

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

Blow (L) - Risk bedrock
Blow (IF) - Risk bedrock
BT SS3
SUBMIT 1 COPY TO
NATURAL RESOURCE DEPT
AND OIL & GAS ADMINISTRATION
sep - Risk bedrock

PIT REMEDIATION AND CLOSURE REPORT

RECEIVED
AUG 20 1999

Operator: AMOCO PRODUCTION COMPANY

Telephone: (505) 226-9200

Address: 200 Amoco Court, Farmington, NM 87401

Facility or Well Name: JICARILLA APACHE TRIBE 151-2

Location: Unit or Qtr/Qtr Sec A Sec 10 T26N R5W County RIO ARriba

Pit Type: Separator Dehydrator Other BLOW (I)

Land Type: RANGE

Pit Location:
(Attach diagram)

Pit dimensions: length 16', width 15', depth 5'

Reference: wellhead X, other

Footage from reference: 90

Direction from reference: 34 Degrees X East of North X
West 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) 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

BT553

Blow Pit (I)

Date Remediation Started: _____

Date Completed: _____

5/7/98

Remediation Method:
Check all appropriate
sections)

Excavation

☒

Landfarmed

☒

Other _____

Approx. cubic yards

30

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,

THEREFORE NO TPH ANALYSIS WAS CONDUCTED.

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 Document

25

Sample depth

5'

Sample date

5/7/98

Sample time

0930

Sample Results

Soil: Benzene

(ppm)

Water: Benzene

(ppb)

Total BTEX

(ppm)

Toluene

(ppb)

Field Headspace

(ppm)

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

5/7/98

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:

Kee C. Marshall

DATE:

5-7-98

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BT553</u> C.O.C. NO: _____
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FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>
LOCATION: NAME: <u>JIC AP. TUBAL 151</u> WELL #: <u>2</u> PIT: <u>BLOW (I)</u>		DATE STARTED: <u>5/7/98</u> DATE FINISHED: _____
QUAD/UNIT: <u>A</u> SEC: <u>10</u> TWP: <u>26N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u>		ENVIRONMENTAL SPECIALIST: <u>NV</u>
QTR/FOOTAGE: <u>NE 1/4 NE 1/4</u> CONTRACTOR: <u>P+S</u>		

EXCAVATION APPROX. <u>16</u> FT. x <u>15</u> FT. x <u>5</u> FT. DEEP.	CUBIC YARDAGE: <u>30</u>
DISPOSAL FACILITY: <u>ON-SITE</u>	REMEDIAATION METHOD: <u>LANDFARM</u>
LAND USE: <u>RANGE</u>	LEASE: <u>JIC 151</u> FORMATION: <u>OK</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>90</u> FT. <u>N34E</u> FROM WELLHEAD.
DEPTH TO GROUNDWATER: <u>>100'</u>	NEAREST WATER SOURCE: <u>>1000'</u> NEAREST SURFACE WATER: <u>>1000'</u>

NMOC D RANKING SCORE: <u>0</u>	NMOC D TPH CLOSURE STD: <u>5000</u> PPM	CHECK ONE: <input checked="" type="checkbox"/> PIT ABANDONED <input type="checkbox"/> STEEL TANK INSTALLED <input type="checkbox"/> FIBERGLASS TANK INSTALLED
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SOIL AND EXCAVATION DESCRIPTION:

MOST OF THE EXCAVATION CONSIST OF BEDROCK, SIDEWALLS ARE DUSKY RED IN COLOR, SOFT (NEAR GROUND SURFACE) TO VERY HARD (TOWARD PIT BOTTOM), NO APPARENT STAINING OR HC ODOR OBSERVED W/IN EXCAVATION, PIT BOTTOM - OLIVE GRAY VERY HARD NO APPARENT STAINING OR HC ODOR OBSERVED, HC ODOR DETECTED IN PIT BOTTOM OVM SAMPLE ONLY, NO TPH ANALYSIS CONDUCTED DUE TO ALL SAMPLES BEING BEDROCK.

