

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

AUG 16 1999

PIT REMEDIATION AND CLOSURE REPORT

OIL CON. DIV.
DIST. 3

Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9200
Address: 200 Amoco Court, Farmington, NM 87401
Facility or Well Name: JICARILLA CONTRACT # 146-28
Location: Unit or Qtr/Qtr Sec M Sec 9 T 25N R 5W County RIO ARriba
Pit Type: Separator Dehydrator Other BLOW
Land Type: RANGE

Pit Location: Pit dimensions: length 56', width 58', depth 15'
(Attach diagram) Reference: wellhead X, other
Footage from reference: 312'
Direction from reference: 69 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: 7/10/98

Remediation Method: ☒ Excavation
(check all appropriate sections)

☒ Landfarmed

Other _____

Approx. cubic yards 700

Insitu Bioremediation _____

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

Onsite _____

Offsite ☒

JICARILLA CONTRACT #146-10
(P + A'D) (N-9-25-5)

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. DUM SAMPLE OF WEST

SIDEWALL @ 10' BTEX & TPH - COMPOSITE SAMPLE OF SIDEWALLS.

Sample depth 10'

Sample date 7/2/98

Sample time 1030

Sample Results

Soil: Benzene

(ppm) 0.388

Water: Benzene

(ppb) _____

Total BTEX

(ppm) 0.970

Toluene

(ppb) _____

Field Headspace

(ppm) 1844

Ethylbenzene

(ppb) _____

TPH

(ppm) 13.1

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

7/10/98

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: Ken M...

DATE: 8-27-98

CLIENT: AMOCOBLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199LOCATION NO: 87577C.D.C. NO: 6086

FIELD REPORT: CLOSURE VERIFICATION

PAGE No: 1 of 1LOCATION: NAME JICA. CONTR. 146 WELL #: 28 PIT: BLOW
QUAD/UNIT: M SEC: 9 TWP: 25N RNG: SW PM: NM CNTY: RA ST: NM
QTR/FOOTAGE: 1170' FSL 1170' FWL CONTRACTOR: PFSDATE STARTED: 7/2/98

DATE FINISHED: _____

ENVIRONMENTAL
SPECIALIST: NVEXCAVATION APPROX. 56 FT. x 58 FT. x 15 FT. DEEP. CUBIC YARDAGE: 700
DISPOSAL FACILITY: JICA. CONTR. 146 -10 REMEDIATION METHOD: LANDFARM
LAND USE: RANGE LEASE: JIC 146 FORMATION: PCFIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 312 FT. 569E 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:

CHECK ONE:

- ☒
- PIT ABANDONED
-
- ☐
- STEEL TANK INSTALLED
-
- ☐
- FIBERGLASS TANK INSTALLED

SIDEWALL - CONSIST OF MOD. YELL. BROWN SILTY SAND TO SILTY CLAY,
NON COHESIVE TO SLIGHTLY COHESIVE SLIGHTLY MOIST, FIRM,
TO DENSE, OLIVE TO MED. GRAY COLOR W/ STRONG HC ODOR
IN WEST SIDEWALL SAMPLING AREA, NO APPARENT HC ODOR
OR STAINING OBSERVED IN OTHERS.BOTTOM - VERY PALE ORANGE TO DK. YELL. BROWN BEDROCK (SHALE),
VERY HARD, SLIGHT HC ODOR IN DUM SAMPLE.BEDROCK
BOTTOM

CLOSED

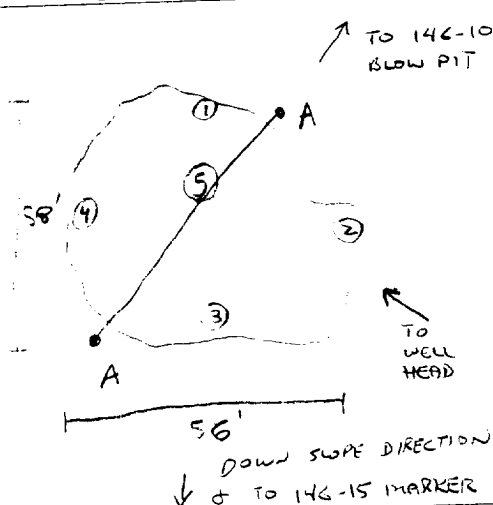
FIELD 418.1 CALCULATIONS

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

SCALE

0 FT

PIT PERIMETER

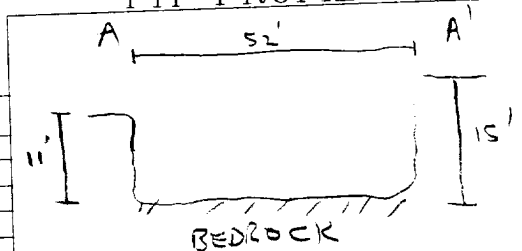
OVM
RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 10'	0.0
2 @ 9'	0.0
3 @ 10'	0.0
4 @ 10'	1844
5 @ 15'	80.8

