

Jicarilla Apache Tribe
Environmental Protection Office
P.O. Box 507
Dulce, New Mexico 87528

Pit Remediation and Closure Report

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Dehy - OK

RECEIVED
OCT 13 1993
OIL CON. DIV.
DIST. 3

Operator: Elm Ridge Resources		Telephone: (505) 326-7099	
Address: 312 W. La Plata, Farmington, NM 87401			
Facility or Well Name: Jicarilla Apache 12 - F			
Location: Unit or Qtr/QTR		Sec "L" Sec 17, T 24 N, R 5 W County Rio Arriba	
Pit Type: Separator:	Dehydrator:	Other: X - Abandoned Separator/Prod. Tank Pit	
Land Type: Range			
Pit Location: Pit dimensions: length: 40 ft width: 35 ft depth: 15 ft			
(Attach Diagram)			
Reference:		wellhead: other: X Apache 12 E Dry Hole Marker	
Footage from reference:		135 feet	
Direction from reference:		60 Degrees X East North X	
		West South	
Depth To Groundwater: Less than 50 feet (20 points)			
(Vertical distance from 50 feet to 99 feet (10 points)			
contaminants to seasonal Greater than 100 feet (0 points) 0			
high water elevations of groundwater)			
Distance to an Ephemeral Stream: Less than 100 feet (10 points)			
(Downgradient dry wash greater than Greater than 100 feet (0 points) 0			
ten feet in width)			
Distance to Nearest Lake, Playa, or Watering Less than 100 feet (10 points)			
Pond: (Downgradient lakes, playas, and Greater Than 100 feet (0 points) 0			
livestock or wildlife watering ponds)			
Wellhead Protection Area:		Yes (20 points)	
(Less than 200 feet from a private		No (0 points) 0	
domestic water source, or less than			
1000 feet from all other water sources)			
Distance To Surface Water: Less than 100 feet (20 points)			
(Horizontal distance to perennial 100 feet to 1000 feet (10 points)			
lakes, ponds, rivers, streams, creeks, Greater than 1000 feet (0 points) 0			
irrigation canals and ditches.)			
RANKING SCORE (TOTAL SCORE):			0

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Dulce, New Mexico 87528

Pit Remediation and Closure Report

Date Remediation Started: 8/5/99		Date Completed 8/9/99	
Remediation Method: (Check all appropriate sections)	Excavation:	☒	Approx. cubic yards: 761
	Landfarmed:	☒	Insitu Bioremediation:
	Other:		
Remediation Location: (i.e. landfarmed on site, name and location of off site location)	On-site:	☒	Off-site:
General Description of Remedial Action: Soil was excavated and landfarmed on location.			
Groundwater Encountered: No: ☒ Yes: _____ Depth: _____			
Final Pit Closure Sampling: (If multiple samples, attach sample results and diagram of sample locations and depths.)	Sample location: Pit Bottom @ 15 feet below surface. Pit walls were analyzed for Headspace (see attachment).		
	Sample depth:	15 feet	
	Sample date:	8/9/99	Sample time: 15:00
Sample Results:			
Soil:		Water:	
Benzene (ppm)	ND	Benzene (ppb)	
Total BTEX (ppm)	ND	Toluene (ppb)	
Field Headspace (ppm)	28	Ethylbenzene (ppb)	
TPH (ppm)	ND	Total Xylenes (ppb)	
Groundwater Sample: (If yes, attach sample results.)	Yes: _____	No: ☒	
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF			
DATE: August 16, 1999		Virgil Chavez	
SIGNATURE: <i>Virgil Chavez</i>		AND TITLE: Environmental Specialist	
AFTER REVIEW OF THE PIT CLOSURE INFORMATION PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE			
APPROVED: Yes: ☒ No: _____ (Reason)			
SIGNED: <i>Ken C. M...</i>		DATE: 8-17-99	

