

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.

6328

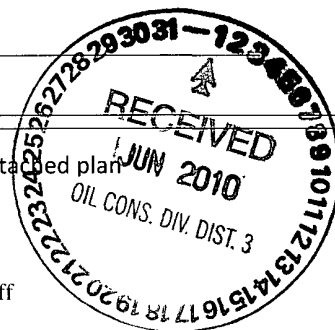
**Pit, Closed-Loop System, Below-Grade Tank, or
Proposed Alternative Method Permit or Closure Plan Application**

- 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: RIDDLE D LS 003B	
API Number: 3004531172	OCD Permit Number: _____
U/L or Qtr/Qtr N Section 22 Township 31.0N Range 09W County: San Juan	
Center of Proposed Design: Latitude 36.88005 Longitude 107.77127 NAD: <input type="checkbox"/> 1927 <input checked="" type="checkbox"/> 1983	
Surface Owner: <input checked="" type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Tribal Trust or Indian Allotment	
2.	
<input type="checkbox"/> Pit: Subsection F or G of 19.15.17.11 NMAC	
Temporary: <input type="checkbox"/> Drilling <input type="checkbox"/> Workover	
<input type="checkbox"/> Permanent <input type="checkbox"/> Emergency <input type="checkbox"/> Cavitation <input type="checkbox"/> P&A	
<input type="checkbox"/> Lined <input type="checkbox"/> Unlined Liner type: Thickness _____ mil <input type="checkbox"/> LLDPE <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____	
<input type="checkbox"/> String-Reinforced	
Liner Seams: <input type="checkbox"/> Welded <input type="checkbox"/> Factory <input type="checkbox"/> Other _____ Volume: _____ bbl Dimensions: L _____ x W _____ x D _____	
3.	
<input type="checkbox"/> Closed-loop System: Subsection H of 19.15.17.11 NMAC	
Type of Operation: <input type="checkbox"/> P&A <input type="checkbox"/> Drilling a new well <input type="checkbox"/> Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)	
<input type="checkbox"/> Drying Pad <input type="checkbox"/> Above Ground Steel Tanks <input type="checkbox"/> Haul-off Bins <input type="checkbox"/> Other _____	
<input type="checkbox"/> Lined <input type="checkbox"/> Unlined Liner type: Thickness _____ mil <input type="checkbox"/> LLDPE <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____	
Liner Seams: <input type="checkbox"/> Welded <input type="checkbox"/> Factory <input type="checkbox"/> Other _____	
4.	
<input checked="" type="checkbox"/> Below-grade tank: Subsection I of 19.15.17.11 NMAC Note: Existing BGT to be modified pursuant to attached plan	
Volume: 95 bbl Type of fluid: Produced water	
Tank Construction material: Steel	
<input checked="" type="checkbox"/> Secondary containment with leak detection <input type="checkbox"/> Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	
<input type="checkbox"/> Visible sidewalls and liner <input type="checkbox"/> Visible sidewalls only <input type="checkbox"/> Other _____	
Liner type: Thickness _____ mil <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____	
5.	
<input type="checkbox"/> 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.

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 Hogwire Fencing per attached plan

7.

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)

8.

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 19.15.3.103 NMAC

9.

Administrative Approvals 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:

- ☐ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.
- ☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC **Note: Pre-Existing BGT – Siting Criteria Not Applicable**

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.

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No
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	<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. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
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 search; 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 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 500 feet of a wetland. - 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 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

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 H₂S, 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 **Method – 19.15.17.13E – Protocols and Procedures included in attached Closure Plan**
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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<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. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<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 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 500 feet of a wetland. - 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 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

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 Peace Title: Field Environmental Advisor
 Signature: Jeffrey Peace Date: May 24, 2010
 e-mail address: Peace.Jeffrey@bp.com Telephone: 505-326-9479

20.

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

OCD Representative Signature: Jonathan D. Kelly Approval Date: 7/07/2011
 Title: Compliance Officer OCD Permit Number: _____

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: _____

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 _____ Longitude _____ NAD: ☐ 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): _____ Title: _____
 Signature: _____ Date: _____
 e-mail address: _____ Telephone: _____

BP AMERICA PRODUCTION COMPANY

San Juan Basin in Northwest New Mexico Below-Grade Tank Design and Construction Plan

Pursuant to Rule 19.15.17.11 NMAC, BP America Production Company (BP) shall construct a below-grade tank (BGT) or modify an existing permitted BGT according to the following plan. Any deviations from this plan will be addressed on the New Mexico Oil Conservation Division's (NMCOD) form C-144 at the time of submittal.

