

1R - 427-351

REPORTS

DATE:

7-12-12

Rice Environmental Consulting & Safety

P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

RECEIVED OGD

CERTIFIED MAIL
RETURN RECEIPT NO. 7007 2560 0000 4569 8180

2012 JUL 17 P 12:45

July 12th, 2012

Mr. Edward Hansen

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

**RE: CAP Report and Termination Request
Rice Operating Company – EME SWD System
EME H-7 EOL (1R427-351): UL/H sec. 7 T20S R37E
(formerly EME I-7 EOL)**

Mr. Hansen:

RICE Operating Company (ROC) has retained Rice Environmental Consulting and Safety (RECS) to address environmental concerns at the above-referenced site in the EME Salt Water Disposal (SWD) system. The site was previously referred to as the EME I-7 EOL. However, GIS mapping shows the site to be located within unit letter H rather than unit letter I (Figure 1). To reflect the geographical location of the site, the name has been changed to the EME H-7 EOL. All correspondence reference EME H-7 EOL.

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 2.5 miles southwest of Monument, New Mexico at UL/H sec. 7 T20S R37E as shown on the Site Map (Figure 1). Monitor well sampling at the site indicates that groundwater is located at 29 ft bgs.

In 2010, ROC initiated work on the former EME H-7 EOL junction box. The site was delineated using a backhoe to form a 30 ft x 30 ft x 12 ft deep excavation and soil samples were screened at regular intervals for both hydrocarbons and chlorides. From the excavation, the four-wall composite, the bottom composite and the backfill were taken to a commercial laboratory for analysis. Laboratory tests of the four-wall composite showed a chloride reading of 384 mg/kg and gasoline range organics (GRO) and diesel range organics (DRO) readings of non-detect. The bottom composite showed a chloride laboratory reading of 624 mg/kg and GRO and DRO readings of non-detect.

The excavated soil was blended on site. Laboratory analysis of the blended backfill showed a chloride reading of 352 mg/kg and GRO and DRO readings of non-detect. At 12-11 ft below ground surface (bgs), a 1 foot thick clay layer was installed to inhibit downward migration of chlorides in the soil. A clay compaction test was performed on March 25th, 2010. The remaining excavation was backfilled with the blended backfill to ground surface. The area was contoured to the surrounding landscape and seeded.

To further investigate the site, a soil bore was advanced 10 ft south of the former junction box (source) on June 10th, 2010 to 24 ft bgs with samples collected every three feet. The samples were field tested for both chlorides and hydrocarbons. The 21 ft and 24 ft samples were taken to a commercial laboratory to be analyzed, resulting in chloride concentrations of 912 mg/kg in the 21 ft sample and 1,120 mg/kg in the 24 ft sample. Both samples showed GRO and DRO readings of non-detect. The bore was plugged in entirety with bentonite.

NMOCD was notified of potential groundwater impact on October 5th, 2010 and a junction box disclosure report was submitted to NMOCD with all the 2010 junction box closures and disclosures.

As part of the Investigation and Characterization Plan approved by NMOCD on July 21st, 2011, seven soil bores (SB-2 through SB-8) were advanced at the site to a depth of 24 ft. The soil bores were sampled every three feet and the samples were field tested for chlorides and screened in the field with a photo-ionization detector (PID) for hydrocarbons. Representative samples from each bore were taken to a commercial laboratory for analysis of chlorides and hydrocarbons. Chloride readings ranged from a high of 1,060 mg/kg at 21 ft bgs in SB-8 to a low of 128 mg/kg at 24 ft bgs in SB-5. GRO readings at all depths in all bores were non-detect. DRO readings were also non-detect in all samples, except for at 24 ft bgs in SB-8 where the DRO reading was 11.9 mg/kg.

