

Denny E. Foust
DEPUTY OIL & GAS INSPECTOR

AUG 13 1999

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

BT 450⁰⁴ 20/7/0

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: JI CARILLAS B #3E

Location: Unit or Qtr/Qtr Sec I Sec 15 T 26N R 5W County RIO ARIZONA

Pit Type: Separator_____ Dehydrator_____ Other PRODUCTION TANK

Land Type: RANGE

Pit Location: Pit dimensions: length 22', width 21', depth 15'
(Attach diagram)

Reference: wellhead X , other

Footage from reference: 125'

Direction from reference: 49 Degrees X East of North X
West South

Depth To Groundwater:

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

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

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)

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)

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)

Distance To SurfaceWater:

(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)

RANKING SCORE (TOTAL POINTS):

PROD. TANK PIT / BJ 450

Date Remediation Started: _____ Date Completed: 10/3/96

Remediation Method: Excavation ☒ Approx. cubic yards 175
 Check all appropriate (actions) 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 16'

Sample date 10/3/96 Sample time 1245

Sample Results

Soil: Benzene (ppm) _____	Water: Benzene (ppb) _____
Total BTEX (ppm) _____	Toluene (ppb) _____
Field Headspace (ppm) <u>7.7</u>	Ethylbenzene (ppb) _____
TPH (ppm) <u>72</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 10/3/96 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: [Signature] DATE: 10/22/96

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BT450</u> C.O.C. NO: _____
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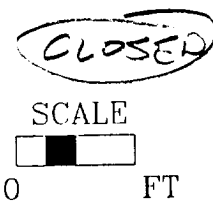
FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>
LOCATION: NAME: <u>TICARIWA</u> B WELL #: <u>3E</u> PIT: <u>PROD. TANK</u>		DATE STARTED: <u>10/3/96</u> DATE FINISHED: _____
QUAD/UNIT: <u>I</u> SEC: <u>15</u> TWP: <u>26N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u>		ENVIRONMENTAL SPECIALIST: <u>NV</u>
QTR/FOOTAGE: <u>1685' FSL/955' FEL</u> CONTRACTOR: <u>PFS</u>		

EXCAVATION APPROX. <u>22</u> FT. x <u>21</u> FT. x <u>15</u> FT. DEEP.	CUBIC YARDAGE: <u>175</u>
DISPOSAL FACILITY: <u>ON-SITE</u>	REMEDIATION METHOD: <u>LANDFARMED</u>
LAND USE: <u>RANGE</u>	LEASE: <u>JICA. CNTR. #109</u> FORMATION: <u>DK</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>125</u> FT. <u>N49E</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
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SOIL MOSTLY DR. YELL. BROWN TO OLIVE GRAY (SOUTH SIDEWALL & PIT BOTTOM) SAND, NON-COESIVE, SLIGHTLY MOIST FIRM. NO APPARENT HC DDOR IN ANY OF THE OVM SAMPLES. NO APPARENT HC STAINING OR DDOR OBSERVED W/IN THE EXCAVATION.



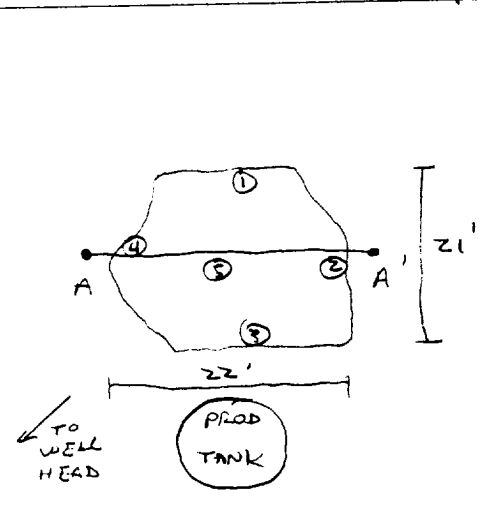
FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1245	⑤ @ 16'	TAH-1835	5	20	1:1	18	72

