District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-144
July 21, 2008

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

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

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

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

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

1.
Operator: Williams Field Services (Williams Four Corners, LLC) OGRID #:
Address: 188 CR 4900 Bloomfield, NM 87413
Facility or well name: SCHALK #29-4 #7
API Number: 3003921620 OCD Permit Number:
U/L or Qtr/Qtr Section 26 Township 29N Range 4W County: RIO ARRIBA
Center of Proposed Design: Latitude Longitude NAD: ☐1927 ☐ 1983
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☐ **Pit:** Subsection F or G of 19.15.17.11 NMAC
Temporary: ☐ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A
☐ Lined ☐ Unlined Liner type: Thickness mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other Volume: bbl Dimensions: L x W x D

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

4.
☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: 45 bbl Type of fluid: Produced water – dehydrator fluids or other produced liquids (RCRA exempt)
Tank Construction material: Steel ☒ Fiberglass ☐
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☒ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other
Liner type: Thickness 30 mil ☐ HDPE ☒ PVC ☐ Other

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

6.

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 Four foot high welded wire (hog fence) which may include top rebar rail or barbed wire or combination

7.

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

☐ Screen ☐ Netting ☒ Other Expanded metal

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

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

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	☐ Yes ☒ 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	☐ Yes ☒ 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	☐ Yes ☒ No ☐ 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	☐ Yes ☒ No ☐ 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	☐ Yes ☒ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☒ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☒ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☒ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☒ No

11.
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

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

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

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

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
- ☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

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

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

13.
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

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

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

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Closed-loop System ☐ Alternative

Proposed Closure Method:
- ☐ Waste Excavation and Removal
- ☐ Waste Removal (Closed-loop systems only)
- ☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
  - ☐ In-place Burial ☐ On-site Trench Burial
- ☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15.
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

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

16.
Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)
Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?
☐ Yes (If yes, please provide the information below) ☐ No

Required for impacted areas which will not be used for future service and operations:
☐ Soil Backfill and Cover Design Specifications - - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

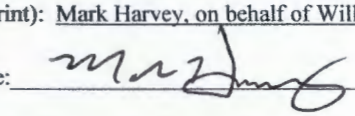
Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ No

18.
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19.
Operator Application Certification:

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

Name (Print): Mark Harvey, on behalf of Williams Title: Project Coordinator

Signature:  Date: 6-1-10

e-mail address: mark.b.harvey@williams.com Telephone: 801-232-8985 or 505-632-4708

20.
OCD Approval: ☐ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

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

Title: _____ **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 indentify 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: _____

Site Specific Information

The Schalk 29-4 #7 site is located approximately eighteen miles east of Gobernador in Rio Arriba County. The soil type is broadly classified as Entisols with a specific description of sandy-silt with clay as reported on pit closure records.

The below grade tank is situated on the well pad in material cut and leveled to construct the pad where it is recessed below grade. The site elevation is 7060 feet above sea level.

The site is located on the flank of Dry Lake Canyon approximately one mile north of Laguna Seca in the Carson National Forest. The site is greater than 500 feet from any domestic water well, spring, or wetland, and greater than 1000 feet from any other well or spring. There is no residence, school, church, hospital or other institution or significant watercourse within 300 feet. The site is not located within a 100 year floodplain. This information is based on a review of public records or from a site visit or both. Siting standards have been evaluated using information listed below for each criteria:

Ground water depth has been determined using one or more of the following sources for information:

- NM Office of the State Engineer – Water Rights Reporting System; USGS; data obtained from NMOCD well records

Determination of BGT proximity within 300 ft of a continuously flowing water course , or 200 ft of any other significant water course or lakebed, sinkhole, or playa lake (measured from the ordinary high water mark) has been determined by information obtained from one or more of the following:

- Topographic maps; Visual Inspection (certification) of the site

Determination of BGT proximity within 300 ft from a permanent residence, school, hospital, institution, or church in existence at the time of the initial application was made using one or more of the following:

- Visual inspection (certification) of the site; Aerial photo; Satellite imagery

Determination of BGT proximity 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 was made using one or more of the following sources:

- NM Office of the State Engineer – Water Rights Reporting System; Visual inspection (certification) of the proposed site

BGT location 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 was determined by:

- Written confirmation or verification from the municipality: Written approval obtained from the municipality, or review of landowner and boundary information

BGT proximity within 500 feet of a wetland was evaluated based on information from one or more of the following:

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

Determination of the presence of a subsurface mine was made using information obtained from:

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

Evaluation of an unstable area in the vicinity of the BGT was made using information from one or more of the following:

- Engineering measures incorporated into the design; NM Bureau of Geology and Mineral Resources; USGS; NM Geological Society; Topographic map

Proximity of BGT location within a 100-year floodplain was made by evaluating published information shown on FEMA maps or from evaluation of Topographic maps.

In the absence of site specific information from public sources, information was obtained from a site visit and visual inspection. Distances from the BGT to any identified siting criteria were measured from aerial photos, topographic maps, or during site reconnaissance. Several of the maps supporting these facts are included. They are: Topographic map (Fig 1), aerial photo (Fig 2), Wetland map , and the FEMA FIRM map.

NM Water Rights Reporting System data reveal no water wells in the area. A review of NMOCD well files shows surface casing at the subject well and at a nearby well (Schalk 29-4 #15) was set greater than 250 feet bgs. Conditions suggest that ground water is greater than 50 feet. This is supported by the topographic setting and the absence of any ground water information to the contrary.

Based on the information available, ground water is estimated to be greater than 50 feet below the bottom of the BGT. The Pit Rule siting criteria has been evaluated and this location is in an area which poses minimal risk to human health, safety, and the environment.

Note: In some cases, site evaluation criteria is collected from dated sources and may or may not represent actual conditions in existence at the time of the application. The accuracy or completeness of such information has not been independently confirmed but is considered reliable for the purpose of completing the permit application.

BGT Siting Criteria Evaluation

I have performed site reconnaissance at the SCHALK 29-4 #7 and have evaluated the siting criteria for below grade tanks (BGTs) as defined in the Pit Rule (19.15.17.10 NMAC).

Observations and relative information from field notes have been recorded on Form C-144 and reflect conditions at the named site. NMOCD recommended reference material(s) was examined and evaluated to validate field observations and to determine site proximity (distance) to features identified in Section 10 of C-144. In some cases, information was obtained from company operations records or earlier pit assessment records in order to facilitate the completion of the form.

The siting criteria evaluation relies on the accuracy and completeness of published data, none of which was independently verified. The findings are then accurate to the best of my knowledge and belief and reflect conditions on the date and time of the site visit.

M. Harvey 6-12-10

Signature Mark Harvey, Project Coordinator Date

San Juan Basin
Regional Hydrogeologic Information

The San Juan Basin region is notable both by its marked aridity and by a rugged topography of plains and valleys interspersed by buttes, canyons and mesas. Its most striking features include Chaco Canyon (northwestern New Mexico, between Farmington and Santa Fe) and Chacra Mesa. The climate of the region is arid, with average annual rainfall about 10 inches in the central part of the basin and as low as 8 inches along the San Juan River west of Farmington.

