

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

30-039-22878

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Energen Resources	Contact: Kellie J. Skelton
Address: 2198 Bloomfield Hwy.	Telephone No. 505-566-4682
Facility Name: Jicarilla 89 #6	Facility Type: On shore well site

Surface Owner: Jicarilla Apache Tribe	Mineral Owner: Federal	Lease No.: 09-000089
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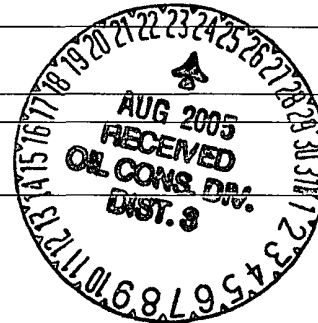
LOCATION OF RELEASE

Unit Letter D	Section 13	Township 27N	Range 03W	Feet from the 990'	North/South Line FNL	Feet from the 990'	East/West Line FWL	County Rio Arriba
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Latitude 36.57791 Longitude -107.10117

NATURE OF RELEASE

Type of Release: Oil	Volume of Release 144 bbls	Volume Recovered: 33 bbls + soil
Source of Release: Oil Production tank	Date and Hour of Occurrence: Between 03-08 pm and 03-10-2005 am	Date and Hour of Discovery 03-10-2005, 1000
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Reported to Denny Foust.	
By Whom?	Date and Hour : 03-10-2005, 1000	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.* NA		



Describe Cause of Problem and Remedial Action Taken.*
The valve on the tank froze and as the weather warmed the freeze melted allowing the fluid to release from the tank. Energen immediately started to recover as much product as possible. A spill clean up crew was dispatched to begin clean-up.

Describe Area Affected and Cleanup Action Taken.*
Please see the attached report from BEST Environmental.

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: <i>Kellie Skelton</i>	OIL CONSERVATION DIVISION	
Printed Name: Kellie Skelton	Approved by District Supervisor: <i>Denny Foust</i> for Charlie Perry	
Title: E&S Coordinator	Approval Date: 9/20/05	Expiration Date:
E-mail Address: kskelton@energen.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: Monday, August 22, 2005 Phone: 505-566-4682		

* Attach Additional Sheets If Necessary

11 DGF 0526342447

Energen Resources

Jicarilla 89 # 6 Spill Clean-up

1. Introduction

On March 10, 2005 a hydrocarbon spill occurred on the Energen Resources Jicarilla 89 # 6 oil and gas well location. The spill was estimated at approximately 144-bbbls of condensate with approximately 33-bbbls recovered. The spill was located approximately 80-ft, south 60-degrees East of the wellhead.

Once the separator and pit tank were removed from the spill area, remedial work began. Hydrocarbon impacted areas associated with the spill were excavated and transported to TNT Landfarms. Clean backfill was trucked in, and the impacted area was contoured to original condition. Sampling was continuous throughout the impacted area and verified by Envirotech Laboratories.

2. Statement of Work

Remediation of the spill area was monitored ensuring that all remediation efforts exceeds or meets EPO requirements necessary for closure of the hydrocarbon impacted soils.

1. Biosphere Environmental Sciences & Technologies, LLC (B.E.S.T.), a reputable contractor excavated and removed hydrocarbon-impacted soils associated with the 144-bbl spill.
2. B.E.S.T. Excavated and removed hydrocarbon-impacted soils associated with the 144-bbl crude oil spill. Excavation was performed with heavy construction equipment including backhoes, and front-end loaders where access is available.
3. All activities were in accordance with Jicarilla Apache Nation Environmental Protection Office (EPO) and the New Mexico Oil Conservation Division (NMOCD) regulations. Field screening with an Organic Vapor Meter/ Photo Ionization Detector (OVM/PID) was used to determine the horizontal and vertical extent of the contamination.
4. Impacted soil was excavated until OVM/PID soil vapor headspace readings are below 100 parts per million (ppm). After excavation a soil sample was collected for confirmation of acceptable levels. Impacted soil was excavated with heavy equipment where accessible or removed by hand in the inaccessible areas. OVM/PID soil vapor headspace readings were collected throughout the areas of contamination to determine the extents of the contamination. In addition, confirmation soil samples were collected after OVM/PID readings are below 100 ppm. All soil samples were kept on ice and shipped under Chain-of-Custody

record to Envirotech Laboratories for analysis per USEPA Method 8015 Total Petroleum Hydrocarbons (TPH) and 8021 BTEX. Soil clean-up standards of 100 ppm TPH and 50-ppm total BTEX were used (see Lab results attached).

