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

Form C-144
Revised April 3, 2017

**For temporary pits, below-grade tanks, and multi-well fluid management pits**, submit to the appropriate NMOCD District Office.
**For permanent pits** submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

16388

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

NMOCD
MAY 29 2018
DISTRICT III

Type of action:
- ☐ 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: **HALLADOR PETROLEUM LLP** OGRID #: **12672**
Address: **1660 LINCOLN ST., SUITE 2700, DENVER, CO 80264**
Facility or well name: **HORTON #3B**
API Number: **30-045-31703** **OCD** Permit Number:
U/L or Qtr/Qtr **A** Section **13** Township **32 N** Range **12 W** County: **SAN JUAN**
Center of Proposed Design: Latitude **36.98962° N** Longitude **108.04072° W** NAD83
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ 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: **95** bbl Type of fluid: **produced water**
Tank Construction material: **single wall 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 of approval.

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, hospital, institution or church)*
☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet
☒ Alternate. Please specify **48" high (= 36" hog wire + rebar top)**


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6.

**Netting:** Subsection E of 19.15.17.11 NMAC *(Applies to permanent pits and permanent open top tanks)*

☐ Screen ☐ Netting ☒ Other **expanded metal**

☐ 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 acceptable source 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.** ☐ Yes ☐ No ☐ NA

- ☐ 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 .** ☐ Yes ☐ No ☐ NA

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)** ☐ Yes ☐ No

- 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)** ☐ Yes ☐ No

- 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)** ☐ Yes ☐ No

- 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)** ☐ Yes ☐ No

- 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). ☐ Yes ☐ No

- 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;. ☐ Yes ☐ No

- 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.) ☐ Yes ☐ No

- 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. ☐ Yes ☐ No

- 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. ☐ Yes ☐ No

NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

| | |
|---|---|
| Within 100 feet of a wetland.<br>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| **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).<br>- 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.<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☐ No |
| 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;<br>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within 300 feet of a wetland.<br>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| **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).<br>- Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☐ No |
| Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.<br>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within 500 feet of a wetland.<br>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |

10.

**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
☐ 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: _____ 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 documents are 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 19.15.17.9 NMAC and 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 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 $H_2S$, 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 ☒ Below-grade Tank ☐ Multi-well Fluid Management Pit ☐ Alternative

Proposed Closure Method: ☒ 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

14.

**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 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 material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.***

| | |
|---|---|
| Ground water is less than 25 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ No<br>☐ NA |
| Ground water is between 25-50 feet below the bottom of the buried waste<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ No<br>☐ NA |
| Ground water is more than 100 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ No<br>☐ NA |
| 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).<br>- 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.<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☐ No |
| 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.<br>- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Written confirmation or verification from the municipality; Written approval obtained from the municipality | ☐ Yes ☐ No |
| Within 300 feet of a wetland.<br>US Fish and Wildlife Wetland Identification map; Topographic map; 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.<br>- Written confirmation or verification from the municipality; Written approval obtained from the municipality | ☐ Yes ☐ No |
| Within the area overlying a subsurface mine.<br>- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | ☐ Yes ☐ No |
| Within an unstable area.<br>- 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.<br>- FEMA map | ☐ Yes ☐ No |

16.
**On-Site 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.***

- ☐ 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 NMAC
- ☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ 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 achieved)
- ☐ 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): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

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

**OCD Representative Signature:** _____ **Approval Date:** 6/22/18

**Title:** Environmental Spec. **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 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 Date:** April 9, 2018

20.
**Closure Method:**

☐ Waste Excavation and Removal ☐ On-Site Closure Method ☒ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)

☒ If different from approved plan, please explain. **The sample returned results below the regulatory limits for all constituents analyzed except for TPH, confirming that a release had occurred. The TPH concentration from the sample was 328 mg/kg with no BTEX constituents detected, suggesting the presence of heavy immovable oil. In addition the site is not in a wellhead protection area, depth to groundwater is greater than 100 feet and distance to surface water is between 200 and 1000 feet, suggesting little to no risk to the environment and that no remedial action is warranted. Requested approval for alternative closure method. Approval received. Site backfilled and compacted with non-waste containing, earthen material, in a manner that will prevent ponding of water or erosion.**

21.
**Closure Report Attachment Checklist:** ***Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check 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)
- ☐ Waste Material Sampling Analytical Results (required for on-site closure)

- ☐ Disposal Facility Name and Permit Number
- ☐ Soil Backfilling and Cover Installation
- ☐ Re-vegetation Application Rates and Seeding Technique
- ☐ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude ____ _____ Longitude _____ _____ NAD: ☐1927 ☒ 1983

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

Name (Print): Timothy Lovseth Title: Manager

Signature: [signature] Date: 5-24-16

e-mail address: tlovseth@hilladorenergy.com Telephone: 303 5503226

# BELOW-GRADE TANK CLOSURE REPORT

**Hallador Petroleum LLP**

**Horton #3B**

**API No. 30-045-31703**

## CLOSURE STEPS:

1) Notified the surface owners (Bureau of Land Management, Farmington Field Office) by certified mail, return receipt requested, of the plans to close the below-grade tank. Letter and Receipt Attached.

2) Notified the OCD District III Office (Cory Smith – 505.334.6178, ext. 115) verbally and by e-mail prior to the planned closure operation. E-mail Attached.

3) The tank contained no liquids at the time of the work.

4) Removed the below-grade tank for reuse in an above-ground setup.

5) Tested the soils beneath the below-grade tank to determine if release has occurred.

Envirotech Letter of February 22, 2018, Below-Grade Tank Closure Documentation, Vicinity Map, Site Map, Field Notes and Analytical Results Attached

- Collected a five-point composite sample;

6) The soil analyses included: benzene concentration (U.S. EPA Method 8021B); the Total BTEX concentrations (U.S. EPA Method 8021B); TPH concentration (U.S. EPA Method 8015B (GRO, DRO, ORO); and chloride concentration (U.S. EPA Method 300.0).

Analyzed for benzene, BTEX, TPH and chlorides – Analyses Attached

- Benzene concentration – ND
- Total BTEX concentrations – ND
- TPH concentration – 328 ppm
- Chloride – ND

The sample returned results below the regulatory limits for all constituents analyzed except for TPH, which returned results of 328 mg/kg, confirming that a release had occurred. Analytical Results Attached

7) Submitted e-mail request to OCD District III Office (Cory Smith – 505.334.6178, ext. 115) for approval of alternative closure standard. The basis for the request included: The TPH concentration from the sample was 328 mg/kg with no BTEX constituents detected, suggesting the presence of heavy immovable oil. In addition the site is not in a wellhead protection area, depth to groundwater is greater than 100 feet and distance to surface water is between 200 and 1000 feet, suggesting little to no risk to the environment and that no remedial action is warranted. E-mail Attached

8) Approval received from OCD District III Office (Cory Smith – 505.334.6178, ext. 115) by e-mail. E-mail Attached.

