District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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

Re

For temporary pits, below-grad
multi-well fluid management pi
appropriate NMOCD District Off
For permanent pits submit to th
Environmental Bureau office and
to the appropriate NMOCD Distr

Pit, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

RCVD AUG 19 '13
OIL CONS. DIV.
DIST. 3

Type of action:
11306 Amended
Below grade tank registration
Permit of a pit or proposed alternative method
Closure of a pit, below-grade tank, or proposed alternative method
Modification to an existing permit/or registration
Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, 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.

1.
Operator: ___NM&O Operating Company_____ OGRID #: 15938_____
Address: ___320 S. Boston, Ste. 2000, Tulsa, OK. 74103_____
Facility or well name: Rucker Lake #2 SWD_____
API Number: 30-039-23231_____ OCD Permit Number:_____
U/L or Qtr/Qtr ___K_____ Section __24_____ Township __25N_____ Range _2W_____ County: Rio Arriba
Center of Proposed Design: Latitude _____ Longitude _____ NAD: 192
Surface Owner: Federal State XPrivate Tribal Trust or Indian Allotment

2.
Pit: Subsection F, G or J of 19.15.17.11 NMAC
Temporary: Drilling Workover
Permanent Emergency Cavitation P&A Multi-Well Fluid Management Low Chloride Drilling Fluid yes no
Lined Unlined Liner type: Thickness _____mil LLDPE HDPE PVC Other _____
String-Reinforced
Liner Seams: Welded Factory Other _____ Volume: _____bbl Dimensions: L_____ x W_____ x D__

3.
Below-grade tank: Subsection I of 19.15.17.11 NMAC
Volume: ___20 bbls_____bbl Type of fluid: __Produced Water_____
Tank Construction material: _____Steel_____
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 _____mil HDPE PVC Other _____

4.
Alternative Method:
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration

5.

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, hosp or church)*

Four foot height, four strands of barbed wire evenly spaced between one and four feet

Alternate. Please specify_____

6.

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)

7.

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 19.15.16.8 NMAC

8.

Variances 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:

Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.

Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

9.

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 accep material are provided below. **Siting criteria does not apply to drying pads or above-grade tanks.**

General siting

Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.
-0 NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit .
NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

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. **(Does not apply to below grade tanks)**
-0 Written confirmation or verification from the municipality; Written approval obtained from the municipality

Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)**
-1 Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

Within an unstable area. **(Does not apply to below grade tanks)**
-2 Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

Within a 100-year floodplain. **(Does not apply to below grade tanks)**
-3 FEMA map

Below Grade Tanks

Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).
-1 Topographic map; Visual inspection (certification) of the proposed site

Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;.
-4 NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)

Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)
-5 Topographic map; Visual inspection (certification) of the proposed site

Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.
-6 Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.
NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

Within 100 feet of a wetland.
-7 US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

Temporary Pit Non-low chloride drilling fluid

Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).
-8 Topographic map; Visual inspection (certification) of the proposed site

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.
-9 Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;
-10 NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

Within 300 feet of a wetland.
-11 US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

Permanent Pit or Multi-Well Fluid Management Pit

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).
-12 Topographic map; Visual inspection (certification) of the proposed site

10.

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NM

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doc 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 NM
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
Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.1 19.15.17.13 NMAC

Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

11.

Multi-Well Fluid Management Pit 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 doc attached.

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
A List of wells with approved application for permit to drill associated with the pit.
Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15. 19.15.17.13 NMAC
Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12.

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 doc 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_2S, 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

13.

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 X Below-grade Tank Multi-well Fluid Management Pit Alternative

Proposed Closure Method: Waste Excavation and Removal X
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

14.
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attac 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 C 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 H of 19.15.17.13 NMAC
Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

15.
Siting 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 source provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Plea 19.15.17.10 NMAC for guidance.

Ground water is less than 25 feet below the bottom of the buried waste. -2 NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Y N
Ground water is between 25-50 feet below the bottom of the buried waste -3 NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Y N
Ground water is more than 100 feet below the bottom of the buried waste. -4 NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Y N
Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). -16 Topographic map; Visual inspection (certification) of the proposed site	Y
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. -17 Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Y
Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application. -18 NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	Y
Written confirmation or verification from the municipality; Written approval obtained from the municipality	Y
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Y
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. -19 Written confirmation or verification from the municipality; Written approval obtained from the municipality	Y
Within the area overlying a subsurface mine. -20 Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	Y
Within an unstable area. -21 Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	Y
Within a 100-year floodplain. -22 FEMA map	Y

16.
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 E of 19.15.17.13 NMAC
Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.11 NM
Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.1
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 19.15.17.13 NMAC
Waste Material Sampling Plan - based upon the appropriate requirements 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 cannot be a
Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

17.
Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Larry Sweet Title: President

Signature: Date: 8/13/13

e-mail address: helen@kaweXp.com Telephone: 918-584-3802

18.
OCD Approval: Permit Application (including closure plan) Closure ~~Plan (only)~~ OCD Conditions (see attachment)

OCD Representative Signature: Jonathan D. Kelly **Approval Date:** 9/9/2013

Title: Compliance Officer **OCD Permit Number:**

19.
Closure Report (required within 60 days of closure completion): 19.15.17.13 NMAC
Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not co section of the form until an approved closure plan has been obtained and the closure activities have been completed.

Closure Completion Date: 8-9-13

20.
Closure Method:

X Waste Excavation and Removal On-Site Closure Method Alternative Closure Method Waste Removal (Closed-loop systems o
If different from approved plan, please explain.

21.
Closure Report Attachment Checklist: ***Instructions: Each of the following items must be attached to the closure report. Please indica mark 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 for private land only)
Plot Plan (for on-site closures and temporary pits)
Confirmation Sampling Analytical Results (if applicable)
X Waste Material Sampling Analytical Results (required for on-site closure)
X Disposal Facility Name and Permit Number
X Soil Backfilling and Cover Installation
Re-vegetation Application Rates and Seeding Technique
X Site Reclamation (Photo Documentation)
On-site Closure Location: Latitude _____ Longitude _____ NAD: 1927 198

22.

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 knov belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan

Name (Print): Larry Sweet Title:President

Signature: Date: 8-13-13

e-mail address:helent@xanexp.com Telephone: 918-584-3

918-584-3802

NM&O OPERATING COMPANY

BELOW-GRADE TANK CLOSURE PLAN

In accordance with New Mexico Oil Conservation Rules and Regulations the following is submitted for closing below-grade tanks ("BGT").

NM&O Operating Company ("NM&O ") submits the following requirements established in closing below-grade tanks ("BGT) on NM&O well sites. The standard protocols and procedures for the closure of BGTs are as follows. Any deviations from this plan or specific changes will be filed on form C-144 with the New Mexico Oil Conservation division ("NMOCD");

NM&O will close existing BGT's that do not meet the requirements of Paragraphs 1 – 4, Subsection 1 of 19.15.17.11 NMAC or is not included in Paragraph 5 thereof. NM&O will close permitted BGT's within 60 days of cessation of the BGTs operation or as otherwise required by 19.15.17.11 NMAC in accordance with this closure plan after NMOCD approval.

(1) Notify the surface owner by certified mail, return receipt requested, of the plans to close the below-grade tank.

(2) Notify the Aztec OCD office (Jonathan Kelly – 505-334-6178 ext. 122) verbally or by other means at least 72 hours, but not more than one week, prior to the planned closure operation.

(3) Remove liquids from the below-grade tank. Dispose of the liquids and sludge in a division-approved facility.

(4) Remove the below-grade tank for re-use in an above-ground setup or for disposal in a division-approved manner.

(5) Unless the equipment is required for some other purpose, remove any on-site equipment associated with the below-grade tank.

(6) Test the soils beneath the below-grade tank to determine whether a release has occurred.

- Collect, at a minimum, a five point, composite sample;
- Collect individual grab samples from any area that is wet, discolored or showing other evidence of a release;

Analyze for BTEX, TPH and chlorides to demonstrate:

- Benzene concentration does not exceed 0.2 mg/kg, as determined by EPA SW-846 methods 8021B or 8260B

- Total BTEX concentration does not exceed 50 mg/kg, as determined by EPA SW-846 methods 8021B or 8260B
- TPH concentration does not exceed 100 mg/kg, as determined by EPA method 418.1
- Chloride concentration does not exceed 250 mg/kg, as determined by EPA method 300.1 or the background concentration, whichever is greater.

