD System

EME Jct. G-18 (1R427-162): UL/G sec. 18 T19S R37E

Mr. Hansen:

RICE Operating Company (ROC) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site in the EME Salt Water Disposal (SWD) system. ROC is the service provider (agent) for the EME SWD System and has no ownership of any portion of the pipeline, well, or facility. The system is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Background and Previous Work

The site is located approximately 3 miles northwest of Monument, New Mexico at UL/G sec. 18 T19S R37E as shown on the Site Location Map (Figure 1). Monitor well sampling at the site indicates that groundwater is located at approximately 54 ft bgs.

In 2004, ROC initiated work on the former EME G-18 junction box. The site was delineated using a backhoe to collect soil samples at regular intervals. The excavation reached dimensions of 20 ft x 18 ft x 12 ft (bgs). Composite samples were sent to a commercial laboratory for chloride and TPH analyses, resulting in elevated concentration of chlorides in the bottom composite, elevated concentrations of TPH and BTEX. A 1-ft thick clay layer was installed from 6-5 ft bgs, to inhibit further chloride migration and a compaction test was performed on April 16th, 2004. The site was backfilled, the area was contoured to the surrounding landscape and an identification plate was placed on the surface of the site to mark its location for future environmental considerations. A new junction box was not required at the site.

Between June 2nd, 2004 and December 6th, 2010, five soil bores and three monitor wells were drilled at and surrounding the former junction box. An ICP Report and CAP was then submitted to the NMOCD, which detailed the findings of the soil borings. The report requested a 6-month source removal and test pumping program and that MW-1 be

plugged and replaced with a 4 inch well. In addition, a 44 ft x 49 ft, 20-mil liner would be installed at 4-5 ft bgs. NMOCD approved the plan on July 18th, 2011.

Soil Remedy

Beginning on November 23rd, 2011, the site was excavated to 44 ft x 49 ft x 5 ft deep. The excavation was padded with six inches of the imported sand and then the liner was properly seated into the excavation at approximately 4.5 ft bgs. The liner was padded on top with six inches of imported sand and then backfilled and contoured to the surrounding location. The 20-mil reinforced liner will inhibit the further migration of chlorides through the vadose zone into groundwater. The site was seeded with a blend of native vegetation and a silt net fence was placed around the area to maintain seed integrity. On October 15th, 2012, ROC submitted a Soil Closure Request to NMOCD that detailed these activities and asked for 'Soil Closure' or similar closure status. NMOCD approved the soil closure on the same day.

Groundwater Remedy

On October 26th, 2011, MW-1 was plugged and abandoned with a 1-3% bentonite/concrete slurry and capped with three feet of concrete. MW-1 was then replaced with a 4 inch well (MW-1R) which was installed 9 ft southeast of the former MW-1. Initial sampling of MW-1R resulted in chloride concentrations below WQCC standards.

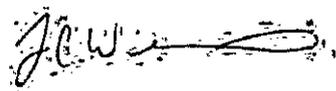
Update Report

On April 17th, 2012, ROC submitted the Vadose Zone Remediation and Termination Request to NMOCD. ROC had completed the vadose zone remediation approved by NMOCD in the CAP and plugged and replaced MW-1 with MW-1R. A 6-month source removal and test pumping program from MW-1R that was described in the Corrective Action Plan was deemed no longer necessary because two quarters of monitor well sampling data showed chlorides below WQCC standards. Therefore, ROC requested 'remediation termination' status of regulatory file. On June 5th, 2012, NMOCD responded with a request for two more quarters of monitor well sampling data from MW-1R prior to terminating the remediation plan.

The two additional sampling events of MW-1R occurred on November 1st, 2012 resulting in a chloride value of 570 mg/kg and on February 8th, 2013 also resulting in a chloride value of 570 mg/kg (Figure 2, Appendix A). Given that these two sampling events show chlorides outside WQCC standards, RECS recommends that ROC continue with a 6-month source removal and test pumping program from MW-1R that was described in the CAP. Removed groundwater will be used in pipeline maintenance operations. Once the test pumping program is completed, ROC will assess the program to determine the best option for site groundwater remediation.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-9174 or me if you have any questions or wish to discuss the site.

