P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 South First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

State of New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C- 141
Originated 2/13/97

Submit 2 copies to Appropriate District Office in accordance with Rule 116 on back side of form

30 045 25867

Release Notification and Corrective Action
OPERATOR

☐ Initial Report ☒ Final Report

Name	Contact
Energen Resources Inc.	Ernest Cardona
Address	Telephone No.
2198 Bloomfield Hwy Farmington N. Mex	(505) 325-6800
Facility Name	Facility Type
Locke #2 A.P.I # 30-045-2586700	Oil Production Storage Tank or Producing well

Surface Owner	Mineral Owner	Lease No.
Federal	Federal	NMSF-078110

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	10	29N	14W	1850'	O	1650'	O	San Juan

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Condersate	65 BBLs	0
Source of Release	**Date and Hour of Occurrence**	**Date and Hour of Discovery**
Production Storage tank	10/23/01 3:00 P:m	10/23/01 4:00 P:m
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	**If YES, To Whom?** Mr. Denny Foust	
By Whom? Mr. Doug Thomas	**Date and Hour** 10/24/01	
Was a Watercourse Reached? ☐ Yes ☒ No	**If YES, Volume Impacting the Watercourse.**	

RECEIVED
NOV 2001
OIL CON. DIV
DIST. 3

If a Watercourse was Impacted, Describe Fully. (Attach Additional Sheets If Necessary)

Describe Cause of Problem and Remedial Action Taken. (Attach Additional Sheets If Necessary)
Corrison leak in production storage tank, tank was removed and repaired. Contamirated soil within Berms was excavated and aerated and Then back filled into excavation.
Lab tests were done to determine vertical & horizontal extent of Contamination; Results Attached

Describe Area Affected and Cleanup Action Taken. (Attach Additional Sheets If Necessary)
All contained within Berms, See above, also see Attached Lab analysis & diagram Attached

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: Ernest Cardona	OIL CONSERVATION DIVISION
Printed Name: Ernest Cardona	Approved by District Supervisor: Denny Foust for Frank Chavez
Title: Production foreman	Approval Date: 11/21/01 Expiration Date:
Date: 11/20/01 Phone: (505) 325-6800	Conditions of Approval: Attached ☐

nDGF0129833129

Client: Energen Resources

Date Began: 10/29/2001 Date End: 10/29/2001

Location: Locke # 2

Unit Letter: "G" Sec. 10 Twn. 29N Rng 14W

Spill Reference from Wellhead:

105 feet North 30 degrees East

Pit: Spill

Initial size: 0

Final Size: 0

Total Cubic Yards: 0

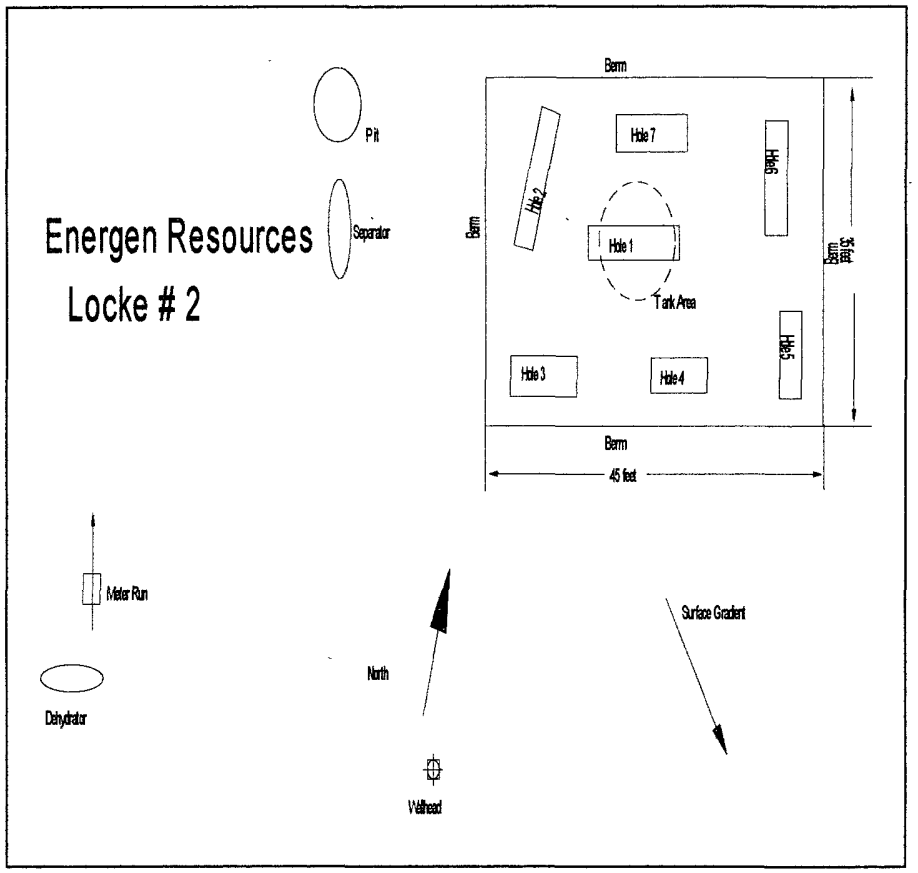
Distanes from (ft):