As the region gently increases in elevation in a southeasterly direction, the Basin's streams flow to the northwest, eventually draining into the Colorado River (Fagan, 2005). Maximum relief in the New Mexico part of the basin is approximately 6,580 feet, based on Mt. Taylor and the San Juan River comparative elevations.

The source of most water supplies in the San Juan Basin outside of certain municipalities is ground water obtained from wells located in surficial valley-fill deposits. In some areas, these alluvium filled channels are principal locations of discharge as well. Most recharge occurs from storm flow infiltration, but some contribution is made from bedrock sources, especially in lower reaches. In certain upper reaches, these ephemeral stream channels may be major sources of recharge to underlying bedrock aquifers. Drainage of irrigated lands also contributes a significant recharge volume to the valley fill of the San Juan, Animas, and La Plata River valleys.

Regional uplift and resulting volcanism were accompanied by a regional dissection of the area by stream systems that evolved into the present-day drainage pattern of superposed streams. Tributaries of the San Juan River that contribute large quantities of water during storm flow events include Canyon Largo, Gallegos Canyon, Chaco River, and the La Plata River. It should be noted that Canon Largo drains approximately 1700 square miles of the central part of the basin.

Notable aquifers are the Ojo Alamo Sandstone , which yields as much as 30 gallons per minute of potable water (Hale et al., 1965) and is identified as one of the major sources of drinking water in the region (Brown and Stone, 1979). Larger fractures found in the Fruitland coals and the presence of interbedded permeable sandstones make the Fruitland formation in the northern part of the basin a significant water source as well. Water quality can vary significantly across the region but is considered good from sources in river valleys and ephemeral streams, and poorer in areas where there is influence from bedrock sources.

Groundwater is recharged along the Fruitland outcrops at the elevated margins to the west and northwest parts of the basin, and lateral flow converges from the northeast and southeast toward upward discharge to the San Juan River valley (Kaiser et al., 1994). The Fruitland and upper Pictured Cliffs sandstone aquifers are confined by the Kirtland shale in the north, but poorly confined by the Kirtland shale near the central and southern portions of the basin. Water from the Fruitland discharges in the western part of the basin and migrates upward across the Kirtland shale into the Animas and San Juan Rivers (Stone et al., 1983).

In general, much of the recharge to aquifers in the New Mexico part of the basin occurs on the flanks of the Zuni, Chuska, and Cebolleta Mountains and in high areas along the northern and northeastern basin margins, including the San Juan Mountains of Colorado.

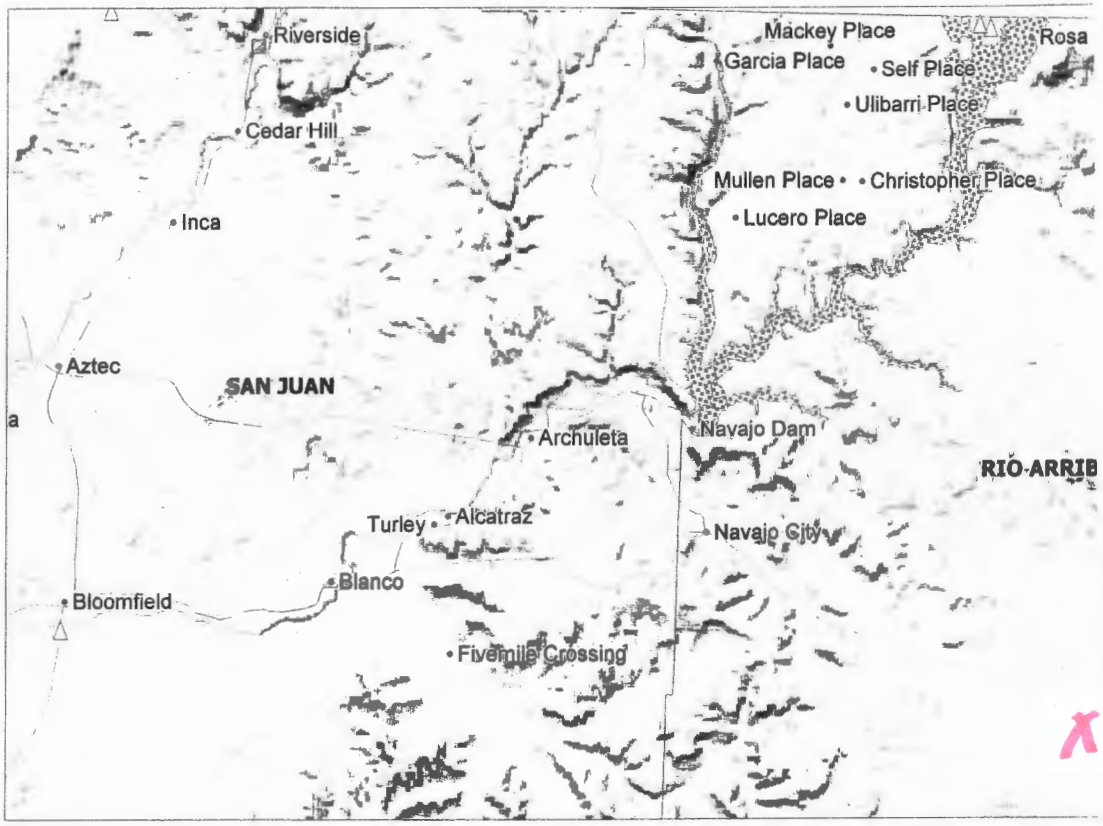
Williams BGT Locations

Mines, Mills & Quarries Commodity Groups

- Aggregate & Stone Mines
- Coal Mines
- Industrial Minerals Mines
- Industrial Minerals Mills
- Metal Mines and Mill Concentrate
- Potash Mines & Refineries
- Smelters & Refinery Ops.
- Uranium Mines
- Uranium Mills