(7) If the soil analyses show that the soils meet the concentrations specified in (6) above, backfill the excavation with compacted, non-waste containing, earthen material in a manner that will prevent ponding or erosion. If the area will not be needed for operations, reclaim the area as described in the "RECLAMATION" section.

(8) If the soil analyses show that the soils exceed one or more of the concentrations specified in (6) above, notify the Aztec OCD office (Jonathan Kelly – 505-334-6178 ext. 122) and proceed per 19.15.3.116 NMAC.

NOTE: If groundwater is encountered at any time during the closure process, the OCD office will be notified and a specific closure plan will be submitted to the Aztec and Santa Fe OCD offices for approval.

FINAL CLOSURE REPORT:

Within 60 days of closure completion, submit a closure report on form C-144, with necessary attachments to document all closure activities including sampling results.

RECLAMATION:

If the area is not needed for operations, reclaim the area to a safe and stable condition that blends with the surrounding undisturbed area. Restore the impacted surface area to the condition that existed prior to oil and gas operations by placement of the soil cover, recontour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography and re-vegetate.

(A) Construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material. The soil cover shall consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.

(B) Seed or plant the disturbed areas the first growing season after closing the below grade tank. Drill on the contour whenever practical or by other division-approved methods. The goal is to obtain vegetative cover that

equals 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. During the two successive growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.

(C) Repeat seeding or planting until it successfully achieves the required vegetative cover.

(D) If conditions are not favorable for the establishment of vegetation, such as periods of drought, contact the Aztec OCD office to discuss possibly delaying seeding or planting until soil moisture conditions become favorable or using additional techniques such as mulching, fertilizing, irrigating, fencing or other practices.

(E) Notify the Aztec OCD office (Jonathan Kelly – 505-334-6178 ext. 122) when the area has been seeded or planted and when it successfully achieves re-vegetation.

NM&O OPERATING COMPANY
BELOW GRADE TANK
CLOSURE REPORT

Lease Name: Rucker Lake #2 SWD

API No: 30-039-23231

Description: Unit K, Section 24, Township 25N, Range 2W, Rio Arriba County

This is NM&O Operating Company's ("NM&O"procedure for the closing of the below grade tank (s) at the above mentioned location.

1. NM&O's final closure for the below-grade tanks completed on for the Rucker Lake #2 SWD.

2. NM&O removed the produced water and sludge from the below grade tank prior to implementing a closure plan and disposed of them in a division-approved facility. **TNT Envirmental Inc. Permit No 08-00001**

3. NM&O has removed the below grade tank, and has disposed of it at a division approved facility, or recycled, reclaimed or reused it in a manner that is approved by the dividion.

4. A five poit composite sample was taken of the pit using sampling tools and all samples tested per NMOCD Regulations.
   Envirotech Inc. (Sample results attached)

5. Mr. Jonathan Kelly of the disrict office was notified on or around May 30, 2013.

6. The location has been recontoured to match the fit, shape, line form and texture of the surrounding area. Re-shaping include damage conrrol, prevent ponding and prevent erosion. The final re-contour has a uniform appearance with smooth surface, fitting the natural landscape.

7. The excavations have been backfilled with fresh dirt meeting the requirementf of the NMOCD.

8. No vegetation was included in the leak, no re-seeding necessary.

9. NM&O's closure report will be filed on form C-144 and include the following:
   A.Comfirmation sampling analyutical results:
   B. Disposal facility name and permit number (included in this report):
   C. Soil backfilling and cover installation:
   D. Photo documentation of the site reclamation:

Helen Thomas

From: "Felipe Aragon" <faragon@envirotech-inc.com>
To: <helent@xanexp.com>
Cc: "Greg Crabtree" <gcrabtree@envirotech-inc.com>; "Rene' Garcia" <rgarcia@envirotech-inc.com>
Sent: Wednesday, June 19, 2013 3:55 PM
Subject: Rucker Lake #2 SWD

Helen,

Per our phone conversation earlier today below is the NMOCD regulatory information you were requesting in regards to the activities performed at the Rucker lake #2 SWD well site.

Regulations for Below Ground Tank Closure:

Constituent	Analytical Method	NMOCD BGT Closure Standard
Benzene	8021B	.2 ppm
Total BTEX	8021B	50.0 ppm
TPH	418.1	100 ppm
TPH	8015D	100 ppm
Chlorides	300	250 ppm

Regulations for spill cleanup; the Risk ranking for this location was determined to be 100 ppm TPH and 100 ppm organic vapor (10 ppm benzene and 50 ppm total BTEX). This was based on distance to surface water being between 200-1000 feet, depth to ground water between 50-100 feet and the well site being within 1000 feet of a well head protected area.

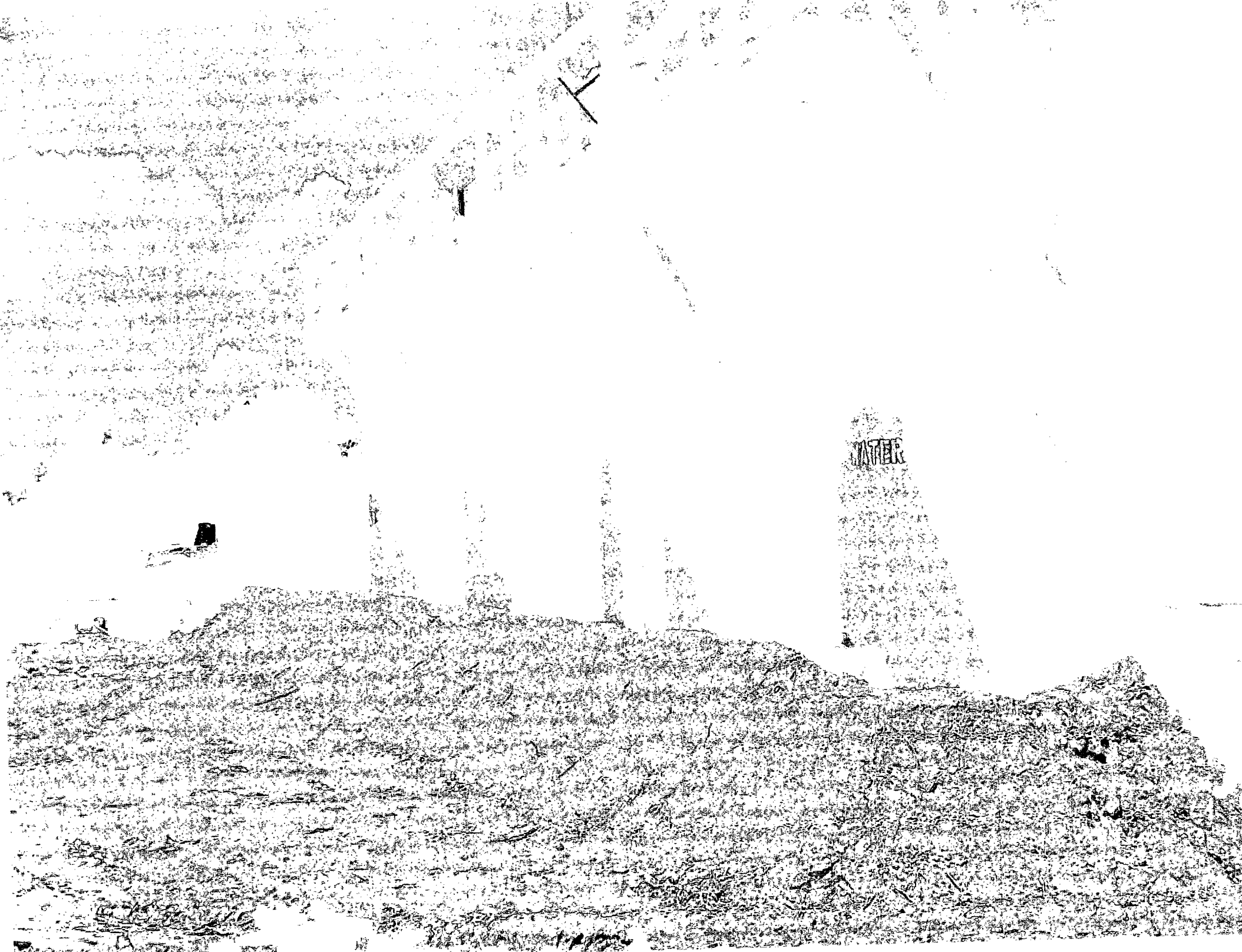
Constituent	Analytical Method	NMOCD Spill Closure Standard
Benzene	8021B	10 ppm
Total BTEX	8021B	50.0 ppm
TPH	418.1	100 ppm
TPH	8015D	100 ppm
Organic Vapors	PID	100 ppm

