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.

16389

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

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 3**
API Number: **30-045-11448** **OCD** Permit Number:
U/L or Qtr/Qtr **G** Section **13** Township **32 N** Range **12 W** County: **SAN JUAN**
Center of Proposed Design: Latitude **36.98752° N** Longitude **108.04360° W** NAD83
Surface Owner: ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

NMOCD
MAY 29 2018
DISTRICT III

2.
☐ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC
* Release Confirm Add Form C-141 Req.
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: **25** bbl Type of fluid: **produced water**
Tank Construction material: **single wall fiberglass**
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☒ Visible sidewalls only ☐ Other _____
Liner type: Thickness _____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)**

27

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 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. - 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). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a 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; - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet of a wetland. - 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). - 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. - 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. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No

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. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ 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). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 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. - 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. 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. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ No

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. **First sample returned results below the regulatory limits for all constituents analyzed except for TPH, confirming that a release had occurred. Waste material excavated to bedrock and removed. Second sample, returned results below the regulatory limits for all constituents analyzed except for TPH. Requested approval for application of 300 gallons potassium permanganate to oxidize remaining oil. Approval received. Site treated and 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: 5-24-18

e-mail address: tlovseth@halladorenergy.com Telephone: 303 550 3226

BELOW-GRADE TANK CLOSURE REPORT

Hallador Petroleum LLP

Horton #3

API No. 30-045-11448

CLOSURE STEPS:

1) Notified the surface owners (Kenneth Roddy and Joyce Roddy, Trustees) 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 23, 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 – 9,950 mg/kg
- Chloride – ND

The sample returned results below the regulatory limits for all constituents analyzed except for TPH, which returned results of 9,950 mg/kg, confirming that a release had occurred. Analytical Results Attached

7) Conducted excavation and removal of 720 cubic yards (cy) of waste material from excavated area, seventy-five (75) feet long by forty-five (45) feet wide with a depth ranging from two (2) feet to twenty-one (21) feet below ground surface (bgs). **C-138 and Invoices Attached.**

- Waste material disposed of at: JF3 Land farm Industrial Ecosystems, Inc., 49 Road 3150 Aztec, NM 87510. Permit # NM 01-001B.

8) Tested the soils beneath the former location of the BGT excavated area. Envirotech Letter of April 9, 2018, Below-Grade Tank Closure Documentation, Vicinity Map, Site Map, Field Notes and Analytical Results Attached

Collected a five-point composite samples. Samples identified as *South Wall, South Cup, Bottom South, West Wall, Bottom North, North Wall, Northeast Wall, and East Wall*. Field Notes and Site Map Attached

- The samples collected from the *South Wall, Bottom South,* and *Bottom North* were screened in the field for TPH using U.S. EPA Method 418.1 and organic vapors (OV) using a photoionization detector (PID).

- The *South Wall* returned a result of 15.8 mg/kg OV and 180 ppm of TPH, the *Bottom South* returned a result of 756.0 mg/kg OV and 392 ppm TPH, and the *Bottom North* returned a result of 386.0 mg/kg OV and 468 ppm TPH. Field Notes Attached

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 – *West Wall* 224.6 mg/kg; *Bottom North* 235.1 mg/kg

- Chloride – ND

The sample returned results below the regulatory limits for all constituents analyzed except for TPH, which returned results of *West Wall* 224.6 mg/kg; *Bottom North* 235.1 mg/kg in exceedance of regulatory standard. Site Map and Analytic Results Attached

10) Submitted request to apply 300 gallons potassium permanganate to OCD District III Office (Cory Smith – 505.334.6178, ext. 115) by e-mail. E-mail Attached.

11) Received approval to apply permanganate and backfill excavation from District 3, OCD. E-mail Attached

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

13) 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.

