

Remediation Unit
DEPUTY OIL & GAS INSPECTOR

001 0 8 1999

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

Blow (I) - risk bedrock
8J563
Blow (II) - OK
SUBMIT 1 COPY TO
NATURAL RESOURCE DEPT
AND OIL & GAS ADMINISTRATION
Sep - Tank Diagram - OK

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 CONTRACT 148-32
Location: Unit or Qtr/Qtr Sec D Sec 14 T25N R5W County RIO ARIZONA
Pit Type: Separator Dehydrator Other BLOW (I)
Land Type: RANGE

Pit Location: Pit dimensions: length 40', width 40', depth 18'
(Attach diagram) Reference: wellhead X, other
Footage from reference: 132'
Direction from reference: 34 Degrees X East of North
 West of South X

Depth To Groundwater:

(Vertical distance from
contaminants to seasonal
high water elevation of
groundwater)

RECEIVED
AUG 24 1999

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

Distance to an Ephemeral Stream

(Downgradient dry wash greater than
ten feet in width)

OIL CON. DIV.
DIST. 3

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) 0
Greater than 1000 feet (0 points)

RANKING SCORE (TOTAL POINTS): 0

BJ 563

Blow PIT (I)

Date Remediation Started: _____

Date Completed: _____

6/15/98

Remediation Method:

Excavation

☒

(check all appropriate sections)

Landfarmed

☒

Other _____

Approx. cubic yards

800

Insitu Bioremediation _____

Remediation Location:

(i.e. landfarmed onsite, name and location of offsite facility)

Onsite _____

Offsite

☒ JICARILLA CONTRACT 148-24 (D-14-25-5)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

12' (SOUTH SIDEWALL)

Sample date

6/9/98

Sample time

1120

Sample Results

Soil: Benzene

(ppm)

3,680

Water: Benzene

(ppb)

Total BTEX

(ppm)

51.6

Toluene

(ppb)

Field Headspace

(ppm)

1,682

Ethylbenzene

(ppb)

TPH

(ppm)

872

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

6/15/98

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:

Kent C. Marshall

DATE:

7-27-98

Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

Jicarilla Contract 148 #32

Unit D, Sec. 14, T25N, R5W

Blow Pit (I)

Basin Dakota

Non Vulnerable

> 1000 ft.

> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered shale bedrock at 18 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 18 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 1.16 miles east southeast 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 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.

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

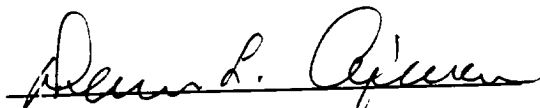
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	3 @ 12'	Date Reported:	06-10-98
Laboratory Number:	D372	Date Sampled:	06-09-98
Chain of Custody No:	6018	Date Received:	06-09-98
Sample Matrix:	Soil	Date Extracted:	06-09-98
Preservative:	Cool	Date Analyzed:	06-09-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

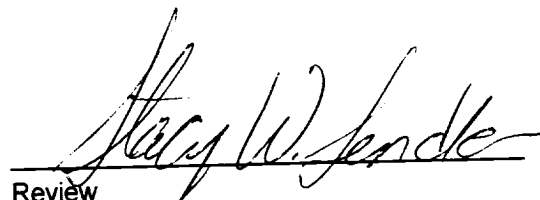
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	206	0.2
Diesel Range (C10 - C28)	666	0.1
Total Petroleum Hydrocarbons	872	0.2

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 148-32 Blow Pit (I).


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	3 @ 12'	Date Reported:	06-11-98
Laboratory Number:	D372	Date Sampled:	06-09-98
Chain of Custody:	6018	Date Received:	06-09-98
Sample Matrix:	Soil	Date Analyzed:	06-10-98
Preservative:	Cool	Date Extracted:	06-09-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	3,680	17.5
Toluene	10,400	16.7
Ethylbenzene	3,570	15.2
p,m-Xylene	20,590	21.6
o-Xylene	13,360	10.4
Total BTEX	51,600	

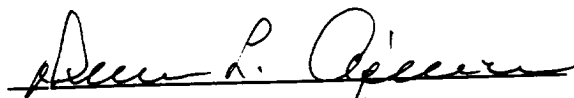
ND - Parameter not detected at the stated detection limit.