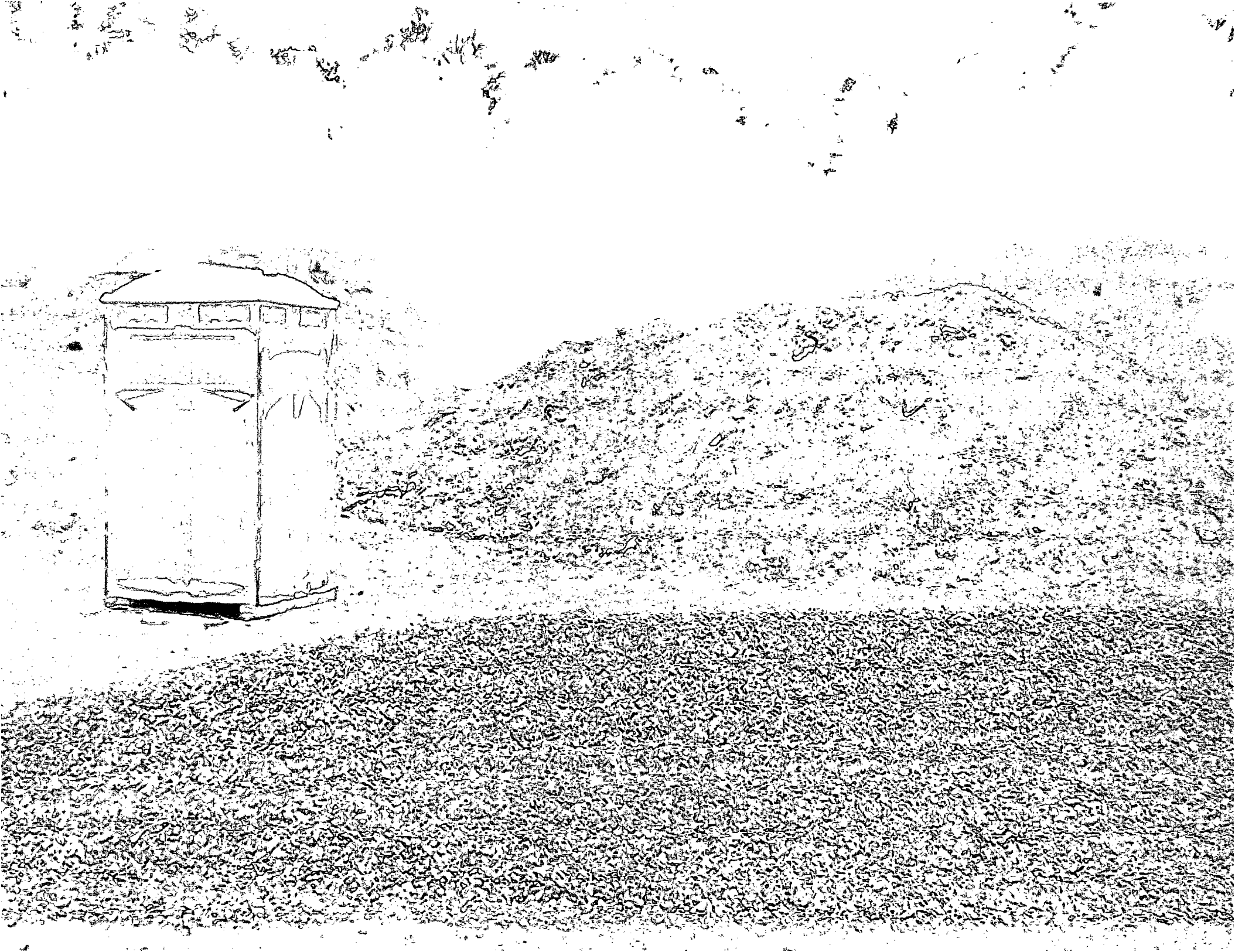
If you have any further questions please feel free to contact me. We appreciate the opportunity to be of service.

Respectfully,

Felipe Aragon, CES
Senior Environmental Field Technician
Phone (505) 632-0615
Cell (505) 947-2332

envirotech


WATER



NM&O OPERATING COMPANY

320 S Boston Ave., Suite 2000
Tulsa, Oklahoma 74103
(918) 584-3802

August 13, 2013

State of New Mexico
Energy Minerals & Natural Resources Dept.
Oil Conservation Division
District III
1000 Rio Brazos Road
Aztec, New Mexico 87410
Attention Mr. Jonathan Kelly

Re: Rucker Lake #2 SWD
API #30-039-23231
Rio Arriba County, New Mexico
Below Grade Tank Closure Report

Dear Mr. Kelly:

Enclosed is NM&O Operating Company's Form 144 with the final closure details for the above mentioned well.

If you need additional information please call me at the number listed above.

Thank you for your help and consideration in this matter.

Sincerely,

Helen Thomas

Helen Thomas
Helent@xanexp.com

Enclosures

Helen Thomas

From: "Kelly, Jonathan, EMNRD" <Jonathan.Kelly@state.nm.us>
To: "Helen Thomas" <helent@xanexp.com>
Sent: Tuesday, September 03, 2013 8:55 AM
Subject: RE: NM&O Operating Company Rucker Lake #2 SWD Completed Forms

Thank you Helen, that is enough to allow me to hold the permit until we received a hard copy, please submit the attachment to us by mail and I will get them attached and the permit approved once we receive them.

Thank you,

Jonathan D. Kelly
Compliance Officer
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 122
jonathan.kelly@state.nm.us

From: Helen Thomas [mailto:helent@xanexp.com]
Sent: Tuesday, September 03, 2013 7:51 AM
To: Kelly, Jonathan, EMNRD
Subject: NM&O Operating Company Rucker Lake #2 SWD Completed Forms

Mr. Jonathan Kelly,

Please find the attached NM&O Operating Company's executed Form C-141, Sampling Analytical results, an amendment to our Below Grade Tank Closure Plan, as well as an amended Below Grade Tank Closure Plan. The completed Request for Approval to Accept Solid Waste from T-N-T is also attached.

Thank you for your time and consideration in this matter.

Best regards,

Helen Thomas
NM&O Operating Company
320 S. Boston Ave, Suite 2000
Tulsa, OK 74103

Phone - 918-584-3802
Fax - 918-585-1753

NM&O Operating Company

320 S. Boston Ave, #2000
Tulsa, OK 74103
Phone 918-584-3802
Fax 918-585-1753

August 29, 2013

Mr. Johathan Kelly
State Of New Mexico
Energy Minerals ande Natural Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RE: Rucker Lake #2 SWD
30-039-23231
Rio Arriba County, New Mexico

Dear Mr. Kelly

Enclosed is NM&O Operating Company's ("NM&O") executed Form C-141, Sampling Analyutical results and an amendment to our Below-Grade Tank Closure Plan as well as an amended Below Grade Tank Closure Plan.

Also the completed Request for Approval to Accept Solid Wate from T-N-T is enclosed.

Thank you for your time and consideration in this matter.

