

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

Blow - Risk - bedrock

Sep - BT 556
Risk - bedrock

SUBMIT 1 COPY TO
NATURAL RESOURCE DEPT

AND OIL & GAS ADMINISTRATION

PIT REMEDIATION AND CLOSURE REPORT

RECEIVED
AUG 20 1999

OIL CON. DIV.
DULCE 9200

Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9200
Address: 200 Amoco Court, Farmington, NM 87401
Facility or Well Name: JICARILLA APACHE TRIBAL 151-4E
Location: Unit or Qtr/Qtr Sec 4 Sec 3 T 26N R 5W County RIO ARriba
Pit Type: Separator Dehydrator Other Blow
Land Type: RANGE

Pit Location:
(Attach diagram)

Pit dimensions: length 23', width 33', depth 4'
Reference: wellhead X, other
Footage from reference: 75'
Direction from reference: 12 Degrees East of North
X West of South X

Depth To Groundwater:
(Vertical distance from
contaminants to seasonal
high water elevation of
groundwater)

Less than 50 feet (20 points)
50 feet to 99 feet (10 points)
Greater than 100 feet (0 points) 0

Distance to an Ephemeral Stream
(Downgradient dry wash greater than
ten feet in width)

Less than 100 feet (10 points)
Greater than 100 feet (0 points) 0

Distance to Nearest Lake, Playa, or Watering Pond
(Downgradient lakes, playas and
livestock or wildlife watering ponds)

Less than 100 feet (10 points)
Greater than 100 feet (0 points) 0

Wellhead Protection Area:
(Less than 200 feet from a private
domestic water source, or: less than
1000 feet from all other water sources)

Yes (20 points)
No (0 points) 0

Distance To Surface Water:
(Horizontal distance to perennial
lakes, ponds, rivers, streams, creeks,
irrigation canals and ditches)

Less than 100 feet (20 points)
100 feet to 1000 feet (10 points)
Greater than 1000 feet (0 points) 0

RANKING SCORE (TOTAL POINTS): 0

BJ556

Blow PIT

Date Remediation Started: _____ Date Completed: 5/20/98

Remediation Method: Excavation ☒ Approx. cubic yards 100
Check all appropriate Insitu Bioremediation _____
(actions) Landfarmed ☒
Other _____

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

General Description of Remedial Action: Excavation, EXCAVATION mostly BEDROCK.
SPRAYED PIT BOTTOM w/ FERTILIZER. RISK ASSESSED.

Groundwater Encountered: No ☒ Yes _____ Depth _____

Final Pit: Sample location see Attached Documents

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

Sample depth 4'

Sample date 5/20/98 Sample time 1220

Sample Results

Soil: Benzene	(ppm)	_____	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	_____	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>3,678</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	_____	Total Xylenes	(ppb)	_____

Groundwater Sample: Yes _____ No ☒ (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 5/20/98 PRINTED NAME Buddy D. Shaw

SIGNATURE Buddy D. Shaw AND TITLE Environmental Coordinator

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: Kevin M. Shaw DATE: 6-15-98

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>8J556</u> C.D.C. NO: _____
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FIELD REPORT: CLOSURE VERIFICATION	PAGE No: <u>1</u> of <u>1</u>
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LOCATION: NAME: <u>JICA AP. TRIB. 151</u> WELL #: <u>46</u> PIT: <u>BLOW</u> QUAD/UNIT: <u>L SEC: 3</u> TWP: <u>26N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u> QTR/FOOTAGE: <u>NW1/4 SW1/4</u> CONTRACTOR: <u>P & S</u>	DATE STARTED: <u>5/20/98</u> DATE FINISHED: _____ ENVIRONMENTAL SPECIALIST: <u>NV</u>
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EXCAVATION APPROX. <u>23</u> FT. x <u>33</u> FT. x <u>4</u> FT. DEEP.	CUBIC YARDAGE: <u>100</u>
DISPOSAL FACILITY: <u>ON-SITE</u>	REMEDIAL METHOD: <u>LANDFARM</u>
LAND USE: <u>RANGE</u>	LEASE: <u>JIC 151</u> FORMATION: <u>DK</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>75</u> FT. <u>S12W</u> FROM WELLHEAD. DEPTH TO GROUNDWATER: <u>>100'</u> NEAREST WATER SOURCE: <u>>1000'</u> NEAREST SURFACE WATER: <u>>1000'</u> NMOCB RANKING SCORE: <u>0</u> NMOCB TPH CLOSURE STD: <u>5000</u> PPM SOIL AND EXCAVATION DESCRIPTION:
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CHECK ONE:
☒ PIT ABANDONED
☐ STEEL TANK INSTALLED
☐ FIBERGLASS TANK INSTALLED