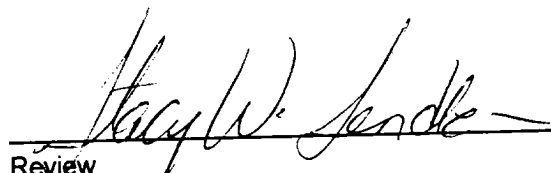
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	98 %
	Bromofluorobenzene	98 %

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 148-32 Blow Pit (I).


Analyst


Review

CHAIN OF CUSTODY RECORD

6018

Client / Project Name <i>BATES / Amoco</i>			Project Location <i>Brow PT (I)</i>		ANALYSIS / PARAMETERS											
Client No. <i>04034-0</i>			Project Location <i>TR-48129 CONTRACT 148-32</i>		Remarks											
Sampler: <i>NTV</i>			Sample No./ Identification <i>3 @ 12'</i>		Sample Date <i>6/9/98</i>		Sample Time <i>1120</i>		Lab Number <i>D372</i>		Sample Matrix <i>SOIL</i>		No. of Containers <i>TPH (8015)</i> <i>BREX (8021)</i>		Preserv. - cool	
Relinquished by: (Signature) <i>[Signature]</i>			Date <i>6/9/98</i>		Time <i>1431</i>		Received by: (Signature) <i>[Signature]</i>		Date <i>6.9.98</i>		Time <i>1431</i>		Received Intact		Cool - Ice/Blue Ice	
Relinquished by: (Signature) <i>[Signature]</i>			Date		Time		Received by: (Signature)		Date		Time		Received Intact		Cool - Ice/Blue Ice	
Relinquished by: (Signature)			Date		Time		Received by: (Signature)		Date		Time		Received Intact		Cool - Ice/Blue Ice	

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt

Y N N/A

Received Intact

Cool - Ice/Blue Ice

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

87563

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 CONTRACT 148 - 32
Location: Unit or Qtr/Qtr Sec D Sec 14 T Z5N R SW County RIO ARriba
Pit Type: Separator Dehydrator Other BLOW (II)
Land Type: RANGE

Pit Location: Pit dimensions: length 20', width 20', depth 8'
(Attach diagram) Reference: wellhead X, other
Footage from reference: 123'
Direction from reference: 13 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

BT563

Blow PIT (II)

Date Remediation Started: _____

Date Completed: _____

6/9/98

Remediation Method:

Excavation

☒

Approx. cubic yards

75

Check all appropriate sections)

Landfarmed

☒

Insitu Bioremediation _____

Other _____

Remediation Location:

(i.e. landfarmed onsite, name and location of offsite facility)

Onsite _____

Offsite

☒ JICARILLA CONTRACT 148-24

(0-14-25-5)

General Description of Remedial Action: Excavation.

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

9' (PIT BOTTOM)

Sample date

6/9/98

Sample time

1210

Sample Results

Soil: Benzene

(ppm)

Water: Benzene

(ppb)

Total BTEX

(ppm)

Toluene

(ppb)

Field Headspace

(ppm)

0.0

Ethylbenzene

(ppb)

TPH

(ppm)

ND

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

6/9/98

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. Ma

DATE:

6-15-98

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>8TS63</u> C.D.C. NO: _____
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FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>
LOCATION: NAME: <u>JICA CONTR. 148</u> WELL #: <u>32</u> PIT: <u>Blow (II)</u>		DATE STARTED: <u>6/9/98</u> DATE FINISHED: _____
QLAD/UNIT: <u>D</u> SEC: <u>14</u> TWP: <u>25N</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>NW/4 NW/4</u> CONTRACTOR: <u>P+S</u>		

