

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
1000 Rio Brazos Rd. Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

LF-607

SUBMIT 1 COPY TO
APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator : Energen Resources (Taurus Exploration) Telephone: (505) 326-6131

Address: 2198 Bloomfield Highway Farmington, NM 87401

Facility Or: McCroden A #2
Well Name _____

Location: Unit or Qtr/Qtr Sec 0 Sec 9 T 25N R 3W County Rio Arriba

Pit Type: Separator _____ Dehydrator _____ Other Production Unit/Tank

Land Type: BLM _____ State _____ Fee X Other _____

Pit Location: Pit dimensions: Length 38 ft, width 45 ft, depth 7 ft
(Attach diagram) Reference: wellhead X other _____

Footage from reference: 100 ft

Direction from reference: 10 Degrees _____ East North X
of _____
X West South _____

↑

JAN 2000
RECEIVED
OIL CON. DIV
DIST. 3

Depth to Ground Water: <u>>100 feet</u> (vertical distance from contaminants to seasonal highwater elevation of ground water)	<u> </u> Less than 50 feet	(20 points)	
	<u> </u> 50 ft to 99 feet	(10 points)	
	<u>X</u> Greater than 100 feet	(0 points)	<u>0</u>

Wellhead Protection Area: (less than 200 feet from a private domestic water source, or: less than 1000 feet from all other water sources).	<u> </u> Yes	(20 points)	
	<u>X</u> No	(0 points)	<u>0</u>

Distance to Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches.)	<u> </u> Less than 200 feet	(20 points)	
	<u> </u> 200 feet to 1000 feet	(10 points)	
	<u>X</u> Greater than 1000 feet	(0 points)	<u>0</u>

P:\pits\Prrc@WKJ **RANKING SCORE (TOTAL POINTS):** 0

Date Remediation Started: 8/21/98 Date Completed: 1/27/99

Excavation Approx. cubic yards 413

Landfarmed Insitu Bioremediation _____

Other _____

Remediation Method: Onsite Offsite _____

(Check all appropriate sections)

General Description of Remedial Action : On 8/24/98, the pit was excavated to a depth of 7 feet where bedrock was encountered. A soil sample was obtained from the center bottom of the pit at a depth of 7 feet utilizing U.S.E.P.A. protocol and evaluated for BTEX and GRO/DRO analysis. Excavated soils were landfarmed on site. On 1/27/99, the landfarm was tested and provided concentrations below NMOCD guidelines.

Ground Water Encountered: No Yes _____ Depth _____

Final Pit:

Closure Sampling:
(if multiple samples,
attach sample results
and diagram of sample
locations and depths)

Sample location Center Bottom

Sample depth 7 feet (Bedrock)

Sample date 8/24/98

Sample time 12:35

Sample Results

Benzene(ppm) 0.025

Total BTEX (PPM) 0.925

Field Headspace (ppm) 319

TPH 1355

Ground Water Sample: Yes _____ No (if yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETED TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DATE 12/22/98 PRINTED NAME Virgil Chavez