EXCAVATION CONSIST OF MOSTLY BEDROCK, DK. YELL. BROWN, SOFT @ 2' BELOW GRADE TO VERY HARD @ PIT BOTTOM, NO APPARENT STAINING OR HC ODOR EVIDENT W/IN EXCAVATION, STRONG HC ODOR IN PIT BOTTOM DUM SAMPLE, DUE TO EXCAVATION BEING MOSTLY BEDROCK, NO TPH ANALYSIS WAS CONDUCTED.

EXCAVATION MOSTLY BEDROCK

SCALE

0 4 FT

RISK ASSESSED

FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1220							

PIT PERIMETER

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 3'	0.0
2 @ 2'	0.0
3 @ 2'	0.0
4 @ 2'	18.5
5 @ 4'	3,678

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

PIT PROFILE

TRAVEL NOTES: CALLOUT: <u>5/19/98 - AFTER.</u>	ONSITE: <u>5/20/98 - AFTER.</u>
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Well Name:	Jicarilla Apache Tribal 151 #4E
Well Site location:	Unit L, Sec. 3, T26N, R5W
Pit Type:	Blow Pit
Producing Formation:	Basin Dakota
Pit Category:	Non Vulnerable
Horizontal Distance to Surface Water:	> 1000 ft.
Vicinity Groundwater Depth:	> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 4 feet below grade.

No past or future threat to surface water or groundwater is likely based on the following considerations:

1. Past production fluids were contained locally by a relatively shallow sandstone bedrock located 4 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below sandstone bedrock.
2. Topographic information does not indicate off site lateral fluid migration near the earthen pit.
3. Daily discharge into the earthen pit has been terminated (pit abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.
4. Well site located within the **non-vulnerable area** and is approximately 1.4 miles southeast of the nearest vulnerable area boundary (Cereza Canyon wash).

(Refer to Vigas Canyon Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), photorevised 1982, (vulnerable area boundary developed by Mr. William C. Olson, Hydrogeologist, Environmental Bureau, New Mexico Oil Conservation Division).

Based upon the information given, we conclude that the subsurface lateral impact from the earthen pit is very limited and that the sandstone bottom creates enough of an impermeable barrier as to subdue impact to groundwater below it (please refer to AMOCO's report "Post Excavation Pit Closure Investigation Summary, July, 1995", with cover letter dated November 30, 1995). AMOCO requests pit closure approval on this location.

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

BJ556

SUBMIT 1 COPY TO
NATURAL RESOURCE DEPT
AND OIL & GAS ADMINISTRATION

PIT REMEDIATION AND CLOSURE REPORT

Operator: AMOCO PRODUCTION COMPANY **Telephone:** (505) 326-9200
Address: 200 Amoco Court, Farmington, NM 87401
Facility or Well Name: JICARILLA APACHE TRIBAL 151-4E
Location: Unit or Qtr/Qtr Sec L Sec 3 T 26N R 5W County RIO ARRIBA
Pit Type: Separator ☒ Dehydrator ☐ Other ☐
Land Type: RANGE

Pit Location: Pit dimensions: length 22', width 48', depth 6'
(Attach diagram) Reference: wellhead ☒, other ☐
Footage from reference: 120'
Direction from reference: 54 Degrees ☒ East of North ☐
West of South ☒

Depth To Groundwater: (Vertical distance from contaminants to seasonal high water elevation of groundwater)	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 points)	<u>0</u>
Distance to an Ephemeral Stream (Downgradient dry wash greater than ten feet in width)	Less than 100 feet (10 points) Greater than 100 feet (0 points)	<u>0</u>
Distance to Nearest Lake, Playa, or Watering Pond (Downgradient lakes, playas and livestock or wildlife watering ponds)	Less than 100 feet (10 points) 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)	Yes (20 points) No (0 points)	<u>0</u>
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 100 feet (20 points) 100 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)	<u>0</u>