BELOW-GRADE TANK CLOSURE REPORT

Hallador Petroleum LLP

Horton #3

30-045-11448

FINAL CLOSURE REPORT:

A closure report on Form C-144 with necessary attachments documenting all closure activities including sampling described above was submitted. Form C-144 Attached

HALLADOR ENERGY COMPANY
"COAL KEEPS YOUR LIGHTS ON"

SUNRISE COAL LLC
A wholly owned subsidiary of Hallador Energy Company

February 13, 2018

Certified No. 7016 2070 0000 6447 9333
Return Receipt Requested

Mr. Kenneth E. Roddy and
Ms. Joyce Roddy, Trustees
P. O. Box 133197
Tyler, TX 75713

Re: Commencement of Closure Operations
Horton #3, API 33004514480
SWNE Section 13 T32N R12W
San Juan County, New Mexico

Dear Mr. and Ms. Roddy:

Regarding the below-grade tank at the referenced location, this letter is your notification as surface owners that closure operations commenced February 2, 2018, at the Horton #3 well API 3004514480 SWNE 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:

Mr. Kenneth E. Roddy and
Ms. Joyce Roddy
P. O. Box 133197
Tyler, TX 75713

9590 9402 2501 6306 8057 41

2. Article Number *(Transfer from service label)*
7016 2070 0000 6447 9333

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Joyce Roddy ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* Joyce Roddy C. Date of Delivery 2/22/18

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

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☒ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery 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
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 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. 30-045-11448

LOCATION OF RELEASE

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

Latitude 36.98752 **Longitude** 108.04360 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.

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

#NCS180795057

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.

Based on the analytical results, Envirotech recommends that further delineation, excavation, and closure sampling be performed until the soil beneath the BGT returns results below all applicable NMOCD regulatory standards.

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.

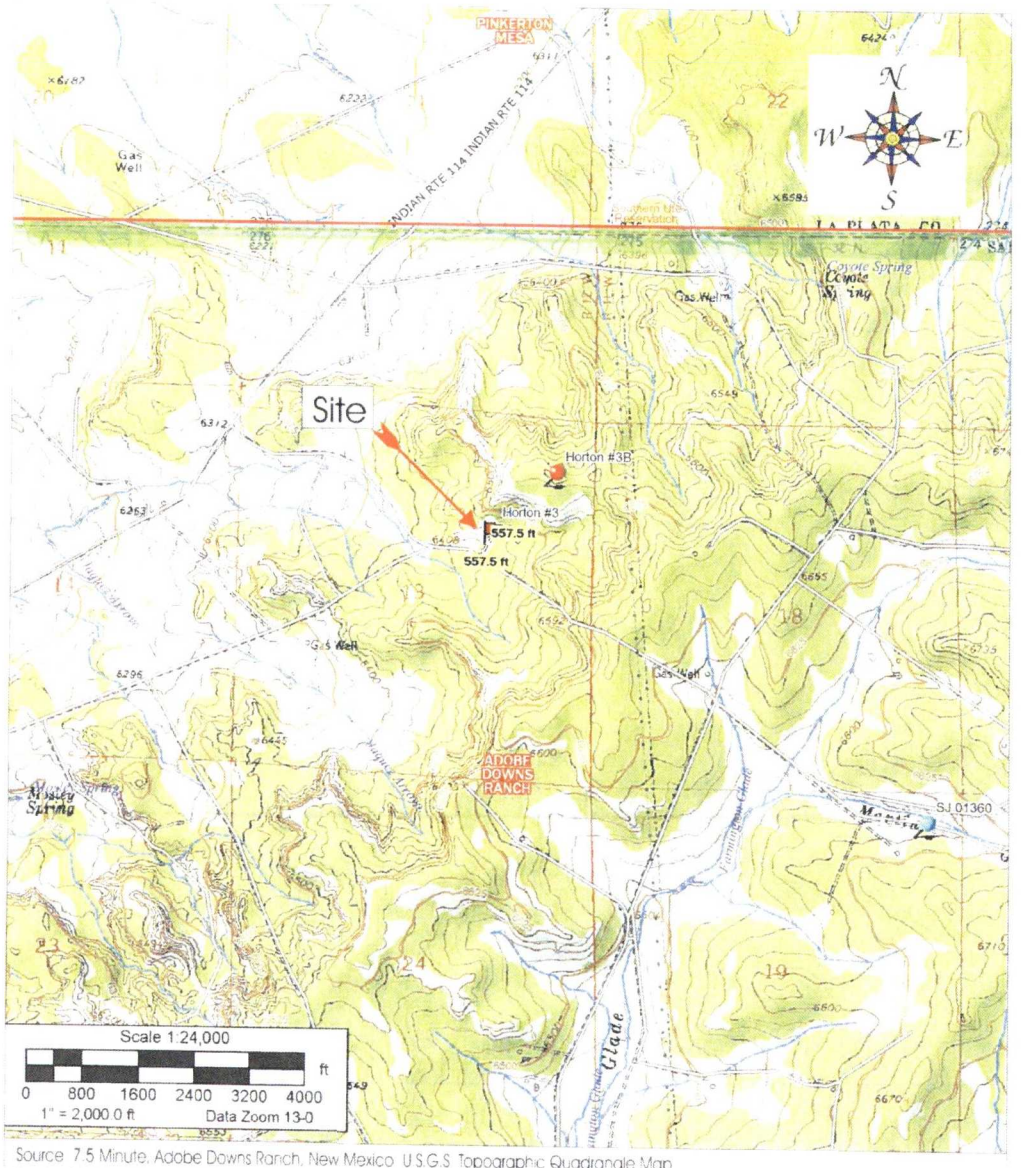
Respectfully submitted,
ENVIROTECH, INC.

