

Blow - OK BJ 406
SEP - Risk
no behavior
SUBMIT 1 COPY TO
NATURAL RESOURCE DEPT
AND BUREAU OF LAND ADMINISTRATION
AUG 09 1999

7-11-64
OIL CON. DIV.
DIST. 3

Non-vulnerable, practical extent

Pit Location: Pit dimensions: length 40', width 40', depth 28'
(Attach diagram) Reference: wellhead X, other _____
Footage from reference: 300'
Direction from reference: 20 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 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>

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: _____ Date Completed: 8/28/96

Remediation Method: Excavation ☒ Approx. cubic yards 1660

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

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 30'

Sample date 8/28/96 Sample time 1400

Sample Results

Soil: Benzene	(ppm)	<u>1.42</u>	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	<u>29.09</u>	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>290</u>	Ethylbenzene	(ppb)	_____
TPH (8015)	(ppm)	<u>153</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 8/28/96 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: KSC Mamm DATE: 8-29-96

CLIENT: <u>Amoco</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>85406</u> C.D.C. NO: <u>4896</u>
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FIELD REPORT: PIT CLOSURE VERIFICATION

LOCATION: <u>JICARILLA APACHE 102 #9E</u>	PIT TYPE: <u>BLOW</u>	DATE STARTED: <u>8-14-96</u>
QUAD/UNIT: <u>P SEC: 4 TWP: 26N RNG: 4W BM: NM CNTY: RA ST: NM</u>		DATE FINISHED: <u>8-26-96</u>
QTR/FOOTAGE: <u>SE/SE</u>	CONTRACTOR: <u>PAUL</u>	ENVIRONMENTAL SPECIALIST: <u>PEO</u>

EXCAVATION APPROX. 40 FT. x 40 FT. x 28 FT. DEEP. CUBIC YARDS: 1660
DISPOSAL FACILITY: ON-SITE REMEDIATION METHOD: LANDFARM
LAND USE: RANGE LEASE: #102 FORMATION: _____

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 300 FEET, S20°E FROM WELLHEAD.
DEPTH TO GROUNDWATER: 2100' NEAREST WATER SOURCE: 21000' NEAREST SURFACE WATER: 21000'
NMOC D RANKING SCORE: 0 NMOC TPH CLOSURE STD: 5000 PPM

SOIL AND EXCAVATION DESCRIPTION: PIT DISPOSITION: AS AMENDED

SOIL CONSISTS OF MOIST, BROWN, SANDY SILT - NO STAIN, LIGHT ODOR IN BOTTOM.
SAMPLED BOTTOM AGAIN AFTER ADDITIONAL EXCAVATION.

FIELD 418.1 CALCULATIONS

FIELD 418.1 CALCULATIONS						
SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
EB@23'	1782	10.0	20.0	10	633	12,660

SCALE

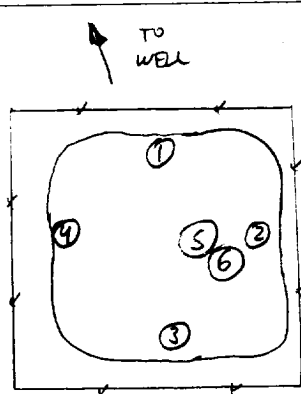


0 10 20 FT

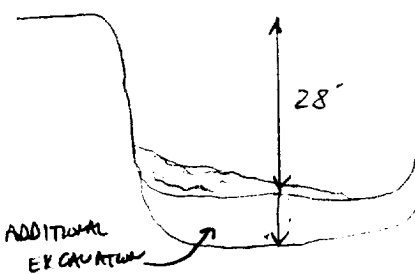
PIT PERIMETER

OVM RESULTS

PIT PROFILE



SURFACE
GRADIENT

[illegible]