RANKING SCORE (TOTAL POINTS): 0

BTSSG

SEP. PIT

Date Remediation Started: _____ Date Completed: 5/20/98Remediation Method: Excavation ☒
Check all appropriate (actions) Landfarmed ☒
Other _____
Approx. cubic yards 200
Insitu Bioremediation _____Remediation Location: Onsite ☒ Offsite _____
(i.e. landfarmed onsite, name and location of offsite facility)General Description of Remedial Action: Excavation. EXCAVATION MOSTLY BEDROCK. SPRAYED EAST, WEST SIDEWALLS, + PIT BOTTOM w/ FERTILIZER. RISK ASSESSED.Groundwater Encountered: No ☒ Yes _____ Depth _____

Final Pit:

Closure Sampling:

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

Sample location see Attached DocumentsSample depth 4'Sample date 5/20/98 Sample time 1150

Sample Results

Soil: Benzene	(ppm)	_____	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	_____	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>3,483</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>NA</u>	Total Xylenes	(ppb)	_____

Groundwater Sample: Yes _____ No ☒ (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 5/20/98 PRINTED NAME Buddy D. Shaw
SIGNATURE Buddy D. Shaw AND TITLE Environmental Coordinator

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: Kenn C. M...ell DATE: 6-15-98

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BT556</u> C.D.C. NO: _____
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FIELD REPORT: CLOSURE VERIFICATION	PAGE No: <u>1</u> of <u>1</u>
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LOCATION: NAME: <u>JICA AP. TRIB. 151</u> WELL #: <u>4E</u> PIT: <u>SEP</u>	DATE STARTED: <u>5/20/98</u> DATE FINISHED: _____
QUAD/UNIT: <u>L SEC. 3 TWP. 26N RNG. 5W PM: NM CNTY: RA ST: NM</u>	ENVIRONMENTAL SPECIALIST: <u>NV</u>
QTR/FOOTAGE: <u>NW1/4 SW1/4</u> CONTRACTOR: <u>P & S</u>	

EXCAVATION APPROX. <u>22</u> FT. x <u>48</u> FT. x <u>6</u> FT. DEEP. CUBIC YARDAGE: <u>200</u>
DISPOSAL FACILITY: <u>ON-SITE</u> REMEDIATION METHOD: <u>LANDFARM</u>
LAND USE: <u>RANGE</u> LEASE: <u>JIC 151</u> FORMATION: <u>DK</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>120</u> FT. <u>SS4E</u> FROM WELLHEAD.
DEPTH TO GROUNDWATER: <u>>100'</u> NEAREST WATER SOURCE: <u>>1000'</u> NEAREST SURFACE WATER: <u>>1000'</u>	CHECK ONE: <input checked="" type="checkbox"/> PIT ABANDONED <input type="checkbox"/> STEEL TANK INSTALLED <input type="checkbox"/> FIBERGLASS TANK INSTALLED
NMOCB RANKING SCORE: <u>0</u> NMOCB TPH CLOSURE STD: <u>5000</u> PPM	
SOIL AND EXCAVATION DESCRIPTION:	

EXCAVATION CONSIST OF MOSTLY BEDROCK (SANDSTONE), COLOR VARYING FROM MOD. YELL. BROWN TO MED. GRAY (PIT BOTTOM), SOFT @ 2' BELOW GRADE TO VERY HARD @ PIT BOTTOM STAINING & HC ODOR EVIDENT IN EAST & WEST SIDEWALLS, STRONG HC ODOR IN EAST & WEST SIDEWALL ALONG W/ PIT BOTTOM, DUE TO EXCAVATION BEING MOSTLY BEDROCK, NO TPH ANALYSIS WAS CONDUCTED.