Design and Construction Plan

1. BP will design and construct a BGT which will be constructed to contain liquids and prevent contamination of fresh water and protect public health and the environment.
2. BP is the well operator and shall install and maintain a well sign that is in compliance with 19.15.16.8 NMAC. The sign will be posted at the well site to address, at a minimum;
 - a. Well Number
 - b. Property name
 - c. Operators name
 - d. Location by footage, quarter-quarter section, township and range (or unit letter)
 - e. API number
 - f. Emergency contact information
3. BP will fence or enclose its BGTs in a manner that prevents unauthorized access and shall maintain its fence in good repair.
4. BP will fence or enclose a BGT located within 1,000 feet of a permanent residence, school, hospital, institution or church with, at a minimum a chain link security fence at least six (6) feet in height with at least two (2) strands of barbed wire at the top. BP will ensure that all gates associated with the fence are closed and locked when responsible personnel are not on-site.
5. BP is requesting NMOCD's approval for an alternative fence design that provides, at a minimum, equivalent protection to the design specified in Paragraph 3 of Subsection D of 19.15.17.11 NMAC for BGTs beyond the stated distance in paragraph 4 of this document. BP's proposed design for its BGTs will utilize 48" steel mesh field-fence (hogwire) with a metal or steel top rail. Perimeter T-post will be installed roughly every 10 feet.
6. BP will construct an expanded metal covering that completely covers the top of the BGT. The covering will be constructed such that it will prevent hazardous conditions to wildlife, including migratory birds
7. BP shall construct the BGT of materials that are resistant to produced water, any contained liquids, and damage from sunlight. BP's BGTs will be constructed of carbon steel that meets the requirements of ASTM A36.
8. BP's BGTs shall have a properly constructed earthen foundation consisting of a level base free of rocks, debris, sharp edges, or irregularities as to prevent punctures, cracks or indentations to the tank bottom as demonstrated on the design drawing.
9. BP will construct and operate the BGT to prevent surface water run-on by using both earthen berms and leaving a portion of the BGT above the original grade as demonstrated on the design drawing.
10. BP will construct and operate the BGT to prevent overflow and overfilling of the BGT. Overflow will be

prevented by use of an electronic high fluid level detector that will automatically engage an electronic shut-off valve when a 1 foot freeboard is reached. The Hi-level automatic alarm notifies well optimizers when liquid level has reached within a pre-set distance to the top of the BGT. The Hi Hi alarm will trigger the Hi-level automatic shutdown valve which will close in the well until the liquid level can be lowered.

11. BP will construct and install a double-walled tank design per Subparagraph (b) of Paragraph (4) of Subsection I of 19.15.17.11 NMAC with a two (2) inch diameter leak detection port. The floor supports located in the annular space of the tank bottom will be channeled to allow outward movement of liquid between the walls. Leak detection will be monitored per BP's Operating and Maintenance Plan. The walls of the BGT will be constructed of carbon steel that meets the ASTM A36 standard. BP's BGT design will insure containment of tank contents and protect underlying groundwater. The production equipment line drain is an automated drain that allows water level in production equipment (generally the separator) to be maintained within the equipment's operating parameters. The environmental drain is a manually operated drain that is used to drain liquids off of equipment. The tank drain is a manually operated drain, typically in the closed position that is used to rid the condensate tank of any water accumulation. The vent drain is a manually operated drain off the discharge of production equipment (usually the separator) and is used to blowdown the wellsite. The swab drain line is a manually operated drain originating between the wellhead and separator and is used during well workovers when large amounts of liquid are removed from the well and sent straight to the BGT.
12. BP owned and operated BGTs that were constructed and installed prior to June 16, 2008 that do not meet all the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC and are not included in Paragraph (6) of Subsection I of 19.15.17.11 NMAC are not required to equip or be retrofit to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC so long as the BGT demonstrates integrity. If the existing BP BGT does not demonstrate integrity, BP shall promptly remove the BGT and install a BGT that complies with the BP NMOCD approved BGT design attached to the Design and Construction Plan. BP shall comply with the operational requirements of 19.15.17.12 NMAC.
13. BP owned and operated BGTs that were constructed and installed prior to June 16, 2008 that are single walled and where any portion of the tank side wall is below ground surface and not visible shall be retrofit or replaced to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or shall be closed within 5 years of June 16, 2008. If the existing BP owned and operated BGT does not demonstrate integrity, BP shall promptly remove the BGT and install a BGT that complies with the BP NMOCD approved BGT design attached to the Design and Construction Plan. BP shall comply with the operational requirements of 19.15.17.12 NMAC.
14. The general specifications for the design and construction of the BGT have been provided in the attached BP design and construction schematic.

