

SUBMIT 1 COPY TO

NATURAL RESOURCE DEPT
AND OIL & GAS ADMINISTRATION

RECEIVED
AUG 09 1988

Risk
no bedrock

Vulnerable boundary, practical exte

~~en~~ OIL CON. DIV.

05053326-9200

Land Type: RANGE

Direction from reference: 10 Degrees X East of North X
West of South _____

RANKING SCORE (TOTAL POINTS): 5

8J399

Date Remediation Started: _____ Date Completed: 8/20/96

Remediation Method: Excavation ☒ Approx. cubic yards 1000
 (check all appropriate sections) Landfarmed ☒ Insitu Bioremediation _____
 Other _____

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

General Description of Remedial Action: Excavation

Groundwater Encountered: No ☒ Yes _____ Depth _____

Final Pit: Sample location see Attached Documents
 Closure Sampling: MULTIPLE SAMPLES
 (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample depth 20'

Sample date 8/12/96 Sample time 0735

Sample Results

Soil: Benzene (ppm) _____	Water: Benzene (ppb) _____
Total BTEX (ppm) _____	Toluene (ppb) _____
Field Headspace (ppm) <u>160</u>	Ethylbenzene (ppb) _____
TPH (ppm) <u>5,703</u>	Total Xylenes (ppb) _____

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

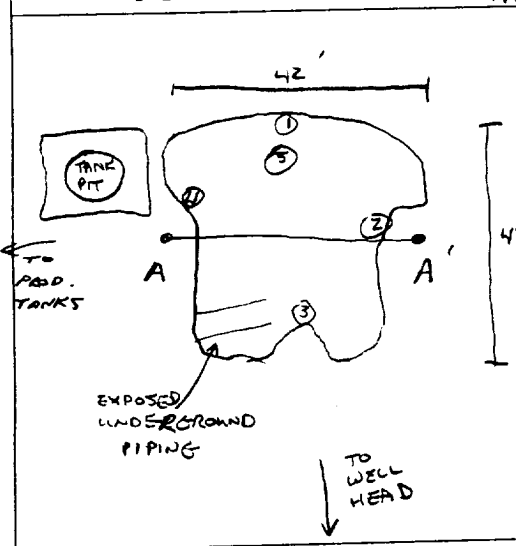
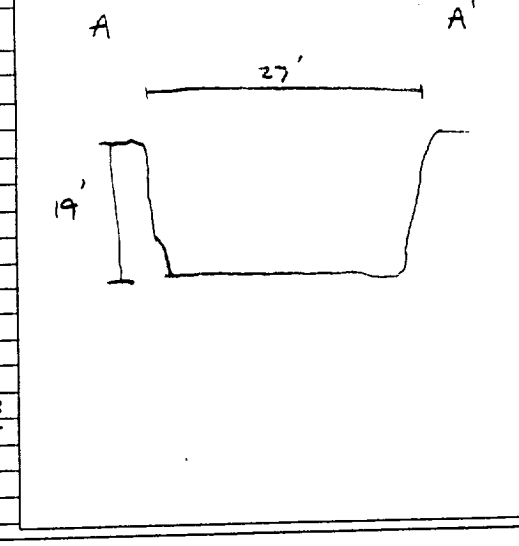
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 8/20/96 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) conditional closure till P&A

