

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, 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  
July 21, 2008

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.  
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

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

- Type of action: ☐ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method  
☒ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method  
☐ Modification to an existing permit  
☐ Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, 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: BP AMERICA PRODUCTION COMPANY OGRID #: 778  
Address: 200 Energy Court, Farmington, NM 87401  
Facility or well name: GALLEGOS CANYON UNIT 006  
API Number: 3004507287 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr L Section 22.0 Township 28.0N Range 12W County: San Juan County  
Center of Proposed Design: Latitude 36.64403 Longitude -108.10435 NAD: ☐ 1927 ☒ 1983  
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2. ☐ Pit: Subsection F or G of 19.15.17.11 NMAC  
Temporary: ☐ Drilling ☐ Workover  
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A  
☐ 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 \_\_\_\_\_

RCVD FEB 6 '14  
OIL CONS. DIV.  
DIST. 3

3. ☐ Closed-loop System: Subsection H of 19.15.17.11 NMAC  
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)  
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other \_\_\_\_\_  
☐ Lined ☐ Unlined Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_

4. ☒ Below-grade tank: Subsection I of 19.15.17.11 NMAC Tank ID: A  
Volume: 55.0 bbl Type of fluid: Produced Water  
Tank Construction material: Fiberglass OK 3/3/2014  
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off  
☐ Visible sidewalls and liner ☒ Visible sidewalls only ☐ Other SINGLE WALLED SINGLE BOTTOMED  
Liner type: Thickness \_\_\_\_\_ mil ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_

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

6.	<p><b>Fencing:</b> Subsection D of 19.15.17.11 NMAC (<i>Applies to permanent pits, temporary pits, and below-grade tanks</i>)</p> <p><input type="checkbox"/> Chain link, six feet in height, two strands of barbed wire at top (<i>Required if located within 1000 feet of a permanent residence, school, hospital, institution or church</i>)</p> <p><input type="checkbox"/> Four foot height, four strands of barbed wire evenly spaced between one and four feet</p> <p><input checked="" type="checkbox"/> Alternate. Please specify <u>4' Hogwire with single barbed wire</u></p>																				
7.	<p><b>Netting:</b> Subsection E of 19.15.17.11 NMAC (<i>Applies to permanent pits and permanent open top tanks</i>)</p> <p><input type="checkbox"/> Screen <input type="checkbox"/> Netting <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Monthly inspections (If netting or screening is not physically feasible)</p>																				
8.	<p><b>Signs:</b> Subsection C of 19.15.17.11 NMAC</p> <p><input type="checkbox"/> 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers</p> <p><input checked="" type="checkbox"/> Signed in compliance with 19.15.16.8 NMAC</p>																				
9.	<p><b>Administrative Approvals and Exceptions:</b></p> <p>Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.</p> <p><i>Please check a box if one or more of the following is requested, if not leave blank:</i></p> <p><input checked="" type="checkbox"/> Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.</p> <p><input type="checkbox"/> Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.</p>																				
10.	<p><b>Siting Criteria (regarding permitting):</b> 19.15.17.10 NMAC</p> <p><i>Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 85%;"> <p>Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.</p> <p>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells</p> </td> <td style="width: 15%; text-align: center; vertical-align: top;"> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No </td> </tr> <tr> <td> <p>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).</p> <p>- Topographic map; Visual inspection (certification) of the proposed site</p> </td> <td style="text-align: center; vertical-align: top;"> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </td> </tr> <tr> <td> <p>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to temporary, emergency, or cavitation pits and below-grade tanks</i>)</p> <p>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</p> </td> <td style="text-align: center; vertical-align: top;"> <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input type="checkbox"/> NA </td> </tr> <tr> <td> <p>Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to permanent pits</i>)</p> <p>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</p> </td> <td style="text-align: center; vertical-align: top;"> <input type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> NA </td> </tr> <tr> <td> <p>Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.</p> <p>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</p> </td> <td style="text-align: center; vertical-align: top;"> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </td> </tr> <tr> <td> <p>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.</p> <p>- Written confirmation or verification from the municipality; Written approval obtained from the municipality</p> </td> <td style="text-align: center; vertical-align: top;"> <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No </td> </tr> <tr> <td> <p>Within 500 feet of a wetland.</p> <p>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</p> </td> <td style="text-align: center; vertical-align: top;"> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </td> </tr> <tr> <td> <p>Within the area overlying a subsurface mine.</p> <p>- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division</p> </td> <td style="text-align: center; vertical-align: top;"> <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No </td> </tr> <tr> <td> <p>Within an unstable area.</p> <p>- Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</p> </td> <td style="text-align: center; vertical-align: top;"> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </td> </tr> <tr> <td> <p>Within a 100-year floodplain.</p> <p>- FEMA map</p> </td> <td style="text-align: center; vertical-align: top;"> <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No </td> </tr> </table>	<p>Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.</p> <p>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>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).</p> <p>- Topographic map; Visual inspection (certification) of the proposed site</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. 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(<i>Applies to permanent pits</i>)</p> <p>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	<p>Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.</p> <p>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>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.</p> <p>- Written confirmation or verification from the municipality; Written approval obtained from the municipality</p>	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Within 500 feet of a wetland.</p> <p>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Within the area overlying a subsurface mine.</p> <p>- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division</p>	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Within an unstable area.</p> <p>- Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Within a 100-year floodplain.</p> <p>- FEMA map</p>	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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<p>Within a 100-year floodplain.</p> <p>- FEMA map</p>	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No																				

