

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.

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

12128
39-23721

Type of action: Below grade tank registration
 Permit of a pit or proposed alternative method
 Closure of a pit, below-grade tank, or proposed alternative method
JK
9/11/04 Modification to an existing permit/or registration
X 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: Enervest Operating LLC OGRID #: 143199
Address: 2700 Farmington Ave, Building K, Suite #1 Farmington, NM 87042
Facility or well name: Jicarilla Contract 146-43
API Number: 30-039-23721 OCD Permit Number: _____
U/L or Qtr/Qtr O Section 4 Township 25N Range 5W County: Rio Arriba
Center of Proposed Design: Latitude 36.424022 Longitude 107.361242 NAD: 1927 X 1983
Surface Owner: Federal State Private Tribal Trust or Indian Allotment

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

OIL CONS. DIV DIST. 3

3.
 Below-grade tank: Subsection I of 19.15.17.11 NMAC
Volume: 95 bbl Type of fluid: Produced Water
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 Other Closure plan BGT to be closed per new plan
Liner type: Thickness _____ mil HDPE PVC Other _____

AUG 11 2014

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

5.
Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)
 Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)
 Four foot height, four strands of barbed wire evenly spaced between one and four feet
 Alternate. Please specify Four foot hog wire

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

X 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

X Signed in compliance with 19.15.16.8 NMAC

8. **Variations 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 X 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 X 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 X 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 X 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

<p>Within 100 feet of a wetland.</p> <ul style="list-style-type: none"> - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p><u>Temporary Pit Non-low chloride drilling fluid</u></p>	
<p>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).</p> <ul style="list-style-type: none"> - Topographic map; Visual inspection (certification) of the proposed site 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</p> <ul style="list-style-type: none"> - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>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;</p> <ul style="list-style-type: none"> - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 300 feet of a wetland.</p> <ul style="list-style-type: none"> - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p><u>Permanent Pit or Multi-Well Fluid Management Pit</u></p>	
<p>Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).</p> <ul style="list-style-type: none"> - Topographic map; Visual inspection (certification) of the proposed site 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</p> <ul style="list-style-type: none"> - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>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.</p> <ul style="list-style-type: none"> - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 500 feet of a wetland.</p> <ul style="list-style-type: none"> - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	<input type="checkbox"/> Yes <input type="checkbox"/> 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 H₂S, Prevention Plan
- Emergency Response Plan
- Oil Field Waste Stream Characterization
- Monitoring and Inspection Plan
- Erosion Control Plan
- Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	<input type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

17. **Operator Application Certification:**

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

Name (Print): Wilbert L Gardner Title: HSE Supervisor

Signature: *Wilbert L Gardner* Date: 7-1-2014

e-mail address: wgardner@enervest.net Telephone: 505-325-0318

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

OCD Representative Signature: *Jonathan D. Kelly* Approval Date: 9/11/2014

Title: Compliance Officer 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.

X Closure Completion Date: May 22, 2014

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

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: _____

EnerVest Operating, LLC (EV)

**BELOW-GRADE TANK
CLOSURE PLAN**

Rule 19.15.17.13

Well Name – Jicarilla Contract 146-43 Below Grade Tank

API # 30-039-23721

Location UL- O, Sec 4 T-25N, R-5W

Lat: N 36.424022 Lat W -107. 361242

Before June 15, 2013, EV shall close, retrofit, or replace an existing below-grade tank that has not demonstrated integrity.

EV shall close a below-grade tank within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment.

- A. EV shall close an existing below-grade tank that does not meet the requirements of Subsection I, paragraphs (1) through (4), of 19.15.17.11 NMAC if not retrofitted to comply with said requirements prior to any sale or change of operator to 19.15.9.9 NMAC.

Any below-grade tank installed prior to June 16, 2008 that is single walled and where any portion of the tank sidewall is below the ground surface and not visible shall equip or retrofit the below-grade tank to comply with paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, or close it, within 5 years after June 16, 2008.

Within 60 days of cessation of the permitted below-grade tanks operation or as required by Subsection B of 19.15.17.17 NMAC, EV shall close the below-grade tank in accordance with a closure plan that the appropriate division district office approves.

- B. Prior to implementing any closure operations EV shall research county tax records to determine the name and address of the surface owner of the properties involved. EV shall notify this surface owner via Certified U.S. Mail, return receipt requested, of their intent to close said below-grade tank.

