

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

BT647

SUBMIT COPY TO
NATURAL RESOURCE DEPT
AND OIL & GAS ADMINISTRATION

RECEIVED
AUG 16 1999

PIT REMEDIATION AND CLOSURE REPORT

OIL CON. DIV.
DIST. 3

Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9200
Address: 200 Amoco Court, Farmington, NM 87401
Facility or Well Name: JICARILLA CONTRACT # 146-3
Location: Unit or Qtr/Qtr Sec D Sec 10 T 25N R 5W County RIO ARriba
Pit Type: Separator Dehydrator Other COMPRESSOR
Land Type: RANGE

Pit Location: Pit dimensions: length 21', width 22', depth 25'
(Attach diagram) Reference: wellhead X, other
Footage from reference: 66'
Direction from reference: 74 Degrees X East of North
 West of South X

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>
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>
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>
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>
Distance To SurfaceWater: (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>

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: _____ Date Completed: 10/1/98

Remediation Method: Excavation ☒ Approx. cubic yards 300

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. BEDROCK BOTTOM. 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 Documents

Sample depth 19' (WEST SIDEWALL)

Sample date 9/28/98 Sample time 1045

Sample Results

Soil: Benzene	(ppm)	<u>5.240</u>	Water: Benzene	(pph)	_____
Total BTEX	(ppm)	<u>103.660</u>	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>604</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>15,320</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 10/1/98 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) R-A, Attached

SIGNED: Kear C Mault DATE: 12-28-98

3003906112

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BJ647</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 CONTR. 146</u> WELL #: <u>3</u> PIT: <u>COMPR</u> QUAD/UNIT: <u>0</u> SEC: <u>00</u> TWP: <u>25N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>BA</u> ST: <u>NM</u> QTR/FOOTAGE: <u>990' FWL / 1140' FWL</u> CONTRACTOR: <u>P+S</u>	DATE STARTED: <u>9/28/98</u> DATE FINISHED: _____ ENVIRONMENTAL SPECIALIST: <u>NV</u>
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EXCAVATION APPROX. <u>21</u> FT. x <u>22</u> FT. x <u>25</u> FT. DEEP.	CUBIC YARDAGE: <u>300</u>
DISPOSAL FACILITY: <u>ON-SITE</u>	REMEDIATION METHOD: <u>LANDFARM</u>
LAND USE: <u>RANGE</u>	LEASE: <u>TIC 146</u> FORMATION: <u>PC</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>66</u> FT. <u>SY4E</u> FROM WELLHEAD. DEPTH TO GROUNDWATER: <u>>100'</u> NEAREST WATER SOURCE: <u>>1000'</u> NEAREST SURFACE WATER: <u>>1000'</u> NMOC RANKING SCORE: <u>0</u> NMOC 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

SIDEWALLS - DR. TELL. BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, STRONG HC OOR IN WEST SIDEWALL OVM SAMPLE, HC OOR DETECTED W/IN EXCAVATION, NO APPARENT STAINING OBSERVED.

BOTTOM - BEDROCK (SANDSTONE), OLIVE GRAY IN COLOR, VERY HARD, STRONG HC OOR IN OVM SAMPLE.

BEDROCK BOTTOM

RISK ASSESSED

SCALE

 0 FT

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

PIT PERIMETER

PIT PROFILE

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 20'	22.4
2 @ 19'	364
3 @ 20'	518
4 @ 19'	604
5 @ 25'	292

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
4 @ 19'	TPH/BTEX	1045
BOTH FAILED		

TRAVEL NOTES:	CALLOUT: _____
ONSITE: <u>9/28/98 - MORN.</u>	

Well Name:	Jicarilla Contract 146 #3
Well Site location:	Unit D, Sec. 10, T25N, R5W
Pit Type:	Compressor Pit
Producing Formation:	Pictured Cliffs
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 25 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 25 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 0.58 miles northeast of the nearest vulnerable area boundary (Gonzales Canyon wash).

(Refer to Lapis Point Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), 1963, (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.

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

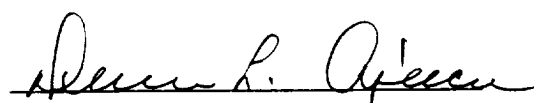
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	4 @ 19'	Date Reported:	10-01-98
Laboratory Number:	E005	Date Sampled:	09-28-98
Chain of Custody No:	6281	Date Received:	09-30-98
Sample Matrix:	Soil	Date Extracted:	09-30-98
Preservative:	Cool	Date Analyzed:	09-30-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	13,710	0.2
Diesel Range (C10 - C28)	1,600	0.1
Total Petroleum Hydrocarbons	15,320	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 Contract #146 - 3 Compressor Pit.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	4 @ 19'	Date Reported:	10-01-98
Laboratory Number:	E005	Date Sampled:	09-28-98
Chain of Custody:	6281	Date Received:	09-30-98
Sample Matrix:	Soil	Date Analyzed:	09-30-98
Preservative:	Cool	Date Extracted:	09-30-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	5,240	8.8
Toluene	35,540	8.4
Ethylbenzene	7,690	7.6
p,m-Xylene	34,670	10.8
o-Xylene	20,520	5.2
Total BTEX	103,660	

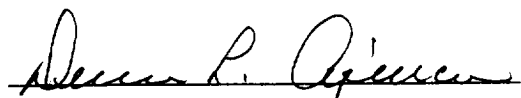
ND - Parameter not detected at the stated detection limit.


Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	96 %
	Bromofluorobenzene	96 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Jicarilla Contract #146 - 3 Compressor Pit.