11. **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: \_\_\_\_\_

12. **Closed-loop Systems 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.*

☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9  
☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - 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: \_\_\_\_\_

☐ Previously Approved Operating and Maintenance Plan API Number: \_\_\_\_\_ (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

13. **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

14. **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 ☐ Closed-loop System  
☐ 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 (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15. **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 F 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 I of 19.15.17.13 NMAC  
☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16.

**Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)**

*Instructions: Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.*

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please provide the information below) ☐ No

*Required for impacted areas which will not be used for future service and operations:*

☐ 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 I of 19.15.17.13 NMAC

☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.

**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 may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.*

Ground water is less than 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 between 50 and 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

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 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 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 private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, 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

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 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ 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

18.

**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 F of 19.15.17.13 NMAC

☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements 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 Subsection F of 19.15.17.13 NMAC

☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F 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 I of 19.15.17.13 NMAC

☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19.

**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): Jeffrey PeaceTitle: Field Environmental AdvisorSignature: Jeffrey H. PeaceDate: 6/3/10e-mail address: Peace.Jeffery@bp.comTelephone: 505-326-9479

20.

OCD Approval: ☐ Permit Application (including closure plan) ☒ Closure Plan (only) ☐ OCD Conditions (see attachment)OCD Representative Signature: [Signature]Approval Date: 3/3/2014Title: Environmental EngineerOCD Permit Number: [Signature]

21.

**Closure Report (required within 60 days of closure completion):** Subsection K of 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: 4-5-2012

22.

**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.

23.

**Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:***Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.*

Disposal Facility Name: \_\_\_\_\_

Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_

Disposal Facility Permit Number: \_\_\_\_\_

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No*Required for impacted areas which will not be used for future service and operations:*

- ☐
- Site Reclamation (Photo Documentation)
- 
- ☐
- Soil Backfilling and Cover Installation
- 
- ☐
- Re-vegetation Application Rates and Seeding Technique

24.

**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)
- 
- ☐
- 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 36.64403Longitude -108.10435NAD: ☐ 1927 ☒ 1983

25.