Location: <u>Jicarilla Apache 12 - F</u>		Overview of Location and Sampling:																																						
Quad: <u>L</u>	Section: <u>17</u>																																							
Range: <u>5 W</u>	Township: <u>24 N</u>																																							
<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>N. Wall @ 12'</td><td>10</td></tr> <tr><td>2</td><td>S. Wall @ 12'</td><td>8</td></tr> <tr><td>3</td><td>E. Wall @ 12'</td><td>11</td></tr> <tr><td>4</td><td>W. Wall @ 12'</td><td>4.4</td></tr> <tr><td>5</td><td>C. Bottom @ 15'</td><td>28</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 @ 12'	10	2	S. Wall @ 12'	8	3	E. Wall @ 12'	11	4	W. Wall @ 12'	4.4	5	C. Bottom @ 15'	28	6			7			8			9			10			11			12
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Pit: Separator/Prod-Tank Pit Reference: 135' N 60° E from Apache 12 E marker. Initial Size: 15' x 15' x 2' deep Final Size: 40' x 35' x 15' deep Yds. Excavated: 761 cy Depth to Groundwater: >100' Nearest Water Source: >1000' Nearest Surface Water: >1000' Nearest Ephemeral Stream: >1000' EPO Ranking Score: 0 TPH Closure Standard: 5000		Comments: Top soil - 15' Soil is moist, tan colored, sandy/clay/loam with dark brown staining, and a strong hydrocarbon odor. 15' Soil is moist, brown, tightly pack shale with no staining and no detectable hydrocarbon odor. A sample from the center bottom at 15' was sent to "On Site Technologies" for 8015 GRO/DRO and 8021 BTEX analysis.																																						
Pit Profile: North to South: 1 5 2 1 5 2		Pit Profile: East to West: 3 5 4 3 5 4																																						

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 11-Aug-99

Client:	Cimarron Oilfield Service	Client Sample Info:	Jicarilla Apache 12-F Prod/Sep Pit
Work Order:	9908022	Client Sample ID:	Jic Apache 12-F C. Bottom@15ft.
Lab ID:	9908022-01A	Matrix:	SOIL
Project:	Jicarilla Apache 12-F Prod/Sep Pit	Collection Date:	08/09/1999 3:00:00 PM
		COC Record:	10239

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015B				Analyst: DC
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	08/10/1999
GASOLINE RANGE ORGANICS		SW8015B				Analyst: DM
T/R Hydrocarbons: C6-C10	ND	0.18		mg/Kg	1	08/10/1999
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DC
Benzene	ND	1		µg/Kg	1	08/11/1999
Toluene	ND	2		µg/Kg	1	08/11/1999
Ethylbenzene	ND	1		µg/Kg	1	08/11/1999
m,p-Xylene	ND	2		µg/Kg	1	08/11/1999
o-Xylene	ND	1		µg/Kg	1	08/11/1999

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

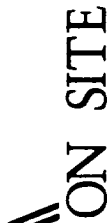
E - Value above quantitation range

Surrogate - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

TECHNOLOGIES SERVING THE FARMINGTON AREA



1

Page: _____ of _____

Page: _____ of _____

Purchase Order No.:		Project No.:	
Name: <u>Edwin Ridge Resources</u>		Dept.:	
Company:			
Address:			
City, State, Zip:			
PROJECT LOCATION:		Project: <u>Apex 12-4 Road / Exp Pit</u>	
SAMPLER'S SIGNATURE:			
SAMPLE IDENTIFICATION		SAMPLE	
DATE		TIME	MATRIX
PRES.			
RESULTS TO		Number of Containers	
Name: <u>Virgil Chavez</u>		Title: <u>Manager</u>	
Company: <u>Chavez Environmental</u>			
Mailing Address: <u>1000 E. 1st St.</u>			
City, State, Zip: <u>Albuquerque, NM 87101</u>			
Telephone No.:		Telefax No.:	
ANALYSIS REQUESTED		LAB ID	
Date/Time: <u>10/10/01</u>		Date/Time:	
Received by: <u>[Signature]</u>		Date/Time:	
Received by:		Date/Time:	
Received by:		Date/Time:	
Rush		24-48 Hours	10 Working Days
Special Instructions / Remarks:			
Authorized by: _____		Date: _____	
(Client Signature <u>Must</u> Accompany Request)			

