EME SWD #8

C-144s East & West **BGTs** Closure Reports

Hansen, Edward J., EMNRD

From: Hansen, Edward J., EMNRD

Sent: Wednesday, November 21, 2012 2:54 PM **To:** Hack Conder (hconder@riceswd.com)

Cc: Leking, Geoffrey R, EMNRD; Katie Jones <kjones@riceswd.com> (kjones@riceswd.com)

Subject: EME G-8 East BGT and EME G-8 West BGT closures

Attachments: EME G-8 West BGT C-144 clousure report.pdf; EME G-8 East BGT C-144 clousure

report.pdf

Dear Mr. Conder,

The New Mexico Oil Conservation Division (OCD) has received the confirmation samples results for both BGTs (East and West) at the above-referenced site, in accordance with 19.15.17.13.E(4) NMAC with a completed form C-141. The OCD has reviewed the results and has determined no further investigation is required. Please proceed with the closure plan of November 2, 2011, as soon as possible.

Once the closure activities are completed, you must submit (within 60 days) a closure report for each BGT (East and West) in accordance with 19.15.17.13.K. NMAC (please use the respective form C-144s attached – also, include the API # for the SWD well at the sites).

If you have any further questions regarding this matter, please contact me at 505-476-3489.

Edward J. Hansen Hydrologist Environmental Bureau

Hansen, Edward J., EMNRD

From:

Hansen, Edward J., EMNRD

Sent:

Thursday, October 25, 2012 3:42 PM

To:

Hack Conder (hconder@riceswd.com)

Cc:

Leking, Geoffrey R, EMNRD; Katie Jones <kjones@riceswd.com> (kjones@riceswd.com)

Subject:

EME G-8 East BGT and EME G-8 West BGT closures

Attachments:

EME G-8 East BGT C-144.pdf; EME G-8 West BGT C-144.pdf; C-14120110808.doc

Dear Mr. Conder,

Please find attached the form C-144s for the EME G-8 East and West BGTs.

Once the confirmation samples results have been obtain by you for both BGTs, please submit a copy of the results to OCD Santa Fe Office (c/o Edward J. Hansen) in accordance with 19.15.17.13.E(4) NMAC (i.e., with a completed form C-141 (also attached) – please note on the form C-141 that you are submitting analytical result for "BGT Closure" at the top of the form – also, it is <u>not</u> necessary to submit a copy of the form to the appropriate OCD District Office if submitted to OCD Santa Fe Office).

Then when the OCD has determined that additional delineation is not required, you must submit a closure report for each BGT in accordance with 19.15.17.13.K. NMAC (please use the respective form C-144s attached – also include API # for the SWD well at the sites). Be sure to include the proof of notice in accordance with 19.15.17.13.J(1) NMAC and written approval from the surface owner for an alternative to re-vegetation of the sites in accordance with 19.15.17.13.G(2) NMAC.

If you have any further questions regarding this matter, please contact me at 505-476-3489.

Edward J. Hansen Hydrologist Environmental Bureau

2013 JAN 10 P 1: 42

RICE Operating Company

112 West Taylor • Hobbs, New Mexico 88240 Phone: (575) 393-9174 • Fax: (575) 397-1471

CERTIFIED MAIL RETURN RECEIPT NO. 7007 2560 0000 4569 8739

January 4, 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

RE: Below Grade Tank (BGT) - Closure

EME G-8 East BGT (API 30-025-06017):

Unit G, Sec. 8, T20S, R37E

RICE Operating Company - Eunice Monument Eumont (EME) SWD System

Mr. Hansen:

Rice Operating Company (ROC) is the service provider (agent) for the EME Saltwater Disposal (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.

Based on the November 2nd, 2011, Finalization of Below Grade Tank Closure Plan, the east and west below grade tanks were removed from the site and were properly disposed of on September 27th, 2012. On October 25th, 2012, a composite sample was collected from the area beneath the former east tank. Laboratory analysis of the East 5 Pt. Comp resulted in a chloride concentration of 144 mg/kg, a GRO concentration of <10.0 mg/kg, a DRO concentration of 164 mg/kg, and BTEX concentrations below detectable limits. Based on the DRO concentration, the area located beneath the former below grade tank was scraped approximately 6 inches. The scraped soil was properly disposed of at the NMOCD approved facility Sundance (Permit # NM-01-0003). On November 13th, 2012, a second composite sample was collected from the east area, and laboratory analysis of that sample resulted in a chloride concentration of 96 mg/kg, a GRO concentration of <10.0 mg/kg, a DRO concentration of 21.2 mg/kg, and BTEX concentrations below detectable limits.

On October 25th, 2012, the landowner was notified of ROC's intent to conduct on-site closure activities at this site. The landowner also gave approval for the site to be backfilled with caliche and not seeded.

The landowner notification, landowner approval to not seed the backfilled site, and lab results were submitted to the NMOCD on October 30th, 2012. NMOCD granted approval to proceed with the closure plan of November 2nd, 2011.

To further protect groundwater, a 76x67-ft, 20-mil reinforced liner was installed at approximately 5 ft below ground surface (bgs). The liner was then padded with 6 inches of imported top soil. Laboratory analysis of the imported topsoil resulted in a chloride concentration below detectable limit and a PID (field) reading of 0.0. The remaining excavation was backfilled with imported caliche and base coarse. Lab analysis of these resulted in a chloride concentration of below detectable limits and a PID (field) reading of 2.1 ppm for the caliche and concentration of 80 mg/kg chloride and a PID (field) reading of 0.0 ppm for the base coarse. Laboratory analyses, PID sheets, and photo documentation is attached.

ROC acknowledges they have met the requirements of 19.15.17 NMAC, and respectfully request termination or similar closure status for the east and west below grade tank formerly located at this site. If you require any additional information or have any questions or comments, please contact me at (575)393-9174. Thank you for your time and consideration.

Sincerely,

Hack Conder

Environmental Manager RICE Operating Company

Form C-144 July 21, 2008

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office,

| Pit, Closed-Loop System, Below-Grade Tank, or |
|---|
| Proposed Alternative Method Permit or Closure Plan Application |
| Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method Modification to an existing permit |
| Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method |
| Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request |
| Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances. |
| Operator: Rice Operating Company OGRID #: |
| Address: 122 West Taylor, Hobbs NM 88240 |
| Facility or well name: EME G-S EAST TANK |
| API Number: none 30 -025 - O(0017 OCD Permit Number: none |
| U/L or Qtr/Qtr G Section 8 Township 20S Range 37E County: Lea |
| Center of Proposed Design: Latitude 32°.35'.383" Longitude 103° 16'.337" NAD: ⊠1927 ☐ 1983 |
| Surface Owner: ☐ Federal ☐ State ☑ Private ☐ Tribal Trust or Indian Allotment |
| 2. |
| Pit: Subsection For G of 19,15,17,11 NMAC |
| Temporary: Drilling Workover |
| Permanent Emergency Cavitation P&A |
| Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other |
| ☐ String-Reinforced |
| Liner Seams: Welded Factory Other Volume: bbl Dimensions: L x W x D |
| 3. |
| Closed-loop System: Subsection H of 19.15.17.11 NMAC |
| Type of Operation: P&A Drilling a new well Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) |
| Drying Pad Above Ground Steel Tanks Haul-off Bins Other |
| ☐ Lined ☐ Unlined Liner type: Thicknessmil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other |
| Liner Seams: Welded Factory Other |
| |
| Below-grade tank: Subsection 1 of 19.15.17.11 NMAC |
| Volume: two 500 bbl tanks Type of fluid: Produced Water |
| Tank Construction material: Fiberglass |
| Secondary containment with leak detection Visible sidewalls, tiner, 6-inch lift and automatic overflow shut-off |
| Usible sidewalls and liner ☐ Visible sidewalls only ☑ Other Buried 4 feet below grade |
| Liner type: Thickness none mil HDPE PVC Other |
| |
| Alternative Method: |

| Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks) Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, institution or church). Four foot height, four strands of barbed wire evenly spaced between one and four feet Alternate. Please specify | hospitał, |
|---|-----------------------------|
| Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks) Screen Netting Other Monthly inspections (If netting or screening is not physically feasible) | |
| Signs: Subsection C of 19.15.17.11 NMAC 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers Signed in compliance with 19.15.3.103 NMAC | |
| Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance. Please check a box if one or more of the following is requested, if not leave blank: Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. | office for |
| Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of accept material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying above-grade tanks associated with a closed-loop system. | priate district pproval. |
| Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ No |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☐ No ☐ NA |
| Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☐ No ☐ NA |
| Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality | Yes No |
| Within 500 feet of a wetland. = US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | ☐ Yes ☐ No |
| Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | ☐ Yes ☐ No |
| Within a 100-year floodplain FEMA map | Yes 1 No |

| Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Stiing Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC Previously Approved Design (attach copy of design) API Number: |
|---|
| |
| 12. Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC |
| Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC |
| Previously Approved Design (attach copy of design) API Number: |
| Previously Approved Operating and Maintenance Plan API Number:(Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure) |
| |
| Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Preceboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardous Odors, including H ₂ S, Prevention Plan Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC |
| Proposed Closure: 19.15.17.13 NMAC |
| Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan. |
| Type: Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Closed-loop System Alternative |
| Proposed Closure Method: Waste Excavation and Removal |
| Waste Removal (Closed-loop system's only) |
| On-site Closure Method (Only for temporary pits and closed-loop systems) |
| ☐ In-place Burial ☐ On-site Trench Burial |
| Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration) |
| Note Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection II of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC |

| 16. Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.1 | NA 1 2 CO | | | | | | | | |
|--|-------------------------|--|--|--|--|--|--|--|--|
| Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if t facilities are required. | ONMAC) note than two | | | | | | | | |
| Disposal Facility Name: Sundance Sevices Disposal Facility Pennit Number: NM-01-0003 | | | | | | | | | |
| Disposal Facility Name: Disposal Facility Permit Number: | | | | | | | | | |
| Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future service and operations? Yes (If yes, please provide the information below) No | | | | | | | | | |
| Required for impacted areas which will not be used for future service and operations: Soil Backfill and Cover Design Specifications based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC | C | | | | | | | | |
| Sting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable soun provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate disting considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justi demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance. | rict office or may be | | | | | | | | |
| Ground water is less than 50 feet below the bottom of the buried waste: - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ No ☐ NA | | | | | | | | |
| Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | Yes No | | | | | | | | |
| Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ № ☐ NA | | | | | | | | |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No | | | | | | | | |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☐ No | | | | | | | | |
| Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site | ☐ Yes ☐ № | | | | | | | | |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality | ☐ Yes ☐ No | | | | | | | | |
| Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No | | | | | | | | |
| Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | ☐ Yes ☐ No | | | | | | | | |
| Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | ☐ Yes ☐ No | | | | | | | | |
| Within a 100-year floodplain FEMA map | ☐ Yes ☐ No | | | | | | | | |
| On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.13 NMAC Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19. Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cann Soil Cover Design - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC | 15.17.11 NMÁC | | | | | | | | |

