

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.

BGT 1

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: Hilcorp Energy Company OGRID #: 372171  
Address: 382 Road 3100 Aztec, NM 87410  
Facility or well name: SAN JUAN 29-5 UNIT 49  
API Number: 30-039-07647 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr M Section 09 Township 29N Range 05W County: Rio Arriba  
Center of Proposed Design: Latitude 36.7354698 °N Longitude -107.3677979 °W NAD27  
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.  
☐ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC  
Temporary: ☐ Drilling ☐ Workover  
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☐ yes ☐ no  
☐ Lined ☐ Unlined Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
☐ String-Reinforced  
Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_ Volume: \_\_\_\_\_ bbl Dimensions: L \_\_\_\_\_ x W \_\_\_\_\_ x D \_\_\_\_\_

3.  
☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC  
Volume: 120 bbl Type of fluid: Produced Water  
Tank Construction material: Metal  
☐ 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 Unspecified

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 \_\_\_\_\_

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.**

- ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells

☐ Yes ☐ No  
☒ NA

**Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit.**

NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No  
☒ NA

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**)

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☐ No

Within the area overlying a subsurface mine. (**Does not apply to below grade tanks**)

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area. (**Does not apply to below grade tanks**)

- 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. (**Does not apply to below grade tanks**)

- FEMA map

☐ Yes ☐ No

**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).

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

☐ Yes ☒ No

Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;

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

☐ Yes ☒ No

**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.)

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

☐ Yes ☐ No

Within 300 feet from a occupied 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 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.

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

☐ Yes ☐ No

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<sub>2</sub>S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13. **Proposed Closure:** 19.15.17.13 NMAC

**Instructions:** Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

- Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☒ Below-grade Tank ☐ Multi-well Fluid Management Pit  
☐ Alternative
- Proposed Closure Method: ☒ Waste Excavation and Removal  
☐ Waste Removal (Closed-loop systems only)  
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)  
☐ In-place Burial ☐ On-site Trench Burial  
☐ Alternative Closure Method

14. **Waste Excavation and Removal Closure Plan Checklist:** (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☒ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC
- ☒ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☒ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

15. **Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC

**Instructions:** Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.

- |   |   |
|---|---|
| Ground water is less than 25 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells   | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Ground water is between 25-50 feet below the bottom of the buried waste<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells   | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Ground water is more than 100 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells  | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).<br>- Topographic map; Visual inspection (certification) of the proposed site                        | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application.<br>- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Written confirmation or verification from the municipality; Written approval obtained from the municipality   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 300 feet of a wetland.<br>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |



adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> 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: 1/17/2020

Title: Environmental Specialist 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: 12/10/2019

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 \_\_\_\_\_ 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): Tammy Jones Title: Operations/Regulatory Technician – Sr

Signature:  Date: 12/20/2019

e-mail address: [tajones@hilcorp.com](mailto:tajones@hilcorp.com) Telephone: (505) 324-5185

**Hilcorp Energy Company  
San Juan Basin  
Below Grade Tank Closure Report**

**Lease Name: SAN JUAN 29-5 UNIT 49**

**API No.: 30-039-07647**

In accordance with Rule 19.15.17.13 NMAC the following information describes the closure of the below-grade tank referenced above. All proper documentation regarding closure activities is being included with the C-144.

**General Plan:**

1. HILCORP shall close a below-grade tank within 60 days of cessation of operations per Subsection G.4 of 19.15.17.13 NMAC. This will include a) below-grade tanks that do not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC; b) an earlier date that the division requires because of imminent danger to fresh water, public health or the environment. For any closure, HILCORP will file the C144 Closure Report as required.

**The below-grade tank referenced above was permitted and closed within 60 days of cessation of the below-grade tanks operation.**

2. HILCORP shall remove liquids and sludge from a below-grade tank prior to implementing a closure method and shall dispose of the liquids and sludge in a division-approved facility. The facilities to be used will be Basin Disposal (Permit #NM-01-005), JFJ Landfarm % Industrial Ecosystem Inc. (Permit # NM-01-0010B) and Envirotech Land Farm (Permit #NM-01-011). The liner after being cleaned well (Subsection D, Paragraph 1, Subparagraph (m) of 19.15.9.712 NMAC) will be disposed of at the San Juan County Regional Landfill located on CR 3100.

