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

5781

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 theoperator 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 Energen Resources OGRID # 162928

Address 2010 Afton Place, Farmington, New Mexico 87401

Facility or well name Jicarilla N 1

API Number 3003920331 OCD Permit Number

U/L or Qtr/Qtr K Section 4 Township 24N Range 05W County Rio Arriba

Center of Proposed Design Latitude 36 33914 Longitude -107 36852 NAD ☐1927 ☒ 1983

Surface Owner ☐ Federal ☐ State ☐ Private ☒ Tribal Trust or Indian Allotment

RECEIVED
MAR 2010
OIL CONS. DIV. DIST. 3

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 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

X **Below-grade tank:** Subsection I of 19 15 17 11 NMAC

Volume _____bbl Type of fluid. Produced Water

Tank Construction material _____

☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off

☐ Visible sidewalls and liner X Visible sidewalls only ☐ Other _____

Liner type Thickness _____mil ☐ HDPE ☐ PVC ☐ Other _____

5

☐ **Alternative Method:**

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

6

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_____

7

Netting: Subsection E of 19 15 17 11 NMAC *(Applies to permanent pits and permanent open top tanks)*

☐ Screen ☐ Netting ☐ Other_____

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

8

Signs: Subsection C of 19 15.17 11 NMAC

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

☐ Signed in compliance with 19 15 3 103 NMAC

9

Administrative Approvals and Exceptions:

Justifications and/or demonstrations of equivalency are required Please refer to 19 15 17 NMAC for guidance

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

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

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

10

Siting Criteria (regarding permitting): 19 15 17 10 NMAC

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 X Below-grade Tank ☐ Closed-loop System ☐ Alternative

Proposed Closure Method X 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) _____ Title _____

Signature _____ Date 1/4/10

e-mail address _____ Telephone _____

20

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

OCD Representative Signature: Jonathan D. Kelly **Approval Date:** 10/03/2011

Title: Compliance Officer **OCD Permit Number:** _____

21

Closure Report (required within 60 days of closure completion): Subsection K of 19 15 17.13 NMAC

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

☒ **Closure Completion Date:** 2/2/10

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 ---------- *TNT Landfarm, NM-01-0008*

☐ Soil Backfilling and Cover Installation

☐ Re-vegetation Application Rates and Seeding Technique

☐ Site Reclamation (Photo Documentation) ---------- *Too muddy to get to location for a photo Will submit at a later date*

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) Ed Hasely Title Sr Environmental Engineer

Signature Ed Hasely Date 3/19/10

e-mail address ed hasely@energen com Telephone (505) 324-4131

BELOW-GRADE TANK CLOSURE REPORT

ENERGEN RESOURCES
Jicarilla N #1

CLOSURE STEPS: (Closure Report information is in **bold**)

(1) Notify the surface owner by certified mail, return receipt requested, of the plans to close the below-grade tank.
Attached

(2) Notify the Aztec OCD office (Brandon Powell – 334-6178, Ext 15) verbally or by other means at least 72 hours, but not more than one week, prior to the planned closure operation.
Attached

(3) Remove liquids from the below-grade tank. Dispose of the liquids and sludge in a division-approved facility.
No disposal of liquids was required.

(4) Remove the below-grade tank for re-use in an above-ground setup or for disposal in a division-approved manner.
Tank removed.

(5) Unless the equipment is required for some other purpose, remove any on-site equipment associated with the below-grade tank
All remaining equipment is required for operations.

(6) Test the soils beneath the below-grade tank to determine whether a release has occurred.

- Collect, at a minimum, a five point, composite sample;
- Collect individual grab samples from any area that is wet, discolored or showing other evidence of a release,
  Visual observation and odor indicated that the soils were impacted w/ hydrocarbons. No soil samples were collected until after excavation of impacted soils.

