

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

8553
SUBMIT 1 COPY TO
NATURAL RESOURCE DEPT
AND OIL & GAS ADMINISTRATION
RECEIVED
AUG 27 1999

PIT REMEDIATION AND CLOSURE REPORT

OIL CON. DIV.
DIST. 2

Operator: AMOCO PRODUCTION COMPANY **Telephone:** (505) 326-9200
Address: 200 Amoco Court, Farmington, NM 87401
Facility or Well Name: JICARILLA GC 3S B #1E
Location: Unit or Qtr/Qtr Sec C Sec 11 T24N R5W County RIO ARRIERA
Pit Type: Separator ☐ Dehydrator ☐ Other BLOW
Land Type: RANGE

Pit Location: Pit dimensions: length 67', width 40', depth 30'
(Attach diagram) Reference: wellhead X, other _____
Footage from reference: 228'
Direction from reference: 59 Degrees _____ East _____ North _____
X 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)	<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

Date Remediation Started: _____ Date Completed: 12/17/97

Remediation Method: Excavation X Approx. cubic yards 2,000
 (check all appropriate sections) Landfarmed X Insitu Bioremediation _____
 Other X STOCKPILED

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

General Description of Remedial Action: Excavation. APPLIED FERTILIZER TO PIT BOTTOM.

Groundwater Encountered: No X 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 32' (PIT BOTTOM)
 Sample date 12/15/97 Sample time 1140

Sample Results

Soil: Benzene (ppm)	<u>ND</u>	Water: Benzene (ppb)	_____
Total BTEX (ppm)	<u>0.744</u>	Toluene (ppb)	_____
Field Headspace (ppm)	<u>572</u>	Ethylbenzene (ppb)	_____
TPH (ppm)	<u>12.8</u>	Total Xylenes (ppb)	_____

Groundwater Sample: Yes _____ No X (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 12/17/97 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 X NO _____ (REASON) _____

SIGNED: Kurt C. Marshall DATE: 1-6-98

3003922172

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>8JS13</u> C.O.C. NO: <u>5658</u>
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FIELD REPORT: CLOSURE VERIFICATION

PAGE No: 1 of 1

LOCATION: NAME: <u>TICA GC 35</u> B WELL #: <u>1E</u> PIT: <u>BLW</u>	DATE STARTED: <u>12/15/97</u>
QUAD/UNIT: <u>C</u> SEC: <u>11</u> TWP: <u>24N</u> RNG: <u>5W</u> PM: <u>Nm</u> CNTY: <u>RA</u> ST: <u>NM</u>	DATE FINISHED: _____
DIRECTION: <u>NE/4 NW/4</u> CONTRACTOR: <u>P & S</u>	ENVIRONMENTAL SPECIALIST: <u>NV</u>
EXCAVATION APPROX. <u>67</u> FT. x <u>40</u> FT. x <u>30</u> FT. DEEP. CUBIC YARDAGE: <u>2,000</u>	
DISPOSAL FACILITY: <u>ON-SITE</u> REMEDIATION METHOD: <u>LANDFARMED/STOCKPILED</u>	
LAND USE: <u>RANGE</u> LEASE: <u>SWI 4221</u> FORMATION: <u>DK</u>	

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 228 FT. SSW FROM WELLHEAD.
 DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
 NMDD PAKING SCORE: 0 NMDD TPH CLOSURE STD: 5000 PPM
 SOIL AND EXCAVATION DESCRIPTION:

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

SOIL MOSTLY DR. YELL. BROWN SAND, NON COHESIVE, SLIGHTLY MOIST
 FIRM, NO APPARENT STRAINING OR HC ODOR OBSERVED, SLIGHT HC
 ODOR IN NORTH SIDEWALL OUM SAMPLE, STRONG HC ODOR IN
 PIT BOTTOM OUM SAMPLE.