| Operator Application Certification: Thereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief |
|--|
| Name (Print): Hack Conder Title Environmental Manager |
| Signature Ball Level Date 1212.08 |
| e-mail address: <u>heonder à recessed com</u> Telephone: <u>575-393-3174</u> |
| OCD Approval: Permit Application (including clusure plant) Chause Plan (only) OCD Conditions (see attachment) OCD Representative Signature: Edward Distance Approval Date: 01/13/09 Title: Hvdrologist OCD Permit Number: |
| Title: TVRF0/0913T V OCD Permit Number: |
| Closure Report (required within 60 days of closure completion): Subsection K of 1915.1713 NMAC Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed. Closure Completion Dates. |
| |
| 21. Closure Method: On-Site Closure Method Alternative Choure Method Waste Removal (Closed loop by stems only) If different from approved plan, please explain |
| It. Closure Report Regarding Waste Removal Clusure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Unal-oft Bins Only: Instructions: Please locketify the facility or facilities for where the liquids, drilling fluids and drill curlings were disposed. Use attachment if more than two facilities was utilized. |
| Disposal Facility Name: Disposal Facility Permit Number: |
| Disposal Facility Name: Disposal Facility Permit Number: |
| Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and operations? Yes (If yes, please demonstrate compliance to the items below) \(\subseteq \text{No} \) |
| Required for impacted areas which will not be used for future service and operations Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-regulation Application Rates and Seeding Technique |
| 14. Closure Report Attachment Checklist: Instructions: Each of the following tlems must be attached to the closure report. Please ladicate, by a check |
| mork in the box, that the documents are attached |
| Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure) |
| District for an site classing and temporary arts) |
| Confirmation Sompling Analytical Results (if applicable) Waste Material Sumpling Analytical Results (required for on-site closure) |
| Disposal Facility Name and Permit Number |
| XI Soil Backfilling and Cover Installation XI Re-vegetation Application Rates and Seeding Technique |
| Site Reclamation (Photo Documentation) |
| On-site Closure Location: Latitude Longitude NAD: 1927 1983 |
| 15. Operator Closure Certification: |
| I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify and the approved closure plan, |
| Name (Print): Office Conded Phone Date 1-4-13 |
| Signature: #ACC Condra Move Date: 1-4-15 |
| |

-1

RICE Operating Company

122 West Taylor • Hobbs, New Mexico 88240 Phone: (575) 393-9174 • Fax: (575) 397-1471

CERTIFIED MAIL RETURN RECEIPT NO. 7007 2560 0000 4569 9392

October 25, 2012

Mr. Jimmie Cooper PO Box 55 Monument, New Mexico 88265

RE:

EME G-8 BGT (API # 30-025-06017): UL/G, Sec. 8, T20S, R37E

RICE Operating Company – EME SWD System

Mr. Cooper:

Rice Operating Company (ROC) is the service provider (agent) for the EME Saltwater Disposal (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.

In accordance of Subsection F of 19.15.17.13 NMAC, ROC provides this notification that on-site closure activities of the former below grade tanks located at EME G-8 will be conducted from October through December 2012. The former below grade tanks were removed from the site in September 2012. Soil samples collected from beneath the former tanks will be analyzed for 'clean closure' criteria. As a preventative measure, a 20-mil reinforced liner, measuring approximately 54 x 72 ft. will be installed at approximately 5 ft below ground surface (bgs). A liner installed below the subsurface will prevent the migration of any residual constituents and of any constituents contributed in the future. The liner will be padded with blow sand and the site will be backfilled with caliche to the ground surface. The site is located on an active caliche lease pad, so revegetation is not required. Attached is the Finalization of Below Grade Tank Closure Plan submitted to NMOCD on November 2, 2011.

Thank you for your time and please contact me at (575)393-9174 if you have any questions.

Sincerely,

RICE Operating Company

Hack Conder

Environmental Manager

RICE Operating Company

112 West Taylor • Hobbs, New Mexico 88240 Phone: (575) 393-9174 • Fax: (575) 397-1471

Sent via E-mail and U.S. Certified Mail with Return Receipt No. 7008 1140 0001 3070 5979

November 2nd, 2011

Mr. Edward Hansen

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

RE: Finalization of Below Grade Tank Closure Plan Rice Operating Company –EME SWD System EME G-8 BGT (SWD) – East and West Tanks UL-G, Sec 8, T20S, R37E

Mr. Hansen:

This letter is presented to update and finalize the OCD approved "C-144 Modifications to the Closure Plans" of November 10th, 2009, for two below-grade tanks at the Rice Operating Company (ROC) EME G-8 BGT (SWD) facility (attached as an appendix to this letter).

The EME G-8 BGT facility is located approximately 3 miles south of Monument, New Mexico (Figure 1). Since the submittal of the C-144 Modifications in 2009, ROC has conducted additional soil sampling beneath the east tank to supplement information previously provided (Figure 2). In brief, residual soil chloride levels beneath the tanks were low (< 225 mg/kg) as were residual petroleum hydrocarbons (DRO and GRO less than 10 mg/kg beneath the west tank and less than 250 mg/kg beneath the east tank). Residual soil chlorides were slightly elevated (336 mg/kg) and residual hydrocarbons were low (DRO < 160 mg/kg, GRO < 10 mg/kg) in the soil material that was excavated from around the tanks. These results are consistent with the tank integrity test and soil sampling and analyses presented in the 2009 C-144 Modifications and indicate that this facility has not impacted soils or threatened groundwater quality.

EME G-8 BGT

ROC therefore proposes the following work items to affect and finalize the Closure Plan for this facility:

- 1. A temporary facility will be installed adjacent to and used in place of the existing below-grade tanks while the latter are removed from service and the site is prepared for a new salt water disposal terminal facility.
- 2. The existing (east and west) below-grade tanks will be removed and properly disposed at an off-site location. Due care will be given to empty the tanks of their contents before this is done and to secure the lines so that no fluid leakage will occur.
- 3. Composite soil samples will be taken from the bottom of the excavation following the removal of the existing below-grade tanks and analyzed for chlorides. If residual soil chloride levels test below 250 mg/kg, a synthetic liner will be properly seated in the bottom of the excavation at approximately 5 feet below ground surface (bgs), Figure 2. The synthetic liner will be padded with approximately 6 inches of blow sand beneath and above and will cover an area of approximately 48x70 ft. The excavation will then be backfilled with clean soil (testing less than 250 mg/kg for chlorides) and compacted to the natural ground surface. A synthetic liner installed beneath a site will inhibit the downward migration of water through the subsurface, slowing movement of chloride toward groundwater.
- 4. Upon completion of the liner installation and backfilling, a new salt water disposal terminal facility will be constructed in the same location as the former below grade tank facility (above the liner and compacted soil material). The new facility will have two fiberglass receiving tanks and one fiberglass overflow tank with the necessary plumbing and fittings. The tanks will be installed within a lined secondary containment. The gathering system pipeline will be connected to the new facility and placed into operation prior to removal of the BGT on site.
- 5. A report with photographic chronology will be provided to OCD, which summarizes the course and completion of this work.

We submit that the remediation (if warranted) of soils found to exceed 250 mg/kg chlorides and the placement of a synthetic liner will serve to protect groundwater quality. Further, the replacement of below-grade tanks with above-ground tanks will facilitate early detection of any future leaks or spillage that may occur so that timely and effective response may be made.

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. Environmental projects of this magnitude require System Party AFE approval, and work begins as funds are received. In general, project funding is not forthcoming until NMOCD approves the work plan. Therefore, your timely review of this submission would be greatly appreciated.

EME G-8 BGT

Thank you.

Sincerely,

Hack Conder

Environmental Manager

Copy:

Pete Galusky (Texerra)

Katie Jones (ROC)

File

Attachments: NMOCD Approval (e-mail letter) of November 16, 2009,

C-144 Modifications to the Closure Plans November 10, 2009.

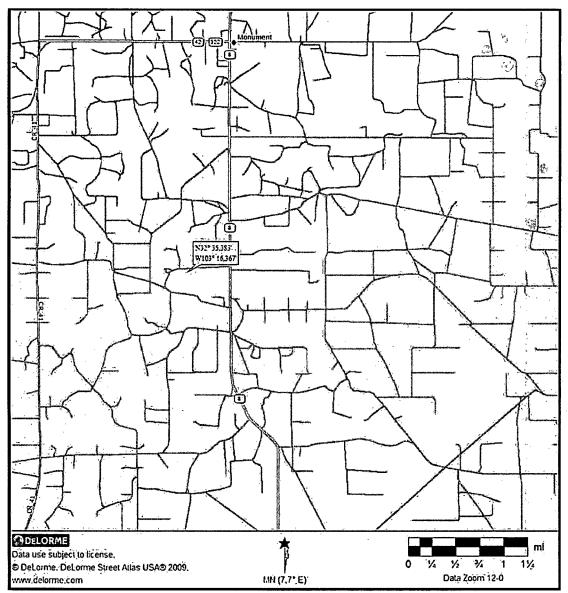


Figure 1 – EME G-8 BGT location.

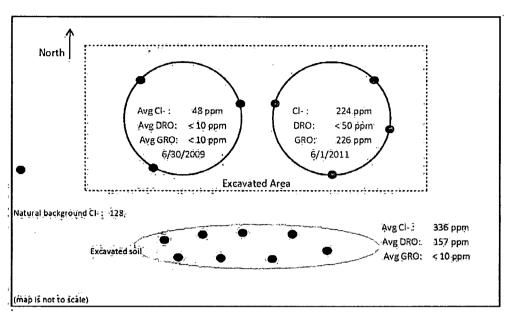


Figure 2 – Approximate soil sampling locations and laboratory results.

