AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.

App Number: pCS1718655048

144B - 15954

Williams Four Corners, LLC

7/5/2017

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

State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
Revised June 6, 2013

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office.
For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

15954

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

Type of action:
- [x] Below grade tank registration
- [ ] Permit of a pit or proposed alternative method
- [ ] Closure of a pit, below-grade tank, or proposed alternative method
- [ ] Modification to an existing permit/or registration
- [ ] Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: Williams Four Corners LLC OGRID #:
Address: 1755 Arroyo Drive, Bloomfield, NM 87413
Facility or well name: 32-8#2 CDP Used Oil BGT (2)
API Number: 144-15943 OCD Permit Number:
U/L or Qtr/Qtr SENW (F) Section 27 Township 32N Range 8W County: San Juan County
Center of Proposed Design: Latitude 36.956897 Longitude -107.664022 NAD: [ ] 1927 [x] 1983
Surface Owner: [x] Federal [ ] State [ ] Private [ ] Trib

DENIED * Administratively Incomplete
No Closure Plan.
BY: Cory Smith
DATE: 7/5/17 (505) 334-6178 Ext. 115

2.
[ ] **Pit:** Subsection F, G or J of 19.15.17.11 NMAC
Temporary: [ ] Drilling [ ] Workover
[ ] Permanent [ ] Emergency [ ] Cavitation [ ] P&A [ ] ... [ ] ...loride Drilling Fluid [ ] yes [ ] no
[ ] Lined [ ] Unlined Liner type: Thickness _____mil [ ] LLDPE [ ] HDPE [ ] PVC [ ] Other _____
[ ] String-Reinforced
Liner Seams: [ ] Welded [ ] Factory [ ] Other _____ Volume: _____bbl Dimensions: L_____ x W_____ x D_____

3.
[x] **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: 165 bbl bbl Type of fluid: Used Oil BGT (2)
Tank Construction material: Steel
[ ] Secondary containment with leak detection [ ] Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
[ ] Visible sidewalls and liner [ ] Visible sidewalls only [x] Other inspection port to check space between inner and outer wall Double Wall/ Double Bottom Tank
Liner type: Thickness _____mil [ ] HDPE [ ] PVC [ ] Other _____

OIL CONS. DIV DIST. 3
JUN 19 2017

4.
[ ] **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.
Fencing: Subsection D of 19.15.17.11 NMAC *(Applies to permanent pits, temporary pits, and below-grade tanks)*
[x] 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_____

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6.

Netting: Subsection E of 19.15.17.11 NMAC *(Applies to permanent pits and permanent open top tanks)*

■ Screen ☐ Netting ☐ Other_____

☐ Monthly inspections (If netting or screening is not physically feasible)

7.

Signs: Subsection C of 19.15.17.11 NMAC

■ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☐ Signed in compliance with 19.15.16.8 NMAC

8.

Variances and Exceptions:

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

Please check a box if one or more of the following is requested, if not leave blank:

■ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

9.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. **Siting criteria does not apply to drying pads or above-grade tanks.**

General siting	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. - ■ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells	☐ Yes ☒ No ☐ NA
Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit . NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☒ NA
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. **(Does not apply to below grade tanks)** - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)** - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. **(Does not apply to below grade tanks)** - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. **(Does not apply to below grade tanks)** - FEMA map	☐ Yes ☐ No
Below Grade Tanks	
Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)	
Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.) - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No

Within 100 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Temporary Pit Non-low chloride drilling fluid	
Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application; - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Permanent Pit or Multi-Well Fluid Management Pit	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No

10.

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☒ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

11.

Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ A List of wells with approved application for permit to drill associated with the pit.
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
- ☐ Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12.
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H_2S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13.
Proposed Closure: 19.15.17.13 NMAC
Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Multi-well Fluid Management Pit ☐ Alternative

Proposed Closure Method:
- ☐ Waste Excavation and Removal
- ☐ Waste Removal (Closed-loop systems only)
- ☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
  - ☐ In-place Burial ☐ On-site Trench Burial
- ☐ Alternative Closure Method

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

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

15.
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.

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

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

16.
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC
- ☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.11 NMAC
- ☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
- ☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

17.
Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Monica Sandoval Title: Environmental Specialist

Signature: MonicaSandoval Date: 6/17/2017

e-mail address: monica.sandoval@williams.com Telephone: 505-632-4625

18.
OCD Approval: ☐ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: _____ **Approval Date:** _____

Title: _____ **OCD Permit Number:** _____

19.
Closure Report (required within 60 days of closure completion): 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ **Closure Completion Date:** _____

20.
Closure Method:

☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)

☐ If different from approved plan, please explain.

21.
Closure Report Attachment Checklist: ***Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.***

- ☐ Proof of Closure Notice (surface owner and division)
- ☐ Proof of Deed Notice (required for on-site closure for private land only)
- ☐ Plot Plan (for on-site closures and temporary pits)
- ☐ Confirmation Sampling Analytical Results (if applicable)
- ☐ Waste Material Sampling Analytical Results (required for on-site closure)
- ☐ Disposal Facility Name and Permit Number
- ☐ Soil Backfilling and Cover Installation
- ☐ Re-vegetation Application Rates and Seeding Technique
- ☐ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude _____ Longitude _____ NAD: ☐ 1927 ☐ 1983

22.

Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

Variance Request #1:

Williams requests a variance request from Subsection E(1) of 19.15.17.13 New Mexico Administrative Code (NMAC) which states:

The operator shall notify the surface owner by certified mail, return receipt requested that the operator plans closure operations at least 72 hours, but not more than one week, prior to any closure operation. Notice shall include well name, API number and location. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance with this requirement.

The variance will allow Williams to notify public agencies such as the Bureau of Land Management (BLM), State of New Mexico, local government/municipalities, and/or tribal agencies via email based on their notification preferences

Variance Request #2:

Williams requests a variance from Subsection D(2) of 19.15.17.12 New Mexico Administrative Code (NMAC) which states:

The operator shall remove any measurable layer of oil from the fluid surface of a below-grade tank.

This variance will allow Williams to store used lubrication oil from operation of facility equipment within a below-grade tank (BGT). For the purposes of this variance request, facility is defined as a natural gas compressor station or a natural gas processing/treatment plant. Williams is requesting this variance based on the following:

1. The BGT is located at a facility and not at a well production location.
2. Used oil is contained within the equipment skid and subsequently stored in the BGT to stop oil from discharging onto the ground.
3. Lube oil will be transferred into the BGT via the facility system piping using manual operated valves. Transfer will only occur by Williams or contract personnel. The manual valves will be normally closed and only operated during transfer of oil to the BGT.
4. The BGT will have a permanent cover installed.
5. Tanks inspections will be performed in compliance with the 19.15.17.12.D(3) NMAC on a monthly basis. Williams uses an environmental tracking management system to record completion of the monthly BGT inspections.
6. Williams will maintain a 10-inch freeboard to prevent overtopping of the BGT. The BGT will be emptied if the freeboard is equal to or less than 10-inches and/or on an annual basis, whichever comes first.
7. The used oil will be removed by the currently approved Williams contactor and will either be recycled or disposed of at a permitted facility. At the time this variance requested was prepared, Safety Kleen (A Clean Harbors Company) is managing the recycling of the used oil for Williams.
8. Prior to removing the used oil from the BGT, a sample is collected by Safety Kleen for RCRA classification. Analysis of the used oil includes ignitability, corrosivity, and RCRA 8 metals. Reactivity and toxicity (other than metals) are not evaluated based on generator knowledge. Copies of the waste profiles will be maintained by Williams.

SITING CRITERIA
SUMMARY INFORMATION SHEET
19.15.17.10 NMAC

LT Environmental Inc.
2243 Main Avenue, Suite 3
Durango, Colorado 81301
T 970-385-1096

GENERAL INFORMATION

Site Name:	32-8 #2 CDP	**Operator:**	Williams Four Corners LLC
Pit Identifier:	BGT 1	**Date**	3/15/2016
		Prepared by:	LT Environmental, Inc.

GENERAL SITE LOCATION INFORMATION

Geologic Formation: San Jose
Soil Type: Buckle Silt Loam
Annual Precipitation: Navajo Dam 12.87"

SEC: 27 **TWN:** 32 N **RNG:** 8 W
Latitude: 36.956897 **Longitude:** -107.664022

GENERAL SITING CRITERIA

Is groundwater less than 25 feet below the bottom of below grade tank? - No

See Figure 3 and attached iWaters Data

BELOW GRADE TANK SITING CRITERIA

Within 100 feet of a continuously flowing watercourse? - No See Figure 1
3.56 miles east to the Los Pinos River.

Within 100 feet of a significant watercourse? - No See Figure 1 and Figure 3
480 feet east to a first order tributary of Jaquez Canyon.

Within 100 feet of a lakebed, playa lake, or sinkhole? - No See Figure 2
1,690 feet southeast to a stock pond and 4,133 feet southwest to a stock pond

Within 200 horizontal feet of a spring or a freshwater well used for public or livestock consumption? - No See Figure 3 and attached iWaters data

ATTACHED DOCUMENTS:

Hydrogeologic Report
Figure 1: Topographic Map
Figure 2: Aerial Photograph
Figure 3: Water Well and Surface Water Features
iWaters Data

ADDITIONAL COMMENTS:

COMPLIANCE / ENGINEERING / REMEDIATION

LT Environmental Inc.

2243 Main Avenue, Suite 3
Durango, Colorado 81301
T 970.385.1096 / F 970.385.1873

32-8 #2 CDP
Hydrogeologic Report for Siting Criteria

General Geology and Hydrology

The San Juan Basin is a typical Rocky Mountain basin with a gently dipping southern flank and a steeply dipping northern flank. Asymmetrically layered Tertiary sandstones and shales, along with Quaternary alluvial deposits, dominate surficial geology. The below-grade tank is located near Pump Mesa, north of Navajo Dam, New Mexico. The predominant geologic formation is the San Jose Formation of Tertiary age, which underlies surface soils and is often exposed (Dane and Bachman, 1965). Deposits of Quaternary alluvial and aeolian sands occur prominently near the surface of the area, especially near streams and washes.

Cretaceous and Tertiary sandstones, as well as Quaternary alluvial deposits, serve as the primary aquifers in the San Juan Basin. In most of the area, the San Jose Formation lies at the surface and overlies the Nacimiento Formation. Thickness of the San Jose Formation ranges from 200 feet to 2,700 feet, thickening from west to east across the region of interest. Aquifers occur within the coarser and continuous sandstone bodies of the San Jose Formation, and groundwater within these aquifers flows toward the San Juan River. Little specific hydrogeologic data are available for the San Jose Formation system, but numerous wells and springs are used for stock and domestic supplies (Stone et al., 1983).