5. Excavated hydrocarbon impacted soils were transported to T-N-T Landfarm, located on New Mexico Highway 537.
6. All excavations were backfilled with native granular soil obtained from an EPO approved backfill pit location and compacted with pneumatic construction machinery until approximately 90% compaction is achieved.

3. Results of Sampling

Field sampling analysis is attached. On April 15,2005 a soil sample was analyzed by Envirotech Laboratories, from the bottom of the excavation and was within EPO and NMOCD requirements. The soil sample of the 4-wall composite was outside EPO Closure limits and further excavation was required. Final analysis of the 4-wall composite was analyzed and deemed within EPO and NMOCD levels for closure. (see lab results attached).

Lab Results:

Bottom @ 17-ft	0.4ppm TPH	0.193ppm BTEX	.0108ppm Benzene
4-wall <u>Comp.@15-ft</u>	3.4ppm TPH	16.8ppm OVM	

Location: Jicarilla 89 # 6

Footages: 990' FNL & 990' FWL

Unit Letter: D Sec. 13 Twn. 27N Rng 3W

Latitude: 36.57791 Longitude: -107.10117

Lease Num. Jicarilla 89 # 6 Land Type: Jicarilla

Spill: 111 bbls

Spill Reference wellhead

Reference: Wellhead Footage: 80'

Direction: N or S 60 Degrees E or W

Initial size: 0

Final Size: 20' X 60' X 17' deep

Total Cubic Yards: 755

Distances from (ft):

Groundwater: >100-ft

Wellhead Protection Area: >1000-ft

Nearest Surface Water: >1000-ft

Distance to ephemeral stream: 500-ft

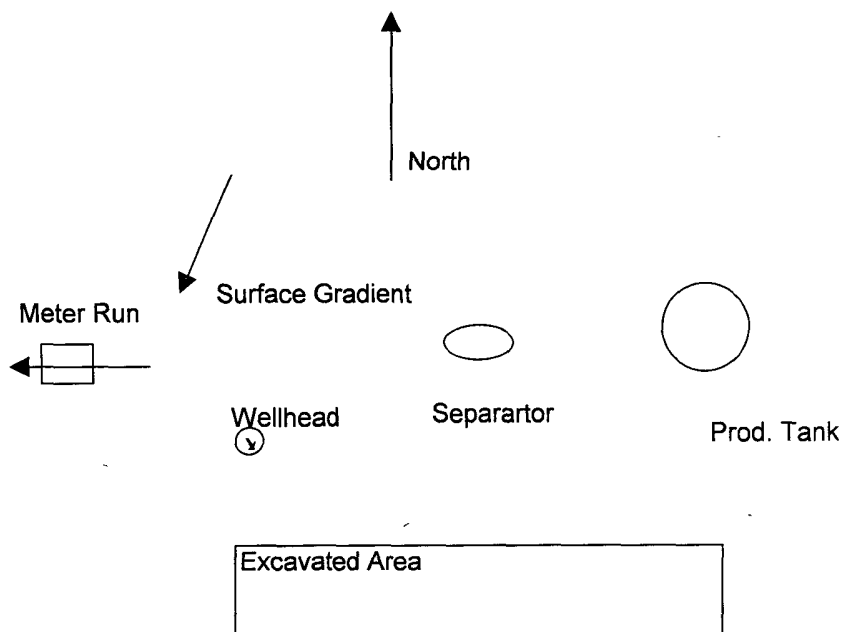
(Navajo/Jicarilla only)

Ranking Score (points): 0

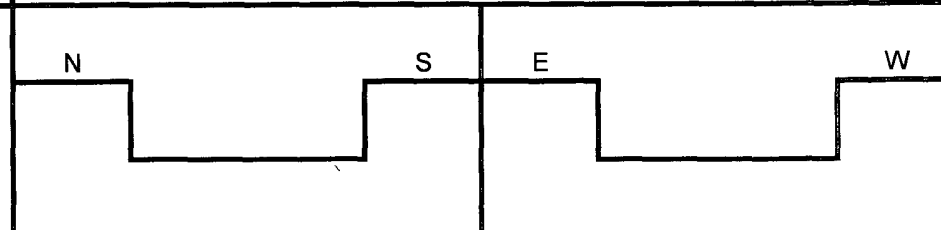
Sample ID	Description	OVM Reading
1	btm @ 4-ft	2763 ppm
2	btm @ 10-ft	1588 ppm
3	btm @ 15-ft	125 ppm
4	btm @ 17-ft	Non-Detect
5	4-wall comp @ 15'	16.8 ppm
6		
7		
8		
9		
10		

Comments:
Soil is H-C Stained, brown sandy to clayey loam, with H-C odor to approx. 15 to 17-ft.