CLOSED

FIELD 418.1 CALCULATIONS

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

SCALE



0 FT

PIT PERIMETER

OVM RESULTS

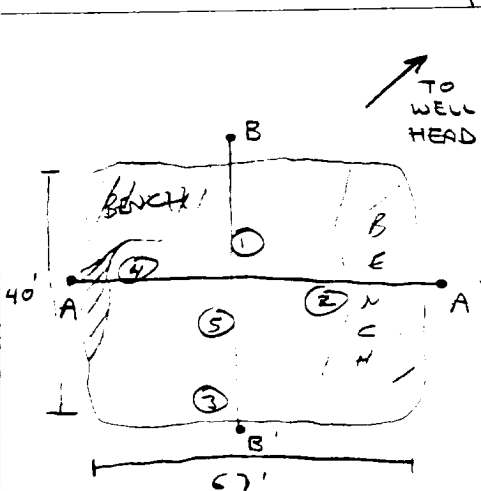
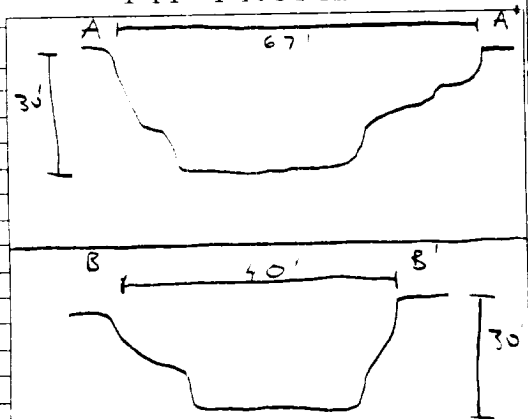
SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 24'	71.3
2 @ 22'	0.0
3 @ 25'	0.0
4 @ 25'	0.0
5 @ 32'	572

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
⑤ @ 32' TPH / STEX	1140	

BOTH TESTED

PIT PROFILE



TRAVEL NOTES:

CALLOUT: 12/11/97 - AFTER.ONSITE: 12/15/97 - MORN.

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

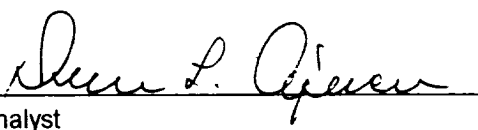
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	5 @ 32'	Date Reported:	12-17-97
Laboratory Number:	C702	Date Sampled:	12-15-97
Chain of Custody No:	5658	Date Received:	12-16-97
Sample Matrix:	Soil	Date Extracted:	12-16-97
Preservative:	Cool	Date Analyzed:	12-16-97
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

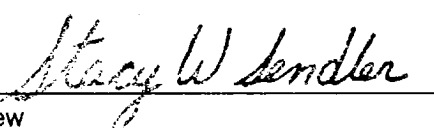
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	12.8	0.1
Total Petroleum Hydrocarbons	12.8	0.2

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 GC 35 B #1E Blow Pit.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Amoco	Project #:	04034-10
Sample ID:	5 @ 32'	Date Reported:	12-17-97
Laboratory Number:	C702	Date Sampled:	12-15-97
Chain of Custody:	5658	Date Received:	12-16-97
Sample Matrix:	Soil	Date Analyzed:	12-16-97
Preservative:	Cool	Date Extracted:	12-16-97
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	8.8
Toluene	47.4	8.4
Ethylbenzene	255	7.6
p,m-Xylene	180	10.8
o-Xylene	262	5.2
Total BTEX	744	

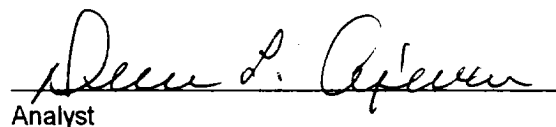
ND - Parameter not detected at the stated detection limit.

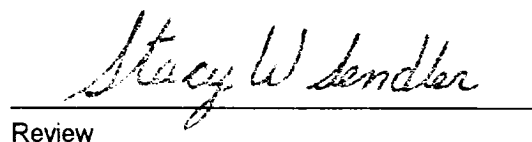
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	97 %
	Bromofluorobenzene	97 %

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 GC 35 B #1E Blow Pit.