The prominent soil type at the below-grade tank are rock lands and aridisols, which are defined as soils that exhibit little to no profile development (www.emnrd.state.nm.us). Soils are basically unaltered from their parent rock. Miles of arroyos, washes, and intermittent streams exist as part of the drainage network toward the San Juan River. These features often cut into soil and other unconsolidated materials, contributing to sedimentation downstream. The sudden influx of water from storm events easily erodes the soils that cover the area and prohibits effective recharge to the underlying aquifers.

Dry and arid weather further prohibits active recharge. The climate of the region is arid, averaging just over 12.87 inches of rainfall annually. As is typical of the southwestern United States monsoonal weather patterns, most precipitation falls from August through October. The heaviest rainfall occurs in the summer in isolated, intense cloudbursts. November through June is relatively dry. Snow generally falls from December to mid-February and averages less than one-half inch in depth. However, most recharge occurs during the winter months during snowmelt periods from the upper elevations (Western Regional Climate Center www.wrcc.dri.edu). The predominant vegetation are sagebrush and grasses with a more restricted pinon-juniper association (Dick-Peddie, 1993).

Site-Specific Hydrogeology

Depth to groundwater is estimated to be greater than 100 feet beneath the below-grade tank. This estimation is based on data from Stone et al. (1983), the United States Geological Survey (USGS) *Groundwater Atlas of the United States*. Local topography and proximity to surface hydrologic features are taken into consideration. When available, permitted water well logs and cathodic protection well logs are referenced to infer depth to groundwater near the site.

Beds of water-yielding sandstone are present in the San Jose Formation, which are fluvial in origin and are interbedded with mudstone, siltstone, and shale. "Extensive intertonguing" of different members of this formation is reported. Porous sandstones form the principal aquifers, while relatively impermeable shales and mudstones form confining units between the aquifers. Most aquifers exist within the San Jose Formation at depths greater than 100 feet, and thicknesses of the aquifers can be up to several hundred feet (USGS, *Groundwater Atlas of the United States*; Stone et al., 1983).

The below-grade tank is located at an elevation of approximately 6,723 near the headwaters of Jaquez Canyon, a tributary of Pump Canyon. Regional topography of Pump Canyon is composed of mesas dissected by deep, narrow canyons and arroyos. The mesas are composed of cliff-forming sandstone, and systems of dry washes and their tributaries composed of alluvium are evident on the attached aerial image. Groundwater is expected to be shallow within the canyon and within the surrounding tributary systems. An elevation difference between the site and the primary channel of Jaquez Canyon of 150 feet suggests groundwater is greater than 100 feet deep beneath the below-grade tank.

Groundwater data available from the New Mexico State Engineer's iWaters database for wells near the site are attached. Groundwater data are sparse in this region; the nearest iWaters data points with similar topographical characteristics and have reported depths to groundwater information are well number SJ 02992 located approximately 0.25 miles to the southeast and SJ 03823 approximately 0.40 miles to the southeast. Depth to groundwater in the permitted water wells is 230 feet and 250 feet below ground surface respectively.

References

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USGS, Groundwater Atlas of the United States: Arizona, Colorado, New Mexico, Utah, HA 730-C: (http://www.pubs.usgs.gov).

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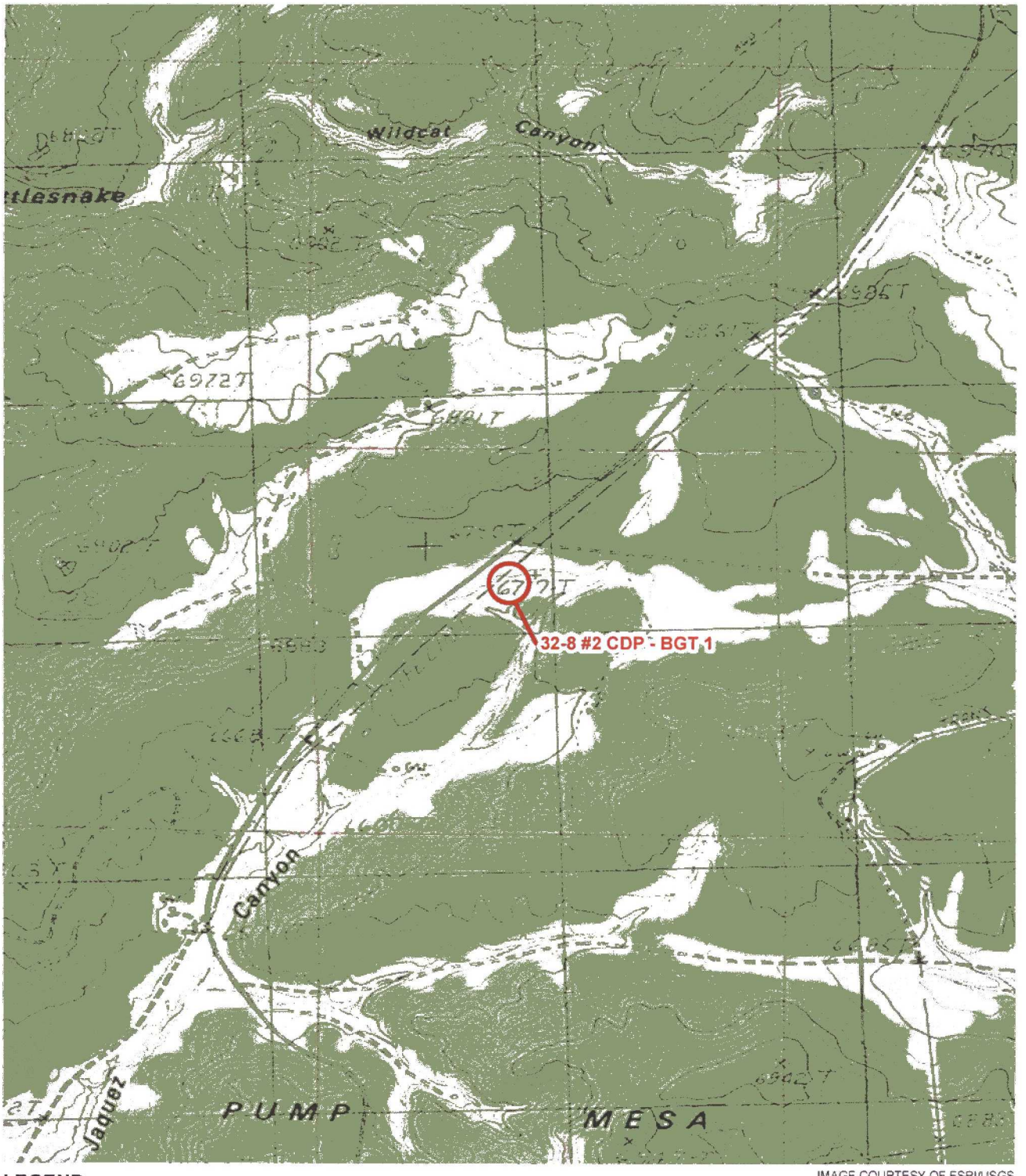