Jicarilla Apache Tribe
Environmental Protection Office
P.O. Box 507
Dulce, New Mexico 87528

Pit Remediation and Closure Report

RECEIVED
OCT 13 1999
OIL CON. DIV.
DIST. 3

Operator:	Elm Ridge Resources	Telephone:	(505) 326-7099
Address:	312 W. La Plata, Farmington, NM 87401		
Facility or Well Name:	Jicarilla Apache 12 - F		
Location:	Unit or Qtr/QTR Sec "L" Sec 17, T 24 N, R 5 W County		Rio Arriba
Pit Type:	Separator: Dehydrator: X Other:		
Land Type:	Range		

Pit Location:	Pit dimensions:	length: 25 ft	width: 63 ft	depth: 21 ft
(Attach Diagram)				
	Reference:	wellhead:	other: X Apache 12 E Dry Hole Marker	
	Footage from reference:	155 feet		
	Direction from reference:	10	Degrees	X East North
				of
			West	South X

Depth To Groundwater:	Less than 50 feet	(20 points)	
(Vertical distance from	50 feet to 99 feet	(10 points)	
contaminants to seasonal	Greater than 100 feet	(0 points)	0
high water elevations of			
groundwater)			
Distance to an Ephemeral Stream:	Less than 100 feet	(10 points)	
(Downgradient dry wash greater than	Greater than 100 feet	(0 points)	0
ten feet in width)			
Distance to Nearest Lake, Playa, or Watering	Less than 100 feet	(10 points)	
Pond: (Downgradient lakes, playas, and	Greater Than 100 feet	(0 points)	0
livestock or wildlife watering ponds)			
Wellhead Protection Area:	Yes	(20 points)	
(Less than 200 feet from a private	No	(0 points)	0
domestic water source, or less than			
1000 feet from all other water sources)			
Distance To Surface Water:	Less than 100 feet	(20 points)	
(Horizontal distance to perennial	100 feet to 1000 feet	(10 points)	
lakes, ponds, rivers, streams, creeks,	Greater than 1000 feet	(0 points)	0
irrigation canals and ditches.)			
RANKING SCORE (TOTAL SCORE):			0

Jicarilla Apache Tribe
Environmental Protection Office
P.O. Box 507
Dulce, New Mexico 87528

Pit Remediation and Closure Report

Date Remediation Started:	8/9/99	Date Completed	8/11/99
Remediation Method:	Excavation:	X	Approx. cubic yards: 1208
(Check all appropriate sections)	Landfarmed:	X	Insitu Bioremediation:
	Other:		
Remediation Location:	On-site:	X	Off-site:
(I.e. landfarmed on site, name and location of off site location)			
General Description of Remedial Action: Soil was excavated and landfarmed on location.			
Groundwater Encountered: No: X Yes: Depth:			
Final Pit Closure Sampling:	Sample location: Pit Bottom @ 21 feet below surface. Pit walls were analyzed for Headspace (see attachment).		
(If multiple samples, attach sample results and diagram of sample locations and depths.)	Sample depth:	21 feet	
	Sample date:	8/11/99	Sample time: 15:00
Sample Results:			
<u>Soil:</u>		<u>Water:</u>	
Benzene (ppm)	ND	Benzene (ppb)	
Total BTEX (ppm)	1.18	Toluene (ppb)	
Field Headspace (ppm)	540	Ethylbenzene (ppb)	
TPH (ppm)	232	Total Xylenes (ppb)	
Groundwater Sample:	Yes:	No: X	
(If yes, attach sample results.)			
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF			
DATE:	August 16, 1999	Virgil Chavez	
SIGNATURE:	AND TITLE: Environmental Specialist		
AFTER REVIEW OF THE PIT CLOSURE INFORMATION PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE			
APPROVED: Yes: X No: (Reason)			
SIGNED: K. C. M. [Signature]		DATE: 8-17-99	