SIGNATURE Virgil Chavez and TITLE Environmental Specialist

Location: <u>McCrodan A # 2</u>		Overview of Location and Sampling:																																								
Quad: <u>O</u> Section: <u>9</u>																																										
Range: <u>3 W</u> Township: <u>25 N</u>		Pit Profile: East to West:																																								
Pit: Production Unit/Tank (pit # 1) Reference: 100' N 10 W from wellhead Initial Size: 20' x 20' x 2' deep Final Size: 38' x 45' x 7' deep Yds. Excavated: 413 cy		Pit Profile: North to South:																																								
Depth to Groundwater: >100' Nearest Water Source: >1000' Nearest Surface Water: >1000' NMOCD Ranking Score: 0 TPH Closure Standard: 5000	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Sample #</th> <th style="width: 20%;">Location</th> <th style="width: 10%;">OVM</th> </tr> </thead> <tbody> <tr><td>1</td><td>N Wall @ 5'</td><td>3.1</td></tr> <tr><td>2</td><td>S Wall @ 5'</td><td>115</td></tr> <tr><td>3</td><td>E Wall @ 5'</td><td>7.3</td></tr> <tr><td>4</td><td>W Wall @ 4'</td><td>198</td></tr> <tr><td>5</td><td>C Bottom @ 7'</td><td>319</td></tr> <tr><td>6</td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td></tr> <tr><td>11</td><td></td><td></td></tr> <tr><td>12</td><td></td><td></td></tr> </tbody> </table>	Sample #	Location	OVM	1	N Wall @ 5'	3.1	2	S Wall @ 5'	115	3	E Wall @ 5'	7.3	4	W Wall @ 4'	198	5	C Bottom @ 7'	319	6			7			8			9			10			11			12			Comments: Top soil - 5' Soil is moist, dark brown, sandy/loam with gray staining and a strong hydrocarbon odor. 5' - 7' Soil is moist, gray, packed sand with moderate staining and a moderate hydrocarbon odor. 7' Bedrock - Solid sandstone A sample from the center bottom at 7' was sent to IML for GRO/DRO and BTEX analysis.	
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GASOLINE RANGE ORGANICS - GRO

Taurus Exploration U.S.A., Inc.

Project ID:	McCroden A#2 Tank Pit	Report Date:	09/10/98
Sample ID:	C. Bottom @ 7'	Date Sampled:	08/24/98
Lab ID:	0398G04868	Date Received:	08/25/98
Sample Matrix:	Soil	Date Analyzed:	08/28/98
Condition:	Cool/Intact		

TPH GAS-RANGE (MOD EPA 8015)	RESULT	DETECTION LIMIT
Gasoline-Range Petroleum Hydrocarbons	1200	5.0 mg/kg

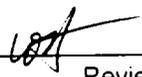
ND - Analyte not detected at the stated detection limit.

Reference:

Comments:



Reported By:



Reviewed By:

Diesel Range Organic - DRO**Taurus Exploration U.S.A., Inc.**

Project ID:	McCroden A#2 Tank Pit	Report Date:	08/31/98
Sample ID:	Mc. A#2 T.P.C. Btm @ 7'	Date Sampled:	08/24/98
Lab ID:	0398G04868	Date Received:	08/25/98
Sample Matrix:	Soil	Date Analyzed:	08/28/98
Condition:	Cool/Intact		

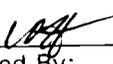
TPH DIESEL-RANGE (MOD EPA 8015)	RESULT mg/Kg	DETECTION LIMIT
Diesel-Range Petroleum Hydrocarbons	155	5.0 mg/kg
Total Extractable Petroleum Hydrocarbons	164	5.0 mg/kg

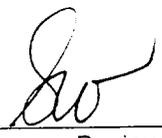
Quality Control: Surrogate Percent Recovery Acceptance Limits

O-Terphenyl 101% 70-130%

Comments: Hydrocarbon pattern in the gasoline range.

Reference: USEPA Manual SW-846, Methods, 3510,3550a, 8015Mod, Revision 2, 1996.
Hydrocarbons in Soil - 8015AZ, Revision 0, 1998.


Reported By:


Reviewed By:

VOLATILE AROMATIC HYDROCARBONS**Taurus Exploration U.S.A., Inc.**

Project ID:	McCroden A#2 Tank Pit	Report Date:	09/01/98
Sample ID:	C. Bottom @ 7'	Date Sampled:	08/24/98
Lab ID:	0398G04868	Time Sampled:	12:35
Sample Matrix:	Soil	Date Received:	08/25/98
Condition:	Cool/Intact	Date Extracted:	NA
		Date Analyzed:	08/28/98

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	25	10.0
Toluene	170	50.0
Ethylbenzene	140	50.0
m,p-Xylenes	395	50.0
o-Xylene	195	50.0

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	118%	70%-130%

Reference: Method 5030, Purge and Trap; Method 8021B, Aromatic Volatile Organics; Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Revision 2, December, 1996.

