

JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE
P.O. BOX 507
DULCE, NEW MEXICO 87528

STANDARD COPY 1
NATURAL RESOURCES DEPT
OIL & GAS ADMINISTRATION

DEC

PIT REMEDIATION AND CLOSURE REPORT

APPROVED

Operator: ELM RIDGE RESOURCES Telephone: 326-7099
Address: 312 W. La Plata Street, Farmington, NM 87401
Facility or Well Name: JICARILLA APACHE "H" TRACT 1 WELL 3
Location: Unit or Qtr/Qtr Sec A Sec 05 T23N R2W County RIO ARriba
Pit Type: Separator ___ Dehydrator ___ Other BLOW ___
Land Type: _____ ° _____

Pit Location: Pit dimensions: length 22', width 22', depth 11'
(Attach diagram)
Reference: wellhead X, other _____
Footage from reference: 72'
Direction from reference: 45 Degrees _____ of _____
NW X West South _____

Depth To Groundwater: (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet	(20 points)	<u>0</u>
	50 feet to 99 feet	(10 points)	
	Greater than 100 feet	(0 points)	

Distance to an Ephemeral Stream	Less than 100 feet	(10 points)
(Downgradient dry wash greater than ten feet in width)	Greater than 100 feet	(0 points) <u>0</u>

Distance to Nearest Lake, Playa, or Watering Pond Less than 100 feet (10 points)
(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)	<u>0</u>
irrigation canals and ditches)			

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: 10/23/97 Date Completed: 10/30/97

Remediation Method: Excavation X Approx. cubic yards 200 CY

(Check all appropriate sections)

Landfarmed X

Insitu Bioremediation _____

Other _____

Remediation Location: Onsite X Offsite _____
(i.e. landfarmed onsite,
name and location of
offsite facility)

General Description of Remedial Action: REMOVED CONTAMINATED SOIL USING
A BACKHOE AND SPREAD IN SOIL FARM ON LOCATION

Groundwater Encountered: No X Yes _____ Depth _____

Final Pit: Sample location Pit Bottom - CENTER 4 BANKS N,S,E,W
Closure Sampling: (SANDSTONE AT 11-12') TPH by EPA 418.1
(if multiple samples,
attach sample results
and diagram of sample
locations and depths) Sample depth 11' ND PPM
Sample date 10/29/97 Sample time 13:45 PID <20.0 PPM

Sample Results

Soil: Benzene (ppm)	<u>ND</u>	Water: Benzene (ppb)	<u>N/A</u>
Total BTEX (ppm)	<u>1.9</u>	Toluene (ppb)	<u>N/A</u>
Field Headspace (ppm)	<u>2000</u>	Ethylbenzene (ppb)	<u>N/A</u>
TPH 418.1 (ppm)	<u>67</u>	Total Xylenes (ppb)	<u>N/A</u>

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 11/23/98 PRINTED NAME SHAWN ADAMS

SIGNATURE [Signature] AND TITLE ENV. CONSULTANT

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: [Signature] DATE: 11-25-98

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Attn: **Shawn Adams**
Company: **Contract Environmental Services, Inc.**
Address: **P.O. Box 3376**
City, State: **Farmington, NM 87499**

Date: **31-Oct-97**
COC No.: **6549**
Sample No.: **16698**
Job No.: **2-1000**

Project Name: **Jicarilla Apache 'H' Tract 1, Well #3**
Project Location: **JAHT1-3-100; Pit Bottom @ 11', Bedrock**
Sampled by: **DGM** Date: **29-Oct-97** Time: **13:45**
Analyzed by: **HR** Date: **31-Oct-97**
Sample Matrix: **Soil**

Laboratory Analysis

Parameter	Results as Received	Limit of Quantitation	Unit of Measure	Method
Total Petroleum Hydrocarbons, TPH	67	25	mg/kg	EPA Method 418.1