Mines, Mills & Quarries Status

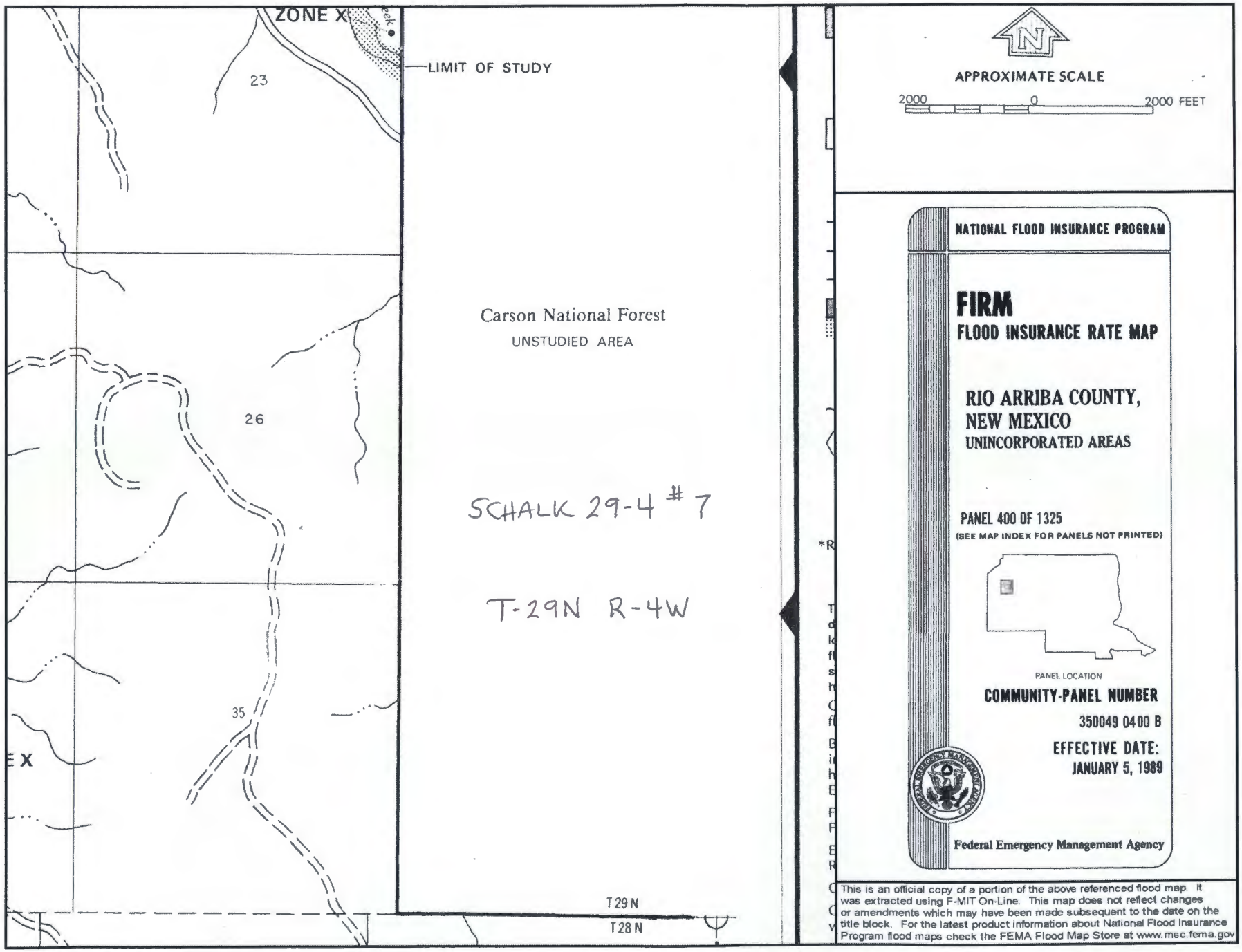
- Active Mining
- Active Mining, Active Reclamation
- Permanent Closure, Active Reclamation
- Permanent Closure, Reclaimed Awaiting Bond Release
- Temporary Suspension
- Under Development



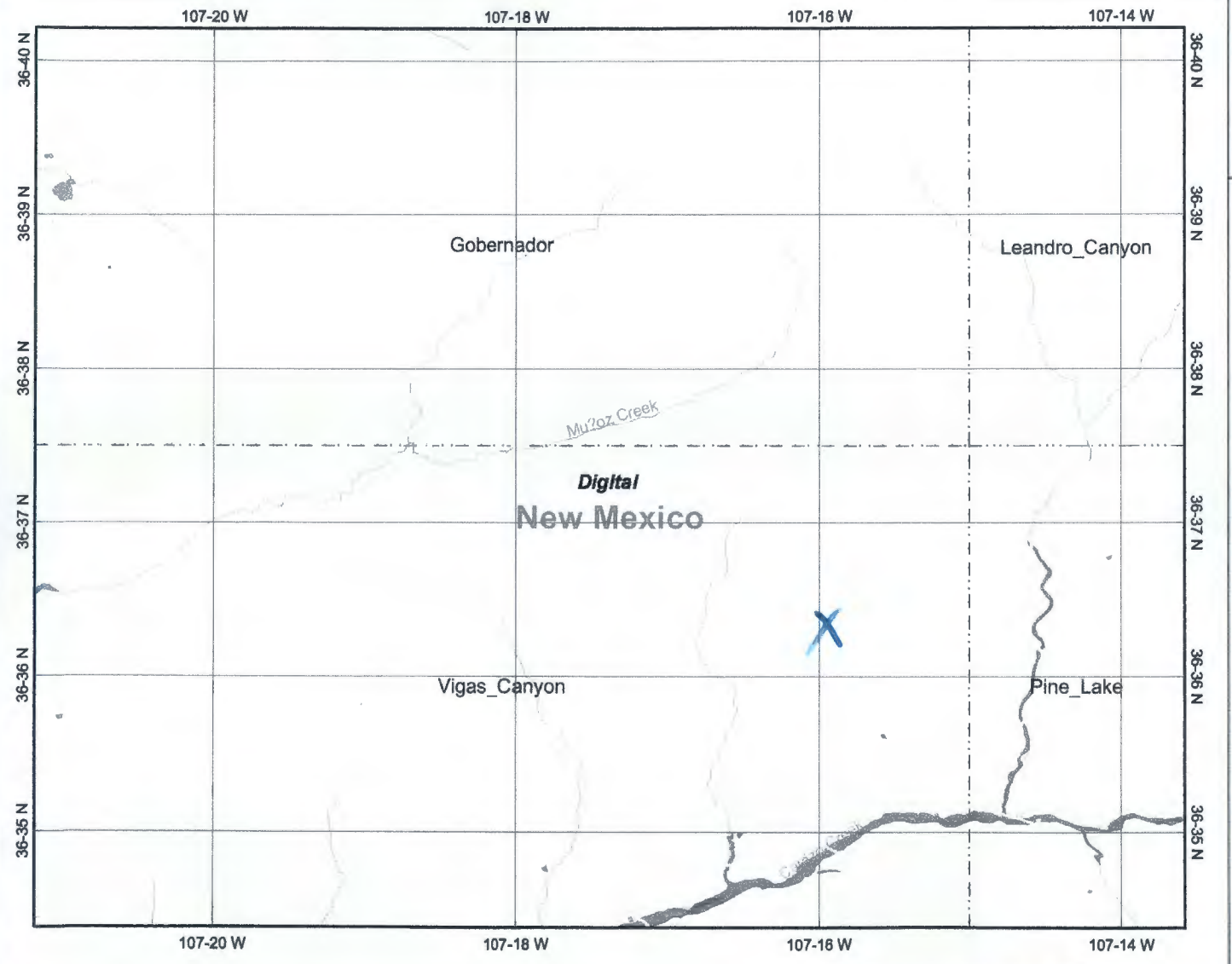
SCALE 1 : 400,000

5 0 5 10 15

MILES


ZONE X
LIMIT OF STUDY
23
26
35
E X
Carson National Forest
UNSTUDIED AREA
SCHALK 29-4 # 7
T-29N R-4W
T29N
T28N
APPROXIMATE SCALE
2000 0 2000 FEET
NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE RATE MAP
RIO ARRIBA COUNTY, NEW MEXICO
UNINCORPORATED AREAS
PANEL 400 OF 1325
(SEE MAP INDEX FOR PANELS NOT PRINTED)
PANEL LOCATION
COMMUNITY-PANEL NUMBER
350049 0400 B
EFFECTIVE DATE:
JANUARY 5, 1989
Federal Emergency Management Agency
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