PIT PERIMETER

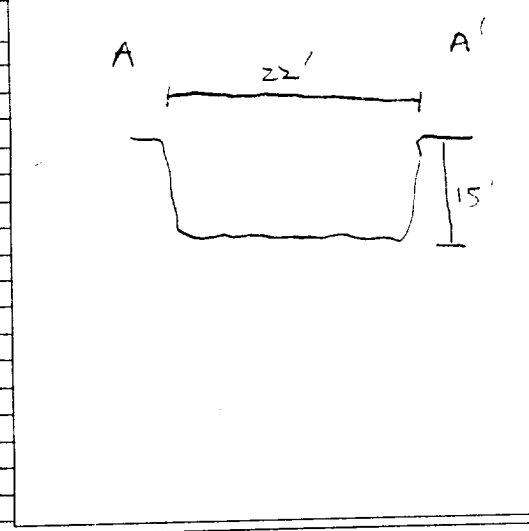
OVM RESULTS

PIT PROFILE



SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 11'	0.0
2 @ 10'	0.0
3 @ 10'	0.0
4 @ 11'	0.0
5 @ 16'	7.7

LAB SAMPLES		
SAMPLE ID	ANALYSIS	TIME



TRAVEL NOTES:	CALLOUT: <u>10/1/96 AFTER.</u> ONSITE: <u>10/3/96 MORN.</u>
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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: 5 @ 16'
Project Location: Jicarilla B # 3E
Laboratory Number: TPH-1835

Project #:
Date Analyzed: 10-03-96
Date Reported: 10-03-96
Sample Matrix: Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
-----	-----	-----
Total Recoverable Petroleum Hydrocarbons	72	20

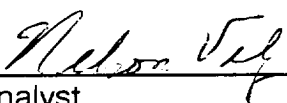
ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	-----	-----	-----
	4640	4400	5.31

* 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: Production Tank Pit - BJ450



Analyst



Review

BT 450

AND OIL & GAS ADMINISTRATION

Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9200

Address: 200 Amoco Court, Farmington, NM 87401

Facility or Well Name: JICARILLA B #3E

Location: Unit or Qtr/Qtr Sec I Sec 15 T 26N R 5W County RIO ARriba

Pit Type: Separator ☒ Dehydrator ☐ Other ☐

Land Type: RANGE

Pit Location:
(Attach diagram)

Pit dimensions: length 30', width 22', depth 17'

Reference: wellhead X, other _____

Footage from reference: 70'

Direction from reference: 59 Degrees X East North _____
West South X

Depth To Groundwater:	Less than 50 feet	(20 points)	
(Vertical distance from	50 feet to 99 feet	(10 points)	
contaminants to seasonal	Greater than 100 feet	(0 points)	<u>0</u>
high water elevation of			
groundwater)			

Distance to an Ephemeral Stream	Less than 100 feet	(10 points)	
(Downgradient dry wash greater than ten feet in width)	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)	<u>0</u>
	Greater than 100 feet	(0 points)	

Wellhead Protection Area: Yes (20 points)
(Less than 200 feet from a private No (0 points) 0
domestic water source, or: less than
1000 feet from all other water sources)

Distance To SurfaceWater:	Less than 100 feet	(20 points)	
(Horizontal distance to perennial	100 feet to 1000 feet	(10 points)	
lakes, ponds, rivers, streams, creeks,	Greater than 1000 feet	(0 points)	<u>0</u>
irrigation canals and ditches)			

RANKING SCORE (TOTAL POINTS): 0

SEP. PIT / BJ 450

Date Remediation Started: _____ Date Completed: 10/4/96

Remediation Method: Excavation ☒ Approx. cubic yards 325
Check all appropriate (actions) 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 18'