**BELOW-GRADE TANK CLOSURE REPORT**

**Hallador Petroleum LLP**

**Horton #3B**

**API No. 30-045-31703**

9) Backfilled the excavation with compacted, non-waste containing, earthen material, in a manner that will prevent ponding of water or erosion.

10) The area is needed for operation as the tank will be set above ground in the same location. Seeding and final reclamation will take place upon P&A.

HALLADOR ENERGY COMPANY
"COAL KEEPS YOUR LIGHTS ON"

SUNRISE COAL LLC
A wholly owned subsidiary of Hallador Energy Company

January 25, 2018

Certified No. 7016 2070 0000 6447 9388
Return Receipt Requested

Bureau of Land Management
6251 College Boulevard, Suite A
Farmington, NM 87402

Re: Commencement of Closure Operations
Horton #3B, API 3004531703
NENE Section 13 T32N R12W
San Juan County, New Mexico

Ladies and Gentlemen:

Pursuant to the New Mexico Oil and Gas rules governing below-grade tanks, this letter is notification that closure operations will commence within one week at the well Horton #3B API 3004531703 NENE Section 13 T32N R12W.

If you have any questions regarding this matter, please call me on my cell at 303 550-3226. Thanks you

Yours truly,

Timothy Lovseth
Exploration Manager

1660 LINCOLN STREET, SUITE 2700, DENVER, COLORADO 80264-2701
303.839.5504 WWW.HALLADORENERGY.COM NASDAQ: HNRG

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Bureau of Land Management
6251 College Boulevard, Ste A
Farmington, NM 87402

9590 9402 2501 6306 8058 40

2. Article Number (Transfer from service label)
7016 2070 0000 6447 9388

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery
JAN 29 2018

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

FARMINGTON NM 87401 JAN 29 2018 USPS

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☒ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Del very
☐ Collect on Del very Restricted Delivery
☐ Insured Mail
Insured Mail Restricted Delivery (over $500)
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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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-141
Revised April 3, 2017

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

# Release Notification and Corrective Action

## OPERATOR

☒ Initial Report ☐ Final Report

| | |
|---|---|
| Name of Company Hallador Petroleum LLP | Contact Tim Lovseth |
| Address 1660 Lincoln St. Suite 2700 | Telephone No. 303 839-5504 x 317 |
| Facility Name Horton #3 | Facility Type gas well |

| | | |
|---|---|---|
| Surface Owner Roddy | Mineral Owner BLM | API No. 30-045-31703 |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| A | 13 | 32N | 12W | 1000 | North | 725 | East | San Juan |

**Latitude** 36.98962 **Longitude** 108.04072 NAD83

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release oil spill | Volume of Release unknown | Volume Recovered NA |
| Source of Release BGT | Date and Hour of Occurrence | Date and Hour of Discovery 2/16/18 |
| Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required | If YES, To Whom? OCD, Cory Smith | |
| By Whom? | Date and Hour 2/16/18, 11:58 am | |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume Impacting the Watercourse. | |

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

BGT sample analysis attached. Closure approved under alternative standards as per OCD e-mail (attached)

Describe Area Affected and Cleanup Action Taken.*

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: Timothy Lovseth | OIL CONSERVATION DIVISION |
| Printed Name: Timothy Lovseth | Approved by Environmental Specialist: |
| Title: Manager | Approval Date: / Expiration Date: |
| E-mail Address: tlovseth@halladorenergy.com | Conditions of Approval: / Attached ☐ |
| Date: 4-9-18 Phone: 303 839-5504 | |

* Attach Additional Sheets If Necessary

## Tim Lovseth

**From:** Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
**Sent:** Thursday, February 15, 2018 11:02 AM
**To:** Tim Lovseth
**Cc:** Fields, Vanessa, EMNRD
**Subject:** RE: BGT soil analyses for Horton 3, Horton 3B, Horton 10

Tim,

OCD approves backfill and no further action on the Horton 10. Please complete form C-144 and include all necessary attachments for closure.

For the Horton 3B Hallador needs to indicate that a release did occur, and can either remediate the release or request the OCD for alternative closure standards. If the latter is chosen Hallador needs to justify why leaving contaminates in place is not a threat to human health and the environment.

For the Horton 3, additional remediation is required. After reviewing the site ranking the site is within 200' of a surface body water(Intermittent Arroyo) as is ranked a 20. Setting the closure standards for 100 mg/kg TPH, 50mg/kg BTEX and 10 mg/kg Benzene.

If you have any additional questions please give me a call.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

**From:** Tim Lovseth [mailto:tlovseth@halladorenergy.com]
**Sent:** Thursday, February 15, 2018 9:53 AM
**To:** Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
**Subject:** BGT soil analyses for Horton 3, Horton 3B, Horton 10

The sampling reports should be completed by EnviroTech by early next week.

February 22, 2018 Project Number 18010-0003

Mr. Timothy Lovseth
Hallador Energy
1660 Lincoln Street, Suite 2700
Denver, Colorado 80264

Email: tlovseth@halladorenergy.com
Phone: (303) 550-3226

**RE: BELOW-GRADE TANK CLOSURE DOCUMENTATION FOR THE HORTON #3B WELL SITE LOCATED AT SECTION 13, TOWNSHIP 32 NORTH, RANGE 12 WEST, SAN JUAN COUNTY, NEW MEXICO**

Dear Mr. Lovseth:

Enclosed please find the *Vicinity map, Site Map, Field Notes* and *Analytical Results* for below-grade tank (BGT) closure activities conducted at the Horton #3B well site located in Section 13, Township 32 North, Range 12 West, San Juan County, New Mexico (site).

Upon Envirotech personnel's arrival on February 2, 2018, a brief site assessment and Job Safety Analysis (JSA) was conducted. The BGT closure standard for the site was determined to be 100 parts per million (ppm) total petroleum hydrocarbons (TPH), 0.2 ppm benzene, and 50 ppm total benzene, toluene, ethylbenzene, and xylene (total BTEX), and 250 ppm chlorides in accordance with the New Mexico Oil and Gas Conservation Division (NMOCD) regulatory standards.