Analyze for BTEX, TPH and chlorides to demonstrate:

- Benzene concentration does not exceed 0 2 mg/kg, as determined by EPA SW-846 methods 8021B or 8260B
- Total BTEX concentration does not exceed 50 mg/kg, as determined by EPA SW-846 methods 8021B or 8260B
- TPH concentration does not exceed 100 mg/kg, as determined by EPA method 418.1
- Chloride concentration does not exceed 250 mg/kg, as determined by EPA method 300.1 or the background concentration, whichever is greater.

Constituent	Limit (mg/kg)	Actual Results (mg/kg)
Benzene	**0.2**	**NA**
Total BTEX	**50.0**	**NA**
TPH (418.1)	**100**	**NA**
Chlorides	**250**	**NA**

(7) IF the soil analyses show that the soils meet the concentrations specified in (6) above, backfill the excavation with compacted, non-waste containing, earthen material in a manner that will prevent ponding or erosion. If the area will not be needed for operations, reclaim the area as described in the "RECLAMATION" section.

Not applicable.

(8) IF the soil analyses show that the soils exceed one or more of the concentrations specified in (6) above, notify the Aztec OCD office (Brandon Powell – 334-6178, Ext 15) and proceed per 19.15.3.116 NMAC.

Proceeded per 19.15.29 and 19.15.30.

NOTE: If groundwater is encountered at any time during the closure process, the OCD office will be notified and a specific closure plan will be submitted to the Aztec and Santa Fe OCD offices for approval.

Not applicable.

FINAL CLOSURE REPORT:

Within 60 days of closure completion, submit a closure report on form C-144, with necessary attachments to document all closure activities including sampling results.

This submittal is the closure report.

RECLAMATION:

If the area is not needed for operations, reclaim the area to a safe and stable condition that blends with the surrounding undisturbed area. Restore the impacted surface area to the condition that existed prior to oil and gas operations by placement of the soil cover, recontour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography and re-vegetate.

(A) Construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material. The soil cover shall consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.

(B) Seed or plant the disturbed areas the first growing season after closing the below-grade tank. Drill on the contour whenever practical or by other division-approved methods The goal is to obtain vegetative cover that equals 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons During the two successive growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.

(C) Repeat seeding or planting until it successfully achieves the required vegetative cover

(D) If conditions are not favorable for the establishment of vegetation, such as periods of drought, contact the Aztec OCD office to discuss possibly delaying seeding or planting until soil moisture conditions become favorable or using additional techniques such as mulching, fertilizing, irrigating, fencing or other practices

(E) Notify the Aztec OCD office (Brandon Powell – 334-6178, Ext 15) when the area has been seeded or planted and when it successfully achieves re-vegetation.

Area is needed for operations. Upon abandonment, seeding will be deferred to the BLM / Tribal requirements per the BLM / OCD MOU.

Ed Hasely

From: Ed Hasely
Sent: Monday, January 04, 2010 2 33 PM
To: 'Powell, Brandon, EMNRD'
Cc: Dixon Sandoval, Billy Stalcup
Subject: BGT Closure Notification - Jicarilla N #1

Brandon - This is to notify you that Energen will be closing the below grade tank on the following location in the near future Plans are to set the tank above grade

Jicarilla N #1 - Unit Letter K, Section 4, Township 24N, Range 5W

Ed Hasely
Energen Resources Corporation
Sr Environmental Engineer
ed hasely@energen com
Office (505) 324-4131
Cell (505) 330-3584

ENERGEN
RESOURCES

PMT#5781

May 27, 2010

New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410
Attn: Brandon Powell

Re: **Jicarilla N #1**
Below Grade Tank Closure – Photo Submittal

Dear Mr. Powell:

Enclosed is the photo documentation to be included with the final C-144 Form for the Below-Grade Tank closure on the subject well location. The C-144 and the rest of the documentation was submitted on an earlier date.