BP AMERICA PRODUCTION COMPANY

San Juan Basin in Northwest New Mexico Below-Grade Tank Operating and Maintenance Plan

Pursuant to Rule 19.15.17.12 NMAC, BP America Production Company (BP) shall maintain and operate a below-grade tank (BGT) with the following requirements. Deviations from this plan will be addressed with a submittal to the New Mexico Oil Conservation Division's (NMOCD) using form C-144 at the time of the BGT permit or modification to an existing permitted BGT application.

Operating and Maintenance Plan

1. BP's BGTs will be operated and maintained to contain liquids and solids and promptly identify a release or potential release. BP's BGTs will be operated and maintained to prevent contamination to freshwater and protect public health and the environment. BP will use automated high fluid level alarms and automated shut-off valves to insure that liquids are contained within the vessel and that the vessel does not overflow. These alarms and shut-off valves will be consistent with those demonstrated in the design plan. BP will perform and document inspections of the BGTs on a monthly basis to confirm the integrity of the vessel.
2. BP will not knowingly discharge or store any hazardous waste into a BGT
3. If a BGT develops a leak, or a release occurs due to mechanical failure or vandalism, or if a penetration of the BGT occurs below the liquid's surface, BP shall: 1) evacuate liquids from the BGT to a level below the damage or leak line within 48 hours; and 2) notify the NMOCD's District III office within 48 hours of the discovery. BP will review #4 of the BP Operating and Maintenance plan prior to any repair or replacement to determine if the BGT and location will require closure. If appropriate BP shall repair or replace the BGT with the BP NMOCD approved design. If a release from the BGT occurs BP shall follow the release reporting procedures of 19.15.29 NMAC. If closure of the BGT is required, BP shall implement the approved closure plan for the BGT.
4. If a BP operated BGT that was constructed and installed prior to June 16, 2008 that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC does not demonstrate integrity or if the BGT develops any of the conditions identified in Paragraph (5) of Subsection A of 19.15.17.12 NMAC, BP shall close the existing BGT pursuant to the closure requirements of 19.15.17.13 NMAC and will install a BGT that complies with BP NMOCD approved BGT design attached to the Design and Construction Plan.
5. If a BP operated BGT that was constructed and installed prior to June 16, 2008 that does not comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC is equipped or retrofit to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, BP shall visually inspect the area beneath the BGT during the retrofit and shall document any areas that are wet, discolored or showing other evidence of a release on Form C-141. BP shall demonstrate to the division whether evidence of contamination indicates that an imminent threat to fresh water, public health, safety or the environment exists. If the division

determines that the contamination does not pose an imminent threat to fresh water, public health, safety or the environment, BP shall complete the retrofit or replacement of the BGT. If BP or the division determines that the contamination poses an imminent threat to fresh water, public health, safety or the environment, then BP shall close the existing BGT pursuant to the closure requirements of 19.15.17.13 NMAC prior to initiating the retrofit or replacement with the BP NMOCD approved BGT design that is attached to the BP Design and Construction Plan.

6. BP will install and construct the BGT following the BP NMOCD approved Design and Construction Plan, and will control surface water run on by the use of a berm or leaving a portion of the tank wall exposed. BP will use high level shot-off devices to insure that the BGT does not overflow.
7. The following requirements adhere to Subsection D of 19.15.17.12 NMAC.
 - a. BP will remove any visible or measurable layer of oil from the fluid surface of the BGT.
 - b. BP will inspect the BGT monthly. The monthly inspection will consist of the following:
 - i. Personnel will conduct a walk-around of the BGT to observe any abnormalities or signs of corrosion on the vessel. Personnel will inspect the surface run-on berm. Where applicable, inspection of the BGT's double wall – double bottom inspection port, tank flanges and valves for signs of leakage or spills will be conducted. Personnel will record any BGT deficiencies, repair as necessary and report to BP Dispatch Office immediately if an imminent danger to fresh water, public health, or to the environment is observed. BP will maintain a written record of the monthly inspections on the BP inspection form referred to as the San Juan Lease Inspection Form. BP will maintain these written records for at least five (5) years. A copy of the San Juan Lease Inspection Form is attached.
8. BP will maintain sufficient freeboard of one foot in the BGT to prevent overtopping.