TRAVEL NOTES: CALLOUT: 8-14-96 ONSITE: 8-14-96 0920

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:	East Bottom @ 23'	Date Analyzed:	8-14-96
Project Location:	Jicarilla Apache 102 # 9E	Date Reported:	8-15-96
Laboratory Number:	TPH #1782	Sample Matrix:	Soil

Parameter -----	Result, mg/kg -----	Detection Limit, mg/kg -----
Total Recoverable Petroleum Hydrocarbons	12,700	100

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg -----	Duplicate TPH mg/kg -----	% *Diff. -----
	1,420	1,344	5

*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 - BJ406

R. E. O'Neil
Analyst

Nelson V. J.
Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

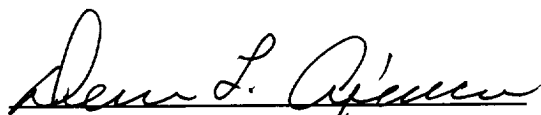
Client:	Amoco / Blagg	Project #:	04034
Sample ID:	E. Bottom @ 30'	Date Reported:	08-27-96
Laboratory Number:	A503	Date Sampled:	08-26-96
Chain of Custody No:	4896	Date Received:	08-27-96
Sample Matrix:	Soil	Date Extracted:	08-27-96
Preservative:	Cool	Date Analyzed:	08-27-96
Condition:	Cool and Intact	Analysis Requested:	8015 TPH


Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	47.6	0.2
Diesel Range (C10 - C28)	105	0.1
Total Petroleum Hydrocarbons	153	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Comments: Jicarilla Apache 102 #9E Blow Pit.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco / Blagg	Project #:	04034
Sample ID:	E. Bottom @ 30'	Date Reported:	08-28-96
Laboratory Number:	A503	Date Sampled:	08-26-96
Chain of Custody:	4896	Date Received:	08-27-96
Sample Matrix:	Soil	Date Analyzed:	08-27-96
Preservative:	Cool	Date Extracted:	08-27-96
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	1,420	17.5
Toluene	2,990	16.7
Ethylbenzene	1,900	15.2
p,m-Xylene	17,650	21.6
o-Xylene	5,130	10.4
Total BTEX	29,090	

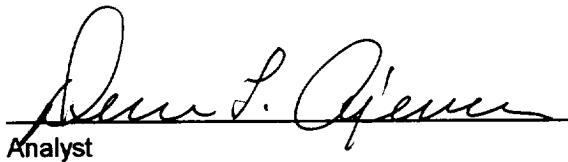
ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	101 %
	Bromofluorobenzene	100 %

References: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1994.

Comments: Jicarilla Apache 102 #9E Blow Pit.


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

East Bottom @ 23'

Jicarilla Apache 102 # 9E

TPH #1782

Project #:

Date Analyzed:

Date Reported:

Sample Matrix:

8-14-96

8-15-96

Soil

Sample Weight: 10.00 grams
Volume Freon: 20.00 mL
Dilution Factor: 10 (unitless)
TPH Reading: 633 mg/kg

TPH Result: 12660.0 mg/kg
Reported TPH Result: 12700.0 mg/kg
Actual Detection Limit: 100.0 mg/kg
Reported Detection Limit 100 mg/kg

QA/QC:

Original
TPH mg/kg

1420

Duplicate
TPH mg/kg

1344

%
Diff.

5

Comments:

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

Comments:

Blow Pit - BJ406

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

03706
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 102 # 9E
Location: Unit or Qtr/Qtr Sec P Sec 4 T 26 N R 4 W County RIO ARriba
Pit Type: Separator X Dehydrator Other
Land Type: RANGE

Pit Location: Pit dimensions: length 30', width 40', depth 20'
(Attach diagram) Reference: wellhead X, other
Footage from reference: 125
Direction from reference: 65 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 (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

Date Remediation Started: _____ Date Completed: 8-21-96

Remediation Method: Excavation ☒ Approx. cubic yards 750 75
(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

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 12' (SOUTH SIDEWALL) 20' (PIT BOTTOM) 95
Sample date 9/10/96 Sample time 1448 / 1452

