

July 21, 2008

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

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**

8451

- 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.

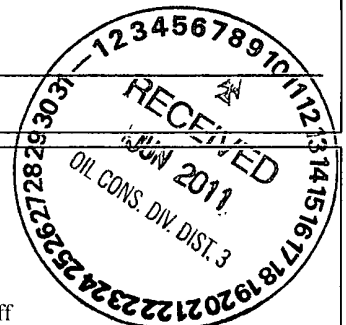
1
Operator: Energen Resources Corporation OGRID #: 162928
Address: 2010 Afton Place, Farmington, NM 87401
Facility or well name: Carracas 10B #14H
API Number: 30-039-30840 OCD Permit Number: _____
U/L or Qtr/Qtr I Section 9 Township 32N Range 04W County: RIO ARriba
Center of Proposed Design: Latitude 36.99890 Longitude -107.25165 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 20 mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____

4
☐ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: _____ bbl Type of fluid: _____
Tank Construction material: _____
☐ 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 _____ mil ☐ LLDPE ☐ 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 _____

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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

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

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

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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: _____

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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)

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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
- ☐ Quality Control/Quality Assurance Construction and Installation Plan the appropriate requirements of 19.15.17.11 NMAC
- ☐ 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

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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)

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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

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13 D NMAC)

Instructions: Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future service and operations?

☐ Yes (If yes, please provide the information below) ☐ No

Required for impacted areas which will not be used for future service and operations.

- ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

Siting Criteria (regarding on-site closure methods only: 19.15.17.10 NMAC

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

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

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

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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: _____

e-mail address: _____ Telephone: _____

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

OCD Representative Signature: Jonathan D. Kelly Approval Date: 6/09/2011

Title: Compliance Officer OCD Permit Number: _____

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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: 7/30/10

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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.

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Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:

Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: Bondad Landfill WCA Disposal Facility Permit Number: CRS-30-20112

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

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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): Anna Stotts Title: Regulatory Analyst

Signature: Anna Stotts Date: 6/1/11

e-mail address: astotts@energen.com Telephone: 505-324-4154



Requested Disposal Facility:

Bondad Landfill

Waste Profile #

WCA Sales Rep:

Date:

I. Generator Information

Generator Name: <u>Energen Resources</u>			
Generator Site Address: <u>Carracas IOB#14</u>			
City: <u>Carracas</u>	County: <u>Rio Arriba</u>	State: <u>NM</u>	Zip:
State ID/Reg No:	State Approval/Waste Code: (if applicable)	SIC Code: <u>1311</u>	
Generator Mailing Address (if different): <u>2010 Afton Place</u>			
City: <u>Farmington</u>	County: <u>San Juan</u>	State: <u>NM</u>	Zip: <u>87401</u>
Generator Contact Name: <u>Kellie Campbell</u>			
Phone Number: <u>505-324-4152</u>		Fax Number: <u>505-324-4177</u>	

IIa. Transporter Information

Transporter Name: <u>Multiple</u>		Contact Name: <u>Bill Vacke</u>	
Transporter Address:			
City:	County:	State:	Zip:
Phone Number: <u>505-322-519</u>	Fax Number:	State Transportation Number:	

IIb. Billing Information

Bill To: <u>Energen Resources</u>		Contact Name: <u>Bill Vacke</u>	
Billing Address: <u>2010 Afton Place</u>			
City: <u>Farmington</u>	State: <u>NM</u>	Zip: <u>87401</u>	Phone Number: <u>505-325-6800</u>

III. Waste Stream Information

Name of Waste: <u>Drill Cuttings</u>
Process Generating Waste: <u>Drill Cuttings from closed loop operations of drilling a gas well.</u>
Type of Waste: <input checked="" type="checkbox"/> INDUSTRIAL PROCESS WASTE <input type="checkbox"/> POLLUTION CONTROL WASTE
Physical State: <input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SEMI SOLID <input type="checkbox"/> POWDER <input type="checkbox"/> LIQUID <input type="checkbox"/> OTHER:
Method of Shipment: <input checked="" type="checkbox"/> Bulk <input type="checkbox"/> Drum <input type="checkbox"/> Bagged <input type="checkbox"/> Other
Estimated Annual Volume: CUBIC YARDS: TONS: GALLONS: OTHER:
Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> DAILY <input type="checkbox"/> WEEKLY <input type="checkbox"/> MONTHLY <input type="checkbox"/> OTHER
Special Handling Instructions: <u>none</u>