Location : <u>Jicarilla Apache 12 - F</u> Quad : <u>L</u> Section : <u>17</u> Range : <u>5 W</u> Township : <u>24 N</u>		Overview of Location and Sampling : 																																								
Pit : <u>Dehydrator Pit</u> Reference : <u>155' S 10' E from Apache 12 E marker.</u> Initial Size : <u>15' x 15' x 2' deep</u> Final Size : <u>25' x 63' x 21' deep</u> Yds. Excavated : <u>1208 cy</u> Depth to Groundwater : <u>>100'</u> Nearest Water Source : <u>>1000'</u> Nearest Surface Water : <u>>1000'</u> Nearest Ephemeral Stream : <u>>1000'</u> EPO Ranking Score : <u>0</u> TPH Closure Standard : <u>5000</u>		<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>N. Wall @ 17'</td><td>132</td></tr> <tr><td>2</td><td>S. Wall @ 17'</td><td>181</td></tr> <tr><td>3</td><td>E. Wall @ 17'</td><td>30</td></tr> <tr><td>4</td><td>W. Wall @ 17'</td><td>40</td></tr> <tr><td>5</td><td>C. Bottom @ 21'</td><td>540</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 @ 17'	132	2	S. Wall @ 17'	181	3	E. Wall @ 17'	30	4	W. Wall @ 17'	40	5	C. Bottom @ 21'	540	6			7			8			9			10			11			12		
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Comments : <u>Top soil - 21' Soil is moist, tan colored, sandy/clay/loam with dark brown staining, and a strong hydrocarbon odor.</u> <u>21' Soil is moist, brown, sandy/loam with no staining and a slight hydrocarbon odor.</u> <u>A sample from the center bottom at 21' was sent to "On Site Technologies" for 8015 GRO/DRO and 8021 BTEX analysis.</u>		Pit Profile : East to West : 																																								



ANALYTICAL REPORT

Date: 16-Aug-99

Client:	Cimarron Oilfield Service	Client Sample Info:	Jicarilla Apache 12-F Dehy Pit
Work Order:	9908029	Client Sample ID:	Jicarilla Apache 12-F @ 21ft.
Lab ID:	9908029-01A	Matrix:	SOIL
Project:	Jicarilla Apache 12-F	Collection Date:	08/11/1999 3:00:00 PM
		COC Record:	5730

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015B				Analyst: DC
T/R Hydrocarbons: C10-C28	200	25		mg/Kg	1	08/13/1999
GASOLINE RANGE ORGANICS		SW8015B				Analyst: DC
T/R Hydrocarbons: C6-C10	32	4.5		mg/Kg	25	08/13/1999
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DC
Benzene	ND	50		µg/Kg	50	08/12/1999
Toluene	ND	100		µg/Kg	50	08/12/1999
Ethylbenzene	140	50		µg/Kg	50	08/12/1999
m,p-Xylene	810	100		µg/Kg	50	08/12/1999
o-Xylene	230	50		µg/Kg	50	08/12/1999

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

1 of 1

CHAIN OF CUSTODY RECORD

0025

Date:

Page 1 of 1

TECHNOLOGIES, LTD.  657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

[illegible]

Distribution:	White – On Site	Yellow – LAB	Pink – Sampler	Goldenrod – Client
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JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE
P.O. BOX 507
DULCE, NEW MEXICO 87528