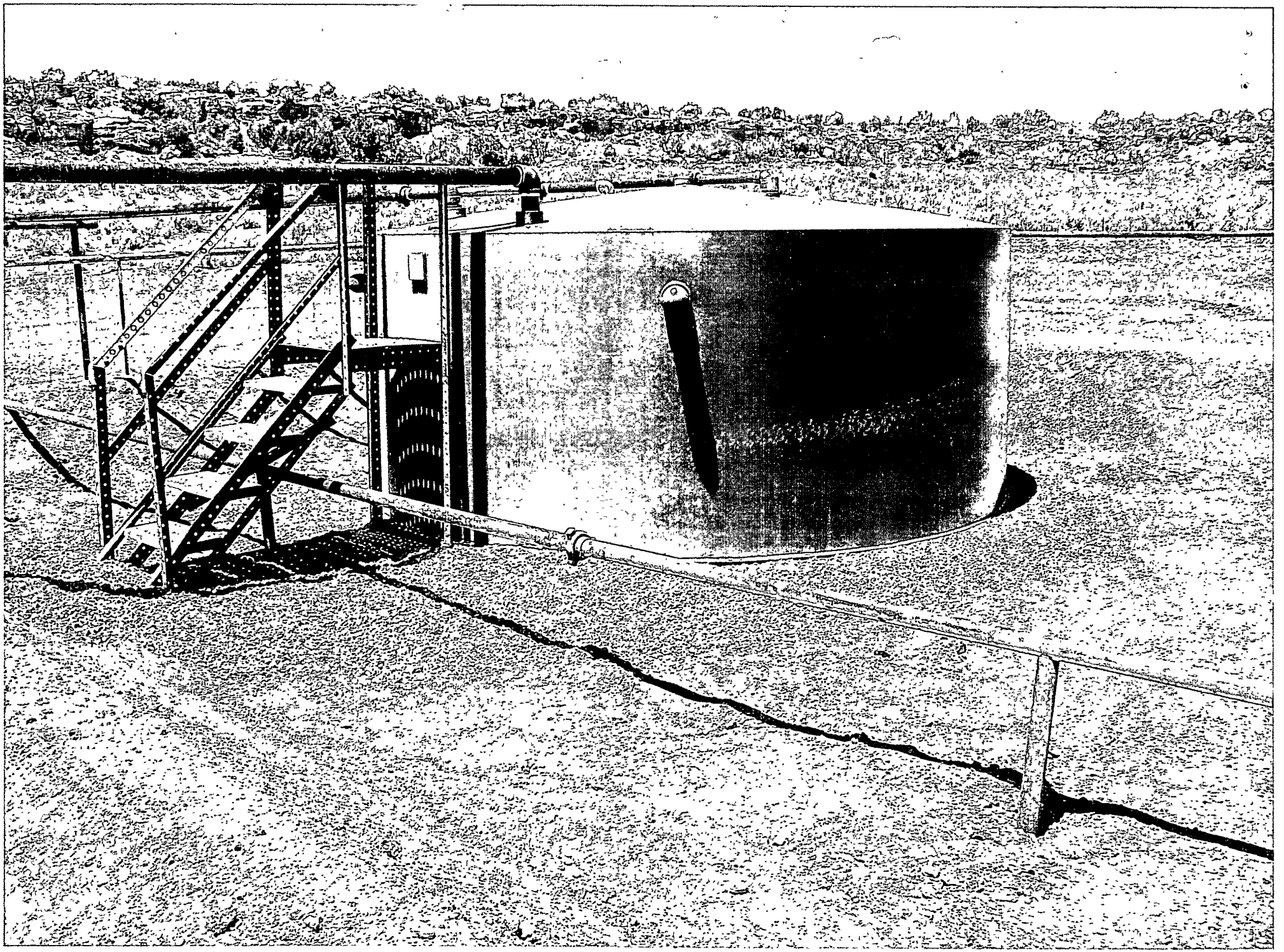
If there are any questions or concerns with this submittal, please contact me at 505-324-4131.