ND - Not Detected at Limit of Quantitation

Quality Assurance Report

Laboratory Fortified Blank/Spike Soil

Laboratory Identification	Analyzed Value	Acceptable Range	Unit of Measure
Laboratory Fortified Blank Soil - QCBS2	ND	ND	mg/kg
Laboratory Fortified Spike Soil - QCSS1	890	800-1200	mg/kg

Duplication

Laboratory Identification	RPD	Limit RPD
16698-6549	14.9	15.0

Approved by: 

Date: **11/4/97**

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Attn: *Shawn Adams*
Company: *Contract Environmental Services, Inc.*
Address: *P.O. Box 3376*
City, State: *Farmington, NM 87499*

Date: *4-Nov-97*
COC No.: *6549*
Sample No.: *16698*
Job No.: *2-1000*

Project Name: *Jicarilla Apache 'H' Tract 1, Well #3*
Project Location: *JAHT1-3-100; Pit Bottom @ 11', Bedrock*
Sampled by: *DGM* Date: *29-Oct-97* Time: *13:45*
Analyzed by: *DC* Date: *30-Oct-97*
Sample Matrix: *Soil*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/kg	50	ug/kg
<i>Toluene</i>	110	ug/kg	50	ug/kg
<i>Ethylbenzene</i>	207	ug/kg	50	ug/kg
<i>m,p-Xylene</i>	1470	ug/kg	50	ug/kg
<i>o-Xylene</i>	125	ug/kg	50	ug/kg
	<i>TOTAL</i>	1912	ug/kg	

ND - Not Detected at Limit of Quantitation

Method - SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography

Approved by: *[Signature]*
Date: *11/4/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

TECHNOLOGY READING INSTRUMENTS, INC. 11/4/97

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Attn: **Shawn Adams**
Company: **Contract Environmental Services, Inc.**
Address: **P.O. Box 3376**
City, State: **Farmington, NM 87499**

Date: **4-Nov-97**
COC No.: **6553**
Sample No.: **16751**
Job No.: **2-1000**

Project Name: **Jicarilla Apache 'H' Tract 1, Well #3**
Project Location: **JAHT1-3-200; 4 Bank Comp @ 5'**
Sampled by: **DGM**
Analyzed by: **HR**
Sample Matrix: **Soil**

Date: **30-Oct-97** Time: **14:35**
Date: **4-Nov-97**

Laboratory Analysis

Parameter	Results as Received	Limit of Quantitation	Unit of Measure	Method
Total Petroleum Hydrocarbons, TPH	ND	25	mg/kg	EPA Method 418.1

ND - Not Detected at Limit of Quantitation

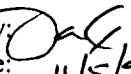
Quality Assurance Report

Laboratory Fortified Blank/Spike Soil

Laboratory Identification	Analyzed Value	Acceptable Range	Unit of Measure
Laboratory Fortified Blank Soil - QCBS2	ND	ND	mg/kg
Laboratory Fortified Spike Soil - QCSS1	888	800-1200	mg/kg

Duplication

Laboratory Identification	RPD	Limit RPD
16751-6553	<LOQ	15.0

Approved by: 
Date: **11/5/97**

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○
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Date: 10/30/17

Date:

TECHNOLOGIES, LTD.

Purchase Order No.:		Job No.		Name		Company		Title	
SEND INVOICE TO		Name		Company		Mailing Address		City, State, Zip	
Address		City, State, Zip		Telephone No.		Telefax No.			
Sinner Adams		LES, Inc.		325-1178					
PO Box 3276		Farmington, NM 87411							
Sampling Location:		Sicarra Apache "H" Tract 2 Well #3							
Sampler:		DGM							
SAMPLE IDENTIFICATION		SAMPLE DATE		MATRIX		PRES.		LAB ID	
JAHT2-3-200 4 bank composite		10/28/11 1130		Soil		None		17 1115-6415	
JAHT2-1-101 4 bank composite		1330		↓		↓		9 1116-1	
JAHT2-1-100 pit bottom @ 10'		1340		↓		↓		65 1117-1	
JAHT1-3-100 pit bottom @ 11', bedrock		10/28/11 1345		↓		↓		200H 1118-1	
Relinquished by:		Date/Time		Received by:		Date/Time		Special Instructions:	
Relinquished by:		Date/Time		Received by:		Date/Time			
Relinquished by:		Date/Time		Received by:		Date/Time			
Method of Shipment:		Rush		24-48 Hours		10 Working Days			
Authorized by:		Date		Date		Date			
(Client Signature Must Accompany Request)									