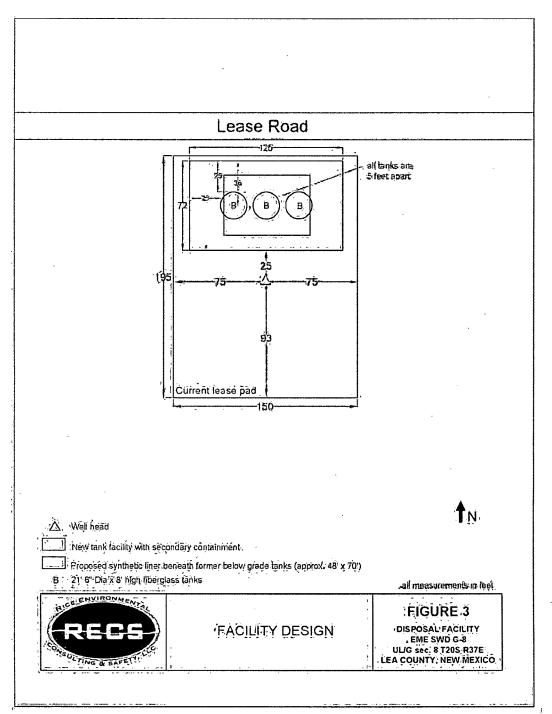


Figure 3 – Schematic diagram of proposed liner.

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October 26, 2012

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME G-8 BGT

Enclosed are the results of analyses for samples received by the laboratory on 10/25/12 15:30.

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/ga/lab accredited certif.html.

Cardinal Laboratories is accreditated 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.

Celey D. Keene

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:

10/25/2012

Reported:

10/26/2012

Project Name: Project Number: EME G-8 BGT NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

Sampling Date:

10/25/2012

Soil

Sampling Condition: Sample Received By: ** (See Notes)

Jodi Henson

Sample ID: WEST 5 PT. COMP (H202607-01)

| BTEX 8021B | mg/ | kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|-----------------|--------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifie |
| Benzene* | <0.050 | 0.050 | 10/25/2012 | ND | 1.76 | 87.9 | 2.00 | 0.815 | |
| Toluene* | <0.050 | 0.050 | 10/25/2012 | ND | 1.92 | 95.9 | 2.00 | 1.02 | |
| Ethylbenzene* | <0.050 | 0.050 | 10/25/2012 | ND | 1.89 | 94.4 | 2.00 | 0.726 | |
| Total Xylenes* | <0.150 | 0.150 | 10/25/2012 | ND | 5.72 | 95.3 | 6.00 | 0.867 | |
| Total BTEX | <0.300 | 0.300 | 10/25/2012 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIC | 104 % | 6 89.4-12 | 5 | | | | | | |
| Chloride, SM4500CI-B | mg/kg | | Analyzed By: HM | | | | 4 | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 96.0 | 16.0 | 10/25/2012 | ND | 416 | 104 | 400 | 3.77 | |
| TPH 8015M | mg/ | kg | Analyze | d By: MS | | <u>.</u> | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 10/25/2012 | ND | 195 | 97.7 | 200 | 2.56 | • |
| DRO >C10-C28 | 89.5 | 10.0 | 10/25/2012 | ND | 216 | 108 | 200 | 9.52 | |
| Surrogate: 1-Chlorooctane | 91.9 9 | 65.2-14 |) | | | | | | |
| Surrogate: 1-Chlorooctadecane | 116% | 63.6-15 | 4 | | | | | | |

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 valved 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. Keine



Analytical Results For:

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

Fax To:

(575) 397-1471

Received:

10/25/2012

Sampling Date:

10/25/2012

Reported:

10/26/2012

Sampling Type:

Project Name:

EME G-8 BGT

Sampling Condition:

** (See Notes)

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

NOT GIVEN

Sample ID: EAST 5 PT. COMP (H202607-02)

| BTEX 8021B | mg/ | kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|-----------------|--------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 10/26/2012 | ND | 1.76 | 87.9 | 2.00 | 0.815 | , |
| Toluene* | <0.050 | 0.050 | 10/26/2012 | ND | 1.92 | 95.9 | 2.00 | 1.02 | |
| Ethylbenzene* | <0.050 | 0.050 | 10/26/2012 | ND | 1.89 | 94.4 | 2.00 | 0.726 | |
| Total Xylenes* | <0.150 | 0.150 | 10/26/2012 | ND | 5.72 | 95.3 | 6.00 | 0.867 | |
| Total BTEX | <0.300 | 0.300 | 10/26/2012 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIL | 104 9 | % 89.4-12 | 6 | | | | | | |
| Chloride, SM4500CI-B | mg/ | 'kg | Analyzed By: HM | | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 144 | 16.0 | 10/25/2012 | ND | 416 | 104 | 400 | 3.77 | |
| TPH 8015M | mg/ | kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 10/25/2012 | ND | 195 | 97.7 | 200 | 2.56 | |
| DRO >C10-C28 | 164 | 10.0 | 10/25/2012 | ND | 216 | 108 | 200 | 9.52 | |
| Surrogate: 1-Chlorooctane | 86.8 | % 65.2-14 | 0 | | | | | | |
| Surrogate: 1-Chlorooctadecane | 99.9 | % 63.6-15 | 4 | | | | | | |

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.

Celeg & Keene

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

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Celey D. Kune



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| [] Tank Bottoms | Contaminated Soil [] Jet Out |
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November 13, 2012

HACK CONDER

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

112 W. TAYLOR

HOBBS, NM 88240

RE: EME G-8 BGT

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

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 accredited certif.html.

Cardinal Laboratories is accreditated 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 ENVIRONMENTAL CONSULTING & SAFETY HACK CONDER 112 W. TAYLOR HOBBS NM, 88240

(575) 397-1471 Fax To:

Received: Reported: 11/13/2012

11/13/2012

Project Name: Project Number: Project Location: EME G-8 BGT NONE GIVEN NONE GIVEN

Sampling Date:

11/13/2012

Sampling Type:

Sampling Condition:

** (See Notes)

Sample Received By:

Jodi Henson

Sample ID: EAST SIDE 5 PT COMP (H202751-01)

| BTEX 8021B | mg/ | kg | Analyze | d By: AP | | | • | | , : |
|--------------------------------------|---------|-----------------|-----------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 11/13/2012 | ND | 1.76 | 0.88 | 2.00 | 7.74 | |
| Toluene* | <0.050 | 0.050 | . 11/13/2012 | ND | 2.07 | 103 | 2.00 | 7.46 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/13/2012 | ND . | 2.12 | 106 | 2.00 | 7.45 | |
| Total Xylenes* | < 0.150 | 0.150 | 11/13/2012 | ND | 6.40 | 107 | 6.00 | 7.47 | |
| Total BTEX | <0.300 | 0.300 | 11/13/2012 | ND 3 | | | • | | |
| Surrogate: 4-Bromofluorobenzene (PIE | 119 % | 6 89.4-12 | 6 i | | | | | | |
| Chloride, SM4500CI-B | mg/ | kg | Analyzed By: AP | | | | • | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 96.0 | 16.0 | 11/13/2012 | ND | 432 | 108 | 400 | 3.77 | |
| TPH 8015M | mg/ | kg | Analyze | d By: MS | | | | • | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 11/13/2012 | ND | 197 | 98.7 | 200 | 2.81 | |
| DRO >C10-C28 | 21.2 | 10.0 | 11/13/2012 | ND | 205 | 102 | 200 | 5.59 | |
| Surrogate: 1-Chlorooctane | 85.6 | % 65.2-14 | 0 | ٠ | | , | | | |
| Surrogate: 1-Chlorooctadecane | 98.9 | % 63.6-15 | 4 | | | | • | | |

Cardinal Laboratories

*=Accredited Analyte

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 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.

Celeg D. Keene



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

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Celey D. Keine



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240-

| Company Name: | | (373) 333-247 | | | | | 1 | | В | ILL.T | 0 | | | | | | ANA | LYSI | S. RE | QUE | ST | | |
|-----------------------------------|--|--|------------------|-----------------------------|--------------------|------------|---------------|-------------|------------------------|---|----------|--------------------|---------------------|-------------|------------|----------|-------|------------------|-------------|-----------------|-----------|--------------------|-----|
| Project Manager: | MECK En | delier | **** | | | | | P. O | .#: | | | | | , | ŀ | 1 | 1 | • | T | Ĭ | 1 | | |
| Address: | | | | | | | | Con | npany: | | | | | |]. | `] | ĺ. | | | | | | |
| City: | | Slate: | Zip: | | | | | Attr | i: | | | ;' | | | <u> </u> | | | | 1 | | | | |
| Phone #: | | Fax#: | | | | · | | ٩dd | lress: | | | | | ļ. | | | | | 1 | | | | ŀ |
| Project #: | | Project Owner | į. | | - | | | City | | | | : | | ; | ŀ | | | | l | | · | | i i |
| Project Name: | | | | | | | | Stat | e: | Zip: | | | | ' ' | | | | 1 | Ì | | | | |
| Project Location Sampler Name: | KOBE P | -9 BC | 7 | | 77-80 . • . | * | - 1. | Phọ ax | ne #: #: | | | - | | | | | | | | | | | |
| FOR LAB USE ONLY | * * * * | | 2.4 | Ţ | M | ATRIX | <u> </u> | | PRESERV | SAN | MPLI | VG. | | | | .] | | | | | ļ | | . |
| Lab I.D. | Şample)l:t | Ď _{ří} | (G)RAB OR (C)OMP | GROUNDWATER | WASTEWATER FOIL | | Siudge | HER | ACIDIBASE ICE7.COOL | | | ; | 21. | TRIK | BIEX | | | | | | | | |
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| Relinquished By | | Date: | Rec | eived | • / | | | | | | | Fax Result REMARKS | | ا الإندا | 1-201. |) | W. |) ₃ . | UU | 3 | . | | |
| Delivered By: Sampler - UPS | | | | | Samp Cool Y | Inta | ret in | - 1. | CHEC | KED BY: | <i>:</i> |) i | | | | | NI. | | | | | . | |



December 04, 2012

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME G-8 BGT

Enclosed are the results of analyses for samples received by the laboratory on 12/03/12 16:15.

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 accredited certif.html.

Cardinal Laboratories is accreditated 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.