Upon determination, EV will notify the appropriate district office verbally and in writing at least 72 hours but not more than one week prior to beginning work. Such notice shall contain at a minimum the following:

Operators Name
Unit letter, Section, Township, & Range of well
Well name and well number
API Number of well

- C. Within 60 days of completion of closure operations, EV will file Form C-144, with attachments, outlining the detailed operations of the closing operations. Such attachments shall include, but not limited to, proof of surface owner and division notifications, confirmation of sampling analysis, disposal facility names and permit numbers, soil backfilling and cover installation, re-vegetation application rates and seeding techniques, and photo documentations.
- D. All free standing liquids and sludge will be removed at the start of the below-grade tank closure process from the below-grade tank and disposed of in one of the below division-approved facility as indicated below:
- | | | |
|-----------------------|---------------------|------------------|
| TNT Land Farm | Permit # NM-01-0008 | Liquids & Sludge |
| Environtech Land Farm | Permit # NM-01-0011 | Solids |
| AguaMoss | Permit # 247130 | Liquids |

EV will obtain prior approval from the division to dispose, recycle, reuse, or reclaim the below-grade tanks and provide documentation of the final disposition of the below-grade tank in the closure report.

Existing liners that are removed as a result of closure will be wiped cleaned and disposed of at a solid waste facility listed below in compliance with Subparagraph (M) of Paragraph (I) of Subsection C 19.15.35.8 NMAC..

San Juan Regional Landfill Permit # SWM 052426 or
 “ Special Waster Permit # SWM052433 “sp”

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

Upon removal of the below-grade tank, EV will take, at a minimum, a five point composite sample from where the tank was sitting. EV shall collect individual grab samples will be taken from any area that is wet, discolored or showing other evidence of a release. All samples will be analyzed for the following:

Constituent	Method	Groundwater 51-100FT	Test Results
Chloride	EPA 300.0	10,000 mg/kg	Pending
TPH	EPA SW-846 Method 418.1	2,500 mg/kg	Pending
BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg	Pending
Benzene	EPA -SW-846 Method 8021B or 8015M	10 mg/kg	Pending
GRO/DRO	EPA SW-846 Method 8015B	1000 mg/kg	Pending

EV will insure that the results of all sampling shall be reported to the division on approved form C-141. EV understands that the division may require additional delineation upon review of the results.

If sampling demonstrates that concentrations specified above have NOT been exceeded, or that a release has NOT occurred, EV will backfill the excavation with compacted, non-waste containing, earthen material, construct a division prescribed soil cover, and recontour and re-vegetate the site. The division prescribed soil cover, recontouring, and re-vegetation shall comply with 19.15.17.13.

If EV or the division determines that a release has occurred, EV shall fully comply with 19.15.29 NMAC and 19.15.30 NMAC as appropriate.

- E. Once EV has closed a below-grade tank, we shall reclaim the site to a safe and stable condition that blends with the surrounding undisturbed area. When possible, EV will restore the impacted surface area to the condition that existed prior to oil and gas operations by the placement of soil cover.

If the closed area is within the confines of the pad location EV will blend the site to match the pad location as much as possible. Such activities shall prevent erosion, protect fresh water, human health and the environment. EV will obtain written agreement from the surface owner for any alternate re-vegetation proposals and submit to the division for final approval.

The soil cover design will be consistent with the requirements of 19.15.17.13(H)(1) and (3). The soil cover will consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. The soil cover will be constructed to the site's existing grade and prevent ponding of water and erosion of the cover material.

EV will seed the disturbed areas the first growing season after closing the below grade tank. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will be used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.

EV shall notify the division when it has seeded or planted and when it successfully achieves re-vegetation.

Enervest Operating LLC
Jicarilla Apache Nation, San Juan Basin

Jicarilla Contract 146-43
Below Grade Tank
Well API: 30-039-23721
UL-O, Sec 4, T-25N, R-5W
Lat: 36.424022, Long: -107.361242

Siting Criteria Compliance

- Ground water is not less than 50 feet below the bottom the subject location
- The subject location is not within 300 feet of a continuously flowing watercourse.
- The subject location is not within 200 feet of any significant watercourse, lakebed, sinkhole or playa lake
- The subject location is not within 300 feet of a known permanent residence, school, hospital, institution or church
- The subject location is not within 500 feet of any known private domestic fresh water well or 1000 feet of any other fresh water well spring
- The subject location is not within any known incorporated municipal boundary
- The subject location is not within 500 feet of a known wetland
- The subject location is not within a known unstable area
- The subject location is not within a known 100 year flood plain
- The subject location is not over any known subsurface or surface mine

Regional Geologic Setting

Enervest Operating's Jicarilla Contract 146-43 Below Grade Tank is located in the eastern-central portion of the San Juan Basin, within the Jicarilla Apache Indian Nation, the San Jose Formation outcrops and forms the surface landscape.