**All recovered liquids were disposed of at Basin Disposal (Permit #NM-01-005) and any sludge or soil required to be removed to facilitate closure was hauled to Envirotech Land Farm (Permit #NM-01-011) and JFJ Landfarm % IEI (Permit #NM-01-0010B). The liner was cleaned per Subsection D, Paragraph 1, Subparagraph (m) of 19.15.9.712 NMAC was disposed of at the San Juan County Regional Landfill located on CR 3100.**

3. HILCORP will receive prior approval to remove the below-grade tank and dispose of it in a division-approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves.

**The below-grade tank was disposed of in a division-approved manner.**

4. If there is any on-site equipment associated with a below-grade tank, then HILCORP shall remove the equipment, unless the equipment is required for some other purpose.

**All on-site equipment associated with the below-grade tank was removed.**

5. HILCORP will test the soils beneath the below-grade tank to determine whether a release has occurred. HILCORP shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyzed for the constituents listed in Table I of 19.15.17.13 NMAC. Hilcorp shall notify the division of its results on form C-141.

**A five point composite sample was taken of the below-grade tank using sampling tools and all samples tested per Subsection B of 19.15.17.1 3(B)(1)(b). (Sample results attached). Form C-141 is attached.**

Components	Tests Method	Limit (mg/kg)
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	100
Chlorides	EPA 300.0	250

6. If HILCORP or the division determines that a release has occurred, then HILCORP shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.

**A release was not determined for the above referenced well.**

7. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Table I of 19.15.17.13 NMAC, then HILCORP shall backfill the excavation with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site.

**The below-grade tank area passed all requirements of Paragraph (4) of Subsection E of 19.15.17.13 NMAC and was backfilled with compacted, non-waste containing, earthen material.**

8. Notice of Closure will be given prior to closure to the Aztec Division office between 72 hours and one week via email or verbally. The notification of closure will include the following:
- i. Operator's name
  - ii. Location by Unit Letter, Section, Township, and Range. Well name and API number.

**Notification is attached.**

9. The surface owner shall be notified of HILCORP's closing of the below-grade tank 72 hours, but not more than one week, prior to closure as per the approved closure plan via certified mail, return receipt requested.

**The closure process notification to the landowner was sent via email. (See Attached) (Well located on Federal Land, certified mail is not required for Federal Land per BLM/OCD MOU.)**

10. Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be place in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.

**The below-grade tank area was re-contoured to match fit, shape, line, form and texture of the surrounding area. Re-shaping including drainage control, to prevent ponding and erosion. Natural drainages were unimpeded and water bars and/or silt traps were placed in areas where needed to prevent erosion on a large scale. Final recontour has a uniform appearance with smooth surface, fitting the natural landscape.**

11. HILCORP shall seed the disturbed areas the first favorable growing season following closure of a below-grade tank. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM stipulated seed mixes will be used on federally regulated lands and division-approved seed mixtures (administratively approved if required) will be utilized on all State or private lands. A uniform vegetative cover has been established that reflects a life-form ratio of plus or minus fifty percent (50%) of pre-disturbance levels and a total percent plant cover of at least seventy percent (70%) of pre-disturbance levels, excluding noxious weeds. If alternate seed mix is required by the state, private owner or tribe, it will be implemented with administrative approval if needed. Hilcorp will repeat seeding or planting will be continued until successful vegetative growth occurs.



**Provision 13 was accomplished through complying with BLM seeding requirements as allowed by the BLM/OCD MOU.**

12. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material, with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.

**The below-grade tank area was backfilled and more than four feet of cover was achieved and the cover included one foot of suitable material to establish vegetation at the site.**

13. All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of the below-grade tank. Closure report will be filed on C-144 and incorporate the following:
  - Soil Backfilling and Cover Installation **(See Report)**
  - Re-vegetation application rates and seeding techniques **(See Report)**
  - Photo documentation of the site reclamation **(Included as an attachment)**
  - Confirmation Sampling Results **(Included as an attachment)**
  - Proof of closure notice **(Included as an attachment)**

## Tammy Jones

---

**From:** Smith, Cory, EMNRD <Cory.Smith@state.nm.us>  
**Sent:** Monday, November 18, 2019 7:14 AM  
**To:** Tammy Jones; Griswold, Jim, EMNRD  
**Subject:** [EXTERNAL] RE: BGT Permit request - Closure plan approvals needed ASAP

Tammy,

(11/18/19)

Sorry Y'all checking my email this morning it looks like I drafted the email below last week and did not hit send only noticed it this morning due the reply's. looks like everything is covered.