**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): Jeff PeaceTitle: Field Environmental AdvisorSignature: Jeff PeaceDate: February 4, 2014e-mail address: peace.jeffrey@bp.comTelephone: (505) 326-9479

BP AMERICA PRODUCTION COMPANY  
SAN JUAN BASIN, NORTHWEST NEW MEXICO

BELOW-GRADE TANK CLOSURE PLAN

Gallegos Canyon Unit 6  
API No. 3004507287  
Unit Letter L, Section 22, T28N, R12W

RCVD FEB 6 '14  
OIL CONS. DIV.  
DIST. 3

This plan will address the standard protocols and procedures for closure of below-grade tanks (BGTs) on BP America Production Company (BP) well sites. As stipulated in Paragraph A of 19.15.17.13 NMAC, BP shall close a BGT within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the New Mexico Oil Conservation Division (NMOCD) requires because of imminent danger to fresh water, public health, safety or the environment. If deviations from this plan are necessary, any specific changes will be included on form C-144 and approved by the NMOCD. BP shall close an existing BGT that does 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 after June 16, 2008, if not retrofit with a BGT that complies with the BP NMOCD approved BGT design attached to the BP Design and Construction Plan. BP shall close an existing BGT that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, if not previously retrofitted to comply with the BP NMOCD approved BGT Design attached to the BP Design and Construction Plan, prior to any sale or change in operator pursuant to 19.15.9.9 NMAC. BP shall close the permitted BGT within 60 days of cessation of the BGTs operation or as required by the transitional provisions of Subsection B, D, or E of 19.15.17.17 NMAC.

**General Closure Plan**

1. BP shall notify the surface owner by certified mail that it plans to close a BGT. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records demonstrates compliance with this requirement.  
**No notice was made due to misunderstanding of the notice requirements. Closure notices will be made for all BGT closures from this point forward.**
2. BP shall notify 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 shall include the operator's name, and the location to be closed by unit letter, section, township and range. If the BGT closure is associated with a particular well, then the notice shall also include the well's name, number and API number.  
**No notice was made due to misunderstanding of the notice requirements. Closure notices will be made for all BGT closures from this point forward.**
3. BP shall 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. The facilities to be used are:
  - a. BP Crouch Mesa Landfarm, Permit NM-02-003 (Solids)
  - b. JFJ Landfarm, Permit NM-01-010(B) (Solids and Sludge)

- c. Basin Disposal, Permit NM-01-0005 (Liquids)
- d. Envirotech Inc Soil Remediation Facility, Permit NM-01-0011 (Solids and Sludge)
- e. BP Operated E.E. Elliott SWD #1, API 30-045-27799 (Liquids)
- f. BP Operated 13 GCU SWD #1, API 30-045-28601 (Liquids)
- g. BP Operated GCU 259 SWD, API 30-045-20006 (Liquids)
- h. BP Operated GCU 306 SWD, API 30-045-24286 (Liquids)
- i. BP Operated GCU 307 SWD, API 30-045-24248 (Liquids)
- j. BP Operated GCU 328 SWD, API 30-045-24735 (Liquids)
- k. BP Operated Pritchard SWD #1, API 30-045-28351 (Liquids)

**All liquids and sludge in the BGT were removed and sent to one of the above NMOCD approved facilities for disposal.**

4. BP shall remove the BGT and dispose of it in a NMOCD approved facility or recycle, reuse, or reclaim it in a manner that the NMOCD approves. If a liner is present and must be disposed of it will be cleaned by scraping any soils or other attached materials on the liner to a de minimus amount and disposed at a permitted solid waste facility, pursuant to Subparagraph (m) of Paragraph (1) of Subsection C of 19.15.35.8 NMAC. Documentation as to the final disposition of the removed BGT will be provided in the final closure report.

