

District I

P.O. Box 1980, Hobbs, NM

District II

P.O. Drawer DD, Artesia, NM 88211

District III

1000 Rio Brazos Rd, Aztec, NM 87410

Blow OK - 12/13/01 - LF approved
 Deny - Denied - lacks BTEX - headspace high
 state of New Mexico
 Energy, Minerals and Natural Resources Department

Production - OK

Sep - OK

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO
 APPROPRIATE
 DISTRICT OFFICE
 AND 1 COPY TO
 SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator: AMOCO PRODUCTION COMPANY Telephone: 326-9200Address: 200 AMOCO COURT, FARMINGTON, NM 87401Facility Or: WARREN 18 4E
Well NameLocation: Unit or Qtr/Qtr Sec H Sec 13 T 28N R 9W County SAN JUANPit Type: Separator Dehydrator Other BLOWLand Type: BLM ✓, State , Fee , Other Pit Location: Pit dimensions: length 24', width 30', depth 14'
(Attach diagram)Reference: wellhead ✓, other Footage from reference: 110'Direction from reference: 65 Degrees East North ✓
✓ West South

Depth To Ground Water:

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

Less than 50 feet (20 points)

50 feet to 99 feet (10 points)

Greater than 100 feet (0 Points) 0

Wellhead Protection Area:

(Less than 200 feet from a private
domestic water source, or; less than
1000 feet from all other water sources)

Yes (20 points)

No (0 points) 0

Distance To Surface Water:

(Horizontal distance to perennial
lakes, ponds, rivers, streams, creeks,
irrigation canals and ditches)

Less than 200 feet (20 points)

200 feet to 1000 feet (10 points)

Greater than 1000 feet (0 points) 10

RANKING SCORE (TOTAL POINTS):

10

Date Remediation Started: _____ Date Completed: 6/6/94

Remediation Method: Excavation ☒ Approx. cubic yards 300^{mv} 375
(Check all appropriate sections) Landfarmed ☒ Insitu Bioremediation _____
Other _____

Remediation Location: Onsite ☒ Offsite _____
(ie. landfarmed onsite, name and location of offsite facility) _____

General Description Of Remedial Action: _____
EXCAVATION. BEDROCK BOTTOM. ^{mv}

Ground Water Encountered: No ☒ Yes _____ Depth _____

Final Pit: Sample location SEE "CLOSURE VERIFICATION" SHEET
Closure Sampling: _____
(if multiple samples, attach sample results and diagram of sample locations and depths)

Sample depth 14'

Sample date 6/6/94 Sample time 1345

Sample Results

Benzene(ppm) .001

Total BTEX(ppm) 3.4

Field headspace(ppm) 732

TPH 110

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

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

DATE 6/13/94

SIGNATURE B.D. Shaw

PRINTED NAME
AND TITLE

Buddy D Shaw
Environmental Coordinator

TRAVEL NOTES:

**ON SITE
TECHNOLOGIES, LTD.**
TOTAL PETROLEUM HYDROCARBONS

Attn: *Nelson Velez*
Company: *Blagg Engineering*
Address: *P.O. Box 87*
City, State: *Bloomfield, NM 87413*

Date: *6/8/94*
Lab ID: *1558*
Sample No. *1635*
Job No. *2-1000*

Project Name: *Amoco Production*
Project Location: *Warren 4E 5 @ 14ft.; Blow Pit*
Sampled by: *NV* Date: *6/6/94* Time: *1345*
Analyzed by: *TT* Date: *6/7/94*
Type of Sample: *Soil*

Laboratory Analysis

Laboratory Identification	Sample Identification	Total Petroleum Hydrocarbons
<i>1635-1558</i>	<i>Amoco Production Warren 4E 5 @ 14ft.; Blow Pit</i>	<i>110 mg/kg</i>

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by:
Date:

[Signature]
6/8/94

FAX: (505) 327-1496 ▪ 24 HR. - (505) 327-7105 ▪ OFF.: (505) 325-8786
3005 NORTHRIDGE DRIVE ▪ SUITE F ▪ P. O. BOX 2606 ▪ FARMINGTON, NEW MEXICO 87499

**ON SITE
TECHNOLOGIES, LTD.**
AROMATIC VOLATILE ORGANICS

Attn: *Nelson Velez*
Company: *Blagg Engineering*
Address: *P.O. Box 87*
City, State: *Bloomfield, NM 87413*