CHAIN OF CUSTODY RECORD

55

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

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4/15/01

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[illegible]

Distribution:	White – On Site	Yellow – LAB	Pink – Sampler	Goldenrod – Client
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Elm Ridge

10/29/27

JA H Tract 1

Well #3

- arrived on-site @ $\approx$ 0945

- repiped tank; tank has a leak along the bottom seam, will advise client

- pit is 72' from the well head in a direction 45° West of North

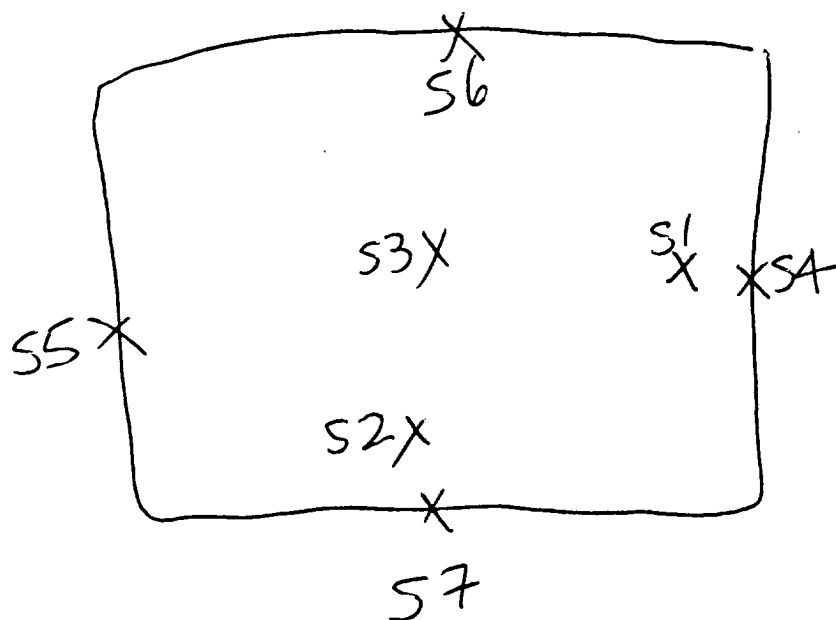
- pit started at 16' x 16' x 3' deep

- hit sandstone/bedrock at $\approx$ 11'-12'

- left site @ $\approx$ 1430

Sample No	Location	Depth (ft)	Conc (ppm)	Remarks
1	pit-bottom-North	7'	320*	hard grey clay/SS
2	" " East	6'	2000+	brown sand
3	" " - middle	11'	2000+	gray sand-bedrock
4	N Bank	5'	44	} above rock
5	S Bank	5'	23	
6	W Bank	5'	50	
7	E Bank	5'	243	