The BGT was removed and staged on-site with Envirotech representative Brittany Hall and New Mexico Oil and Gas Conservation Division (NMOCD) representative Cory Smith as witnesses. 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 organic vapors using a photoionization detector (PID) and returned a result of 0.0 mg/Kg; see enclosed ***Field Notes***. 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 8015B (GRO, DRO, and ORO), for benzene and total BTEX using USEPA Method 8021B and for chlorides using USEPA Method 300.0. The sample returned results below the regulatory limits for all constituents analyzed except TPH, which returned results above the BGT closure standard of 100 parts per million (ppm) TPH using USEPA Method 8015B; therefore, confirming a release had occurred.

A brief site assessment was conducted and the cleanup standards for the site were determined to be 1,000 ppm TPH and 100 ppm organic vapors or 10 ppm benzene and 50 ppm total BTEX 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 was not located within a wellhead protection

area, pursuant to the NMOCD Guidelines for Remediation of Spills, Leaks, and Releases. The sample from beneath the former BGT returned results below the regulatory standard for all constituents analyzed; see enclosed ***Analytical Results***. 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.

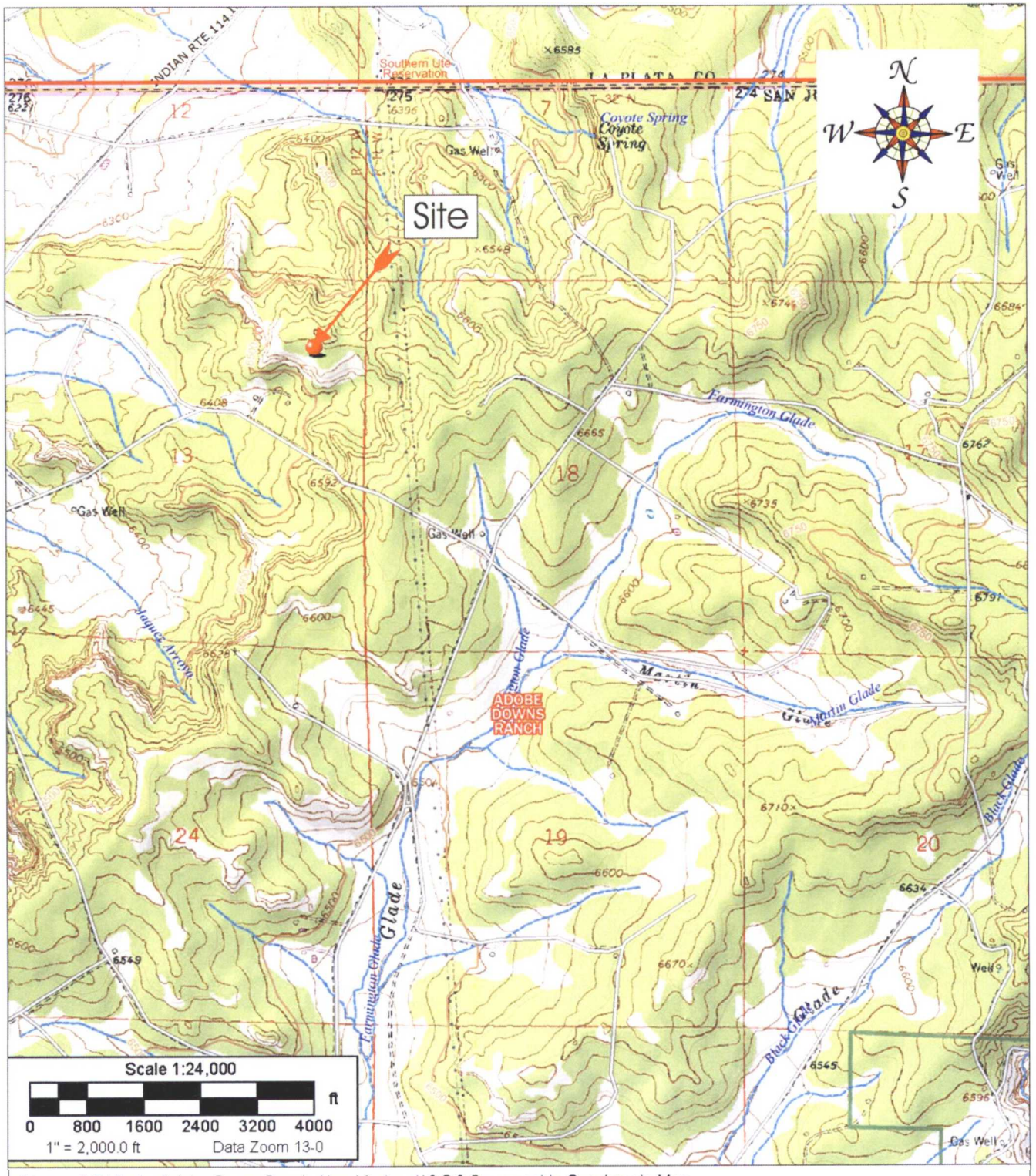
Respectfully submitted,
**ENVIROTECH, INC.**

Brittany Hall

Brittany Hall
Environmental Field Technician
bhall@envirotech-inc.com

Enclosure(s): Vicinity Map
Site Map
Field Notes
Analytical Results

Cc: Client File Number 18010




Source: 7.5 Minute, Adobe Downs Ranch, New Mexico U.S.G.S. Topographic Quadrangle Map
Scale: 1:24,000 1" = 2,000

| | | | |
|---|---|---|---|
| Hallador Energy<br>Horton #3B Well Site<br>Section 13, Township 32N, Range 12W,<br>San Juan County, New Mexico | envirotech<br>ENVIRONMENTAL SCIENTISTS & ENGINEERS | Vicinity Map | |
| | | Figure #1 | |
| Project Number: 18010-0003 / Date Drawn: 2/15/18 | 5796 U.S. HIGHWAY 64<br>Farmington, New Mexico 87401<br>505.632.0615 | DRAWN BY: Brittany Hall | PROJECT MANAGER: Felipe Aragon |


## LEGEND

X BGT Sample Location

⊕ Well Head

# SITE MAP
## Hallador Energy
### Horton #3B Well Site
### SECTION 13, TWP 32 NORTH, RANGE 12 WEST
### SAN JUAN COUNTY, NEW MEXICO

| SCALE: NTS | FIGURE NO. 2 | REV |
|---|---|---|
| PROJECT NO18010-0003 | | |

REVISIONS

| NO. | DATE | BY | DESCRIPTION |
|---|---|---|---|
| | | | |
| | | | |

| MAP DRWN | BH | 2/15/18 | BASE DRWN | IG | 11/7/17 |
|---|---|---|---|---|---|

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

CLIENT: Hallador

CLIENT/JOB #: 18010-0003

START DATE: 2/2/18

FINISH DATE:

Page # _____ of _____

envirotech

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

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

Environmental Specialist: Blair

LAT: 36.9597881

LONG: -108.0406799

# FIELD REPORT: BELOW GROUND TANK VERIFICATION

LOCATION NAME: Horton WELL #: 3B Temp Pit: _____ PERM Pit: _____

QUAD/UNIT: A SEC: 13 TWP: 32N RNG: 12W PM:

QTR/FOOTAGE: CNTY: San Juan ST: NM

Excavation Approx: _____ Feet X: 15 Feet X: 15 Feet Deep: 3 Cubic Yardage: _____

Disposal Facility: - Remediation Method: -

Land Owner: Federal API: 30-045-31703 Volume: 95 bbl

Construction Material: Single wall Steel Double Walled, With Leak Detection

_____ Temporary Pit Closure NMAC 19 15 17 Table II (Pemitted after 6/28/2013)

_____ BGT Closure NMAC 19 15 17 Table I (Pemitted after 6/28/2013)

X BGT Closure BENZENE ≤ 0 2 mg/kg, BTEX ≤ 50 mg/kg, TPH (418 1) ≤ 100 mg/kg, CHLORIDES ≤ 250 mg/kg (Pemitted before 6/28/2013)

## FIELD 418.1 ANLAYSIS

| SAMPLE DESCRIPTION | TIME | SAMPLE ID | LAB # | WEIGHT | mL FREON | DILUTION | READING | CALC (mg/kg) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

## PID RESULTS

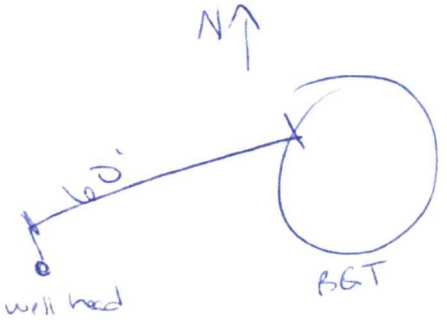
| SAMPLE ID | RESULTS (mg kdg) |
|---|---|
| BGT Comp | 0.0 |
| | |
| | |

## FIELD CHLORIDES RESULTS

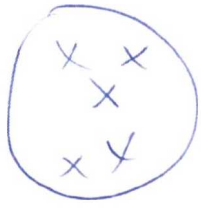
| SAMPLE ID | READING | CALC (mg kg) |
|---|---|---|
| | | |
| | | |
| | | |

| SAMPLE ID | ANALYSIS | US EPA |
|---|---|---|
| BGT Comp | BENZENE | 8021B/8015 |
| BGT Comp | BTEX | 8021B/80260B |
| BGT Comp | GRO & DRO | 8015 |
| BGT Comp | CHLORIDES | EPA300 |
| | TPH | 418.1 |

## SITE PERIMETER




## SAMPLE PROFILE



Brittany Hall

Analyst Signature

Brittany Hall

Printed Name

NOTES:

WO #: Who ordered/Site Rep.:

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Analytical Laboratory

# Analytical Report

**Report Summary**

Client: Hallador

Chain Of Custody Number:

Samples Received: 2/2/2018 1:50:00PM

Job Number: 18010-0003

Work Order: P802007

Project Name/Location: BGT Sample

Report Reviewed By: _____ Date: 2/13/18

Walter Hinchman, Laboratory Director

_____ Date: 2/13/18

Tim Cain, Quality Assurance Officer

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Analytical Laboratory

| | | | |
|---|---|---|---|
| Hallador | Project Name: | BGT Sample | |
| 1660 Lincoln St Suite 2700 | Project Number: | 18010-0003 | **Reported:** |
| Colorado NM, 87401 | Project Manager: | F.Aragon | 13-Feb-18 16:22 |

## Analyical Report for Samples

| Client Sample ID | Lab Sample ID | Matrix | Sampled | Received | Container |
|---|---|---|---|---|---|
| Horton 3B API 3004531703 | P802007-01A | Soil | 02/02/18 | 02/02/18 | Glass Jar, 4 oz. |
| | P802007-01B | Soil | 02/02/18 | 02/02/18 | Glass Jar, 4 oz. |

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| | | | |
|---|---|---|---|
| Hallador | Project Name: | BGT Sample | |
| 1660 Lincoln St Suite 2700 | Project Number: | 18010-0003 | **Reported:** |
| Colorado NM, 87401 | Project Manager: | E.Aragon | 13-Feb-18 16:22 |

## Horton 3B API 3004531703
## P802007-01 (Solid)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics by EPA 8021** | | | | | | | | | |
| Benzene | ND | 100 | ug/kg | 1 | 1806002 | 02/05/18 | 02/08/18 | EPA 8021B | |
| Toluene | ND | 100 | ug/kg | 1 | 1806002 | 02/05/18 | 02/08/18 | EPA 8021B | |
| Ethylbenzene | ND | 100 | ug/kg | 1 | 1806002 | 02/05/18 | 02/08/18 | EPA 8021B | |
| p,m-Xylene | ND | 200 | ug/kg | 1 | 1806002 | 02/05/18 | 02/08/18 | EPA 8021B | |
| o-Xylene | ND | 100 | ug/kg | 1 | 1806002 | 02/05/18 | 02/08/18 | EPA 8021B | |
| Total Xylenes | ND | 100 | ug/kg | 1 | 1806002 | 02/05/18 | 02/08/18 | EPA 8021B | |
| Total BTEX | ND | 100 | ug/kg | 1 | 1806002 | 02/05/18 | 02/08/18 | EPA 8021B | |
| *Surrogate: 4-Bromochlorobenzene-PID* | | *97.5 %* | | *50-150* | *1806002* | *02/05/18* | *02/08/18* | *EPA 8021B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 20.0 | mg/kg | 1 | 1806002 | 02/05/18 | 02/08/18 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | ND | 25.0 | mg/kg | 1 | 1805024 | 02/05/18 | 02/06/18 | EPA 8015D | |
| Oil Range Organics (C28-C40+) | **328** | 50.0 | mg/kg | 1 | 1805024 | 02/05/18 | 02/06/18 | EPA 8015D | |
| *Surrogate: 1-Chloro-4-fluorobenzene-FID* | | *101 %* | | *50-150* | *1806002* | *02/05/18* | *02/08/18* | *EPA 8015D* | |
| *Surrogate: n-Nonane* | | *75.2 %* | | *50-200* | *1805024* | *02/05/18* | *02/06/18* | *EPA 8015D* | |
| **Anions by 300.0** | | | | | | | | | |
| Chloride | ND | 20.0 | mg/kg | 1 | 1807003 | 02/12/18 | 02/12/18 | EPA 300.0 | |

| | | | |
|---|---|---|---|
| Hallador | Project Name: | BGT Sample | |
| 1660 Lincoln St Suite 2700 | Project Number: | 18010-0003 | **Reported:** |
| Colorado NM, 87401 | Project Manager: | F.Aragon | 13-Feb-18 16:22 |