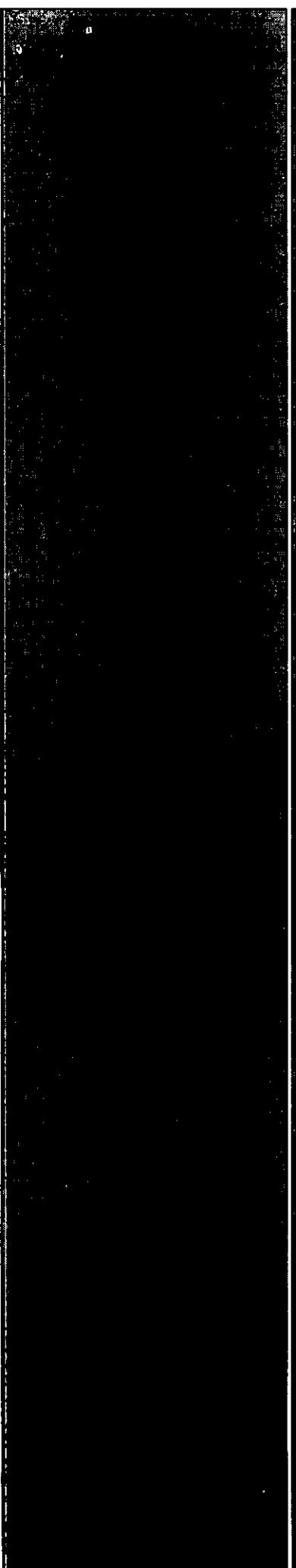
Sincerely,

A handwritten signature in black ink, appearing to read 'L. Weinheimer', with a long, sweeping horizontal flourish extending to the right.

Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

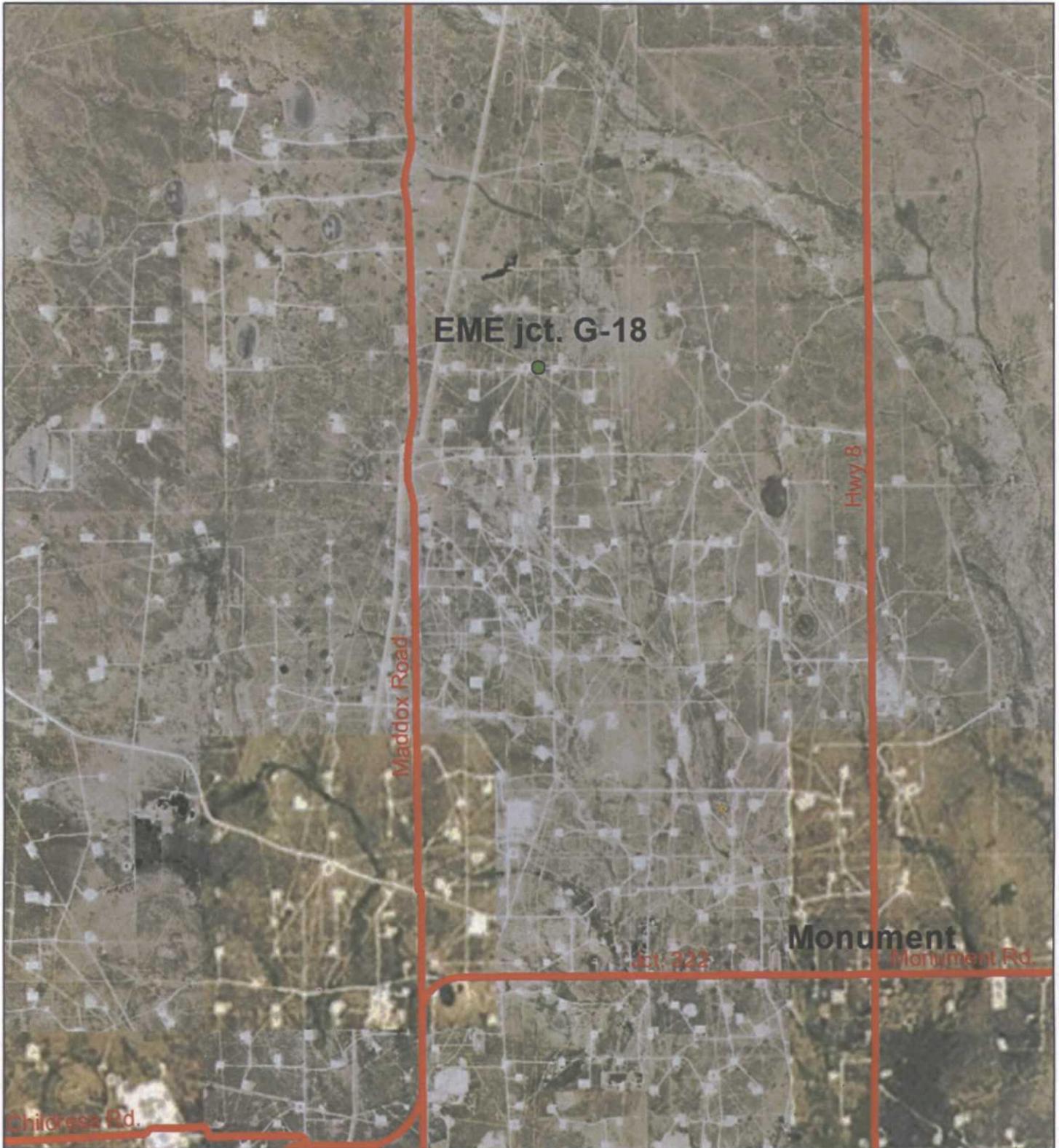
- Figure 1 – Site Location Map
- Figure 2 – MW Sampling Map
- Appendix A – MW Sampling Labs