Groundwater:	>100 ft
Wellhead Protection Area:	>1000 ft
Nearest Surface Water:	>1000 ft

Ranking Score (points): **0**

Sample ID	Sample Depth (ft)	OVM Reading
1	Hole 1 @ 5 ft	**487 ppm**
2	Hole 1 @ 10 ft	**460 ppm**
3	Hole 1 @ 13-15 ft	**285 ppm**
4	Hole 2 @ 13-15 ft	**Non-Detect**
5	Hole 3 @ 13-15 ft	**Non-Detect**
6	Hole 4 @ 10 ft	**88 ppm**
7	Hole 4 @ 13-15 ft	**28 ppm**
8	Hole 5 @ 13-15 ft	**Non-Detect**
9	Hole 6 @ 13-15 ft	**Non-Detect**
10	Hole 7 @ 13-15 ft	**Non-Detect**

Site Diagram:



Not to Scale

Comments:

Topography is flat (mesa top). Soil is brown sandy loam.

Hydrocarbon staining occurs from surface to approx. 12 inches

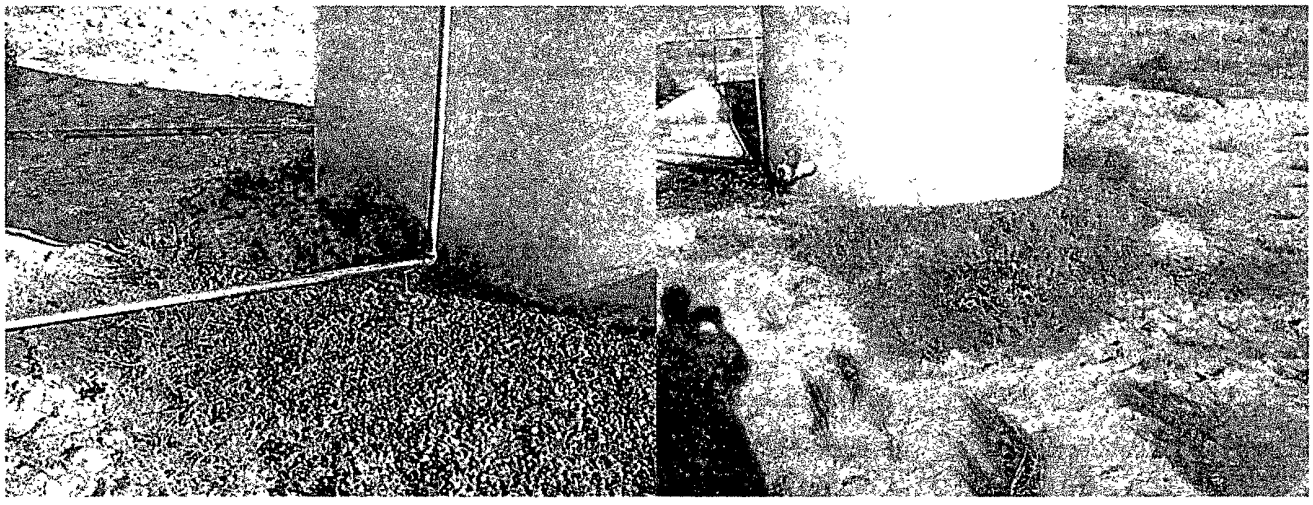
Hole # 1: Hydrocarbon odor throughout excavation.