**The BGT was transported to a storage area for sale and re-use.**

5. BP shall remove any on-site equipment associated with a BGT unless the equipment is required for well production.

**All equipment associated with the BGT has been removed.**

6. BP shall test the soils beneath the BGT to determine whether a release has occurred. BP shall collect at a minimum: a five (5) point composite sample and individual grab samples from any area that is wet, discolored or showing other evidence of a release and analyze for BTEX, TPH and chlorides. The testing methods for those constituents are as follows;

Constituents	Testing Method <b>55 bbl BGT</b>	Release Verification (mg/Kg)	Sample results
Benzene	US EPA Method SW-846 8021B or 8260B	0.2	ND
Total BTEX	US EPA Method SW-846 8021B or 8260B	50	ND
TPH	US EPA Method SW-846 418.1	100	ND
Chlorides	US EPA Method 300.0 or 4500B	250 or background	37

**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. Chloride closure standards will be determined by which ever concentration level is greatest.**

**Soil under the BGT was sampled and TPH, BTEX and chloride levels were below the stated limits. Sampling data is attached.**

7. BP shall notify the division District III office of its results on form C-141.  
**C-141 is attached.**
8. If it is determined that a release has occurred, then BP will comply with 19.15.30 NMAC and 19.15.29 NMAC, as appropriate.  
**Sampling results indicate no release occurred.**
9. If the sampling demonstrates that a release has not occurred or that any release does not exceed the concentrations specified above, then BP shall backfill the excavation, with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover, re-contour and re-vegetate the location. The location will be reclaimed if it is not within the active process area  
**The area under the BGT was backfilled with clean soil and is still within the active area.**
10. BP shall reclaim the BGT location and all areas associated with the BGT including associated access roads to a safe and stable condition that blends with the surrounding undisturbed area. BP 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 19.15.17.13 NMAC, re-contour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography and re-vegetate according to Subsection I of 19.15.17.13 NMAC.  
**The area over the BGT is still within the active well area. This area will be reclaimed when the well is plugged and abandoned as part of final reclamation.**
11. The soil cover for closures where the BGT has been removed or remediated to the NMOCD's satisfaction shall consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. The soil cover will be constructed to the site's existing grade and all practicable efforts will be made to prevent ponding of water and erosion of the cover material.  
**The area over the BGT is still within the active well area. This area will be reclaimed when the well is plugged and abandoned as part of final reclamation.**
12. BP shall seed the disturbed area the first growing season after closure of the BGT. Seeding will be accomplished by drilling on the contour whenever practical or by other division-approved methods. Vegetative cover will be, at a minimum, 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation), consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintenance of that cover through two successive growing seasons. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.  
**The area over the BGT is still within the active well area. This area will be reclaimed when the well is plugged and abandoned as part of final reclamation.**
13. BP shall seed, plant and re-seed pursuant to Paragraph (3) of Subsection I of 19.15.17.13 NMAC, until the location successfully achieves the required vegetative cover.  
**BP will seed the area when the well is plugged and abandoned.**



14. Pursuant to Paragraph (5) of Subsection I of 19.15.17.13 NMAC, BP shall notify the NMOCD when it has seeded or planted and when it successfully achieves re-vegetation.

**BP will notify NMOCD when re-vegetation is successful.**

15. Within 60 days of closure completion, BP shall submit a closure report on NMOCD's form C-144, and will include the following:
  - a. proof of closure notification (surface owner and NMOCD)
  - b. sampling analytical reports; information required by 19.15.17 NMAC;
  - c. disposal facility name and permit number
  - d. details on back-filling, capping, covering, and where applicable re-vegetation application rates and seeding techniques and
  - e. site reclamation, photo documentation.

**Closure report on C-144 form is included.**

16. BP shall certify that all information in the report and attachments is accurate, truthful, and compliant with all applicable closure requirements and conditions specified in the approved closure plan.

**Certification section of C-144 has been completed.**

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 8, 2011

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

## Release Notification and Corrective Action

### OPERATOR

☐ Initial Report ☒ Final Report


Name of Company: BP	Contact: Jeff Peace	
Address: 200 Energy Court, Farmington, NM 87401	Telephone No.: 505-326-9479	
Facility Name: Gallegos Canyon Unit 6	Facility Type: Natural gas well	
Surface Owner: Federal	Mineral Owner: Federal	API No. 3004507287

### LOCATION OF RELEASE

Unit Letter L	Section 22	Township 28N	Range 12W	Feet from the 1,340	North/South Line South	Feet from the 1,110	East/West Line West	County: San Juan
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Latitude 36.64403 Longitude 108.10435