SIGNED: [Signature] DATE: 8-21-96

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>8J399</u> C.O.C. NO: <u>0554</u>																																					
FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>																																					
LOCATION: NAME: <u>JICARILLA RACHE 102</u> WELL #: <u>8M</u> PIT: <u>PROD</u> QUAD/UNIT: <u>I</u> SEC: <u>3</u> TWP: <u>26N</u> RNG: <u>4W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u> QTR/FOOTAGE: <u>NE/4 SE/4</u> CONTRACTOR: <u>P+S</u>		DATE STARTED: <u>8/12/96</u> DATE FINISHED: _____ ENVIRONMENTAL SPECIALIST: <u>NV</u>																																					
EXCAVATION APPROX. <u>42</u> FT. x <u>45</u> FT. x <u>19</u> FT. DEEP. CUBIC YARDAGE: <u>1000</u> DISPOSAL FACILITY: <u>ON-SITE</u> REMEDIATION METHOD: <u>LANDFARMED</u> LAND USE: <u>RANGE</u> LEASE: <u>FED. LSE. 102</u> FORMATION: _____																																							
FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY <u>140</u> FT. <u>N10E</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: <u>DK. YELL. BROWN SAND (EAST & SOUTH SIDEWALLS) TO OLIVE GRAY (NORTH & WEST SIDEWALLS AND PIT BOTTOM) NON-COHESIVE, SLIGHTLY MOIST, FIRM, STRONG HC ODOR IN NORTH & WEST SIDEWALL AND PIT BOTTOM. DUM SAMPLES, OLIVE GRAY DISCOLORATION APPARENT W/IN EXCAVATION.</u>		CHECK ONE! <input checked="" type="checkbox"/> PIT ABANDONED <input type="checkbox"/> STEEL TANK INSTALLED																																					
RISK ASSESSED - NMOC D CONDITIONAL - JICARILLA EPO																																							
FIELD 418.1 CALCULATIONS																																							
<table border="1" style="width:100%; border-collapse: collapse;"><thead><tr><th>TIME</th><th>SAMPLE I.D.</th><th>LAB No:</th><th>WEIGHT (g)</th><th>mL. FREON</th><th>DILUTION</th><th>READING</th><th>CALC. ppm</th></tr></thead><tbody><tr><td>0733</td><td>④ @ 12'</td><td>TPH-1771</td><td>5</td><td>20</td><td>1:1</td><td>730</td><td>2,920</td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr></tbody></table>			TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm	0733	④ @ 12'	TPH-1771	5	20	1:1	730	2,920																					
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SCALE <div style="display: flex; align-items: center;"><div style="width: 20px; height: 10px; background-color: black; margin-right: 5px;"></div>0</div> FT	OVM RESULTS	PIT PROFILE																																					
<div style="text-align: center;">PIT PERIMETER</div> 	<table border="1" style="width:100%; border-collapse: collapse;"><thead><tr><th>SAMPLE ID</th><th>FIELD HEADSPACE PID (ppm)</th></tr></thead><tbody><tr><td>1 @ 15'</td><td>242</td></tr><tr><td>2 @ 13'</td><td>0.0</td></tr><tr><td>3 @ 12'</td><td>0.0</td></tr><tr><td>4 @ 12'</td><td>344</td></tr><tr><td>5 @ 20'</td><td>160</td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></tbody></table> <div style="text-align: center; font-weight: bold; margin-top: 10px;">LAB SAMPLES</div> <table border="1" style="width:100%; border-collapse: collapse;"><thead><tr><th>SAMPLE ID</th><th>ANALYSIS</th><th>TIME</th></tr></thead><tbody><tr><td>④ @ 12'</td><td>BTEX</td><td>0733</td></tr><tr><td>⑤ @ 20'</td><td>TPH / TW</td><td>0735</td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>	SAMPLE ID	FIELD HEADSPACE PID (ppm)	1 @ 15'	242	2 @ 13'	0.0	3 @ 12'	0.0	4 @ 12'	344	5 @ 20'	160											SAMPLE ID	ANALYSIS	TIME	④ @ 12'	BTEX	0733	⑤ @ 20'	TPH / TW	0735							
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TRAVEL NOTES: CALLOUT: <u>8/9/96 AFTER.</u> ONSITE: <u>8/12/96 MORN.</u>																																							

Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

Jicarilla Apache 102 #8E(M)

Unit I, Sec. 3, T26N, R4W

Production Tank Pit

Basin Dakota/Mesa Verde

Non Vulnerable

> 1000 ft.

> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe reached practical extent for abandoned pit (19 ft. below grade) and for safety concerns (underground piping and surface equipment).

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

1. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below presumed shallow sandstone bedrock (based on informal site observation of adjacent sandstone outcrop).
2. Topographic information does not indicate off site lateral fluid migration near the earthen pit.
3. Daily discharge into the earthen pit has been terminated (pit abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.
4. Well site located on the fringe of the Cottonwood Canyon wash **vulnerable area boundary**.