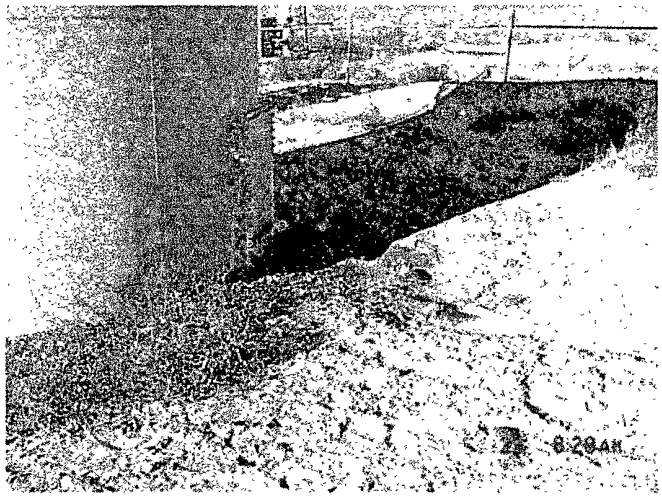
Hole # 4: Hydrocarbon odor from 10-15 feet.

All holes: @ 5' large river rock, @ 12-15' small pebbles w/ soft sandstone

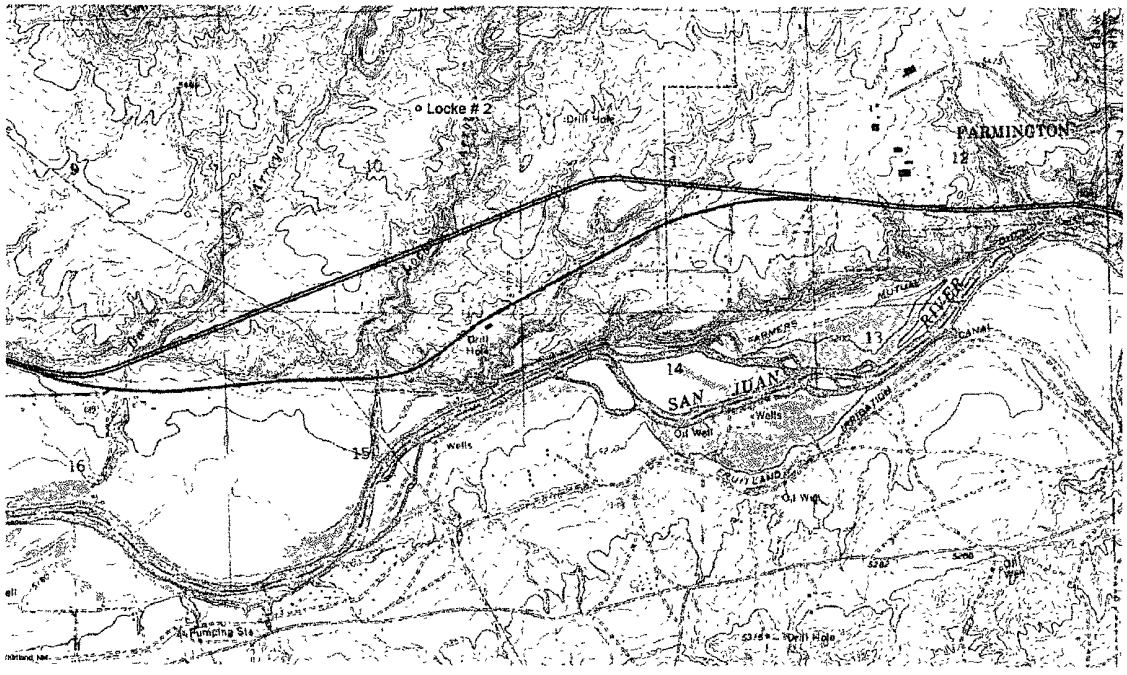
Environmental Specialist: FM

Biosphere Environmental Sciences Technologies




8:28AM

Kirtland 7.5 minute Topographic Map
Energen Resources
Locke # 2



iml

Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

November 13, 2001

Frank McDonald
B.E.S.T.
8101 N. College Blvd.
Suite 5045
Farmington, NM 87402

Mr. McDonald:

Enclosed please find the reports for the soil samples submitted to our laboratory for Energen Resources on October 29, 2001.

If you have any questions about the results of these analyses, please don't hesitate to call at your convenience.

Thank you for choosing IML for your analytical needs!

Sincerely,

Sharon Williams
Organic Analyst/IML-Farmington

Enclosure

xc: File

iml

Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

ENERGEN RESOURCES

On October 29, 2001, two soil samples were submitted to Inter-Mountain Laboratories Farmington for analysis. The samples were received intact. Total Petroleum Hydrocarbons as Diesel Range Organics (8015M DRO) and Gasoline Range Organics (8015M GRO) and BTEX (8021B) were performed on the samples as per the accompanying Chain of Custody form. The samples were analyzed within the required method holding times.

Practical Quantification Limits (PQL's) are based on statistically derived determinations, and upon any dilutions necessary to obtain proper method response without matrix interferences.