### NATURE OF RELEASE

Type of Release: none	Volume of Release: N/A	Volume Recovered: N/A
Source of Release: below grade tank – 55 bbl	Date and Hour of Occurrence:	Date and Hour of Discovery:
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* Sampling of the soil beneath the BGT was done during removal to ensure no soil impacts from the BGT. Soil analysis resulted in TPH, BTEX and chloride below standards. Analysis results are attached.		
Describe Area Affected and Cleanup Action Taken.* BGT was removed and the area underneath the BGT was sampled. The excavated area was backfilled and compacted and is still within the active well area.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Jeff Peace	Approved by Environmental Specialist:	
Title: Field Environmental Advisor	Approval Date:	Expiration Date:
E-mail Address: peace.jeffrey@bp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: February 4, 2014	Phone: 505-326-9479	

\* Attach Additional Sheets If Necessary

CLIENT: <b>BP</b>	<b>BLAGG ENGINEERING, INC.</b> <b>P.O. BOX 87, BLOOMFIELD, NM 87413</b> <b>(505) 632-1199</b>	API #: <b>3004507287</b> TANK ID (if applicable): <b>A</b>
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<b>FIELD REPORT:</b> (circle one): <b>BGT CONFIRMATION</b> / RELEASE INVESTIGATION / OTHER:	PAGE #: <b>1</b> of <b>1</b>
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<b>SITE INFORMATION:</b>	SITE NAME: <b>GCU # 6</b>	DATE STARTED: <b>04/05/12</b>
QUAD/UNIT: <b>L</b> SEC: <b>22</b> TWP: <b>28N</b> RNG: <b>12W</b> PM: <b>NM</b> CNTY: <b>SJ</b> ST: <b>NM</b>	1/4 - 1/4/FOOTAGE: <b>1,340'S / 1,110'W</b> <b>NW/SW</b> LEASE TYPE: <b>FEDERAL</b> STATE / FEE / INDIAN	DATE FINISHED:
LEASE #: <b>SF078905</b>	PROD. FORMATION: <b>FT/PC</b> CONTRACTOR: <b>ELKHORN MBF - J. YEAGER</b>	ENVIRONMENTAL SPECIALIST(S): <b>NV</b>

<b>REFERENCE POINT:</b>	WELL HEAD (W.H.) GPS COORD.: <b>36.64417 X 108.10428</b> GL ELEV.: <b>5,660'</b>	
1) <b>55 BBL BGT (SW/SB)</b>	GPS COORD.: <b>36.64403 X 108.10435</b>	DISTANCE/BEARING FROM W.H.: <b>57', S23W</b>
2)	GPS COORD.:	DISTANCE/BEARING FROM W.H.:
3)	GPS COORD.:	DISTANCE/BEARING FROM W.H.:
4)	GPS COORD.:	DISTANCE/BEARING FROM W.H.:

<b>SAMPLING DATA:</b>	CHAIN OF CUSTODY RECORD(S) # OR LAB USED: <b>HALL</b>	OVM READING (ppm) <b>NA</b>
1) SAMPLE ID: <b>5PC - TB @ 1' (55 BGT)</b>	SAMPLE DATE: <b>04/05/12</b> SAMPLE TIME: <b>1445</b> LAB ANALYSIS: <b>418.1/8015/8021/300.0/(CI)</b>	
2) SAMPLE ID:	SAMPLE DATE: SAMPLE TIME: LAB ANALYSIS:	
3) SAMPLE ID:	SAMPLE DATE: SAMPLE TIME: LAB ANALYSIS:	
4) SAMPLE ID:	SAMPLE DATE: SAMPLE TIME: LAB ANALYSIS:	