EXCAVATION APPROX. <u>20</u> FT. x <u>20</u> FT. x <u>8</u> FT. DEEP.	CUBIC YARDAGE: <u>75</u>
DISPOSAL FACILITY: <u>JICA CONTR. 148-24</u>	REMEDIALATION METHOD: <u>LANDFARM</u>
LAND USE: <u>RANGE</u> LEASE: <u>TIC 148</u>	FORMATION: <u>OK</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>123</u> FT. <u>53E</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: 0 NMOC D TPH CLOSURE STD: 5000 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

SOIL MOSTLY MED. YELL. ORANGE SAND (SIDEWALLS) & DUSKY RED (PIT BOTTOM) SAND TO CLAY (PIT BOTTOM), NON COHESIVE, SLIGHTLY MOIST, FIRM TO VERY STIFF (PIT BOTTOM), NO APPARENT STRAINING OR HC ODOR OBSERVED w/in EXCAVATION NO APPARENT HC ODOR DETECTED IN ANY OF THE DUM SAMPLES.

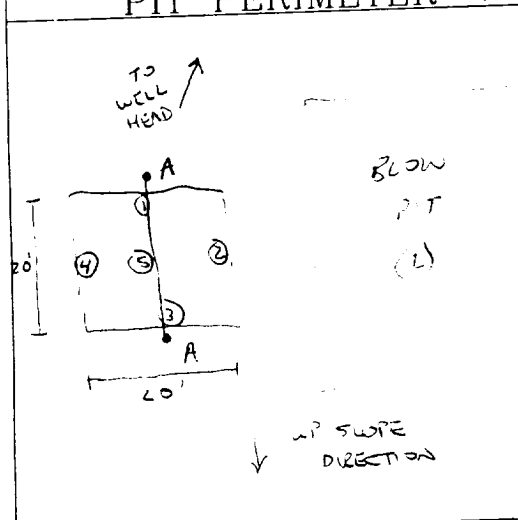
CLOSED

FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1210	③e 9'	TPH-1989	5	20	1:1	4	ND

SCALE
0 FT

PIT PERIMETER



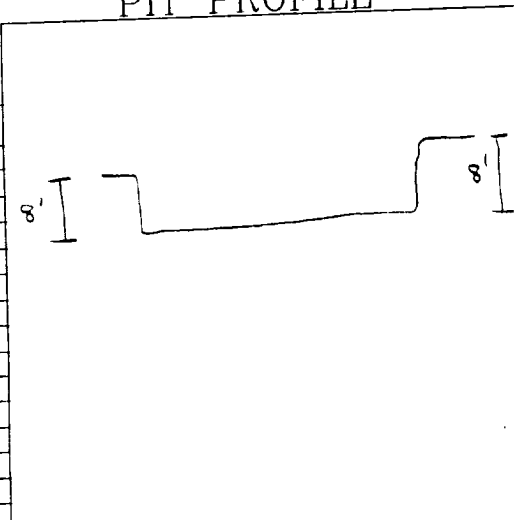
OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 e 4'	0.0
2 e 4'	0.0
3 e 4'	0.0
4 e 4'	0.0
5 e 9'	0.0

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

PIT PROFILE



TRAVEL NOTES: CALLOUT: 6/9/98-morn. ONSITE: 6/9/98-morn.

BLAGG ENGINEERING, INC.
P.O. Box 87, Bloomfield, New Mexico 87413
Phone: (505)632-1199 Fax: (505)632-3903

**FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS**

Client:	AMOCO	Project #:	
Sample ID:	4 @ 10'	Date Analyzed:	06-09-98
Project Location:	Jicarilla Contract 148 - 32	Date Reported:	06-09-98
Laboratory Number:	TPH-1989	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	ND	20

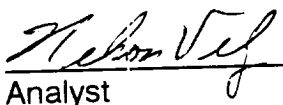
ND = Not Detectable at stated detection limits.