Date: *6/8/94*
Lab ID: *1635*
Sample ID: *1558*
Job No. *2-1000*

Project Name: *Warren 4E*
Project Location: *5 @ 14' - Blow Pit*
Sampled by: *NV* Date: *6/6/94*
Analyzed by: *dla* Date: *6/8/94*
Sample Matrix: *Soil*

Time: *12:20*

Aromatic Volatile Organics

<i>Component</i>	<i>**Measured Concentration ug/kg</i>
<i>Benzene</i>	<i>1.0</i>
<i>Toluene</i>	<i>350</i>
<i>Ethylbenzene</i>	<i>212</i>
<i>m,p-Xylene</i>	<i>2,400</i>
<i>o-Xylene</i>	<i>454</i>
	<i>TOTAL 3,417 ug/kg</i>

ND - Not Detectable

*** - Method Detection Limit, 2 ug/kg*

***Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by
Gas Chromatography***

Approved by: *[Signature]*
Date: *6/8/94*

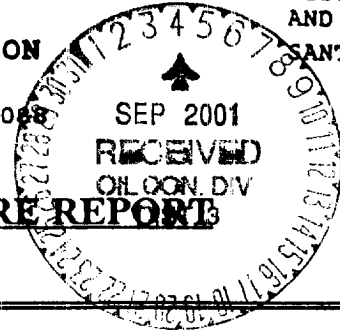
FAX: (505) 327-1496 ■ 24 HR. - (505) 327-7105 ■ OFF.: (505) 325-8786
3005 NORTHRIDGE DRIVE ■ SUITE F ■ P. O. BOX 2606 ■ FARMINGTON, NEW MEXICO 87499

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO
APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICE



PIT REMEDIATION AND CLOSURE REPORT

Operator: AMOCO PRODUCTION COMPANY Telephone: 326-9200
Address: 200 AMOCO COURT, FARMINGTON, NM 87401
Facility Or: WARREN 18 4E
Well Name
Location: Unit or Qtr/Qtr sec H sec 13 T28N R9W county SAN JUAN
Pit Type: Separator Dehydrator Other PROD. TANK
Land Type: BLM ✓, State , Fee , Other

Pit Location: Pit dimensions: length 9', width 12', depth 8'
(Attach diagram) Reference: wellhead ✓, other
Footage from reference: 117
Direction from reference: 18 Degrees East North
of
✓ West South ✓

Depth To Ground Water: 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) 0
high water elevation of
ground water)

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 Surface Water: Less than 200 feet (20 points)
(Horizontal distance to perennial 200 feet to 1000 feet (10 points)
lakes, ponds, rivers, streams, creeks, Greater than 1000 feet (0 points) 10
irrigation canals and ditches)

RANKING SCORE (TOTAL POINTS): 10

Date Remediation Started: _____ Date Completed: 6/6/94
Remediation Method: Excavation ☒ Approx. cubic yards 3220^{cu}
(Check all appropriate sections) Landfarmed ☒ Insitu Bioremediation _____
Other _____

Remediation Location: Onsite ☒ Offsite _____
(ie. landfarmed onsite, name and location of offsite facility)

General Description Of Remedial Action: _____

Ground Water Encountered: No ☒ Yes _____ Depth _____

Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)
Sample location SEE "CLOSURE VERIFICATION" SHEET
Sample depth 8'
Sample date 6/6/94 Sample time 1050
Sample Results
Benzene(ppm) _____
Total BTEX(ppm) _____
Field headspace(ppm) 23.6
TPH 20
Ground Water Sample: Yes _____ No ☒ (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF
DATE 6/13/94
SIGNATURE B. Shaw PRINTED NAME AND TITLE Buddy D. Shaw
Environmental Coordinator

RESULTS GIVEN TO BOB MCCOY 6/8/94

CLIENT: <u>Amoco</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>80001</u> C.D.C. NO: <u>1558</u>
----------------------	--	---

FIELD REPORT: <u>CLOSURE VERIFICATION</u> <u>NU</u>	JOB No: _____ PAGE No: <u>1</u> of <u>1</u>
LOCATION: NAME: <u>WARREN</u> <u>LS</u> WELL #: <u>4E</u> PIT: <u>PROD.</u>	DATE STARTED: <u>6/6/94</u> DATE FINISHED: <u>6/6/94</u>
QUAD/UNIT: <u>H</u> SEC: <u>13</u> TWP: <u>28N</u> RNG: <u>9W</u> BM: <u>NM</u> CNTY: <u>ST NM</u>	ENVIRONMENTAL SPECIALIST: <u>NU</u>
QTR/FOOTAGE: <u>SE 1/4 NE 1/4</u> CONTRACTOR: <u>P. VELASQUEZ</u>	