JAH T1-3-100



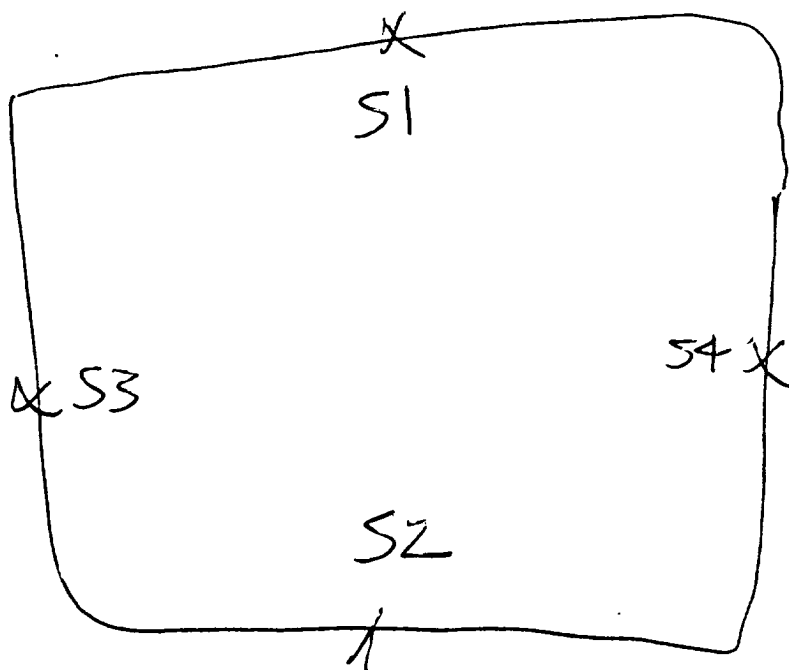
* may be low because it was so hard!

Elm Ridge
 JH H' Tract 1
 Well #3
 10/30/97

- arrived on-site @ ≈ 1000
 - banks being excavated
 - pit is 19' x 22' x 11' deep

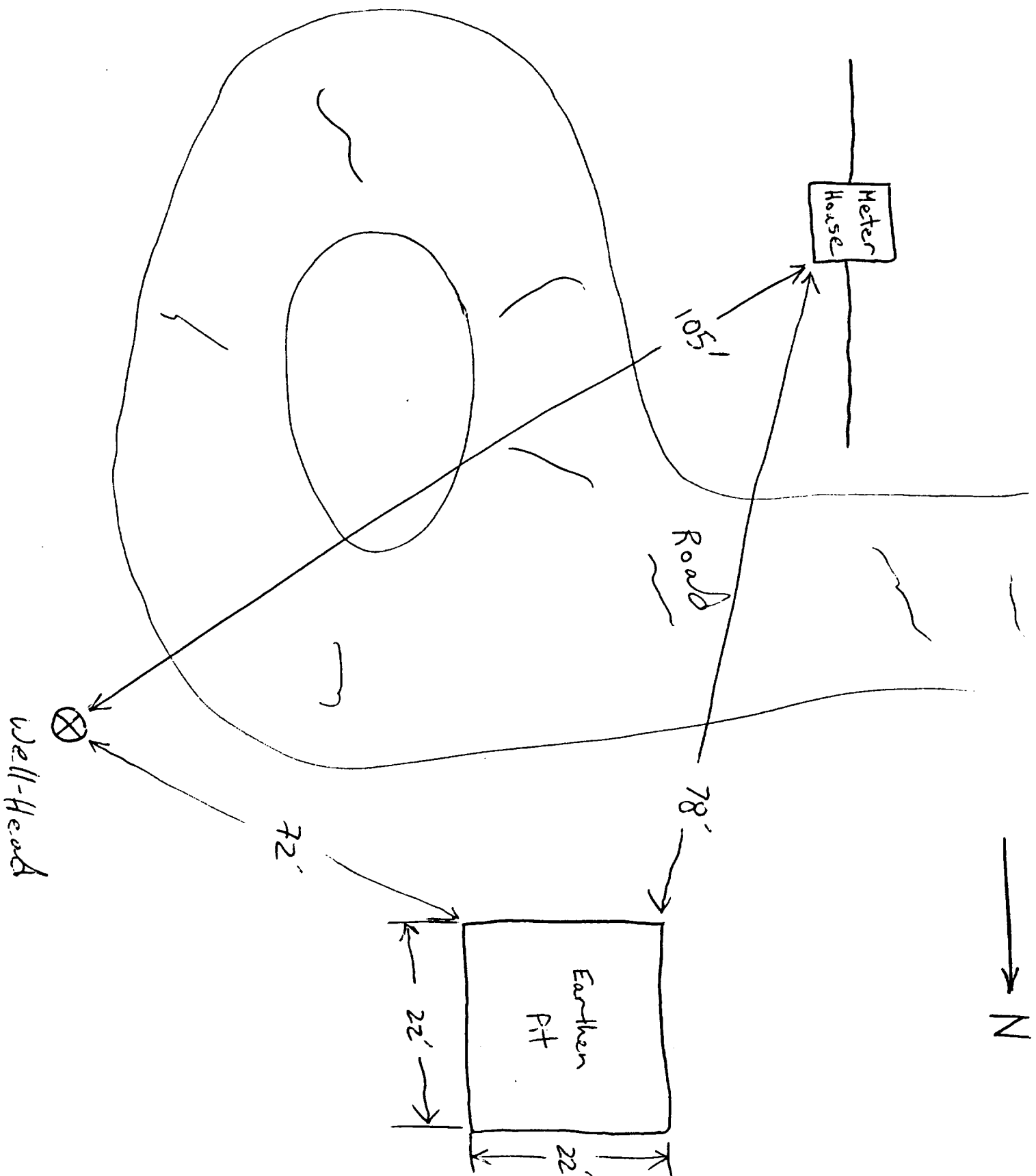
	Sample No	Location	Depth (ft)	Grain Size	Remarks
AHTI-3-200	1	West Bank-Middle	5	12	Brown Sand/Loc
	2	East " "	5	9	" " "
	3	South " "	5	12	" " "
	4	North " "	5	6	Brown/Grey/Cl.