ENTIRE EXCAVATION MOSTLY BEDROCK

SCALE

0 FT

CLOSED

FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
0930							

FIELD 418.1 CALCULATIONS

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

PIT PERIMETER

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 3'	0.0
2 @ 3'	0.0
3 @ 3'	0.0
4 @ 3'	0.0
5 @ 5'	91.4

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

PIT PROFILE

TRAVEL NOTES:	CALLOUT: <u>5/6/98 - AFTER.</u>	ONSITE: <u>5/7/98 - MORN.</u>
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SUBMIT 1 COPY TO
NATURAL RESOURCE DEPT
AND OIL & GAS ADMINISTRATION

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 151-2</u>		
Location: Unit or Qtr/Qtr Sec <u>A</u> Sec <u>10</u> T <u>26N</u> R <u>5W</u> County <u>LIO ARIZONA</u>		
Pit Type: Separator <input type="checkbox"/> Dehydrator <input type="checkbox"/> Other <u>BLOW (II)</u>		
Land Type: <u>RANGE</u>		

Pit Location: (Attach diagram)	Pit dimensions: length <u>41'</u> , width <u>42'</u> , depth <u>6'</u>	
	Reference: wellhead <u>X</u> , other _____	
	Footage from reference: <u>215'</u>	
	Direction from reference: <u>63</u> Degrees _____ East _____ North _____ <div style="text-align: center;"> <u>X</u> West _____ South <u>X</u> </div>	

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

Date Remediation Started: _____ Date Completed: 5/7/98

Remediation Method: Excavation ☒ Approx. cubic yards 350
 Check all appropriate sections) Landfarmed ☒ Insitu Bioremediation _____
 Other _____

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

General Description of Remedial Action: Excavation. EXCAVATION MOSTLY BEDROCK,
THEREFORE NO TPH ANALYSIS WAS CONDUCTED. 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 3'

Sample date 5/7/98 Sample time 1040

Sample Results

Soil: Benzene	(ppm)	_____	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	_____	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>120.2</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 5/7/98 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: Ken C. Marshall DATE: 5-7-98

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BJSS3</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. TUBAL 151</u> WELL #: <u>2</u> PIT: <u>BLOW (II)</u> QUAD/UNIT: <u>A</u> SEC: <u>10</u> TWP: <u>26N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u> QTR/FOOTAGE: <u>NE 1/4</u> <u>NE 1/4</u> CONTRACTOR: <u>P & S</u>	DATE STARTED: <u>5/7/98</u> DATE FINISHED: _____ ENVIRONMENTAL SPECIALIST: <u>NV</u>
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EXCAVATION APPROX. <u>41</u> FT. x <u>42</u> FT. x <u>6</u> FT. DEEP.	CUBIC YARDAGE: <u>350</u>
DISPOSAL FACILITY: <u>ON-SITE</u>	REMEDIALATION METHOD: <u>LANDFARM</u>
LAND USE: <u>RANGE</u>	LEASE: <u>JIC 151</u> FORMATION: <u>OK</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>215</u> FT. <u>563W</u> FROM WELLHEAD. DEPTH TO GROUNDWATER: <u>>100'</u> NEAREST WATER SOURCE: <u>>1000'</u> NEAREST SURFACE WATER: <u>>1000'</u> NMOC D RANKING SCORE: <u>0</u> NMOC D TPH CLOSURE STD: <u>5000</u> PPM
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SOIL AND EXCAVATION DESCRIPTION:

EXCAVATION CONSIST OF MOSTLY BEDROCK, TOP HALF CONSIST OF DR. YEL. BROWN CLAY, VERY STIFF TO HARD, NO APPARENT STAINING OR HC ODOR OBSERVED. BOTTOM HALF CONSIST OF PALE ORANGE SHALE, SOFT (0-3') TO VERY HARD (6' PIT BOTTOM) NO APPARENT STAINING OR HC ODOR OBSERVED, PIT BOTTOM OLIVE GRAY IN COLOR, VERY HARD, NO APPARENT STAINING OBSERVED,

CHECK ONE:

☒ PIT ABANDONED

☐ STEEL TANK INSTALLED

☐ FIBERGLASS TANK INSTALLED

ENTIRE EXCAVATION MOSTLY BEDROCK

RISK ASSESSED

FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1040							

SCALE

0 FT

PIT PERIMETER

PIT PROFILE

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 c 3'	62.1
2 c 3'	0.0
3 c 3'	120.2
4 c 3'	0.0
5 c 6'	0.0

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

TRAVEL NOTES:	CALLOUT: <u>5/6/98 - AFTER -</u>	ONSITE: <u>5/7/98 - MORN.</u>
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Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

Jicarilla Apache Tribal 151 #2

Unit A, Sec. 10, T26N, R5W

Blow Pit (II)

Basin Dakota

Non Vulnerable

> 1000 ft.

> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered shale 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 shale 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 shale 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 1.9 miles south 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 shale 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.