Sincerely,

Ed Hasely
Sr. Environmental Engineer
Energen Resources

Attachments: Final C-144
Closure Report
Proof of Closure Notice

Cc: HSE File
Facility File
Correspondence



ENERGEN
RESOURCES

Certi

7007 1490 0000 5397 4493

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
OFFICIAL USE

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Sent To
Street, Apt No.; or PO Box No.
City, State, ZIP+4

PS Form 3800, August 2006 See Reverse for Instructions

January 4, 2010

Jicarilla Apache Nation
Environmental Protection Office
P.O. Box 507
Dulce, NM 87528
Attn: Mr. Dixon Sandoval, Environmental Specialist

Re: Below Grade Tank Closure
Jicarilla N #1

Dear Sirs:

Energen Resources plans to close a below grade tank located on the subject location. You are on record as the surface owner where this tank is located. New Mexico Oil Conservation Division (NMOCD) rules require notification to the surface owner of our plans to close the below grade tank. NMOCD rules and guidelines will be followed. The well is located in Unit Letter K, Section 4, Township 24N, Range 5W in Rio Arriba County, New Mexico.

If there are any questions or concerns, please contact me at 505-324-4131.

Sincerely,

Ed Hasely
Sr. Environmental Engineer
Energen Resources

RECEIVED
SEP 2011
OIL CONS. DIV. DIST. 3

Cc: Well File
Correspondence

Scanned and sent to OCD on 8/16/11

ENERGEN
RESOURCES

March 19, 2010

New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410
Attn: Brandon Powell

Re: **Jicarilla N #1**
C-141 Submittal
Below Grade Tank Closure – Release Submittal

Dear Mr. Powell:

Enclosed is the final C-141 Form for the possible release identified during a Below-Grade Tank closure on the subject well location.

If there are any questions or concerns with this submittal, please contact me at 505-324-4131.

Sincerely,

Ed Hasely
Sr. Environmental Engineer
Energen Resources

Attachments: Final C-141
Envirotech's Field Report
Lab Reports

Cc: Dixon Sandoval – Jicarilla EPO
Bryce Hammond – Jicarilla Oil and Gas
HSE File
Facility File
Correspondence

Jicarilla Apache Nation
Environmental Protection Office
P.O. Box 507
Dulce, NM 87528
Attn: Mr. Dixon Sandoval, Environmental Specialist

Jicarilla Oil and Gas
Jicarilla Apache Nation
P.O. Box 146
Dulce, NM 87528
Attn: Mr. Bryce Hammond

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

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Energen Resources, Inc.	**Contact:** Ed Hasely
Address: 2010 Afton Place, Farmington, NM 87401	**Telephone No:** 505-324-4131
Facility Name: Jicarilla N #1	**Facility Type:** Oil/Gas Well Site

Surface Owner: Jicarilla	**Mineral Owner:** Jicarilla	**Lease No.** Jicarilla N

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	4	24N	5W	1850	South	1850	West	Rio Arriba

Latitude 36.33914 **Longitude** -107.36852

NATURE OF RELEASE

Type of Release: Produced Fluids	**Volume of Release:** Unknown	**Volume Recovered:** 0 bbls
Source of Release: Production Pit Tank	**Date and Hour of Occurrence:** Unknown	**Date and Hour of Discovery:** 1/11/10
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	**If YES, To Whom?** NA	
By Whom? NA	**Date and Hour:** NA	
Was a Watercourse Reached? ☐ Yes ☒ No	**If YES, Volume Impacting the Watercourse.** NA	

If a Watercourse was Impacted, Describe Fully.* NA

Describe Cause of Problem and Remedial Action Taken.*

Soils underneath the tank during the below-grade tank closure were visually impacted According to the Pit Rule, this is an indication of a release.