- left site @ ≈ 1505



Elm Ridge
JA 'H' Tract #1
Well #3
10/29/97
Site Diagram

115 115 5-2301-241
00 000100



Elm Ridge
JA H' Tract 1
Well #3
10/23/97

- arrived on-site @ ~1100
- pit had a galv. steel tank in it

- moved tank enough to sample mid-pit @ 4'; I thought it might clear!

↙ Nope

<u>Sample No</u>	<u>Location</u>	<u>Depth</u>	<u>Conc</u>
1	mid-pit	4'	2000+ ppm

- will ask Doug about a ^{temporary} ~~temporary~~ set-up for the tank

valve is
on a timer; so we could move w/o the tank
possibility of spill

JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE
P.O. BOX 507
DULCE, NEW MEXICO 87528

SUBMIT COPY TO
NATURAL RESOURCE DEPT
AND OIL & GAS ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT

APPROVED

Operator: ELM RIDGE RESOURCES Telephone: (505) 326-7099
Address: 312 W. LA PLATA STREET, FARMINGTON, NM 87401
Facility or Well Name: JICARILLA APACHE "H" TRACT 1 WELL 3
Location: Unit or Qtr/Qtr Sec A Sec 5 T 23N R 2W County RIO ARIZONA
Land Type: _____

Date Remediation Started: 10/23/97 Date Completed: 6/17/98
Remediation Method: Landfarmed X Approx. cubic yards 170
Composted _____
Other _____

Depth To Groundwater: (pts.) 0
Distance to an Ephemeral Stream (pts.) 0
Distance to Nearest Lake, Playa, or Watering Pond (pts.) 0
Wellhead Protection Area: (pts.) 0
Distance To Surface Water: (pts.) 0

RANKING SCORE (TOTAL POINTS): 0

Final Closure Sampling:
Sampling Date: 6/17/98 Time: 12:10P
Sample Results:
Field Headspace (ppm) 4.2 / 0.5
TPH GAS (ppm) ND Method BOISM
Other DIE ND
GAS ND
DIE ND

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

DATE 7/1/98 PRINTED NAME SHAWN ADAMS
SIGNATURE [Signature] AND TITLE ENV. CONSULTANT

AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO _____ (REASON) was as per Kf:11

SIGNED: [Signature] DATE: 11-25-98

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 30-Jun-98

Client: Contract Environmental Services, Inc.
Work Order: 9806074
Lab ID: 9806074-06A **Matrix:** SOIL
Project: Pit Remediation

Client Sample Info: Jic. Apache "H" Tract 1 Well 3
Client Sample ID: JAH13-401; Soil Farm NE
Collection Date: 6/17/98 12:10:00 PM
COC Record: 6987

