

8J609

BLOW PIT

Date Remediation Started: _____ Date Completed: 8/19/98

Remediation Method: Excavation ☒ Approx. cubic yards 500
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. BOTTOM HALF OF EXCAVATION CONSISTED OF BEDROCK THEREFORE NO TPH ANALYSIS WAS CONDUCTED. RSR 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 12' (PIT BOTTOM)Sample date 8/19/98Sample time 0830

Sample Results

Soil: Benzene	(ppm)	_____	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	_____	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>273</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>NA</u>	Total Xylenes	(ppb)	_____

Groundwater Sample: Yes _____ No ☒ (If yes, attach sample results)


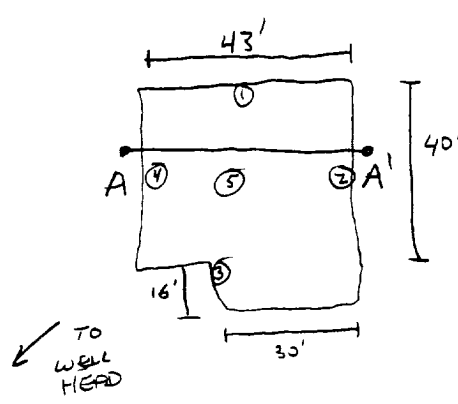
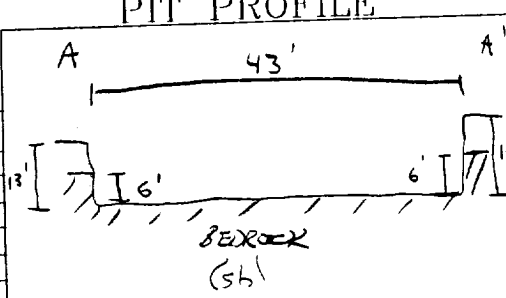
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 8/19/98 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. AttachedSIGNED: Ken C. Marshall DATE: 9-9-98

3003906181

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BT609</u> C.D.C. NO: _____																																							
FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>																																							
LOCATION: NAME: <u>JICA. CONTR. 147</u> WELL #: <u>3</u> PIT: <u>BLOW</u>		DATE STARTED: <u>8/19/98</u> DATE FINISHED: _____																																							
QUAD/UNIT: <u>A</u> SEC: <u>6</u> TWP: <u>25N</u> RNG: <u>5W</u> PM: <u>NM CNTY: RA</u> ST: <u>NM</u>		ENVIRONMENTAL SPECIALIST: <u>NV</u>																																							
QTR/FOOTAGE: <u>1190' FNL</u> / <u>790' FEL</u> CONTRACTOR: <u>P+S</u>																																									
EXCAVATION APPROX. <u>43</u> FT. x <u>40</u> FT. x <u>14</u> FT. DEEP. CUBIC YARDAGE: <u>500</u>																																									
DISPOSAL FACILITY: <u>ON-SITE</u> REMEDIATION METHOD: <u>LANDFARM</u>																																									
LAND USE: <u>RANGE</u> LEASE: <u>TIC 147</u> FORMATION: <u>OK</u>																																									
FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY <u>348</u> FT. <u>N43E</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																																									
SOIL AND EXCAVATION DESCRIPTION:																																									
<p>TOP HALF OF ALL SIDEWALLS CONSISTED OF OR. YELL. ORANGE SAND NON COHESIVE, DRY TO SLIGHTLY MOIST NO APPARENT STAINING OBSERVED. BOTTOM HALF CONSISTED OF DUSKY RED SHALE, SOFT TO HARD STAINING, NOT DISTINGUISHABLE, NO APPARENT HC ODOR DETECTED WITH EXCAVATION OR ANY OF THE OVM SAMPLES. ALL SIDEWALL OVM SAMPLES COLLECTED FROM BEDROCK, THEREFORE NO TPH ANALYSIS WAS CONDUCTED.</p> <p>BOTTOM - BEDROCK (SHALE), LT. TO MED. GRAY IN COLOR, VERY HARD, STRONG HC ODOR IN OVM SAMPLES.</p>																																									
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>BEDROCK BOTTOM</p> <p>SCALE</p> <p>0  10 FT</p> </div> <div style="width: 30%; text-align: center;"> <p>RISK ASSESSED</p> </div> <div style="width: 30%; text-align: center;"> <p>FIELD 418.1 CALCULATIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>TIME</th> <th>SAMPLE I.D.</th> <th>LAB No:</th> <th>WEIGHT (g)</th> <th>ML. FREON</th> <th>DILUTION</th> <th>READING</th> <th>CALC. ppm</th> </tr> </thead> <tbody> <tr> <td>0830</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> </div> </div>			TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	ML. FREON	DILUTION	READING	CALC. ppm	0830																														
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TRAVEL NOTES: CALLOUT: <u>8/17/98 - MORN.</u> ONSITE: <u>8/19/98 - MORN.</u>																																									

Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

Jicarilla Contract 147 #3

Unit A, Sec. 6, T25N, R5W

Blow Pit

Basin Dakota

Non Vulnerable

> 1000 ft.

> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered shale bedrock at 14 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 14 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 0.75 miles southeast of the nearest vulnerable area boundary (Tapacito Creek).

(Refer to Gonzales Mesa 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 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.

BJ609

RANKING SCORE (TOTAL POINTS): 0

BJ609

COMPL. PIT

Date Remediation Started: _____

Date Completed: 8/19/98

Remediation Method:

Excavation ☒Approx. cubic yards 200

(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 TPH CONDUCTED ONWEST SIDEWALL e 7' (OUM = 0.0 ppm)Sample depth 12' (PIT BOTTOM)Sample date 8/19/98Sample time 0930

Sample Results

Soil: Benzene

(ppm) _____

Water: Benzene

(ppb) _____

Total BTEX

(ppm) _____

Toluene

(ppb) _____

Field Headspace

(ppm) 277

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

8/19/98

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:

Kurt E. Manna

DATE:

9-9-98

CLIENT: AMOCO

BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

LOCATION NO: BT609
C.D.C. NO: _____

FIELD REPORT: CLOSURE VERIFICATION

PAGE No: 1 of 1

LOCATION: NAME: JICA. CONTR. 147 WELL #: 3 PIT: COMPR.
QUAD/UNIT: A SEC: 6 TWP: 25N RNG: 5W PM: NM CNTY: RA ST: NM
QTR/FOOTAGE: 1190' FNL / 790' FEL CONTRACTOR: P+S

DATE STARTED: 8/19/98
DATE FINISHED: _____
ENVIRONMENTAL SPECIALIST: NV

EXCAVATION APPROX. 28 FT. x 21 FT. x 12 FT. DEEP. CUBIC YARDAGE: 200
DISPOSAL FACILITY: ON-SITE REMEDIATION METHOD: LANDFARM
LAND USE: RANGE LEASE: JICA 147 FORMATION: DR

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 165 FT. N85W FROM WELLHEAD.
DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
NMOC RANKING SCORE: 0 NMOC TPH CLOSURE STD: 5000 PPM

SOIL AND EXCAVATION DESCRIPTION:
DR. YELL. ORANGE SAND, NON COHESIVE SLIGHTLY MOIST, FIRM TO DENSE, NO APPARENT STAINING OR HC ODOR OBSERVED/DETECTED W/ EXCAVATION, SOME LT. GRAY/DUSKY RED CLAY/SHALE OBSERVED ON SOUTH SIDEWALL BETWEEN 10'-12' BELOW GRADE, NO APPARENT HC ODOR IN ANY OF THE SIDEWALL OVM SAMPLES
BOTTOM - BEDROCK (SANDSTONE), LT. TO MED. GRAY IN COLOR, VERY HARD, STRONG HC ODOR IN OVM SAMPLE.