## 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 1806002 - Purge and Trap EPA 5030A** | | | | | | | | | | |
| **Blank (1806002-BLK1)** | | | | Prepared: 05-Feb-18 Analyzed: 08-Feb-18 | | | | | | |
| Benzene | ND | 100 | ug/kg | | | | | | | |
| Toluene | ND | 100 | " | | | | | | | |
| Ethylbenzene | ND | 100 | " | | | | | | | |
| p,m-Xylene | ND | 200 | " | | | | | | | |
| o-Xylene | ND | 100 | " | | | | | | | |
| Total Xylenes | ND | 100 | " | | | | | | | |
| Total BTEX | ND | 100 | " | | | | | | | |
| *Surrogate: 4-Bromochlorobenzene-PID* | *7720* | | " | *8000* | | *96.5* | *50-150* | | | |
| **LCS (1806002-BS1)** | | | | Prepared: 05-Feb-18 Analyzed: 08-Feb-18 | | | | | | |
| Benzene | 4980 | 100 | ug/kg | 5000 | | 99.7 | 70-130 | | | |
| Toluene | 4900 | 100 | " | 5000 | | 98.0 | 70-130 | | | |
| Ethylbenzene | 4910 | 100 | " | 5000 | | 98.3 | 70-130 | | | |
| p,m-Xylene | 9820 | 200 | " | 10000 | | 98.2 | 70-130 | | | |
| o-Xylene | 4830 | 100 | " | 5000 | | 96.6 | 70-130 | | | |
| Total Xylenes | 14600 | 100 | " | 15000 | | 97.7 | 70-130 | | | |
| *Surrogate: 4-Bromochlorobenzene-PID* | *7850* | | " | *8000* | | *98.1* | *50-150* | | | |
| **Matrix Spike (1806002-MS1)** | **Source: P802007-01** | | | Prepared: 05-Feb-18 Analyzed: 08-Feb-18 | | | | | | |
| Benzene | 4960 | 100 | ug/kg | 5000 | ND | 99.2 | 54.3-133 | | | |
| Toluene | 4880 | 100 | " | 5000 | ND | 97.7 | 61.4-130 | | | |
| Ethylbenzene | 4890 | 100 | " | 5000 | ND | 97.9 | 61.4-133 | | | |
| p,m-Xylene | 9770 | 200 | " | 10000 | ND | 97.7 | 63.3-131 | | | |
| o-Xylene | 4800 | 100 | " | 5000 | ND | 96.0 | 63.3-131 | | | |
| Total Xylenes | 14600 | 100 | " | 15000 | ND | 97.2 | 63.3-131 | | | |
| *Surrogate: 4-Bromochlorobenzene-PID* | *7790* | | " | *8000* | | *97.3* | *50-150* | | | |
| **Matrix Spike Dup (1806002-MSD1)** | **Source: P802007-01** | | | Prepared: 05-Feb-18 Analyzed: 08-Feb-18 | | | | | | |
| Benzene | 4950 | 100 | ug/kg | 5000 | ND | 99.1 | 54.3-133 | 0.177 | 20 | |
| Toluene | 4860 | 100 | " | 5000 | ND | 97.3 | 61.4-130 | 0.354 | 20 | |
| Ethylbenzene | 4880 | 100 | " | 5000 | ND | 97.7 | 61.4-133 | 0.168 | 20 | |
| p,m-Xylene | 9750 | 200 | " | 10000 | ND | 97.5 | 63.3-131 | 0.195 | 20 | |
| o-Xylene | 4790 | 100 | " | 5000 | ND | 95.9 | 63.3-131 | 0.0834 | 20 | |
| Total Xylenes | 14500 | 100 | " | 15000 | ND | 97.0 | 63.3-131 | 0.158 | 20 | |
| *Surrogate: 4-Bromochlorobenzene-PID* | *7800* | | " | *8000* | | *97.5* | *50-150* | | | |

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Analytical Laboratory

| | | | |
|---|---|---|---|
| Hallador | Project Name: | BGT Sample | |
| 1660 Lincoln St Suite 2700 | Project Number: | 18010-0003 | **Reported:** |
| Colorado NM, 87401 | Project Manager: | F.Aragon | 13-Feb-18 16:22 |

## 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 1805024 - DRO Extraction EPA 3570** | | | | | | | | | | |
| **Blank (1805024-BLK1)** | | | | Prepared & Analyzed: 05-Feb-18 | | | | | | |
| Diesel Range Organics (C10-C28) | ND | 25.0 | mg/kg | | | | | | | |
| Oil Range Organics (C28-C40+) | ND | 50.0 | " | | | | | | | |
| *Surrogate: n-Nonane* | *58.5* | | " | *50.0* | | *117* | *50-200* | | | |
| **LCS (1805024-BS1)** | | | | Prepared & Analyzed: 05-Feb-18 | | | | | | |
| Diesel Range Organics (C10-C28) | 491 | 25.0 | mg/kg | 500 | | 98.2 | 38-132 | | | |
| *Surrogate: n-Nonane* | *40.7* | | " | *50.0* | | *81.4* | *50-200* | | | |
| **Matrix Spike (1805024-MS1)** | **Source: P801048-01** | | | Prepared & Analyzed: 05-Feb-18 | | | | | | |
| Diesel Range Organics (C10-C28) | 4780 | 250 | mg/kg | 500 | 4300 | 95.7 | 38-132 | | | |
| *Surrogate: n-Nonane* | *78.9* | | " | *50.0* | | *158* | *50-200* | | | |
| **Matrix Spike Dup (1805024-MSD1)** | **Source: P801048-01** | | | Prepared & Analyzed: 05-Feb-18 | | | | | | |
| Diesel Range Organics (C10-C28) | 5210 | 250 | mg/kg | 500 | 4300 | 181 | 38-132 | 8.51 | 20 | SPK2 |
| *Surrogate: n-Nonane* | *74.6* | | " | *50.0* | | *149* | *50-200* | | | |

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Analytical Laboratory

| | | | |
|---|---|---|---|
| Hallador | Project Name: | BGT Sample | |
| 1660 Lincoln St Suite 2700 | Project Number: | 18010-0003 | **Reported:** |
| Colorado NM, 87401 | Project Manager: | F.Aragon | 13-Feb-18 16:22 |