Figures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

Site Location

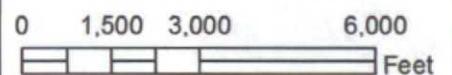


EME jct. G-18

Legals: UL/G sec. 18
T19S R37E

Case #: 1R427-162

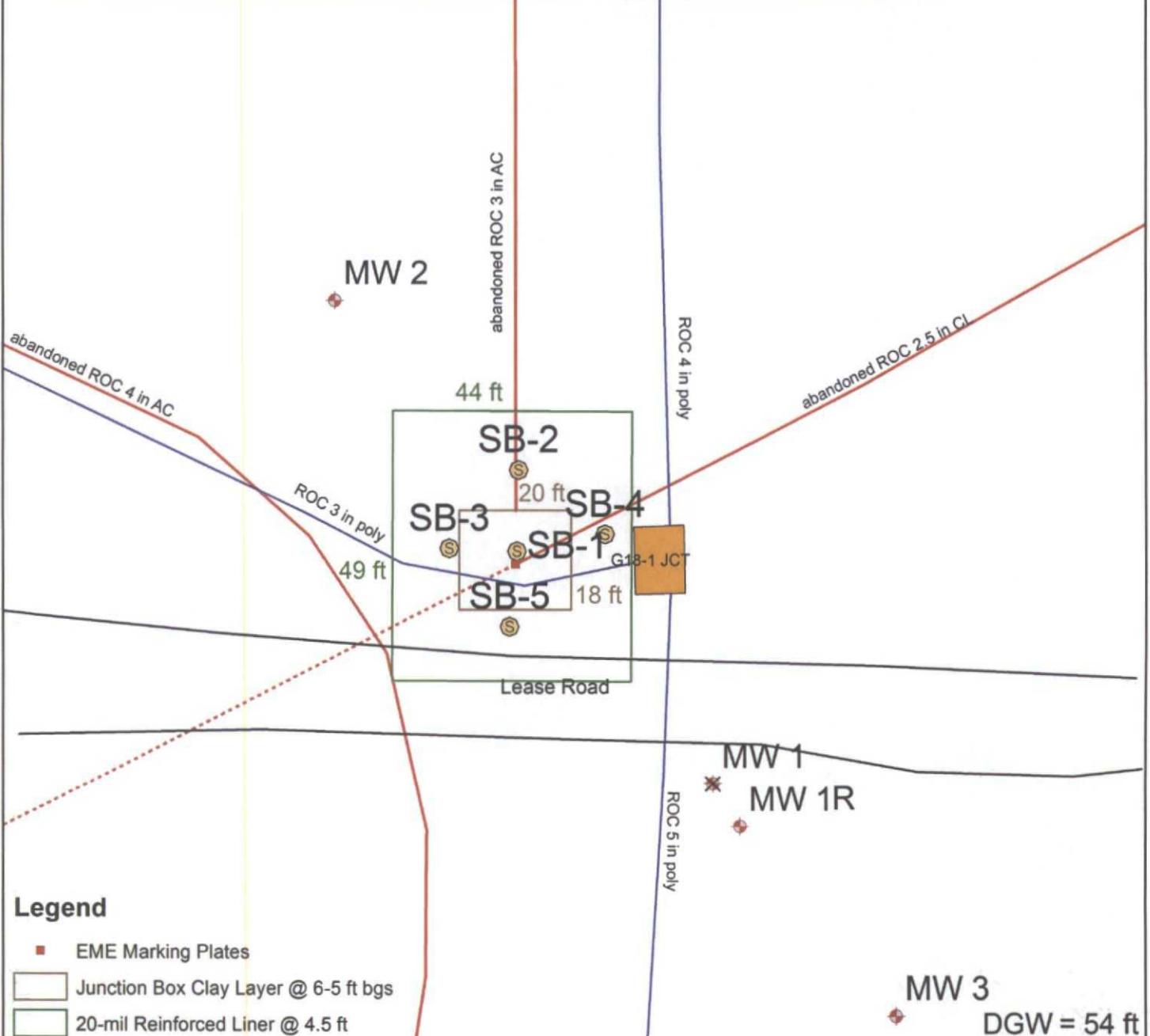
Figure 1



Drawing date: 7-6-11
Drafted by: L. Weinheimer

MW-1R Sampling Data

MW	Depth to Water	Total Depth	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
1R	54.4	100.15	11/14/2011	200	768	<0.001	<0.001	<0.001	<0.003	98.2
1R	54.64	100.15	2/14/2012	192	713	<0.001	<0.001	<0.001	<0.003	78.1
1R	54.83	100.15	5/23/2012	360	1060	<0.001	<0.001	<0.001	<0.003	99.4
1R	54.92	100.15	7/13/2012	308	1060	<0.001	<0.001	<0.001	<0.003	117
1R	55.17	100.15	11/1/2012	570	1750	<0.001	<0.001	<0.001	<0.003	209
1R	55.28	100.15	2/8/2013	570	1660	<0.001	<0.001	<0.001	<0.003	243



Legend

- ◆ EME Marking Plates
- Junction Box Clay Layer @ 6-5 ft bgs
- 20-mil Reinforced Liner @ 4.5 ft

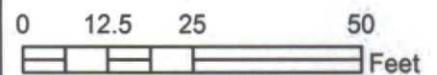