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: HR
TTR Hydrocarbons: C10-C28	ND	25		mg/Kg	1	6/27/98
GASOLINE RANGE ORGANICS		SW8015				Analyst: DC
TTR Hydrocarbons: C6-C10	ND	0.18		mg/Kg	1	6/22/98

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

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— TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT —

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 30-Jun-98

Client:	Contract Environmental Services, Inc.	Client Sample Info:	Jic. Apache "H" Tract 1 Well 3
Work Order:	9806074	Client Sample ID:	JAH13-400; Soil Farm NW
Lab ID:	9806074-05A	Matrix:	SOIL
Project:	Pit Remediation	Collection Date:	6/17/98 12:00:00 PM
		COC Record:	6987

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				Analyst: DC
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	6/26/98
GASOLINE RANGE ORGANICS		SW8015				Analyst: DC
T/R Hydrocarbons: C6-C10	ND	0.18		mg/Kg	1	6/22/98

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

6937

ON SITE

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

Date: 6/14/92

Page 1 of 1

Purchase Order No.:		Job No.		Name		Title	
Name: SHAW ADAMS		Company: SHAW ADAMS		Mailing Address:		City, State, Zip:	
Address: 2030 3376		City, State, Zip: Farmington NM 87499		Telephone No.:		Telefax No.:	
Sampling Location:		J. CARROLL # 71-16		ANALYSIS REQUESTED			
J. CARROLL APACHE "H" TRACT 1 WELL 3		J. CARROLL APACHE "H" TRACT 2 WELL 3					
J. CARROLL APACHE "H" TRACT 2 WELL 3		SAMPLER: SAI ADAMS					
SAMPLE IDENTIFICATION		SAMPLE		MATRIX		PRES.	
		DATE	TIME				
J. C 7116-200 Bottom SE Corner 19'	DEEP	6/14/92	7:07	Soil	20	1.8	7116-200
J. C 7116-701 2 Back Comp South + East		"	7:09	"	"	1.0/0.0	-021
J. C 7116-1000 NE Corner		6/14/92	7:53	"	"	2.5	-021
J. C 7116-1601 NE Wall		"	7:55	"	"	4.0	-021
J. C 7116-400 Soil from NW		6/14/92	12:00	"	"	4.2	-021
J. C 7116-401 Soil from NE		"	12:00	"	"	0.5	-021
J. C 7116-402 Soil from South		"	1:00	"	"	2.9	-021
J. C 7116-403 Soil from East		"	1:00	"	"	16	-021
Relinquished by:		Date/Time: 6/14/92		Received by:		Date/Time: 6/14/92	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Method of Shipment:		Rush		24-48 Hours		10 Working Days	
Authorized by:		Date: 6/14/92		Special Instructions:			

White - Lab Yellow - Lab Pink - Sampler Goldenrod - Client

Elm Ridge Resources

Risk Analysis

Prepared by:

Contract Environmental Services, Inc.

Prepared for:

Oil Conservation Division - District III

Jicarilla Apache Tribe - EPO

Date: 11/23/98

Location: Jicarilla Apache "H" Tract 1 Well 3 Separator Pit

Unit Letter A, Sec 05, T23N, R2W

Lease Number:

Resources

Ground Water: 100 feet +

Closest Surface Water: No down gradient perennial bodies within 1000 feet
(visual inspection of the area)

Water Sources: No private water source is located within 1000 feet
of this site.

Risk Management

Natural Barriers: Natural soil permeability is one natural barrier that
will protect ground water from site contamination.

Additional
Investigation:

This earthen pit had sandstone bedrock at 11-12' of
depth. Field-testing and laboratory analysis was
done on this earthen pit. The results of this
analysis and testing are shown in the following
pages. All data is supported with lab result sheets
and field data sheets found in this closure package.

Additional
Investigation: (continued)

Table 1. Field and laboratory results summary.