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
SW-C	TPH / BTEX	1030
	(8015/8021)	
BOTH PASSED		

PIT PROFILE



TRAVEL NOTES:

CALLOUT: 7/1/98 - MORN. ONSITE: 7/2/98 - MORN.

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client: Blagg / AMOCO
Sample ID: SW - C
Laboratory Number: D586
Chain of Custody No: 6086
Sample Matrix: Soil
Preservative: Cool
Condition: Cool and Intact

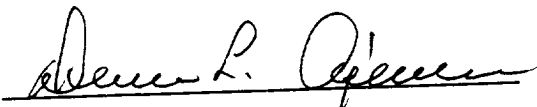
Project #: 04034-10
Date Reported: 07-05-98
Date Sampled: 07-02-98
Date Received: 07-02-98
Date Extracted: 07-05-98
Date Analyzed: 07-05-98
Analysis Requested: 8015 TPH

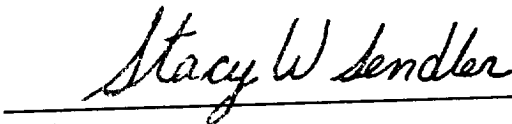
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	3.4	0.2
Diesel Range (C10 - C28)	9.7	0.1
Total Petroleum Hydrocarbons	13.1	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Jicarilla Contract #146 - 28 Blow Pit. 4 Pt. Composite.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	SW - C	Date Reported:	07-05-98
Laboratory Number:	D586	Date Sampled:	07-02-98
Chain of Custody:	6086	Date Received:	07-02-98
Sample Matrix:	Soil	Date Analyzed:	07-05-98
Preservative:	Cool	Date Extracted:	07-05-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	388	8.8
Toluene	57.1	8.4
Ethylbenzene	45.4	7.6
p,m-Xylene	304	10.8
o-Xylene	172	5.2
Total BTEX	970	

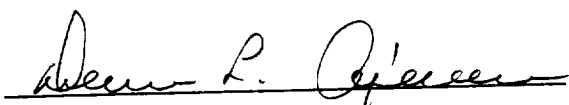
ND - Parameter not detected at the stated detection limit.

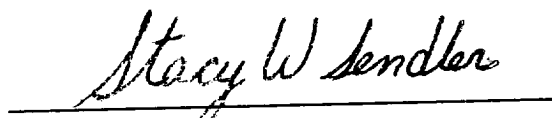
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	97 %
	Bromofluorobenzene	97 %

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

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

Comments: Jicarilla Contract #146 - 28 Blow Pit. 4 Pt. Composite.


Analyst


Review

5086

RF Coc's 6043.6086

8J577

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

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

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 146 - 28

Location: Unit or Qtr/Qtr Sec M Sec 9 T 25N R 5W County RIO ARriba

Pit Type: Separator ☒ Dehydrator ☐ Other ☐

Land Type: RANGE

Pit Location: Pit dimensions: length 22', width 12', depth 9'
(Attach diagram) Reference: wellhead ☒, other ☐
Footage from reference: 155'
Direction from reference: 18 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)	
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 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)	<u>0</u>

RANKING SCORE (TOTAL POINTS): 0

BJ 577

SEP. PIT

Date Remediation Started: _____

Date Completed: _____

7/2/98

Remediation Method:
(check all appropriate
sections)

Excavation

☒

Landfarmed

☒

Other _____

Approx. cubic yards

75

Insitu Bioremediation _____

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

Onsite

☒

Offsite _____

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

4' (EAST SIDEWALL)

Sample date

7/2/98

Sample time

0840

Sample Results

Soil: Benzene

(ppm)

Water: Benzene

(ppb)

Total BTEX

(ppm)

Toluene

(ppb)

Field Headspace

(ppm)

Ethylbenzene

(ppb)

TPH

(ppm)

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

7/2/98

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:

Ker C. Moore

DATE:

7-27-98

3003922145

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>8JS77</u> C.O.C. NO: _____
----------------------	--	---