Describe Area Affected and Cleanup Action Taken.* Approximately 800 cubic yards of soil were excavated. Samples were collected after excavation and results were acceptable (see attached). The impacted soils were taken to an approved disposal facility.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations

Signature: Ed Hasely	OIL CONSERVATION DIVISION	
Printed Name. Ed Hasely	Approved by District Supervisor	
Title Sr Environmental Engineer	Approval Date:	Expiration Date:
E-mail Address: ed.hasely@energen.com	Conditions of Approval:	Attached ☐
Date: 3/19/10 Phone: 505-324-4131 / 505-330-3584(cell)		

* Attach Additional Sheets If Necessary

Client: Energen	envirotech (505) 632-0615 (800) 362-1879 5796 U.S. Hwy 64, Farmington, NM 87401	Location No: C.O.C. No:

FIELD REPORT: SPILL CLOSURE VERIFICATION

PAGE NO: 1 OF 1

DATE STARTED: 1-26-2010
DATE FINISHED: 1-26-2010
ENVIRONMENTAL SPECIALIST: TCM

LOCATION: NAME: Jicarilla N WELL #: 1
QUAD/UNIT: P SEC: 4 TWP: 24N RNG: 5W PM: NM CNTY: RA ST: NM
QTR/FOOTAGE: 1050'FSL & 1050'FEL CONTRACTOR: N/A

EXCAVATION APPROX: 62 FT. X 50 FT. X 8-25 FT. DEEP CUBIC YARDAGE:
DISPOSAL FACILITY: Smidt's Landfarm REMEDIATION METHOD: Landfarm
LAND USE: Grazing LEASE: LAND OWNER: Jicarilla
CAUSE OF RELEASE: Historical MATERIAL RELEASED: Condensate

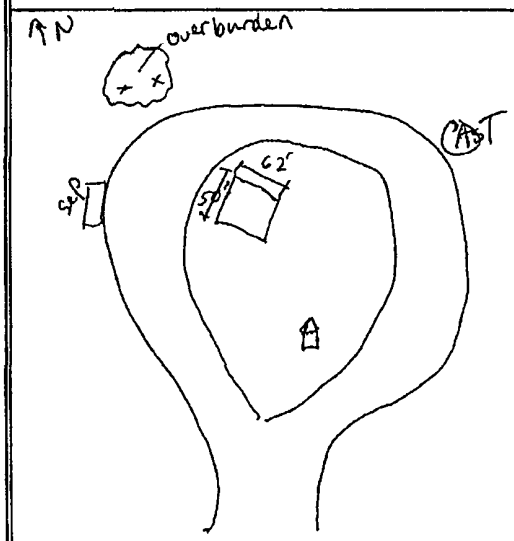
SPILL LOCATED APPROXIMATELY: 80 FT. 42° FROM Wellhead
DEPTH TO GROUNDWATER: ≥200' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: ≥ 900'
NMOCD RANKING SCORE: 10 NMOCD TPH CLOSURE STD: ~~PPM~~ → 100

SOIL AND EXCAVATION DESCRIPTION:
closure STD at 100 due to well on Jicarilla Lands.
Excavated Prior to Arrival by Energen

Field chloride Results BPE 8' = 41 mg/kg Lat: 36°20.2910' Long: -107°22.1913'

SAMPLE DESCRIPTION	TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. ppm
200 STD	9:52	—	—	—	—	—	216	216
South	10:14	1	—	5	20	4	09	36
West	10:08	2	—	5	20	4	08	32
North	10:11	3	—	5	20	4	15	60
Bottom	10:03	4	—	5	20	4	15	60
East	10:17	5	—	5	20	4	12	48
BPE 8'	10:05	6	1	5	20	4	07	28
Overburden	10:40	7	2		20	4	31	124

SPILL PERIMETER



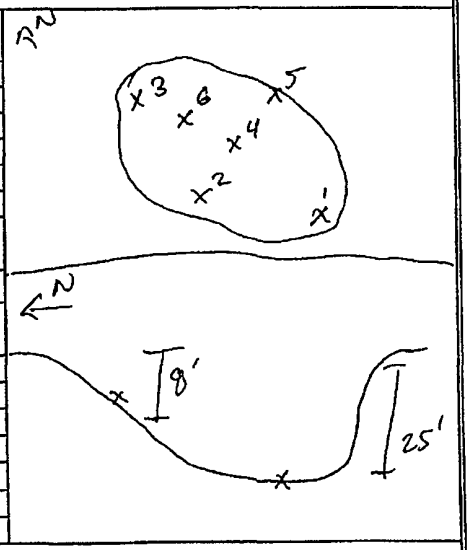
OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1	0.0
2	0.0
3	0.0
4	0.0
5	0.0
6	0.0
7	0.0