The San Jose Formation outcrops in the eastern-northeastern portion and covers ~1/6th of the San Juan Structural Basin. The San Jose Formation overlies the Nacimiento Formation in the area generally south of the CO-NM state line, and overlies the Animas Formation in the area generally north of the CO-NM state line (Fassett, 1974, p. 229). The basal contact of the San Jose varies with location in the basin. This contact is a disconformity along the basin margins, and it is an angular unconformity along the Nacimiento Uplift; the contact is conformable in the central basin (Baltz, 1967, p. 54; Fassett, 1974 p. 229).

The Eocene-aged San Jose Formation was deposited in various fluvial-type environments (Baltz, 1967, p 44-45) and consists of interbedded sequence of sandstone, siltstone and shale. The sandstone are buff to yellow and rusty-colored, crossbedded, very fine to coarse-grained arkose, which are locally conglomeratic and contain abundant silicified wood (Baltz, 1967, p. 46; Fassett, 1974, p 229; Anerholm, 1979, p. 23).

Thickness of the San Jose Formation generally increases from west to east. Fassett (1974, p 229) reported a maximum thickness of 2,400 feet in the east-central part of the basin, and Stone and others (1983, p. 25) reported a range of from about 200 feet in the west and south to almost 2,700 feet in the center of the structural basin.

Ground Water Data, Water Well Locations

Hydraulic Properties: Levings and Others (1990) reported well yields from 79 water wells completed in the San Jose, Nacimiento and Animas Formations ranged from 1 to 61 gallons per minute and median is 6 gallons per minute. Transmissivity data for the San Jose, Nacimiento and Animas Formations are minimal. Values of 40 and 120 feet squared per day were determined from two aquifer tests (Stone and Others, 1983, table 5). The San Jose, Nacimiento and Animas Formations are a source of water for public supply, commercial, private-domestic and livestock use in areas where drilling depths and pumping levels are economically feasible and where water quality is suitable.

The San Jose, Nacimiento and Animas Formations are all hydrologically similar because sands in all units produce approximately the same quantities of water. The great percentage of fine material in all may restrict the downward vertical leakage to the Ojo Alamo Sandstone or Kirtland Shale. The poorly cemented material is highly erodible, forms a badland terrain and supports only spotty vegetation. These conditions are more conducive to runoff than retention of precipitation.

iWaters Database: The search showed no reported wells with groundwater information in the **T25N-R5W**. Attached are the results for the two query engines: 1) Avg Depth to Water Report, 2) Water Column Report

- Ground water is not less than 50 feet below the bottom the subject location
- No known private water wells are within 500 feet of the subject location
- No known public water wells are within 1000 feet of the subject location
- No water wells around the subject area are listed in the iWaters Database

Wetland Maps and Data

The US Fish and Wildlife for the **Jicarilla Contract 146-43** is unavailable due to its location being within the Jicarilla Apache Indian Nation. The US Fish and Wildlife does not have wetland information for the Jicarilla Apache Indian Nation. This well is not located near a wash or watercourse and is not in a wetland area as visible on the topographic map.

Flood Zone Maps and Data

The FEMA Map for the **Jicarilla Contract 146-43** is unavailable due to its location being within the Jicarilla Apache Indian Nation. FEMA does not provide floodplain information for the Jicarilla Apache Indian Nation. This well is not located near a wash or watercourse and is not in a 100 year floodplain as visible on the topographic map.

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Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H., and Padgett, E.T., 1983, Hydrogeology and water resource of San Juan Basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Hydrologic Report 6

Wells, S.G., Lambert, W., and Callender, J., 1981, Environmental Geology and Hydrology in New Mexico: New Mexico Geological Society Special Publication #10, 152p.

New Mexico Office of the State Engineer-iWATERS Database
http://www.ose.state.nm.us/water_db_index.html

New Mexico EMNRD Mining and Mineral Divison
<http://www.emnrd.state.nm.us/MMD/coalminewebmap/coalminewebmap.html>
<http://www.enrd.state.nm.us/MMD/MRRS/MinesMillsQuarriesWebMap.htm>

State Bureau of Mines and Minerals Resources
<http://geoinfo.nmt.edu/index.html>

US Fish and Wildlife
<http://www.fws.gov.html>

New Mexico Land Office
<http://store.usgs.gov/mod/index.html>

<http://terraserver-usa.com>

US Geological Survey (USGS)

<http://store.usgs.gov/mod/index.html>

<http://terraserver-usa.com/>

Federal Emergency Management Agency (FEMA)