Analyst


Review

87513

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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 GC 35 B #1E
Location: Unit or Qtr/Qtr Sec C Sec 11 T 24N R 5W County RIO ARRIBA
Pit Type: Separator ☒ Dehydrator ☐ Other ☐
Land Type: RANGE

Pit Location: Pit dimensions: length 22', width 40', depth 25'
(Attach diagram) Reference: wellhead ☒, other ☐
Footage from reference: 160'
Direction from reference: 58 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) 0

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) 0

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) 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 100 feet (20 points)
100 feet to 1000 feet (10 points)
Greater than 1000 feet (0 points) 0

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: _____ Date Completed: 12/17/97Remediation Method: Excavation ☒ Approx. cubic yards 500Check all appropriate sections) Landfarmed ☒ Insitu Bioremediation _____Other ☒ STOCKPILED _____Remediation Location: Onsite ☒ Offsite _____(i.e. landfarmed onsite,
name and location of
offsite facility) _____General Description of Remedial Action: Excavation. APPLIED FERTILIZER TO THE
ENTIRE EXCAVATED AREA.Groundwater Encountered: No ☒ Yes _____ Depth _____Final Pit: Sample location see Attached DocumentsClosure Sampling:
(if multiple samples,
attach sample results
and diagram of sample
locations and depths)Sample depth 28' (PIT BOTTOM)Sample date 12/15/97 Sample time 1215

Sample Results

Soil: Benzene	(ppm)	<u>0.727</u>	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	<u>37.940</u>	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>1,035</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>1,457</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 12/17/97 PRINTED NAME Buddy D. ShawSIGNATURE 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: Kenneth M. Marshall DATE: 1-6-98

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BT513</u> C.O.C. NO: <u>5658</u>
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FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>
LOCATION: NAME <u>TICA GC 35</u> WELL #: <u>1E</u> PIT: <u>SEP.</u> QUAD/UNIT: <u>C SEC 11</u> TWP: <u>24N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u> DTP/EQUITAGE: <u>NE 1/4 NW 1/4</u> CONTRACTOR: <u>P+S</u>		DATE STARTED: <u>12/15/97</u> DATE FINISHED: _____ ENVIRONMENTAL SPECIALIST: <u>NV</u>
EXCAVATION APPROX. <u>22</u> FT. x <u>40</u> FT. x <u>25</u> FT. DEEP. CUBIC YARDAGE: <u>500</u> DISPOSAL FACILITY: <u>ON-SITE</u> REMEDIATION METHOD: <u>LANDFILLED/STOCKPILED</u> LAND USE: <u>RANGE</u> LEASE: <u>SWI 4221</u> FORMATION: <u>DK</u>		
FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY <u>160</u> FT. <u>NSBW</u> FROM WELLHEAD. DEPTH TO GROUNDWATER: <u>>100'</u> NEAREST WATER SOURCE: <u>>1000'</u> NEAREST SURFACE WATER: <u>>1000'</u> NMOCED BANKING SCOPE: <u>0</u> NMOCED TPH CLOSURE STD: <u>5000</u> PPM SOIL AND EXCAVATION DESCRIPTION:		

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

SOIL MOSTLY OK. YELL. TO OLIVE GRAY SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT STRAINING OBSERVED WITH EXCAVATION BUT HC ODOR EXIST, STRONG HC ODOR IN ALL OF THE OVM SAMPLES.

CLOSED

SCALE

0 10 FT

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

PIT PERIMETER

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 19'	679
2 @ 20'	656
3 @ 20'	179.6
4 @ 21'	601
5 @ 28'	1,035

PIT PROFILE

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
⑤ @ 28'	TPH/BTEX	12/15
① @ 19'	TPH/BTEX	12/15

BOTH PASSED

TRAVEL NOTES: CALLOUT: 12/11/97 - AFTER. ONSITE: 12/15/97 - MORN.

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

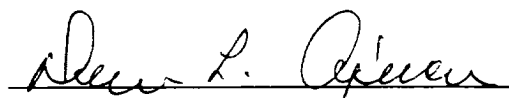
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	5 @ 28'	Date Reported:	12-17-97
Laboratory Number:	C703	Date Sampled:	12-15-97
Chain of Custody No:	5658	Date Received:	12-16-97
Sample Matrix:	Soil	Date Extracted:	12-16-97
Preservative:	Cool	Date Analyzed:	12-16-97
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