FIELD REPORT: CLOSURE VERIFICATION

PAGE No: 1 of 1

LOCATION: NAME JICA CONTR. 146 WELL #: 28 PIT: SEP
 QUAD/UNIT: M SEC 9 TWP: 25N RNG: 5W PM: NM CNTY: RA ST: NM
 QTR/FOOTAGE: 1170' FSL 1170' FWL CONTRACTOR: P+S

DATE STARTED: 7/2/98
 DATE FINISHED: _____

ENVIRONMENTAL
 SPECIALIST: NV

EXCAVATION APPROX. 22 FT. x 12 FT. x 9 FT. DEEP. CUBIC YARDAGE: 70
 DISPOSAL FACILITY: ON-SITE REMEDIATION METHOD: LANDFARM
 LAND USE: RANGE LEASE: JIC 146 FORMATION: PC

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 155 FT. S18E FROM WELLHEAD.

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

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

SOIL AND EXCAVATION DESCRIPTION:

CHECK ONE:

- ☒ PIT ABANDONED
☐ STEEL TANK INSTALLED
☐ FIBERGLASS TANK INSTALLED

mostly OK. YELL. BROWN SAND, NON COHESIVE SLIGHTLY MOIST, FIRM,
 NO APPARENT STAINING OR HC ODOR OBSERVED W/IN EXCAVATION,
 SLIGHT HC ODOR IN EAST SIDEWALL OVM SAMPLE ONLY.

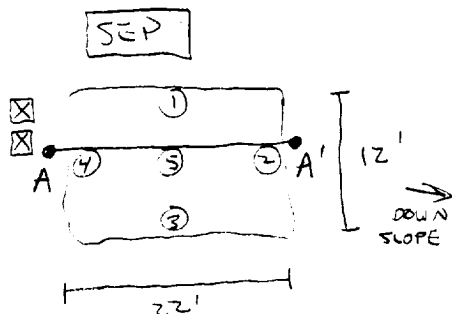
CLOSED

SCALE



0 FT

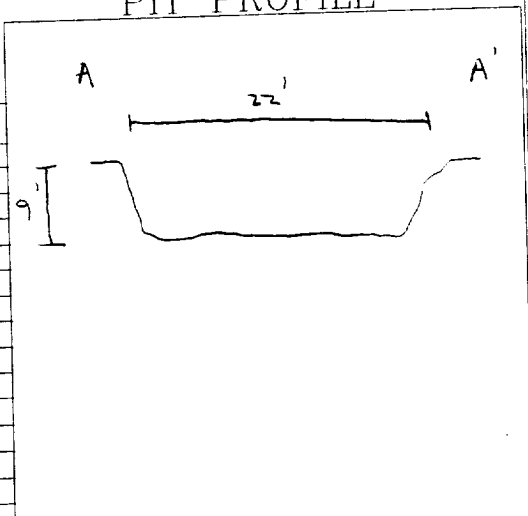
PIT PERIMETER



FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
0840	② e 4'	TPH-1998	5	20	1:1	54	216

PIT PROFILE



OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 e 5'	0.0
2 e 4'	79.3
3 e 5'	0.0
4 e 5'	0.0
5 C 11'	0.0

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

TRAVEL NOTES:

CALLOUT: 7/1/98 - MORN.ONSITE: 7/2/98 - 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:	2 @ 4'	Date Analyzed:	07-02-98
Project Location:	Jicarilla Contract # 146 - 28	Date Reported:	07-02-98
Laboratory Number:	TPH-1998	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	220	20

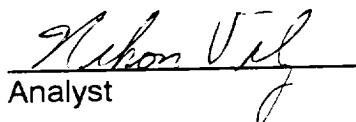
ND = Not Detectable at stated detection limits.

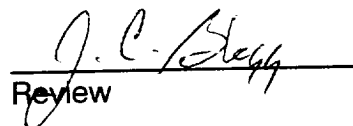
QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	1684	1712	1.65

*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 - BJ577


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:

2 @ 4'

Date Analyzed:

07-02-98

Project Location:

Jicarilla Contract # 146 - 28

Date Reported:

07-02-98

Laboratory Number:

TPH-1998

Sample Matrix:

Soil

Sample Weight:

5.00 grams

Volume Freon:

20.00 mL

Dilution Factor:

1 (unitless)

TPH Reading:

54 mg/kg

TPH Result:

216.0 mg/kg

Reported TPH Result:

220 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 - BJ577

B5577

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: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9200
Address: 200 Amoco Court, Farmington, NM 87401
Facility or Well Name: JICARILLA CONTRACT 146-28
Location: Unit or Qtr/Qtr Sec M Sec 9 T 25N R 5W County BOARIBA
Land Type: RANGE