Celeg D. Keine

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

(575) 397-1471 Fax To:

Received:

12/03/2012

Reported:

12/04/2012

Project Name: Project Number: EME G-8 BGT NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

Sampling Type:

11/30/2012 Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: CALICHE (H202906-01)

| Chloride, | SM4500CI-B |
|-----------|------------|
|-----------|------------|

Chloride

Chloride

mg/kg

Analyzed By: HM

Analyte

Result

<16.0

Result

<16.0

Reporting Limit 16.0

Analyzed 12/04/2012 Method Blank ND

ND

BS 416

416

% Recovery 104

True Value QC 400

RPD

0.00

0.00

Qualifier

Sample ID: TOPSOIL (H202906-02)

Chloride, SM4500CI-B

Analyte

mg/kg

Analyzed By: HM

Reporting Limit

16.0

Analyzed

12/04/2012

BS Method Blank

% Recovery 104

True Value QC 400

RPD Qualifier

Sample ID: BASE COARSE (H202906-03)

Chloride, SM4500CI-B

Analyzed By: HM

| | 3 | | | | | | | | |
|----------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 80.0 | 16.0 | 12/04/2012 | ND | 416 | 104 | 400 | 0.00 | |

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

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

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Celeg D. Keene



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Mariand; Hobbs, NM 88240

| Company Name: | 175),393-2326 (FAX (575),393-247 | · | · · · · · · · · · · · · · · · · · · · | i | | | ₹BI | LLTO | | 5. | - | | | ANA | LYSI | S RE | QUE | ST | | | |
|--------------------------------|---|--|---------------------------------------|------------------|-----------------|-----------|---------------------|---|---------------------|--------------|--------------|-------------|---------------|----------------|--|-----------------|-------------|----------|-----------------------------|----------------------------|---------------|
| Project Manager: | | | | w. # | F | .0.# | | | | 7 1 | | Π | | | | | | T T | · | | |
| Address: | | | | | c | omp | any:: | | 1 | 1. | į | ľ | ľ | | | | | | | | |
| City: | State: | Zip: | | | Security of | ttin:: | ., | | |] | | | l | | | | | | | , | |
| Phone #: | Fax#: | | | | Ā | ddre | ss: | | | | | | 1 | 1 | | | ' | | | | ľ |
| Project,# | Project Owne | ř: | | | | itÿ: | | manana o type in a mana | | 1 | | | | | | | | ŀ | | | |
| Project Name: | | | | | Š | tatě: | <u> </u> | Źip: | | | ŀ | | | | | ļ. | | | | | |
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| Lab I.D. | Şample I.D. | (G)RAB OR (C # CONTAINER | GROUNDWATER WASTEWATER | | | ij | ö . | | | . : | | ' | 1 | | ŀ | | | | | | |
| | | SNT A | STEV ST | | DOE I | ACID/BASE | ICE / COC | · | | <u></u> | |] | | | | • • | | 1. | | | |
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| - | k gain the same the same that | | | | | - | | ļi | | | - | | ļ | | ļ | | | | | 1 | |
| PLEASE NOTE: Unpubly app | Dannages, Cardinal's liability and sheat's exclusive remedy for | eny claim arisi | nu whether | hased in co | antimet of | iost: sha | l be limited | to the amount pa | is by the chent for | r the | | | <u> </u> | | | | <u> </u> | | <u> </u> | | |
| service: In no event shall Cou | i Damagues, Guromal s kalakty mid chemis exclusive remedy for រូ ប៉ាតិនុស្សកា negligence and any other calling who soever shall be នៅនៅ គ្រូន Papte (gr Incidontal or consequent) damagus (មានប្រជុ | without limit | itlan) busin | នេស អ៊ែរជំពូវវិទ | tions, los | afuse, | in lous at | House kicured by | chent, its subsidi | ailes. | hlá*- | | | | | | | | | | |
| Relinquished By | out of a felatest to the ferformance of services hereinoder by | | ved By | | claim is b | ased (ca | nn any ôt t | ne above stated re | Phone Re | sult: | - - [] Yo | s. D | No | Add'l Add'l | Phone | #: | | | | | |
| 一次没有 | Oate: 13/3/12 Time: 15 | 17 | والمزا | | M_{z} | 111 | AX | 11/1 | Fax Resu REMARK | | | | | | | | <i>i</i> - | | 7 . | | |
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| Delivered By: | | <u></u> | Ti read | nple Co | nditi- | <u>.</u> | CHEC | ZED BV. | ր. | | 7 16 D | . I. B | 7 | r right | ζ / | ث | *** 6. 4 'A | , | | | |
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| Sampler UPS | Bus Other: | i | | Ves 3 No □ | Yes No: | | (ميز) | 75 | 1 | | #** } | | | | | | | | | | |

RICE ENVIRONMENTAL CONSULTING & SAFETY

122 West Taylor Hobbs, NM 88240 PHONE: (505) 393-9174 FAX: (505) 397-1471 PID METER CALIBRATION & FIELD REPORT FORM

| ACCURACY: +/- 2% | ETER READING | ACCURACY: 100 | | |
|----------------------------------|---------------|-----------------------|------------|--|
| | | | : //1/2015 | |
| LOT NO : Hal-248-100-1 | | EXPIRATION DATE | 7/1/2015 | |
| GAS COMPOSI | TION: ISOBUTY | LENE 100PPM / AIR: 1 | BALANCE | |
| NO. X MODEL: PGM 73 MODEL: PGM _ | | NO: 592-903318 NO: | | |
| MODEL MODEL: PGM 73 | 00 SERIAL | NO: 590-000504 | | |
| | | NO: 590-000508 | | |

| SITE | UNIT | SECTION | TOWN SHIP | RANGE |
|-----------|------|---------|-----------|--------|
| | | | | |
| EME G-8 B | GT G | 8 | T-20-S | R-37-E |

| PID | SAMPLE ID | PID |
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| | 2.1 | 0 2.1 |

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

SIGNATURE:

DATE: 11/30/2012

RICE ENVIRONMENTAL CONSULTING & SAFETY

122 West Taylor Hobbs, NM 88240 PHONE: (505) 393-9174 FAX: (505) 397-1471 PID METER CALIBRATION & FIELD REPORT FORM

| SITE | | MPANY DPERATING SECTION | TOWN SHIP | RANGE |
|--|--------------|---|------------|-------|
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| | | | | |
| | | | | |
| ACCURACY: ÷/- 2% | | · | | |
| ME | TER READING | ACCURACY: 100 | | |
| LOT NO : Hal-248-100-1 | | EXPIRATION DATE | : 7/1/2015 | |
| GAS COMPOSITI | ON: ISOBUTYI | LENE 100PPM / AIR: | BALANCE | · . |
| NO. X MODEL: PGM 7320 MODEL: PGM |) SERIAL | NO: 590-000504 NO: 592-903318 NO: | | |
| CK. MODEL: PGM 7300 MODEL MODEL: PGM 7300 | | NO: 590-000508 | | |

| SAMPLE ID | PID | SAMPLE ID | PID |
|-------------|-----|-----------|-----|
| BASE COARSE | 0 | | |
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I verify that Thave calibrated the above instrument in accordance to the manufacture operation manual.

SIGNATURE:

DATE: 12/3/2012

Jimmie T. Cooper PO Box 55 Monument, NM 88265 October 25, 2012

Hack Conder Environmental Project Manager Rice Operating Company 120 West Taylor Hobbs, NM 88240

Dear Mr. Conder.

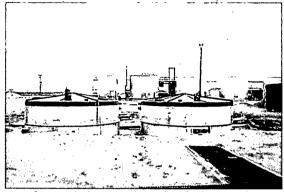
This letter is in regards to work that will be performed at EME G-8 BGT (API 30-025-06017) located at UL/G, Sec. 8, T208, R37E. The site is located inside of an active facility. Therefore, I am authorizing that it is permissible for the site to be backfilled with clean imported caliche and seeding will not be required.

Sincerely,

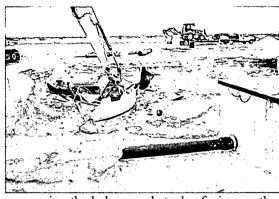
Jimmie T. Cooper

Smorie 1 Stoffer

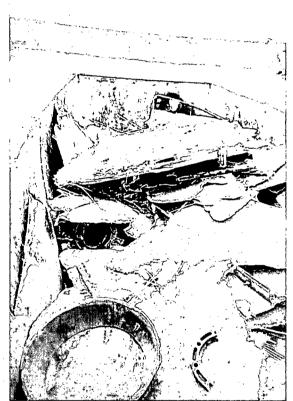
EME G-8 BGT Unit G, Section 8, T20S, R37E



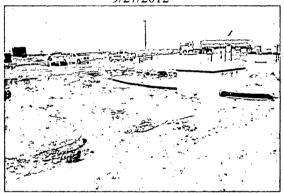
former below grade tanks, facing north 9/27/2012



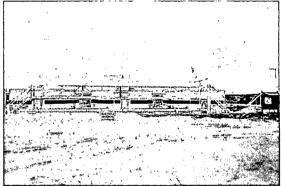
removing the below grade tanks, facing south 9/27/2012



disposing of the below grade tanks 9/27/2012



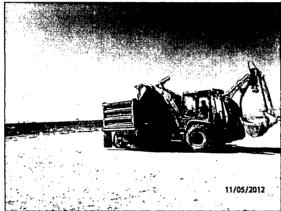
below grade tanks removed, facing northwest 9/27/2012



new G-8 facility, facing west 9/27/2012



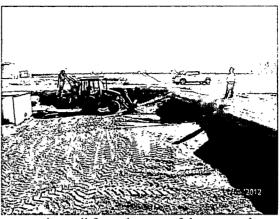
collecting soil samples, facing northeast 10/25/2012



exporting scraped soil, facing south 11/5/2012



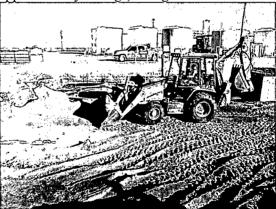
importing blow sand, facing north 11/29/2012



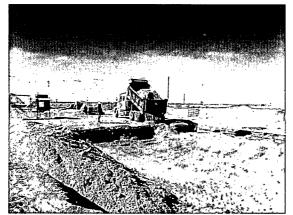
scraping soil from the area of the east tank, facing east 11/5/2012



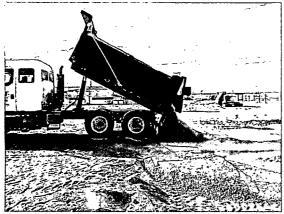
20-mil, reinforced liner installed at approximately 5 ft bgs, facing west 11/29/2012