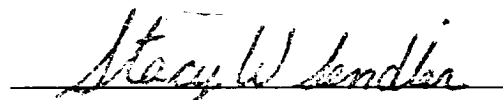
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	954	0.2
Diesel Range (C10 - C28)	503	0.1
Total Petroleum Hydrocarbons	1,457	0.2

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 GC 35 B #1E Separator Pit.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Amoco	Project #:	04034-10
Sample ID:	5 @ 28'	Date Reported:	12-17-97
Laboratory Number:	C703	Date Sampled:	12-15-97
Chain of Custody:	5658	Date Received:	12-16-97
Sample Matrix:	Soil	Date Analyzed:	12-16-97
Preservative:	Cool	Date Extracted:	12-16-97
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	727	8.8
Toluene	658	8.4
Ethylbenzene	6,460	7.6
p,m-Xylene	9,290	10.8
o-Xylene	20,810	5.2
Total BTEX	37,940	

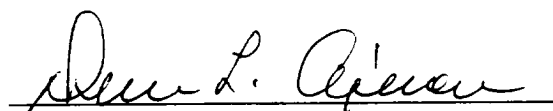
ND - Parameter not detected at the stated detection limit.

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

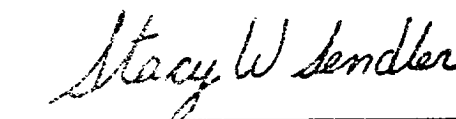
References: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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

Comments: Jicarilla GC 35 B #1E Separator Pit.



Analyst



Review

Client/Project Name			Project Location			ANALYSIS/PARAMETERS									
Baste / Amoco			DEPUELA GC 35 B #1E												
Sample: (Signature)			Chain of Custody Tape No.												
Alison Vely			04034-10												
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TPH (8015)	BTEX (8020)						Remarks		
⑤ @ 32'	12/15/97	1140	C702	SOIL	1	✓	✓						ALL SAMPLES PRESERV. - COOL		
													IF TPH < 5000 ppm, THEN RUN BTEX		
⑤ @ 28'	12/15/97	1215	C703	SOIL	1	✓	✓						SEPARATOR PIT		
① @ 19'	12/15/97	1200	C704	SOIL	1	✓	✓						SEPARATOR PIT		
													SEE ATTACHED MEMO FOR SEPARATOR PIT ANALYSES.		
Relinquished by: (Signature)			DATE RECEIVED			COOL & IMPACT DATA									
Alison Vely			12/16/97			0726			Alison L. Cyren						
Relinquished by: (Signature)									Received by: (Signature)						
Relinquished by: (Signature)									Received by: (Signature)						

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

8JS13

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 GC 35 B #1E

Location: Unit or Qtr/Qtr Sec C Sec 11 T 24N R 5W County RIO ARriba

Land Type: RANGE

Date Remediation Started: 12/15/97 Date Completed: 5/20/98

Remediation Method: Landfarmed X Approx. cubic yards 2,500
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

Final Closure Sampling:
Sampling Date: 5/19/98 Time: —
Sample Results:
Field Headspace (ppm) —
TPH (ppm) — Method 8015
Other MULTIPLE SAMPLES COLLECTED

RANKING SCORE (TOTAL POINTS): 0

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

DATE 5/20/98 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) NOT for use as Backfill

SIGNED: Ken C. M... DATE: 9-9-98

CLIENT: AMOCOBLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199LOCATION NO: 87513C.E.C. NO: 6001

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: JICARILUP 6C 35 B WELL #: 1E PITS: SEP, BLOW
QUAD/UNIT: C SEC: 11 TWP: 24N RNG: 5W PM: NM CNTY: RA ST: NM
OTP/FOOTAGE: NE 1/4 NW 1/4 CONTRACTOR: PFSDATE STARTED: 5/19/98

DATE FINISHED: _____

ENVIRONMENTAL
SPECIALIST: NV

SOIL REMEDIATION:

REMEDIATION SYSTEM: LANDFARMAPPROX. CUBIC YARDAGE: 2,500LAND USE: RANGELIFT DEPTH (ft): 1.5-2

FIELD NOTES & REMARKS:

DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'NMOC RANKING SCORE 0 NMOC TPH CLOSURE STD 5000 PPM

SOIL TYPE RANGE FROM SAND TO CLAY, COLOR VARIES FROM DR. YELL. ORANGE TO BLACK, NON COHESIVE TO SLIGHTLY PLASTIC, FIRM TO STIFF SAMPLING DEPTHS RANGE FROM 6" TO 2 1/2' STRONG HC ODRK IN ALL SAMPLE PTS. OF LF-3 AREA, 4 OF 5 SAMPLE PTS. IN LF-5 AREA, 2 OF 5 SAMPLE PTS. IN LF-6 AREA, COLLECTED 5 PT. COMPOSITE SAMPLES FOR LAB ANALYSIS.