EXCAVATION
MOSTLY
BEDROCK

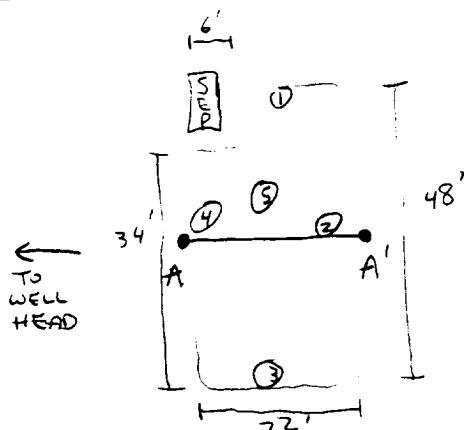
RISK ASSESSED

FIELD 418.1 CALCULATIONS

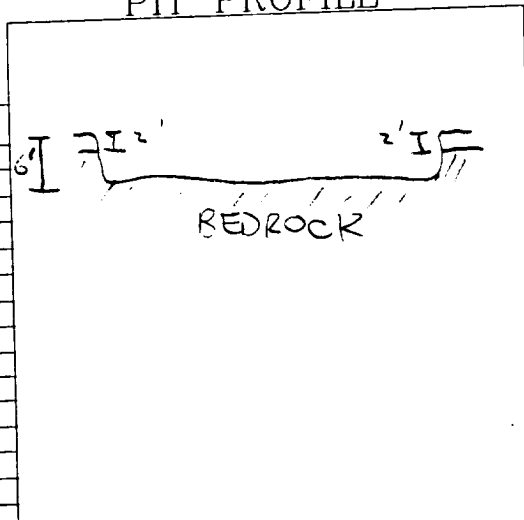
TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1150							

SCALE
0 FT

PIT PERIMETER



PIT PROFILE



OVN
RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 3'	113.9
2 @ 3'	2,580
3 @ 2'	0.0
4 @ 4'	3,483
5 @ 6'	2,817

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

TRAVEL NOTES: CALLOUT: 5/19/98 - AFTER. ONSITE: 5/20/98 - MORN.

Well Name:

Jicarilla Apache Tribal 151 #4E

Well Site location:

Unit L, Sec. 3, T26N, R5W

Pit Type:

Separator Pit

Producing Formation:

Basin Dakota

Pit Category:

Non Vulnerable

Horizontal Distance to Surface Water:

> 1000 ft.

Vicinity Groundwater Depth:

> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 6 feet below grade.

No past or future threat to surface water or groundwater is likely based on the following considerations:

1. Past production fluids were contained locally by a relatively shallow sandstone bedrock located 6 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below sandstone bedrock.
2. Topographic information does not indicate off site lateral fluid migration near the earthen pit.
3. Daily discharge into the earthen pit has been terminated (pit abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.
4. Well site located within the **non-vulnerable area** and is approximately 1.4 miles southeast of the nearest vulnerable area boundary (Cereza Canyon wash).

(Refer to Vigas Canyon Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), photorevised 1982, (vulnerable area boundary developed by Mr. William C. Olson, Hydrogeologist, Environmental Bureau, New Mexico Oil Conservation Division).

Based upon the information given, we conclude that the subsurface lateral impact from the earthen pit is very limited and that the sandstone bottom creates enough of an impermeable barrier as to subdue impact to groundwater below it (please refer to AMOCO's report "Post Excavation Pit Closure Investigation Summary, July, 1995", with cover letter dated November 30, 1995). AMOCO requests pit closure approval on this location.

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

SUBMIT 1 COPY TO
NATURAL RESOURCE DEPT
AND OIL & GAS ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT

Operator: <u>AMOCO PRODUCTION COMPANY</u>		Telephone: <u>(505) 326-9200</u>
Address: <u>200 Amoco Court, Farmington, NM 87401</u>		
Facility or Well Name: <u>JICARILLA APACHE TRIBAL 151-4E</u>		
Location: Unit or Qtr/Qtr Sec <u>4</u> Sec <u>3</u> T <u>26N</u> R <u>5W</u> County <u>RIO ARriba</u>		
Land Type: <u>RANGE</u>		
Date Remediation Started: <u>5-20-98</u>		Date Completed: <u>1-22-99</u>
Remediation Method: Landfarmed <input checked="" type="checkbox"/>		Approx. cubic yards <u>300</u>
Composted <input type="checkbox"/>		
Other <input type="checkbox"/>		
Depth To Groundwater: (pts.) <u>0</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>		Final Closure Sampling: Sampling Date: <u>1-19-99</u> Time: <u>1350</u> Sample Results: Field Headspace (ppm) <u>0.0</u> TPH (ppm) <u>7.8</u> Method <u>8015</u> Other <u> </u>
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF DATE <u>1/22/99</u> PRINTED NAME <u>Buddy D. Shaw</u> SIGNATURE <u>Buddy D. Shaw</u> AND TITLE <u>Environmental Coordinator</u>		
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE. APPROVED: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> (REASON) <u> </u> SIGNED: <u>K. C. M...</u> DATE: <u>3-31-99</u>		