8J553

**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

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 151-2
Location: Unit or Qtr/Qtr Sec A Sec 10 T 26N R 5W County RIO ARriba
Pit Type: Separator ☒ Dehydrator ☐ Other ☐
Land Type: RANGE

Pit Location: Pit dimensions: length 21', width 22', depth 5'
(Attach diagram) Reference: wellhead ☒, other ☐
Footage from reference: 150'
Direction from reference: 53 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

BTSSB

SEP. PIT

Date Remediation Started: _____ Date Completed: 5/7/98

Remediation Method: Excavation ☒ Approx. cubic yards 85
Check all appropriate sections) Landfarmed ☒ Insitu Bioremediation _____
Other _____

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

General Description of Remedial Action: Excavation. Mostly Bedrock. Risk Assessed. Sprayed Entire Excavation w/ Fertilizer.

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 3'

Sample date 5/7/98 Sample time 0950

Sample Results

Soil: Benzene	(ppm)	_____	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	_____	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>3,90</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 5/7/98 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: Kate C Mammill DATE: 5-7-98

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>87553</u> C.O.C. NO: _____
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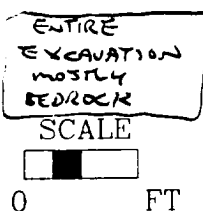
FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>
LOCATION: NAME: <u>JIA AP. TRIBAL 151</u> WELL #: <u>2</u> PIT: <u>SEP.</u>		DATE STARTED: <u>5/7/98</u> DATE FINISHED: _____
QUAD/UNIT: <u>A</u> SEC: <u>10</u> TWP: <u>26N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u>		ENVIRONMENTAL SPECIALIST: <u>NV</u>
QTR/FOOTAGE: <u>NE 1/4 NE 1/4</u> CONTRACTOR: <u>P+S</u>		

EXCAVATION APPROX. <u>21</u> FT. x <u>22</u> FT. x <u>5</u> FT. DEEP.	CUBIC YARDAGE: <u>85</u>
DISPOSAL FACILITY: <u>ON-SITE</u>	REMEDIATION METHOD: <u>LANDFARM</u>
LAND USE: <u>RANGE</u>	LEASE: <u>TIC 151</u> FORMATION: <u>DK</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>150</u> FT. <u>N53W</u> FROM WELLHEAD.
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DEPTH TO GROUNDWATER: <u>>100'</u>	NEAREST WATER SOURCE: <u>>1000'</u>	NEAREST SURFACE WATER: <u>>1000'</u>
NMOC D RANKING SCORE: <u>0</u>	NMOC D TPH CLOSURE STD: <u>5000</u> PPM	
SOIL AND EXCAVATION DESCRIPTION:		CHECK ONE: <input checked="" type="checkbox"/> PIT ABANDONED <input type="checkbox"/> STEEL TANK INSTALLED <input type="checkbox"/> FIBERGLASS TANK INSTALLED

MOST OF THE EXCAVATION CONSIST OF BEDROCK, SIDEWALLS ARE DUSKY RED TO GRAYISH RED IN COLOR, SOFT (NEAR GROUND SURFACE) TO VERY HARD (TOWARD PIT BOTTOM), STRONG HC ODOR OBSERVED WHILE COLLECTING SAMPLES, DUE TO HARDNESS UNABLE TO PENETRATE SIDEWALLS PASS 3", PIT BOTTOM - LT. GRAY IN COLOR, VERY HARD, SLIGHT HC ODOR DETECTED IN OVM SAMPLE, NO TAP ANALYSIS CONDUCTED DUE TO ALL SAMPLES BEING BEDROCK.

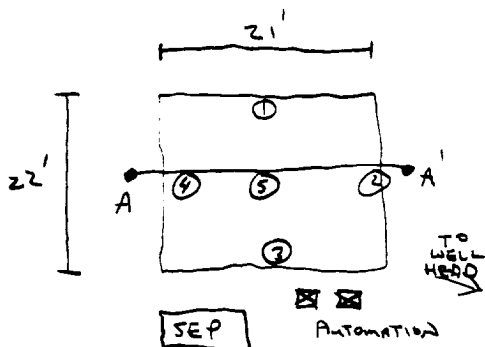


RISK ASSESSED

FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
0950							

PIT PERIMETER



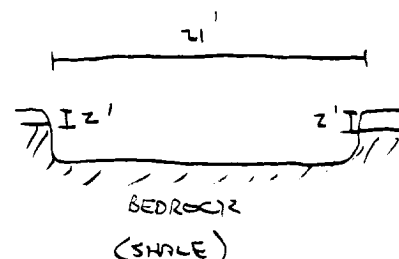
OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 3'	826
2 @ 3'	1106
3 @ 3'	1974
4 @ 3'	3190
5 @ 5'	120.2