ON-SITE SOIL REMEDIATION REPORT

Operator: <u>Elm Ridge Resources</u> Telephone: <u>(505) 326-7099</u>	
Address: <u>312 W. La Plata, Farmington, NM 87401</u>	
Facility or Well Name: <u>Jicarilla Apache 12-F</u>	
Location: Unit or Qtr/Qtr Sec <u>L</u> Sec <u>17</u> T <u>24N</u> R <u>5W</u> County <u>Rio Arriba</u>	
Land Type: <u>Range</u>	
Date Remediation Started: <u>August 5, 1999</u> Date Completed: <u>September 15, 1999</u>	
Remediation Method: Landfarmed <u>X</u> Approx. cubic yards <u>1,969</u>	
Composed _____	
Other _____	
Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling: Sampling Date: <u>9/15/99</u> Time: <u>11:40</u> Sample Results: Field Headspace (ppm) <u>321.2</u> TPH (ppm) <u>350.93</u> Method <u>8015</u> Other: <u>BTEX Method 8021 = 0.0112 ppm</u>
Distance to an Ephemeral Stream (pts) <u>0</u>	
Distance to Nearest Lake, Playa, or Watering Pond (pts) <u>0</u>	
Wellhead Protection Area (pts) <u>0</u>	
Distance to Surface Water (pts) <u>0</u>	
RANKING SCORE (TOTAL POINTS): <u>0</u>	
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF	
DATE: <u>29 Sept 99</u> PRINTED NAME <u>Frank McDonald</u>	
SIGNATURE <u>[Signature]</u> AND TITLE <u>Environmental Specialist</u>	
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE SOIL REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.	
APPROVED: YES _____ NO _____ (REASON) _____	
SIGNED: _____ DATE: _____	

Location : Jicarilla Apache 12 - F			
Quad :	L	Section :	17
Township:	24 N	Range:	5 W
Pit : Separator / Prod. Tank and Dehydrator Reference : Landfarm # 1 See below Landfarm # 2 See below Size: Landfarm # 1 = 270' x 110' x 8" Landfarm # 2 = 170' x 105' x 8" Cubic yardage: 1969			
Sample #	Location	OVM	
1	Comp 1	20.2	
2	Comp 2	55.0	
3	Comp 3	28.6	
4	Comp 4	24.9	
5	Comp 5	321.2	
6	Comp 6	22.5	
7	Comp 7	84.0	
8	Comp 8	14.1	
9	Comp 9	26.8	
10			
11			
12			
9 5 - Point Composites			
Comments : References: Landfarm # 1 surrounds the Apache Federal 12 E dry hole marker. See drawing. Landfarm # 2 is 120' N 35' W from Jicarilla Apache 12 - F wellhead, approximately 1000' North of Landfarm # 1. Soil is moist, pale brown, clay/loam, with no visible staining or detectable hydrocarbon odor. A sample from composite # 5 was sent to "On-Site Technologies" laboratory for GRO/DRO and BTEX analysis. Environmental Specialist : VEC			

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 28-Sep-99

Client:	Cimarron Oilfield Service	Client Sample Info:	Jicarilla Apache 12-F LF
Work Order:	9909058	Client Sample ID:	Landfarm Comp. #5
Lab ID:	9909058-01A	Matrix:	SOIL
Project:	Jicarilla Apache 12-F LF	Collection Date:	09/15/1999 11:40:00 AM
		COC Record:	5733

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015B				Analyst: DC
T/F: Hydrocarbons: C10-C28	350	25		mg/Kg	1	09/24/1999
GASOLINE RANGE ORGANICS		SW8015B				Analyst: DM
T/F: Hydrocarbons: C6-C10	0.93	0.18		mg/Kg	1	09/16/1999
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DM
Benzene	ND	1		µg/Kg	1	09/24/1999
Toluene	ND	2		µg/Kg	1	09/24/1999
Ethylbenzene	1.9	1		µg/Kg	1	09/24/1999
m,p-Xylene	7.6	2		µg/Kg	1	09/24/1999
o-Xylene	1.7	1		µg/Kg	1	09/24/1999

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