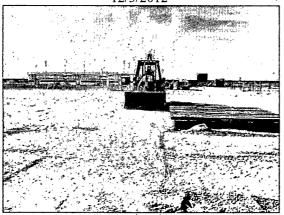
padding above the liner with blow sand, facing north 11/30/2012



importing caliche, facing west 11/30/2012



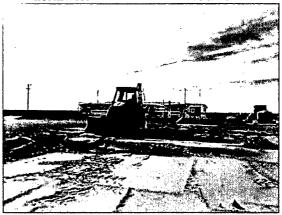
importing base coarse, facing west 12/3/2012



contouring the site, facing west 12/6/2012



backfilling the site with caliche, facing northwest 11/30/2012



backfilling the site with base coarse, facing west 12/3/2012



site complete, facing north 12/6/2012

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 District II
1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Revised October 10, 2003

Form C-141

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

| Release Notificat | tion and Corrective Action |
|--|--|
| BGT-Closure | OPERATOR Initial Report Final Repor |
| Name of Company: RICE Operating Company | Contact: Hack Conder |
| Address: 112 West Taylor Hobbs, NM 88240 | Telephone No: (575) 393-9174 |
| Facility Name: EME G-8 East below grade tank (BGT) | Facility Type: SWD |
| Surface Owner: Jimmie Cooper Mineral Own | ner API No. 30-025-06017 |
| LOCAT | TION OF RELEASE |
| | North/South Line Feet from the East/West Line County |
| G 8 20S 37E | Lea |
| NATU | '383" Longitude 103° 16'337" URE OF RELEASE |
| Type of Release: produced water | Volume of Release: unknown Volume Recovered: unknown |
| Source of Release: unknown | Date and Hour of Occurrence: unknown Date and Hour of Discovery: soil investigation began in 2009 and was completed in December 2012 |
| Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Requi | If YES, To Whom? |
| By Whom? | Date and Hour |
| Was a Watercourse Reached? | If YES, Volume Impacting the Watercourse. |
| If a Watercourse was Impacted, Describe Fully.* | - 1 |
| soils beneath the tanks, it was determined that past operations did Describe Area Affected and Cleanup Action Taken.* A composite sample was collected from the area beneath the form resulting in a chloride concentration of 144 mg/kg, a GRO concert concentration below detectable limits. Because of the DRO concert disposed of at a NMOCD facility. A composite sample then collect resulted in a chloride concentration of 96 mg/kg, a GRO concentration below detectable limits. In order to protect ground properly seated at approximately 5 ft below ground surface (bgs) | ng to 19.15.17 NMAC. Upon removed of the former tanks and investigation of the lid not impact soil at concentrations to impair groundwater quality. mer east below grade tank and was analyzed by a commercial laboratory, entration of <10.0 mg/kg, a DRO concentration of 164 mg/kg, and a BTEX centration, the area was scraped an additional 6 inches and the soil was properly ected from the scraped area was analyzed by a commercial laboratory and tration of <10.0 mg/kg, a DRO concentration of 21.2 mg/kg, and BTEX adwater from any potential chloride migration, a 76x67-ft liner was installed and so. The liner was padded with clean, imported blow sand, and the excavation was a active lease pad; therefore, seeding was not required (as approved by the |
| regulations all operators are required to report and/or file certain releating public health or the environment. The acceptance of a C-141 report to should their operations have failed to adequately investigate and remove | te to the best of my knowledge and understand that pursuant to NMOCD rules and case notifications and perform corrective actions for releases which may endanger by the NMOCD marked as "Final Report" does not relieve the operator of liability nediate contamination that pose a threat to ground water, surface water, human health port does not relieve the operator of responsibility for compliance with any other |
| Signature: Hold Conden | OIL CONSERVATION DIVISION For Elwand J. Hanner Approved by District Supervisor: |

Approval Date:

Phone: (575) 393-9174

Conditions of Approval:

Expiration Date:

Attached

E-mail Address: hconder@riceswd.com

Printed Name: Hack Conder

12/28/2012

Title: Environmental Manager

^{*} Attach Additional Sheets If Necessary

RICE Operating Company

112 West Taylor • Hobbs, New Mexico 88240 Phone: (575) 393-9174 • Fax: (575) 397-1471

CERTIFIED MAIL
RETURN RECEIPT NO. 7007 2560 0000 4569 8739

RECEIVED

January 4, 2013

JAN 10 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 Oil Conservation Division 1220 S. St. Francis Drive Santa Fe, NM 87505

RE:

Below Grade Tank (BGT) - Closure EME G-8 West BGT (API 30-025-06017): Unit G, Sec. 8, T20S, R37E

RICE Operating Company – Eunice Monument Eumont (EME) SWD System

Mr. Hansen:

Rice Operating Company (ROC) is the service provider (agent) for the EME Saltwater Disposal (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.

Based on the November 2nd, 2011, Finalization of Below Grade Tank Closure Plan, the east and west below grade tanks were removed from the site and were properly disposed of on September 27th, 2012. On October 25th, 2012, a composite sample was collected from the area beneath the former west tank. Laboratory analysis of the West 5 Pt. Comp resulted in a chloride concentration of 96.0 mg/kg, a GRO concentration of <10.0 mg/kg, a DRO concentration of 89.5 mg/kg, and BTEX concentrations below detectable limits.

On October 25th, 2012, the landowner was notified of ROC's intent to conduct on-site closure activities at this site. The landowner also gave approval for the site to be backfilled with caliche and not seeded.

The landowner notification, landowner approval to not seed the backfilled site, and lab results were submitted to the NMOCD on October 30th, 2012. NMOCD granted approval to proceed with the closure plan of November 2nd, 2011.

To further protect groundwater, a 76x67-ft, 20-mil reinforced liner was installed at approximately 5 ft below ground surface (bgs). The liner was then padded with 6 inches of imported top soil. Laboratory analysis of the imported topsoil resulted in a chloride concentration below detectable limit and a PID (field) reading of 0.0. The remaining excavation was backfilled with imported caliche and base coarse. Lab analysis of these resulted in a chloride concentration of below detectable limits and a PID (field) reading of 2.1 ppm for the caliche and concentration of 80 mg/kg chloride and a PID (field) reading of 0.0 ppm for the base coarse. Laboratory analyses, PID sheets, and photo documentation is attached.

ROC acknowledges they have met the requirements of 19.15.17 NMAC, and respectfully request termination or similar closure status for the east and west below grade tank formerly located at this site. If you require any additional information or have any questions or comments, please contact me at (575)393-9174. Thank you for your time and consideration.

Sincerely,

Hack Conder

Environmental Manager RICE Operating Company

Form C-144 July 21, 2008

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fc, NM 87505 State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

| Pit, Closed-Loop System, Below-Grade Tank, or |
|---|
| Proposed Alternative Method Permit or Closure Plan Application |
| Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method Modification to an existing permit Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, |
| below-grade tank, or proposed alternative method |
| Instructions: Please submit one application (Form C-144) per Individual pit, closed-loop system, below-grade tank or alternative request |
| Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances. |
| Operator: Rice Operating Company OGRID#: |
| Address: 122 West Taylor, Hobbs NM 88240 |
| Facility or well name: EME G-8 WEST TANK |
| API Number: |
| U/L or Qtr/Qtr G Section 8 Township 20S Range 37E County: Lea |
| Center of Proposed Design: Latitude 32° 35' 383" Longitude 103° 16' 337' NAD: ⊠1927 ☐ 1983 |
| Surface Owner: ☐ Federal ☐ State ☑ Private ☐ Tribal Trust or Indian Allotment |
| |
| Pit: Subsection F or G of 19.15.17.11 NMAC |
| Temporary: Drilling Workover |
| Permanent Emergency Cavitation P&A |
| Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other |
| String-Reinforced |
| |
| Liner Seams: Welded Factory Other Volume: bbl Dimensions: Lx Wx D |
| 3. Closed-loop System: Subsection H of 19.15.17.11 NMAC |
| Type of Operation: P&A Drilling a new well Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) |
| Drying Pad Above Ground Steel Tanks Haul-off Bins Other |
| ☐ Lined ☐ Unlined Liner type: Thicknessmil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other |
| Liner Seams: Welded Factory Other |
| [4. |
| ⊠ Below-grade tank: Subsection 1 of 19.15.17.11 NMAC |
| Selow-grade tank: Subsection 1 of 19.15.17.11 NMAC Volume: |
| Tank Construction material: Fiberglass |
| Secondary containment with leak detection [Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off |
| ☐ Visible sidewalls and liner ☐ Visible sidewalls only ☒ Other |
| Liner type: Thickness none mil HDPE PVC Other |
| [5 |
| Alternative Method: |
| Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of annound |

| Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks) Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, institution or church) Four foot height, four strands of barbed wire evenly spaced between one and four feet Alternate. Please specify | hospital, |
|---|-----------------------------|
| Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks) Screen Netting: Other Monthly inspections (If netting or screening is not physically feasible) | |
| a. Signs: Subsection C of 19.15.17.11 NMAC 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers □ Signed in compliance with 19.15.3.103 NMAC | · |
| Standard Standard | office for |
| Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptant material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate of may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying above-grade tanks associated with a closed-loop system. | priate district pproval. |
| Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ No |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within 300 feet from a permanent residence, school, hospital, institution, or cliurch in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☐ № ☐ NA |
| Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) | ☐ Yes ☐ No ☐ NA |
| Visual inspection (certification) of the proposed site; Aerial photo; Satellite image Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site. | ☐ Yes ☐ No |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality | ☐ Yes ☐ No |
| Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | ☐ Yes ☐ No |
| Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | ☐ Yes ☐ No |
| Within a 100-year floodplain. — FEMA map | ☐ Yes ☐ No |

| • |
|---|
| Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. |
| Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC |
| |
| Previously Approved Design (attach copy of design) API Number: or Permit Number: or Permit Number: |
| Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. |
| Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC |
| Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC |
| Previously Approved Design (attach copy of design) API Number: |
| Previously Approved Operating and Maintenance Plan API Number: (Applies only to closed-loop system that use |
| above ground steel tanks or haul-off bins and propose to Implement waste removal for closure) |
| Number Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardous Odors, including H ₂ S, Prevention Plan Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control Plan Erosion Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC |
| Proposed Closure: 19.15.17.13 NMAC Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan. Type: Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Closed-loop System Alternative Alternative Waste Excavation and Removal Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration) |
| IS. Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. ☑ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC ☑ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC ☑ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) ☑ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC ☑ Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC |

| 16. | | |
|--|---|------------------------|
| Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Stee Instructions: Please indentify the facility or facilities for the disposal of liquids, drilli facilities are required. | 1 Tanks or Haul-off Bins Only: (19.15.17.13.Ding fluids and drill cuttings. Use attachment if n | NMAC) nore than two |
| | acility Permit Number: NM-01-0003 | |
| Disposal Facility Name: Dis | oosal Facility Permit Number: | |
| Will any of the proposed closed-loop system operations and associated activities occur of Yes (If yes, please provide the information below) No | on or in areas that will not be used for future serv | ice and operations? |
| Required for impacted areas which will not be used for future service and operations: Soil Backfill and Cover Design Specifications based upon the appropriate requirements of Subsection I of Re-vegetation Plan - based upon the appropriate requirements of Subsection C | 19.15.17.13 NMAC | |
| String Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the clos provided below. Requests regarding changes to certain siting criteria may require ad considered an exception which must be submitted to the Santa Fe Environmental But demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for g | ministrative approval from the appropriate distraction of approval. Justi, | ict office or may be |
| Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obt | ained from nearby wells | ☐ Yes ☐ No ☐ NA |
| Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obt | ained from nearby wells | ☐ Yes ☐ No ☐ NA |
| Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obt | ained from nearby wells | ☐ Yes ☐ No ☐ NA |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other signific lake (measured from the ordinary high-water mark). Topographic map; Visual inspection (certification) of the proposed site | ant watercourse or lakebed, sinkhole, or playa | ☐ Yes ☐ No |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in e Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | | ☐ Yes ☐ No |
| Within 500 horizontal feet of a private, domestic fresh water well or spring that less that watering purposes, or within 1000 horizontal feet of any other fresh water well or spring - NM Office of the State Engineer - iWATERS database; Visual inspection (cert | g, in existence at the time of initial application. | Yes No |
| Within incorporated municipal boundaries or within a defined municipal fresh water we adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval of | · | ☐ Yes ☐ No |
| Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual in: | spection (certification) of the proposed site | ☐ Yes ☐ No |
| Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and | Mineral Division | ☐ Yes ☐ No |
| Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Society; Topographic map | Mineral Resources; USGS; NM Geological | ☐ Yes ☐ No |
| Within a 100-year floodplain FEMA map | · | ☐ Yes ☐ No |
| 18. On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the forby a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of Sut Proof of Surface Owner Notice - based upon the appropriate requirements of Sut Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) Protocols and Procedures - based upon the appropriate requirements of 19.15.17 Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Sub Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill Soil Cover Design - based upon the appropriate requirements of Subsection H of Re-vegetation Plan - based upon the appropriate requirements of Subsection I of Site Reclamation Plan - based upon the appropriate requirements of Subsection I of | ments of 19.15.17.10 NMAC section F of 19.15.17.13 NMAC priate requirements of 19.15.17.11 NMAC based upon the appropriate requirements of 19. 133 NMAC ments of Subsection F of 19.15.17.13 NMAC section F of 19.15.17.13 NMAC cuttings or in case on-site closure standards cann 19.15.17.13 NMAC | 15.17.11 NMAC |

| Operator Application Certif | | | |
|--|--|--|--|
| Name (Print) Hack Con. | nation submitted with this application is i | - | he best of my knowledge and behef sironmental Manager |
| E10 | 1 1 | | |
| Signature A | | | 12.12.08 |
| e-mail address: hean | der' <u>a neeswal.com</u> | Telephone | 575-393-3174 |
| OCD Approval: Permit | Application (including closure plan) | Chasure Plan (only) OCE | Conditions (see attachment) |
| OCD Representative Signate | ere: Edward f. | House | Approval Date: |
| Title: Hyo | drologist V | OCD Permit Num | ibor: |
| Instructions: Operators are e The closura repart is required | | len prior to implementing ony O days of the completion of the | closure activities and submitting the closure report. |
| | | Closure Com | pletion Date: |
| If different from approved | noval [] OneSite Closure Method [plan, please explain | Alternative Chaire Method | Waste Removal (Cloud-butp systems only) |
| Instructions: Please indentify two facilities were utilized. | y the facility or facilities for where the li | quiés, Arilling fluids and drill : | Ground Steel Tanks or Haul-off Bins Onls: cuttlegs were disposed. Use attachment if more than |
| | ويومونونون ورمواء ومدارياته والمواويونونون | | ermit Number. |
| , , - | The same and the s | | ermit Number. |
| | perations and associated activities perfor pastrate compliance to the items below) | | be used for future service and operations? |
| Site Reclamation (Photo | | nd operations | |
| Proof of Closure Notice Proof of Closure Notice (n Proof of Deed Notice (n Plot Plan (for on-site cle Confirmation Sampling Waste Material Sampling Disposal Facility Name Soil Backfilling and Co | ments are anached. (surface owner and division) equired for on-site closure) ssures and temporary pits) Analytical Results (if applicable) gr Analytical Results (required for on-site and Permit Number ver Installation on Rates and Seeding Technique) Documentation) | | d to the closure report. Please indicate, by a check NAD: []1927 [] 1983 |
| Overntor Closure Certificatt | | e'Alassons populat er talla manifes | e and complete to the best of my know ledge and |
| belief. I also certify that the cl | osure complies with all applicable closur | e requirements and conditions: | specified in the approved closure plan. |
| Name (Print) HACK | Constrat | | Vikonmental motingal |
| Signature | Villa in the said | | 1-4-13 |
| 640 | ndor @ricogin | / // n = | 5715.1.2.1 LU20 |

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RICE Operating Company

122 West Taylor • Hobbs, New Mexico 88240 Phone: (575) 393-9174 • Fax: (575) 397-1471

CERTIFIED MAIL
RETURN RECEIPT NO. 7007 2560 0000 4569 9392

October 25, 2012

Mr. Jimmie Cooper PO Box 55 Monument, New Mexico 88265

RE:

EME G-8 BGT (API # 30-025-06017): UL/G, Sec. 8, T20S, R37E

RICE Operating Company - EME SWD System

Mr. Cooper:

Rice Operating Company (ROC) is the service provider (agent) for the EME Saltwater Disposal (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.

In accordance of Subsection F of 19.15.17.13 NMAC, ROC provides this notification that on-site closure activities of the former below grade tanks located at EME G-8 will be conducted from October through December 2012. The former below grade tanks were removed from the site in September 2012. Soil samples collected from beneath the former tanks will be analyzed for 'clean closure' criteria. As a preventative measure, a 20-mil reinforced liner, measuring approximately 54 x 72 ft. will be installed at approximately 5 ft below ground surface (bgs). A liner installed below the subsurface will prevent the migration of any residual constituents and of any constituents contributed in the future. The liner will be padded with blow sand and the site will be backfilled with caliche to the ground surface. The site is located on an active caliche lease pad, so revegetation is not required. Attached is the Finalization of Below Grade Tank Closure Plan submitted to NMOCD on November 2, 2011.

Thank you for your time and please contact me at (575)393-9174 if you have any questions.

Sincerely,

RICE Operating Company

Hack Conder

Environmental Manager

RICE Operating Company

112 West Taylor • Hobbs, New Mexico 88240 Phone: (575) 393-9174 • Fax: (575) 397-1471

Sent via E-mail and U.S. Certified Mail with Return Receipt No. 7008 1140 0001 3070 5979

November 2nd, 2011

Mr. Edward Hansen

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

RE: Finalization of Below Grade Tank Closure Plan Rice Operating Company –EME SWD System EME G-8 BGT (SWD) – East and West Tanks UL-G, Sec 8, T20S, R37E

Mr. Hansen:

This letter is presented to update and finalize the OCD approved "C-144 Modifications to the Closure Plans" of November 10th, 2009, for two below-grade tanks at the Rice Operating Company (ROC) EME G-8 BGT (SWD) facility (attached as an appendix to this letter).

The EME G-8 BGT facility is located approximately 3 miles south of Monument, New Mexico (Figure 1). Since the submittal of the C-144 Modifications in 2009, ROC has conducted additional soil sampling beneath the east tank to supplement information previously provided (Figure 2). In brief, residual soil chloride levels beneath the tanks were low (< 225 mg/kg) as were residual petroleum hydrocarbons (DRO and GRO less than 10 mg/kg beneath the west tank and less than 250 mg/kg beneath the east tank). Residual soil chlorides were slightly elevated (336 mg/kg) and residual hydrocarbons were low (DRO < 160 mg/kg, GRO < 10 mg/kg) in the soil material that was excavated from around the tanks. These results are consistent with the tank integrity test and soil sampling and analyses presented in the 2009 C-144 Modifications and indicate that this facility has not impacted soils or threatened groundwater quality.

EME G-8 BGT

ROC therefore proposes the following work items to affect and finalize the Closure Plan for this facility:

- 1. A temporary facility will be installed adjacent to and used in place of the existing below-grade tanks while the latter are removed from service and the site is prepared for a new salt water disposal terminal facility.
- 2. The existing (east and west) below-grade tanks will be removed and properly disposed at an off-site location. Due care will be given to empty the tanks of their contents before this is done and to secure the lines so that no fluid leakage will occur.
- 3. Composite soil samples will be taken from the bottom of the excavation following the removal of the existing below-grade tanks and analyzed for chlorides. If residual soil chloride levels test below 250 mg/kg, a synthetic liner will be properly seated in the bottom of the excavation at approximately 5 feet below ground surface (bgs), Figure 2. The synthetic liner will be padded with approximately 6 inches of blow sand beneath and above and will cover an area of approximately 48x70 ft. The excavation will then be backfilled with clean soil (testing less than 250 mg/kg for chlorides) and compacted to the natural ground surface. A synthetic liner installed beneath a site will inhibit the downward migration of water through the subsurface, slowing movement of chloride toward groundwater.
- 4. Upon completion of the liner installation and backfilling, a new salt water disposal terminal facility will be constructed in the same location as the former below grade tank facility (above the liner and compacted soil material). The new facility will have two fiberglass receiving tanks and one fiberglass overflow tank with the necessary plumbing and fittings. The tanks will be installed within a lined secondary containment. The gathering system pipeline will be connected to the new facility and placed into operation prior to removal of the BGT on site.
- 5. A report with photographic chronology will be provided to OCD, which summarizes the course and completion of this work.

We submit that the remediation (if warranted) of soils found to exceed 250 mg/kg chlorides and the placement of a synthetic liner will serve to protect groundwater quality. Further, the replacement of below-grade tanks with above-ground tanks will facilitate early detection of any future leaks or spillage that may occur so that timely and effective response may be made.

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. Environmental projects of this magnitude require System Party AFE approval, and work begins as funds are received. In general, project funding is not forthcoming until NMOCD approves the work plan. Therefore, your timely review of this submission would be greatly appreciated.

EME G-8 BGT

Thank you.