LEGEND

SITE LOCATION

BGT: BELOW GRADE TANK

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

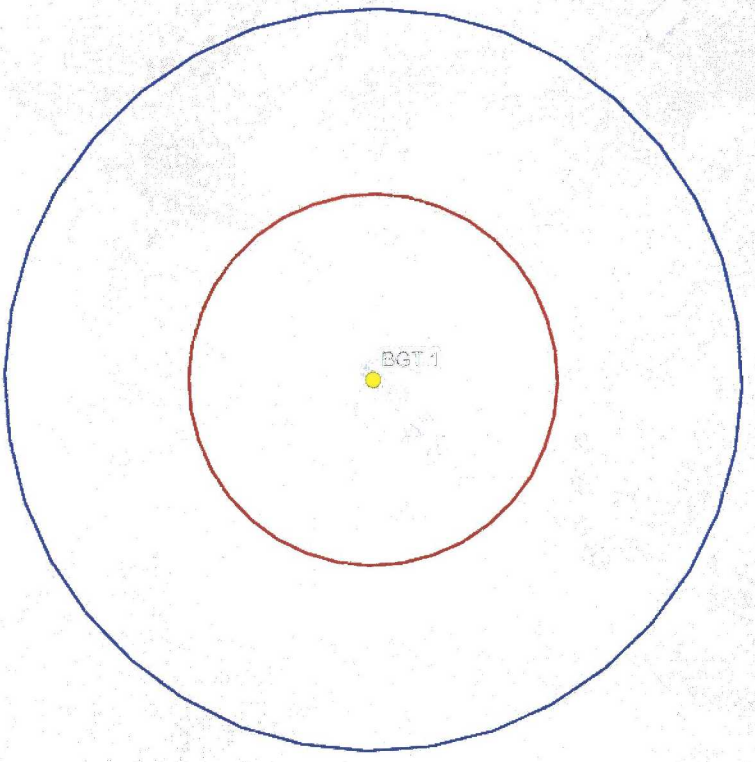
Feet

N

FIGURE 1
TOPOGRAPHIC MAP
32-8 #2 CDP - BGT 1
NW/SE (J) SEC 27 T32N R8W
SAN JUAN COUNTY, NEW MEXICO

WILLIAMS FOUR CORNERS

P:\Williams Four Corners\GIS\MXD\034014012_PIT_PERMITS\034014012_PIT PERMIT MAPBOOK FIG01 TOPO.mxd



LEGEND

BGT: BELOW GRADE TANK

100-FOOT RADIUS

200-FOOT RADIUS

IMAGE COURTESY OF ESRI

0 100 200

Feet

N

FIGURE 2
AERIAL PHOTOGRAPHIC MAP
32-8 #2 CDP - BGT 1
NWSE (J) SEC 27 T32N R8W
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS

P:\Williams Four Corners\GIS\MXD\034\014012_PIT_PERMITS\034014012_PIT PERMIT MAPBOOK FIG02 AERIAL.mxd

