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.

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

RCVD DIII 5/31/19

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: EPIC ENERGY, LLC OGRID #: 372834
Address: 7415 E. Main Street Farmington, NM 87402
Facility or well name: Horton #001B
API Number: 30-045-30165 OCD Permit Number:
U/L or Qtr/Qtr J Section 07 Township 31N Range 11W County: San Juan
Center of Proposed Design: Latitude 36.9124641 Longitude -108.0286102 NAD83
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☐ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC

*Release Confirmed Addtional Remediation Required
nCS1821455684

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: 100 bbl Type of fluid: Produced Water
Tank Construction material: steel/double bottom
☐ 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 rebar and hog wire

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. - 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:** 6/27/19

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:** July 28, 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.

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 36.91248 Longitude -108.02865 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): Vanessa Fields Title: Regulatory Specialist

Signature: Date: 5/24/2019

e-mail address: vanessa@walsheng.net Telephone: 505-327-4892

Vanessa

From: Michael Dean <michael.dean@walsheng.net>
Sent: Friday, May 24, 2019 8:02 AM
To: 'Vanessa'
Subject: FW: Hallador, Below Grade Pits Horton 1B, P808003

-----Original Message-----
From: vern@walsheng.net [mailto:vern@walsheng.net]
Sent: Wednesday, August 08, 2018 8:32 AM
To: 'Smith, Cory, EMNRD'; 'Fields, Vanessa, EMNRD'; 'Whitney Thomas'
Cc: 'Tim Lovseth'; 'John Jr.'; 'Michael Dean'
Subject: RE: Hallador, Below Grade Pits Horton 1B, P808003

Thank you Cory, we will have it to you by September 5th.

Thank you,
Vern Andrews
505-320-1763
vern@walsheng.net

-----Original Message-----
From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Wednesday, August 8, 2018 7:59 AM
To: vern@walsheng.net; Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>; Whitney Thomas <l1thomas@blm.gov>
Cc: Tim Lovseth <tlovseth@halladorenergy.com>; 'John Jr.' <jdhampton@walsheng.net>; 'Michael Dean' <michael.dean@walsheng.net>
Subject: RE: Hallador, Below Grade Pits Horton 1B, P808003

Vern,

Everything looks to be in order, please send in the final C-141 with all the required attachments no later than September 5, 2018.

Thanks,

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

-----Original Message-----

From: vern@walsheng.net <vern@walsheng.net>
Sent: Tuesday, August 7, 2018 4:40 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>; Whitney Thomas <l1thomas@blm.gov>
Cc: Tim Lovseth <tlovseth@halladorenergy.com>; 'John Jr.' <jdhampton@walsheng.net>; 'Michael Dean' <michael.dean@walsheng.net>
Subject: FW: Hallador, Below Grade Pits Horton 1B, P808003

Cory,
The North wall resample for the Horton #1B is attached and is below the 1000 ppm TPH and 20 ppm BTEX levels and we are requesting permission to bury the excavated area and reset equipment.
A final c-141 will be filed if the sample results are approved. Farmington BLM and NMOCD will receive an updated site security diagram via sundry notice.
If I am missing anything, please let me know.

Thank you,
Vern Andrews
505-320-1763
vern@walsheng.net

-----Original Message-----
From: Timothy Cain <tcain@envirotech-inc.com>
Sent: Tuesday, August 7, 2018 3:43 PM
To: vern@walsheng.net
Cc: Walter Hinchman <whinchman@envirotech-inc.com>
Subject: Hallador, Below Grade Pits Horton 1B, P808003

Vern,

Thank you for Choosing Envirotech Analytical Laboratory. Attached is the final report for the "Below Grade Pits/Horton 1B" project. Let us know if you have any questions.

Envirotech Analytical Laboratory welcomes your feedback. Please visit the survey site below to let us know how we are doing and how we can better serve you.
https://www.surveymonkey.com/r/BHB9MZR

Tim Cain
Envirotech Analytical Laboratory
Chemist
Office 505-632-0615
tcain@envirotech-inc.com
5796 U.S. Highway 64, Farmington NM 87401

"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete." - Richard Buckminster Fuller

Vanessa

From: Michael Dean <michael.dean@walsheng.net>
Sent: Friday, May 24, 2019 8:02 AM
To: 'Vanessa'
Subject: FW: Hallador - Horton #1B sampling

From: vern@walsheng.net [mailto:vern@walsheng.net]
Sent: Monday, July 30, 2018 9:51 AM
To: 'Smith, Cory, EMNRD'; 'Michael Dean'; 'Whitney Thomas'; 'John Jr.'
Cc: 'Fields, Vanessa, EMNRD'; 'Tim Lovseth'
Subject: RE: Hallador - Horton #1B sampling

Cory we will dig more on the north side of the excavation and resample after notifying you when we think it is ready to sample.
Thanks,
Vern Andrews

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Monday, July 30, 2018 9:07 AM
To: vern@walsheng.net; 'Michael Dean' <michael.dean@walsheng.net>; Whitney Thomas <l1thomas@blm.gov>; 'John Jr.' <jdhampton@walsheng.net>
Cc: Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>; Tim Lovseth <tlovseth@halladorenergy.com>
Subject: RE: Hallador - Horton #1B sampling

Vern,

The site ranking at the Horton #1B is a 10 making the closure limits 1,000 mg/kg TPH. Looking at the laboratory results the north sample is over the closure limits additional remediation will be required.