It is the policy of this laboratory to employ, whenever possible, preparatory and analytical methods which have been approved by regulatory agencies. The methods used in the analysis of the samples reported herein are found in DRO – U.S.E.P.A.: "Test Method for the Determination of Diesel Range Organics", Revision 2, February 1992. GRO – U.S.E.P.A.: "Test Method for the Determination of Gasoline Range Organics", Revision 5, February 1992. BTEX analysis was performed by EPA Method 5030, Purge and Trap and EPA Method 8021B, Aromatic Volatile Hydrocarbons, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", U.S.E.P.A., SW-846, Volume 1B.

Quality assurance data, if not included, is on file and available upon request. If there any questions regarding the information presented in this report package, please feel free to call at your convenience.

Sincerely,

Sharon Williams

Organic Analyst/IML-Farmington

Inter·Mountain Laboratories, Inc.
2506 West Main Street
Farmington, NM 87401

Client: Energen Resources
Project: Locke #2
Sample ID: HOLE 1 @13-15FT.
Lab ID: 0301W04699
Matrix: Soil
Condition: Cool/Intact

Date Reported: 11/09/01
Date Sampled: 10/29/01
Date Received: 10/29/01
Date Extracted: N/A

Parameter	Analytical Result	PQL	Units
BTEX - METHOD 8021B			
Benzene	103	50	ug/Kg
Toluene	3,151	50	ug/Kg
Ethylbenzene	1,722	50	ug/Kg
Xylenes (total)	9,708	150	ug/Kg

Quality Control - Surrogate Recovery	%	QC Limits
4-Bromofluorobenzene(SUR-8021B)	173 **	70 - 130
a,a,a-Trifluorotoluene(SUR-8021B)	211 **	70 - 130

** - Surrogate Recovery failed QC Limits due to matrix interference.

Reference. Method 8021b, Volatile Organic Compounds, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, United States Environmental Protection Agency, SW-846, Volume IB.

Reviewed By: William Lipps

Analyst:

Inter-Mountain Laboratories, Inc.
2506 West Main Street
Farmington, NM 87401

Client:	**Energen Resources**		
Project:	**Locke #2**	**Date Reported:**	11/09/01
Sample ID:	HOLE 1 @13-15FT.	**Date Sampled:**	10/29/01
Lab ID:	0301W04699	**Date Received:**	10/29/01
Matrix:	Soil	**Date Extracted:**	N/A
Condition:	Cool/Intact		

Parameter	Analytical Result	PQL	Units
GRO - METHOD 8015M			
Gasoline Range Organics(C6-C10)	595.9	0.5	mg/Kg
Gasoline Range Organics as Gasoline	595.9	0.5	mg/Kg

Quality Control - Surrogate Recovery	%	QC Limits
4-Bromofluorobenzene(SUR-8015B)	211 **	70 - 130

** - Surrogate Recovery failed QC Limits due to matrix interference.

Reference: SW-846 - "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods", United States Environmental Protection Agency, November, 1986.

Reviewed By: William Lipps

Analyst:

Inter·Mountain Laboratories, Inc.
2506 West Main Street
Farmington, NM 87401

Client:	**Energen Resources**		
Project:	**Locke #2**	**Date Reported:**	11/09/01
Sample ID:	HOLE 1 @13-15FT.	**Date Sampled:**	10/29/01
Lab ID:	0301W04699	**Date Received:**	10/29/01
Matrix:	Soil	**Date Extracted:**	N/A
Condition:	Cool/Intact		

Parameter	Analytical Result	PQL	Units
DRO - METHOD 8015M			
Diesel Range Organics (C10 - C22)	2,143	30	mg/Kg
Diesel Range Organics as Diesel	2,143	30	mg/Kg

Quality Control - Surrogate Recovery	%	QC Limits
o-Terphenyl(SUR-8015)	90	70 - 130

Reference: SW-846 - "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods", United States Environmental Protection Agency, November, 1986.

Reviewed By: William Lipps

Analyst:

Inter·Mountain Laboratories, Inc.
2506 West Main Street
Farmington, NM 87401

Client: Energen Resources
Project: Locke #2
Sample ID: HOLE 4 @13-15FT.
Lab ID: 0301W04700
Matrix: Soil
Condition: Cool/Intact

Date Reported: 11/09/01
Date Sampled: 10/29/01
Date Received: 10/29/01
Date Extracted: N/A

Parameter	Analytical Result	PQL	Units
BTEX - METHOD 8021B			
Benzene	106	50	ug/Kg
Toluene	114	50	ug/Kg
Ethylbenzene	81	50	ug/Kg
Xylenes (total)	456	150	ug/Kg

Quality Control - Surrogate Recovery	%	QC Limits
4-Bromofluorobenzene(SUR-8021B)	116	70 - 130
a,a,a-Trifluorotoluene(SUR-8021B)	106	70 - 130

Reference: Method 8021b, Volatile Organic Compounds, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, United States Environmental Protection Agency, SW-846, Volume IB.