IV. Representative Sample Certification

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> NA
Sample Date: <u>6-11-2010</u>	Type of Sample: <input checked="" type="checkbox"/> COMPOSITE SAMPLE <input type="checkbox"/> GRAB SAMPLE	
Laboratory: <u>Envirotech</u>	Sample ID Numbers: <u>Nell110-00</u>	
Sampler's Employer: <u>Energen Resources</u>		
Sampler's Name (printed): <u>Bill Vacke</u>		Signature: <u>Kellie Campbell</u>

Waste Profile #

Characteristic Components		% by Weight (range)			
1. <u>Oil</u>					
4. .					
5. .					
Color	Odor (describe)	Free Liquids <input type="checkbox"/> YES OR <input checked="" type="checkbox"/> NO Content %	% Solids	pH	Flash Point °F
<u>brown/bk</u>	<u>none</u>		<u>100</u>		
Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Required Parameters Provided for this Profile					
Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and it epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?					<input type="checkbox"/> YES OR <input checked="" type="checkbox"/> NO
Does this waste or generating process cause it to exceed OSHA exposure limits from high levels of Hydrogen Sulfide or Hydrogen Cyanide as defined in 40 CFR 261.23?					<input type="checkbox"/> YES OR <input checked="" type="checkbox"/> NO
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?					<input type="checkbox"/> YES OR <input checked="" type="checkbox"/> NO
Does this waste contain regulated concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?					<input type="checkbox"/> YES OR <input checked="" type="checkbox"/> NO
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD), or any other dioxin as defined in 40 CFR 261.31?					<input type="checkbox"/> YES OR <input checked="" type="checkbox"/> NO
Is this a regulated Toxic Material as defined by Federal and/or State regulations?					<input type="checkbox"/> YES OR <input checked="" type="checkbox"/> NO
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?					<input type="checkbox"/> YES OR <input checked="" type="checkbox"/> NO
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?					<input type="checkbox"/> YES OR <input checked="" type="checkbox"/> NO
Is this waste generated at a Federal Superfund Clean Up Site?					<input type="checkbox"/> YES OR <input checked="" type="checkbox"/> NO

V. Physical Characteristics of Waste**VI. Generator Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Waste Corporation. The undersigned individual warrants that he/she is authorized to sign this document on behalf of the Generator.

Kellie J Campbell / ENV/SAFETY
Authorized Representative Name And Title (Printed)

ENERGETIC RESOURCES
Company Name

Kellie J Campbell
Authorized Representative Signature

6/23/2010
Date

VII. Waste Approval Decision

<input type="checkbox"/> Approved	<input type="checkbox"/> Rejected	Expiration: _____
Conditions:		
Name, Title	Signature	Date

CLOSED-LOOP SYSTEM

Design Plan

The closed loop system will include a drying pad and sump to facilitate the collection of liquids derived from drill cuttings and an above ground steel holding tank suitable for generated cuttings and fluids during rig operations. The tank will be of sufficient volume to maintain a safe free board between disposal of the liquids and solids from rig operations.

- 1) Fencing is not required for an above ground closed-loop system.
- 2) The drying pad will be constructed by 6 inches of clay dirt over a 20-mil string-reinforced LLDPE liner to prevent infiltration of any draining liquid.
- 3) Run-off will be prevented from lined ditches on the perimeter of the drying pad.
- 4) Berms will also be constructed on the outside perimeter to prevent run-on of water or fluids.
- 5) It will be signed in compliance with 19.15.3.103 NMAC.

Operating and Maintenance Plan

A modified steel tank will be operated and maintained; to contain liquids and drill cuttings, to aid in the prevention of contamination of fresh water sources, in order to protect public health and the environment. To attain this goal the following steps will be followed:

- 1) The liquids in the closed-loop tank will be re-circulated through the mud system or vacuumed and disposed of at Envirotech (Permit Number NM-01-0011) or IEI/JFL Landfarm (#NM-01-0010B) on a periodic basis to prevent over topping.
- 2) As drill solids are generated, a front-end loader removes the waste and will begin stacking it on a drying pad.
- 3) Small amounts of dirt or lime may be added to aid in drying.
- 4) No hazardous waste, miscellaneous solid waste or debris will be discharged into or stored in the tank. Only fluids or cuttings used or generated by rig operations will be placed or stored in the tank.
- 5) The division district office will be notified within 48 hours of the discovery of compromised integrity of the closed-loop tank. Upon the discovery of the compromised tank, repairs will be enacted immediately.
- 6) All of the above operations will be inspected and a log will be signed and dated. During rig operations the inspection will be daily.