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: vern@walsheng.net <vern@walsheng.net>
Sent: Monday, July 30, 2018 9:01 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; 'Michael Dean' <michael.dean@walsheng.net>; Whitney Thomas <l1thomas@blm.gov>; 'John Jr.' <jdhampton@walsheng.net>
Cc: Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>; Tim Lovseth <tlovseth@halladorenergy.com>
Subject: RE: Hallador - Horton #1B sampling

Cory we received the sample analysis for the Hallador – Horton #1B and it is below the TPH and BTEX levels approved for reclamation of the site. We are requesting permission to backfill and reset the equipment. An initial & final C-141 will be filed and the site security diagram will be updated.

Thank you,
Vern Andrews
505-320-1763
vern@walsheng.net

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Tuesday, July 24, 2018 1:12 PM
To: Michael Dean <michael.dean@walsheng.net>
Cc: vern@walsheng.net; Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>
Subject: RE: Hallador - Horton #1B sampling

That's the one thanks

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: Michael Dean <michael.dean@walsheng.net>
Sent: Tuesday, July 24, 2018 1:11 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: vern@walsheng.net; Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>
Subject: Re: Hallador - Horton #1B sampling

Cory
That's Highway 574 light plant road not 537.

Michael Dean

On Jul 24, 2018, at 11:59 AM, Smith, Cory, EMNRD <Cory.Smith@state.nm.us> wrote:

> Vern,
>
> Per our conversation we will meet on hwy 537 turn off at 2PM today.
>
> 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: vern@walsheng.net <vern@walsheng.net>
Sent: Tuesday, July 24, 2018 11:08 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: 'Michael Dean' <michael.dean@walsheng.net>
Subject: Hallador - Horton #1B sampling

Cory,
We have the BGT spill area excavated and will be ready to sample tomorrow morning at 1pm if that works for you. I will follow up with a phone call.

Thank you,
Vern Andrews
505-320-1763
vern@walsheng.net

Vanessa

From: Michael Dean <michael.dean@walsheng.net>
Sent: Friday, May 24, 2019 7:41 AM
To: 'Vanessa'
Subject: FW: Hallador, Hallador Below Grade Pits, P809002

From: Smith, Cory, EMNRD [mailto:Cory.Smith@state.nm.us]
Sent: Monday, September 10, 2018 1:38 PM
To: Michael Dean; Vern Andrews; John Hampton Jr.
Cc: Fields, Vanessa, EMNRD
Subject: RE: Hallador, Hallador Below Grade Pits, P809002

Michael,

Thanks for the update on the BGT Closures. Please make sure you include your final laboratory samples in your closure packets.

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: Michael Dean <michael.dean@walsheng.net>
Sent: Friday, September 7, 2018 4:18 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Vern Andrews <vern@walsheng.net>; John Hampton Jr. <jdhampton@walsheng.net>
Subject: Fwd: Hallador, Hallador Below Grade Pits, P809002

Michael Dean

Begin forwarded message:

> **From:** Timothy Cain <tcain@envirotech-inc.com>
> **Date:** September 7, 2018 at 2:41:24 PM MDT
> **To:** John Jr. <jdhampton@walsheng.net>, "Michael.Dean@walsheng.net" <Michael.Dean@walsheng.net>
> **Cc:** Walter Hinchman <whinchman@envirotech-inc.com>
> **Subject: Hallador, Hallador Below Grade Pits, P809002**
>
> John and Michael,
>
> Thank you for Choosing Envirotech Analytical Laboratory. Attached is the final report for the "Hallador

Below Grade Pits" project. Let us know if you have any questions.

Envirotech Analytical Laboratory welcomes your feedback. Please visit the survey site below to let us know how we are doing and how we can better serve you.
https://www.surveymonkey.com/r/BHB9MZR

Tim Cain
Envirotech Analytical Laboratory
Chemist
Office 505-632-0615
tcain@envirotech-inc.com
5796 U.S. Highway 64, Farmington NM 87401

"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete." - Richard Buckminster Fuller

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-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NCS 1821455684
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party EPIC Energy L.L.C	OGRID 320949
Contact Name Vanessa Fields	Contact Telephone 505-787-9100
Contact email vanessa@walsheng.net	Incident # *(assigned by OCD)* NCS 1821455684
Contact mailing address 7415 East Main Street Farmington, NM 87402	

Location of Release Source

Latitude 36.9124541 Longitude -108.0286102
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Horton #001B	Site Type Gas
Date Release Discovered 7/6/2018	API# *(if applicable)* 30-045-30165

Unit Letter	Section	Township	Range	County
J	07	31N	11W	San Juan

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Cause of Release: NMOCD representative was onsite to witness the removal of the BGT removal. Five-point composite samples were collected from the base and walls of excavation. Samples were collected and sent to Envirotech Labs to be analyzed for Chlorides, TPH, BTEX and Benzene. All samples came back below regulatory standards except for the analytical results from the North Wall. On August 2, 2018 the North wall of the excavation was resampled after an estimated 60 cyds were removed via excavation. Sample results returned analytical results below regulatory standards. The excavation was backfilled using like surface material approved by the BLM.