Sincerely,

Helen Thomas

Helen Thomas

enclosures

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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 August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report X Final Report

Name of Company NM&O Operating Company	Contact Larry Sweet
Address 320 S. Boston Ave, Ste 2000 Tulsa, OK 74103	Telephone No. 918-584-3802
Facility Name Rucker Lake #2	Facility Type SWD

Surface Owner Larry Hadley	Mineral Owner Federal	API No. 30-039-23231

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	1450 Feet from	South Line	1520' Feet from	West Line	County
K	24	25N	2W					Rio Arriba

Latitude 36.38014628 **Longitude** -107-0053462

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 20bbls	Volume Recovered 20 BBLS
Source of Release Below-Grade Tank	Date and Hour of Occurrence May 30, 2013	Date and Hour of Discovery May 30, 2013
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD Aztec District	
By Whom? Surface Owner	Date and Hour May 30, 2013	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

OIL CONS. DIV DIST. 3

SEP 09 2013

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Below-grade steel tank had a leak in the bottom resulting in approximately 20 bbls of produced water escaping onto the location. All steel tanks were emptied and prepared for removal to be dispossed of according to NMOCD specifications.

Describe Area Affected and Cleanup Action Taken.*Tank was removed from area, soil samples were taken from the pit and sent to Envirotech for analyzing. (Report attached) Affected area was scraped and dirt and sluge was hauled to TNT Envirmental. The excavation has been back filled with fresh dirt meeting the NMOCD rules and regulations. Fiberglass tanks have been set.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Helen Thomas	OIL CONSERVATION DIVISION	
Printed Name: Helen Thomas	Approved by Environmental Specialist:	
Title: Adm. Asst	Approval Date:	Expiration Date:
E-mail Address: helent@xtoenp.com	Conditions of Approval:	Attached ☐
Date: 8-30-13 Phone: 918-584-3802		

* Attach Additional Sheets If Necessary

NM&O OPERATING COMPANY
BELOW GRADE TANK
CLOSURE REPORT

Lease Name: Rucker Lake #2 SWD

API No: 30-039-23231

Description: Unit K, Section 24, Township 25N, Range 2W, Rio Arriba County

This is NM&O Operating Company's ("NM&O"procedure for the closing of the below grade tank (s) at the above mentioned location.

1. NM&O's final closure for the below-grade tanks completed on August 9, 2013 for the Rucker Lake #2 SWD.

2. NM&O removed the produced water and sludge from the below grade tank prior to implementing a closure plan and disposed of them in a division-approved facility. **TNT Envirmental Inc. Permit No 08-00001**

3. NM&O has removed the below grade tank, and has disposed of it at a division approved facility, or recycled, reclaimed or reused it in a manner that is approved by the division.

4. A five poit composite sample was taken of the pit using sampling tools and all samples tested per NMOCD Regulations.
   Envirotech Inc. (Sample results attached)

5. Mr. Jonathan Kelly of the disrict office was notified on or around May 30, 2013.

6. The location has been recontoured to match the fit, shape, line form and texture of the surrounding area. Re-shaping include damage control, prevent ponding and prevent erosion. The final re-contour has a uniform appearance with smooth surface, fitting the natural landscape.

7. The excavations have been backfilled with fresh dirt meeting the requirementf of the NMOCD.

8. No vegetation was included in the leak, no re-seeding necessary.

9. NM&O's closure report will be filed on form C-144 and include the following:
   A.Comfirmation sampling analyutical results:
   B. Disposal facility name and permit number (included in this report):
   C. Soil backfilling and cover installation:
   D. Photo documentation of the site reclamation:

NM&O OPERATING COMPANY

BELOW GRADE TANK CLOSURE PLAN
AMENDMENT

Page 1

Part 1. Surace owner discovered the leak and notified th NMOCD and NM&O's representative of the leak. Therefore, it was simply an oversite on NM&O's part not to formally notify the surface owner. The surface owner was aware of the work and the prompt progress to replace the tanks. In the future i NM&O has an occurance where the surface owner needs to be notified, NM&O will do so by Certified, Return Reciept mail.

Page 2

Reclamation: At this time the well is in operation and if and when the well will be abandoned and pluged then NM&O Operating Company will abide by the reclamation requirements as set forth in the NMOCD Rules and Regulations.

District I
1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
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1000 Rio Brazos Road, Aztec, NM 87410
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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-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
NM&O Operating Company, 320 S. Boston Ave. Ste 2000 Tulsa, OK 74103

2. **Originating Site:** RUCKER LAKE #2 SWD

Rio Arriba County, New Mexico

3. **Location of Material (Street Address, City, State or ULSTR):**
API 30-039-23231

4. **Source and Description of Waste:**

Produced Water **K Sec 24-T25N-R2W**

Estimated Volume ___20___ (yd³) / bbls Known Volume (to be entered by the operator at the end of the haul) 260 (yd³) / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Larry Sweet, representative or authorized agent for NM&O Operating Co do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

X☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency: ☐ Monthly ☐ Weekly ☐ Per Load*

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, TONY, representative for T-N-T do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**

B/B VAC

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: NM-01-0008

Address of Facility: 70 ojito rd Lindrith nm 87029

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☑ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☑ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Taylor Lundy TITLE: vice pres DATE: 8/20/13

SIGNATURE: TELEPHONE NO.: 774-8549

envirotech

OIL CONS. DIV DIST. 3

SEP 09 2013

August 30, 2013

Project Number 11168-0002

Mr. Don Shipley
NM&O Operating Company
15 East 5th Street, Suite 3000
Tulsa, Oklahoma 74103

Cell: (505) 320-9936

RE: BELOW GRADE TANK CLOSURE AND CONFIRMATION SAMPLING DOCUMENTATION FOR THE RUCKER LAKE #2 WELL SITE, RIO ARRIBA COUNTY, NEW MEXICO

Dear Mr. Shipley:

Enclosed please find the field notes and analytical results for below grade tank (BGT) closure, spill assessment and closure sampling activities conducted at the Rucker Lake #2 well site located in Section 24, Township 25 North, Range 2 West, Rio Arriba County, New Mexico. Upon Envirotech personnel's arrival on June 4, 2013, one (1) five (5)-point composite sample was collected from directly beneath the former BGT; see enclosed ***Field Notes***. The sample was analyzed in the field for total petroleum hydrocarbons (TPH) using USEPA Method 418.1 and for organic vapors using a photoionization detector (PID). The sample returned results below the regulatory limits for organic vapors, but above the regulatory standard for TPH, which returned results above the BGT closure standard of 100 parts per million (ppm) TPH using USEPA Method 418.1; therefore, confirming a release had occurred.

A brief site assessment was conducted and the cleanup standards for the site were determined to be 100 ppm TPH and 100 ppm organic vapors due to a horizontal distance to surface water between 200 and 1000 feet from the site, depth to groundwater greater than 100 feet, and the well site being located within a wellhead protection area, pursuant to New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Spills, Leaks, and Releases. Additionally, the sample was placed into a four (4)-ounce glass jar, capped headspace free, and transported on ice, under chain of custody, to Envirotech's Analytical Laboratory to be analyzed for TPH using USEPA Method 8015, for benzene and total BTEX using USEPA Method 8021 and for chlorides using USEPA Method 300. The sample from beneath the former BGT returned results below the regulatory standard for all constituents analyzed; see enclosed ***Analytical Results***.

In addition to the BGT closure activities, Envirotech personnel performed spill assessment and confirmation sampling activities on three (3) separate areas. The first area was a release of produced water that impacted an approximately 75 foot by 40 foot area. Prior to Envirotech's arrival, the impacted area was excavated from approximately one (1) inch deep to one (1) foot deep. Within the impacted area was the excavation of the former location of the BGT and a pothole used to delineate the extent of the contamination. The dimensions of the BGT excavation were 24 feet by 16 feet by five (5) feet deep and the dimensions of the pothole were three (3) feet

by six (6) feet by two (2) feet deep; see enclosed ***Figure 2, Site Map***. Three (3) composite samples were collected from the impacted area; one (1) from the main excavation, one (1) from the walls of the BGT, and one (1) from a pothole; see enclosed ***Field Notes***. The three (3) samples were analyzed in the field for TPH using USEPA Method 418.1, for organic vapors using a PID. All samples returned results above the regulatory standard for TPH, but below the regulatory standard for organic vapors. The samples were then placed into a four (4)-ounce glass jars, capped headspace free, and transported on ice, under chain of custody, to Envirotech's Analytical Laboratory to be analyzed for TPH using USEPA Method 8015, and for chlorides using USEPA Method 300. All samples returned results below the regulatory limits for TPH; see enclosed ***Analytical Results***. The sample collected from the main spill area returned a result of 336 ppm chlorides. The sample collected from the BGT wall returned a result of 586 ppm chlorides, and the sample from the pothole returned a result of 67 ppm chlorides; see enclosed ***Analytical Results***.