<b>SOIL DESCRIPTION:</b>	SOIL TYPE: <b>SAND</b> SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER
SOIL COLOR: <b>DARK YELLOWISH ORANGE</b>	
COHESION (ALL OTHERS): <b>NON COHESIVE</b> SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE	PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC
CONSISTENCY (NON COHESIVE SOILS): <b>LOOSE / FIRM</b> DENSE / VERY DENSE	DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD
MOISTURE: <b>DRY / SLIGHTLY MOIST</b> MOIST / WET / SATURATED / SUPER SATURATED	HC ODOR DETECTED: YES <b>NO</b> EXPLANATION -
SAMPLE TYPE: GRAB <b>COMPOSITE</b> - # OF PTS. <b>5</b>	
DISCOLORATION/STAINING OBSERVED: YES <b>NO</b> EXPLANATION -	

ANY AREAS DISPLAYING WETNESS: YES <b>NO</b> EXPLANATION -	ADDITIONAL COMMENTS: <b>BGT- FIBERGLASS</b> <b>NO APPARENT EVIDENCE OF A RELEASE FROM BGT OBSERVED.</b>
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SOIL IMPACT DIMENSION ESTIMATION: <b>NA</b> ft. X <b>NA</b> ft. X <b>NA</b> ft.	EXCAVATION ESTIMATION (Cubic Yards): <b>NA</b>
DEPTH TO GROUNDWATER: <b>&lt;50'</b> NEAREST WATER SOURCE: <b>&gt;1,000'</b> NEAREST SURFACE WATER: <b>&lt;1,000'</b>	NMOCD TPH CLOSURE STD: <b>100</b> ppm

<b>SITE SKETCH</b>	WELL HEAD	PLOT PLAN circle: <b>attached</b>	OVM CALIB. READ. = <b>NA</b> ppm OVM CALIB. GAS = <b>NA</b> ppm TIME: <b>NA</b> am/pm DATE: <b>NA</b>
<b>X - S.P.D.</b>			

NOTES: BGT = BELOW-GRADE TANK; E.D. = EXCAVATION DEPRESSION; B.G. = BELOW GRADE; B = BELOW; T.H. = TEST HOLE; ~ = APPROX.; W.H. = WELL HEAD; T.B. = TANK BOTTOM; PBGTL = PREVIOUS BELOW-GRADE TANK LOCATION; SPD = SAMPLE POINT DESIGNATION; R.W. = RETAINING WALL; NA - NOT APPLICABLE OR NOT AVAILABLE; SW - SINGLE WALL; DW - DOUBLE WALL; SB - SINGLE BOTTOM; DB - DOUBLE BOTTOM.	
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TRAVEL NOTES:	CALLOUT: <b>4/4/12 - AFTER.</b>
ONSITE:	<b>4/4/12 - AFTER (SCHED.)</b>

<b>MISCELL. NOTES</b>	
WO: <b>N1477656</b> PO #: <b>65422</b> PK: <b>ZSCHWLLBGT</b> PJ #: <b>Z2-00690-C</b>	OCD Appr. date: <b>10/12/11</b>
Tank ID: <b>A</b>	Permit date: <b>06/03/10</b>
<b>BGT Sidewalls Visible: Y / N</b>	<b>BGT Sidewalls Visible: Y / N</b>
Magnetic declination: <b>10° E</b>	

**Analytical Report**

Lab Order 1204367

Date Reported: 4/16/2012

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** 5PC-TB@ 1' (55 BGT)**Project:** GCU #6**Collection Date:** 4/5/2012 2:45:00 PM**Lab ID:** 1204367-001**Matrix:** SOIL**Received Date:** 4/10/2012 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/11/2012 11:34:50 AM
Surr: DNOP	94.5	77.4-131		%REC	1	4/11/2012 11:34:50 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/13/2012 4:36:05 AM
Surr: BFB	104	69.7-121		%REC	1	4/13/2012 4:36:05 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.048		mg/Kg	1	4/13/2012 4:36:05 AM
Toluene	ND	0.048		mg/Kg	1	4/13/2012 4:36:05 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/13/2012 4:36:05 AM
Xylenes, Total	ND	0.097		mg/Kg	1	4/13/2012 4:36:05 AM
Surr: 4-Bromofluorobenzene	99.2	80-120		%REC	1	4/13/2012 4:36:05 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>BRM</b>
Chloride	37	15		mg/Kg	10	4/12/2012 11:55:35 AM
<b>EPA METHOD 418.1: TPH</b>						Analyst: <b>JMP</b>
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	4/13/2012