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?
☐ Yes ☒ No	

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Vanessa Fields Title: Regulatory Specialist

Signature: Date: 5/28/2019

email: vanessa@walsheng.net Telephone: 505-787-9100

OCD Only

Received by: Date:

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Hallador

Chain Of Custody Number:

Samples Received: 7/24/2018 4:00:00PM

Job Number: 18010-0004

Work Order: P807040

Project Name/Location: Below Grade Pits/Horton 1B

30-045-30165

Report Reviewed By:

Walter Hinchman, Laboratory Director — Date: 7/27/18

Tim Cain, Project Manager — Date: 7/27/18

NELAP ACCREDITED TNI LABORATORY

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

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Analytical Laboratory

Hallador	Project Name:	Below Grade Pits/Horton 1B 30-045-30165	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	27-Jul-18 15:08

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Bottom	P807040-01A	Soil	07/24/18	07/24/18	Glass Jar, 4 oz.
North	P807040-02A	Soil	07/24/18	07/24/18	Glass Jar, 4 oz.
South	P807040-03A	Soil	07/24/18	07/24/18	Glass Jar, 4 oz.
East	P807040-04A	Soil	07/24/18	07/24/18	Glass Jar, 4 oz.
West	P807040-05A	Soil	07/24/18	07/24/18	Glass Jar, 4 oz.

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Analytical Laboratory

Hallador	Project Name:	Below Grade Pits/Horton 1B 30-045-30165	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	27-Jul-18 15:08

Bottom
P807040-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1830007	07/24/18	07/25/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1830007	07/24/18	07/25/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1830007	07/24/18	07/25/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1830007	07/24/18	07/25/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1830007	07/24/18	07/25/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1830007	07/24/18	07/25/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1830007	07/24/18	07/25/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*99.2 %*		*50-150*	*1830007*	*07/24/18*	*07/25/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1830007	07/24/18	07/25/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**221**	25.0	mg/kg	1	1830008	07/25/18	07/26/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**81.7**	50.0	mg/kg	1	1830008	07/25/18	07/26/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*99.4 %*		*50-150*	*1830007*	*07/24/18*	*07/25/18*	*EPA 8015D*	
Surrogate: n-Nonane		*94.3 %*		*50-200*	*1830008*	*07/25/18*	*07/26/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**50.0**	20.0	mg/kg	1	1830012	07/25/18	07/25/18	EPA 300.0/9056A	

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Analytical Laboratory

Hallador	Project Name:	Below Grade Pits/Horton 1B 30-045-30165	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	27-Jul-18 15:08

North
P807040-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*98.4 %*		*50-150*	*1830007*	*07/24/18*	*07/26/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1830007	07/24/18	07/26/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**657**	25.0	mg/kg	1	1830008	07/25/18	07/26/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**1010**	50.0	mg/kg	1	1830008	07/25/18	07/26/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*97.2 %*		*50-150*	*1830007*	*07/24/18*	*07/26/18*	*EPA 8015D*	
Surrogate: n-Nonane		*99.3 %*		*50-200*	*1830008*	*07/25/18*	*07/26/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**45.4**	20.0	mg/kg	1	1830012	07/25/18	07/25/18	EPA 300.0/9056A	

Hallador	Project Name:	Below Grade Pits/Horton 1B 30-045-30165	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	27-Jul-18 15:08

South

P807040-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*98.7 %*		*50-150*	*1830007*	*07/24/18*	*07/26/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1830007	07/24/18	07/26/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1830008	07/25/18	07/26/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1830008	07/25/18	07/26/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*99.9 %*		*50-150*	*1830007*	*07/24/18*	*07/26/18*	*EPA 8015D*	
Surrogate: n-Nonane		*91.9 %*		*50-200*	*1830008*	*07/25/18*	*07/26/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**86.9**	20.0	mg/kg	1	1830012	07/25/18	07/25/18	EPA 300.0/9056A	

Hallador	Project Name:	Below Grade Pits/Horton 1B 30-045-30165	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	27-Jul-18 15:08

East
P807040-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*99.1 %*		*50-150*	*1830007*	*07/24/18*	*07/26/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1830007	07/24/18	07/26/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**26.1**	25.0	mg/kg	1	1830008	07/25/18	07/26/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1830008	07/25/18	07/26/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*98.9 %*		*50-150*	*1830007*	*07/24/18*	*07/26/18*	*EPA 8015D*	
Surrogate: n-Nonane		*95.4 %*		*50-200*	*1830008*	*07/25/18*	*07/26/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**53.0**	20.0	mg/kg	1	1830012	07/25/18	07/25/18	EPA 300.0/9056A	

Hallador	Project Name:	Below Grade Pits/Horton 1B 30-045-30165	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	27-Jul-18 15:08