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

SPILL PROFILE



TRAVEL NOTES: CALLED OUT: ONSITE:

envirotech

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Energen Resources	Project #:	03022-0163
Sample No :	1	Date Reported:	1/29/2010
Sample ID:	South Wall	Date Sampled:	1/26/2010
Sample Matrix:	Soil	Date Analyzed.	1/26/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition.	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**36**	**5.0**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Jicarilla N #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

Toni McKnight
Analyst

Toni McKnight
Printed

Review

James McDaniel
Printed

5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 info@envirotech-inc.com envirotech-inc.com

envirotech

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Energen Resources	Project #	03022-0163
Sample No.:	2	Date Reported.	1/29/2010
Sample ID:	West Wall	Date Sampled.	1/26/2010
Sample Matrix:	Soil	Date Analyzed:	1/26/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**32**	**5.0**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Jicarilla N #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

Toni McKnight
Analyst

Toni McKnight
Printed

Review

James McDaniel
Printed

5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 info@envirotech-inc.com envirotech-inc.com

envirotech

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Energen Resources	Project #:	03022-0163
Sample No.:	3	Date Reported	1/29/2010
Sample ID.	North Wall	Date Sampled:	1/26/2010
Sample Matrix:	Soil	Date Analyzed:	1/26/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**60**	**5.0**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Jicarilla N #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

Toni McKnight
Analyst

Toni McKnight
Printed

Review

James McDaniel
Printed

5796 US Highway 64, Farmington, NM 87401 | Ph (505)632-0615 Fr (800)362-1879 Fx (505) 632-1865 info@envirotech-inc.com envirotech-inc.com

envirotech

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Energen Resources	Project #:	03022-0163
Sample No..	5	Date Reported:	1/29/2010
Sample ID:	East Wall	Date Sampled:	1/26/2010
Sample Matrix:	Soil	Date Analyzed.	1/26/2010
Preservative:	Cool	Analysis Needed.	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**48**	**5.0**

ND = Parameter not detected at the stated detection limit

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Jicarilla N #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

Analyst

Toni McKnight
Printed

Review

James McDaniel
Printed

5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 info@envirotech-inc.com envirotech-inc.com

envirotech

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Energen Resources	Project #:	03022-0163
Sample No.:	4	Date Reported	1/29/2010
Sample ID:	Bottom @ 25'	Date Sampled	1/26/2010
Sample Matrix:	Soil	Date Analyzed	1/26/2010
Preservative	Cool	Analysis Needed:	TPH-418 1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**60**	**5.0**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Jicarilla N #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

Toni McKnight
Analyst

Toni McKnight
Printed

Review

James McDaniel
Printed

5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 info@envirotech-inc.com envirotech-inc.com

envirotech

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client.	Energen Resources	Project #:	03022-0163
Sample No.:	6	Date Reported.	1/29/2010
Sample ID:	Bottom @ 8'	Date Sampled:	1/26/2010
Sample Matrix:	Soil	Date Analyzed:	1/26/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**28**	**5.0**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Jicarilla N #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