The second area was the former location of an aboveground storage tank (AST) that was staged at the location. One (1) composite sample was collected from the 12 foot diameter of the former AST see enclosed ***Figure 2, Site Map***. The sample was analyzed in the field for TPH using USEPA Method 418.1 and for organic vapors using a PID. The sample returned results above the regulatory standard for TPH, but below the regulatory standard for organic vapors; see enclosed ***Field Notes***. The sample was then placed into a four (4)-ounce glass jar, capped headspace free, and transported on ice, under chain of custody, to Envirotech's Analytical Laboratory to be analyzed for TPH using USEPA Method 8015. The sample returned results below the regulatory standards for TPH; see enclosed ***Analytical Results***.

The third area was the former location of a separator. Prior to Envirotech's arrival, the area was excavated to the extents of approximately 10 feet by six (6) feet by three (3) feet deep; see enclosed ***Figure 2, Site Map***. One (1) composite sample was collected from the excavation. The sample was analyzed in the field for TPH using USEPA Method 418.1 and for organic vapors using a PID. The sample returned results above the regulatory standard for TPH, but below the regulatory standard for organic vapors; see enclosed ***Field Notes***. Due to the concentration of the TPH, Envirotech recommended further excavation of the impacted area.

Envirotech personnel returned to the location on June 18, 2013, to perform confirmation sampling activities of the former location of the separator. Prior to arrival, the area was excavated to the extents of 10 feet by 10 feet by four (4) feet deep. One (1) composite sample was collected from the excavation. The sample was analyzed in the field for TPH using USEPA Method 418.1 and for organic vapors using a PID. The sample returned results above the regulatory standard for TPH, but below the regulatory standard for organic vapors; see enclosed ***Field Notes***. The sample was then placed into a four (4)-ounce glass jar, capped headspace free, and transported on ice, under chain of custody, to Envirotech's Analytical Laboratory to be analyzed for TPH using USEPA Method 8015. The sample returned results below the regulatory standards for TPH; see enclosed ***Analytical Results***. Based on the results above, Envirotech, Inc. recommends no further action in regards to this incident.

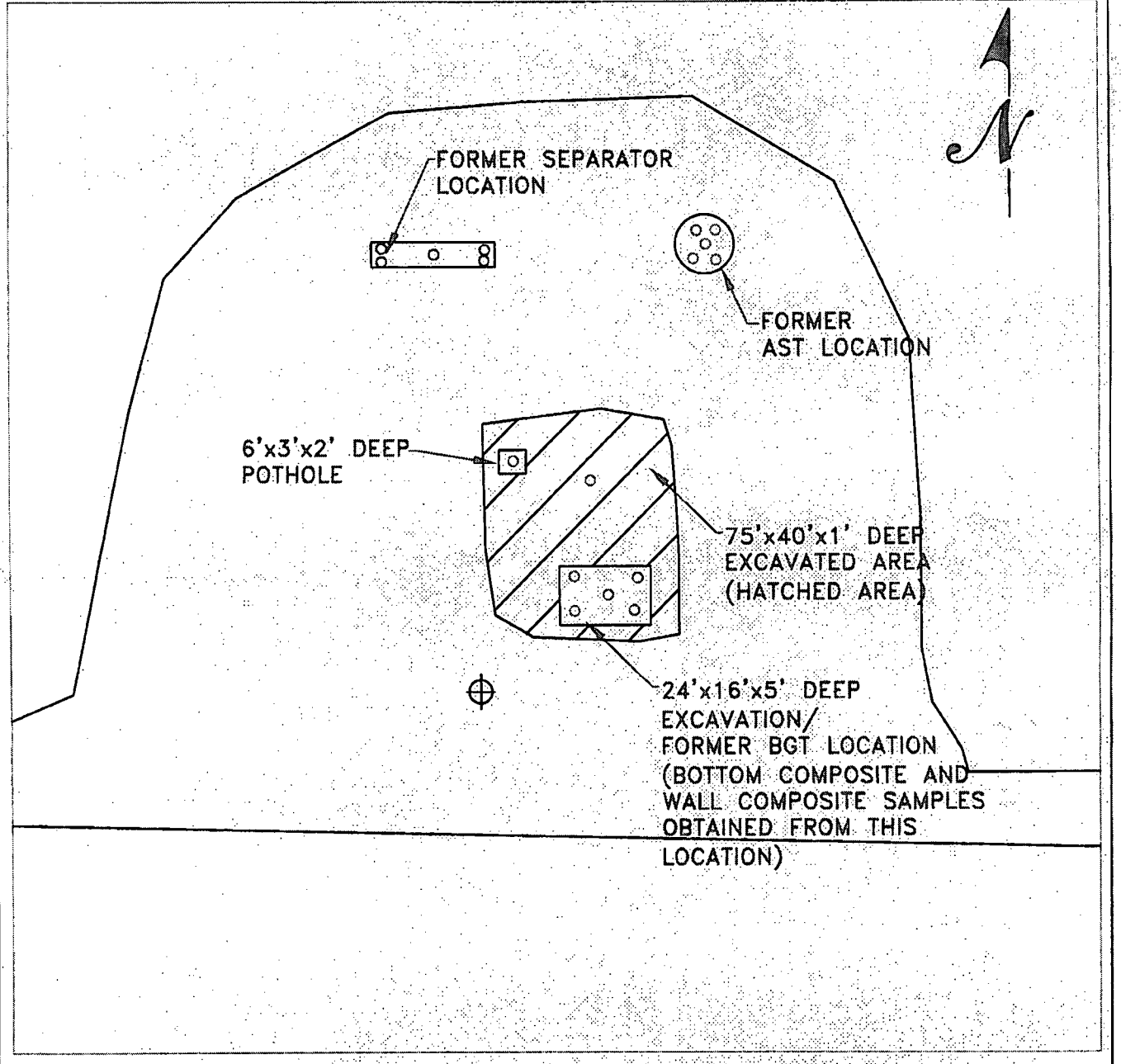
We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully submitted,
ENVIROTECH, INC.

Felipe Aragon, CES
Environmental Field Coordinator
faragon@envirotech-inc.com

Enclosure(s): Site Map
Field Notes
Analytical Results

Cc: Client File Number 11168



KEY:

○ 5-POINT COMPOSITE SAMPLE

RED SAMPLES TAKEN ON 6/4/2013

BLUE SAMPLES TAKEN ON 6/18/2013

⊕ WELLHEAD

Site Map

NM&O Operating Company
Rucker Lake #2 Well Site
Rio Arriba County, New Mexico

SCALE: NTS	FIGURE NO. 1	REV
PROJECT NO11168-0002		

REVISIONS

NO.	DATE	BY	DESCRIPTION

MAP DRWN JA DATE 8/5/2013

envirotech
5796 U.S. HIGHWAY 64, FARMINGTON, NM 87401 505-632-0615

PAGE NO: 1 OF 2

DATE STARTED: 6-4-13

DATE FINISHED:

envirotech

(505) 632-0615 (800) 362-1879

5796 U.S. Hwy 64, Farmington, NM 87401

ENVIRONMENTAL SPECIALIST: A. T. Fox

LAT: 36.58046

LONG: -107.005346

FIELD REPORT: BGT / PIT CLOSURE VERIFICATION

LOCATION: NAME: Rucker Lake WELL #: 2 TEMP PIT: PERMANENT PIT: BGT: X

LEGAL ADD: UNIT: K SEC: 24 TWP: 25N RNG: 24W PM:

QTR/FOOTAGE: 1520 / 1478 E CNTY: R. A ST: NM

EXCAVATION APPROX: 24 FT. X 16 FT. X 5 FT. DEEP CUBIC YARDAGE:

DISPOSAL FACILITY: REMEDIATION METHOD:

LAND OWNER: Fed API: 3003923231 BGT / PIT VOLUME: 45661

CONSTRUCTION MATERIAL: Fiberglass DOUBLE-WALLED, WITH LEAK DETECTION:

LOCATION APPROXIMATELY: FT. FROM WELLHEAD

DEPTH TO GROUNDWATER:

___ TEMPORARY PIT - GROUNDWATER 50-100 FEET DEEP

BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, GRO & DRO FRACTION (8015) ≤ 500 mg/kg, TPH (418.1) ≤ 2500 mg/kg, CHLORIDES ≤ 500 mg/kg

___ TEMPORARY PIT - GROUNDWATER ≥100 FEET DEEP

BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, GRO & DRO FRACTION (8015) ≤ 500 mg/kg, TPH (418.1) ≤ 2500 mg/kg, CHLORIDES ≤ 1000 mg/kg

X PERMANENT PIT OR BGT

BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, TPH (418.1) ≤ 100 mg/kg, CHLORIDES ≤ 250 mg/kg

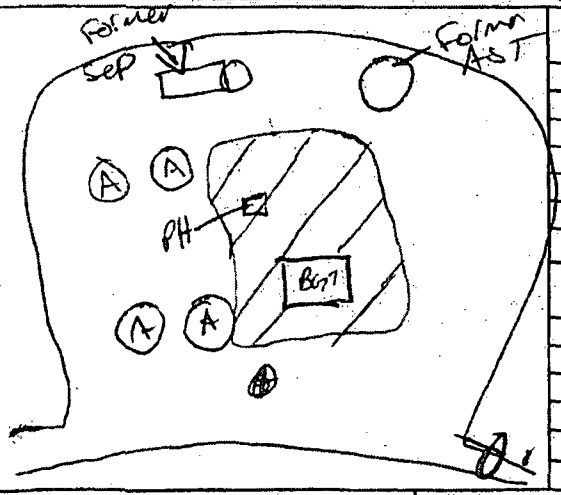
1.69

FIELD 418.1 ANALYSIS

TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. (mg/kg)
1233	~~1000~~ STD		-	-	-	105	
1259	BGT Comp	1	5	20	1	1318	5272
		2					
		3					
		4					
		5					
1320	1000 STD	6				999	

998.9

PERIMETER



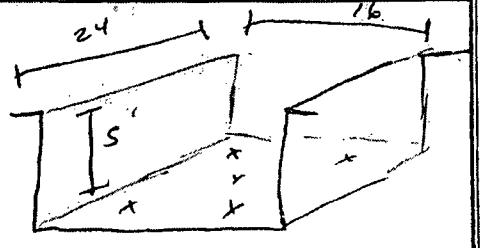
FIELD CHLORIDES RESULTS

SAMPLE ID	READING	CALC. (mg/kg)

PID RESULTS

SAMPLE ID	RESULTS (mg/kg)
1	1.7

PROFILE



LAB SAMPLES

SAMPLE ID	ANALYSIS	RESULTS
1	BENZENE	
1	BTEX	
1	GRO & DRO	
1	CHLORIDES	

NOTES:

Coy Davis

505.320.6502

100 pm Ranking: ~300' to SW, ~330' to unregistered domestic water well

WORKORDER # WHO ORDERED

3003923231

Client: NM3D

envirotech
(505) 632-0615 (800) 362-1879
5796 U.S. Hwy 64, Farmington, NM 87401

Project No: 11168-0002
COC No: 15636/15637

FIELD REPORT: SPILL CLOSURE VERIFICATION

PAGE NO: 2 OF 2
DATE STARTED: 6-4-13
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: F. Araga

LOCATION: NAME: WELL #:
QUAD/UNIT: SEC: TWP: RNG: PM: CNTY: ST:
QTR/FOOTAGE: CONTRACTOR:

EXCAVATION APPROX: FT. X FT. X FT. DEEP CUBIC YARDAGE:
DISPOSAL FACILITY: REMEDIATION METHOD:
LAND USE: LEASE: LAND OWNER:
CAUSE OF RELEASE: MATERIAL RELEASED:

SPILL LOCATED APPROXIMATELY: FT. FROM
DEPTH TO GROUNDWATER: NEAREST WATER SOURCE: NEAREST SURFACE WATER:
NMOCD RANKING SCORE: NMOCD TPH CLOSURE STD: PPM

SOIL AND EXCAVATION DESCRIPTION:

9999
139 ~~1000~~ STD @ 1320 - 797 ppm

SAMPLE DESCRIPTION	TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. ppm
200 STD	1250	200 STD					185	
BGT Load	1257	1		5	20	4	1318	5272
BGT walls	1305	2		5	20	4	382	1528
Pothole	1308	3		5	20	4	73	292
Spill @ 20a	1315	4		5	20	4	804	3216
Separator	1318	5		5	20	4	1112	4448
ASS T	1323	6		5	20	4	38	152

0 0 0 SPILL PERIMETER

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1	1.7
2	1.6
3	1.8
4	3.3
5	29.3
6	1.0

0 SPILL PROFILE

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
1	8015 8021 CL-	
3	8015 CL-	
4	8015 CL-	
6	8015	

rush

TRAVEL NOTES: CALLED OUT: ONSITE:

Client: NMOCD

envirotech
(505) 632-0615 (800) 362-1879
5796 U.S. Hwy 64, Farmington, NM 87401

Project No: 11168-0002
COC No: 15723

FIELD REPORT: SPILL CLOSURE VERIFICATION

PAGE NO: 1 OF 1
DATE STARTED: 6/18/13
DATE FINISHED: 6/18/13
ENVIRONMENTAL SPECIALIST:

LOCATION: NAME: RUCKER LAKE WELL #: 2
QUAD/UNIT: K SEC: 24 TWP: 25N RNG: 2W PM: CNTY: RIO ARRIBA NM
QTR/FOOTAGE: CONTRACTOR:

EXCAVATION APPROX: FT. X FT. X FT. DEEP CUBIC YARDAGE:
DISPOSAL FACILITY: REMEDIATION METHOD:
LAND USE: LEASE: LAND OWNER:
CAUSE OF RELEASE: MATERIAL RELEASED:

SPILL LOCATED APPROXIMATELY: FT. FROM
DEPTH TO GROUNDWATER: NEAREST WATER SOURCE: NEAREST SURFACE WATER:
NMOCD RANKING SCORE: NMOCD TPH CLOSURE STD: 100 PPM
SOIL AND EXCAVATION DESCRIPTION:

SAMPLE DESCRIPTION	TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. ppm
2 Point	10:30					1X	134	134
Sep. Comp	11:00			5g	20	4X	220	880

SPILL PERIMETER

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
Sep Comp	24

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

SPILL PROFILE

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: NM & O

Chain Of Custody Number: 15636

Samples Received: 6/4/2013 5:00:00PM

Job Number: 11168-0002

Work Order: P306012

Project Name/Location: Confirmation Sample/
Rucker Lake #2

Entire Report Reviewed By: _____ Date: 6/6/13

Tim Cain, Laboratory Manager

Supplement to analytical report generated on: 6/6/13 8:01 am

envirotech
Analytical Laboratory

NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	06-Jun-13 08:08

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BGT Bottom Comp	P306012-01A	Soil	06/04/13	06/04/13	Glass Jar, 4 oz.
Spill Area Comp	P306012-02A	Soil	06/04/13	06/04/13	Glass Jar, 4 oz.