Sincerely,

Hack Conder

Environmental Manager

Copy:

Pete Galusky (Texerra)

Katie Jones (ROC)

File

Attachments: NMOCD Approval (e-mail letter) of November 16, 2009,

C-144 Modifications to the Closure Plans November 10, 2009.

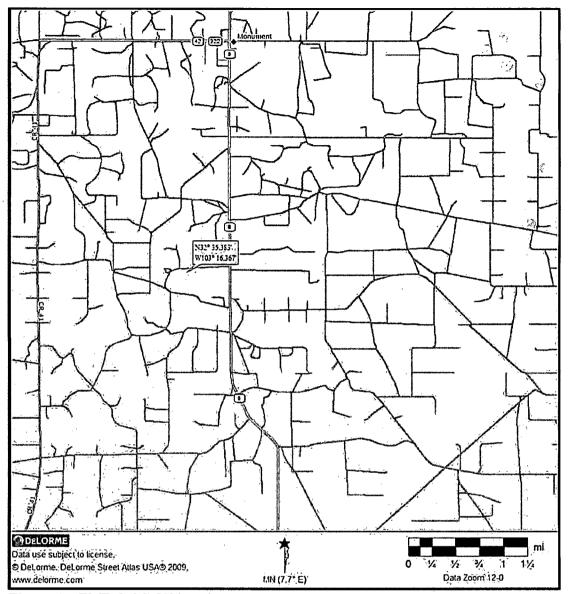


Figure 1 – EME G-8 BGT location.

1

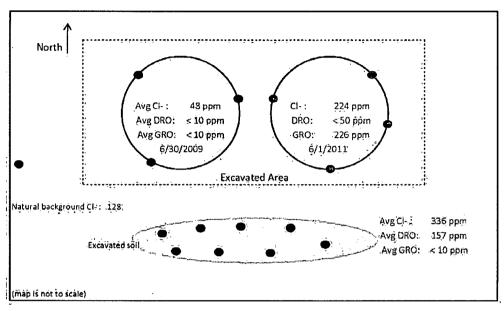


Figure 2 – Approximate soil sampling locations and laboratory results.

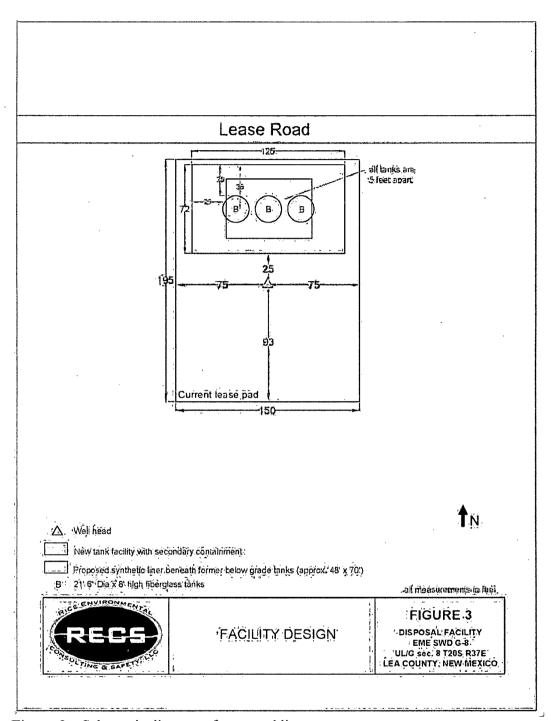


Figure 3 – Schematic diagram of proposed liner.

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October 26, 2012

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME G-8 BGT

Enclosed are the results of analyses for samples received by the laboratory on 10/25/12 15:30.

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 accreditated 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.

Celey D. Keene

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: Reported: 10/25/2012

10/26/2012

Project Name: Project Number: EME G-8 BGT NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

Sampling Type:

Soil

Sampling Condition:

** (See Notes)

Sample Received By:

Jodi Henson

10/25/2012

Sample ID: WEST 5 PT. COMP (H202607-01)

| BTEX 8021B | mg/kg | | Analyzed By: MS | | | | | | |
|--------------------------------------|--------|-----------------|-----------------|-----------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 10/25/2012 | ND | 1.76 | 87.9 | 2.00 | 0.815 | |
| Toluene* | <0.050 | 0.050 | 10/25/2012 | ND | 1.92 | 95.9 | 2.00 | 1.02 | |
| Ethylbenzene* | <0.050 | 0.050 | 10/25/2012 | ND · | 1.89 | 94.4 | 2.00 | 0.726 | |
| Total Xylenes* | <0.150 | 0.150 | 10/25/2012 | ND | 5.72 | 95.3 | 6.00 | 0.867 | |
| Total BTEX | <0.300 | 0.300 | 10/25/2012 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIL | 104 9 | % 89.4-12 | 6 | | | | | | |
| Chloride, SM4500CI-B | mg/ | kg | Analyze | Analyzed By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyżed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 96.0 | 16.0 | 10/25/2012 | ND | 416 | 104 | 400 | 3.77 | |
| TPH 8015M | mg/ | kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 10/25/2012 | ND | 195 | 97.7 | 200 | 2.56 | |
| DRO >C10-C28 | 89.5 | 10.0 | 10/25/2012 | ND | 216 | 108 | 200 | 9.52 | |
| Surrogate: 1-Chlorooctane | 91.9 | % 65.2-14 | 0 | | | | | | |
| Surrogate: 1-Chlorooctadecane | 1169 | 63.6-15 | 4 | | | | | | |

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*=Accredited Analyte

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Celeg D. Keena



Analytical Results For:

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

Fax To: (575) 397-1471

Received:

10/25/2012

Sampling Date:

10/25/2012

Reported:

10/26/2012

Sampling Type:

Project Name:

EME G-8 BGT

Sampling Condition:

** (See Notes)

Project Number: Project Location:

NONE GIVEN **NOT GIVEN**

99.9 %

63.6-154

Sample Received By:

Jodi Henson

Sample ID: EAST 5 PT. COMP (H202607-02)

| BTEX | 8021B | |
|------|-------|--|
|------|-------|--|

| BTEX 8021B | mg/kg | | Analyze | Analyzed By: MS | | | | • | |
|--------------------------------------|--------|-----------------|-----------------|-----------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS · | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 10/26/2012 | ND | 1.76 | 87.9 | 2.00 | 0.815 | |
| Toluene* | <0.050 | 0.050 | 10/26/2012 | ND | 1.92 | 95.9 | 2.00 | 1.02 | |
| Ethylbenzene* | <0.050 | 0.050 | 10/26/2012 | ND | 1.89 | 94.4 | 2.00 | 0.726 | |
| Total Xylenes* | <0.150 | 0.150 | 10/26/2012 | ND | 5.72 | 95.3 | 6.00 | 0.867 | |
| Total BTEX | <0.300 | 0.300 | 10/26/2012 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIL | 104 9 | 6 89.4-12 | 6 | | | | | | |
| Chloride, SM4500CI-B | mg/ | kg | Analyzed By: HM | | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 144 | 16.0 | 10/25/2012 | .ND | 416 | 104 | 400 | 3.77 | |
| TPH 8015M | mg/ | kg | Analyze | Analyzed By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifie |
| GRO C6-C10 | <10.0 | 10.0 | 10/25/2012 | ND | 195 | 97.7 | 200 | 2.56 | |
| ako ce-cio | | | | | | | • | | |

Cardinal Laboratories

Surrogate: I-Chlorooctadecane

*=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 Clerdinal, 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. Keine

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 SM4500CI-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

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Celey D. Keine



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (675) 393-2326, FAX (575) 393-2476

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December 04, 2012

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME G-8 BGT

Enclosed are the results of analyses for samples received by the laboratory on 12/03/12 16:15.

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 accredited certif.html.

Cardinal Laboratories is accreditated 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.

Celey D. Keine

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:

12/03/2012

Reported:

12/04/2012

Project Name: Project Number: EME G-8 BGT NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

11/30/2012

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: CALICHE (H202906-01)

| Chloride, | SM4500CI-B |
|-----------|------------|
| | |

Chloride

mg/kg

Analyzed By: HM

Analyte

Result

<16.0

Reporting Limit 16.0

Analyzed 12/04/2012

Method Blank ND BS 416 % Recovery 104 True Value QC 400 RPD

`

Oualifier

0.00

Sample ID: TOPSOIL (H202906-02)

| Chloride, SM4500CI-B | mg/ | 'kg | Analyzed By: HM | | | | | | |
|----------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | <16.0 | 16.0 | 12/04/2012 | ND ` | 416 | 104 | 400 | 0.00 | |

Sample ID: BASE COARSE (H202906-03)

| Chloride, SM4500CI-B | | /kg | Analyzed By: HM | | | | | | |
|----------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 80.0 | 16.0 | 12/04/2012 | ND | 416 | 104 | 400 | 0.00 | |

Cardinal Laboratories

*=Accredited Analyte

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Celey & Keine

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

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Celey & Keine



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Mariand; Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

| Company Name: | KIGE OPERATIONS - | | | | . 1 | 24 | | 3// | LLTO | | | | | | .Α | NAI | LYSI | S RE | QUE | ST: | | | |
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| Project Manager | | | | | | P.C |), #: | | | | | | 1 | | T | | | | | | | | |
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| Labil.D., | Sample I.D. | (G)RAB OR (C)OMP # CONTAINERS | ROUNDWATER | WASTEWATER SOIL | OIL. SLUDGE, | THER | ACID/BASE: ICE (COOL, | отнек: | DATE | ÍIMÉ. | 1. | | | | | | | | | | | | |
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| IPLEASE NOTE: Linusly and | d Damuyus, Cordinals balahiy und sheru's exclusive remody lot a g base for negligency and any olitor criuso wholsoaver shall be e | ny cham an | say what | ner based in | contract | or fart | , shall be lan | មួយជា រ | o the amount par | a by the chent for | the. | <u> </u> | <u> </u> | -11_ | !_ | | <u> </u> | 1 | | l | | <u>_</u> | |
| anidyses. All chims including | g thase for negligency find any Ottion Edicisi Wholsoaver shall be e Wilhish he l'able for Incidional or consequentel damagos, lifetiffing of our of the Celated in the Performance of Services hereimder by C | loemed wo without lim | ved unler italien, bu | s mada in w និទ្ធិសេន វិកវត្តិខ្ | riting and Collens, ic | receiv inn int | ved by Couli use, or hiss | nal w | stiving 30 chays with other included by e | r នៃបញ្ចេញម៉ូម៉ូម៉ូប៉ូក្រ ស៊ូរ៉ូ ម៉ នាំបំពុំស្រី នៃវិទ្យាស្រីទីទីនេ | no apidica iĝes, | blo. | | | | | | | | | | | |
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RICE ENVIRONMENTAL CONSULTING & SAFETY