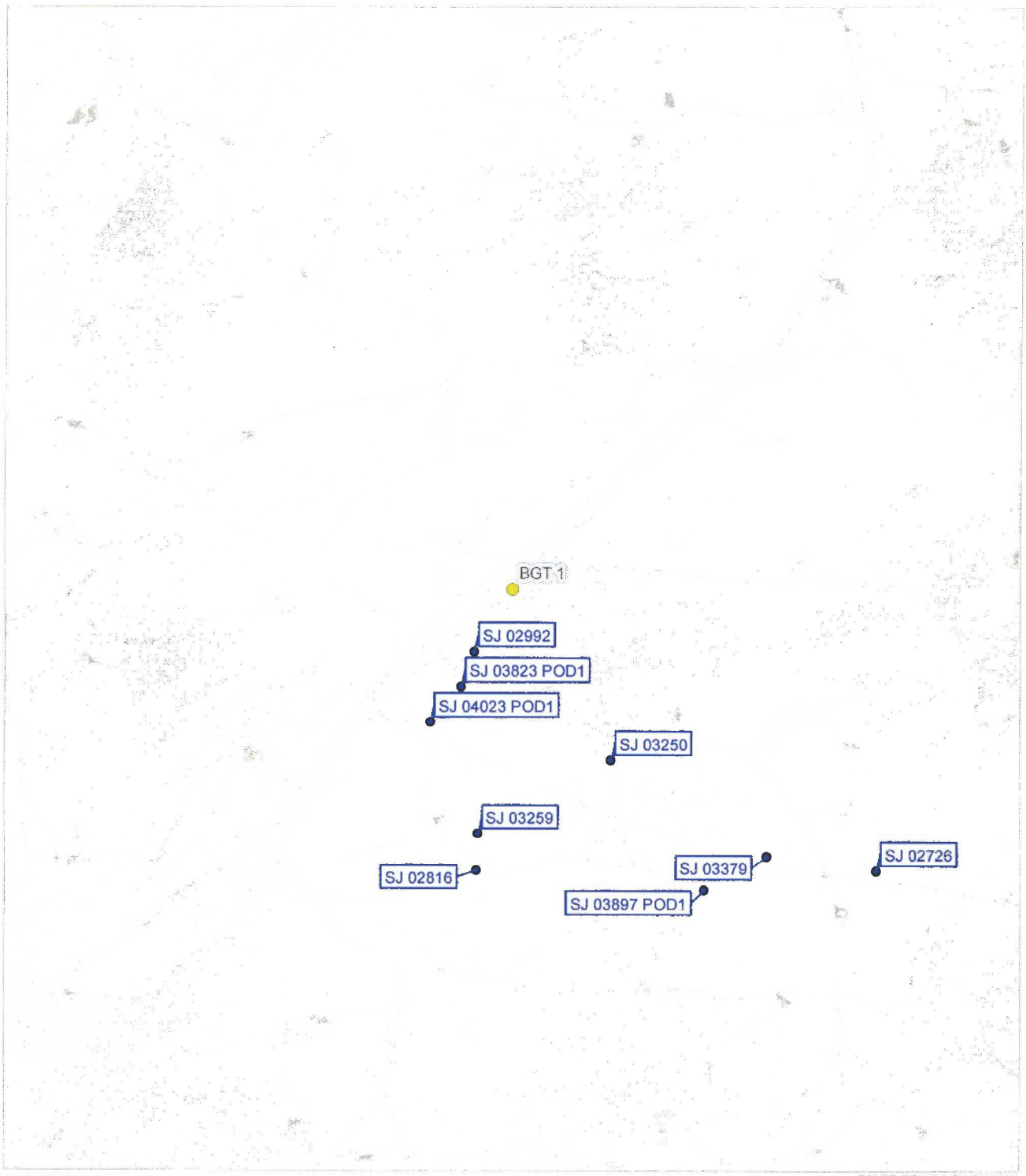


IMAGE COURTESY OF ESRI

LEGEND

- WATER WELL
- BGT: BELOW GRADE TANK

0 0.5 1
Miles

N

FIGURE 3
WATER WELL MAP
32-8 #2 CDP - BGT 1
NW/SE (J) SEC 27 T32N R8W
SAN JUAN COUNTY, NEW MEXICO
WILLIAMS FOUR CORNERS

P:\GIS\MXD\XTO1006 PIT PERMIT NM\PIT PERMIT MAPBOOK FIG04 WW.mxd

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-Code basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 02992		SJ	1	2	3	27	32N	08W	262631	4093068*	330	230	100
SJ 03250		SJ	4	3	4	27	32N	08W	263222	4092454*	400	375	25
SJ 03823 POD1		SJ	3	2	3	27	32N	08W	262567	4092875	380	250	130

Average Depth to Water: **285 feet**

Minimum Depth: **230 feet**

Maximum Depth: **375 feet**

Record Count: 3

PLSS Search:

Section(s): 27 **Township:** 32N **Range:** 08W

***UTM location was derived from PLSS - see Help**

Williams Four Corners LLC
Design and Construction Plan - Below Grade Tanks
San Juan Basin – New Mexico

Background

The following Design and Construction Plan has been developed to satisfy requirements of the "Pit Rule" as defined in 19.15.17.11 New Mexico Administrative Code (NMAC) and describes general design and construction standards to be used by Williams Four Corners LLC (Williams) when installing below grade tanks (BGTs). This is a standard procedure and any deviation from these standards due to site-specific conditions will require development of a design and construction plan modification. Any such deviation and plan modification requires separate New Mexico Oil Conservation Division (NMOCD) approval.

While existing tank installations have served to protect public health and the environment, this plan serves to standardize the construction design to ensure the required elements specified by NMOCD Rules are incorporated when installing new tanks, or when modifying or retrofitting tanks. The design standards herein shall also apply when modifications are made to existing BGTs.

Applicability

This plan applies to all new BGT installations for Williams operations in New Mexico as well as modifications made to existing tanks. It is developed to ensure that BGT operations are protective of fresh water, public health and the environment.