I have reviewed the Closure Plan for the registered tank SJ 29-5 #49. The Closure Plan only is approved Please include this email in your Closure report

## BGT 1 @ 30-039-07647

### General Pit Information

Well: [\[30-039-07647\]](#) SAN JUAN 29 5 UNIT #049

Facility:

Operator: [\[372171\]](#) HILCORP ENERGY COMPANY

Status: Active

Type: Production

Construction Material: Steel

District: Aztec

Fluid Type: Produced Water

Surface Owner: Federal

County: Rio Arriba (39)

Location: M-09-29N-05W 990 FSL 990 FWL

Lat/Long: 36.7355537,-107.3684006 NAD83

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](mailto:cory.smith@state.nm.us)

## Tammy Jones

---

**From:** Tammy Jones  
**Sent:** Wednesday, November 20, 2019 3:27 PM  
**To:** 'Smith, Cory, EMNRD'; 'Whitney Thomas - BLM (l1thomas@blm.gov)'; 'Adeloye, Abiodun'; 'Durham, John, EMNRD'  
**Cc:** Lisa Jones; Juanita Farrell; Bryan Hall; Lindsay Dumas; Etta Trujillo; Steve Rees; Kurt Hoekstra; Christopher Bramwell; Stephen Baird  
**Subject:** 72 Hour BGT Closure Notification - San Juan 29-5 Unit 49

### **Subject: 72 Hour BGT Closure Notification**

**Anticipated Start Date: Tuesday, November 26th at approximately 9:00 a.m.**

The subject well has a below-grade tank that will begin the closure process between 72 hours and one week from this notification. Please contact me at any time if you have any questions or concerns.

**Well Name:** San Juan 29-5 Unit 49

**API#:** 3003907647

**Location:** Unit M (SWSW), Section 9, T29N, R05W

**Footages:** 990' FSL & 990' FWL

**Operator:** Hilcorp **Surface Owner:** FEDERAL (Lease #NMSF080069)

**Reason:** P&A'd well BGT removal

Thank you,

*Tammy Jones* | **HILCORP ENERGY** | San Juan East Regulatory | 505.324.5185 | [tajones@hilcorp.com](mailto:tajones@hilcorp.com)

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	
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party	Hilcorp Energy Company	OGRID	372171
Contact Name	Tammy Jones	Contact Telephone	(505) 324-5185
Contact email	tajones@hilcorp.com	Incident #	(assigned by OCD)
Contact mailing address	382 Road 3100 Aztec NM 87410		

### Location of Release Source

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	SAN JUAN 29-5 UNIT 49	Site Type	Gas Well
Date Release Discovered	N/A	API# (if applicable)	30-039-07647

Unit Letter	Section	Township	Range	County
M	9	29N	5W	Rio Arriba

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)

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

Cause of Release

No release was encountered during the BGT Closure.



Form C-141

State of New Mexico  
Oil Conservation Division


Page 2

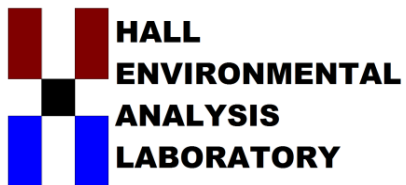
Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?  N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?  Not Required	

**Initial Response**

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

<input type="checkbox"/> The source of the release has been stopped. <input type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:  N/A
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.
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: <u>Tammy Jones</u> Title: <u>Operations/Regulatory Technician – Sr.</u> Signature: <u></u> Date: <u>12/20/19</u> email: <u>tajones@hilcorp.com</u> Telephone: <u>(505) 324-5185</u>
<b><u>OCD Only</u></b>  Received by: _____ Date: _____



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

December 05, 2019

Devin Hencmann  
HILCORP ENERGY  
PO Box 4700  
Farmington, NM 87499  
TEL: (505) 564-0733  
FAX

RE: San Juan 29-5 Unit 49

OrderNo.: 1911C47

Dear Devin Hencmann:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/27/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 1911C47