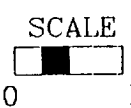
SOIL REMEDIATION: EXCAVATION APPROX. 9 FT. x 12 FT. x 8 FT. DEEP.
DISPOSAL FACILITY: LANDFARMED ON-SITE CUBIC YARDAGE: 2220 NU
LAND USE: RANGE LEASE: SF - 077123

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 117 FEET S18W FROM WELLHEAD.
DEPTH TO GROUNDWATER: >100 NEAREST WATER SOURCE: >1000 NEAREST SURFACE WATER: >1000
NMCD RANKING SCORE: 10 NMCD TPH CLOSURE STD: 1000 PPM Fm. - DK

SOIL AND EXCAVATION DESCRIPTION: DK. YELL. ORANGE TO BROWN SAND, NON-COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HC ODOR.

FIELD 418.1 CALCULATIONS

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



PIT PERIMETER

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 4'	2.0
2 @ 4'	0.3
3 @ 4'	1.6
4 @ 4'	10.2
5 @ 8'	23.6

LAB SAMPLES

5 @ 8' TPH (418.1)

PIT PROFILE

TRAVEL NOTES: CALLOUT: 6/3/94 ONSITE: 6/6/94

**ON SITE
TECHNOLOGIES, LTD.**

TOTAL PETROLEUM HYDROCARBONS

Attn: *Nelson Velez*
Company: *Blagg Engineering*
Address: *P.O. Box 87*
City, State: *Bloomfield, NM 87413*

Date: *6/8/94*
Lab ID: *1558*
Sample No. *1636*
Job No. *2-1000*

Project Name: *Amoco Production*
Project Location: *Warren 4E 5 @ 8ft.; Prod. Pit*
Sampled by: *NV* Date: *6/6/94* Time: *1050*
Analyzed by: *TT* Date: *6/7/94*
Type of Sample: *Soil*

Laboratory Analysis

Laboratory Identification	Sample Identification	Total Petroleum Hydrocarbons
<i>1636-1558</i>	<i>Amoco Production Warren 4E 5 @ 8ft.; Prod. Pit</i>	<i>20 mg/kg</i>

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by:

Date:

John H.
6/8/94

FAX: (505) 327-1496 ■ 24 HR. - (505) 327-7105 ■ OFF.: (505) 325-8786
3005 NORTHRIDGE DRIVE ■ SUITE F ■ P. O. BOX 2606 ■ FARMINGTON, NEW MEXICO 87499



657 W. Maple ■ P. O. Box 2606 ■ Farmington, NM 87499
LAB: (505) 325-5667 ■ FAX: (505) 325-6256

CHAIN OF CUSTODY RECORD

No. 1558

Date: 6/6/94 Page 1 of 1

80001

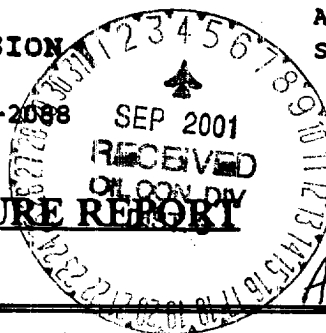
Purchase Order No.:		Reference No.:	
Name		Name Nelson Vellez	
Company		Company BLAGE ENGINEERING	
Address		Mailing Address SAME	
City, State, Zip		City, State, Zip SAME	
Special Instructions: WARREN 4E		Telephone No. 632-1199	
City, State, Zip Bloomfield, NM 87413		Telefax No.	
SEND INVOICE TO		Title PE	
Sampler: Nelson Vellez		ANALYSIS REQUESTED	
SAMPLE IDENTIFICATION		Number of Containers	
DATE/TIME SAMPLED		LAB ID	
COMPOSITE/ GRAB		Remarks (matrix)	
PRESERVATIVES		IF PHASE 1000	
(5) @ 11' DENY PIT		1634-1558	
(5) @ 14' BLOWN PIT		1635-1558	
(5) @ 8' PROD. PIT		1636-1558	
Relinquished by: Nelson Vellez		Received by: Tony Tintano	
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Method of Shipment:		Rush	
Authorized by:		Date	
(Client Signature Must Accompany Request)		Date	
Distribution: White - On Site		Yellow - LAB	
Pink - Sampler		Goldenrod - Client	