Closure Plan

The closed loop holding tank will be closed in accordance with 19.15.17.13. To accomplish this, all cuttings on the drying pad and any remaining fluids in the holding tank will be hauled to **Envirotech** (Permit # NM-01-0011) or **IEI/JFL Landfarm** (# NM-01-0010B) immediately following rig operations. The tanks will be removed from location as part of the rig move, and stacked cuttings to a commercial disposal site mentioned above. The APD Conditions of Approval will be followed for site reclamation.

Completion Plan

A closed-loop tank will be set on location once drilling operations have ceased. The closed-loop tank will measure 20 ft height by 12 ft diameter (400 BBL) or 20 ft height by 10 ft 6 in diameter (300 BBL). It will be designed, operated, maintained and closed according to the attached Closed-loop Design Plan, Closed-loop Operating and Maintenance Plan, and Closed-loop Closure Plan.



TRACE METAL ANALYSIS

Client:	Energen	Project #:	03022-0168
Sample ID:	061110-00	Date Reported:	06-17-10
Laboratory Number:	54745	Date Sampled:	06-11-10
Chain of Custody:	9646	Date Received:	06-11-10
Sample Matrix:	Soil	Date Analyzed:	06-15-10
Preservative:	Cool	Date Digested:	06-15-10
Condition:	Intact	Analysis Needed:	Total Metals

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Arsenic	0.006	0.001
Barium	74.8	0.001
Cadmium	0.009	0.001
Chromium III	0.049	0.001
Copper	0.611	0.001
Lead	0.364	0.001
Mercury	0.005	0.001
Selenium	ND	0.001
Silver	ND	0.001
Zinc	1.51	0.001

ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils.
SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emission
Spectroscopy, SW-846, USEPA, December 1996.

Comments: Carr 10 B #14

Analyst

Review

**envirotech**
Analytical Laboratory**BORON/NICKEL**
Hot Water Soluable

Client:	Energen	Project #:	03022-0168
Sample ID:	061110-00	Date Reported:	06-17-10
Laboratory Number:	54745	Date Sampled:	06-11-10
Chain of Custody:	9646	Date Received:	06-11-10
Sample Matrix:	Soil	Date Analyzed:	06-15-10
Preservative:	Cool	Date Digested:	06-15-10
Condition:	Intact	Analysis Needed:	B/Ni - Hot Water Sol

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Boron	ND	0.001
Nickel	ND	0.001

ND - Parameter not detected at the stated detection limit.

References: Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emission Spectroscopy, SW-846, USEPA, December 1996.

Comments: Carr 10 B #14

Analyst


Review

CHAIN OF CUSTODY RECORD

09646

Client: Emergent		Project Name / Location: Carroll 10B#14				ANALYSIS / PARAMETERS													
Client Address:		Sampler Name: Bill Vacke				TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	PCPAs Metals CO	Cation / Anion	PCI	TCIP with H/P	PAH	TPH (418.1)	CHLORIDE			Sample Cool	Sample Intact
Client Phone No.: 800-793-7611		Client No.: 03022 - 0168																	
Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative													
06/11/00	8/1/00	9:00	54745	Soil Solid	Sludge Aqueous													4	4
				Soil Solid	Sludge Aqueous														
				Soil Solid	Sludge Aqueous														
				Soil Solid	Sludge Aqueous														
				Soil Solid	Sludge Aqueous														
				Soil Solid	Sludge Aqueous														
				Soil Solid	Sludge Aqueous														
				Soil Solid	Sludge Aqueous														
				Soil Solid	Sludge Aqueous														
				Soil Solid	Sludge Aqueous														
				Soil Solid	Sludge Aqueous														
Relinquished by: (Signature) Bill Vacke				Date	Time	Received by: (Signature) David Thompson				Date	Time								
Relinquished by: (Signature)						Received by: (Signature)													
Relinquished by: (Signature)						Received by: (Signature)													