On August 30th, 2011, two monitor wells (MW-1 and MW-2) were installed at the site. MW-1, the near-source well, is located approximately 43 ft south-southeast from the former junction box site and MW-2, the up gradient well, is located approximately 101 ft northwest of the former junction box site. Soil samples were collected every three feet from each well as they were being advanced and field tested for chlorides and screened in the field with a PID for hydrocarbons. Representative soil samples from each well were taken to a commercial laboratory for analysis of chlorides and hydrocarbons. Laboratory chloride readings in MW-1 decreased from 736 mg/kg at 18 ft bgs to 576 mg/kg at 24 ft bgs. GRO and DRO readings were non-detect for both samples in MW-1. Chloride and TPH readings from MW-2 are representative of background concentrations in the area. Laboratory analysis resulted in a chloride concentration of 528 mg/kg at 12 ft and 128 mg/kg at 24 ft bgs. GRO and DRO readings were non-detect in the 12 ft sample. For the 24 ft sample, the GRO reading was non-detect and the DRO reading had a concentration of 16.5 mg/kg.

On September 15th, 2011, an ICP Report was submitted to NMOCD which was approved on October 20th, 2011. In the ICP Report, RECS proposed that ROC would sample and analyze the two monitor wells installed at the site per NMOCD requirements. Once groundwater samples were obtained and groundwater quality fully delineated, ROC would submit a Corrective Action Plan (CAP) which would include a vadose zone remedy and groundwater remedy, if warranted.

To fully delineate the vadose zone, SB-9 through SB-11 were advanced at the site on November 8th, 2011. The soil bores were sampled every three feet as they were advanced and were field tested for chlorides and hydrocarbons. Representative samples from each bore were taken to a commercial laboratory for confirmation of field numbers. In SB-9, the chloride value at 18 ft bgs was 800 mg/kg which decreased to 768 mg/kg at 24 ft bgs. In SB-10, the chloride value at 21 ft bgs was 688 mg/kg which decreased to 416 mg/kg at 24 ft bgs. In SB-11, the chloride value at 18 ft bgs was 848 mg/kg and the chloride value at 24 ft bgs was 1,140 mg/kg. The GRO and DRO values were non-detect in all three bores at all depths.

ROC submitted a Report of Further Investigation and Corrective Action Plan (CAP) on April 17th, 2012, which was approved by NMOCD of May 2nd, 2012. As part of the report, RECS recommended that ROC excavate the site to dimensions of 39 ft x 81 ft and properly seat a 20-mil reinforced poly liner at approximately 4-5 ft bgs. The liner would cover the existing clay layer installed at 12 ft bgs measuring 30 ft x 30 ft. The soils placed above the liner would have a laboratory chloride reading no greater than 500 mg/kg and a field PID reading below 100 ppm. Excavated soil would be evaluated for use as backfill and any soils requiring disposal will be properly disposed of at a NMOCD approved facility. Upon completion of backfilling, the site would be seeded with a native vegetative mix and soil amendments would be added as needed. Vegetation above the liner would also provide a natural infiltration barrier for the site since plants capture water through their roots thereby reducing the volume of water moving through the vadose zone to groundwater.

To address the chlorides contributed to groundwater from the site, ROC proposed to remove chloride impacted groundwater from the existing EME A-20 recovery system. Removed water would be used for pipeline and well maintenance. The estimate conservatively reflected the net impact to groundwater at the site resulting from the former junction box site. It did not take into account other sources or regional groundwater conditions that may exist up gradient of the site. The total chloride mass in the groundwater was determined to be 179 kg and it was estimated that the EME A-20 recovery system would require approximately 23 days to extract 331 barrels of groundwater equating to the 179 kg.