Sample date 10/3/96 Sample time 1130

Sample Results

Soil: Benzene	(ppm)	<u>ND</u>	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	<u>2.560</u>	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>224.2</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>1,116</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 10/4/96 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: Gabriel Julian DATE: 10/22/96

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BT450</u> C.D.C. NO: <u>4914</u>
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FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>
LOCATION: NAME: <u>JICARILLA</u> B WELL #: <u>3E</u> PIT: <u>SEP</u> QUAD/UNIT: <u>I</u> SEC: <u>15</u> TWP: <u>26N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u> QTR/FOOTAGE: <u>1685' FSL / 955' FEL</u> CONTRACTOR: <u>P & S</u>		DATE STARTED: <u>10/3/96</u> DATE FINISHED: _____ ENVIRONMENTAL SPECIALIST: <u>NV</u>

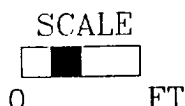
EXCAVATION APPROX. <u>30</u> FT. x <u>22</u> FT. x <u>17</u> FT. DEEP.	CUBIC YARDAGE: <u>325</u>
DISPOSAL FACILITY: <u>ON-SITE</u>	REMEDIATION METHOD: <u>LANDFARMED</u>
LAND USE: <u>RANGE</u>	LEASE: <u>JICA, CONTR. #109</u> FORMATION: <u>DK</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>70</u> FT. <u>559E</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:	CHECK ONE : <input checked="" type="checkbox"/> PIT ABANDONED <input type="checkbox"/> STEEL TANK INSTALLED
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SOIL MOSTLY DR. YELL. BROWN SILTY SAND NON-COHESIVE, SLIGHTLY MOIST, FIRM, STRONG HC ODOR IN PIT BOTTOM. OUM SAMPLE, SMALL QUANTITY (GUESTIMATION OF 10 C.Y.) OF STAINED SOIL IN NE CORNER OF EXCAVATION.

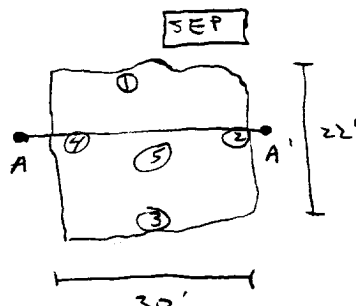
CLOSED



FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1130	5 @ 18'	TPH-1834	5	20	1:1	279	1116

PIT PERIMETER

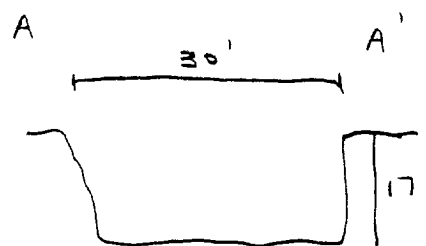


OVN RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 12'	0.0
2 @ 12'	0.0
3 @ 12'	0.0
4 @ 14'	0.0
5 @ 18'	224.2

LAB SAMPLES		
SAMPLE ID	ANALYSIS	TIME
5 @ 18'	BTEX	1130

PIT PROFILE



TRAVEL NOTES:	CALLOUT: <u>10/1/96 AFTER.</u> ONSITE: <u>10/3/96 MORN.</u>
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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: 5 @ 18'
Project Location: Jicarilla B # 3E
Laboratory Number: TPH-1834

Project #:
Date Analyzed: 10-03-96
Date Reported: 10-03-96
Sample Matrix: Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	1,100	20

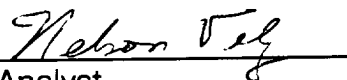
ND = Not Detectable at stated detection limits.