Analyst


Review

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DULCE, NEW MEXICO 87528

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

ON-SITE SOIL REMEDIATION REPORT

Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9200
Address: 200 Amoco Court, Farmington, NM 87401
Facility or Well Name: JICARILLA CONTRACT 146-3
Location: Unit or Qtr/Qtr Sec D Sec 10 T 25N R 5W County RIO ARriba
Land Type: RANGE

Date Remediation Started: 9-28-98 Date Completed: 4/21/99
Remediation Method: Landfarmed ☒ Approx. cubic yards 300
Composted ☐
Other ☐

Depth To Groundwater: (pts.) <u>0</u>	Final Closure Sampling:
Distance to an Ephemeral Stream (pts.) <u>0</u>	Sampling Date: <u>4 19 99</u> Time: <u>1400</u>
Distance to Nearest Lake, Playa, or Watering Pond (pts.) <u>0</u>	Sample Results:
Wellhead Protection Area: (pts.) <u>0</u>	Field Headspace (ppm) <u>174.6</u> TPH (8015) +
Distance To Surface Water: (pts.) <u>0</u>	TPH (ppm) <u>183</u> Method <u>BTEX</u> (8021)
RANKING SCORE (TOTAL POINTS): <u>0</u>	Other <u>BENZENE = 0.0094 ppm</u>
	<u>TOTAL BTEX = 5.120 ppm</u>

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

DATE 4/21/99 PRINTED NAME Buddy D. Shaw
SIGNATURE Buddy D. Shaw AND TITLE Environmental Coordinator

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

APPROVED: YES ☐ NO ☐ (REASON) _____

SIGNED: _____ DATE: _____

CLIENT: <u>Amoco</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>B5647</u> C.D.C NO <u>6897</u>
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FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: <u>JCARILLA CONTRACTING</u> WELL #: <u>3</u>	PITS: <u>COMP.</u>	DATE STARTED: <u>4.19.99</u>
QUAD/UNIT: <u>D</u> SEC: <u>10</u> TWP: <u>25N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u>		DATE FINISHED: _____
STRAFEEDTAGE: <u>SW/4 NW/4</u>	CONTRACTOR: <u>P+S</u>	ENVIRONMENTAL SPECIALIST: <u>DEP</u>

REMEDIAL ACTION:

REMEDICATION SYSTEM: LANDFARM APPROX. CUBIC YARDAGE: 300
 LAND USE: RANGE LIFT DEPTH (ft): 1.5

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

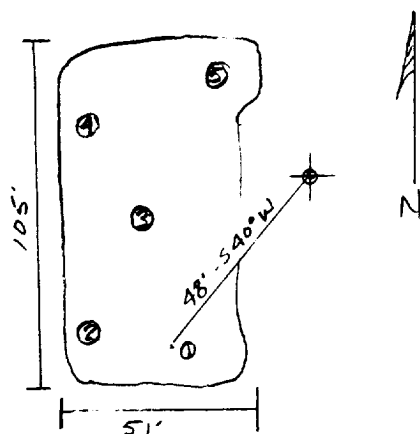
DK. YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM.
 NO APPARENT STAINING, NO HC ODDR DETECTED. SAMPLING DEPTHS
 RANGE FROM 6" - 18" COLLECTED 5PT. COMPOSITE SAMPLE FOR
 LAB ANALYSIS.

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	194.6	LF-1	TPH (B015)	1400	183
		"	BENZENE	"	9.4 ppb
		"	TOT. BTEX	"	5120 ppb

SCALE

0 FT

TRAVEL NOTES: CALLOUT: N/A ONSITE: 4.19.99

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons


Client:	Blagg / AMOCO	Project #:	403410
Sample ID:	LF - 1	Date Reported:	04-21-99
Laboratory Number:	F063	Date Sampled:	04-19-99
Chain of Custody No:	6897	Date Received:	04-20-99
Sample Matrix:	Soil	Date Extracted:	04-21-99
Preservative:	Cool	Date Analyzed:	04-21-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

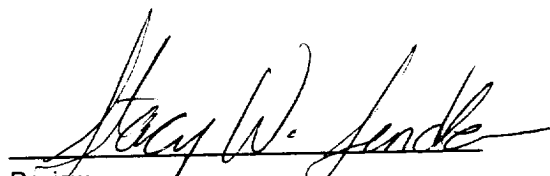
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	47.6	0.2
Diesel Range (C10 - C28)	135	0.1
Total Petroleum Hydrocarbons	183	0.2

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 Contract 146 - 3 Landfarm. 5 Pt. Composite.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	403410
Sample ID:	LF - 1	Date Reported:	04-21-99
Laboratory Number:	F063	Date Sampled:	04-19-99
Chain of Custody:	6897	Date Received:	04-20-99
Sample Matrix:	Soil	Date Analyzed:	04-21-99
Preservative:	Cool	Date Extracted:	04-21-99
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	9.4	8.8
Toluene	241	8.4
Ethylbenzene	359	7.6
p,m-Xylene	3,040	10.8
o-Xylene	1,470	5.2
Total BTEX	5,120	

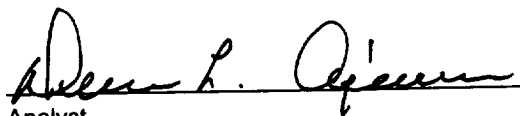
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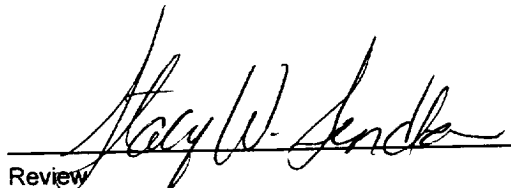
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	Bromofluorobenzene	96 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Jicarilla Contract 146 - 3 Landfarm. 5 Pt. Composite.


Analyst


Review