for

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
Horton #3 Well Site
Section 13, Township 32N, Range 12W,
San Juan County, New Mexico

Project Number 18010-0001 | Date Drawn 2/23/18

envirotech
ENVIRONMENTAL SCIENTISTS & ENGINEERS

5796 U.S. HIGHWAY 64
Farmington, New Mexico 87401
505.632.0615

Vicinity Map

Figure #1

DRAWN BY
Brittany Hall

PROJECT MANAGER
Felipe Aragon

LEGEND

X BGT Sample Location

⊕ Well Head

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

SCALE: NTS	FIGURE NO. 2	REV
PROJECT NO.18010-0001		

REVISIONS

NO.	DATE	BY	DESCRIPTION

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

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

CLIENT: Halliburton
CLIENT JOB #: 1900 0001
START DATE: 2/2/13
FINISHED DATE:
Page # of

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

Environmental Specialist: Bhall
LAT: 36.90735
LONG: 108 04360

FIELD REPORT: BELOW GROUND TANK VERIFICATION

LOCATION: NAME: Horton WELL #: 3 Temp Pit: PERM Pit:
QUAD/UNIT: G SEC: 13 TWP: 32N RNG: 12W PM:
QTR FOOTAGE: CNTY: San Juan ST: New Mexico

Excavation Approx: 4 Feet X 4 Feet X 2 Feet Deep: Cubic Yardage:
Disposal Facility: Remediation Method:
Land Owner: Private API 30-045-11493 BGT Volume: 25 bbl
Construction Material: Single wall fiberglass Double Walled With Leak Detection

Temporary Pit Closure: NMAC 19.15.17 Table II (Permitted after 6/28/2013)
BGT Closure: NMAC 19.15.17 Table I (Permitted after 6/28/2013)
✓ BGT Closure: BENZENE ≤ 0.2 mg/kg BTEX ≤ 50 mg/kg TPH (418.1) ≤ 100 mg/kg CHLORIDES ≤ 250 mg/kg (Permitted before 6/28/2013)

FIELD 418.1 ANLAYSIS

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

PID RESULTS

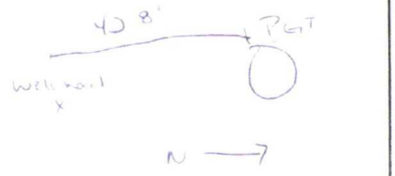
SAMPLE ID	RESULTS (mg/kg)
BGT (bottom)	0.2

FIELD CHLORIDES RESULTS

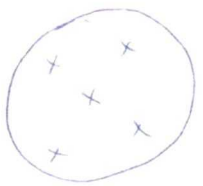
SAMPLE ID	READING	CALC (mg/kg)

SAMPLE ID	ANALYSIS	US EPA
BGT (bottom)	BENZENE	8021B/8015
BGT (sides)	BTEX	8021B/8026B
BGT (bottom)	GRO & DRO	8015
BGT (bottom)	CHLORIDES	EPA300
BGT (bottom)	TPH	418.1