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

SUBMIT 1 COPY TO
APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICE

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088



PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company Telephone: (505) - 326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: Warren 4E
Well Name

Location: Unit or Qtr/Qtr Sec H Sec 13 T 28N R 9W County San Juan

Pit Type: Separator ☒ Dehydrator ☐ Other ☐

Land Type: BLM ☒, State ☐, Fee ☐, Other ☐

Pit Location: Pit dimensions: length 18', width 18', depth 12'
Attach diagram) Reference: wellhead ☒, other ☐

Footage from reference: 80

Direction from reference: 80 Degrees ☐ East North ☐
☒ West of South ☒

Depth To Ground Water:
(Vertical distance from
contaminants to seasonal
high water elevation of
ground water)

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

Wellhead Protection Area:
(Less than 200 feet from a private
domestic water source, or; less than
1000 feet from all other water sources)

Yes (20 points)
No (0 points) 0

Distance To Surface Water:
(Horizontal distance to perennial
lakes, ponds, rivers, streams, creeks,
irrigation canals and ditches)

Less than 200 feet (20 points)
200 feet to 1000 feet (10 points)
Greater than 1000 feet (0 points) 0

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: _____ Date Completed: 6/3/94

Remediation Method: Excavation ☒ Approx. cubic yards 144
(Check all appropriate sections) Landfarmed ☒ Insitu Bioremediation _____
Other _____

Remediation Location: Onsite ☒ Offsite _____
(ie. landfarmed onsite, name and location of offsite facility)

General Description Of Remedial Action: _____
Excavation

DMACD letter correspondence 12-19-96

Ground Water 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 13'

Sample date 6/3/94 Sample time 1100

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) 15

TPH 48 ppm

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

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

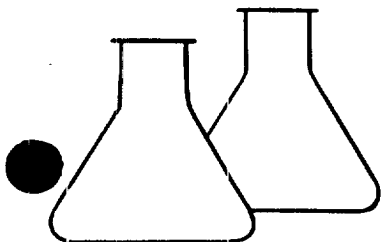
DATE 6/3/94

SIGNATURE

B. Shaw

PRINTED NAME
AND TITLE

Buddy D. Shaw
Environmental Coordinator



ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: Amoco
Sample ID: CB @ 13'
Project Location: Warren 4E
Laboratory Number: GAC0527

Project #: 92140
Date Analyzed: 6-3-94
Date Reported: 6-3-94
Sample Matrix: Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	48	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	11,000	12,600	14

*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 A0043

Bastie Genth
Analyst

Maria D. Young
Review

CLIENT: BP

BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 332-1199

LOCATION NO: 80001
C.O.C. NO: 8419

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCAT ON: NAME: WARRENWELL #: 4EFITS: BLOW, DEHY, PROD, SEP.

QUAD/UNIT: H SEC: 13 TWP: 28N RNG: 9W PM: NM CNTY: SJ ST: NM

QTR/FOOTAGE: 1850' N 1050' E SENE CONTRACTOR: P & S

DATE STARTED: 6/15/01
DATE FINISHED: _____

ENVIRONMENTAL SPECIALIST: NV

SOIL REMEDIATION:

REMEDIATION SYSTEM: LANDFARMED

APPROX. CUBIC YARDAGE: 564

LAND USE: RANGE - BLN SF-077123

LIFT DEPTH (ft): .2

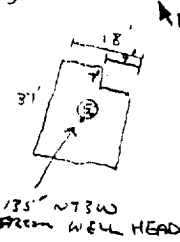
FIELD NOTES & REMARKS:

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

NMOCB RANKING SCORE: 10 NMOCB TPH CLOSURE STD: 1000 PPM

GRAYISH ORANGE TO MOD. YELL. BROWN SAND WITH SOME GRAVEL, NON COHESIVE, DRY TO SLIGHTLY MOIST, LOOSE TO FIRM, NO APPARENT DISCOLORATION/STAINING OBSERVED OR HC DOOR DETECTED @ ANY OF THE SAMPLE PTS. OR OVM SAMPLE, SAMPLE DEPTHS RANGED FROM 8" - 24", COLLECTED 5 PT. COMPOSITE SAMPLE FOR LAB ANALYSIS.