CAP Activities

Vadose Zone Remediation

On May 11th, 2012, RECS personnel were on site to begin the excavation for liner installation. The site was excavated to 39 ft x 81 ft x 5 ft deep (Figure 2). 60 yards of the

excavated soil was taken to a NMOCD approved facility for disposal. The remainder of the excavated soil was blended on site to use as backfill material. An 8 point composite sample of the blended soil was field tested for hydrocarbons and returned a result of 0.1 ppm. The sample was then taken to a commercial laboratory for analysis of chlorides which returned a result of 144 mg/kg. A 20-mil reinforced poly liner was properly seated into the excavation and the site was backfilled to the surrounding location. Padding of the liner was not necessary given the sandy conditions of the location. Silt net fencing was placed around the site to maintain seed integrity and the site was seeded with a blend of native vegetation. Documentation of these activities can be found in Appendix A.

Groundwater Remedy

Groundwater recovery began at the EME A-20 on April 16th, 2012 and was completed on May 9th, 2012. During the recovery process, a total of 819 barrels of groundwater was extracted from the aquifer. Given that RW-1 at EME A-20 had a chloride concentration of 3,550 mg/L (Appendix B), the 819 barrels equates to 462 kg of chloride extracted from the aquifer.

ROC has completed the corrective actions as approved by NMOCD in the CAP by installing and properly seating a 20-mil reinforced poly liner measuring 39 ft x 81 ft at 5 ft deep over the existing clay layer measuring 30 ft x 30 ft at 12 ft deep and by removing the necessary 179 kg of chlorides the site contributed to groundwater. Therefore, ROC requests 'remediation termination' status of the regulatory file.

Upon NMOCD's approval of this report, MW-1 will be plugged and abandoned with a 1-3 % bentonite/concrete slurry with a three foot concrete cap. The up-gradient well, MW-2, will remain open and will be used to monitor groundwater impact in the area.

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.