envirotech
Analytical Laboratory

NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	06-Jun-13 08:08

BGT Bottom Comp

P306012-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1323018	05-Jun-13	05-Jun-13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1323018	05-Jun-13	05-Jun-13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1323018	05-Jun-13	05-Jun-13	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1323018	05-Jun-13	05-Jun-13	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1323018	05-Jun-13	05-Jun-13	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1323018	05-Jun-13	05-Jun-13	EPA 8021B	
Surrogate: Bromochlorobenzene		*103 %*	*80-120*		*1323018*	*05-Jun-13*	*05-Jun-13*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*104 %*	*80-120*		*1323018*	*05-Jun-13*	*05-Jun-13*	*EPA 8021B*	
Surrogate: Fluorobenzene		*104 %*	*80-120*		*1323018*	*05-Jun-13*	*05-Jun-13*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1323019	05-Jun-13	05-Jun-13	EPA 8015D	
Diesel Range Organics (C10-C28)	**31.1**	4.99	mg/kg	1	1323019	05-Jun-13	05-Jun-13	EPA 8015D	
GRO and DRO Combined Fractions	**31.1**	4.99	mg/kg	1	1323019	05-Jun-13	05-Jun-13	EPA 8015D	
Cation/Anion Analysis									
Chloride	**93.6**	9.95	mg/kg	1	1323020	05-Jun-13	05-Jun-13	EPA 300.0	

envirotech
Analytical Laboratory

NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	06-Jun-13 08:08

Spill Area Comp

P306012-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1323019	05-Jun-13	05-Jun-13	EPA 8015D	
Diesel Range Organics (C10-C28)	82.6	4.99	mg/kg	1	1323019	05-Jun-13	05-Jun-13	EPA 8015D	
GRO and DRO Combined Fractions	82.6	4.99	mg/kg	1	1323019	05-Jun-13	05-Jun-13	EPA 8015D	
Cation/Anion Analysis									
Chloride	336	9.99	mg/kg	1	1323020	05-Jun-13	05-Jun-13	EPA 300.0	

envirotech
Analytical Laboratory

NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	06-Jun-13 08:08

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1323018 - Purge and Trap EPA 5030A										
Blank (1323018-BLK1)				Prepared & Analyzed: 05-Jun-13						
Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.05	"							
o-Xylene	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: Bromochlorobenzene	*51.3*		*ug/L*	*50.0*		*103*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*51.2*		*"*	*50.0*		*102*	*80-120*			
Surrogate: Fluorobenzene	*50.9*		*"*	*50.0*		*102*	*80-120*			
Duplicate (1323018-DUP1)	**Source: P306012-01**			Prepared & Analyzed: 05-Jun-13						
Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
p,m-Xylene	ND	0.05	"		ND				30	
o-Xylene	ND	0.05	"		ND				30	
Surrogate: Bromochlorobenzene	*50.5*		*ug/L*	*50.0*		*101*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*52.2*		*"*	*50.0*		*104*	*80-120*			
Surrogate: Fluorobenzene	*52.6*		*"*	*50.0*		*105*	*80-120*			
Matrix Spike (1323018-MS1)	**Source: P306012-01**			Prepared & Analyzed: 05-Jun-13						
Benzene	50.0		ug/L	50.0	0.22	99.5	39-150			
Toluene	50.1		"	50.0	0.48	99.2	46-148			
Ethylbenzene	50.5		"	50.0	0.13	101	32-160			
p,m-Xylene	100		"	100	0.39	99.9	46-148			
o-Xylene	49.3		"	50.0	0.36	97.8	46-148			
Surrogate: Bromochlorobenzene	*48.9*		*"*	*50.0*		*97.8*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*49.9*		*"*	*50.0*		*99.9*	*80-120*			
Surrogate: Fluorobenzene	*52.1*		*"*	*50.0*		*104*	*80-120*			

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Analytical Laboratory

NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	06-Jun-13 08:08

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1323019 - GRO/DRO Extraction EPA 3550C										
Blank (1323019-BLK1)				Prepared & Analyzed: 05-Jun-13						
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
Diesel Range Organics (C10-C28)	ND	5.00	"							
GRO and DRO Combined Fractions	ND	5.00	"							
Duplicate (1323019-DUP1)	Source: P306012-01			Prepared & Analyzed: 05-Jun-13						
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg		ND				30	
Diesel Range Organics (C10-C28)	36.7	4.99	"		31.1			16.6	30	
Matrix Spike (1323019-MS1)	Source: P306012-01			Prepared & Analyzed: 05-Jun-13						
Gasoline Range Organics (C6-C10)	258	5.26	mg/kg	263	ND	98.1	75-125			
Diesel Range Organics (C10-C28)	264	5.26	"	263	31.1	88.5	75-125			

NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	06-Jun-13 08:08

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1323020 - Anion Extraction EPA 300.0										
Blank (1323020-BLK1)				Prepared & Analyzed: 05-Jun-13						
Chloride	ND	9.99	mg/kg							
Duplicate (1323020-DUP1)		Source: P306012-01		Prepared & Analyzed: 05-Jun-13						
Chloride	52.2	9.95	mg/kg		93.6			56.8	30	RPD

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NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	06-Jun-13 08:08

Notes and Definitions

RPD	Sample/Duplicate or Matrix Spike/Matrix Spike Duplicate combination, Relative Percent Difference exceeded 30%
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Rush

CHAIN OF CUSTODY RECORD

15636

Client:	Project Name / Location:
NM30	Confirmation Samples / Rucker Lake #2
Email results to:	Sampler Name:
F. Aragon	F. Aragon
Client Phone No.:	Client No.:
	11168-0002

ANALYSIS / PARAMETERS

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative HNO3	Preservative HCl	Preservative Cool	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
BGT bottom Comp	6-4-13	1257	P306012-01	1-4oz			X	X	X								X				Y	Y
Spill Area Comp	6-4-13	1310	P306012-02	1-4oz			X	X									X				Y	Y

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	6-4-13	1700		6/4/13	17:00
Relinquished by: (Signature)			Received by: (Signature)		

Sample Matrix

Soil ☒ Solid ☐ Sludge ☐ Aqueous ☐ Other ☐ _____

☐ Sample(s) dropped off after hours to secure drop off area.

Rush

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Analytical Laboratory

Analytical Report

Report Summary

Client: NM & O

Chain Of Custody Number: 15637

Samples Received: 6/4/2013 5:05:00PM

Job Number: 11168-0002

Work Order: P306016

Project Name/Location: Confirmation Sample/ Rucker Lake #2

Entire Report Reviewed By: _____ Date: 6/11/13

Tim Cain, Laboratory Manager

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

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NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	11-Jun-13 15:56

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Pot Hole	P306016-01A	Soil	06/04/13	06/04/13	Glass Jar, 4 oz.
Former AST	P306016-02A	Soil	06/04/13	06/04/13	Glass Jar, 4 oz.

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NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	11-Jun-13 15:56

Pot Hole

P306016-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1323027	06-Jun-13	10-Jun-13	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	5.00	mg/kg	1	1323027	06-Jun-13	10-Jun-13	EPA 8015D	
GRO and DRO Combined Fractions	ND	5.00	mg/kg	1	1323027	06-Jun-13	10-Jun-13	EPA 8015D	
Cation/Anion Analysis									
Chloride	**67.0**	9.99	mg/kg	1	1324001	09-Jun-13	09-Jun-13	EPA 300.0	

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Analytical Laboratory

NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	11-Jun-13 15:56

Former AST
P306016-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1323027	06-Jun-13	10-Jun-13	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	5.00	mg/kg	1	1323027	06-Jun-13	10-Jun-13	EPA 8015D	
GRO and DRO Combined Fractions	ND	5.00	mg/kg	1	1323027	06-Jun-13	10-Jun-13	EPA 8015D	

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Analytical Laboratory

NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	11-Jun-13 15:56

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1323027 - GRO/DRO Extraction EPA 3550C										
Blank (1323027-BLK1)				Prepared: 06-Jun-13 Analyzed: 09-Jun-13						
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
Diesel Range Organics (C10-C28)	ND	5.00	"							
GRO and DRO Combined Fractions	ND	5.00	"							
Duplicate (1323027-DUP1)	Source: P306015-01			Prepared: 06-Jun-13 Analyzed: 09-Jun-13						
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg		ND				30	
Diesel Range Organics (C10-C28)	ND	4.99	"		ND				30	
Matrix Spike (1323027-MS1)	Source: P306015-01			Prepared: 06-Jun-13 Analyzed: 09-Jun-13						
Gasoline Range Organics (C6-C10)	284	5.26	mg/kg	263	ND	108	75-125			
Diesel Range Organics (C10-C28)	309	5.26	"	263	ND	117	75-125			

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Analytical Laboratory

NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	11-Jun-13 15:56

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1324001 - Anion Extraction EPA 300.0										
Blank (1324001-BLK1)				Prepared & Analyzed: 09-Jun-13						
Chloride	ND	10.0	mg/kg							
Duplicate (1324001-DUP1)		Source: P305100-01		Prepared & Analyzed: 09-Jun-13						
Chloride	1080	10.0	mg/kg		1110			2.99	30	

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Analytical Laboratory

NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	11-Jun-13 15:56

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CHAIN OF CUSTODY RECORD

15637

Client:	Project Name / Location:	ANALYSIS / PARAMETERS
NM30	Confirmation Sample / Rucker Lake #2	
Email results to:	Sampler Name:	
F Aragon	F. Aragon	
Client Phone No.:	Client No.:	
	11168-0002	

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative			TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
					HNO_3	HCl	Cool															
Pot Hole	6-4-13	1308	1306016-01	1-4oz			X	X									X				Y	Y
Former AST	6-4-13	1315	1306016-02	1-4oz			X	X													Y	Y

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	6-4-13	1705		6/4/13	1705
Relinquished by: (Signature)			Received by: (Signature)		

Sample Matrix

Soil [X] Solid [ ] Sludge [ ] Aqueous [ ] Other [ ] _____

[ ] Sample(s) dropped off after hours to secure drop off area.