West

P807040-05 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Ethylbenzene	**278**	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
p,m-Xylene	**238**	200	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
o-Xylene	**159**	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Total Xylenes	**398**	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Total BTEX	**676**	100	ug/kg	1	1830007	07/24/18	07/26/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*106 %*		*50-150*	*1830007*	*07/24/18*	*07/26/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**42.8**	20.0	mg/kg	1	1830007	07/24/18	07/26/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**764**	25.0	mg/kg	1	1830008	07/25/18	07/26/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**193**	50.0	mg/kg	1	1830008	07/25/18	07/26/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*107 %*		*50-150*	*1830007*	*07/24/18*	*07/26/18*	*EPA 8015D*	
Surrogate: n-Nonane		*113 %*		*50-200*	*1830008*	*07/25/18*	*07/26/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**66.4**	20.0	mg/kg	1	1830012	07/25/18	07/25/18	EPA 300.0/9056A	

Hallador	Project Name:	Below Grade Pits/Horton 1B	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	27-Jul-18 15:08

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1830007 - Purge and Trap EPA 5030A										
Blank (1830007-BLK1)				Prepared: 24-Jul-18 Analyzed: 26-Jul-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	*7850*		"	*8000*		*98.1*	*50-150*			
LCS (1830007-BS1)				Prepared: 24-Jul-18 Analyzed: 26-Jul-18						
Benzene	4470	100	ug/kg	5000		89.5	70-130			
Toluene	4530	100	"	5000		90.6	70-130			
Ethylbenzene	4560	100	"	5000		91.2	70-130			
p,m-Xylene	8830	200	"	10000		88.4	70-130			
o-Xylene	4570	100	"	5000		91.5	70-130			
Total Xylenes	13400	100	"	15000		89.4	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7870*		"	*8000*		*98.4*	*50-150*			
Matrix Spike (1830007-MS1)		**Source: P807035-01**		Prepared: 24-Jul-18 Analyzed: 26-Jul-18						
Benzene	4520	100	ug/kg	5000	ND	90.5	54.3-133			
Toluene	4580	100	"	5000	ND	91.7	61.4-130			
Ethylbenzene	4630	100	"	5000	ND	92.7	61.4-133			
p,m-Xylene	8970	200	"	10000	ND	89.7	63.3-131			
o-Xylene	4640	100	"	5000	ND	92.8	63.3-131			
Total Xylenes	13600	100	"	15000	ND	90.7	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*7900*		"	*8000*		*98.8*	*50-150*			
Matrix Spike Dup (1830007-MSD1)		**Source: P807035-01**		Prepared: 24-Jul-18 Analyzed: 26-Jul-18						
Benzene	4040	100	ug/kg	5000	ND	80.8	54.3-133	11.3	20	
Toluene	4120	100	"	5000	ND	82.4	61.4-130	10.7	20	
Ethylbenzene	4170	100	"	5000	ND	83.4	61.4-133	10.6	20	
p,m-Xylene	8110	200	"	10000	ND	81.1	63.3-131	10.0	20	
o-Xylene	4220	100	"	5000	ND	84.4	63.3-131	9.47	20	
Total Xylenes	12300	100	"	15000	ND	82.2	63.3-131	9.84	20	
Surrogate: 4-Bromochlorobenzene-PID	*7900*		"	*8000*		*98.8*	*50-150*			

Hallador	Project Name:	Below Grade Pits/Horton 1B	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	27-Jul-18 15:08

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1830007 - Purge and Trap EPA 5030A										
Blank (1830007-BLK1)				Prepared: 24-Jul-18 Analyzed: 26-Jul-18						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.71*		"	*8.00*		*96.3*	*50-150*			
LCS (1830007-BS2)				Prepared: 24-Jul-18 Analyzed: 26-Jul-18						
Gasoline Range Organics (C6-C10)	46.6	20.0	mg/kg	50.0		93.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.12*		"	*8.00*		*102*	*50-150*			
Matrix Spike (1830007-MS2)		**Source: P807035-01**		Prepared: 24-Jul-18 Analyzed: 26-Jul-18						
Gasoline Range Organics (C6-C10)	38.8	20.0	mg/kg	50.0	ND	77.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.93*		"	*8.00*		*99.1*	*50-150*			
Matrix Spike Dup (1830007-MSD2)		**Source: P807035-01**		Prepared: 24-Jul-18 Analyzed: 26-Jul-18						
Gasoline Range Organics (C6-C10)	46.2	20.0	mg/kg	50.0	ND	92.4	70-130	17.3	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.89*		"	*8.00*		*98.6*	*50-150*			

Hallador	Project Name:	Below Grade Pits/Horton 1B	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	27-Jul-18 15:08