	Sample			
	Depth	Field Headspace Results	Laboratory Results	Remarks
	(feet)	(PPM)	(PPM)	
JAHT1- 3-100	11'	2000	TPH = 67.0 B = ND T = .11 E = .21 X = 1.59 Total = 1.9	Pit Bottom
JAHT1- 3-200	5'	<20.0	TPH = ND	4 Banks NSEW

Risk

The following table and conclusion summarize the risk this contamination sources poses to the ground water.

Table 2. Total risk table.

RISK	CHOICE
Extremely Low	X
Low	
Moderate	
High	

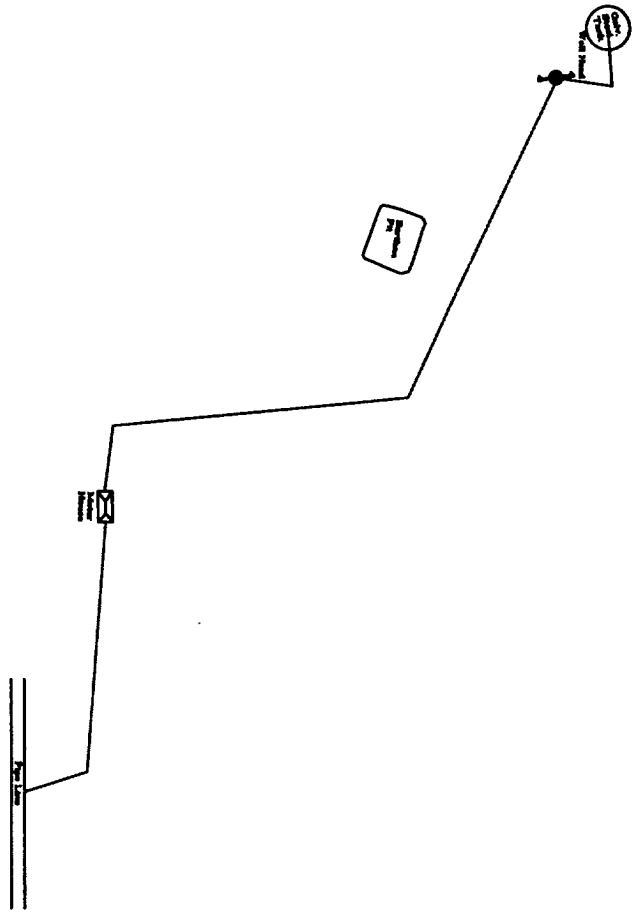
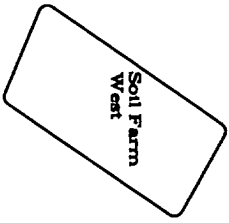
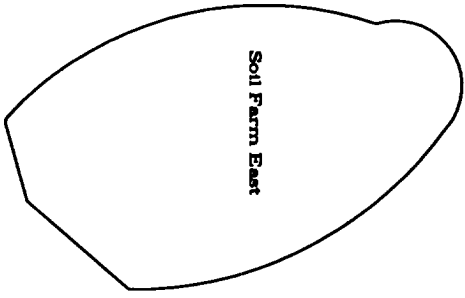
Risk Analysis

Contract Environmental Services, Inc.
Post Office Box 3376
Farmington, New Mexico 87499

The ground water under this site is at almost no danger of being impacted by contamination from this site. From the low laboratory and field-test results and the restrictive geologic soil barriers it is concluded that the risk of resource contamination is extremely low.

Legend:
OL
Water
Gas
Oil/Water
Gas/Oil/Water

Field Data Recorded :	_____	Date: _____
Reviewed :	_____	Date: _____
Drawn :	_____	Date: _____



NOTE: CONNECTING PIPING INSTRUCTIONS ARE APPROXIMATE FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL LINES MUST BE LOCATED ON-SITE BY A QUALIFIED TECHNICIAN.

Elm Ridge Resources
 Jicarilla Apache "H" Tract 1 Well 3
 Unit Letter "A" Sec.5, T23N, R2W

Contract Environmental Services, Inc.
 505-325-1198
 Farmington, New Mexico