Design and Construction

1. Excavation for tanks shall be made to ensure a properly constructed level foundation free of rocks and debris which could puncture or damage a synthetic liner or tank bottom.
2. Soil conditions will dictate the size and sidewall slope and will be evaluated for stability. Cribbing reinforcement may be necessary at certain sites.
3. For BGTs that do not have double walls, Williams will construct the BGT to meet the following requirements as depicted in Figure 1.
   A. The BGTs sidewalls must be open for visual inspection for leaks.
   B. A 30-mil flexible Polyvinyl Chloride (PVC) or 60-mil High-density polyethylene (HDPE) liner (or equivalent liner when approved by the NMOCD) with hydraulic conductivity no greater than 1×10^{-9} centimeters per second (cm/sec) shall be installed within the excavation to cover the bottom and sidewalls and in such a manner to direct fluid to a single inspection point (for evidence of leakage).

C. The liner will be resistant to Ultra-Violet (UV) light, hydrocarbons, salts, alkaline, and acidic solutions, and otherwise compatible with the material(s) to be contained. Liner compatibility shall comply with United States Environmental Protection Agency (USEPA) SW-846 method 9090A. To evidence appropriate liner use, a liner specification sheet will be provided to the NMOCD for approval when a C-144 is prepared for modifications or retrofit, or if new liner material is utilized.

D. Washed gravel will be placed on the liner (lined bottom) for tank placement to allow for visual leak detection (some liner exposed) and subsequent inspection. The tank bottom is required to be at least six inches above the underlying ground surface.

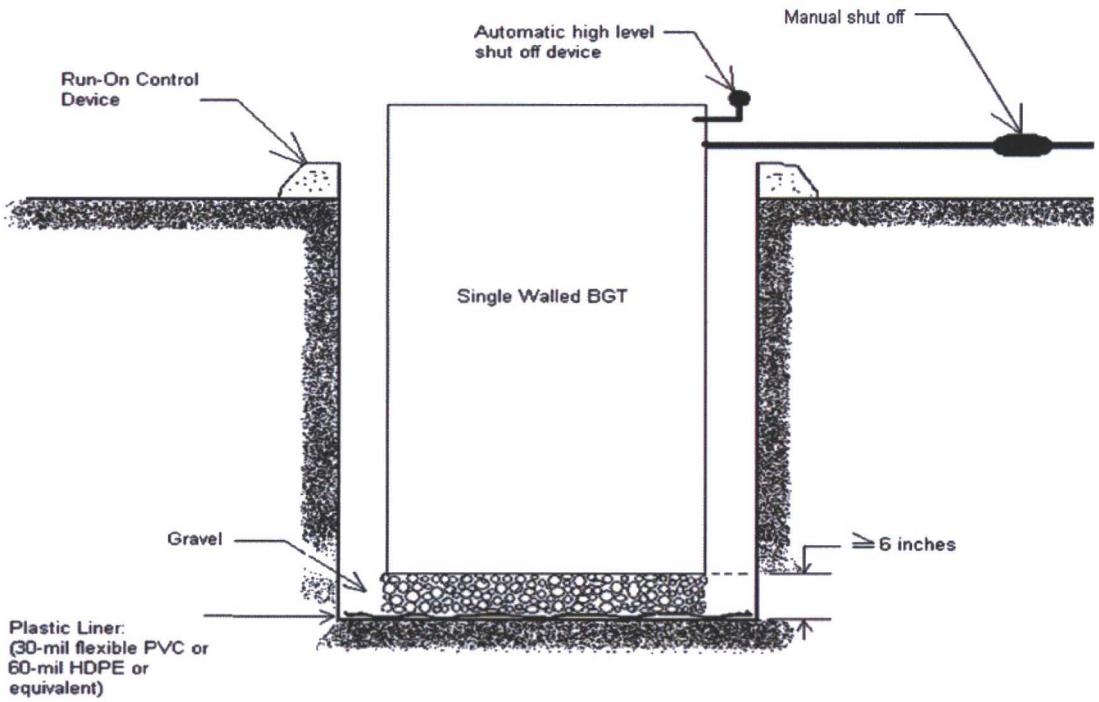
E. Each tank installed in accordance with 19.15.17.11.I(4)(a) NMAC shall be installed with automatic high level shut-off control devices and manual controls appropriate to prevent overflows. The automatic shut-off shall be set to maintain adequate freeboard (minimum 28 inches).

4. All other BGTs, in which the side walls are not open for visible inspection shall be double walled with leak detection capability as depicted in Figure 2.
5. Tanks shall be constructed of single wall steel meeting all American Petroleum Institute (API) and industry codes and shall otherwise be compatible with the fluids to be contained and be UV resistant. Williams shall, in most cases, utilize 45 barrel tanks (5 feet high x 8 feet in diameter) or 70 barrel tanks (5 feet high x 10 feet diameter) for future BGT installations (variations will be noted on C-144 Forms as appropriate). Tanks may or may not be constructed with double bottoms.
6. Tanks will have one inch (or less) steel mesh (i.e. expanded metal) or solid steel covers or otherwise be constructed to prevent migratory bird / fowl contact.
7. A solid riser pipe will be installed to facilitate liquid removal from the tank. The riser shall have a cap or cover and be positioned to prevent standing accumulation of liquids within the riser.
8. BGT installations will include an earthen berm to prevent surface water run-on in accordance with 19.15.17.11.I(3) NMAC.
9. BGT installations will be fenced to protect livestock and wildlife in accordance with 19.15.17.11.D. NMAC. Fencing shall prevent unauthorized access and at a minimum be four feet high with four strands of barbed wire spaced in the interval between one foot and four feet above ground. In lieu of barbed wire, the fence may be constructed using "hog wire" or similar fencing to satisfy the requirement. Other fence designs will require NMOCD approval.
10. A six-foot high chain link will be installed around BGT locations within 1000 ft of a permanent residence, school, hospital, institution, or church. At least two strands of barbed wire will be placed at the top. If the well site or facility has perimeter chain link fencing of equivalent design, then a pit or BGT fence is not necessary. Unmanned facilities must have a locked gate.
11. Appropriate signage will be installed in accordance with 19.15.17.11.C NMAC and include Operator name, legal location information, and emergency telephone contact information. The sign will be at least 12-inches x 24-inches with lettering not less than 2-inches in height and be placed on the fence surrounding the BGT.