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1830008 - DRO Extraction EPA 3570										
Blank (1830008-BLK1)				Prepared: 24-Jul-18 Analyzed: 26-Jul-18						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	*45.7*		"	*50.0*		*91.3*	*50-200*			
LCS (1830008-BS1)				Prepared: 24-Jul-18 Analyzed: 26-Jul-18						
Diesel Range Organics (C10-C28)	479	25.0	mg/kg	500		95.8	38-132			
Surrogate: n-Nonane	*49.5*		"	*50.0*		*99.0*	*50-200*			
Matrix Spike (1830008-MS1)	**Source: P807035-01**			Prepared: 24-Jul-18 Analyzed: 26-Jul-18						
Diesel Range Organics (C10-C28)	463	25.0	mg/kg	500	ND	92.6	38-132			
Surrogate: n-Nonane	*48.1*		"	*50.0*		*96.2*	*50-200*			
Matrix Spike Dup (1830008-MSD1)	**Source: P807035-01**			Prepared: 24-Jul-18 Analyzed: 26-Jul-18						
Diesel Range Organics (C10-C28)	448	25.0	mg/kg	500	ND	89.6	38-132	3.29	20	
Surrogate: n-Nonane	*48.2*		"	*50.0*		*96.4*	*50-200*			

Hallador	Project Name:	Below Grade Pits/Horton 1B	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	27-Jul-18 15:08

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1830012 - Anion Extraction EPA 300.0/9056A										
Blank (1830012-BLK1)				Prepared & Analyzed: 25-Jul-18						
Chloride	ND	20.0	mg/kg							
LCS (1830012-BS1)				Prepared & Analyzed: 25-Jul-18						
Chloride	257	20.0	mg/kg	250		103	90-110			
Matrix Spike (1830012-MS1)	**Source: P807040-01**			Prepared & Analyzed: 25-Jul-18						
Chloride	313	20.0	mg/kg	250	50.0	105	80-120			
Matrix Spike Dup (1830012-MSD1)	**Source: P807040-01**			Prepared & Analyzed: 25-Jul-18						
Chloride	308	20.0	mg/kg	250	50.0	103	80-120	1.65	20	

Hallador	Project Name:	Below Grade Pits/Horton 1B	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	27-Jul-18 15:08

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Project Information | Chain of Custody | Page 1 of 1

Client:	HALLADOR
Project:	BELOW GRADE PITS / HORTON 1B
Project Manager:	MICHAEL L DEAN
Address:	7415 EAST MAIN
City, State, Zip	FARMINGTON N.M. 87402
Phone:	505-320-1763
Email:	VERN@WALSHENG.NET

Report Attention

Report due by:	7-27-18
Attention:	VERN ANDREWS
Address:	7415 EAST MAIN
City, State, Zip	FARMINGTON N.M. 87402
Phone:	505-320-1763
Email:	VERN@WALSHENG.NET

Lab Use Only

Lab WO# P887040 | Job Number 1R010-0004

TAT: 1D | 3D: X

EPA Program: RCRA | CWA | SDW

State: NM: X | CO | UT | A

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	Metals 6010	Chloride 300.0	TPH 418.1	Remarks
2:00PM	7-24-18	S	6	BOTTOM	1	X	X	X			X		
2:25	7-24-18	S	6	NORTH	1								
2:10	7-24-18	S	6	SOUTH	1								
2:15	7-24-18	S	6	EAST	1								
2:30	7-24-18	S	6	WEST	1								

Additional Instructions: V. 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: Michael Dean

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
Michael Dean	7/24/18	1600	[illegible]	7/24/18	1600
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only
Received on ice: Y / N
T1 T2 T3
AVG Temp °C 4.0

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 boratory 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 | 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

Analytical Report

Report Summary

Client: Hallador

Chain Of Custody Number: Samples Received: 8/2/2018 2:55:00PM Job Number: 18010-0004

Work Order: P808003

Project Name/Location: Below Grade Pits/Horton 1B

API# 30-045-30165

Report Reviewed By: Walter Hinchman, Laboratory Director Date: 8/7/18

Tim Cain, Project Manager Date: 8/7/18

NELAP ACCREDITED TNI LABORATORY

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

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Hallador	Project Name:	Below Grade Pits/Horton 1B	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	08/07/18 15:41

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
North	P808003-01A	Soil	08/02/18	08/02/18	Glass Jar, 4 oz.

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Analytical Laboratory

Hallador	Project Name:	Below Grade Pits/Horton 1B API# 30-045-30165	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	08/07/18 15:41

North
P808003-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1831014	08/02/18	08/03/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1831014	08/02/18	08/03/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1831014	08/02/18	08/03/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1831014	08/02/18	08/03/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1831014	08/02/18	08/03/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1831014	08/02/18	08/03/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1831014	08/02/18	08/03/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*99.2 %*		*50-150*	*1831014*	*08/02/18*	*08/03/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1831014	08/02/18	08/03/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1831010	08/02/18	08/03/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*100 %*		*50-150*	*1831014*	*08/02/18*	*08/03/18*	*EPA 8015D*	
Surrogate: n-Nonane		*103 %*		*50-200*	*1831010*	*08/02/18*	*08/03/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**150**	20.0	mg/kg	1	1831018	08/03/18	08/03/18	EPA 300.0/9056A	
Total Petroleum Hydrocarbons by 418.1									
Total Petroleum Hydrocarbons	**50.0**	40.0	mg/kg	1	1832002	08/06/18	08/06/18	EPA 418.1	

Hallador	Project Name:	Below Grade Pits/Horton 1B	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	08/07/18 15:41