BGT Wetlands Info (5)



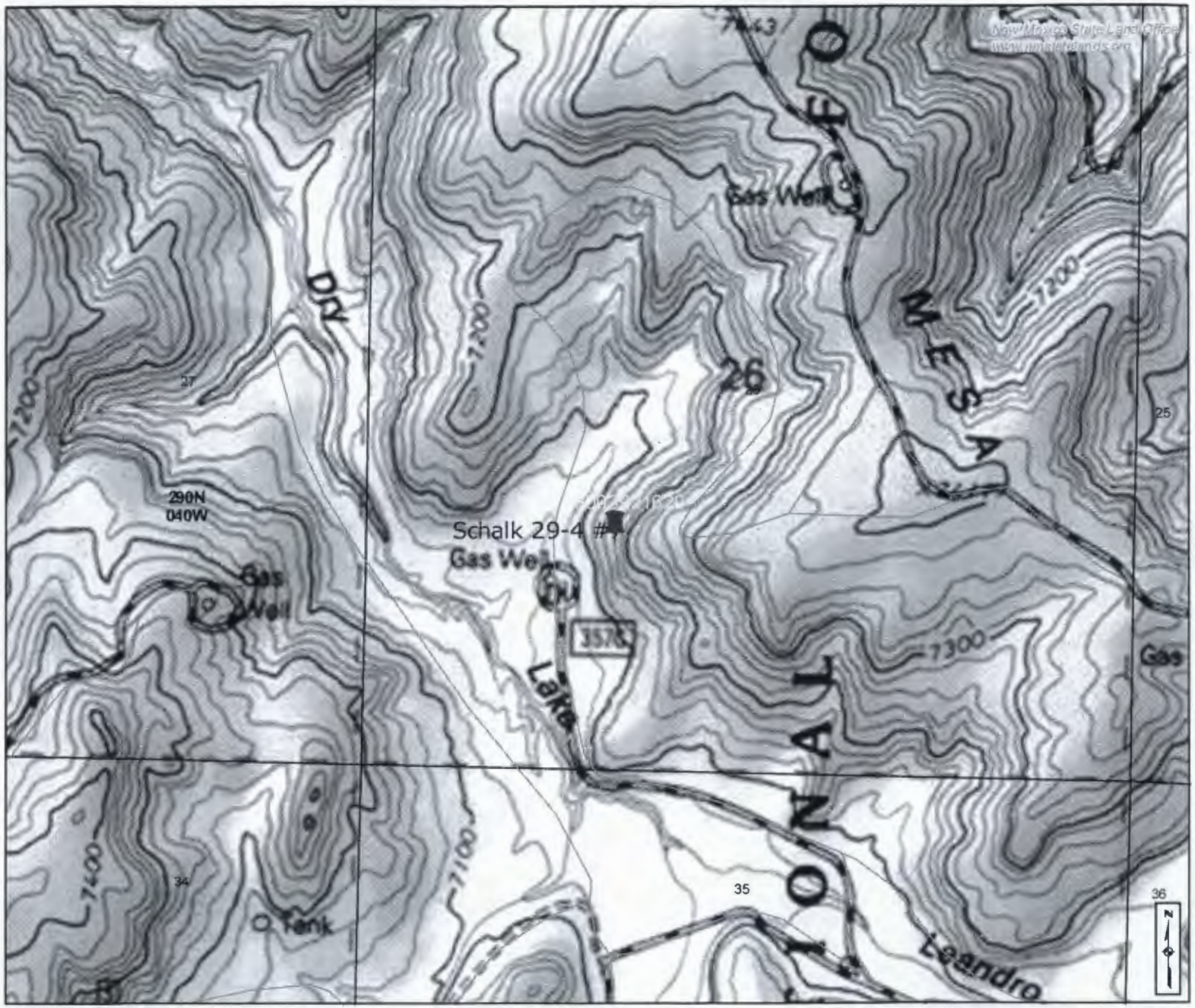
Legend

- Interstate
- Major Roads
- Other Road
- Interstate
- State highway
- US highway
- Roads
- Cities
- USGS Quad Index 24K
- Lower 48 Wetland Polygons
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Lower 48 Available Wetland Data
- Non-Digital
- Digital
- No Data
- Scan
- NHD Streams
- Counties 100K
- Urban Areas 300K
- States 100K
- South America
- North America

Scale: 1:75,802

Map center: 36° 37' 18" N, 107° 17' 23" W

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



LEGEND

- County Seats
- SLO District Offices
- City, Town or Village
- Volcanic Vents
- Highway Mileposts

NMOCD Oil, Gas Wells

- Carbon Dioxide
- Gas
- Injection
- Miscellaneous
- Oil
- Salt Water Disposal
- Water
- DA or PA

Federal Subsurface Ownership

- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

State Trust Lands Ownership

- Surface Estate
- Subsurface Estate
- Both Estates

State Lease Types

- Commercial Leases
- Minerals Leases
- Oil and Gas Leases
- Agricultural Leases
- Oil, Gas Leasing Influenced By Restriction
- Not Available for Oil, Gas Leasing

Other Boundaries

- Continental Divide
- State Boundary
- County Boundaries
- Oil and Gas Unit Boundary
- Participating Areas in Units
- Geologic Regions
- NMOCD Order R-111-P Potash Enclave Outline

For detailed legend of the Geologic Map of New Mexico, please see http://geoinfo.nmt.edu/

New Mexico State Land Office

Oil, Gas, and Minerals Land/Lease Information Map

0 0.025 0.05 0.1 0.15 0.2 Miles

Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

The New Mexico State Land Office assumes no responsibility or liability for, or in connection with, the accuracy, reliability or use of the information provided here, in State Land Office data layers or any other data layer.