CHECK ONE:
☒ PIT ABANDONED
☐ STEEL TANK INSTALLED
☐ FIBERGLASS TANK INSTALLED

BEDROCK BOTTOM

RISK ASSESSED

FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
0930	④ 6'	TPH-2016	5	20	1:1	4	ND

SCALE
0 FT

PIT PERIMETER

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 6'	0.0
2 6'	0.0
3 7'	0.0
4 7'	0.0
5 12'	277

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

PIT PROFILE

TRAVEL NOTES: CALLOUT: 8/17/98 - MORN. ONSITE: 8/19/98 - MORN.

Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

Jicarilla Contract 147 #3

Unit A, Sec. 6, T25N, R5W

Compressor Pit

Basin Dakota

Non Vulnerable

> 1000 ft.

> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 12 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 12 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 0.75 miles southeast of the nearest vulnerable area boundary (Tapacito Creek).

(Refer to Gonzales Mesa 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 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.

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
Sample ID: 4 @ 7'
Project Location: Jicarilla Contract # 147 - 3
Laboratory Number: TPH-2016

Project #:
Date Analyzed: 08-19-98
Date Reported: 08-19-98
Sample Matrix: Soil

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

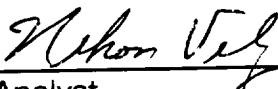
ND = Not Detectable at stated detection limits.

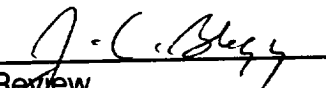
QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	228	244	6.78

*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: Compressor Pit - BJ609


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 @ 7'

Jicarilla Contract # 147 - 3

TPH-2016

Project #:

Date Analyzed:

Date Reported:

Sample Matrix:

08-19-98

08-19-98

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.
	----- 228	----- 244	----- 6.78

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

Comments: Compressor Pit - BJ609

8J609

**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 CONTRACT #147-3
Location: Unit or Qtr/Qtr Sec A Sec 6 T 25N R 5W County RIO ARIZONA
Pit Type: Separator ☒ Dehydrator ☐ Other ☐
Land Type: RANGE

Pit Location: (Attach diagram) Pit dimensions: length 16', width 16', depth 9'
Reference: wellhead ☒, other ☐
Footage from reference: 125'
Direction from reference: 30 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)	<u>0</u>
Greater than 100 feet	(0 points)	

Distance to an Ephemeral Stream

(Downgradient dry wash greater than
ten feet in width)

Less than 100 feet	(10 points)	<u>0</u>
Greater than 100 feet	(0 points)	

Distance to Nearest Lake, Playa, or Watering Pond

(Downgradient lakes, playas and
livestock or wildlife watering ponds)

Less than 100 feet	(10 points)	<u>0</u>
Greater than 100 feet	(0 points)	

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)	<u>0</u>
No	(0 points)	

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)	<u>0</u>
Greater than 1000 feet	(0 points)	

RANKING SCORE (TOTAL POINTS): 0

BJ609

SEP. PIT

Date Remediation Started: _____ Date Completed: 8/19/98

Remediation Method: Excavation ☒ Approx. cubic yards 50
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 -

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 5' (WEST SIDEWALL)

Sample date 8/19/98 Sample time 1100

Sample Results

Soil: Benzene	(ppm)	_____	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	_____	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>0.0</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>ND</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 8/19/98 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: Kerr C. Williams DATE: 9-9-98

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BT609</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>TICA CONTR. 147</u> WELL #: <u>3</u> PIT: <u>SEP</u>		DATE STARTED: <u>8/19/98</u> DATE FINISHED: _____
QUAD/UNIT: <u>A</u> SEC: <u>6</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>1190' NW / 790' SE</u> CONTRACTOR: <u>P&S</u>		

EXCAVATION APPROX. <u>16</u> FT. x <u>16</u> FT. x <u>9</u> FT. DEEP.	CUBIC YARDAGE: <u>50</u>
DISPOSAL FACILITY: <u>ON-SITE</u>	REMEDIALATION METHOD: <u>LANDFARM</u>
LAND USE: <u>RANGE</u>	LEASE: <u>TIC 147</u> FORMATION: <u>OK</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>125</u> FT. <u>S30W</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:	