CLOSED

FIELD 4181 CALCULATIONS

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

SKETCH/SAMPLE LOCATIONS

SEE SITE MAP
ATTACHED

OVM RESULTS

LAB SAMPLES

SAMPLE ID	FIELD HEADSPACE PID (ppm)	SAMPLE ID	ANALYSIS	TIME	RESULTS
LF-1	0.0	LF-1	TPH (8015)	0945	137
LF-2	0.0	LF-2	"	1015	55.8
LF-3	1147	LF-3	"	1040	305
LF-4	124.5	LF-4	"	1105	32.1
LF-5	668	LF-5	"	1130	41.4
LF-6	108.6	LF-6	"	1150	55.9

SCALE



0 FT

TRAVEL NOTES:

CA: OUT:

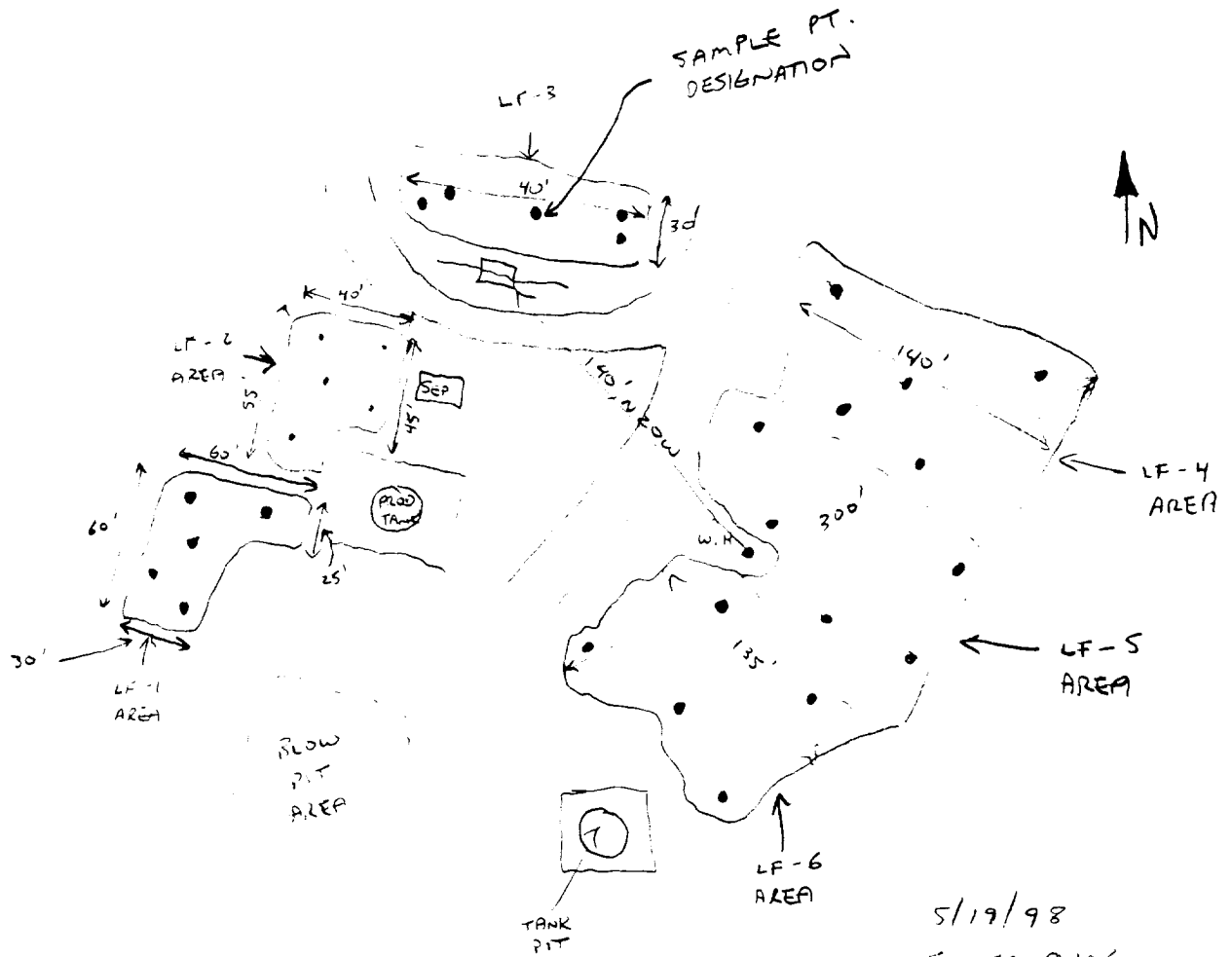
NA

ONSITE:

5/19/98 - MORN.

JICARILLA GC 35 B #1E

5/19/98



5/19/98

LF SAMPLING-

JICARILLA GC 35 B #1E

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

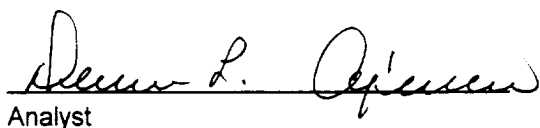
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	05-20-98
Laboratory Number:	D281	Date Sampled:	05-19-98
Chain of Custody No:	6001	Date Received:	05-19-98
Sample Matrix:	Soil	Date Extracted:	05-20-98
Preservative:	Cool	Date Analyzed:	05-20-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

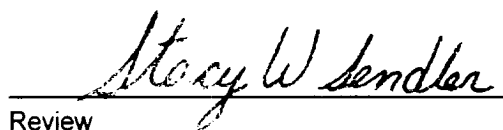
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	119	0.2
Diesel Range (C10 - C28)	17.6	0.1
Total Petroleum Hydrocarbons	137	0.2

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 GC 35 B #1E Landfarms. 5 Pt. Composite.


Analyst


Review

**EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons**

Client: Blagg / AMOCO
Sample ID: LF - 2
Laboratory Number: D282
Chain of Custody No: 6001
Sample Matrix: Soil
Preservative: Cool
Condition: Cool and Intact

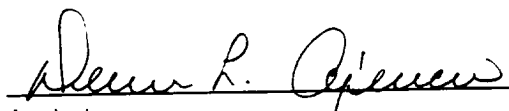