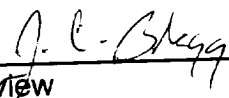
QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	1684	1712	1.65

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: Blow Pit (II) - BJ563


Analyst


Review

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413
Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Max Characters:

Client:

Sample ID:

Project Location:

Laboratory Number:

AMOCO

4 @ 10'

Jicarilla Contract 148 - 32

TPH-1989

Project #:

Date Analyzed:

Date Reported:

Sample Matrix:

06-09-98

06-09-98

Soil

Sample Weight: 5.00 grams
Volume Freon: 20.00 mL
Dilution Factor: 1 (unitless)
TPH Reading: 4 mg/kg

TPH Result: 16.0 mg/kg
Reported TPH Result: 16 mg/kg
Actual Detection Limit: 20.0 mg/kg
Reported Detection Limit: 20 mg/kg

QA/QC:	Original TPH mg/kg	Duplicate TPH mg/kg	% Diff.
	----- 1684	----- 1712	----- 1.65

Comments: *****Max Characters*****

Comments: Blow Pit (II) - BJ563

BT563

PIT REMEDIATION AND CLOSURE 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 CONTRACT 148-32</u>		
Location: Unit or Qtr/Qtr Sec <u>D</u> Sec <u>14</u> T <u>25N</u> R <u>5W</u> County <u>RIO ARriba</u>		
Pit Type: Separator <input checked="" type="checkbox"/> Dehydrator <input type="checkbox"/> Other <u>PRODUCTION TANK</u>		
Land Type: _____		

Pit Location: (Attach diagram)	Pit dimensions: length <u>22'</u> , width <u>26'</u> , depth <u>15'</u>		
	Reference: wellhead <input checked="" type="checkbox"/> , other _____		
	Footage from reference: <u>96'</u>		
	Direction from reference: <u>58</u> Degrees <input checked="" type="checkbox"/> East of North <input checked="" type="checkbox"/> <div style="display: flex; justify-content: space-around; width: 100%;"> _____ West _____ South </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>
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

BT563

SEP/PROD. TANK PIT

Date Remediation Started: _____

Date Completed: _____

6/9/98

Remediation Method:
(check all appropriate sections)

Excavation

☒

Landfarmed

☒

Other _____

Approx. cubic yards

250

Insitu Bioremediation _____

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

Onsite _____

Offsite

☒ JICARILLA CONTRACT 148-24
(D-14-25-5)General Description of Remedial Action: Excavation. BEDROCK BOTTOM.

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

10' (WEST SIDEWALL)

Sample date

6/9/98

Sample time

1045

Sample Results

Soil: Benzene

(ppm)

Water: Benzene

(ppb)

Total BTEX

(ppm)

Toluene

(ppb)

Field Headspace

(ppm)

0.0

Ethylbenzene

(ppb)

TPH

(ppm)

ND

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

6/9/98

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. Mann

DATE:

6-15-98

3003923655

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BT563</u> C.D.C. NO: _____
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FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>
LOCATION: NAME: <u>JICA CONTR. 148</u> WELL #: <u>32</u> PIT: <u>SEP/PROD.</u>		DATE STARTED: <u>6/9/98</u> DATE FINISHED: _____
QUAD/UNIT: <u>D</u> SEC: <u>14</u> TWP: <u>25N</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>NW/4</u> <u>NW/4</u> CONTRACTOR: <u>P+S</u>		

EXCAVATION APPROX. 22 FT. x 26 FT. x 15 FT. DEEP. CUBIC YARDAGE: 250
DISPOSAL FACILITY: JICA CONTR. 148-1 REMEDIATION METHOD: LANDFARM
LAND USE: RANGE LEASE: JIC 148 FORMATION: OK

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 96 FT. NSBE FROM WELLHEAD.
DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'

NMOC D RANKING SCORE: 0 NMOC D TPH CLOSURE STD: 5000 PPM

SOIL AND EXCAVATION DESCRIPTION:

SIDEWALLS - MOSTLY DR. YELL. BROWN SILTY SAND TO SILTY CLAY (SOUTH SIDEWALL),
NON COHESIVE TO SLIGHTLY COHESIVE, SLIGHTLY MOIST, FIRM TO STIFF;
NO APPARENT STAINING OR HC ODOR OBSERVED W/IN EXCAVATION;
NO APPARENT HC ODOR IN ANY OF THE OUM SAMPLES.