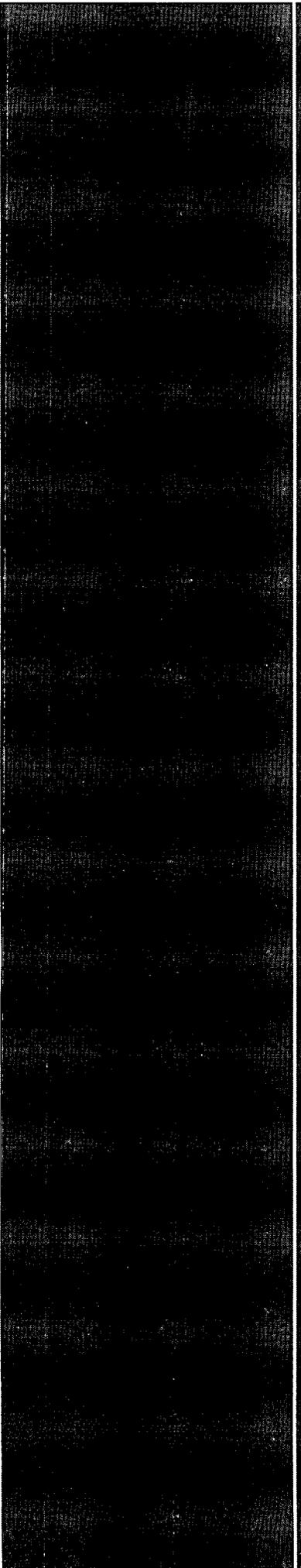
Sincerely,



Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

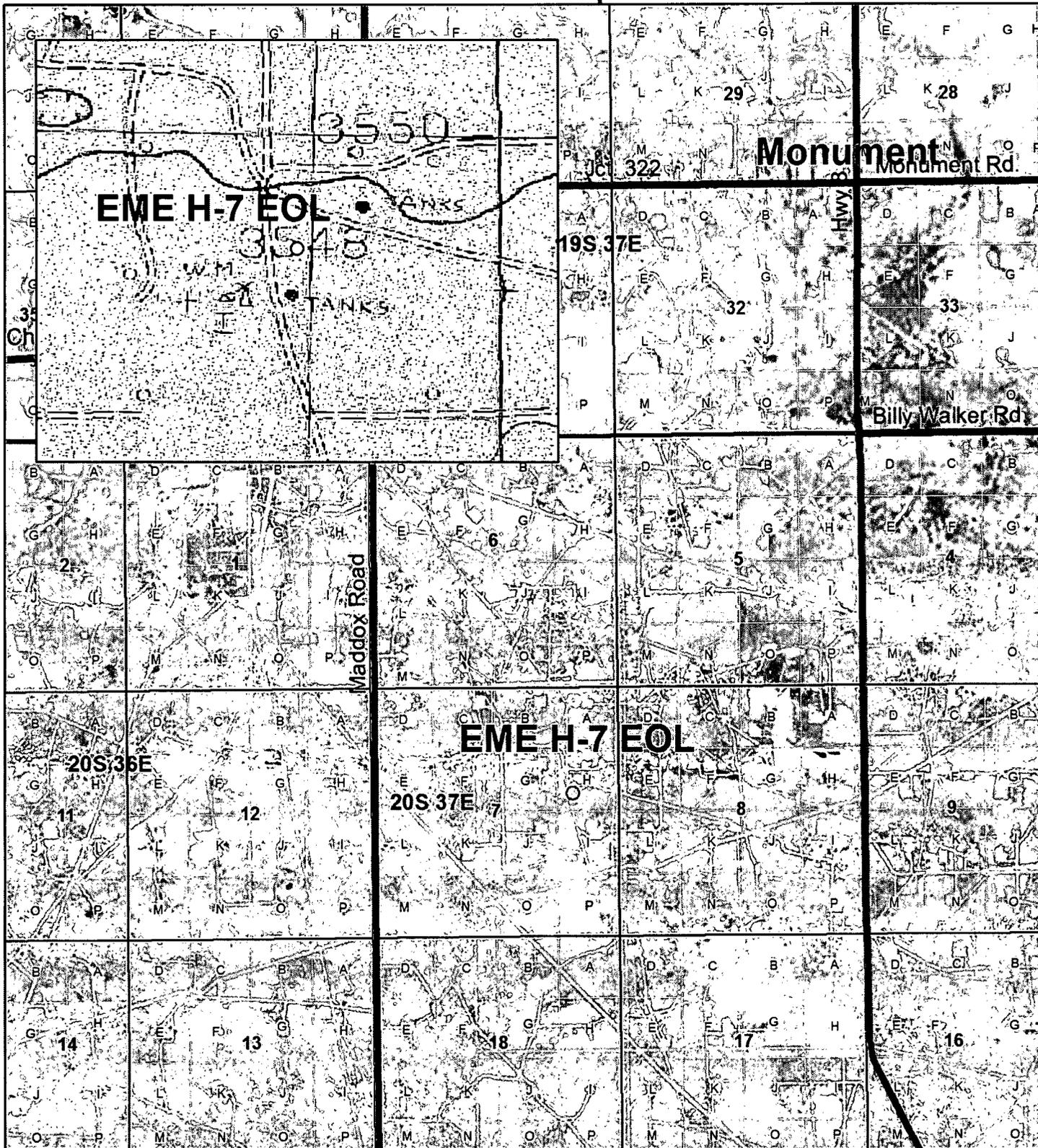
- Figure 1 – Site Map
- Figure 2 – NMOCD Approved Liner
- Appendix A – Liner Installation Documentation
- Appendix B – EME A-20 RW-1 Sampling Lab