CLIENT: AMOCOBLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199LOCATION NO: 85556C.D.C. NO: 6556

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: SICARILLA APACHE WELL #: 4E PITS: SEP, BLOW
TRIBAL 151
QUAD/UNIT: L SEC: 3 TWP: 26N RNG: 5W PM: NM CNTY: RA ST: NM
QTP/FOOTAGE: NW/4 SW/4 CONTRACTOR: RJSDATE STARTED: 1.19.99DATE FINISHED: 1.22.99ENVIRONMENTAL
SPECIALIST: REP

SOIL REMEDIATION:

REMEDICATION SYSTEM: LANDFARMAPPROX. CUBIC YARDAGE: 300LAND USE: RANGELIFT DEPTH (ft): 1.15

FIELD NOTES & REMARKS:

DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'NMDCD RANKING SCORE: 0 NMDCD TPH CLOSURE STD: 5000 PPM

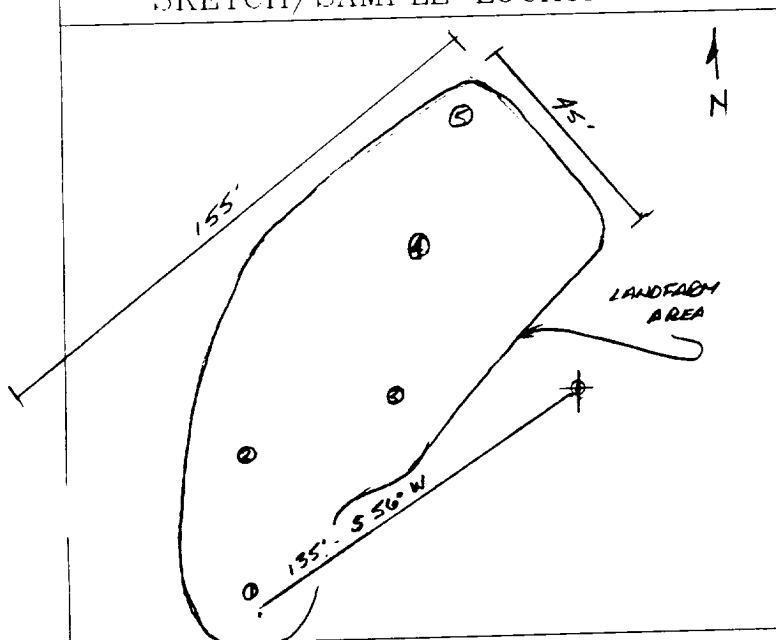
MODERATE YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST. FIRM
NO STAINING OBSERVED OR HC. ODOR DETECTED SAMPLING DEPTHS RANGE
FROM 6" - 18" TOOK A SPT. COMPOSITE SAMPLE FOR LAB ANALYSIS.

CLOSED

FIELD 418.1 CALCULATIONS

SAMP. TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

SKETCH/SAMPLE LOCATIONS



OVM RESULTS

LAB SAMPLES

SAMPLE ID	FIELD HEADSPACE PID (ppm)	SAMPLE ID	ANALYSIS	TIME	RESULTS
LF-1	0.0	LF-1	TPH (B015)	1350	7.8

SCALE

0 FT

TRAVEL NOTES:

CALLOUT: N/AONSITE: 1.19.99

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

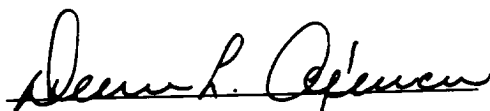
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	01-22-99
Laboratory Number:	E558	Date Sampled:	01-19-99
Chain of Custody No:	6556	Date Received:	01-21-99
Sample Matrix:	Soil	Date Extracted:	01-22-99
Preservative:	Cool	Date Analyzed:	01-22-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

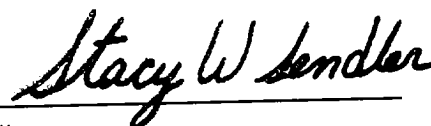
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	3.8	0.2
Diesel Range (C10 - C28)	4.0	0.1
Total Petroleum Hydrocarbons	7.8	0.2

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 Apache Tribal 151 - 4E Landfarm. 5 Pt. Composite.


Analyst


Review

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ENVIROTECH INC.

5796 U.S. Highway 64

Farmington, New Mexico 87401

(505) 632-0615

Sample Receipt		
	Y	N
		N/A