EME jct. G-18

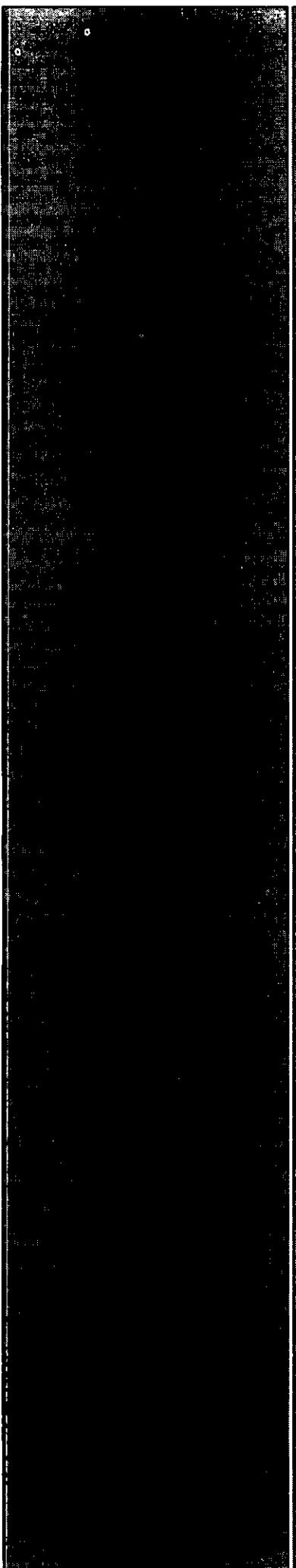
Legals: UL/G sec. 18
T19S R37E

Case #: 1R427-162

Figure 2



Drawing date: 3/13/13
Drafted by: L. Weinheimer



Appendix A

MW Sampling Labs

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

November 09, 2012

Hack Conder
Rice Operating Company
112 W. Taylor
Hobbs, NM 88240

RE: EME JUNCTION G-18

Enclosed are the results of analyses for samples received by the laboratory on 11/06/12 13:51.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

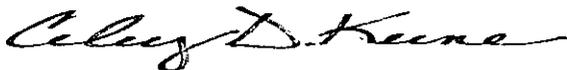
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene
Lab Director/Quality Manager

Analytical Results For:

 Rice Operating Company
 Hack Conder
 112 W. Taylor
 Hobbs NM, 88240
 Fax To: (575) 397-1471

 Received: 11/06/2012
 Reported: 11/09/2012
 Project Name: EME JUNCTION G-18
 Project Number: NONE GIVEN
 Project Location: T19S-R37E-SEC18 G - LEA CTY., NM