<http://www.fema.gov/>

<http://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1>

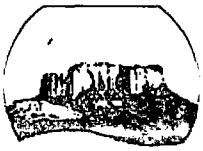
Google Earth

<http://landstatus.nmstatelands.org/>

<http://www.earthpoint.us/townships.html>

New Mexico Geological Society

<http://nmgs.nmt.edu/>

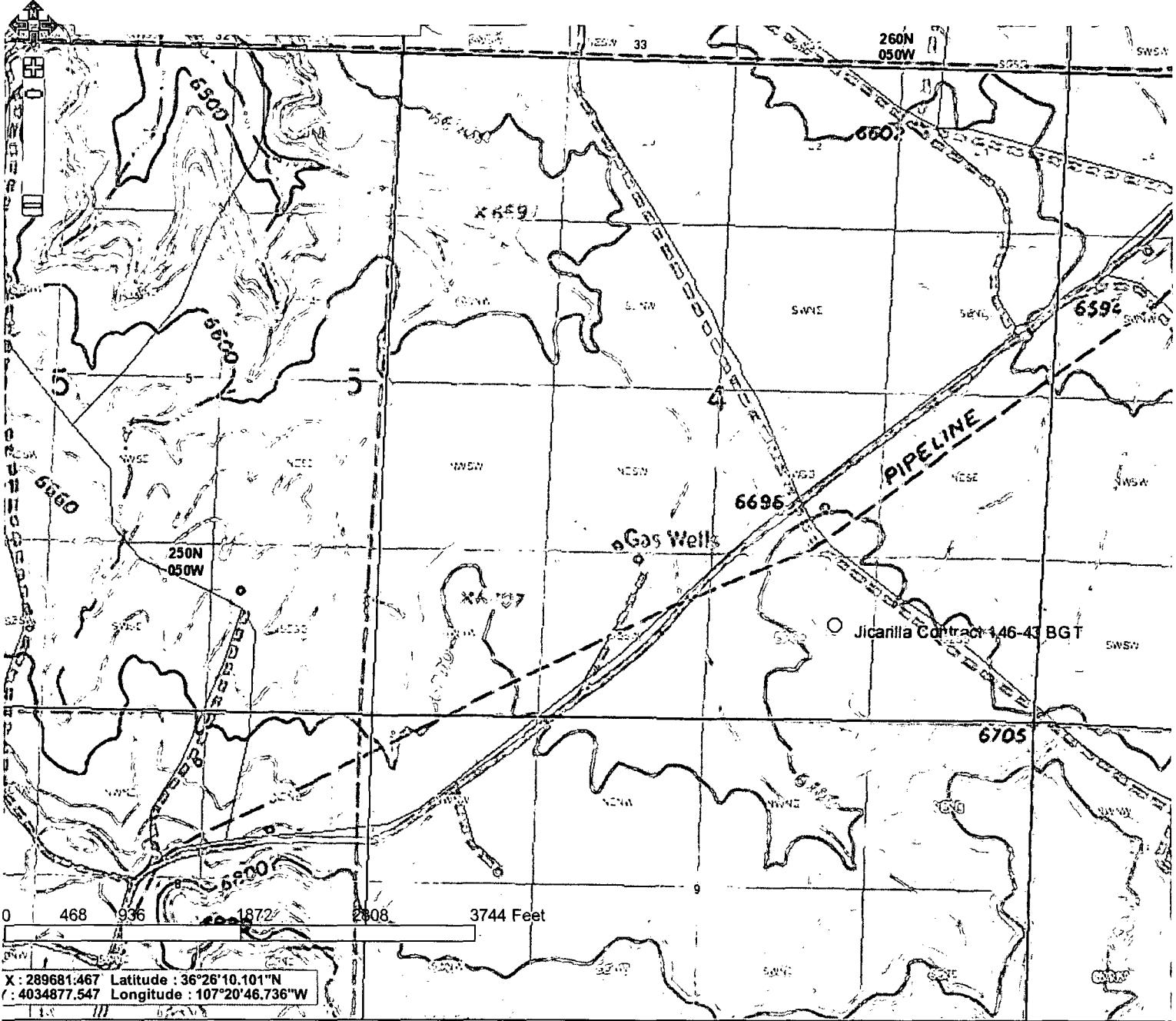


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 505-827-571



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

No records found.

Basin/County Search:

County: Rio Arriba

PLSS Search:

Q16: SW

Q4: SE

Section(s): 4

Township: 25N

Range: 05W

Jicarilla Contract 146-43 BGT

Legend

-  146
-  Jicarilla Contract 146-43 BGT

146 #2

146 #11E

146 #43

Jicarilla Contract 146-43 BGT

Google earth

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900 ft