**Qualifiers:** \* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
RL Reporting Detection Limit

[illegible]

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1204367

16-Apr-12

Client: Blagg Engineering

Project: GCU #6

Sample ID	MB-1502	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	1502	RunNo:	2109					
Prep Date:	4/12/2012	Analysis Date:	4/12/2012	SeqNo:	58319	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-1502	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	1502	RunNo:	2109					
Prep Date:	4/12/2012	Analysis Date:	4/12/2012	SeqNo:	58320	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.7	90	110			

Sample ID	1204365-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	1502	RunNo:	2109					
Prep Date:	4/12/2012	Analysis Date:	4/12/2012	SeqNo:	58324	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	7.5	15.00	0	94.2	74.6	118			

Sample ID	1204365-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	1502	RunNo:	2109					
Prep Date:	4/12/2012	Analysis Date:	4/12/2012	SeqNo:	58325	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	7.5	15.00	0	96.0	74.6	118	1.85	20	

## Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1204367

16-Apr-12

Client: Blagg Engineering

Project: GCU #6

Sample ID	MB-1485	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	1485	RunNo:	2103					
Prep Date:	4/11/2012	Analysis Date:	4/13/2012	SeqNo:	58216	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-1485	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	1485	RunNo:	2103					
Prep Date:	4/11/2012	Analysis Date:	4/13/2012	SeqNo:	58217	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	101	87.8	115			

Sample ID	LCSD-1485	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	1485	RunNo:	2103					
Prep Date:	4/11/2012	Analysis Date:	4/13/2012	SeqNo:	58218	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	102	87.8	115	1.34	8.04	

## Qualifiers:

\*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1204367

16-Apr-12

Client: Blagg Engineering

Project: GCU #6

Sample ID	MB-1449	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	1449	RunNo:	1997					
Prep Date:	4/10/2012	Analysis Date:	4/10/2012	SeqNo:	55703	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.6		10.00		96.5	77.4	131			

Sample ID	LCS-1449	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	1449	RunNo:	1997					
Prep Date:	4/10/2012	Analysis Date:	4/10/2012	SeqNo:	55855	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	10	50.00	0	110	62.7	139			
Surr: DNOP	4.5		5.000		90.6	77.4	131			

Sample ID	1204357-001AMS	SampType:	MS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	1449	RunNo:	2035					
Prep Date:	4/10/2012	Analysis Date:	4/11/2012	SeqNo:	56728	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	120	9.9	49.41	87.63	69.7	57.2	146			
Surr: DNOP	4.5		4.941		91.8	77.4	131			

Sample ID	1204357-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	1449	RunNo:	2035					
Prep Date:	4/10/2012	Analysis Date:	4/11/2012	SeqNo:	56729	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	140	10	50.35	87.63	110	57.2	146	16.0	26.7	
Surr: DNOP	4.7		5.035		93.1	77.4	131	0	0	

## Qualifiers:

\*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
RL Reporting Detection Limit



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1204367

16-Apr-12

Client: Blagg Engineering

Project: GCU #6

Sample ID	MB-1460	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBS	Batch ID:	1460	RunNo:	2089					
Prep Date:	4/10/2012	Analysis Date:	4/12/2012	SeqNo:	58688	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1,000		1,000		101	69.7	121			

Sample ID	LCS-1460	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSS	Batch ID:	1460	RunNo:	2089					
Prep Date:	4/10/2012	Analysis Date:	4/12/2012	SeqNo:	58689	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	5.0	25.00	0	121	98.5	133			
Surr: BFB	1,100		1,000		112	69.7	121			