Land Office Geographic Information Center
logic@slo.state.nm.us

Created On: 4/30/2010 4:07:09 PM

LEGEND

- County Seats
- SLO District Offices
- City, Town or Village
- Volcanic Vents
- Highway Mileposts

NMOCD Oil, Gas Wells

- Carbon Dioxide
- Gas
- Injection
- Miscellaneous
- Oil
- Salt Water Disposal
- Water
- DA or PA

Federal Subsurface Ownership

- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

State Trust Lands Ownership

- Surface Estate
- Subsurface Estate
- Both Estates

State Lease Types

- Commercial Leases
- Minerals Leases
- Oil and Gas Leases
- Agricultural Leases
- Oil, Gas Leasing Influenced By Restriction
- Not Available for Oil, Gas Leasing

Other Boundaries

- Continental Divide
- State Boundary
- County Boundaries
- Oil and Gas Unit Boundary
- Participating Areas in Units
- Geologic Regions
- NMOCD Order R-111-P Potash Enclave Outline

For detailed legend of the Geologic Map of New Mexico, please see http://geoinfo.nmt.edu/

New Mexico State Land Office

Oil, Gas, and Minerals Land/Lease Information Map

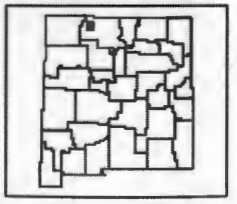
0 0.025 0.05 0.1 0.15 0.2 Miles

Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

The New Mexico State Land Office assumes no responsibility or liability for, or in connection with, the accuracy, reliability or use of the information provided here, in State Land Office data layers or any other data layer.

Land Office Geographic Information Center
logic@slo.state.nm.us

Created On:4/30/2010 4:07:49 PM



New Mexico Office of the State Engineer

Point of Diversion with Meter Attached

No PODs found.

PLSS Search:

Q4: NW **Section(s):** 26 **Township:** 29N **Range:** 04W

SCHALK 29-4 #7

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

New Mexico Office of the State Engineer
Wells Without Well Log Information

No wells found.

PLSS Search:

Q4: NW **Section(s):** 26 **Township:** 29N **Range:** 04W

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

New Mexico Office of the State Engineer
Wells with Well Log Information

No wells found.

PLSS Search:

Q4: NW **Section(s):** 26 **Township:** 29N **Range:** 04W

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

Williams Four Corners, LLC

Design and Construction Plan for Below Grade Tanks

San Juan Basin – New Mexico

The following has been developed to satisfy requirements of Rule 19.15.17.11 NMAC and describes general design and construction standards to be used by Williams Field Services when installing below grade tanks. 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 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 below grade tanks.

Applicability

This plan applies to all new below grade tank installations for Williams Field Services' operations in New Mexico as well as modifications made to existing tanks. It is developed to ensure that below grade tank 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. A 30-mil flexible PVC or 60-mil HDPE liner (or equivalent liner when approved by the OCD) with hydraulic conductivity no greater than 1 x 10-9 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).

4. The liner will be resistant to UV light, hydrocarbons, salts, alkaline, and acidic solutions, and otherwise compatible with the material(s) to be contained. Liner compatibility shall comply with 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.

5. 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.

6. Tanks shall be constructed of single wall steel meeting all API and industry codes and shall otherwise be compatible with the fluids to be contained and be UV resistant. WFS shall, in most cases, utilize 45 barrel tanks (5'h x 8'w) or 70 barrel tanks (5'h x 10'w) for future BGT installations (variations will be noted on C-144 Forms as appropriate). Tanks may or may not be constructed with double bottoms.

7. Each tank 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).

8. 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.

9. 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.

10. BGT installations will include an earthen berm to prevent surface water run-on.

11. BGT installations will be fenced to protect livestock and wildlife in accordance with 19.15.17.11 (D). 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.

12. 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 below grade tank fence is not necessary. Unmanned facilities must have a locked gate.

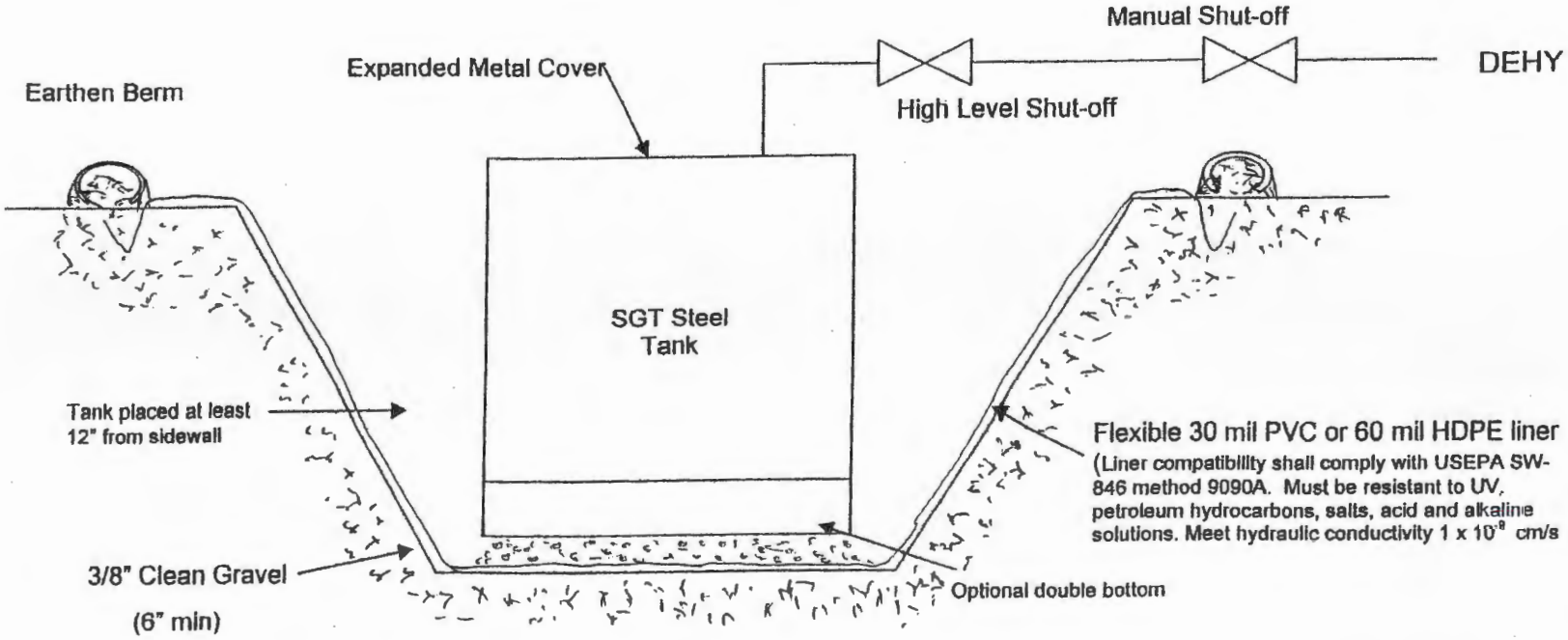
13. Appropriate signage will be installed in accordance with 19.15.17.11 (C) and include Operator name (Williams), legal location information, and emergency telephone contact information. The sign will be at least 12" x 24" with lettering not less than 2" in height and be placed on the fence surrounding the BGT.