Figures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Site Map

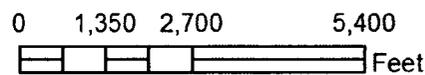


EME H-7 EOL

LEGALS: UL/H sec. 7
T20S R37E

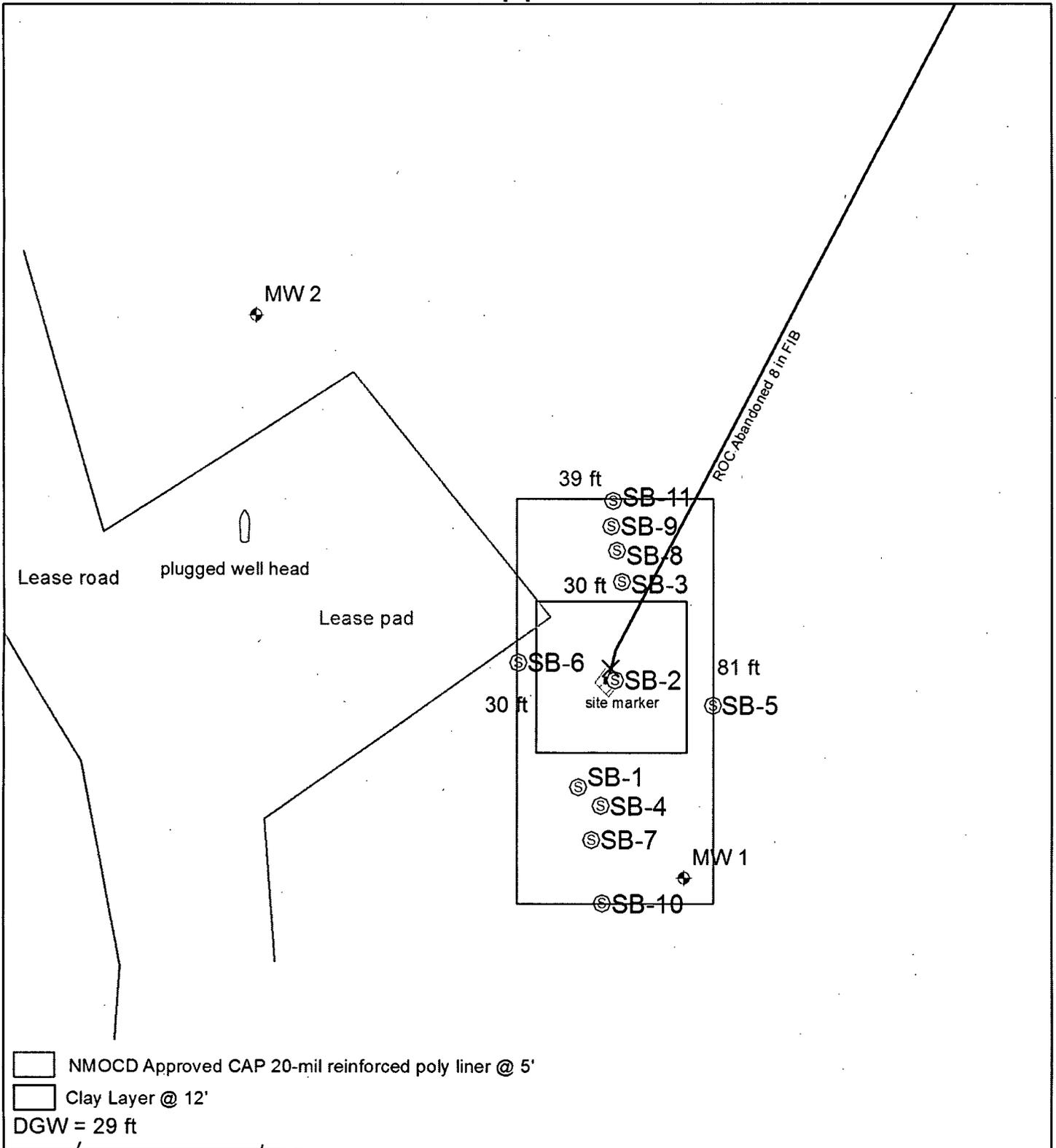
NMOCD Case #: 1R427-351

Figure 1



Drawing date: 5-23-11
Drafted by: L. Weinheimer

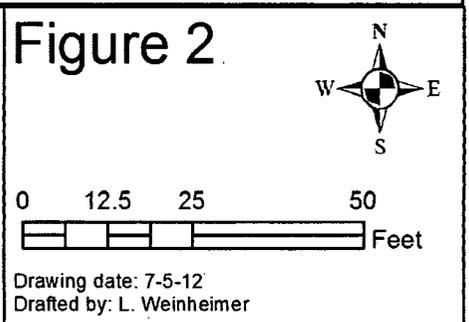
NMOCD Approved Liner

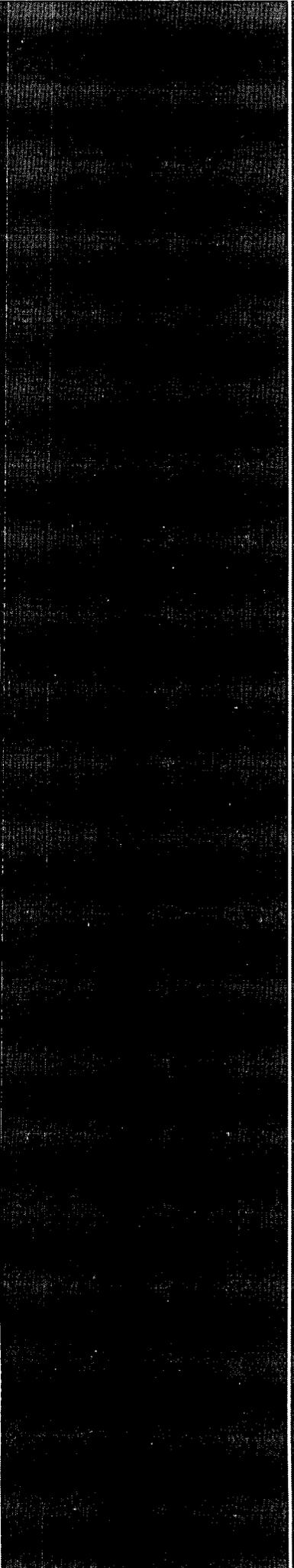


EME H-7 EOL

LEGALS: UL/H sec. 7
 T20S R37E

NMOCD Case #: 1R427-351





Appendix A

Liner Installation Documentation

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

May 16, 2012

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME H-7 EOL

Enclosed are the results of analyses for samples received by the laboratory on 05/16/12 8:05.

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.

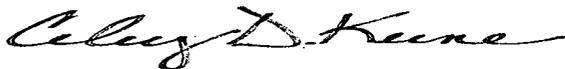
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

| | |
|------------------|------------------------------|
| 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
 KATIE JONES
 112 W. Taylor
 Hobbs NM, 88240
 Fax To: (575) 397-1471

| | | | |
|-------------------|-------------------------------|---------------------|----------------|
| Received: | 05/16/2012 | Sampling Date: | 05/15/2012 |
| Reported: | 05/16/2012 | Sampling Type: | Soil |
| Project Name: | EME H-7 EOL | Sampling Condition: | ** (See Notes) |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | T20S-R37E-SEC7 H-LEA CTY., NM | | |

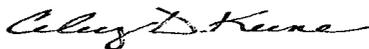
Sample ID: BLENDED BACKFILL (H201089-01)

| Chloride, SM4500Cl-B | mg/kg | Analyzed By: HM | | | | | | | | |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 144 | 16.0 | 05/16/2012 | ND | 400 | 100 | 400 | 0.00 | | |