Sample ID	1204362-001AMS	SampType:	MS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	1460	RunNo:	2089					
Prep Date:	4/10/2012	Analysis Date:	4/12/2012	SeqNo:	58709	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.7	23.74	1.448	119	85.4	147			
Surr: BFB	1,100		949.7		112	69.7	121			

Sample ID	1204362-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	1460	RunNo:	2089					
Prep Date:	4/10/2012	Analysis Date:	4/12/2012	SeqNo:	58710	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.7	23.70	1.448	120	85.4	147	0.922	19.2	
Surr: BFB	1,100		947.9		114	69.7	121	0	0	

## Qualifiers:

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R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1204367

16-Apr-12

Client: Blagg Engineering

Project: GCU #6

Sample ID	MB-1460		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	1460		RunNo:	2089			
Prep Date:	4/10/2012		Analysis Date:	4/12/2012		SeqNo:	58717		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.96		1.000		96.1	80	120			

Sample ID	LCS-1460		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	1460		RunNo:	2089			
Prep Date:	4/10/2012		Analysis Date:	4/12/2012		SeqNo:	58718		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.050	1.000	0	92.3	83.3	107			
Toluene	0.95	0.050	1.000	0	95.5	74.3	115			
Ethylbenzene	0.95	0.050	1.000	0	94.6	80.9	122			
Xylenes, Total	2.9	0.10	3.000	0	95.3	85.2	123			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

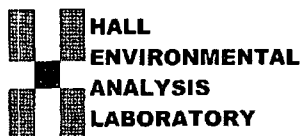
Sample ID	1204365-001AMS		SampType:	MS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	BatchQC		Batch ID:	1460		RunNo:	2089			
Prep Date:	4/10/2012		Analysis Date:	4/12/2012		SeqNo:	58737		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.047	0.9434	0	93.7	67.2	113			
Toluene	0.92	0.047	0.9434	0	97.6	62.1	116			
Ethylbenzene	0.92	0.047	0.9434	0.007545	96.4	67.9	127			
Xylenes, Total	2.7	0.094	2.830	0	97.0	60.6	134			
Surr: 4-Bromofluorobenzene	0.95		0.9434		101	80	120			

Sample ID	1204365-001AMSD		SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	BatchQC		Batch ID:	1460		RunNo:	2089			
Prep Date:	4/10/2012		Analysis Date:	4/12/2012		SeqNo:	58738		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.048	0.9560	0	92.4	67.2	113	0.00210	14.3	
Toluene	0.91	0.048	0.9560	0	95.5	62.1	116	0.843	15.9	
Ethylbenzene	0.92	0.048	0.9560	0.007545	95.0	67.9	127	0.114	14.4	
Xylenes, Total	2.7	0.096	2.868	0	95.7	60.6	134	0.0544	12.6	
Surr: 4-Bromofluorobenzene	0.97		0.9560		102	80	120	0	0	

### Qualifiers:

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H Holding times for preparation or analysis exceeded  
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Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87105  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: **BLAGG** Work Order Number: **1204367**  
Received by/date: **[Signature]** **04/10/12**  
Logged By: **Lindsay Mangin** **4/10/2012 9:50:00 AM** **[Signature]**  
Completed By: **Lindsay Mangin** **4/10/2012 10:25:08 AM** **[Signature]**  
Reviewed By: **IO 04/10/12**

### Chain of Custody

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

### Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☒ No ☐ NA  
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA  
6. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA  
7. Sample(s) in proper container(s)? Yes ☒ No ☐  
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐  
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐  
10. Was preservative added to bottles? Yes ☐ No ☒ NA  
11. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒  
12. Were any sample containers received broken? Yes ☐ No ☒  
13. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐ # of preserved bottles checked for pH:  
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ (<2 or >12 unless noted)  
15. Is it clear what analyses were requested? Yes ☒ No ☐ Adjusted?  
16. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by:

### Special Handling (if applicable)

17. 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:

18. Additional remarks:

### 19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.6	Good	Yes			