14. 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 drawing (see Figure 1) or NMOCD approved modification.

15. 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 drawing (see Figure 1). If modifications cannot reasonably include the same design standards for new tanks, the existing tank shall be retired and removed from service. In this event, the Williams Closure Plan for Below Grade Tanks shall be implemented.

Typical Below Grade Tank Installation



Note: Foundation shall be free of rocks and debris and otherwise made level. Liner is anchored at ground surface - min 12 in trench. Installation allows for fluid collection point and visible inspection of exposed liner. Shut-off system designed to maintain 28" freeboard. Installation location should meet siting criteria or be approved by NMOCD.

Williams

FIGURE 1: Standard BGT Design FCA
DATE: 01-07-10

Williams Four Corners, LLC

Maintenance and Operating Plan for Below Grade Tanks

San Juan Basin – New Mexico

Background

Following promulgation of 19.15.17 NMAC also known as the Pit Rule, Williams has developed this Maintenance and Operating Plan to comply with requirements related to ongoing use of below grade tanks (BGTs). The plan is developed to ensure that Williams' operation of BGTs is adequate to contain liquid discharges from production equipment and ensure that those discharges are captured in a prescribed manner suitable to protect fresh water, public health and the environment.

Williams has previously operated BGTs and other discharge containment structures consistent with applicable regulations All BGTs have been operating in general compliance with OCD regulations developed prior to the new Pit Rule of June 2008. This plan describes in greater detail, the operating policies and procedures and new information specifically detailed in the new Pit Rule.

Applicability

This plan shall be used for any and all BGTs in service. Elements of this plan have been developed to not only satisfy current regulatory requirements, but to define best practices 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 OCD 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 OCD and described in the Pit Rule (19.15.17). Installation design details are provided in the WFS Design and Construction Plan for Below Grade Tanks. Following are current operating standards applicable to BGTs:

Operating Standards

- All BGTs shall have berms or diversion ditches to ensure surface run-on does not enter any tank or containment.
- BGT fluid levels will be maintained to ensure proper free board (28") by effective use of high level shut-offs / level controllers. In the event of malfunction or if freeboard cannot otherwise be maintained, then excessive volumes shall be pumped off for hauling and proper disposal (management).

- Remove any visible or measurable layer of oil from the fluid surface of the BGT

- Fluid removal shall be performed in a manner preventing damage to the tank, secondary containment liner, or diversion structures (i.e. berms)

- A below-grade tank constructed and installed prior to June 16, 2008 that does not meet current design standards and that does not otherwise demonstrate integrity (i.e. leaks), or when there is any penetration of liner material below the liquid surface, shall be closed pursuant to the Closure Plan. *Installation of any new tank meeting the current design criteria (see Figure 1 Design Drawing) shall commence only after closing the defective BGT.*

- If a BGT or BGT liner 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 (applies to tanks meeting current design standards).

- If a BGT liner is damaged above the liquid surface, notice will be made to the local NMOCD District Office within 48 hours of discovery and appropriate repairs made.

- A BGT constructed and installed prior to June 16, 2008 that does not meet current design standards can be equipped or retrofitted to meet current design standards (refer to the Design and Construction Plan) at anytime prior to June 2013. In such cases:

    1. Visually inspect the area beneath the below-grade tank during the retrofit and document any areas that are wet, discolored or showing other evidence of a release on Form C-141.

    2. Demonstrate to the division whether the evidence of contamination indicates an imminent threat to fresh water, public health, safety or the environment exists.

    3. If the division determines that the contamination does not pose an imminent threat to fresh water, public health, safety or the environment, Williams will complete the retrofit or the replacement of the below-grade tank.

    4. If Williams or the NMOCD determines that the contamination poses an imminent threat to fresh water, public health, safety or the environment, then the BGT will be closed pursuant to the Closure Plan prior to initiating the retrofit or replacement.

    5. If the BGT is not retrofitted to meet current design standards, then the tank will be closed prior to any sale, transfer of ownership, or change of Operator.

- 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 standards. ***Note that all such tanks must be modified or retrofitted to meet current design standards or be closed by June 15, 2013. This requirement also applies prior to any sale, transfer of ownership, or change of Operator.***

- Ensure that any BGT modification, replacement, or retrofit conforms with current and applicable design and construction specifications (see Design and Construction Plan Figure 1).

Inspection

- Monthly inspections will be performed to assess the overall operation of tanks to ensure integrity and working high level shut off systems
- Maintain written inspection reports for five years

Records and Documentation

Records of monthly inspections will be documented and maintained for at least five years. Monthly inspection information shall include:

Well or facility name

API # (for well locations)

Legal information (Section, Township, Range)

Date and time of inspection

Confirmation of visible sidewalls and adequate berms

Confirmation of BGT integrity and overall condition

Observations of overflows, oil accumulation, freeboard, overall integrity of liner, etc.

Identified deficiencies and corrective action(s)

Inspector Name

The attached form shall be used when performing BGT monthly inspections.

NOTE: If a release event 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 reporting above, and depending on the estimated volume of the release, a separate written spill report (Form C-141) may be required under Rule 29.

BGT MONTHLY INSPECTION FORM Date: _____

Well Name (or facility) _____

API No. _____

Unit Letter ____ Section ____ Township ____ Range ___ Latitude _____

Longitude _____

Conditions Observed:

Adequate Freeboard (min 28")	yes __	no __	
Evidence of Overflow	yes __	no __	
Evidence of wildlife impact	yes __	no __	
Oil Accumulation	yes __	no __	
High Level Shutoff Operational	yes __	no __	unknown __
Liner in Good Condition	yes __	no __	
Fence or screen needs repair	yes __	no __	
Overall tank integrity good	yes __	no __	
Berms appear adequate	yes __	no __	
Sidewalls visible	yes __	no __	

Note nature of deficiencies (if any): _____

_____

Action(s) Necessary:

Oil Removal Service provider: _____

High level maintenance Service provider: _____

Fluids removal Service provider: _____

Remove from service (isolate tank): Contact _____

If Release Event Observed, notification requirements include Williams Environmental and OCD District Office.

Williams Environmental Notified yes __ no __ OCD Notification Made yes __ no __

OCD notification made by Williams Environmental: yes __ no __ unknown __

Time of Inspection: _____ am pm Weather: _____

Inspector Name and Title: _____ Title _____

Williams Four Corners, LLC

Closure Plan for Below Grade Tanks

San Juan Basin – New Mexico

Background

Following promulgation of 19.15.17 NMAC also known as the Pit Rule, Williams has developed this Closure Plan to comply with requirements related to the retirement of certain below grade tanks (BGTs). The plan will be used when closing BGT locations near term, and for all BGTs which are required to be closed by June 15, 2013. This plan shall also be used when closing any other BGT operated by Williams.