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

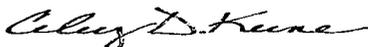
Notes and Definitions

- 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



CARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

| | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|--|------------------|--|---|--|------------------------------|--|--|--|----------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Company Name: RICE Operating | | | | BILL TO | | | | ANALYSIS REQUEST | | | | | | | | | | | | | | | |
| Project Manager: Katie Jones | | | | P.O. #: | | | | Chlorides TPH 8015 M BTEX Texas TPH Complete Cations/Anions TDS | | | | | | | | | | | | | | | |
| Address: 112 W. Taylor | | | | Company: | | | | | | | | | | | | | | | | | | | |
| City: Hobbs State: NM Zip: 88240 | | | | Attn: | | | | | | | | | | | | | | | | | | | |
| Phone #: Fax #: | | | | Address: | | | | | | | | | | | | | | | | | | | |
| Project #: Project Owner: | | | | City: | | | | | | | | | | | | | | | | | | | |
| Project Name: <u>EME H-7 EOL</u> | | | | State: Zip: | | | | | | | | | | | | | | | | | | | |
| Project Location: | | | | Phone #: | | | | | | | | | | | | | | | | | | | |
| Sampler Name: | | | | Fax #: | | | | | | | | | | | | | | | | | | | |
| FOR LAB USE ONLY | | | | | | | | | | | | | | | | | | | | | | | |
| Lab I.D. | | Sample I.D. | | (GRAB OR (C)OMP. # CONTAINERS | | MATRIX | | PRESERV | | SAMPLING | | | | | | | | | | | | | |
| | | | | GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: | | ACID/BASE: ICE / COOL OTHER: | | DATE TIME | | | | | | | | | | | | | | | |
| H201089 | | Blended Backfill | | C1 | | | | S/15/12 4:05pm | | | | | | | | | | | | | | | |

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 analysis. 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.

| | | | | | | | |
|--|--|---------------|--|---|--|---|--|
| Relinquished By: | | Date: 5/16/17 | | Received By: | | Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #: | |
| | | Time: 7:30 | | | | Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Fax #: | |
| Relinquished By: | | Date: 5/16/17 | | Received By: | | REMARKS: | |
| | | Time: 8:05 | | | | email results Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com; kjones@riceswd.com; Lpena@riceswd.com | |
| Delivered By: (Circle One) Sampler - UPS - Bus - Other: | | | | Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No | | CHECKED BY: (Initials) | |

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

#26



PO Box 5630
 Hobbs, NM 88241
 Phone: (575) 393-4411
 Fax: (575) 393-0293

REVEGETATION FORM

1. General Information

| | | | | | | |
|-------------------------|---------|---------------------|-------------|--|---------------|---------------|
| Site name | | EME H-7 EOL | | | | |
| U/L | Section | Township | Range | County | Latitude | Longitude |
| H | 7 | 20S | 37E | Lea | 32°35'18.847" | 103°17'6.658" |
| Contact Name: | | Bruce Baker | | | | |
| Email: | | bbaker@rice-ecs.com | | | | |
| Site size: | | 445 | square feet | Map detail of site attached <input type="checkbox"/> | | |
| Additional information: | | | | | | |

2. Soils

**Do not rip caliche subsoils; caliche rocks brought to the surface by ripping shall be removed.*

| | | | | |
|--|---|-----------------------------------|---|-------------------------------------|
| Salvaged from site <input checked="" type="checkbox"/> | Bioremediated <input type="checkbox"/> | Imported <input type="checkbox"/> | Blended <input checked="" type="checkbox"/> | Depth (in): |
| Texture: Sandy | Describe soil & subsoil: Sandy surface, sand/caliche subsurface | | | |
| Soil-prep methods: Rip <input type="checkbox"/> | Depth(in): | Disc <input type="checkbox"/> | Depth(in): | Rollerpack <input type="checkbox"/> |
| Date completed: 5/17/2012 | | | | |

3. Bioremediation

| | | |
|-------------------------------------|------------------------------|--------------------------------|
| Fertilizer <input type="checkbox"/> | Hay <input type="checkbox"/> | Other <input type="checkbox"/> |
| Type: | Describe: | |
| Lbs/acre: | | |