BP AMERICA PRODUCTION COMPANY
SAN JUAN BASIN, NORTHWEST NEW MEXICO

BELOW-GRADE TANK CLOSURE PLAN

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.
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.
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)
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.
5. BP shall remove any on-site equipment associated with a BGT unless the equipment is required for well production.
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	Release Verification (mg/Kg)
Benzene	US EPA Method SW-846 8021B or 8260B	0.2
Total BTEX	US EPA Method SW-846 8021B or 8260B	50
TPH	US EPA Method SW-846 418.1	100
Chlorides	US EPA Method 300.0 or 4500B	250 or background

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.

7. BP shall notify the division District III office of its results on form C-141.
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.
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.
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.
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.
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.
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.
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.
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.
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.

General Geology and Hydrology

The San Juan Basin is situated in the Navajo section of the Colorado Plateau and is characterized by broad open valleys, mesas, buttes, and hogbacks. Away from major valleys and canyons topographic relief is generally low. Native vegetation is sparse and shrubby. Drainage is mainly by the San Juan River, the only permanent stream in the Navajo Section of the Colorado Plateau; the San Juan River is a tributary of the Colorado River. Major tributaries include the Animas, Chaco, and La Plata Rivers. Flow of the San Juan River across the basin is regulated by the Navajo Dam, located about 30 miles northeast of Farmington, New Mexico. The climate is arid to semiarid with an average annual precipitation of 8–10 in. (Circular 154—Guidebook to coal geology of northwest New Mexico By E. C. Beaumont, J. W. Shomaker, W. J. Stone, and others, 1976). Soils within the basin consist of weathered parent rock derived from predominantly physical means mostly from eolian depositional system with fluvial having a lesser impact.

Cretaceous and Tertiary sandstones, as well as Quaternary alluvial deposits serve as the primary aquifers in the San Juan Basin (Stone, et al., 1983). The San Jose Formation of Eocene age occurs in both New Mexico and Colorado, and its outcrop forms the land surface over much of the eastern half of the central basin. It overlies the Nacimient Formation in the area generally south of the Colorado-New Mexico border and overlies the Animas Formation in the general area north of the State line. The San Jose Formation was deposited in various fluvial-type environments. In general, the unit consists of an interbedded sequence of sandstone, siltstone, and shale. Thickness of the San Jose increases from west to east. Groundwater is associated with alluvial and fluvial sandstone aquifers. The occurrence of groundwater is mainly controlled by distribution of sandstone in the formation. The reported or measured discharge from numerous water wells completed in the formation range from 0.15 to 61 gallons per minute (gpm) and with a median of 5 gpm. Most of wells provide water for livestock and domestic purposes. The formation is suitable for recharge from precipitation due to overlying soils being sandy, highly permeable, and absorbent. Low annual precipitation, relatively high transpiration and evaporation rates, and deep dissection of the formation by the San Juan River and its main tributaries all tend to reduce the effective recharge to the formation. Aquifers within the coarser and continuous sandstone bodies of the Nacimient Formation of Paleocene age are between 0 and 1,000 feet deep in the majority of the basin as well (Stone, et al., 1983, Hydrogeology and Water Resources of the San Juan Basin, New Mexico, Socorro, New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p).