Sample Results

		<u>SOUTH SIDEWALL</u>	<u>PIT BOTTOM</u>		
Soil: Benzene	(ppm)	<u>0.381</u>		Water: Benzene	(ppb) _____
Total BTEX	(ppm)	<u>53.160</u>		Toluene	(ppb) _____
Field Headspace	(ppm)	<u>200</u>	<u>23</u>	Ethylbenzene	(ppb) _____
TPH	(ppm)	<u>5,990</u>	<u>18.8</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 9/11/96 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) spary, condition closure till P+A

SIGNED: Kenn C. Mammell of well
DATE: 9-17-96

RESULTS TO PAUL 9-12-96

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BJ406</u> C.D.C. NO: <u>4902</u>
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FIELD REPORT: PIT CLOSURE VERIFICATION

LOCATION: <u>JICARILLA APACHE 102 #9E</u>	PIT TYPE: <u>SEP.</u>	DATE STARTED: <u>8-14-96</u>
QUAD/UNIT: <u>P SEC. 4 TWP. 26N RNG. 4W BM. NM CNTY. RA ST. NM</u>		DATE FINISHED: <u>9-10-96</u>
QTR/FOOTAGE: <u>SE/SE</u>	CONTRACTOR: <u>PAUL</u>	ENVIRONMENTAL SPECIALIST: <u>REO</u>
EXCAVATION APPROX. <u>30</u> FT. x <u>40</u> FT. x <u>20</u> FT. DEEP. CUBIC YARDS: <u>750</u>		
DISPOSAL FACILITY: <u>ON-SITE</u> REMEDIATION METHOD: <u>LANDFARM</u>		
LAND USE: <u>RANGE</u> LEASE: <u>#102</u> FORMATION: _____		

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 125 FEET S65°E 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 PPMSOIL AND EXCAVATION DESCRIPTION: PIT DISPOSITION: ABANDONED

SOIL CONSISTS OF MOIST, BROWN, SANDY SILT - NO STRAIN, LIGHT O.B.F.S. - PIT FLOODED WITH RAINWATER AFTER ADDITIONAL EXCAVATION. WAITING TO BE PUMPED OUT.

7/11 ADDITIONAL EXCAVATION CONDUCTED. RESAMPLED NORTH & SOUTH TIDEWALLS & PIT BOTTOM.

CONDITIONAL - JICARILLA EPO

RISK ASSESSED - NMOC D

FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No.	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
NS @ 10'	1783	10.0	20.0	10	372	7,440
WB @ 20'	1784	10.0	20.0	10	536	10,720

SCALE

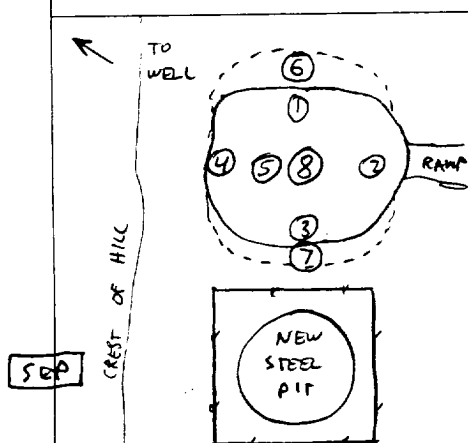


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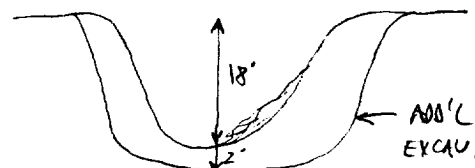
PIT PERIMETER

OVM RESULTS

PIT PROFILE



SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 NS-10'	361
2 ES-10'	19
3 SS-10'	264
4 WS-10'	17
5 WB-20'	241
6 NS-12'	0
7 SS-12'	200
8 CB-22'	23
LAB SAMPLES	
9/10 SS @ 12'	BTEX/8015
CB @ 22'	8015



FAILED
PASSED

TRAVEL NOTES:

CALLOUT: 8-14-96ONSITE: 8-14-96 1030

FORM REVISED 7/95

Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

Jicarilla Contract 102 #9E

Unit P, Sec. 4, T26N, R4W

Separator Pit

Basin Dakota

Non Vulnerable

> 1000 ft.

> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe reached practical extent for abandoned pit (20 ft. below grade) and for safety concerns (underground piping and surface equipment).

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

1. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below presumed shallow sandstone bedrock (based on informal site observation of adjacent sandstone outcrop).
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 0.50 miles northwest of the nearest vulnerable area boundary (Cottonwood Canyon wash).

(Refer to Pine Lake 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 vertical impact to groundwater is very unlikely. 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	Project #:	
Sample ID:	North Side @ 10'	Date Analyzed:	8-14-96
Project Location:	Jicarilla Apache 102 # 9E	Date Reported:	8-15-96
Laboratory Number:	TPH #1783	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	7,400	100

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	-----	-----	-----
	1,420	1,344	5

*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 - BJ406

R. E. O'Neil
Analyst

Adrian V. Tully
Review

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:	West Bottom @ 20'	Date Analyzed:	8-14-96
Project Location:	Jicarilla Apache 102 # 9E	Date Reported:	8-15-96
Laboratory Number:	TPH #1784	Sample Matrix:	Soil

Parameter -----	Result, mg/kg -----	Detection Limit, mg/kg -----
Total Recoverable Petroleum Hydrocarbons	10,700	100

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg -----	Duplicate TPH mg/kg -----	% *Diff. -----
	1,420	1,344	5

*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 - BJ406

R. E. O'Hall
Analyst

Nelson Velez
Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

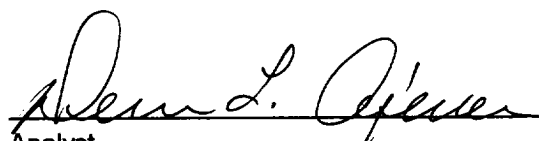
Client:	Amoco / Blagg	Project #:	04034
Sample ID:	C. Bottom @ 22'	Date Reported:	09-11-96
Laboratory Number:	A543	Date Sampled:	09-10-96
Chain of Custody No:	4902	Date Received:	09-11-96
Sample Matrix:	Soil	Date Extracted:	09-11-96
Preservative:	Cool	Date Analyzed:	09-11-96
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

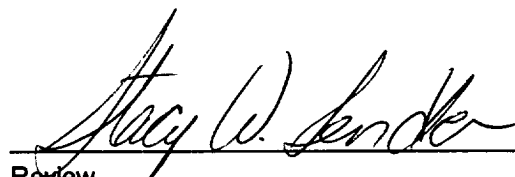
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	2.9	0.2
Diesel Range (C10 - C28)	15.9	0.1
Total Petroleum Hydrocarbons	18.8	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Comments: Jicarilla Apache 102 #9E. Sep. Pit.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

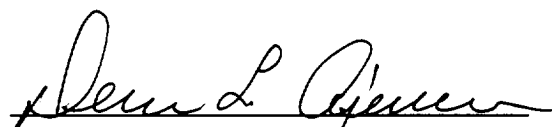
Client:	Amoco / Blagg	Project #:	04034
Sample ID:	S. Side @ 12'	Date Reported:	09-11-96
Laboratory Number:	A542	Date Sampled:	09-10-96
Chain of Custody No:	4902	Date Received:	09-11-96
Sample Matrix:	Soil	Date Extracted:	09-11-96
Preservative:	Cool	Date Analyzed:	09-11-96
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