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 1831014 - Purge and Trap EPA 5030A										
Blank (1831014-BLK1)				Prepared: 08/02/18 1 Analyzed: 08/03/18 1						
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	*7980*		"	*8000*		*99.7*	*50-150*			
LCS (1831014-BS1)				Prepared: 08/02/18 1 Analyzed: 08/06/18 1						
Benzene	4970	100	ug/kg	5000		99.4	70-130			
Toluene	5060	100	"	5000		101	70-130			
Ethylbenzene	5140	100	"	5000		103	70-130			
p,m-Xylene	9940	200	"	10000		99.4	70-130			
o-Xylene	5090	100	"	5000		102	70-130			
Total Xylenes	15000	100	"	15000		100	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7980*		"	*8000*		*99.8*	*50-150*			
Matrix Spike (1831014-MS1)		**Source: P807050-01**		Prepared: 08/02/18 1 Analyzed: 08/03/18 1						
Benzene	4620	100	ug/kg	5000	ND	92.4	54.3-133			
Toluene	4700	100	"	5000	ND	94.1	61.4-130			
Ethylbenzene	4770	100	"	5000	ND	95.5	61.4-133			
p,m-Xylene	9250	200	"	10000	ND	92.5	63.3-131			
o-Xylene	4720	100	"	5000	ND	94.5	63.3-131			
Total Xylenes	14000	100	"	15000	ND	93.2	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*8040*		"	*8000*		*100*	*50-150*			
Matrix Spike Dup (1831014-MSD1)		**Source: P807050-01**		Prepared: 08/02/18 1 Analyzed: 08/03/18 2						
Benzene	4590	100	ug/kg	5000	ND	91.9	54.3-133	0.590	20	
Toluene	4680	100	"	5000	ND	93.6	61.4-130	0.562	20	
Ethylbenzene	4740	100	"	5000	ND	94.9	61.4-133	0.648	20	
p,m-Xylene	9190	200	"	10000	ND	91.9	63.3-131	0.644	20	
o-Xylene	4700	100	"	5000	ND	94.1	63.3-131	0.404	20	
Total Xylenes	13900	100	"	15000	ND	92.7	63.3-131	0.563	20	
Surrogate: 4-Bromochlorobenzene-PID	*8040*		"	*8000*		*101*	*50-150*			

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Analytical Laboratory

Hallador	Project Name:	Below Grade Pits/Horton 1B	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	08/07/18 15:41

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 1831010 - DRO Extraction EPA 3570										
Blank (1831010-BLK1)				Prepared: 08/02/18 0 Analyzed: 08/03/18 1						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Surrogate: n-Nonane	*46.3*		"	*50.0*		*92.6*	*50-200*			
LCS (1831010-BS1)				Prepared: 08/02/18 0 Analyzed: 08/03/18 1						
Diesel Range Organics (C10-C28)	468	25.0	mg/kg	492		95.1	38-132			
Surrogate: n-Nonane	*48.9*		"	*50.0*		*97.8*	*50-200*			
Matrix Spike (1831010-MS1)	**Source: P807050-01**			Prepared: 08/02/18 0 Analyzed: 08/03/18 1						
Diesel Range Organics (C10-C28)	535	25.0	mg/kg	492	90.0	90.5	38-132			
Surrogate: n-Nonane	*58.8*		"	*50.0*		*118*	*50-200*			
Matrix Spike Dup (1831010-MSD1)	**Source: P807050-01**			Prepared: 08/02/18 0 Analyzed: 08/03/18 1						
Diesel Range Organics (C10-C28)	530	25.0	mg/kg	492	90.0	89.5	38-132	0.930	20	
Surrogate: n-Nonane	*58.3*		"	*50.0*		*117*	*50-200*			

Hallador	Project Name:	Below Grade Pits/Horton 1B	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	08/07/18 15:41

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 1831014 - Purge and Trap EPA 5030A										
Blank (1831014-BLK1)				Prepared: 08/02/18 1 Analyzed: 08/03/18 1						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.84*		"	*8.00*		*98.0*	*50-150*			
LCS (1831014-BS2)				Prepared: 08/02/18 1 Analyzed: 08/06/18 1						
Gasoline Range Organics (C6-C10)	49.7	20.0	mg/kg	50.0		99.5	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.03*		"	*8.00*		*100*	*50-150*			
Matrix Spike (1831014-MS2)		**Source: P807050-01**		Prepared: 08/02/18 1 Analyzed: 08/03/18 2						
Gasoline Range Organics (C6-C10)	36.1	20.0	mg/kg	50.0	ND	72.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.00*		"	*8.00*		*99.9*	*50-150*			
Matrix Spike Dup (1831014-MSD2)		**Source: P807050-01**		Prepared: 08/02/18 1 Analyzed: 08/06/18 1						
Gasoline Range Organics (C6-C10)	43.1	20.0	mg/kg	50.0	ND	86.2	70-130	17.6	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.22*		"	*8.00*		*103*	*50-150*			

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Analytical Laboratory

Hallador	Project Name:	Below Grade Pits/Horton 1B	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	08/07/18 15:41