EMER **10Kerre**



envirotech
Analytical Laboratory

5796 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • lab@envirotech-inc.com

Line 1

11:21:47 am

06/21/2010

8/6

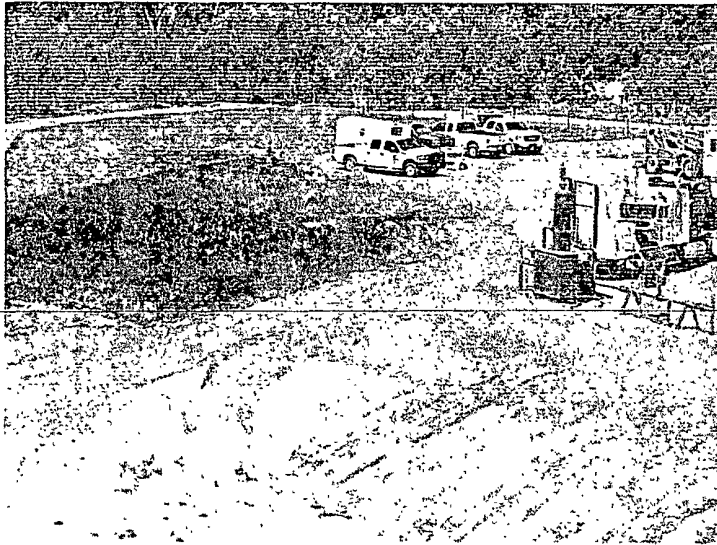
Here is a reclaimed picture of the Carracas 10B#14H. There was no visible sign of any fluid release upon removing the liner for the drying pad.

Bill vocke

construction foreman

ENERGEN RESC.

(505)330 2519



Pit Inspection Log Sheet

(daily while rig is on-site, then weekly as long as liquids remain in the pit)

Well Name: Carracas 10 B #14H		API: 30-039-30840
Name (Print): Keith Kerschman	Signature: <i>Keith Kerschman</i>	Date: 5-11-10
Note Any Deficiencies: Good		
Name (Print): Keith Kerschman	Signature: <i>Keith Kerschman</i>	Date: 5-12-10
Note Any Deficiencies: NONE		
Name (Print): Keith Kerschman	Signature: <i>Keith Kerschman</i>	Date: 5-13-10
Note Any Deficiencies: Good		
Name (Print): Richard Beattie	Signature: <i>Richard Beattie</i>	Date: 5-14-10
Note Any Deficiencies: None		
Name (Print): Richard Beattie	Signature: <i>Richard Beattie</i>	Date: 5-15-10
Note Any Deficiencies: None		
Name (Print): Elias Villalobos	Signature: <i>Elias Villalobos</i>	Date: 5-17-10
Note Any Deficiencies: None		
Name (Print): Elias Villalobos	Signature: <i>Elias Villalobos</i>	Date: 5-18-10
Note Any Deficiencies: None		
Name (Print): Keith Kerschman	Signature: <i>Keith Kerschman</i>	Date: 5-19-10
Note Any Deficiencies: NONE		
Name (Print): Don Trujillo	Signature: <i>Don Trujillo</i>	Date: 5-20-10
Note Any Deficiencies: SEVERAL Tears on East side out side Ditch DRY Pit		
Name (Print): Nick Boran	Signature: <i>Nick Boran</i>	Date: 5-21-10
Note Any Deficiencies: More Tears on East side out side Ditch DRY Pit F/For		
Name (Print): Nick Boran	Signature: <i>Nick Boran</i>	Date: 5-22-10
Note Any Deficiencies: Come and Repaired all Holes in Dry Pit		
Name (Print): Richard Beattie	Signature: <i>Richard Beattie</i>	Date: 5-23-10
Note Any Deficiencies: good		
Name (Print): Don Trujillo	Signature: <i>Don Trujillo</i>	Date: 5-24-10
Note Any Deficiencies: Tear Repaired Good		
Name (Print): Derreck Killam	Signature: <i>Derreck Killam</i>	Date: 5-25-10
Note Any Deficiencies: Good		
Name (Print): Derreck Killam	Signature: <i>Derreck Killam</i>	Date: 5-26-10
Note Any Deficiencies: Good		
Name (Print): Derreck Killam	Signature: <i>Derreck Killam</i>	Date: 5-27-10
Note Any Deficiencies: Good		