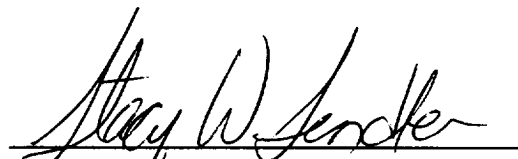
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	5,390	0.2
Diesel Range (C10 - C28)	607	0.1
Total Petroleum Hydrocarbons	5,990	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Comments: Jicarilla Apache 102 #9E. Sep. Pit.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco / Blagg	Project #:	04034
Sample ID:	S. Side @ 12'	Date Reported:	09-11-96
Laboratory Number:	A542	Date Sampled:	09-10-96
Chain of Custody:	4902	Date Received:	09-11-96
Sample Matrix:	Soil	Date Analyzed:	09-11-96
Preservative:	Cool	Date Extracted:	09-11-96
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	381	11.7
Toluene	24,130	11.1
Ethylbenzene	6,880	10.1
p,m-Xylene	4,690	14.4
o-Xylene	17,080	6.9
Total BTEX	53,160	

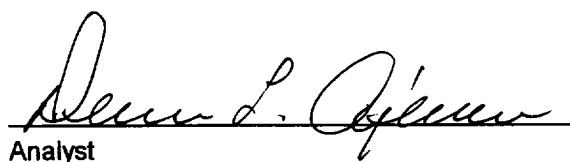
ND - Parameter not detected at the stated detection limit.

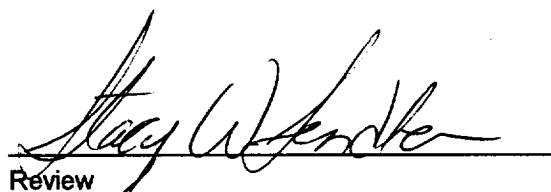
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	103 %
	Bromofluorobenzene	100 %

References: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1994.

Comments: Jicarilla Apache 102 #9E. Sep. Pit.


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

North Side @ 10'

Jicarilla Apache 102 # 9E

TPH #1783

Project #:

Date Analyzed:

Date Reported:

Sample Matrix:

8-14-96

8-15-96

Soil

Sample Weight: 10.00 grams
Volume Freon: 20.00 mL
Dilution Factor: 10 (unitless)
TPH Reading: 372 mg/kg

TPH Result: 7440.0 mg/kg
Reported TPH Result: 7400.0 mg/kg
Actual Detection Limit: 100.0 mg/kg
Reported Detection Limit: 100 mg/kg

QA/QC:

Original
TPH mg/kg

1420

Duplicate
TPH mg/kg

1344

%
Diff.

5

Comments:

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

Comments:

Separator Pit - BJ406

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:	West Bottom @ 20'	Date Analyzed:	8-14-96
Project Location:	Jicarilla Apache 102 # 9E	Date Reported:	8-15-96
Laboratory Number:	TPH #1784	Sample Matrix:	Soil

Sample Weight:	10.00	grams
Volume Freon:	20.00	mL
Dilution Factor:	10	(unitless)
TPH Reading:	536	mg/kg

TPH Result:	10720.0	mg/kg
Reported TPH Result:	10700.0	mg/kg
Actual Detection Limit:	100.0	mg/kg
Reported Detection Limit	100	mg/kg

QA/QC:	Original TPH mg/kg	Duplicate TPH mg/kg	% Diff.
	-----	-----	-----
	1420	1344	5

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

Comments: Separator Pit - BJ406

San Juan negro Form 573-81

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

8J406

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 APACHE #102-9E

Location: Unit or Qtr/Qtr Sec P Sec 4 T 26N R 4W County RIO ARRIBA

Land Type: RANGE

Date Remediation Started: 8/14/96 Date Completed: 7/15/98

Remediation Method: Landfarmed X Approx. cubic yards 600
Composted _____
Other _____

Depth To Groundwater: (pts.) 0
Distance to an Ephemeral Stream (pts.) 0
Distance to Nearest Lake, Playa, or Watering Pond (pts.) 0
Wellhead Protection Area: (pts.) 0
Distance To Surface Water: (pts.) 0