12. An existing single walled tank (installed prior to June 16, 2008) which has completely open sidewalls for visible inspection and which may or may not have a geomembrane liner, need not meet the above design and construction standards unless and until integrity fails, or there is a change of Operator, or the tank or facility is sold. The tank will then be closed pursuant to the Closure Plan or be retrofitted in accordance with the design drawings (see Figures 1 or 2) or NMOCD approved modification.
13. An existing single walled tank (installed prior to June 2008) where any portion of the tank sidewall is below the ground surface and not visible shall be modified or retrofitted to meet the above design and construction standards if at any time the tank leaks, or demonstrates failed integrity prior to June 15, 2013. If the tank is not retrofitted or replaced, then the tank shall be closed by June 15, 2013 in accordance with the BGT Closure Plan. Such tanks shall also be closed or retrofitted prior to June 15, 2013; prior to any sale or change in Operator, or, at ***any time at the discretion of the Operator or NMOCD.***

Any modifications to, or retrofitting of existing tanks shall necessitate that all of the aforementioned design elements be included and as provided in the design drawings (Figures 1 and 2). If modifications cannot reasonably include the same design standards for new tanks or the BGT cannot be retrofitted with alternative system approved by the NMOCD, the existing tank shall be retired and removed from service. In this event, the Williams Closure Plan for BGTs shall be implemented.

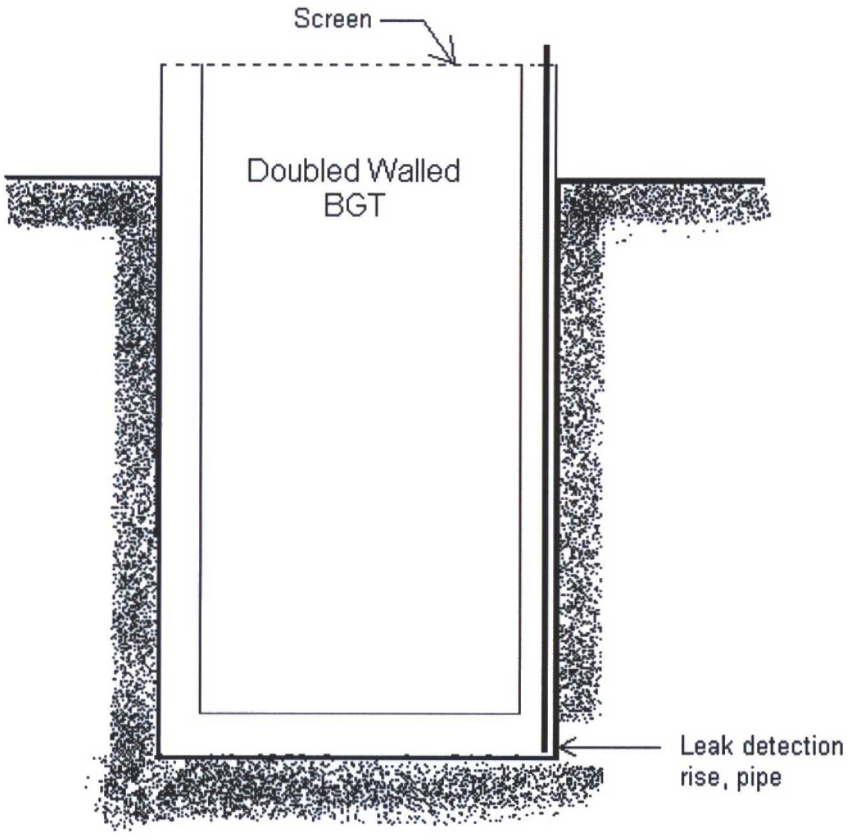
FIGURE 1. BGT DESIGN AND CONSTRUCTION – 19.15.17.11.I.(4)(a) NMAC



BGT Design Per 19.15.17.11.I.(4)(a) NMAC

- The BGT's side walls must be open for visual inspection for leaks.
- The BGT's bottom must be elevated a minimum of six inches above the underlying ground surface.
- The BGT must be underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected (may be covered with gravel).
- Geomembrane liner shall consist of 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner material. The liner must have a hydraulic conductivity no greater than 1×10^{-9} cm/sec, be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions, and resistant to ultraviolet light. The liner compatibility must comply with USEPA SW-846 method 9090A.
- Equipped with a properly operating automatic high-level shut-off control device and manual controls to prevent overflows.

FIGURE 2. BGT DESIGN AND CONSTRUCTION – 19.15.17.11.I.(4)(b) NMAC



BGT Design Per 19.15.17.11.I.(4)(b) NMAC

- Tank side walls are not open for visible inspection for leaks.
- Double walled with leak detection capability.