## 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 1806002 - Purge and Trap EPA 5030A** | | | | | | | | | | |
| **Blank (1806002-BLK1)** | | | | Prepared: 05-Feb-18 Analyzed: 08-Feb-18 | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 20.0 | mg/kg | | | | | | | |
| *Surrogate: 1-Chloro-4-fluorobenzene-FID* | *7.75* | | " | *8.00* | | *96.9* | *50-150* | | | |
| **LCS (1806002-BS2)** | | | | Prepared: 05-Feb-18 Analyzed: 08-Feb-18 | | | | | | |
| Gasoline Range Organics (C6-C10) | 46.7 | 20.0 | mg/kg | 50.0 | | 93.4 | 70-130 | | | |
| *Surrogate: 1-Chloro-4-fluorobenzene-FID* | *8.00* | | " | *8.00* | | *99.9* | *50-150* | | | |
| **Matrix Spike (1806002-MS2)** | **Source: P802007-01** | | | Prepared: 05-Feb-18 Analyzed: 08-Feb-18 | | | | | | |
| Gasoline Range Organics (C6-C10) | 46.9 | 20.0 | mg/kg | 50.0 | ND | 93.7 | 70-130 | | | |
| *Surrogate: 1-Chloro-4-fluorobenzene-FID* | *8.11* | | " | *8.00* | | *101* | *50-150* | | | |
| **Matrix Spike Dup (1806002-MSD2)** | **Source: P802007-01** | | | Prepared: 05-Feb-18 Analyzed: 08-Feb-18 | | | | | | |
| Gasoline Range Organics (C6-C10) | 47.6 | 20.0 | mg/kg | 50.0 | ND | 95.3 | 70-130 | 1.63 | 20 | |
| *Surrogate: 1-Chloro-4-fluorobenzene-FID* | *8.22* | | " | *8.00* | | *103* | *50-150* | | | |

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Analytical Laboratory

| | | | |
|---|---|---|---|
| Hallador | Project Name: | BGT Sample | |
| 1660 Lincoln St Suite 2700 | Project Number: | 18010-0003 | **Reported:** |
| Colorado NM, 87401 | Project Manager: | E.Aragon | 13-Feb-18 16:22 |

## Anions by 300.0 - Quality Control

## Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1807003 - Anion Extraction EPA 300.0/9056A** | | | | | | | | | | |
| **Blank (1807003-BLK1)** | | | | Prepared & Analyzed: 12-Feb-18 | | | | | | |
| Chloride | ND | 20.0 | mg/kg | | | | | | | |
| **LCS (1807003-BS1)** | | | | Prepared & Analyzed: 12-Feb-18 | | | | | | |
| Chloride | 246 | 20.0 | mg/kg | 250 | | 98.6 | 90-110 | | | |
| **Matrix Spike (1807003-MS1)** | **Source: P802010-01** | | | Prepared & Analyzed: 12-Feb-18 | | | | | | |
| Chloride | 400 | 20.0 | mg/kg | 250 | 115 | 114 | 80-120 | | | |
| **Matrix Spike Dup (1807003-MSD1)** | **Source: P802010-01** | | | Prepared & Analyzed: 12-Feb-18 | | | | | | |
| Chloride | 379 | 20.0 | mg/kg | 250 | 115 | 106 | 80-120 | 5.30 | 20 | |

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Analytical Laboratory

| | | | |
|---|---|---|---|
| Hallador | Project Name: | BGT Sample | |
| 1660 Lincoln St Suite 2700 | Project Number: | 18010-0003 | **Reported:** |
| Colorado NM, 87401 | Project Manager: | F.Aragon | 13-Feb-18 16:22 |

## Notes and Definitions

| | |
|---|---|
| SPK2 | The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to native analyte concentration at 4 times or greater than the spike concentration |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| RPD | Relative Percent Difference |

Project Information | Chain of Custody | Page 1 of 1

Page 9 of 9

| | | |
|---|---|---|
| Client: Hallador | Report Attention | Lab Use Only |
| Project: BGT Sample | Report due by: | Lab WO# P802007-01 |
| Project Manager: F.Aragon | Email: | Job Number 18010-0003 |
| Address: | Address: | |
| City, State, Zip | City, State, Zip | |
| Phone: | Phone: | |
| Email: Gcrabtree Admin Bhall Faragon | | |

| TAT | | EPA Program | | |
|---|---|---|---|---|
| 1D | 3D | RCRA | CWA | SDWA |
| | | | | |

| State | | | |
|---|---|---|---|
| NM | CO | UT | AZ |
| X | | | |

| Time Sampled | Date Sampled | Matrix | No Containers | Sample ID | Lab Number | DRO/ORO by 8015 | GRO/DRO by 8015 | BTEX by 8021 | VOC by 8260 | RCRA Metals | 8270 | 418.1 | Chlorides | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1222 | 2/2/2018 | S | 2 | Hopton 3B API 3004531703 | | X | X | X | | | 8/1 | X | X | 2-40z glass |
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**Additional Instructions:** V.s ice in cooler

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Brittany Hall

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days

| Relinquished by: (Signature) | Date | Time | Received by: (Signature) | Date | Time |
|---|---|---|---|---|---|
| Brittany Hall | 2/2/18 | 1350 | | 2/2/18 | 1351 |
| Relinquished by: (Signature) | Date | Time | Received by: (Signature) | Date | Time |
| | | | | | |

Lab Use Only
Received on ice: (Y) / N
T1 T2 T3
AVG Temp °C 4.1

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech Analytical Laboratory
5796 US Highway 64, Farmington, NM 87401
Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301
Ph (505) 632-0615 Fx (505) 632-1865
Ph (970) 259-0615 Fr (800) 362-1879
envirotech-inc.com
laboratory@envirotech-inc.com

From: **Tim Lovseth** tlovseth@halladorenergy.com
Subject: Fw: Below-Grade Tank Closure Documentation
Date: February 23, 2018 at 3:21 PM
To: Smith, Cory, EMNRD Cory.Smith@state.nm.us
Cc: brian@permitswest.com

TL

Cory
Based on the attached Envirotech risk assessment and report we are requesting permission to backfill the pit at the Horton #3B site. We are still waiting on report and risk assessment for the Horton #3 site from Envirotech. Once we receive the Horton #3 report we will schedule excavation and disposal operations.
Tim Lovseth

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**From:** enviro admin <enviroadmin@envirotech-inc.com>
**Sent:** Friday, February 23, 2018 9:08 AM
**To:** Tim Lovseth
**Cc:** Felipe Aragon; Brittany Hall
**Subject:** Below-Grade Tank Closure Documentation

Good Morning,
Please find attached the Below Grade Tank Closure Documentation for the Horton #3B well site and the Horton #10 well site.