RANKING SCORE (TOTAL POINTS): 0

Final Closure Sampling:

Sampling Date: 7/14/98 Time: 0835

Sample Results:

Field Headspace (ppm) 0.0
TPH (ppm) 1.0 Method 8015
Other _____

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

DATE 7/15/98 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 X NO _____ (REASON) _____

SIGNED: Joe C. Mammill DATE: 7-27-98
use as Backfill

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BJ406</u> C.D.C. NO: <u>6097</u>
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FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: <u>JICA. APACHE</u> 102 WELL #: <u>9E</u> PITS: <u>SEP., BLOW</u> QUAD/UNIT: <u>P</u> SEC: <u>4</u> TWP: <u>26N</u> RNG: <u>4W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u> QTR/FOOTAGE: <u>SE1/4 SE1/4</u> CONTRACTOR: <u>P+S</u>	DATE STARTED: <u>7/14/98</u> DATE FINISHED: _____ ENVIRONMENTAL SPECIALIST: <u>NV</u>
---	---

SOIL REMEDIATION: REMEDIATION SYSTEM: <u>LANDFARM</u> LAND USE: <u>RANGE</u>	2410 APPROX. CUBIC YARDAGE: <u>600</u> LIFT DEPTH (ft): <u>2'</u>
--	---

FIELD NOTES & REMARKS:

DEPTH TO GROUNDWATER: 2100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'

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

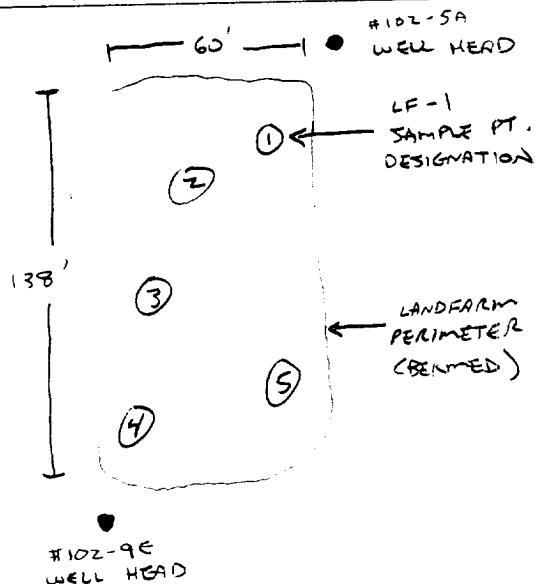
SOIL CONSISTED OF MOSTLY DK. YELL. BROWN SAND TO SILTY SAND W/ A MINOR AMOUNT OF DK. YELL. BROWN PLASTIC CLAY, NON COHESIVE, SLIGHTLY MOIST, FIRM, SAMPLING DEPTHS RANGE FROM 6" TO 1 1/2', NO DISCOLORATION OR HC ODOR OBSERVED @ ANY OF THE SAMPLE PTS. OF LANDFARM AREA, COLLECTED 5 FT. COMPOSITE SAMPLE 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)	0835	1.0

SCALE



TRAVEL NOTES:

CALLOUT: NA

ONSITE: 7/14/98

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

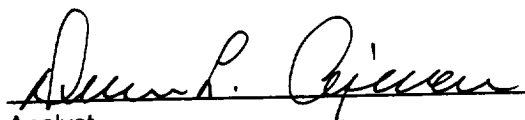
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	07-15-98
Laboratory Number:	D614	Date Sampled:	07-14-98
Chain of Custody No:	6097	Date Received:	07-14-98
Sample Matrix:	Soil	Date Extracted:	07-14-98
Preservative:	Cool	Date Analyzed:	07-14-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	1.0	0.1
Total Petroleum Hydrocarbons	1.0	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 #102 - 9E Landfarm. 5 Pt. Composite.


Analyst


Review

6097

[illegible]