BOTTOM - BEDROCK (SHALE) VERY PALE ORANGE/DISKY RED IN COLOR, VERY HARD,
NO APPARENT HC ODOR IN OUM SAMPLE.

BEDROCK
BOTTOM

CLOSED

FIELD 418.1 CALCULATIONS

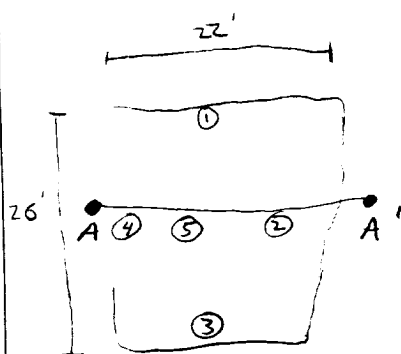
TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1045	④ @ 10'	TPH-1988	5	20	1:1	4	ND

SCALE



0 FT

PIT PERIMETER



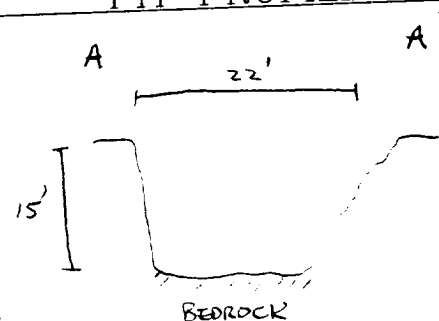
OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 10'	0.0
2 @ 10'	0.0
3 @ 9'	0.0
4 @ 10'	0.0
5 @ 15'	0.0

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

PIT PROFILE



TRAVEL NOTES: CALLOUT: 6/9/98 - MORN. ONSITE: 6/9/98 - MORN.

BLAGG ENGINEERING, INC.
P.O. Box 87, Bloomfield, New Mexico 87413
Phone: (505)632-1199 Fax: (505)632-3903

**FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS**

Client:	AMOCO	Project #:	
Sample ID:	4 @ 10'	Date Analyzed:	06-09-98
Project Location:	Jicarilla Contract 148 - 32	Date Reported:	06-09-98
Laboratory Number:	TPH-1988	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	ND	20

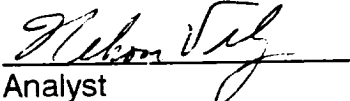
ND = Not Detectable at stated detection limits.

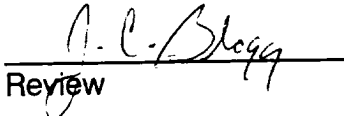
QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	1684	1712	1.65

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total
Recoverable, Chemical Analysis of Water and Waste,
USEPA Storet No.4551, 1978

Comments: Separator Pit - BJ563


Analyst


Review

BLAGG ENGINEERING, INC.

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Field TPH-Worksheet

Max Characters:

Client:

Sample ID:

Project Location:

Laboratory Number:

AMOCO

4 @ 10'

Jicarilla Contract 148 - 32

TPH-1988

Project #:

Date Analyzed:

Date Reported:

Sample Matrix:

06-09-98

06-09-98

Soil

Sample Weight:

5.00 grams

Volume Freon:

20.00 mL

Dilution Factor:

1 (unitless)

TPH Reading:

4 mg/kg

TPH Result:

16.0 mg/kg

Reported TPH Result:

16 mg/kg

Actual Detection Limit:

20.0 mg/kg

Reported Detection Limit:

20 mg/kg

QA/QC:

Original
TPH mg/kg

Duplicate
TPH mg/kg

%
Diff.

1684

1712

1.65

Comments:

*****Max Characters*****

Comments:

Separator Pit - BJ563