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.

Sincerely,
Tamara

Environmental Administrator
Envirotech, Inc. | 5796 US Highway 64 | Farmington, NM 87401
505.632.0615 Office | 505.632.1865 Fax | 505.947.8326 Cell
envirotech
http://envirotech-inc.com/

## Envirotech, Inc - Call Us for Environmental Remediation

envirotech-inc.com

Environmental remediation ensures that our planet stays cleans. Call on the experts at Envirotech, Inc. in Farmington, NM for immediate action.


Below Grade Tank Cl...3B.pdf


Below Grade Tank Cl...10.pdf

## Tim Lovseth

**From:** Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
**Sent:** Tuesday, February 27, 2018 2:15 PM
**To:** Tim Lovseth
**Cc:** Fields, Vanessa, EMNRD
**Subject:** RE: Horton #3B BGT Request

Tim,

OCD approves Hallador's request for alternative closure standards. Please include this email in your Final C-141.

Thank you,

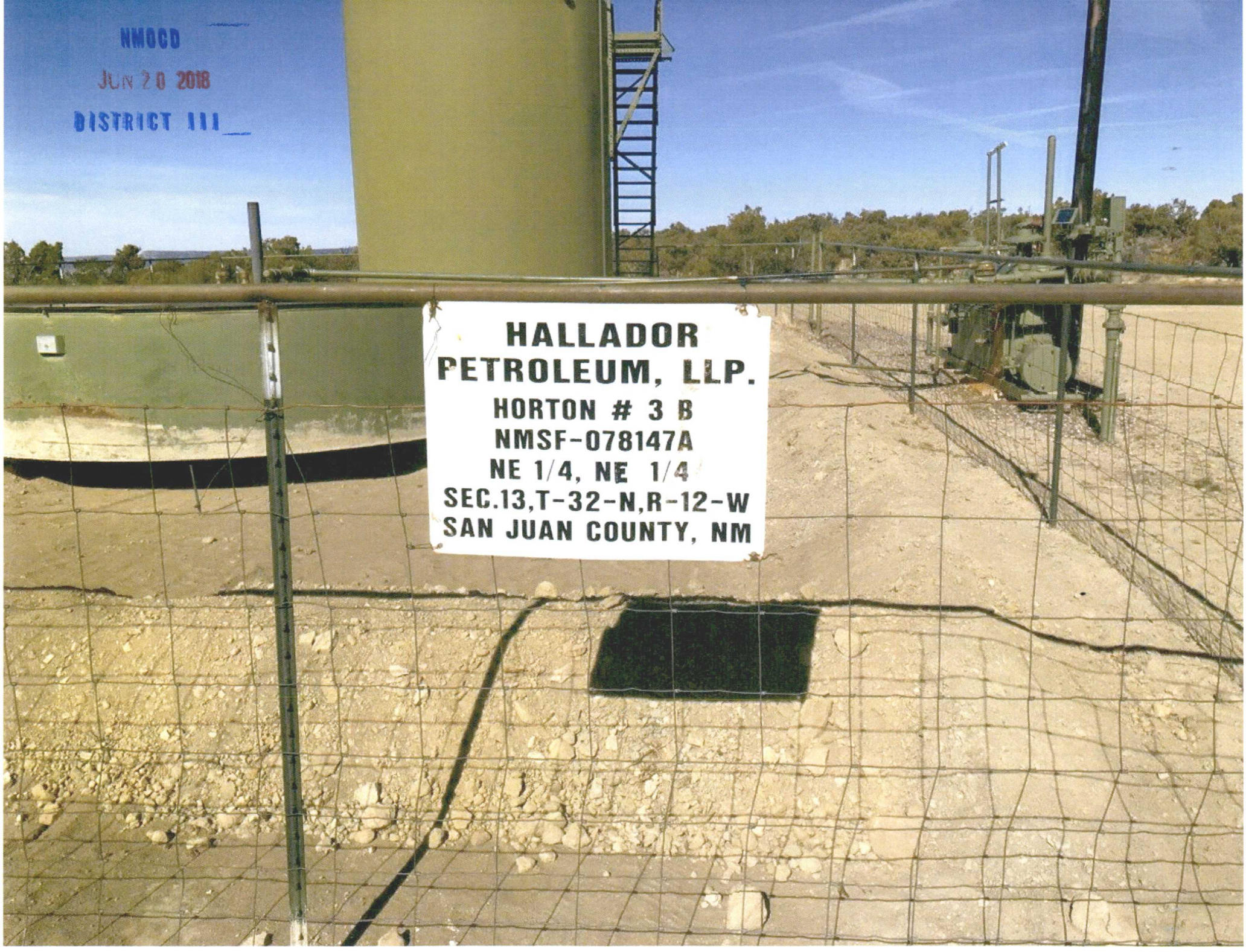
Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