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san juan reproduction 578-129

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Analytical Report

Report Summary

Client: NM & O

Chain Of Custody Number: 15648

Samples Received: 6/6/2013 9:05:00AM

Job Number: 11168-0002

Work Order: P306026

Project Name/Location: Confirmation Sample/ Rucker Lake #2

Entire Report Reviewed By: _____ Date: 6/14/13

Tim Cain, Laboratory Manager

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NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	14-Jun-13 11:40

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BGT Walls Comp	P306026-01A	Soil	06/04/13	06/06/13	Glass Jar, 4 oz.

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Analytical Laboratory

NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	14-Jun-13 11:40

BGT Walls Comp

P306026-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1324003	09-Jun-13	11-Jun-13	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	5.00	mg/kg	1	1324003	09-Jun-13	11-Jun-13	EPA 8015D	
GRO and DRO Combined Fractions	ND	5.00	mg/kg	1	1324003	09-Jun-13	11-Jun-13	EPA 8015D	
Cation/Anion Analysis									
Chloride	586	9.99	mg/kg	1	1324001	09-Jun-13	09-Jun-13	EPA 300.0	

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NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	14-Jun-13 11:40

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1324003 - GRO/DRO Extraction EPA 3550C										
Blank (1324003-BLK1)				Prepared: 09-Jun-13 Analyzed: 11-Jun-13						
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg							
Diesel Range Organics (C10-C28)	ND	4.99	"							
GRO and DRO Combined Fractions	ND	4.99	"							
Duplicate (1324003-DUP1)	Source: P306022-01			Prepared: 09-Jun-13 Analyzed: 11-Jun-13						
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg		ND				30	
Diesel Range Organics (C10-C28)	ND	4.99	"		ND				30	
Matrix Spike (1324003-MS1)	Source: P306022-01			Prepared: 09-Jun-13 Analyzed: 11-Jun-13						
Gasoline Range Organics (C6-C10)	264	5.26	mg/kg	263	ND	100	75-125			
Diesel Range Organics (C10-C28)	272	5.26	"	263	ND	103	75-125			

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Analytical Laboratory

NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	14-Jun-13 11:40

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1324001 - Anion Extraction EPA 300.0										
Blank (1324001-BLK1)				Prepared & Analyzed: 09-Jun-13						
Chloride	ND	10.0	mg/kg							
Duplicate (1324001-DUP1)	Source: P305100-01			Prepared & Analyzed: 09-Jun-13						
Chloride	1080	10.0	mg/kg		1110			2.99	30	

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Analytical Laboratory

NM & O	Project Name:	Confirmation Sample/ Rucker Lake #2	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Felipe Aragon	14-Jun-13 11:40

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CHAIN OF CUSTODY RECORD

15648

Client:	Project Name / Location:
XTO	Confirmation Sample / Buckeye Lake #2
Email results to:	**Sampler Name:**
F. Aragon	F. Aragon
Client Phone No.:	**Client No.:**
	11168-0002

ANALYSIS / PARAMETERS

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative: HNO_3	Preservative: HCl	Preservative: Cool	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
BGT Wells Comp	6-4-13	1305	P306026-01	1-4oz			X	X									X				X	X

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	6-6-13	905		6/6/13	9:05
Relinquished by: (Signature)			Received by: (Signature)		

Sample Matrix

Soil ☒ Solid ☐ Sludge ☐ Aqueous ☐ Other ☐ _____

☑ Sample(s) dropped off after hours to secure drop off area.

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Analytical Report

Report Summary

Client: NM & O

Chain Of Custody Number: 15723

Samples Received: 6/18/2013 2:05:00PM

Job Number: 11168-0002

Work Order: P307100

Project Name/Location: Rucker Lake SWD Soil Sampling

Entire Report Reviewed By: _____ Date: 8/1/13

Tim Cain, Laboratory Manager

Supplement to analytical report generated on: 8/1/13 9:58 am

5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865

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laboratory@envirotech-inc.com

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NM & O	Project Name:	Rucker Lake SWD Soil Sampling	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Greg Crabtree	01-Aug-13 10:30

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Sep. Com.	P307100-01A	Soil	06/18/13	06/18/13	Glass Jar, 4 oz.
	P307100-01B	Soil	06/18/13	06/18/13	Glass Jar, 4 oz.

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NM & O	Project Name:	Rucker Lake SWD Soil Sampling	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Greg Crabtree	01-Aug-13 10:30

Sep. Com.

P307100-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	7.89	4.99	mg/kg	1	1331018	31-Jul-13	31-Jul-13	EPA 8015D	H1
Diesel Range Organics (C10-C28)	92.2	4.99	mg/kg	1	1331018	31-Jul-13	31-Jul-13	EPA 8015D	H1
GRO and DRO Combined Fractions	100	4.99	mg/kg	1	1331018	31-Jul-13	31-Jul-13	EPA 8015D	H1

NM & O	Project Name:	Rucker Lake SWD Soil Sampling	
15 East 5th St. suite 3000	Project Number:	11168-0002	**Reported:**
Tulsa OK, 74103	Project Manager:	Greg Crabtree	01-Aug-13 10:30

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1331018 - GRO/DRO Extraction EPA 3550C										
Blank (1331018-BLK1)				Prepared & Analyzed: 31-Jul-13						
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
Diesel Range Organics (C10-C28)	ND	5.00	"							
GRO and DRO Combined Fractions	ND	5.00	"							
Duplicate (1331018-DUP1)		Source: P307100-01		Prepared & Analyzed: 31-Jul-13						
Gasoline Range Organics (C6-C10)	7.06	5.00	mg/kg		7.89			11.0	30	
Diesel Range Organics (C10-C28)	93.3	5.00	"		92.2			1.17	30	
Matrix Spike (1331018-MS1)		Source: P307100-01		Prepared & Analyzed: 31-Jul-13						
Gasoline Range Organics (C6-C10)	281	5.26	mg/kg	263	7.89	104	75-125			
Diesel Range Organics (C10-C28)	362	5.26	"	263	92.2	103	75-125			

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NM & O	Project Name:	Rucker Lake SWD Soil Sampling	
15 East 5th St. suite 3000	Project Number:	11168-0002	Reported:
Tulsa OK, 74103	Project Manager:	Greg Crabtree	01-Aug-13 10:30

Notes and Definitions

H1	Sample was received after regulatory hold-time exceeded for target analyte.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CHAIN OF CUSTODY RECORD

15723

Client:	Project Name / Location:
NM and O	Rukar Lake SWD Soil Sampling
Email results to:	**Sampler Name:**
kcossum@envirotech-inc.com	Kyle Cossum
Client Phone No.:	**Client No.:**
	11168-0007

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative HNO_3	Preservative HCl	Preservative Ice	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
Sep. Cen.	6/18	11:00	P307100-01	(2) 4oz jars			X	X													X	X

ANALYSIS / PARAMETERS

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	6/18	1105		6/18/13	1405
Relinquished by: (Signature)			Received by: (Signature)		

Sample Matrix

Soil ☒ Solid ☐ Sludge ☐ Aqueous ☐ Other ☐ _____

☐ Sample(s) dropped off after hours to secure drop off area.

envirotech
Analytical Laboratory

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