Analyst

Toni McKnight
Printed

Review

James McDaniel
Printed

5796 US Highway 64, Farmington, NM 87401 | Ph (505)632-0615 Fr (800)362-1879 Fx (505) 632-1865 info@envirotech-inc com envirotech-inc.com

envirotech
Analytical Laboratory

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Energen	Project #:	03022-0163
Sample ID	BGT Bottom	Date Reported.	01-28-10
Laboratory Number	53007	Date Sampled:	01-26-10
Chain of Custody:	8686	Date Received:	01-26-10
Sample Matrix:	Soil	Date Analyzed.	01-27-10
Preservative:	Cool	Date Extracted:	01-26-10
Condition:	Intact	Analysis Requested	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**0.9**
Toluene	**ND**	**1.0**
Ethylbenzene	**ND**	**1.0**
p,m-Xylene	**ND**	**1.2**
o-Xylene	**ND**	**0.9**
Total BTEX	**ND**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**91.0 %**
	1,4-difluorobenzene	**87.3 %**
	Bromochlorobenzene	**96.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **BGT Closure / Jicarilla N#1**

Analyst

Review

5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 lab@envirotech-inc.com envirotech-inc.com

envirotech
Analytical Laboratory

Chloride

Client:	Energen	Project #:	03022-0163
Sample ID.	BGT Bottom	Date Reported:	01-28-10
Lab ID#.	53007	Date Sampled:	01-26-10
Sample Matrix	Soil	Date Received.	01-26-10
Preservative:	Cool	Date Analyzed:	01-27-10
Condition:	Intact	Chain of Custody:	8686

Parameter	Concentration (mg/Kg)
Total Chloride	**25**

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983. Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **BGT Closure / Jicarilla N #1**

Analyst

Review

5796 US Highway 64, Farmington, NM 87401 | Ph (505)632-0615 Fr (800)362-1879 Fx (505) 632-1865 lab@envirotech-inc com envirotech-inc com

envirotech
Analytical Laboratory

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client	Energen	Project #:	03022-0163
Sample ID.	Overburden	Date Reported	01-28-10
Laboratory Number.	53008	Date Sampled:	01-26-10
Chain of Custody No	8686	Date Received	01-26-10
Sample Matrix:	Soil	Date Extracted	01-26-10
Preservative.	Cool	Date Analyzed:	01-27-10
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**3.6**	**0.2**
Diesel Range (C10 - C28)	**52.3**	**0.1**
Total Petroleum Hydrocarbons	**55.9**	**0.2**

ND - Parameter not detected at the stated detection limit

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996

Comments: **BGT Closure / Jicarilla N#1**

Analyst

Review

5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 lab@envirotech-inc com envirotech-inc com

envirotech

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Energen Resources	Project #:	03022-0163
Sample No.:	7	Date Reported:	1/29/2010
Sample ID:	Overburden Pile	Date Sampled:	1/26/2010
Sample Matrix:	Soil	Date Analyzed:	1/26/2010
Preservative:	Cool	Analysis Needed	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**124**	**5.0**

ND = Parameter not detected at the stated detection limit.

Method 8015
showed 55.9 - acceptable

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Jicarilla N #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

Analyst

Toni McKnight
Printed

Review

James McDaniel
Printed

5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 info@envirotech-inc.com envirotech-inc.com

Ed Hasely

From: Ed Hasely
Sent: Monday, January 11, 2010 8:03 AM
To: 'Powell, Brandon, EMNRD'
Cc: 'Dixon Sandoval'; Billy Stalcup
Subject: BGT Closure - Jicarilla N #1- Potential Past Release Notification

Brandon - During the BGT closure on the subject well, impacted soils were discovered under the BGT The impacted soils are being excavated I will follow-up w/ a C-141 and a C-144 upon completion of the project. Let me know if you have questions

Ed Hasely
Energen Resources Corporation

From: Ed Hasely
Sent: Monday, January 04, 2010 2:33 PM
To: 'Powell, Brandon, EMNRD'
Cc: Dixon Sandoval; Billy Stalcup
Subject: BGT Closure Notification - Jicarilla N #1

Brandon - This is to notify you that Energen will be closing the below grade tank on the following location in the near future Plans are to set the tank above grade.

Jicarilla N #1 - Unit Letter K, Section 4, Township 24N, Range 5W

Ed Hasely
Energen Resources Corporation
Sr. Environmental Engineer
ed.hasely@energen.com
Office: (505) 324-4131
Cell: (505) 330-3584