Certain below grade tanks targeted under this closure plan were, in some cases, installed subsequent to earthen pit closures and were constructed in conformance with NMOCD approved criteria. All BGTs have been operating in general compliance with NMOCD regulations developed prior to the new Pit Rule of June 2008.

Applicability

This plan shall be implemented when any BGT is retired or removed from service due to operational considerations or when tank integrity is compromised beyond repair. Closure shall commence within 60 days of cessation of use or sooner if directed by NMOCD.

The plan shall also be used if any leaking BGT is not retrofitted or modified to comply with applicable design criteria defined in the Pit Rule or when it is determined that continued operation of the BGT represents an imminent danger to fresh water, human health or the environment. All BGTs with or without completely visible sidewalls, and that do not meet current design standards, shall be closed prior to sale, transfer, or change of Operator or be retrofitted to meet current design standards. In any event, all single walled tanks without completely visible sidewalls shall be closed by June 15, 2013 in accordance with the provisions herein.

If there are conditions at a BGT location which 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 new, site specific closure plan.

Description of Work

Prior to initiating BGT closure work, notification will be made to the NMOCD Aztec Office 3-7 days before work is scheduled. In addition, the landowner of record (obtained through county tax records) will be notified in advance by certified mail with return receipt. Notifications will provide operator identity, and legal location of the BGT, and the well name / number and API number if the BGT is associated with a well. Notification to NMOCD will be made via email or by phone. If prudent, and contingent upon work schedules and manpower assignments, more than one location may be included in a single communication.

Discharge to the BGT will be eliminated and all piping removed or re-routed as appropriate. The liquid contents in the tank will be removed and shipped for disposal at an NMOCD approved and permitted facility. Williams may utilize other facilities which may be approved by the NMOCD in the future. As such, the selected disposal site will be identified on the closure form (C-144) prepared for each discrete closure action.

The table below provides a list of waste materials and the facility proposed for disposal or recycling:

Table 1

Steel Tank	SJ County Landfill or Steel Recycling
Fiberglass Tank	SJ County or Bondad Landfill * or Re-use
Liner (cleaned – absent soil / sludge)	SJ County or Bondad Landfill
Sludge	Envirotech, IEI, TNT, or Bondad Landfill
Liquids (Water / Hydrocarbons)	Basin Disposal, Key Energy, TNT
Contaminated Soil	Envirotech, IEI, TNT, or Bondad Landfill
Fencing / Miscellaneous	Re-use or scrap

*the tank must be empty, cut up or shredded and EPA clean
Permit Numbers and additional approved facilities are listed on the attached spreadsheet.

The use of any disposal or recycling facility will be identified on the C-144 form submitted to the NMOCD as part of the closure report. Any and all ancillary equipment related to the tank will also be removed, including any synthetic liner material(s) and fencing. Williams will ensure that liners and liner material will be free of soil and sludge material and disposed of at a NMOCD approved solid waste facility (e.g. San Juan County Landfill or Permitted CO Facility).

Steel or fiberglass tanks will be removed and shipped to a Williams storage yard where the condition of each tank will be evaluated for recycling, reuse, or disposal, subject to NMOCD approval. If the tank is not in a condition allowing reuse, it will either be shipped to a permitted recycling facility (for steel tanks) or it will be disposed of at the San Juan County Landfill (NMED Permit SWM-052426) or other NMOCD approved solid waste disposal site. Specific waste acceptance conditions of the landfill could necessitate further actions as appropriate. Such actions include, but may not be limited to, cutting, shredding, or sizing; emptying or cleaning of tanks or liner material, and otherwise those necessary to conform with permit conditions for Subtitle D disposal and conditions identified in 19.15.35.8 NMAC.

After the tank and equipment have been removed, soils beneath the tank will be tested and evaluated to determine if there is hydrocarbon impact or otherwise if a release event has occurred. Specific sampling protocol will follow the description provided in the Pit Rule which calls for a five point composite sample (see Sampling and Lab Analyses section). Additional grab samples will be collected if there is obvious staining, or when wet or discolored soil exists, or if there is other evidence of soil impact(s). Samples will be shipped to an off-site environmental testing laboratory for proper analyses. Results will be submitted to the NMOCD on form C-141. Further sampling may be required if NMOCD determines additional assessment work is necessary.

If there has been no release to underlying soils as demonstrated by soil analyses (i.e. lab results), or if impacts are below closure limits provided in the table below, then the depression (i.e.excavation) will be backfilled with "non-waste containing" fill material. Depending on site conditions and operating needs, the backfilled area will be reclaimed with prescribed topsoil and reseeded.

If NMOCD or Williams determines a release event has occurred, Williams will comply with 19.15.29 and / or 19.15.30 as appropriate. If analyses of soils excavated in conjunction with the BGT removal should reveal contaminant concentrations at or below specified closure limits (see Table 2 below), then the soil may be returned to the excavation and covered with prescribed soil cover. Sampling of the excavated material is detailed in the Sampling and Laboratory Analyses section later in this plan.

Due to the fact that most of Williams BGTs are located on active well sites, reclamation efforts may be deferred in order to avoid impact to ongoing lease operations. In this event, the area of the retired BGT will be incorporated into the overall well site reclamation effort with Williams documenting surface owner and lease operator approval of the proposed alternative.

The BGT site will nevertheless be prepared to prevent erosion, and protect fresh water, human health, and the environment. Williams will submit this documentation to the NMOCD for approval.

Restoration efforts shall incorporate proper contouring as described in the Pit Rule and shall be constructed in a manner to prevent ponding and erosion, using drainage controls such as water bars and/or silt traps as appropriate. Soil cover (suitable for vegetative growth) will be equivalent to the background thickness of topsoil or minimum one foot depth (or background thickness whichever is greater). The area will be contoured in a manner blending soil into/with the surrounding grade. Reclamation shall target the location of the BGT along with associated access roads (not used for production operations) and be implemented to ensure a safe and stable condition that blends with the surrounding undisturbed area.

Re-vegetation efforts will conform with NMOCD approved methods and recommendations including seed type and application rates and shall effect cover equaling 70% of native perennial vegetation. Re-vegetation shall establish at least three native plant species, including at least one grass, but not including any noxious weeds, through two successive growing seasons. Seeding will be accomplished by drilling on the contour whenever practicable or by other NMOCD approved methods.

Seeding efforts will be initiated during the first growing season after closure work is approved and be repeated until re-vegetation is successful. Notification will be made to NMOCD anytime seeding efforts begin and when successful re-vegetation is sustained. Adverse growing conditions (e.g. drought, etc.) may cause delay until conditions are more favorable or necessitate enhanced cultivation techniques (e.g. mulching, irrigating, etc.) as approved by NMOCD.

Sampling and Laboratory Analyses

A minimum five point composite sample shall be collected from the soils beneath the below grade tank and one or more grab samples from each area that is wet, discolored or showing other evidence of a release. Sampled soil will be placed in clean glass jars and cooled and maintained at 39°F. Samples will be packaged and shipped under USEPA Chain-of-Custody protocol to an approved and certified environmental laboratory.