Project #: 04034-10
Date Reported: 05-20-98
Date Sampled: 05-19-98
Date Received: 05-19-98
Date Extracted: 05-20-98
Date Analyzed: 05-20-98
Analysis Requested: 8015 TPH

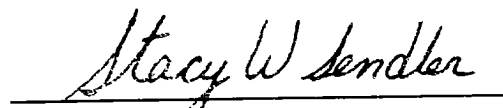
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	1.2	0.2
Diesel Range (C10 - C28)	54.6	0.1
Total Petroleum Hydrocarbons	55.8	0.2

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 GC 35 B #1E Landfarms. 5 Pt. Composite.


Analyst


Review

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 - 3	Date Reported:	05-20-98
Laboratory Number:	D283	Date Sampled:	05-19-98
Chain of Custody No:	6001	Date Received:	05-19-98
Sample Matrix:	Soil	Date Extracted:	05-20-98
Preservative:	Cool	Date Analyzed:	05-20-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

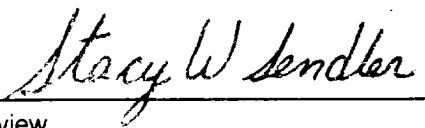
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	106	0.2
Diesel Range (C10 - C28)	199	0.1
Total Petroleum Hydrocarbons	305	0.2

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 GC 35 B #1E Landfarms. 5 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:	LF - 3	Date Reported:	05-20-98
Laboratory Number:	D283	Date Sampled:	05-19-98
Chain of Custody:	6001	Date Received:	05-19-98
Sample Matrix:	Soil	Date Analyzed:	05-20-98
Preservative:	Cool	Date Extracted:	05-20-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	8.8
Toluene	ND	8.4
Ethylbenzene	291	7.6
p,m-Xylene	2,900	10.8
o-Xylene	753	5.2
Total BTEX	3,940	

ND - Parameter not detected at the stated detection limit.