Site Diagram:



Not to Scale



ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Energen	Project #:	03022-099
Sample ID:	4 Wall Composite	Date Reported:	04-20-05
Laboratory Number:	32675	Date Sampled:	04-19-05
Chain of Custody No:	13964	Date Received:	04-20-05
Sample Matrix:	Soil	Date Extracted:	04-20-05
Preservative:	Cool	Date Analyzed:	04-20-05
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

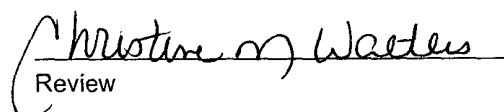
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	1.0	0.2
Diesel Range (C10 - C28)	2.4	0.1
Total Petroleum Hydrocarbons	3.4	0.2

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: **Jicarilla #89-6.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Energen Resources	Project #:	03022-099
Sample ID:	4 Wall Composite	Date Reported:	04-18-05
Laboratory Number:	32663	Date Sampled:	04-15-05
Chain of Custody:	13953	Date Received:	04-15-05
Sample Matrix:	Soil	Date Analyzed:	04-18-05
Preservative:	Cool	Date Extracted:	04-18-05
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	10.8	2.1
Toluene	174	1.8
Ethylbenzene	59.7	1.7
p,m-Xylene	3,590	1.5
o-Xylene	1,290	2.2
Total BTEX	5,130	

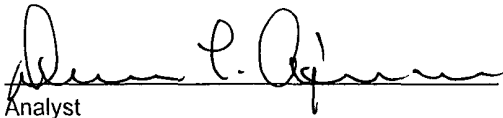
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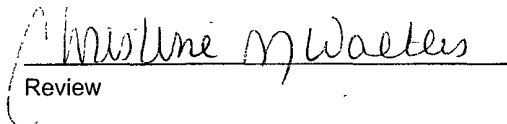
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.0 %
	1,4-difluorobenzene	98.0 %
	Bromochlorobenzene	98.0 %

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: Jicarilla Tribal #89-6.


Analyst


Review

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons


Client:	Energen Resources	Project #:	03022-099
Sample ID:	Excavation Bottom	Date Reported:	04-18-05
Laboratory Number:	32664	Date Sampled:	04-15-05
Chain of Custody No:	13953	Date Received:	04-15-05
Sample Matrix:	Soil	Date Extracted:	04-18-05
Preservative:	Cool	Date Analyzed:	04-18-05
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

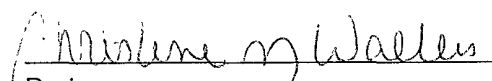
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	0.4	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	0.4	0.2

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: **Jicarilla Tribal #89-6.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Energen Resources	Project #:	03022-099
Sample ID:	Excavation Bottom	Date Reported:	04-18-05
Laboratory Number:	32664	Date Sampled:	04-15-05
Chain of Custody:	13953	Date Received:	04-15-05
Sample Matrix:	Soil	Date Analyzed:	04-18-05
Preservative:	Cool	Date Extracted:	04-18-05
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	15.2	2.1
Toluene	26.3	1.8
Ethylbenzene	15.8	1.7
p,m-Xylene	90.9	1.5
o-Xylene	45.0	2.2
Total BTEX	193	

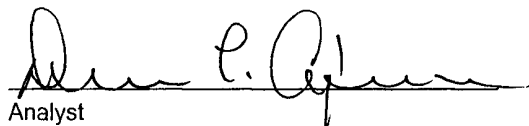
ND - Parameter not detected at the stated detection limit.

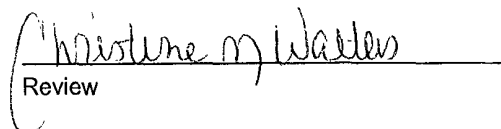
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.0 %
	1,4-difluorobenzene	98.0 %
	Bromochlorobenzene	98.0 %

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: Jicarilla Tribal #89-6.


Analyst


Review