Williams Four Corners LLC
Operation and Maintenance Plan - Below Grade Tanks
San Juan Basin – New Mexico

Background

The following Maintenance and Operating Plan has been developed to satisfy requirements of the "Pit Rule" as defined in 19.15.17 New Mexico Administrative Code (NMAC) and describes the procedures to be used by Williams Four Corners LLC (Williams) when performing maintenance and/or operation including inspections of below grade tanks (BGTs).

This plan describes in greater detail, the operating policies and procedures to be followed in accordance with Rule 19.15.17 NMAC. All BGTs have been operating in general compliance with New Mexico Oil Conservation Division (NMOCD) regulations developed prior to the Pit Rule enacted in June 2008.

Applicability

This plan shall be used for all BGTs currently in service located in New Mexico. The plan was developed to ensure that Williams operation of BGTs protect fresh water, public health and the environment. Elements of this plan have been developed to satisfy current regulatory requirements as well as provide Best Management Practices (BMPs) for responsible operations.

While unlikely, if conditions at a BGT location prevent or limit adherence to this plan, a separate site-specific plan will be developed. Such a plan will be prepared and submitted to the NMOCD for approval and serve as a site specific amendment.

Operation of BGTs

Williams shall operate and maintain all BGTs, including liners and secondary containment structures in a condition to ensure integrity. The goal is to prevent contamination of soil and fresh water and otherwise be protective of public health and the environment. To accomplish this, regular inspection events and specific installation (i.e. design) criteria must be followed and performed.

New and existing BGTs shall be operated to comply with the standards established by the NMOCD and described in 19.15.17 NMAC. Installation design details are provided in the Williams Design and Construction Plan for BGTs. The following operating standards shall be completed for BGTs operated by Williams:

1. Williams shall not allow surface water run-on to enter BGTs. As required, berms and/or dike shall be constructed to prevent surface water run-on from entering BGTs. Surface water control features will be routinely inspected and repaired as required.
2. BGT fluid levels will be maintained to ensure proper free board using either active or inactive monitoring methods. Active monitoring methods may include

the use of high level shut-offs / level controllers. Inactive monitoring may be conducted during monthly inspections or more frequently based on operations. In the event of malfunction or if freeboard cannot otherwise be maintained, then excessive volumes shall be removed and disposed in accordance with applicable NMOCD regulations.

3. Williams shall operate and maintain BGTs to contain liquids and solids, and maintain the integrity of associated liner or secondary containment systems.
4. Williams shall remove any visible or measurable layer of oil from the fluid surface of the BGT except for BGTs that are registered to contain oil.
5. Williams will not discharge into or store any hazardous waste in a below-grade tank.
6. If a BGT is damaged below the liquid surface, all fluids will be removed which are above the damage or leak within 48 hours of discovery. Notification will be made to the NMOCD District Office within 48 hours and appropriate repairs made before putting the BGT back in service.
7. Fluid removal shall be performed in a manner preventing damage to the tank, secondary containment liner, or diversion structures (i.e. berms).
8. Ensure that any BGT modification, replacement, or retrofit conforms with current NMOCD design and construction specifications.
9. A BGT constructed and installed prior to June 16, 2008 that does not meet current NMOCD design and construction standards and that does not otherwise demonstrate integrity, shall be closed pursuant to the Williams Closure Plan for BGTs. Installation of a new/replacement BGT meeting the current design and construction criteria shall commence only after closing the defective BGT.
10. A BGT constructed and installed prior to June 16, 2008 that does not meet current NMOCD design and construction standards can be retrofitted so long as the BGT demonstrates integrity. In such cases, the following procedures shall be completed:
    A. Visually inspect the area beneath the BGT tank during the retrofit and document any areas that are wet, discolored or showing other evidence of a release on Form C-141.
    B. Demonstrate to the NMOCD whether the evidence of contamination indicates an imminent threat to fresh water, public health, safety or the environment exists.
    C. If the NMOCD determines that there is not an imminent threat to fresh water, public health, safety or the environment, Williams will complete the retrofit or the replacement of the BGT.
    D. If Williams or the NMOCD determines that contamination poses an imminent threat to fresh water, public health, safety or the environment, then the BGT will be closed pursuant to the Williams Closure Plan for BGTs prior to initiating the retrofit or replacement.
    E. If the BGT is not retrofitted to meet current design and construction standards, then the tank will be closed prior to any sale, transfer of ownership, or change of Operator.

11. Close all single walled BGTs that do not have completely open and visible sidewalls when integrity is compromised and modifications cannot be made to meet current design and construction standards. **Note that all single walled BGTs must be retrofitted to meet current design and construction standards or be closed by June 15, 2013. This requirement also applies prior to any sale, transfer of ownership, or change of Operator.**

Inspection

Monthly inspections will be performed to assess the BGTs for leakage and damage. William shall perform annual integrity testing of BGTs.

Records and Documentation

Records of annual integrity testing will be documented and maintained for at least five years.

Notification Requirements

If a release is identified, all liquid above the leak line shall be removed within 48 hours and oral notification made to the NMOCD District Office (within 48 hours of discovery). Independent of the notification requirement described above, and depending on the estimated volume of the release, a separate written spill report (Form C-141) may be required per the NMOCD Release Notification requirements defined in 19.15.29 NMAC.