 Sampling Date: 11/01/2012
 Sampling Type: Water
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: MONITOR WELL #1R (H202703-01)

BTEX 8021B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	11/07/2012	ND	0.049	99.0	0.0500	4.63		
Toluene*	<0.001	0.001	11/07/2012	ND	0.054	108	0.0500	4.93		
Ethylbenzene*	<0.001	0.001	11/07/2012	ND	0.053	106	0.0500	4.63		
Total Xylenes*	<0.003	0.003	11/07/2012	ND	0.161	107	0.150	4.65		
Total BTEX	<0.006	0.006	11/07/2012	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 119 % 89.5-126

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	570	4.00	11/08/2012	ND	104	104	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	209	10.0	11/08/2012	ND	16.5	82.6	20.0	27.9		

TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1750	5.00	11/07/2012	ND	834	101	824	0.214		

Cardinal Laboratories

*=Accredited Analyte

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 the 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.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Rice Operating Company
 Hack Conder
 112 W. Taylor
 Hobbs, NM, 88240
 Fax To: (575) 397-1471

 Received: 11/06/2012
 Reported: 11/09/2012
 Project Name: EME JUNCTION G-18
 Project Number: NONE GIVEN
 Project Location: T19S-R37E-SEC18 G - LEA CTY., NM

 Sampling Date: 11/01/2012
 Sampling Type: Water
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: MONITOR WELL #2 (H202703-02)

BTEX 8021B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	11/07/2012	ND	0.049	99.0	0.0500	4.63		
Toluene*	<0.001	0.001	11/07/2012	ND	0.054	108	0.0500	4.93		
Ethylbenzene*	<0.001	0.001	11/07/2012	ND	0.053	106	0.0500	4.63		
Total Xylenes*	<0.003	0.003	11/07/2012	ND	0.161	107	0.150	4.65		
Total BTEX	<0.006	0.006	11/07/2012	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 119% 89.5-126

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	72.0	4.00	11/08/2012	ND	100	100	100	3.92		

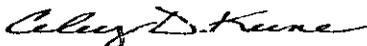
Sulfate 375.4		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	198	10.0	11/08/2012	ND	16.5	82.6	20.0	27.9		

TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	867	5.00	11/07/2012	ND	834	101	824	0.214		

Cardinal Laboratories

* = Accredited Analyte

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 the 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.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Rice Operating Company
 Hack Conder
 112 W. Taylor
 Hobbs NM, 88240
 Fax To: (575) 397-1471

Received:	11/06/2012	Sampling Date:	11/01/2012
Reported:	11/09/2012	Sampling Type:	Water
Project Name:	EME JUNCTION G-18	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T19S-R37E-SEC18 G - LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H202703-03)

BTEX 8021B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	11/07/2012	ND	0.049	99.0	0.0500	4.63		
Toluene*	<0.001	0.001	11/07/2012	ND	0.054	108	0.0500	4.93		
Ethylbenzene*	<0.001	0.001	11/07/2012	ND	0.053	106	0.0500	4.63		
Total Xylenes*	<0.003	0.003	11/07/2012	ND	0.161	107	0.150	4.65		
Total BTEX	<0.006	0.006	11/07/2012	ND						

Surrogate: 4-Bromofluorobenzene (PID) 119 % 89.5-126

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	76.0	4.00	11/08/2012	ND	100	100	100	3.92		

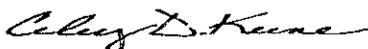
Sulfate 375.4		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	88.3	10.0	11/08/2012	ND	16.5	82.6	20.0	27.9		

TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	783	5.00	11/07/2012	ND	834	101	824	0.214		

Cardinal Laboratories

*=Accredited Analyte

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 the 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.



Celey D. Keene, Lab Director/Quality Manager

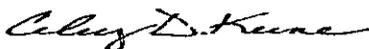
Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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 the 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.