BP America Production Company

Well Site: RIDDLE D LS 003B

Legals: (N) Section 22 – T31N – R09W, San Juan County, NM

API #: 30-045-31172

Site Specific Evaluation

- 1) Topography: The well site is located approximately 13 miles east-northeast of Aztec, New Mexico. The proposed below-grade tank modification (PBGTM) is located on a flat portion on the north half of the well pad. The site surroundings in all directions consist of exposed sandstone with a varying thickness of coarse grained sand.
- 2) Soils: Surface soil at the proposed PBGTM site is comprised primarily of a coarse grained sand. The thickness of this sand at the site is approximately 7-8 feet and overlies a dense sandstone surface that outcrops throughout the region (see Geology, below).
- 3) Geology: Review of geologic maps published by the New Mexico Bureau of Geology and Mineral Resources, 2003, indicates the outcrop at the site is the Nacimiento Formation of Paleocene age. This formation is described as a gray and brown shale and tan, medium grained and conglomeratic sandstone with a thickness as much as 240 meters. Its origin developed from fluvial and lacustrine type environments. Geomorphologic features of the surrounding area are predominantly gentle sloping hills and valleys with surficial channeling of varying size washes and arroyos created by earlier glacial events and recently, in terms of geologic time, by short, sometimes heavy precipitation during the spring and summer portions of the year.
- 4) Surface Hydrology: Surface run-off for the entire well pad is towards the south (see attached topography map). Visual inspection of the site did not present evidence of any recent storm run-on/run-off in the vicinity of the PBGTM location. In addition, no new manmade ponds, ditches, or any other surface depressions for surface water accumulation purposes were observed in the immediate vicinity.
- 5) Groundwater Hydrology: Information researched in the New Mexico State Engineer's (NMSE) well database did not report any water wells within a ½ mile radius of the PBGTM site. Based on topographic data, it appears that groundwater is in excess of 100 feet below surface grade.
- 6) Private residences, schools, hospitals, institutions, churches: The site was inspected for evidences of any habitable structures and none were observed within the 300 lateral foot setback referenced in 19.15.17.10 Subsection A, NMAC.

BP Tank Permit Field Inspection Sheet

San Juan County, New Mexico 2008

Site Information Time: 9:15 Am Date: 2-6-09 Personnel: K.F.

Facility Name: Riddle D. LS #38 API# 3004531172

Distance from BGT to closest water course is greater than 200 feet? ☒ Y ☐ N

Distance from BGT to closest permanent residence is greater than 300 feet? ☒ Y ☐ N

Base of tank is greater than 50 feet above ground water according to local well data, field observations, map and aerial photograph review? ☒ Y ☐ N

Tank location is structurally stable? Y ☒ N ☐

If "No" then inform client by phone ASAP Larry Schlotterback (505) 330 4937

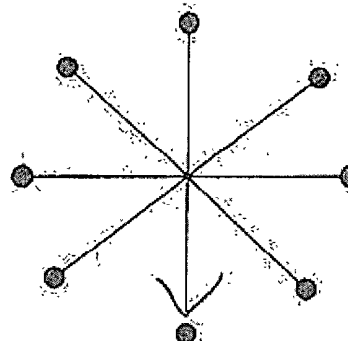
Soil type: sand

Outcrop? ☒ Y ☐ N ☐

Geology type: sandstone

Surface water flow direction.

Notes:



Site passes field inspection for permit process? ☒ Y ☐ N

North. ↑

Photolog NONE

Views included in photograph: NO

#1

Location Sign N-22-31-9

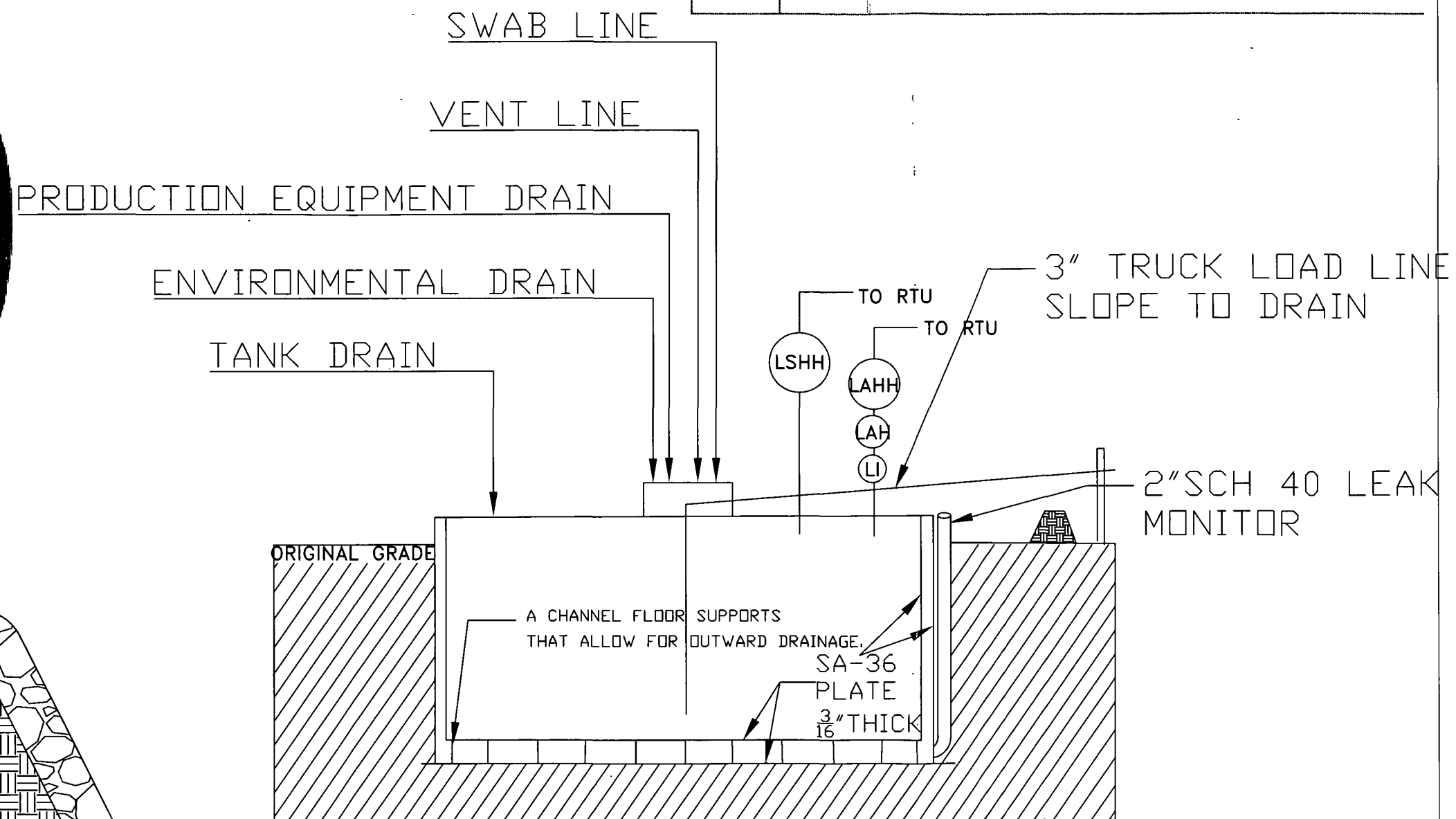
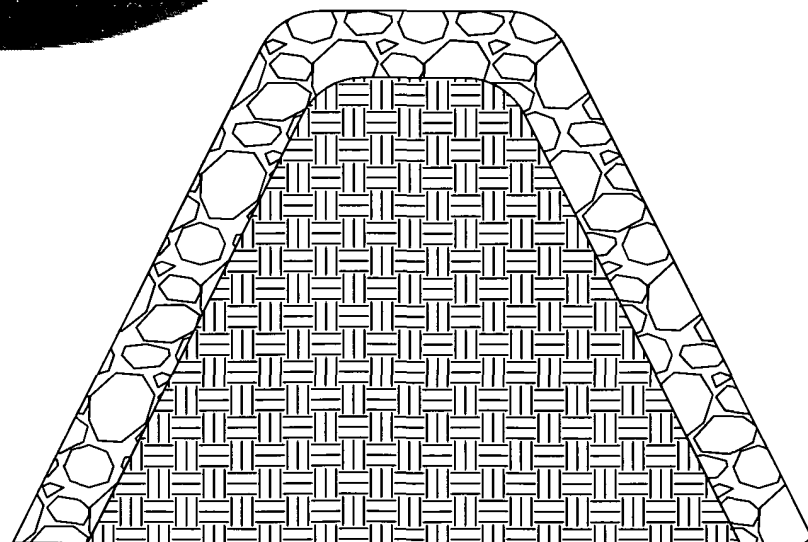
#2

#3

Environmental impacts? Note type and location and inform client by phone ASAP

Larry Schlotterback (505) 330 4937





PROPERLY CONSTRUCTED FOUNDATION CONSISTING OF A LEVEL BASE
FREE OF ROCKS, DEBRIS, SHARP EDGES OR IRREGULARITIES TO PREVENT
PUNCTURES CRACKS OR INDENTATIONS TO THE TANK BOTTOM.

[illegible]

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SAN JUAN OPERATIONS CENTER
FARMINGTON, NEW MEXICO
BP AMERICA PRODUCTION COMPANY

FACILITIES LAYOUT

DOUBLE WALLED BELOW GRADE TANK

Scale None	Drawn By	Date	Checked By	Rev No 1	Control Doc
Filename PIT 95BBL.DD PIT 01-03.dwg					