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1831018 - Anion Extraction EPA 300.0/9056A										
Blank (1831018-BLK1)				Prepared & Analyzed: 08/03/18 1						
Chloride	ND	20.0	mg/kg							
LCS (1831018-BS1)				Prepared & Analyzed: 08/03/18 1						
Chloride	254	20.0	mg/kg	250		102	90-110			
Matrix Spike (1831018-MS1)		**Source: P808003-01**		Prepared & Analyzed: 08/03/18 1						
Chloride	416	20.0	mg/kg	250	150	106	80-120			
Matrix Spike Dup (1831018-MSD1)		**Source: P808003-01**		Prepared & Analyzed: 08/03/18 1						
Chloride	414	20.0	mg/kg	250	150	105	80-120	0.528	20	

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Analytical Laboratory

Hallador	Project Name:	Below Grade Pits/Horton 1B	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	08/07/18 15:41

Total Petroleum Hydrocarbons by 418.1 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1832002 - 418 Freon Solid Extraction										
Blank (1832002-BLK1)				Prepared: 08/06/18 0 Analyzed: 08/06/18 1						
Total Petroleum Hydrocarbons	ND	40.0	mg/kg							
LCS (1832002-BS1)				Prepared: 08/06/18 0 Analyzed: 08/06/18 1						
Total Petroleum Hydrocarbons	952	40.0	mg/kg	1000		95.2	80-120			
Matrix Spike (1832002-MS1)	**Source: P808003-01**			Prepared: 08/06/18 0 Analyzed: 08/06/18 1						
Total Petroleum Hydrocarbons	978	40.0	mg/kg	1000	50.0	92.8	70-130			
Matrix Spike Dup (1832002-MSD1)	**Source: P808003-01**			Prepared: 08/06/18 0 Analyzed: 08/06/18 1						
Total Petroleum Hydrocarbons	916	40.0	mg/kg	1000	50.0	86.6	70-130	6.55	30	

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Analytical Laboratory

Hallador	Project Name:	Below Grade Pits/Horton 1B	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	**Reported:**
Denver CO, 80264	Project Manager:	Vern Andrews	08/07/18 15:41

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Page 1 of 1

Page 10 of 10

Chain of Custody

Project Information

Client: HALLADOR / WALSH
Project: HORTON 1B
Project Manager: MICHAEL L DEAN
Address: ~~[redacted]~~ 7415 E. MAIN
City, State, Zip FARMINGTON NM 87413
Phone: 505-330-1763
Email: VERN@WALSHENG.NET

Report Attention

Report due by: 8/7/18
Attention: VERN ANDREWS
Address: 7415 EAST MAIN
City, State, Zip FARMINGTON N.M 87413
Phone: 320-1763
Email: VERN@WALSHENG.NET

Lab Use Only

Lab WO# P808003
Job Number 13010-0004

TAT

1D: ☐ 3D: X

EPA Program

RCRA: ☐ CWA: ☐ SDWA: ☐

State

NM: X CO: ☐ UT: ☐ AZ: ☐

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	Metals 6010	Chloride 300.0	TPH 418.1	Remarks
2:00PM	8/2/18	SD	~~6~~ 1 TL 8/2/18	NORTH	1		X	X			X	X	

Additional Instructions: vis. ice in cooler -m

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: Michael Dean

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
Michael Dean	8-2-18	2:55pm	[illegible]	8-2-18	14:55
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only
Received on ice: (Y) / N
T1 T2 T3
AVG Temp °C 4.0

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 boratory 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 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

EPIC Energy L.L.C

Below Grade Tank Closure Plan

Horton #001B

30-045-30165

U/J: Section 07, TWN: 31N. RNG: 11W

San Juan County, New Mexico

As stipulated in Rule 19 .15 .17 .13 NMAC, the following information adheres to the requirements established in closing below-grade tanks (BGTs) on EPIC Energy L.L.C well sites. This plan will address the standard protocols and procedures for closure of BGTs.

EPIC Energy L.L.C proposes to close its existing BGTs that do not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or are not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC in accordance with this closure plan and the transitional provisions of Subsection E of 19.15.17.17 NMAC, or within five (5) years after the effective date (June 16, 2008) of 19.15.17 NMAC.

The following outline addresses all requirements for closure of EPIC Energy L.L.C BGTs:

1.Prior notification of EPIC Energy L.L.C intent to close the BGT will follow 19.15.17.13J (I) and (2).

a. EPIC Energy L.L.C will notify the surface owner by certified mail, return receipt requested, of closure plans. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is enough to demonstrate compliance with this requirement.

b. notification will also be given to the division District III office verbally or by other means at least 72 hours, but not more than one (1) week, prior to any closure operation. The notice will include the operator's name and the well's name, number, and API number, in addition to the well's legal description, including the unit letter, section, township, and range.

Notification was provided to the NMOCD District III office and the Farmington Bureau Land Management Farmington office via e-mail.

2.EPIC Energy L.L.C will remove liquids and sludge from the BGT prior to implementing a closure method and dispose of the liquids and sludge in a NMOCD's division-approved facility. A list of EPIC Energy L.L.C approved disposal facilities is below:

Fluid disposal:

Agua Moss

Sunco well #1

U/L=E, SWNW, Section 2, T29N-Rl2W San Juan, New Mexico

Permit #NM-01-0009

Basin Disposal Inc.