Pit Inspection Log Sheet

Drying Pad

(daily while rig is on-site, then weekly as long as liquids remain in the pit)

Well Name:	API:	
Name (Print): Ashley VanLandingham	Signature: <i>[Signature]</i>	Date: 5-31-10
Note Any Deficiencies: <i>Good</i>		
Name (Print): <i>Nathan</i>	Signature: <i>[Signature]</i>	Date: 6-1-10
Note Any Deficiencies: <i>Good</i>		
Name (Print): <i>Nathan</i>	Signature: <i>[Signature]</i>	Date: 6-2-10
Note Any Deficiencies: <i>Good</i>		
Name (Print): <i>Nathan</i>	Signature: <i>[Signature]</i>	Date: 6-3-10
Note Any Deficiencies: <i>Good</i>		
Name (Print): <i>Nathan</i>	Signature: <i>[Signature]</i>	Date: 6-4-10
Note Any Deficiencies: <i>Good</i>		
Name (Print): Ashley VanLandingham	Signature: <i>[Signature]</i>	Date: 6-5-10
Note Any Deficiencies: <i>Good I saw</i>		
Name (Print): Ashley VanLandingham	Signature: <i>[Signature]</i>	Date: 6-6-10
Note Any Deficiencies: <i>Good I saw now!!</i>		
Name (Print): Shawn Pickering	Signature: <i>[Signature]</i>	Date: 6-7-10
Note Any Deficiencies: <i>Good</i>		
Name (Print): Shawn Pickering	Signature: <i>[Signature]</i>	Date: 6-8-10
Note Any Deficiencies: <i>Good</i>		
Name (Print): Keith Kershion	Signature: <i>[Signature]</i>	Date: 6-9-10
Note Any Deficiencies: <i>All Good</i>		
Name (Print): Keith Kershion	Signature: <i>[Signature]</i>	Date: 6-10-10
Note Any Deficiencies: <i>Good</i>		
Name (Print):	Signature:	Date:
Note Any Deficiencies:		
Name (Print):	Signature:	Date:
Note Any Deficiencies:		
Name (Print):	Signature:	Date:
Note Any Deficiencies:		
Name (Print):	Signature:	Date:
Note Any Deficiencies:		
Name (Print):	Signature:	Date:
Note Any Deficiencies:		



Pit Inspection Log Sheet

(daily while rig is on-site, then weekly as long as liquids remain in the pit)

ATTN: Vicky
Drying Pad

Well Name: CAISACAS 10 B 14H		API: 30-039-30840	
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 6/18/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 6/21/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 6/22/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 6/23/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 6/24/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 6/25/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 6/28/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 6/29/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 6/30/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 7/1/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 7/2/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 7/12/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 7/13/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 7/14/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 7/15/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: Ron Haynes	Date: 7/16/10	
Note Any Deficiencies:			



Pit Inspection Log Sheet

ATTN: v. c. y

Drying Pad

(daily while rig is on-site, then weekly as long as liquids remain in the pit)

Well Name: CAINACAS 10 B 14 H		API: 30-039-30840	
Name (Print): RON HAYNES	Signature: <i>Ron Haynes</i>	Date: 7/17/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: <i>Ron Haynes</i>	Date: 7/18/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: <i>Ron Haynes</i>	Date: 7/19/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: <i>Ron Haynes</i>	Date: 7/20/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: <i>Ron Haynes</i>	Date: 7/21/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: <i>Ron Haynes</i>	Date: 7/22/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: <i>Ron Haynes</i>	Date: 7/23/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: <i>Ron Haynes</i>	Date: 7/26/10	
Note Any Deficiencies:			
Name (Print): RON HAYNES	Signature: <i>Ron Haynes</i>	Date: 7/27/10	
Note Any Deficiencies:			
Name (Print):	Signature:	Date:	
Note Any Deficiencies:			
Name (Print):	Signature:	Date:	
Note Any Deficiencies:			
Name (Print):	Signature:	Date:	
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