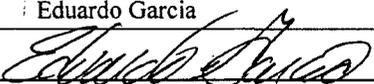
4. Seeding

**Attach seed bag tags to this form. Seed bag tags shall contain the site name and S-T-R.*

| | | | |
|--|---|---------------------------------------|------------------------|
| Custom seed mix <input checked="" type="checkbox"/> | Prescribed mix <input type="checkbox"/> | Seed mix name: 15 lbs. Lea County Mix | Seeding date: 6/8/2012 |
| Broadcast <input checked="" type="checkbox"/> | | | |
| Method: Mechanical seeder | | | |
| Soil conditions during seeding: Dry <input checked="" type="checkbox"/> Damp <input type="checkbox"/> Wet <input type="checkbox"/> | | | |
| Photos attached <input type="checkbox"/> | Observations: Seed was disked into the soil to a depth of approximately 2 inches. | | |
| Number of photos: | | | |

5. Certification

I hereby certify that the information in this form and attachments is true and complete to the best of my knowledge and belief.

| | | |
|--|---------------------------|----------------|
| Name: Eduardo Garcia | Title: Environmental Tech | Date: 6/8/2012 |
| Signature:  | | |

**EME H-7 EOL (1R427-351)
Unit H, Section 7, T-20-S, R-37-E**



Exporting soil, facing northwest 5/11/12



Excavating site, facing north 5/14/2012



Blending excavated soil, facing east 5/15/2012



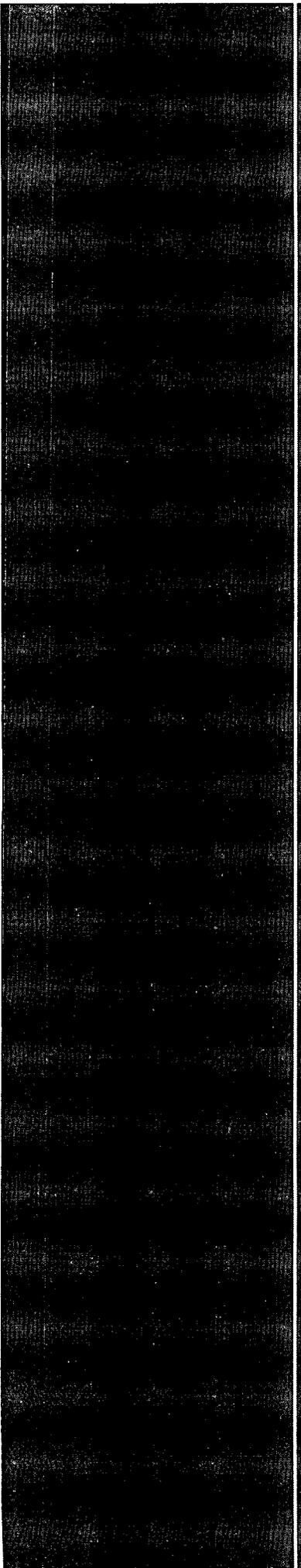
Backfilling above installed 39' x 81' 20-mil reinforced plastic liner, facing north 5/16/2012



Seeding and tilling site, facing south 6/8/2012



Site complete, facing southwest 6/8/2012



Appendix B

EME A-20 RW-1 Sampling Lab

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

April 17, 2012

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

RE: EME A-20

Enclosed are the results of analyses for samples received by the laboratory on 04/16/12 16:20.

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: 04/16/2012
 Reported: 04/17/2012
 Project Name: EME A-20
 Project Number: NONE GIVEN
 Project Location: EME A-20

 Sampling Date: 04/16/2012
 Sampling Type: Water
 Sampling Condition: ** (See Notes)
 Sample Received By: Jodi Henson

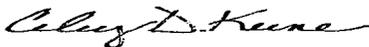
Sample ID: RW-1 (H200877-01)

| Chloride, SM4500Cl-B | mg/L | Analyzed By: HM | | | | | | | |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride* | 3550 | 4.00 | 04/17/2012 | ND | 100 | 100 | 100 | 0.00 | |

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.



Celest D. Keene, Lab Director/Quality Manager

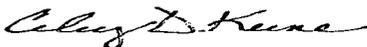
Notes and Definitions

- 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