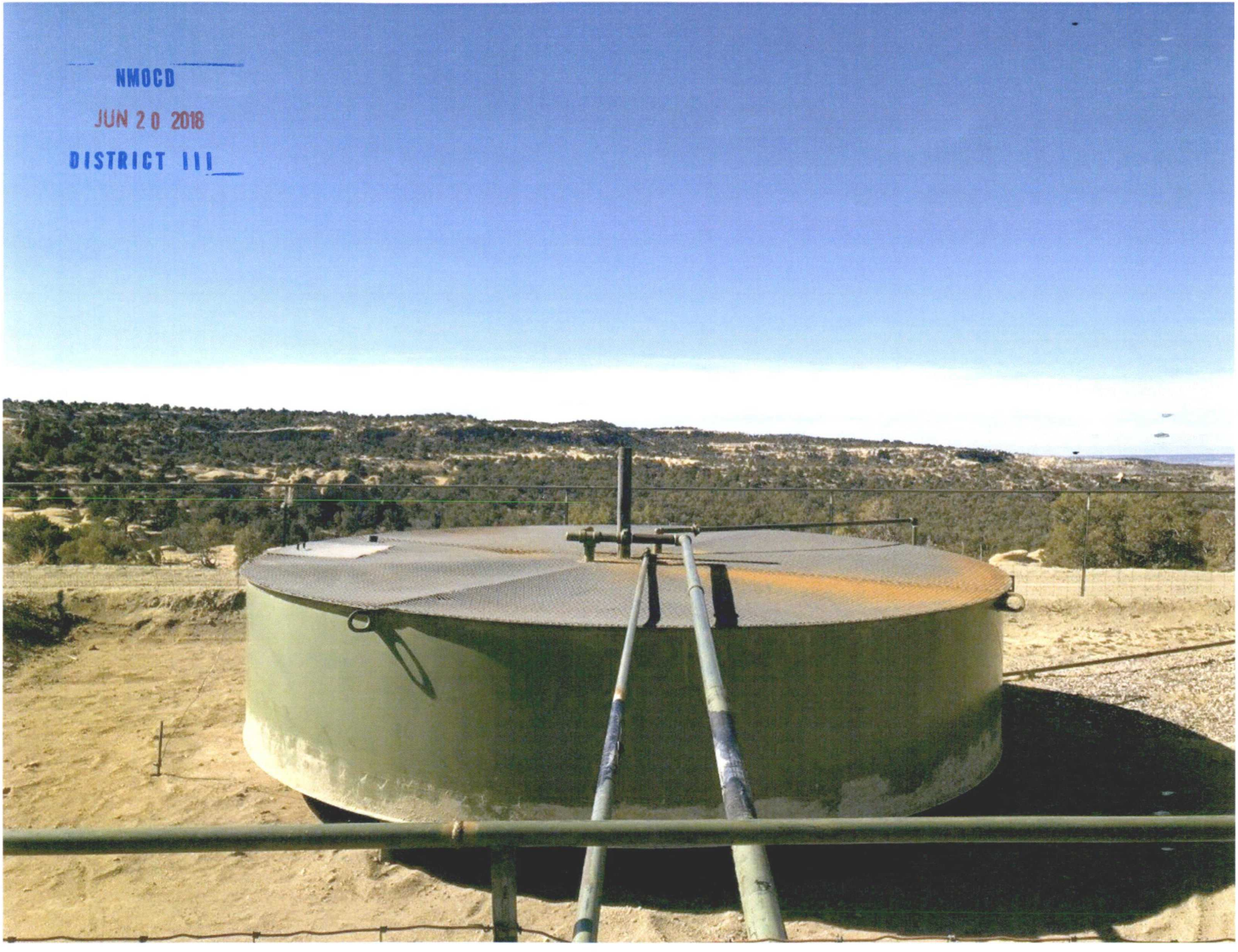
**From:** Tim Lovseth [mailto:tlovseth@halladorenergy.com]
**Sent:** Tuesday, February 27, 2018 11:15 AM
**To:** Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
**Subject:** Horton #3B BGT Request

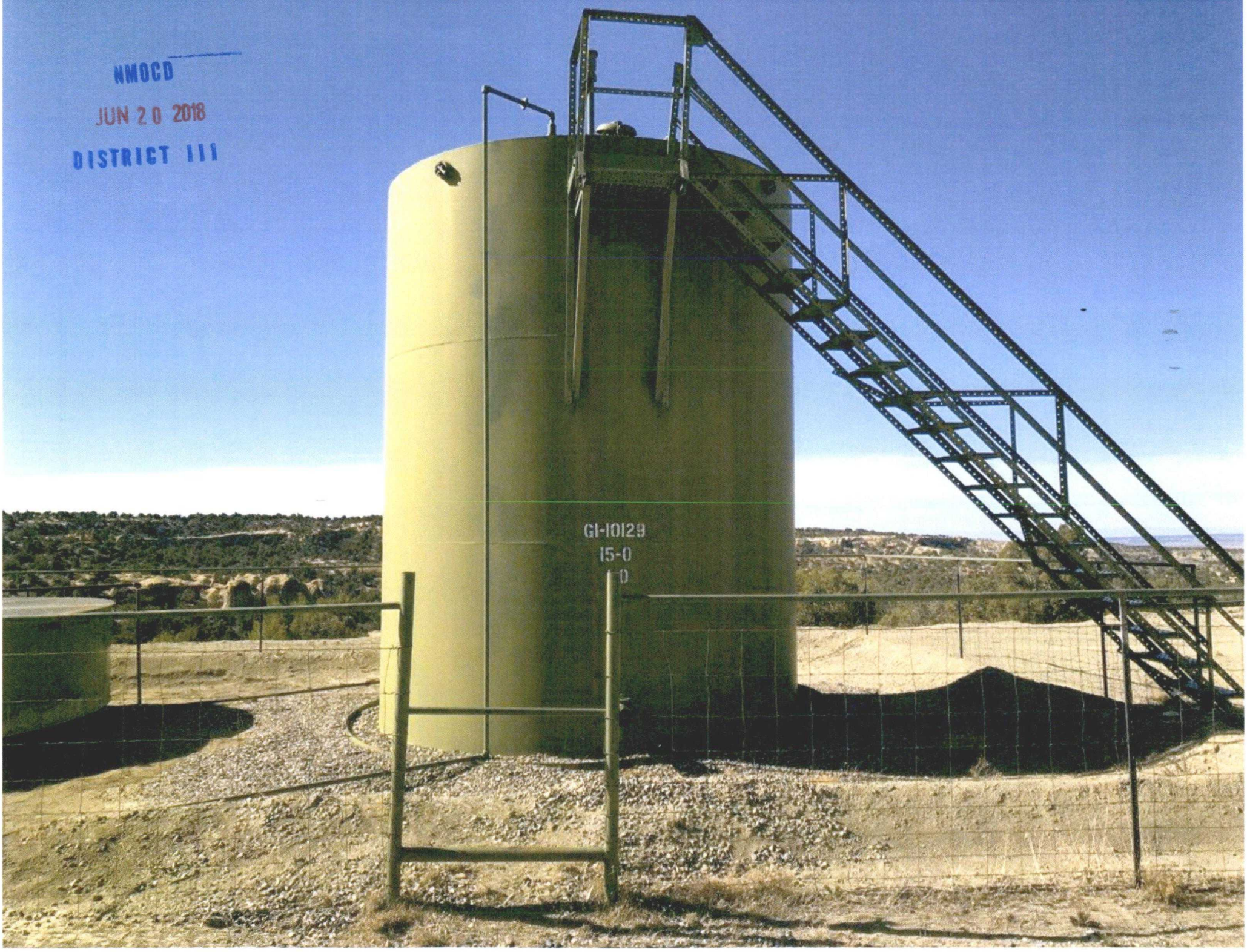
Cory

Hallador is requesting permission to backfill and close the BGT at the Horton #3B location under the State of New Mexico alternative standard. The TPH concentration from the confirmation sample was 328 mg/kg with no BTEX constituents detected. This suggests the presence of heavy immovable oil. In addition, the site is not located in a wellhead protection area, depth to groundwater is greater than 100 feet and distance to surface water is between 200 and 1000 feet. These site conditions suggest little to no risk to the environment and that no remedial action is warranted.

Tim



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