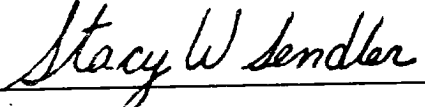
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	98 %
	Bromofluorobenzene	98 %

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 GC 35 B #1E Landfarms. 5 Pt. Composite


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

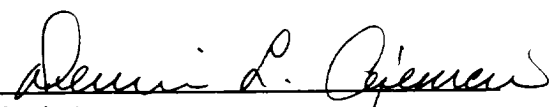
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 4	Date Reported:	05-20-98
Laboratory Number:	D284	Date Sampled:	05-19-98
Chain of Custody No:	6001	Date Received:	05-19-98
Sample Matrix:	Soil	Date Extracted:	05-20-98
Preservative:	Cool	Date Analyzed:	05-20-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

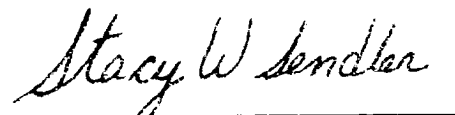
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	28.9	0.2
Diesel Range (C10 - C28)	3.2	0.1
Total Petroleum Hydrocarbons	32.1	0.2

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 GC 35 B #1E Landfarms. 5 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:	LF - 4	Date Reported:	05-20-98
Laboratory Number:	D284	Date Sampled:	05-19-98
Chain of Custody:	6001	Date Received:	05-19-98
Sample Matrix:	Soil	Date Analyzed:	05-20-98
Preservative:	Cool	Date Extracted:	05-20-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	8.8
Toluene	ND	8.4
Ethylbenzene	ND	7.6
p,m-Xylene	491	10.8
o-Xylene	ND	5.2
Total BTEX	491	

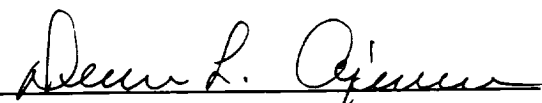
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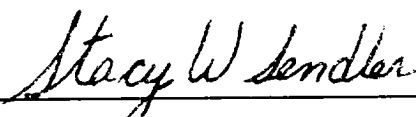
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	95 %
	Bromofluorobenzene	95 %

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 GC 35 B #1E Landfarms. 5 Pt. Composite


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

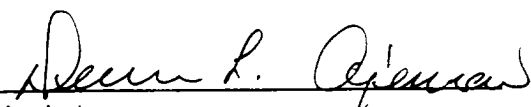
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 5	Date Reported:	05-20-98
Laboratory Number:	D285	Date Sampled:	05-19-98
Chain of Custody No:	6001	Date Received:	05-19-98
Sample Matrix:	Soil	Date Extracted:	05-20-98
Preservative:	Cool	Date Analyzed:	05-20-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

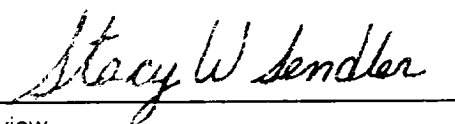
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	22.1	0.2
Diesel Range (C10 - C28)	19.3	0.1
Total Petroleum Hydrocarbons	41.4	0.2

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 GC 35 B #1E Landfarms. 5 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:	LF - 5	Date Reported:	05-20-98
Laboratory Number:	D285	Date Sampled:	05-19-98
Chain of Custody:	6001	Date Received:	05-19-98
Sample Matrix:	Soil	Date Analyzed:	05-20-98
Preservative:	Cool	Date Extracted:	05-20-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	137	8.8
Toluene	227	8.4
Ethylbenzene	592	7.6
p,m-Xylene	7,530	10.8
o-Xylene	4,850	5.2
Total BTEX	13,330	