CHECK ONE:
<input checked="" type="checkbox"/> PIT ABANDONED
<input type="checkbox"/> STEEL TANK INSTALLED
<input type="checkbox"/> FIBERGLASS TANK INSTALLED

DR. YELL. ORANGE SAND, NON COHESIVE SLIGHTLY MOIST, FIRM TO DENSE, NO APPARENT STAINING OR HC ODOR OBSERVED/DETECTED W/IN EXCAVATION, NO APPARENT HC ODOR DETECTED IN ANY OF THE SIDEWALL OVM SAMPLES.

BOTTOM - BEDROCK (SHALE) DUSKY YELL. BROWN IN COLOR, HARD, NO APPARENT HC ODOR IN OVM SAMPLE.

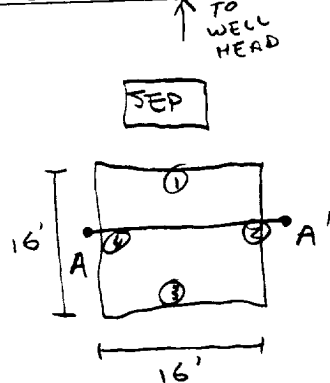
BEDROCK
BOTTOM

SCALE
0 FT

FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1100	4e5'	TPH-2015	5	20	1:1	4	ND

PIT PERIMETER



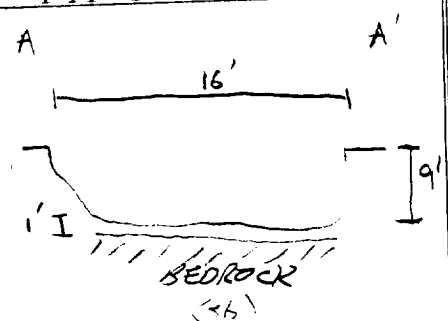
OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1e6'	0.0
2e6'	0.0
3e5'	0.0
4e5'	0.0
5e10'	0.0

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

PIT PROFILE



TRAVEL NOTES: CALLOUT: 8/17/98 - MORN. ONSITE: 8/19/98 - 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
Sample ID: 4 @ 5'
Project Location: Jicarilla Contract # 147 - 3
Laboratory Number: TPH-2015

Project #:
Date Analyzed: 08-19-98
Date Reported: 08-19-98
Sample Matrix: Soil

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

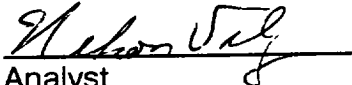
ND = Not Detectable at stated detection limits.


QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	-----	-----	-----
	228	244	6.78

*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 - BJ609


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:

AMOCO

Project #:

Sample ID:

4 @ 5'

Date Analyzed:

08-19-98

Project Location:

Jicarilla Contract # 147 - 3

Date Reported:

08-19-98

Laboratory Number:

TPH-2015

Sample Matrix:

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.

228

244

6.78

Comments:

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

Comments:

Separator Pit - BJ609

B5609

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 CONTRACT 147-3</u>	
Location: Unit or Qtr/Qtr Sec <u>A</u> Sec <u>6</u> T <u>25N</u> R <u>5W</u> County <u>DO ARriba</u>	
Land Type: <u>RANGE</u>	
Date Remediation Started: <u>8.19.98</u> Date Completed: <u>4/9/99</u>	
Remediation Method: Landfarmed <input checked="" type="checkbox"/> Approx. cubic yards <u>750</u>	
Composted <input type="checkbox"/>	
Other <input type="checkbox"/>	
Depth To Groundwater: (pts.) <u>0</u>	Final Closure Sampling:
Distance to an Ephemeral Stream (pts.) <u>0</u>	Sampling Date: <u>4.7.99</u> Time: <u>1300</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>0.0</u>
Distance To Surface Water: (pts.) <u>0</u>	TPH (ppm) <u>1.7</u> Method <u>8015</u>
RANKING SCORE (TOTAL POINTS): <u>0</u>	Other <input type="checkbox"/>
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF	
DATE <u>4/9/99</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 type="checkbox"/> NO <input type="checkbox"/> (REASON) _____	
SIGNED: _____ DATE: _____	