Date Reported: 12/5/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Comp A

Project: San Juan 29-5 Unit 49

Collection Date: 11/26/2019 11:00:00 AM

Lab ID: 1911C47-001

Matrix: SOIL

Received Date: 11/27/2019 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/3/2019 9:06:26 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/3/2019 9:06:26 AM
Surr: DNOP	87.5	70-130		%Rec	1	12/3/2019 9:06:26 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	12/2/2019 10:32:30 AM
Surr: BFB	78.8	77.4-118		%Rec	1	12/2/2019 10:32:30 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	12/2/2019 10:32:30 AM
Toluene	ND	0.046		mg/Kg	1	12/2/2019 10:32:30 AM
Ethylbenzene	ND	0.046		mg/Kg	1	12/2/2019 10:32:30 AM
Xylenes, Total	ND	0.093		mg/Kg	1	12/2/2019 10:32:30 AM
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	12/2/2019 10:32:30 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>CJS</b>
Chloride	ND	60		mg/Kg	20	12/3/2019 4:34:04 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911C47

05-Dec-19

**Client:** HILCORP ENERGY**Project:** San Juan 29-5 Unit 49

Sample ID: <b>MB-49115</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>49115</b>	RunNo: <b>64888</b>								
Prep Date: <b>12/3/2019</b>	Analysis Date: <b>12/3/2019</b>	SeqNo: <b>2226023</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-49115</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>49115</b>	RunNo: <b>64888</b>								
Prep Date: <b>12/3/2019</b>	Analysis Date: <b>12/3/2019</b>	SeqNo: <b>2226024</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.8	90	110			

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911C47

05-Dec-19

**Client:** HILCORP ENERGY  
**Project:** San Juan 29-5 Unit 49

Sample ID: <b>LCS-49070</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>49070</b>	RunNo: <b>64876</b>								
Prep Date: <b>12/2/2019</b>	Analysis Date: <b>12/3/2019</b>	SeqNo: <b>2224173</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	85.8	63.9	124			
Surr: DNOP	4.0		5.000		79.0	70	130			

Sample ID: <b>MB-49070</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>49070</b>	RunNo: <b>64876</b>								
Prep Date: <b>12/2/2019</b>	Analysis Date: <b>12/3/2019</b>	SeqNo: <b>2224174</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		105	70	130			

Sample ID: <b>LCS-49093</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>49093</b>	RunNo: <b>64876</b>								
Prep Date: <b>12/2/2019</b>	Analysis Date: <b>12/3/2019</b>	SeqNo: <b>2225772</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.7		5.000		74.5	70	130			

Sample ID: <b>MB-49093</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>49093</b>	RunNo: <b>64876</b>								
Prep Date: <b>12/2/2019</b>	Analysis Date: <b>12/3/2019</b>	SeqNo: <b>2225773</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.9		10.00		79.3	70	130			

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911C47

05-Dec-19

**Client:** HILCORP ENERGY  
**Project:** San Juan 29-5 Unit 49

Sample ID: <b>MB-49063</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>49063</b>	RunNo: <b>64862</b>								
Prep Date: <b>11/27/2019</b>	Analysis Date: <b>12/2/2019</b>	SeqNo: <b>2223698</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	840		1000		84.2	77.4	118			

Sample ID: <b>LCS-49063</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>49063</b>	RunNo: <b>64862</b>								
Prep Date: <b>11/27/2019</b>	Analysis Date: <b>12/2/2019</b>	SeqNo: <b>2223699</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.6	80	120			
Surr: BFB	920		1000		91.5	77.4	118			

Sample ID: <b>1911c47-001ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>Comp A</b>	Batch ID: <b>49063</b>	RunNo: <b>64862</b>								
Prep Date: <b>11/27/2019</b>	Analysis Date: <b>12/2/2019</b>	SeqNo: <b>2223701</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	4.8	24.08	0	111	69.1	142			
Surr: BFB	860		963.4		88.8	77.4	118			

Sample ID: <b>1911c47-001amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>Comp A</b>	Batch ID: <b>49063</b>	RunNo: <b>64862</b>								
Prep Date: <b>11/27/2019</b>	Analysis Date: <b>12/2/2019</b>	SeqNo: <b>2223702</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.7	23.32	0	111	69.1	142	3.26	20	
Surr: BFB	870		932.8		92.8	77.4	118	0	0	