Reviewed By: William Lipps

Analyst:

Inter·Mountain Laboratories, Inc.
2506 West Main Street
Farmington, NM 87401

Client: Energen Resources
Project: Locke #2
Sample ID: HOLE 4 @13-15FT.
Lab ID: 0301W04700
Matrix: Soil
Condition: Cool/Intact

Date Reported: 11/09/01
Date Sampled: 10/29/01
Date Received: 10/29/01
Date Extracted: N/A

Parameter	Analytical Result	PQL	Units
GRO - METHOD 8015M			
Gasoline Range Organics(C6-C10)	3.3	0.5	mg/Kg
Gasoline Range Organics as Gasoline	3.3	0.5	mg/Kg

Quality Control - Surrogate Recovery	%	QC Limits
4-Bromofluorobenzene(SUR-8015B)	125	70 - 130

Reference: SW-846 - "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods", United States Environmental Protection Agency, November, 1986.

Reviewed By: William Lipps

Analyst:

Inter·Mountain Laboratories, Inc.
2506 West Main Street
Farmington, NM 87401

Client:	**Energen Resources**		
Project:	**Locke #2**	**Date Reported:**	11/09/01
Sample ID:	HOLE 4 @13-15FT.	**Date Sampled:**	10/29/01
Lab ID:	0301W04700	**Date Received:**	10/29/01
Matrix:	Soil	**Date Extracted:**	N/A
Condition:	Cool/Intact		

Parameter	Analytical Result	PQL	Units
DRO - METHOD 8015M			
Diesel Range Organics (C10 - C22)	171	30	mg/Kg
Diesel Range Organics as Diesel	171	30	mg/Kg

Quality Control - Surrogate Recovery	%	QC Limits
o-Terphenyl(SUR-8015)	109	70 - 130

Reference: SW-846 - "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods", United States Environmental Protection Agency, November, 1986.

Reviewed By: William Lipps

Analyst:

Inter-Mountain Laboratories, Inc.

CHAIN OF COUSTODY RECORD

Client/Project Name	Project Location	Chain of Custody Tape No.
Energen	Locke #2	

Sampler: (Signature) [illegible signature]

ANALYSES / PARAMETERS

Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers	BTEX	GRO/DRO				Remarks
Hole 1 @ 13-15ft	10/28/01	0915	W04699	Soil	1	X	X				
Hole 4 @ 13-15ft	✓	11:10	W04700	✓	1		X				

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[illegible signature]	10/29/01	1504			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by laboratory: (Signature)	Date	Time
			[illegible signature]	10/29/01	15:04

Inter-Mountain Laboratories, Inc.

☐ 555 Absaraka
Sheridan, Wyoming 82801
Telephone (307) 674-7506

☐ 1633 Terra Avenue
Sheridan, Wyoming 82801
Telephone (307) 672-8945

☐ 1701 Phillips Circle
Gillette, Wyoming 82718
Telephone (307) 682-8945

☐ 2506 West Main Street
Farmington, NM 87401
Telephone (505) 326-4737

☐ 11183 State Hwy. 30
College Station, TX 77845
Telephone (979) 776-8945

72882

ASSESSMENT OF ENERGEN RESOURCES LOCKE # 2 SPILL

On October 29, 2001, Biosphere Environmental Sciences and Technologies, LLC (B.E.S.T.) conducted an assessment of a spill resulting from tank integrity failure. The assessment was performed to determine lateral and vertical impacts of the hydrocarbon plume and assess the potential for human health and safety. Seven test holes were excavated within the bermed area. All holes were excavated to the full extent of a backhoe (approximately 15 feet). Samples were analyzed utilizing the headspace method and an Organic Vapor Meter (OVM). Results of the headspace analysis provided higher concentrations directly underneath the tank area from depths of surface to approximately 10 feet. A sample from the test hole directly underneath the tank area at approximately 13-15 feet was sent to IML for BTEX and GRO/DRO analysis. A sample from test hole # 4 at approximately 13-15 feet in depth was sent to IML for GRO/DRO analysis. All samples sent to IML were within NMOCD & BLM guidelines.