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

PIT PROFILE



TRAVEL NOTES:	CALLOUT: <u>5/6/98 - MORNING</u>	ONSITE: <u>5/7/98 - MORNING</u>
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Well Name:	Jicarilla Apache Tribal 151 #2
Well Site location:	Unit A, Sec. 10, 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 shale bedrock at 5 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 shale bedrock located 5 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below shale 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 1.9 miles south 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 shale 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 151-2</u>		
Location: Unit or Qtr/Qtr Sec <u>A</u> Sec <u>10</u> T <u>26N</u> R <u>5W</u> County <u>RIO ARriba</u>		
Land Type: <u>RANGE</u>		
Date Remediation Started: <u>5-7-98</u>		Date Completed: <u>1-22-99</u>
Remediation Method: Landfarmed <input checked="" type="checkbox"/>		Approx. cubic yards <u>465</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 SurfaceWater: (pts.) <u>0</u>		Final Closure Sampling: Sampling Date: <u>1-19-99</u> Time: <u>1300</u> Sample Results: Field Headspace (ppm) <u>0.0</u> TPH (ppm) <u>4.6</u> Method <u>8015</u> Other <input type="checkbox"/>
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>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) _____ SIGNED: <u>K. C. Mance</u> DATE: <u>3-31-99</u>		

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>8553</u> C.O.C. NO: <u>6557</u>
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FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: <u>SICABILLA APACHE TRIBAL 151</u>	WELL #: <u>2</u>	PITS: <u>SEP, BLOW1, BLOW2</u>	DATE STARTED: <u>1.19.99</u>	DATE FINISHED: <u>1.22.99</u>
QUAD/UNIT: <u>A</u> SEC: <u>10</u> TWP: <u>26N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u>			ENVIRONMENTAL SPECIALIST: <u>REP</u>	
QTR/FOOTAGE: <u>NE/4 NE/4</u>		CONTRACTOR: <u>P+S</u>		

SOIL REMEDIATION:

 REMEDIATION SYSTEM: LANDFARM

 APPROX. CUBIC YARDAGE: 465

 LAND USE: RANGE

 LIFT DEPTH (ft): 1-2

FIELD NOTES & REMARKS:

 DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'

 NMOCED RANKING SCORE: 0 NMOCED TPH CLOSURE STD: 5000 PPM

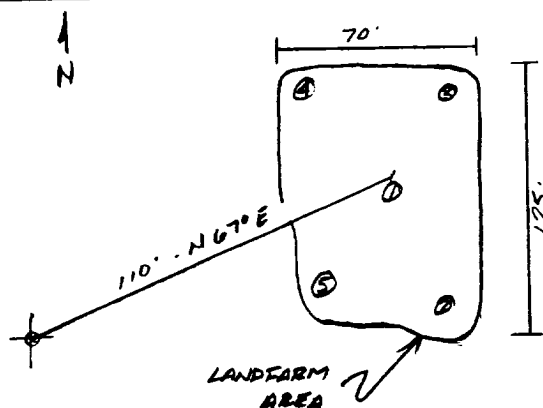
DK YELLOWISH ORANGE SAND. NON COHESIVE, SLIGHTLY MOIST, FIRM.
 NO STAINING OBSERVED OR H.C. ODOR DETECTED. SAMPLING DEPTHS RANGE
 FROM 6" - 18". TOOK A SPT. COMPOSITE SAMPLE FOR LAB ANALYSIS.

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	00	LF-1	TPH (BODIS)	1300	4.6

SCALE

0 FT

TRAVEL NOTES:

 CALLOUT: N/A

 ONSITE: 1.19.99

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

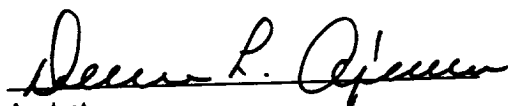
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	01-22-99
Laboratory Number:	E559	Date Sampled:	01-19-99
Chain of Custody No:	6557	Date Received:	01-21-99
Sample Matrix:	Soil	Date Extracted:	01-22-99
Preservative:	Cool	Date Analyzed:	01-22-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

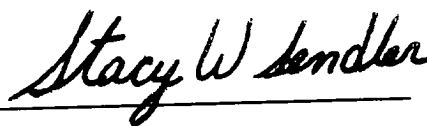
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	2.4	0.2
Diesel Range (C10 - C28)	2.2	0.1
Total Petroleum Hydrocarbons	4.6	0.2

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 - 2 Landfarm. 5 Pt. Composite.


Analyst


Review

6557

Ref Cox's 6576-6576.1