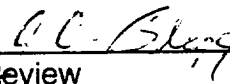
QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	4640	4400	5.31

*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 - BJ450


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Amoco	Project #:	04034
Sample ID:	5 @ 18'	Date Reported:	10-04-96
Laboratory Number:	A640	Date Sampled:	10-03-96
Chain of Custody:	4914	Date Received:	10-04-96
Sample Matrix:	Soil	Date Analyzed:	10-04-96
Preservative:	Cool	Date Extracted:	10-04-96
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	11.7
Toluene	72.2	11.1
Ethylbenzene	118	10.1
p,m-Xylene	1,790	14.4
o-Xylene	575	6.9
Total BTEX	2,560	

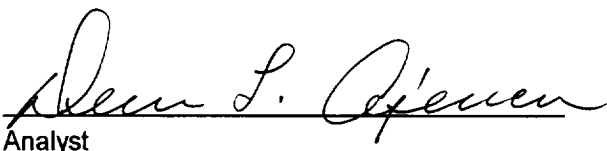
ND - Parameter not detected at the stated detection limit.

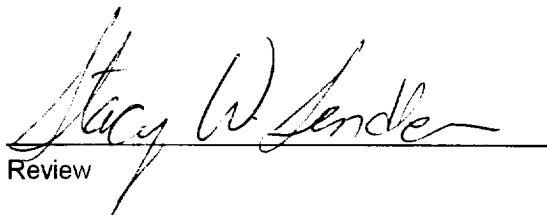
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	101 %
	Bromofluorobenzene	98 %

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 B #3E Separator Pit.


Analyst


Review

San Juan Nepro Form 578-61

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

BT450

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 B # 3E</u>		
Location: Unit or Qtr/Qtr Sec <u>I</u> Sec <u>15</u> T <u>26N</u> R <u>5W</u> County <u>RIO ARRIAGA</u>		
Land Type: <u>RANGE</u>		
Date Remediation Started: <u>10/10/96</u>		Date Completed: <u>5/1/98</u>
Remediation Method: Landfarmed <input checked="" type="checkbox"/> Composted <input type="checkbox"/> Other <input type="checkbox"/>		Approx. cubic yards <u>500</u>
Depth To Groundwater: (pts.) <u>0</u>		Final Closure Sampling: Sampling Date: <u>4/29/98</u> Time: <u>1320</u> Sample Results: Field Headspace (ppm) <u>9.3</u> TPH (ppm) <u>36.9</u> Method <u>8015</u> Other <input type="checkbox"/>
Distance to an Ephemeral Stream (pts.) <u>0</u>		
Distance to Nearest Lake, Playa, or Watering Pond (pts.) <u>0</u>		
Wellhead Protection Area: (pts.) <u>0</u>		
Distance To Surface Water: (pts.) <u>0</u>		
RANKING SCORE (TOTAL POINTS): <u>0</u>		
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF		
DATE <u>5/1/98</u> PRINTED NAME <u>Buddy D. Shaw</u>		
SIGNATURE <u>Buddy D. Shaw</u>		AND TITLE <u>Environmental Coordinator</u>
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.		
APPROVED: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> (REASON) <u>use as Backfill</u>		
SIGNED: <u>Kee C Marshall</u>		DATE: <u>5-7-98</u>

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>8J450</u> C.D.C. NO: <u>5762</u>
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FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: <u>TICARUNA</u> B WELL #: <u>3E</u> PITS: <u>PROD., SEP.</u> QUAD/UNIT: <u>I</u> SEC: <u>15</u> TWP: <u>26N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u> QTR/FOOTAGE: <u>NE/4 SE/4</u> CONTRACTOR: <u>P+5</u>	DATE STARTED: <u>4/29/98</u> DATE FINISHED: <u>5/1/98</u> ENVIRONMENTAL SPECIALIST: <u>NV</u>
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SOIL REMEDIATION:

REMEDIATION SYSTEM: <u>LANDFARM</u>	APPROX. CUBIC YARDAGE: <u>500</u>
LAND USE: <u>RANGE</u>	LIFT DEPTH (ft): <u>1'-2'</u>

FIELD NOTES & REMARKS:

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

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

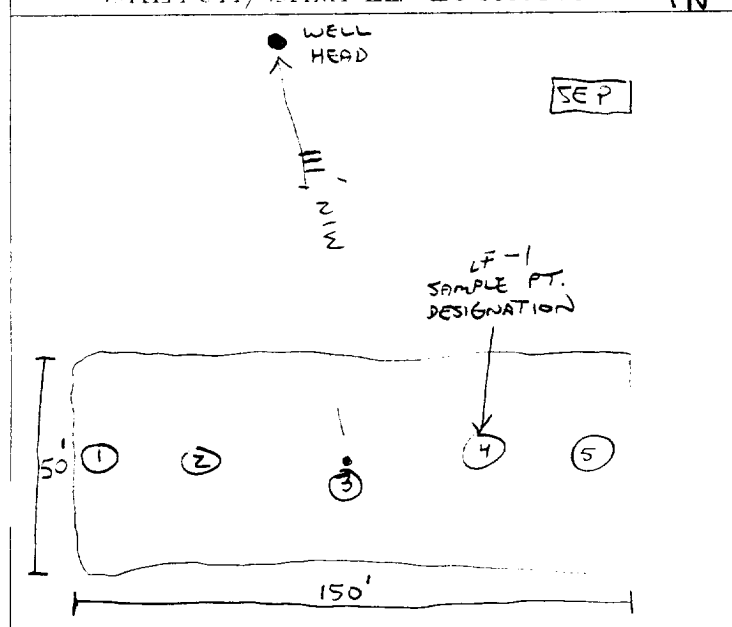
SOIL MOSTLY SILTY SAND TO SILTY CLAY, SLIGHTLY COHESIVE SLIGHTLY MOIST, FIRM, MED. GRAY TO BLACK DISCOLORED CLAY W/ HC ODOR OBSERVED IN SAMPLE PT. ④ ONLY, NO APPARENT STAINING OBSERVED ON LANDFARM SURFACE. SAMPLE DEPTH RANGE FROM 6" TO 1 1/2', 5 PT. COMPOSITE COLLECTED FOR LAB ANALYSIS.

FIELD 418.1 CALCULATIONS

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

CLOSED

SKETCH/SAMPLE LOCATIONS

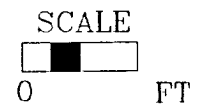


OVM RESULTS

LAB SAMPLES

SAMPLE ID	FIELD HEADSPACE PID (ppm)
LF-1	9.3

SAMPLE ID	ANALYSIS	TIME	RESULTS
LF-1	TPH (PDS)	1240	36.9



TRAVEL NOTES: CALLOUT: NA ONSITE: 4/29/98

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: D203
Chain of Custody No: 5762
Sample Matrix: Soil
Preservative: Cool
Condition: Cool and Intact

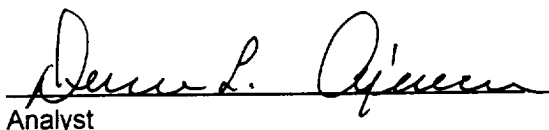
Project #: 04034-10
Date Reported: 05-01-98
Date Sampled: 04-29-98
Date Received: 04-29-98
Date Extracted: 04-30-98
Date Analyzed: 05-01-98
Analysis Requested: 8015 TPH

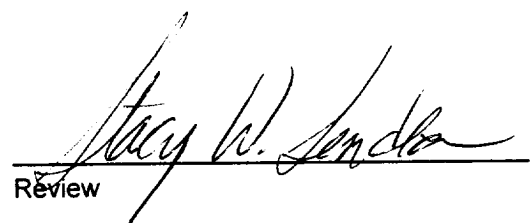
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	6.5	0.2
Diesel Range (C10 - C28)	30.4	0.1
Total Petroleum Hydrocarbons	36.9	0.2

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 B #3E Landfarm 5 Pt. Composite.


Analyst


Review

ENVIROTECH INC.
5796 U.S. Highway 64-3014
Farmington, New Mexico 87401
(505) 632-0615