Celey D. Keene, Lab Director/Quality Manager

February 18, 2013

Hack Conder
Rice Operating Company
112 W. Taylor
Hobbs, NM 88240

RE: EME JUNCTION G-18

Enclosed are the results of analyses for samples received by the laboratory on 02/12/13 12:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene
Lab Director/Quality Manager

Analytical Results For:

 Rice Operating Company
 Hack Conder
 112 W. Taylor
 Hobbs NM, 88240
 Fax To: (575) 397-1471

Received:	02/12/2013	Sampling Date:	02/08/2013
Reported:	02/18/2013	Sampling Type:	Water
Project Name:	EME JUNCTION G-18	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	T19S-R37E-SEC18 G - LEA CTY., NM		

Sample ID: MONITOR WELL #1R (H300391-01)

BTEX 8021B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	02/13/2013	ND	0.048	96.4	0.0500	3.00		
Toluene*	<0.001	0.001	02/13/2013	ND	0.049	98.2	0.0500	2.17		
Ethylbenzene*	<0.001	0.001	02/13/2013	ND	0.048	96.7	0.0500	1.89		
Total Xylenes*	<0.003	0.003	02/13/2013	ND	0.148	98.5	0.150	1.74		
Total BTEX	<0.006	0.006	02/13/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 110 % 89.5-126

Chloride, SM4500Cl-B		mg/L		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	570	4.00	02/14/2013	ND	432	108	400	0.00		

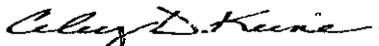
Sulfate 375.4		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	243	50.0	02/15/2013	ND	21.3	106	20.0	1.21		

TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1660	5.00	02/12/2013	ND	236	98.3	240	14.7		

Cardinal Laboratories

* = Accredited Analyte

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 the 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.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Rice Operating Company
 Hack Conder
 112 W. Taylor
 Hobbs NM, 88240
 Fax To: (575) 397-1471

Received:	02/12/2013	Sampling Date:	02/08/2013
Reported:	02/18/2013	Sampling Type:	Water
Project Name:	EME JUNCTION G-18	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	T19S-R37E-SEC18 G - LEA CTY., NM		

Sample ID: MONITOR WELL #2 (H300391-02)

BTEX 8021B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	02/13/2013	ND	0.048	96.4	0.0500	3.00		
Toluene*	<0.001	0.001	02/13/2013	ND	0.049	98.2	0.0500	2.17		
Ethylbenzene*	<0.001	0.001	02/13/2013	ND	0.048	96.7	0.0500	1.89		
Total Xylenes*	<0.003	0.003	02/13/2013	ND	0.148	98.5	0.150	1.74		
Total BTEX	<0.006	0.006	02/13/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 108 % 89.5-126

Chloride, SM4500Cl-B		mg/L		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	28.0	4.00	02/14/2013	ND	432	108	400	0.00		

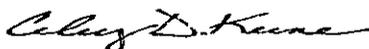
Sulfate 375.4		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	177	50.0	02/15/2013	ND	21.3	106	20.0	1.21		

TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	748	5.00	02/12/2013	ND	236	98.3	240	14.7		

Cardinal Laboratories

*=Accredited Analyte

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 the 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.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Rice Operating Company
 Hack Conder
 112 W. Taylor
 Hobbs NM, 88240
 Fax To: (575) 397-1471

 Received: 02/12/2013
 Reported: 02/18/2013
 Project Name: EME JUNCTION G-18
 Project Number: NONE GIVEN
 Project Location: T19S-R37E-SEC18 G - LEA CTY., NM

 Sampling Date: 02/08/2013
 Sampling Type: Water
 Sampling Condition: Cool & Intact
 Sample Received By: Amanda Ponce

Sample ID: MONITOR WELL #3 (H300391-03)

BTEX 8021B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	02/13/2013	ND	0.048	96.4	0.0500	3.00		
Toluene*	<0.001	0.001	02/13/2013	ND	0.049	98.2	0.0500	2.17		
Ethylbenzene*	<0.001	0.001	02/13/2013	ND	0.048	96.7	0.0500	1.89		
Total Xylenes**	<0.003	0.003	02/13/2013	ND	0.148	98.5	0.150	1.74		
Total BTEX	<0.006	0.006	02/13/2013	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 89.5-126

Chloride, SM4500Cl-B		mg/L		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	80.0	4.00	02/14/2013	ND	432	108	400	0.00		

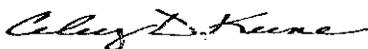
Sulfate 375.4		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	84.0	25.0	02/15/2013	ND	21.3	106	20.0	1.21		

TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	734	5.00	02/12/2013	ND	236	98.3	240	14.7		

Cardinal Laboratories

* = Accredited Analyte

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 the 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.



Celey D. Keene, Lab Director/Quality Manager

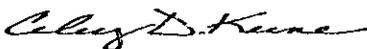
Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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 the 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.



Celey D. Keene, Lab Director/Quality Manager