SITE PERIMETER



SAMPLE PROFILE



Brittany Hall
Analyst Signature

Brittany Hall
Printed Name

NOTES: Not filled prior to the visit + NMOCD on site

WO #: Who ordered/Site Rep:

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Hallador

Chain Of Custody Number:

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

Job Number: 18010-0001

Work Order: P802008

Project Name/Location: BGT Sample

Report Reviewed By: Walter Hinchman Date: 2/13/18

Walter Hinchman, Laboratory Director

Date: 2/13/18

Tim Cain, Quality Assurance Officer

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

envirotech
Analytical Laboratory

Hallador	Project Name:	BGT Sample	
1660 Lincoln St Suite 2700	Project Number:	18010-0001	Reported:
Colorado NM, 87401	Project Manager:	F. Aragon	13-Feb-18 16:24

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Horton #3 API 30045144S0	P802008-01A	Soil	02/02/18	02/02/18	Glass Jar, 4 oz
	P802008-01B	Soil	02/02/18	02/02/18	Glass Jar, 4 oz

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

envirotech
Analytical Laboratory

Hallador	Project Name:	BGT Sample	
1660 Lincoln St Suite 2700	Project Number:	18010-0001	Reported:
Colorado NM, 87401	Project Manager:	F Aragon	13-Feb-18 16:24

Horton #3 API 3004514480
P802008-01 (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		*95.8 %*		*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)	2600	250	mg/kg	10	1805024	02/05/18	02/06/18	EPA 8015D	
Oil Range Organics (C28-C40+)	7350	500	mg/kg	10	1805024	02/05/18	02/06/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*98.5 %*		*50-150*	*1806002*	*02/05/18*	*02/08/18*	*EPA 8015D*	
Surrogate: n-Nonane		*136 %*		*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	02/13/18	EPA 300.0	

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

envirotech
Analytical Laboratory

Hallador	Project Name:	BGT Sample	
1660 Lincoln St Suite 2700	Project Number:	18010-0001	Reported:
Colorado NM, 87401	Project Manager:	F Aragon	13-Feb-18 16:24

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	61.4-136			
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	61.4-136	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	0.138	20	
Surrogate: 4-Bromochlorobenzene-PID	*7800*		"	*8000*		*97.5*	*50-150*			

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

envirotech
Analytical Laboratory

Hallador	Project Name:	BGT Sample	
1660 Lincoln St Suite 2700	Project Number:	18010-0001	Reported:
Colorado NM, 87401	Project Manager:	F Aragon	13-Feb-18 16:24

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	53.5		"	50.0		107	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	49.7		"	50.0		99.4	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			

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

envirotech
Analytical Laboratory

Hallador	Project Name:	BGT Sample	
1660 Lincoln St Suite 2700	Project Number:	180104001	Reported:
Colorado NM, 87401	Project Manager:	F Aragon	13-Feb-18 16:24

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	*8.01*		"	*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	*8.31*		"	*8.00*		*104*	*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*			

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

envirotech
Analytical Laboratory

Hallador	Project Name:	BGT Sample	
1660 Lincoln St Suite 2700	Project Number:	180110-0001	Reported
Colorado NM, 87401	Project Manager:	E Aragon	13-Feb-18 16:24

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	300	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	

envirotech
Analytical Laboratory

Hallador	Project Name:	BGT Sample	
1660 Lincoln St Suite 2700	Project Number:	18030-0001	Reported:
Colorado NM, 87401	Project Manager:	F Aragon	13-Feb-18 16:24

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

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

Project Information | Chain of Custody | Page ___ of ___

Page 9 of 9

Project Information	Report Attention	Lab Use Only	
Client: Halliburton ~~SGT~~ SH	Report due by:	Lab WO#: P P802008-01	Job Number: 18010-0001
Project: BGT Sample	Email:		
Project Manager: F.Aragon	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			

Analysis and Method

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
1100	2/2/2018	S	2	Horton #3 API 3004514480		X	X	X			34	~~X~~	X					2 4oz glass

Additional Instructions:

Via 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	[signature]	2/2/18	1350

Lab Use Only

Received on ice: Y / N

T1 ______ T2 ______ T3 ______

AVG Temp °C 4.0

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 laboraotry is limited to the amount paid for on the report