Basin Disposal well # 1

U/L=F, SWNW, Section 3, T29N-Rl 1 W San Juan, New Mexico

Permit #NM-01-0011

Solid disposal: **Envirotech Land Farm**

Disposal Facility

Section 6, T26N-R10W, County Road #7175 San Juan, New Mexico

Permit #NM-01-0011

3.EPIC Energy L.L.C will remove the BGT from the pit and place it at ground level adjacent to the original BGT site and dispose of it in a NMOCD approved facility or recycle, reuse, or reclaim it in a manner that the NMOCD approved. If a liner is present and must be disposed of it will be cleaned and disposed at a permitted solid waste facility, pursuant to Subparagraph (m) of Paragraph (1) of Subsection C of 19.15.35.8 NMAC.

The BGT was transported for recycling.

4.EPIC Energy L.L.C will hook up necessary equipment and piping for temporary tank use. At this time, any on-site equipment not necessary to the operation of the tank will be removed from the site.

All equipment associated with the BGT removal haws been removed and disposed in division approved manner and/or recycled.

5.EPIC Energy L.L.C will test the soils beneath the original BGT location to determine whether a release has occurred. At a minimum, a five (5) point composite sample will be collected in addition to individual grab samples from areas that are wet, discolored, or showing other evidence of a release. The samples will be analyzed for BTEX, TPH, and chlorides to demonstrate that they do not exceed certain concentrations. The testing methods and closure standards for those constituents are as follows:

NMOCD representative was onsite to witness the removal of the BGT removal. Five-point composite samples were collected from the base and walls of excavation. Samples were collected and sent to Envirotech Labs to be analyzed for Chlorides, TPH, BTEX and Benzene. All samples came back below regulatory standards except for the analytical results from the North Wall. On August 2, 2018 the North wall of the excavation was resampled after an estimated 60 cyds were removed via excavation. Sample results returned analytical results below regulatory standards. The excavation was backfilled using like surface material approved by the BLM.

Table I
Closure Criteria for Soils Impacted by a Release

Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
≤ 50 feet	Chloride***	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
51 feet-100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
>100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

*Or other test methods approved by the division.

Notes: mg/Kg= milligram per kilogram; BTEX = benzene, toluene, ethylbenzene, and total xylenes; TPH = total petroleum hydrocarbons. Other EPA methods that the division approves may be applied to all constituents listed. The Chlorides closure standards will be determined by whichever concentration level is greatest.

6. EPIC Energy L.L.C will notify the division District lil office of the soil test results on Form C-14 l. It is understood that the NMOCD may require additional delineation upon review of the results.

Notification of analytical results above regulatory standards was provided to the NMOCD. On July 24, 2019. Epic Energy indicated a release occurred via Form C-141.

7. If it is determined that a release has occurred, then EPIC Energy L.L.C will comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.

Notification of analytical results above regulatory standards was provided to the NMOCD. On July 24, 2019. Epic Energy indicated a release occurred via Form C-141.

8. If the confirmation sampling demonstrates that a release has not occurred or that any release does not exceed the concentrations specified above, then EPIC Energy L.L.C will backfill the · excavation with compacted, non-waste containing, earthen material; construct a division prescribed soil cover; re-contour the site; and move the fiberglass tank onto the newly backfilled and compacted site. The division-prescribed soil cover, re-contouring, and re-vegetation requirements shall comply with Subsections G, H, and I of 19.15.17.13 NMAC.

The area where the BGT was located has been backfilled and will be reclaimed once the well has been plugged and abandoned.

9.Reclamation will follow 19.15.17.130 (1) and (2).

a. The BGT location and all areas associated with the BGT, including associated access roads, if applicable, will be reclaimed to a safe and stable condition that blends with the surrounding undisturbed area. It is understood that EPIC Energy L.L.C shall substantially restore the impacted surface area to the condition that existed prior to oil and gas operations by placement of the soil cover as provided in Subsection H of 19 .15 .1 7 .13 NMA C and re-contour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography.

b. Re-vegetation will not be completed at the time the BGT pit is reclaimed but will instead be applied for as part of the P&A process when the well is plugged and abandoned.

10. Soil cover will follow 19.15.17.13H (1) and (3).

a. The soil cover for closures where the BGT has been removed or contaminated soil has been remediated to the NMOCD's satisfaction will consist of the background thickness of topsoil or one (1) foot of suitable material to establish vegetation at the site, whichever is greater.

b. The soil cover will be constructed to the site's existing grade, and all possible efforts will be conducted to prevent ponding of water and erosion of the cover material.

The area where the BGT was located has been backfilled and will be reclaimed once the well has been plugged and abandoned.

11.Within 60 days of closure completion, EPIC Energy L.L.C will submit a closure report on NMOCD's Form C-144, with necessary attachments to document all closure activities, including sampling results; information required by 19.15.17 NMAC; and details on backfilling, capping, and covering, where applicable. EPIC Energy L.L.C will certify that all information in the report and attachments is correct and that EPIC Energy L.L.C has complied with all applicable closure requirements and conditions specified in the approved closure plan.


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