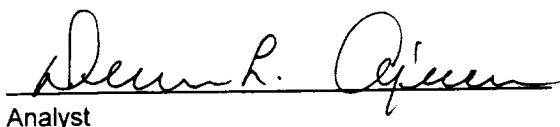
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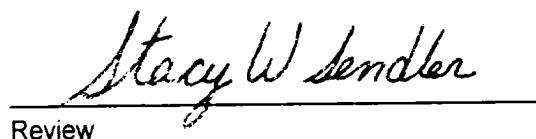
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	98 %
	Bromofluorobenzene	98 %

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 GC 35 B #1E Landfarms. 5 Pt. Composite


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

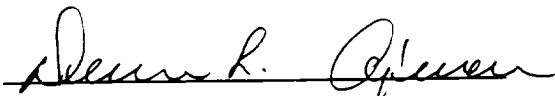
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 6	Date Reported:	05-20-98
Laboratory Number:	D286	Date Sampled:	05-19-98
Chain of Custody No:	6001	Date Received:	05-19-98
Sample Matrix:	Soil	Date Extracted:	05-20-98
Preservative:	Cool	Date Analyzed:	05-20-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

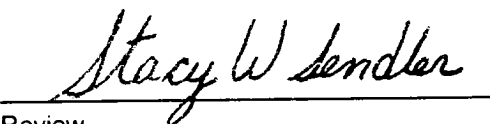
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	54.8	0.2
Diesel Range (C10 - C28)	1.1	0.1
Total Petroleum Hydrocarbons	55.9	0.2

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 GC 35 B #1E Landfarms. 5 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:	LF - 6	Date Reported:	05-20-98
Laboratory Number:	D286	Date Sampled:	05-19-98
Chain of Custody:	6001	Date Received:	05-19-98
Sample Matrix:	Soil	Date Analyzed:	05-20-98
Preservative:	Cool	Date Extracted:	05-20-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	8.8
Toluene	252	8.4
Ethylbenzene	1,000	7.6
p,m-Xylene	1,110	10.8
o-Xylene	2,320	5.2
Total BTEX	4,680	

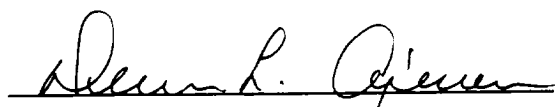
ND - Parameter not detected at the stated detection limit.

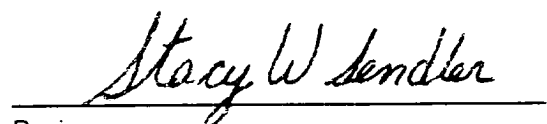
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	101 %
	Bromofluorobenzene	101 %

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 GC 35 B #1E Landfarms. 5 Pt. Composite


Analyst


Review

CHAIN OF CUSTODY RECORD

6001

Client / Project Name			Project Location		ANALYSIS / PARAMETERS												
Bates / Amoco			Tearilla GC 35 B #1E														
Sampler: Gibson VLF			Client No. 04034-10		No. of Containers		Remarks										
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	TPH (8015)	BTEX (8020)	ALL SAMPLES RESERV. - COOL										
LF-1	5/19/98	0945	0281	SOIL	1	✓	5 PT. COMPOSITE										
LF-2	5/19/98	1015	0282	SOIL	1	✓	" " "										
LF-3	5/19/98	1040	0283	SOIL	1	✓	" " "										
LF-4	5/19/98	1105	0284	SOIL	1	✓	" " "										
LF-5	5/19/98	1130	0285	SOIL	1	✓	" " "										
LF-6	5/19/98	1150	0286	SOIL	1	✓	" " "										
Relinquished by: (Signature) Gibson VLF			Date	Time	Received by: (Signature) Elvira D. Ayala		Date	Time									
Relinquished by: (Signature)					Received by: (Signature)												
Relinquished by: (Signature)					Received by: (Signature)												
ENVIROTECH INC. 5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 632-0615 Sample Receipt <table border="1"> <tr> <td>Received Intact</td> <td>Y</td> <td>N</td> <td>N/A</td> </tr> <tr> <td>Cool - Ice/Blue Ice</td> <td>✓</td> <td></td> <td></td> </tr> </table>										Received Intact	Y	N	N/A	Cool - Ice/Blue Ice	✓		
Received Intact	Y	N	N/A														
Cool - Ice/Blue Ice	✓																