Date Remediation Started: 7-2-98 Date Completed: 3/12/99
Remediation Method: Landfarmed ☒ Approx. cubic yards 70
Composted ☐
Other ☐

		Final Closure Sampling:	
Depth To Groundwater:	(pts.) <u>0</u>	Sampling Date: <u>3-10-99</u>	Time: <u>1130</u>
Distance to an Ephemeral Stream	(pts.) <u>0</u>	Sample Results:	
Distance to Nearest Lake, Playa, or Watering Pond	(pts.) <u>0</u>	Field Headspace (ppm)	<u>0.0</u>
Wellhead Protection Area:	(pts.) <u>0</u>	TPH (ppm)	<u>0.4</u> Method <u>8015</u>
Distance To Surface Water:	(pts.) <u>0</u>	Other	<u></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 3/12/99 PRINTED NAME Buddy D. Shaw
SIGNATURE Buddy D. Shaw AND TITLE Environmental Coordinator

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

APPROVED: YES ☒ NO ☐ (REASON)

SIGNED: K. C. M. (C) DATE: 3-31-99

CLIENT: AMOCOBLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199LOCATION NO: 83577C.O.C. NO: 4578

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: JICARILLA CONTRACT 146 WELL #: 28 PITS: SEP, BLOW
QUAD/UNIT: M SEC: 9 TWP: 25N RNG: 5W PM: NM CNTY: RA ST: NM
QTR/FOOTAGE: SW/4 SW/4 CONTRACTOR: P+SDATE STARTED: 3.10.99
DATE FINISHED: _____ENVIRONMENTAL
SPECIALIST: REP

SOIL REMEDIATION:

REMEDIATION SYSTEM: LANDFARMAPPROX. CUBIC YARDAGE: 70LAND USE: RANGELIFT DEPTH (ft): 1

FIELD NOTES & REMARKS:

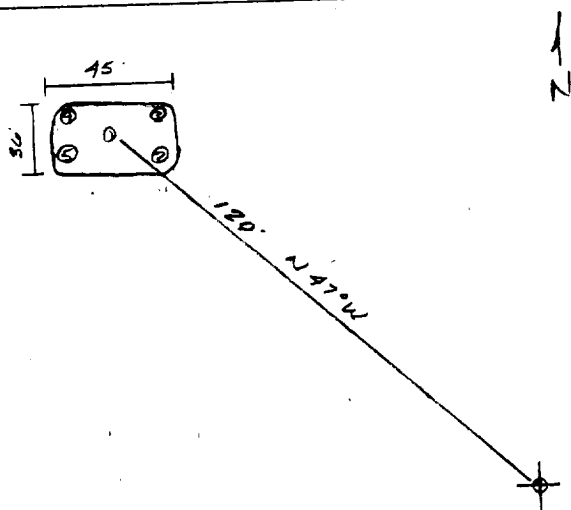
DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'NMOC D RANKING SCORE: 0 NMOC D TPH CLOSURE STD: 5000 PPMMODERATE YELLOWISH BROWN SAND. NON COHESIVE, SLIGHTLY MOIST, FIRM.
NO STAINING OBSERVED OR NO ODOR DETECTED SAMPLING DEPTHS RANGE
FROM 6" - 12". TOOK A SPT COMPOSITE SAMPLE FOR LAB ANALYSIS.CLOSEDAPPROX. 700 C.Y.
DISPOSED TO JICA.
CONTR. 146-10

N-9-25-5

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	7 PH 8015	1130	0.4

SCALE

0 FT

TRAVEL NOTES:

CALLOUT: N/AONSITE: 3.10.99

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

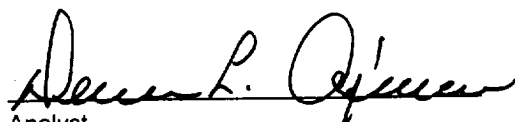
Client:	Blagg / AMOCO	Project #:	403410
Sample ID:	LF - 1	Date Reported:	03-12-99
Laboratory Number:	E804	Date Sampled:	03-10-99
Chain of Custody No:	6578	Date Received:	03-11-99
Sample Matrix:	Soil	Date Extracted:	03-11-99
Preservative:	Cool	Date Analyzed:	03-12-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	0.4	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	0.4	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Jicarilla Contract 146 - 28 Landfarm. 5 Pt. Composite.


Analyst


Review

578

[illegible]