Sample ID: <b>mb-49082</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>49082</b>	RunNo: <b>64903</b>								
Prep Date: <b>12/2/2019</b>	Analysis Date: <b>12/3/2019</b>	SeqNo: <b>2225312</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		88.3	77.4	118			

Sample ID: <b>lcs-49082</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>49082</b>	RunNo: <b>64903</b>								
Prep Date: <b>12/2/2019</b>	Analysis Date: <b>12/3/2019</b>	SeqNo: <b>2225313</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	970		1000		96.8	77.4	118			

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 1911C47

05-Dec-19

**Client:** HILCORP ENERGY  
**Project:** San Juan 29-5 Unit 49

Sample ID: <b>MB-49063</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>
Client ID: <b>PBS</b>	Batch ID: <b>49063</b>	RunNo: <b>64862</b>
Prep Date: <b>11/27/2019</b>	Analysis Date: <b>12/2/2019</b>	SeqNo: <b>2223746</b> Units: <b>mg/Kg</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID: <b>LCS-49063</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>
Client ID: <b>LCSS</b>	Batch ID: <b>49063</b>	RunNo: <b>64862</b>
Prep Date: <b>11/27/2019</b>	Analysis Date: <b>12/2/2019</b>	SeqNo: <b>2223747</b> Units: <b>mg/Kg</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.5	80	120			
Toluene	0.97	0.050	1.000	0	96.5	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.1	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.7	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID: <b>mb-49082</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>
Client ID: <b>PBS</b>	Batch ID: <b>49082</b>	RunNo: <b>64903</b>
Prep Date: <b>12/2/2019</b>	Analysis Date: <b>12/3/2019</b>	SeqNo: <b>2225359</b> Units: <b>%Rec</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID: <b>LCS-49082</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>
Client ID: <b>LCSS</b>	Batch ID: <b>49082</b>	RunNo: <b>64903</b>
Prep Date: <b>12/2/2019</b>	Analysis Date: <b>12/3/2019</b>	SeqNo: <b>2225360</b> Units: <b>%Rec</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



**HALL  
ENVIRONMENTAL  
ANALYSIS  
LABORATORY**

Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: **HILCORP ENERGY FAR**

Work Order Number: **1911C47**

RcptNo: 1

Received By: **Daniel Marquez** 11/27/2019 7:40:00 AM

Completed By: **Leah Baca** 11/27/2019 7:50:59 AM

Reviewed By: *DM 11/27/19*

*DM*  
*Leah Baca*

### Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐  
2. How was the sample delivered? Courier

### Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐  
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐  
5. Sample(s) in proper container(s)? Yes ☒ No ☐  
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐  
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐  
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐  
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒  
10. Were any sample containers received broken? Yes ☐ No ☒  
11. Does paperwork match bottle labels? Yes ☒ No ☐  
(Note discrepancies on chain of custody)  
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐  
13. Is it clear what analyses were requested? Yes ☒ No ☐  
14. Were all holding times able to be met? Yes ☒ No ☐  
(If no, notify customer for authorization.)

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

Adjusted? \_\_\_\_\_

Checked by: *ENM 11/27/19*

### Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.7	Good				



## Chain-of-Custody Record

Client: Hilcorp Energy  
Lindsay Dumas  
 Mailing Address: 382 Aztec Road  
Aztec, NM 87410  
 Phone #: \_\_\_\_\_

email or Fax#: ldumas@hilcorp.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other \_\_\_\_\_

☒ EDD (Type) PDE

Turn-Around Time:

☐ Standard ☒ Rush 3-day

Project Name:

San Juan 29-5 Unit 49

Project #:

017819024

Project Manager:

Devin Hennemann

Sampler: Maryandjenovich

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 0.9-0.2-0.7°C

Container Type and #

2, 4oz jars Cool

Preservative Type

HEAL No. 191147

HEAL No.

-001

TPH: 8015D (GRO / DRO / MRO)

8081 Pesticides / 8082 PCBs

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

Cl<sup>-</sup>, F<sup>-</sup>, Br<sup>-</sup>, NO<sub>3</sub><sup>-</sup>, NO<sub>2</sub><sup>-</sup>, PO<sub>4</sub><sup>3-</sup>, SO<sub>4</sub><sup>2-</sup>

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