122 West Taylor Hobbs, NM 88240 PHONE: (505) 393-9174 FAX: (505) 397-1471 PID METER CALIBRATION & FIELD REPORT FORM

| EME G-8 BGT | | SECTION | 10 WIN SHIII | TO TO TO | | | | |
|------------------------|---------------|--------------------|--------------|----------|--|--|--|--|
| SITE | UNIT | SECTION | TOWN SHIP | RANGE | | | | |
| RICE OPERATING | | | | | | | | |
| | | | | | | | | |
| | CO | MPANY | | | | | | |
| ACCURACY: +/- 2% | | | | | | | | |
| M | ETER READING | ACCURACY: 100 | | | | | | |
| LOT NO : Hal-248-100-1 | | EXPIRATION DATE | : 7/1/2015 | | | | | |
| GAS COMPOST | TION: ISOBUTY | LENE 100PPM / AIR: | BALANCE | | | | | |
| MODEL: PGM | SERIAL | NO: | | ú | | | | |
| NO. X MODEL: PGM 73 | | NO: 592-903318 | | | | | | |
| MODEL MODEL: PGM 73 | | NO: 590-000504 | | • | | | | |
| CK. MODEL: PGM 73 | 00 SERTAL | NO: 590-000508 | | | | | | |

| SAMPLE ID | PID | SAMPLE ID | PID |
|-----------|-----|-----------|-----|
| TOPSOIL | 0 | | |
| CALICHE | 2.1 | | |
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I verify that I have calibrated the above instrument in accordance to the manufacture operation manual.

SIGNATURE:

DATE: 11/30/2012

RICE ENVIRONMENTAL CONSULTING & SAFETY

122 West Taylor Hobbs, NM 88240 PHONE: (505) 393-9174 FAX: (505) 397-1471 PID METER CALIBRATION & FIELD REPORT FORM

| a | | | | | | | | | |
|--|-----------------|-----------------------|-------------------------|-----------|--------|--|--|--|--|
| CK. | MODEL: PGM 7300 | | NO: 590-000508 | | | | | | |
| MODEL | MODEL: PGM 7300 | SERIAL NO: 590-000504 | | | | | | | |
| NO. X | MODEL: PGM 7320 | SERIAL | NO: 592 - 903318 | | | | | | |
| | MODEL: PGM | SERIAL | NO: | | | | | | |
| GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE | | | | | | | | | |
| LOT NO : Hal-248-100-1 EXPIRATION DATE: 7/1/2015 | | | | | | | | | |
| | METE | R READING | ACCURACY: 100 | | | | | | |
| ACCURACY: +/- 2% | | | | | | | | | |
| | | | | | | | | | |
| | COMPANY | | | | | | | | |
| | RICE OPERATING | | | | | | | | |
| | | | | | | | | | |
| SI | FE - | UNIT | SECTION | TOWN SHIP | RANGE | | | | |
| | | | | | | | | | |
| EME G | -8 BGT | G | 8 | T-20-S | R-37-E | | | | |

| SAMPLE ID | PID | SAMPLE ID | PID |
|----------------|-----|-----------|-----|
| BASE COARSE | 0 | | |
| DI IOL COINCID | | | |
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I verify that Thave calibrated the above instrument in accordance to the manufacture operation manual.

SIGNATURE:

DATE: 12/3/2012

Jimmie T. Cooper PO Box 55 Monument, NM 88265 October 25, 2012

Hack Conder Environmental Project Manager Rice Operating Company 120 West Taylor Hobbs, NM \$8240

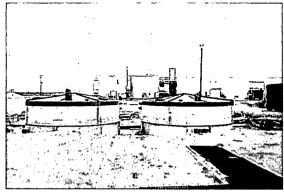
Dear Mr., Conder...

This letter is in regards to work that will be performed at EME G-8 BGT (API 30-025-06017) located at UL/G, Sec. 8, T20S, R37E. The site is located inside of an active facility. Therefore, I am authorizing that it is permissible for the site to be backfilled with clean imported caliche and seeding will not be required.

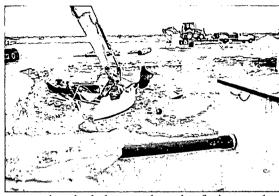
Sincerely;

Jimmie T. Cooper

EME G-8 BGT Unit G, Section 8, T20S, R37E



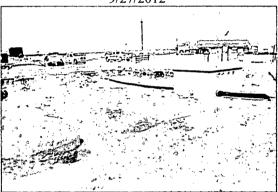
former below grade tanks, facing north 9/27/2012



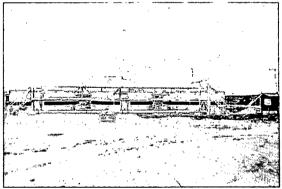
removing the below grade tanks, facing south 9/27/2012



disposing of the below grade tanks 9/27/2012



below grade tanks removed, facing northwest 9/27/2012



new G-8 facility, facing west 9/27/2012



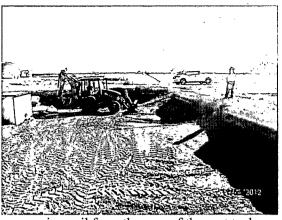
collecting soil samples, facing northeast 10/25/2012



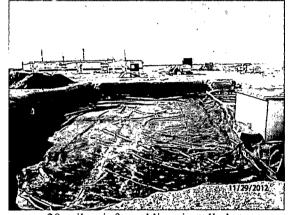
exporting scraped soil, facing south 11/5/2012



importing blow sand, facing north 11/29/2012



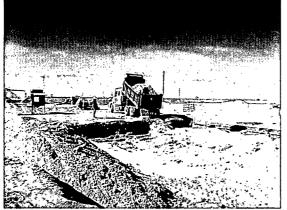
scraping soil from the area of the east tank, facing east 11/5/2012



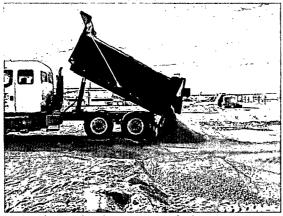
20-mil, reinforced liner installed at approximately 5 ft bgs, facing west 11/29/2012



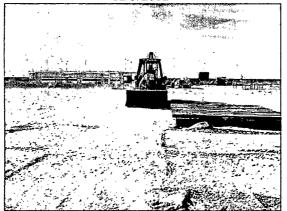
padding above the liner with blow sand, facing north 11/30/2012



importing caliche, facing west 11/30/2012



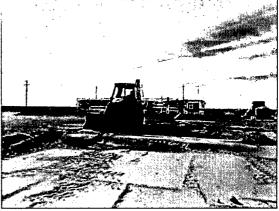
importing base coarse, facing west 12/3/2012



contouring the site, facing west 12/6/2012



backfilling the site with caliche, facing northwest 11/30/2012



backfilling the site with base coarse, facing west 12/3/2012



site complete, facing north 12/6/2012

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003 Submit 2 Copies to appropriate

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

| BGT-Closure | OPERATOR | ☐ Initial Report ☐ Final Report | | | | |
|---|--|--|--|--|--|--|
| Name of Company: RICE Operating Company | Contact: Hack Conder | | | | | |
| Address: 112 West Taylor Hobbs, NM 88240 | Telephone No: (575) 393-9174 | | | | | |
| Facility Name: EME G-8 West below grade tank (BGT) | Facility Type: SWD | | | | | |
| Surface Owner: Jimmie Cooper Mineral Owner | . , | API No. 30-025-06017 | | | | |
| LOCATIO | ON OF RELEASE | | | | | |
| Unit Letter Section Township Range Feet from the Nort S 20S 37E | h/South Line Feet from the East | t/West Line County Lea | | | | |
| Latitude 32° 35' 38 | 3" Longitude 103° 16'337" | | | | | |
| NATURI | E OF RELEASE | | | | | |
| Type of Release: produced water | Volume of Release: unknown | Volume Recovered: unknown | | | | |
| Source of Release: unknown | Date and Hour of Occurrence: unknown | Date and Hour of Discovery: soil investigation began in 2009 and was completed in December 2012 | | | | |
| Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required | If YES, To Whom? | completed in December 2012 | | | | |
| By Whom? | Date and Hour | · · · | | | | |
| Was a Watercourse Reached? | If YES, Volume Impacting the Wa | atercourse. | | | | |
| ☐ Yes ☒ No | | • | | | | |
| If a Watercourse was Impacted, Describe Fully.* | | | | | | |
| Describe Cause of Problem and Remedial Action Taken.* The below grade tanks located at this site were removed according to soils beneath the tanks, it was determined that past operations did not be Describe Area Affected and Cleanup Action Taken.* A composite sample was collected from the area beneath the west for resulting in a chloride concentration of 96 mg/kg, a GRO concentration below detectable limits. In order to protect groundway properly seated at approximately 5 ft below ground surface (bgs). It backfilled with clean, imported caliche. This site is located on an actiandowner). | ot impact soil at concentrations to in rmer below grade tank and was ana tion of <10.0 mg/kg, a DRO concent ater from any potential chloride mig The liner was padded with clean, imp tive lease pad; therefore, seeding wa | mpair groundwater quality. Alyzed by a commercial laboratory, ration of 89.5 mg/kg, and a BTEX gration, a 76x67-ft liner was installed and ported blow sand, and the excavation was as not required (as approved by the | | | | |
| I hereby certify that the information given above is true and complete to regulations all operators are required to report and/or file certain release public health or the environment. The acceptance of a C-141 report by should their operations have failed to adequately investigate and remedi or the environment. In addition, NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations. | notifications and perform corrective a he NMOCD marked as "Final Report' ate contamination that pose a threat to | ctions for releases which may endanger does not relieve the operator of liability ground water, surface water, human health | | | | |
| Signature: Hollander | OIL CONSERVATION DIVISION for Approved by District Supervisor: | | | | | |
| Printed Name: Hack Conder | Transcott of Endine Superinson. | <u> </u> | | | | |
| Title: Environmental Manager | Approval Date: 1/14/13 | Expiration Date: | | | | |
| E-mail Address: hconder@riceswd.com | Conditions of Approval: | Attached | | | | |
| Date: 12/28/2012 Phone: (575) 393-9174 * Attach Additional Sheets If Necessary | , | | | | | |