Soil samples collected from the earthen containment (i.e. BGT excavation) will be analyzed by an approved environmental laboratory by the listed test methods or as may be directed by the NMOCD. The following table lists the contaminants of concern, testing methods, and the closure limits defining action levels:

Table 2

Contaminant	Test Methods	Closure Limits (mg/Kg)
Benzene	EPA SW-846 Method 8021B or 8260B	0.2
BTEX	EPA SW-846 Method 8021B or 8260B	50
TPH	Method 418.1++	100
Chlorides	EPA SW-846 Method 300.1	250*

** Or background concentration – whichever is greater.*

In the event soil is found to have contaminants in excess of the action levels above, requirements of 19.15.29 NMAC and 19.15.30 NMAC shall dictate further actions. Such action would likely include development of a Remedial Action Plan or Abatement Plan as specified under those Rules.
++ Not currently used USEPA Method (Replaced by Method 1664). Method 418.1 is required by NMOCD.

Sampling of any excavated or stockpiled material shall conform with standard environmental sampling protocol. Samples from excavated materials (excavated to facilitate the BGT removal) will be composite samples comprised of at least five discrete samples from the inside and on the surface of the soil pile. A minimum of one composite will be collected from each 25 cubic yards of soil (i.e. one fraction from each cubic yard). Every effort will be made to collect composite fractions from the inside and outside of the soil pile such that a "representative" sample is analyzed.

Stockpile sampling will be facilitated by utilizing a clean soil probe inserted into the soil pile at least three feet or by turning the soil pile with mechanized equipment to expose new soil. The goal is to collect a sample representative of the "whole". These samples will be handled and packaged as described above and be analyzed by the methods listed in Table 2. Soil with contaminant concentrations at or below the Closure Limits may be returned to the BGT excavation prior to initiating reclamation work.

Records and Documentation

All closure activities will be properly documented and include preparation of Form C-144 which shall be submitted to the NMOCD within 60 days of completing closure tasks. Information to be included in the closure report filing shall include, but not necessarily be limited to, the following:

- Proof of closure notice to division and surface owner(s)
- Confirmation sampling and analytical reports (results)
- Disposal facility name and permit information
- Description of capping and reclamation actions (i.e. revegetation rates)
- Photo documentation of site reclamation
- Other information required to complete applicable sections of C-144

As stated above, should conditions at any location necessitate a change to the approach described herein, separate site specific closure details will be provided as an addendum to this plan.

Permit No.	Company Name	Effective	County	Facility Name	Legals
19	GANDY MARLEY INC	10/06/1994	Chaves	GANDY MARLEY LANDFARM	-4-11 S-31 E
28	OLD LOCO OIL CO	07/02/1985	Eddy	OLD LOCO TREATING PLANT	-19-17 S-31 E
43	Loco Hills Landfarm LLC	11/08/2004	Eddy	Loco Hills Landfarm	m-32-16 S-30 E
4	LOCO HILLS WATER DISPOSAL	10/30/1981	Eddy	LOCO HILLS WATER DISPOSAL	M-16-17 S-30 E
36	OK HOT OIL SERVICE INC	08/16/2000	Eddy	OK HOT OIL SERVICES INC	O-14-17 S-28 E
24	CHAPARRAL SWD	01/31/1995	Lea	CHAPARRAL TREATING PLANT	B-17-23 S-37 E
35	LEA LAND INC	01/05/2000	Lea	LEA LAND LANDFILL	-32-20 S-32 E
12	C&C LANDFARM INC	11/16/1992	Lea	C&C LANDFARM	B-3-20 S-37 E
13	ENVIRONMENTAL PLUS INC	02/15/1993	Lea	ENVIRONMENTAL PLUS LANDFARM	-14-22 S-37 E
15	GOO YEA LANDFARM INC	11/16/1992	Lea	GOO YEA LANDFARM	-14-11 S-38 E
23	J&L LANDFARM INC	05/10/1998	Lea	J&L LANDFARM	-9-20 S-38 E
25	GANDY CORP	06/27/1973	Lea	Gandy Corp. Treating Plant	-11-10 S-35 E
26	JENEX OPERATING CO	09/21/1983	Lea	JENEX TREATING PLANT	D-14-20 S-38 E
30	ARTESIA AERATION LLC	06/29/1999	Lea	ARTESIA AERATION LANDFARM	-7-17 S-32 E
32	SOUTH MONUMENT SURFACE WASTE FACILITY LLC	10/04/1999	Lea	SOUTH MONUMENT LANDFARM	A-25-36 S-20 E
33	DOOM LANDFARM	04/03/2000	Lea	DOOM LANDFARM	g-5-25 S-37 E
34	DD LANDFARM INC	04/12/2000	Lea	DD LANDFARM	-31-21 S-38 E
21	RHINO OILFIELD DISPOSAL INC	11/17/1997	Lea	RHINO OILFIELD LANDFARM	-34-20 S-38 E
44	COMMERCIAL EXCHANGE, INC.	11/01/2004	Lea	Blackwater Oil Reclamation Facility	d-1-25 S-37 E
39	PITCHFORK LANDFARM LLC	10/30/2002	Lea	PITCHFORK LANDFARM	A-5-24 S-34 E
6	CONTROLLED RECOVERY INC	04/27/1990	Lea	CONTROLLED RECOVERY	-27-20 S-32 E
42	COMMERCIAL EXCHANGE, INC.	07/22/2004	Lea	Blackwater Landfarm	f-1-25 S-37 E
38	SAUNDERS LANDFARM LLC	10/28/2002	Lea	SAUNDERS LANDFARM	M-7-14 S-34 E
41	LAZY ACE LANDFARM LLC	03/09/2004	Lea	LAZY ACE LANDFARM	M-22-20 S-34 E
3	SUNDANCE SERVICES, INC.	08/30/1977	Lea	SUNDANCE PARABO	m-29-21 S-38 E
37	COMMERCIAL EXCHANGE, INC.	03/31/2003	Lea	COMMERCIAL SURFACE WM FACILITY	A-1-20 S-36 E
8	T-N-T ENVIRONMENTAL INC	01/19/1987	Rio Arriba	TNT EVAP POND/LANDFARM	-8-25 N-3 W
11	ENVIROTECH INC	07/07/1992	San Juan	ENVIROTECH LANDFARM #2	-6-26 N-10 W
9	KEY FOUR CORNERS INC	04/02/1991	San Juan	KEY EVAP POND and Landfarm	E-2-29 N-12 W
10	JFJ LANDFARM LLC	07/22/2002	San Juan	JFJ Land Farm Crouch Mesa (Formerly Tierra)	J-2-29 N-12 W
5	BASIN DISPOSAL INC	10/16/1987	San Juan	BASIN DISPOSAL EVAP. POND	F-3-29 N-11 W