Comments:



Analyst



Review

Client : Taurus Exploration USA Inc.

Date Started : August 21, 1998 Date Completed : January 27, 1999

<p>Location : <u>McCroden A # 2</u></p> <p>Quad : <u>0</u> Section : <u>9</u></p> <p>Township: <u>25 N</u> Range: <u>3 W</u></p> <p>Pit : <u>Prod. Unit/Tank/Blow Pit</u></p> <p>Reference <u>30' S 10 E from wellhead.</u></p> <p>Size: <u>100' x 60' x 2'</u></p> <p>Yds : <u>428</u></p> <p><u>3</u> <u>5 - Point Composites</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Sample #</th> <th>Location</th> <th>OVM</th> </tr> </thead> <tbody> <tr><td>1</td><td>Comp 1</td><td>1.1</td></tr> <tr><td>2</td><td>Comp 2</td><td>36</td></tr> <tr><td>3</td><td>Comp 3</td><td>3.3</td></tr> <tr><td>4</td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td></tr> <tr><td>11</td><td></td><td></td></tr> <tr><td>12</td><td></td><td></td></tr> </tbody> </table> <p>Comments : <u>Soil is moist, pale brown, sandy/loam, with minor staining and a slight hydrocarbon odor.</u> <u>A sample from composite # 2 was sent to IML for GRO/DRO analysis</u></p>	Sample #	Location	OVM	1	Comp 1	1.1	2	Comp 2	36	3	Comp 3	3.3	4			5			6			7			8			9			10			11			12			<p>Overview of Landfarm and Sampling :</p>
Sample #	Location	OVM																																						
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Environmental Specialist : <u>JE</u>																																								

Ranking Score : 0 Closure Standard : 5000 ppm

Cimarron Oilfield Services



Phone (505) 326-4737 Fax (505) 325-4132

2506 West Main Street, Farmington, NM 87401

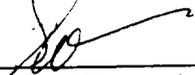
Client: Energen Resources
Project: McGroden A #2
Sample ID: Landfarm Comp 1
Lab ID: 0399W00620
Matrix: Soil
Condition: Warm

Date Reported: 02/02/99
Date Sampled: 01/27/99
Date Received: 01/27/99
Date Analyzed: 01/28/99

Parameter	Analytical Result	PQL	Units
METHOD 8015-GASOLINE RANGE ORGANICS			
Gasoline Range Organics	<5	5	mg/Kg
Gasoline Range Organics as Gasoline	<5	5	mg/Kg

Reference: GRO - USEPA Method for Determination of Gasoline Range Organics, Revision 5, February 1992.

WTPH-G Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Department of Ecology, Revision 3, October 1991.

Reviewed By: 
Sharon Willams, Organic Lab Supervisor



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

2506 West Main Street, Farmington, NM 87401

Client: Energen Resources
Project: McGroden A #2
Sample ID: Landfarm Comp 1
Lab ID: 0399W00620
Matrix: Soil
Condition: Warm

Date Reported: 02/02/99
Date Sampled: 01/27/99
Date Received: 01/27/99
Date Analyzed: 02/01/99

Table with 4 columns: Parameter, Analytical Result, PQL, Units. Row 1: METHOD 8015 - DIESEL RANGE ORGANICS. Row 2: Diesel Range Organics, <5, 5, mg/Kg. Row 3: Diesel Range Organics as Diesel, <5, 5, mg/Kg.

Table with 3 columns: Quality Control - Surrogate Recovery, %, QC Limits. Row 1: o-Terphenyl(SUR-8015), 71, 70 - 130.

Reference: DRO - USEPA Method for Determination of Diesel Range Organics. Revision 2, February 1992.

WTPH-D Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Department of Ecology, Revision 3, October 1991.

Reviewed By: [Signature] Sharon Willams, Organic Lab Supervisor