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BS609</u> C.D.C. NO: <u>6881</u>
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FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: <u>SICABILLA CONTRACT 147 WELL # 3</u>	PITS: <u>SEP, BLOW, COMP.</u>	DATE STARTED: <u>4.7.99</u>
QUAD/UNIT: <u>A</u> SEC: <u>6</u> TWP: <u>25N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u>		DATE FINISHED: _____
QTR/FOOTAGE: <u>NE/4 NE/4</u>	CONTRACTOR: <u>P+S</u>	ENVIRONMENTAL SPECIALIST: <u>REP</u>

SOIL REMEDIATION:

REMEDICATION SYSTEM: LANDFARM

APPROX. CUBIC YARDAGE: 750

LAND USE: RANGE

LIFT DEPTH (ft): 2

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

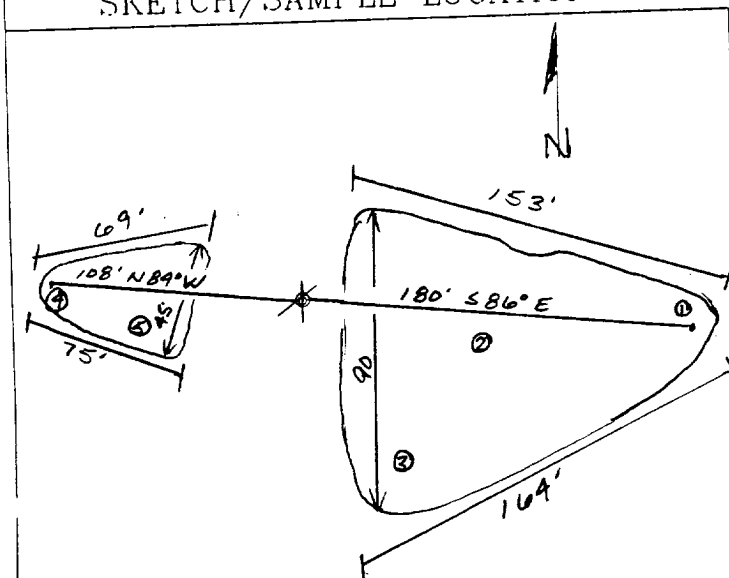
MODERATE YELLOWISH BROWN SAND, NON ADHESIVE, SLIGHTLY MOIST, FIRM
NO APPARENT STAINING, NO HC ODOR DETECTED, SAMPLING DEPTHS RANGE
FROM 6"-18" TOOK A 5 PT. COMPOSITE SAMPLE FOR LAB ANALYSIS.

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 (8015)	1300	1.7

SCALE

0 FT

TRAVEL NOTES:

CALLOUT: N/A

ONSITE: 4.7.99

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client: Blagg / AMOCO
Sample ID: LF - 1
Laboratory Number: E988
Chain of Custody No: 6881
Sample Matrix: Soil
Preservative: Cool
Condition: Cool and Intact

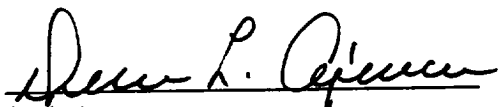
Project #: 403410
Date Reported: 04-09-99
Date Sampled: 04-07-99
Date Received: 04-08-99
Date Extracted: 04-08-99
Date Analyzed: 04-09-99
Analysis Requested: 8015 TPH

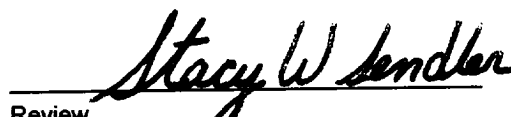
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	1.7	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	1.7	0.2

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 147 - 3 Landfarm. 5 Pt. Composite.


Analyst


Review

6881

[illegible]