SMALLER LANDFARM DIAGRAM

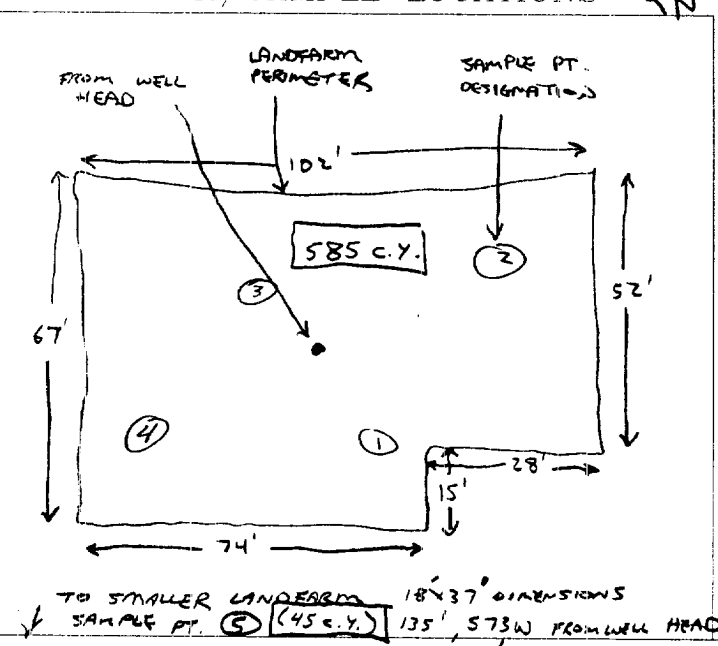


CLOSED

FIELD 4181 CALCULATIONS

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

SKETCH/SAMPLE LOCATIONS



OVM CALIB. READ. 52.8 ppm
TIME: 0830 am 6/15/01

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)	SAMPLE ID	ANALYSIS	TIME	RESULTS
LF-1	1.5	LF-1	TPH (8015)	1000	ND

SCALE
0 28 FT

TRAVEL NOTES: CALLOUT: N/A ONS TE: 6/15/01

revised: 03/12/01

bei1006.skd

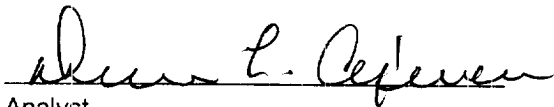
Client:	Blagg / BP	Project #:	94034-010
Sample ID:	LF - 1	Date Reported:	06-20-01
Laboratory Number:	20070	Date Sampled:	06-15-01
Chain of Custody No:	8419	Date Received:	06-18-01
Sample Matrix:	Soil	Date Extracted:	06-19-01
Preservative:	Cool	Date Analyzed:	06-19-01
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

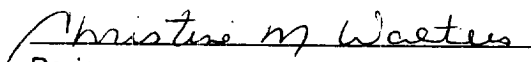
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.1

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: **Warren #4E Landfarm. 5 Pt. Composite.**


Analyst


Review

CHAIN OF CUSTODY RECORD

08419

Client / Project Name BLAGG / BP		Project Location WARREN LEASE		ANALYSIS / PARAMETERS												
Sampler: NTJ		Client No. 94034-CYD		No. of Containers TAN (2015)						Remarks PRESERVED COOL						
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix												
SP-1	6/15/01	0900	20069	SOIL	1	✓								WARREN LS #1A STICKERS		
LF-1	6/15/01	1000	20070	SOIL	1	✓								WARREN LS #1A LANDFARM		
LF-1	6/15/01	1230	20071	SOIL	1	✓								WARREN #4E LANDFARM		
LF-1	6/15/01	1330	20072	SOIL	1	✓								WARREN COM #3 LANDFARM		
														WARREN LS 11		
														ALL SAMPLES		
														5 PT. COMPOSITE		
Relinquished by: (Signature) <i>John W. [Signature]</i>		Date 6/18/01	Time 0704	Received by: (Signature) <i>[Signature]</i>		Date 6-18-01		Time 7:04								
Relinquished by: (Signature)				Received by: (Signature)												
Relinquished by: (Signature)				Received by: (Signature)												
ENVIROTECH INC.														Sample Receipt		
														Y	N	N/A
														Received Intact ✓		
														Cool - Ice/Blue Ice ✓		

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