(Refer to Pine Lake Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), Photorevised 1982, (vulnerable area boundary developed by Mr. William C. Olson, Hydrogeologist, Environmental Bureau, New Mexico Oil Conservation Division).

Based upon the information given, we conclude that the subsurface vertical impact to groundwater is very unlikely. AMOCO requests pit closure approval on this location.

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

**FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS**

Client: AMOCO
Sample ID: 4 @ 12'
Project Location: Jicarilla Apache 102-8M
Laboratory Number: TPH-1771

Project #:
Date Analyzed: 08-12-96
Date Reported: 08-12-96
Sample Matrix: Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	2,900	20

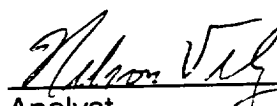
ND = Not Detectable at stated detection limits.

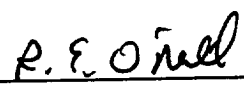
QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	3292	3536	7.15

*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 -- BJ399


Analyst


Review

VOLATILE AROMATIC HYDROCARBONS**Blagg Engineering, Inc.**

Project ID:	Jicarilla Apache 102-8M	Report Date:	08/16/96
Sample ID:	4 @ 12'	Date Sampled:	08/12/96
Lab ID:	4705	Date Received:	08/13/96
Sample Matrix:	Soil	Date Extracted:	08/14/96
Preservative:	Cool	Date Analyzed:	08/15/96
Condition:	Intact		

Target Analyte	Concentration (mg/kg)	Detection Limit (mg/kg)
Benzene	ND	0.29
Toluene	15.0	0.29
Ethylbenzene	14.6	0.29
m,p-Xylenes	128	5.86
o-Xylene	37.1	2.93

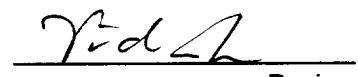
ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	98	81 -117%

Reference: Method 5030, Purge and Trap; Method 8020, Aromatic Volatile Organics;
Test Methods for Evaluating Solid Wastes, SW-846, United States
Environmental Protection Agency, Final Update I, July, 1992.

Comments:


Analyst


Review



TOTAL VOLATILE PETROLEUM HYDROCARBONS

Gasoline Range Organics

Blagg Engineering, Inc.

Project ID: 102-8M
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 08/16/96
Date Sampled: 08/12/96
Date Received: 08/13/96
Date Extracted: 08/14/96
Date Analyzed: 08/15/96

Sample ID	Lab ID	Concentration (mg/kg)	Detection Limit (mg/kg)
5 @ 20'	4706	2,613	77.1

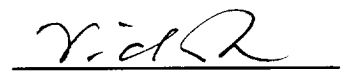
ND- Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	106%	50 - 150%

Reference: Method for the Determination of Gasoline Range Organics,
State of Tennessee, Department of Environment and Conservation, Division
of Underground Storage Tanks.

Comments:


Analyst


Review

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
Diesel Range Organics**Blagg Engineering, Inc.**

Project ID: Jicarilla Apache 102-8M
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 08/16/96
Date Sampled: 08/12/96
Date Received: 08/13/96
Date Extracted: 08/14/96
Date Analyzed: 08/15/96

Sample ID	Lab ID	Concentration (mg/kg)	Detection Limit (mg/kg)
5 @ 20'	4706	3,090	22.7

ND- Analyte not detected at the stated detection limit.

Quality Control: Surrogate % Recovery Acceptance Limits
 o - Terphenyl 100% 50 - 150%

Reference: EPA Method 8015A, modified. "Nonhalogenated Volatile Organics by Gas Chromatography." Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods, SW-846, 3rd Ed, Final Update I, July, 1992. USEPA.

Comments:
Analyst
Review

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Max Characters:

Client:

Sample ID:

Project Location:

Laboratory Number:

AMOCO

4 @ 12'

Jicarilla Apache 102-8M

TPH-1771

Project #:

Date Analyzed:

Date Reported:

Sample Matrix:

08-12-96

08-12-96

Soil

Sample Weight:

5.00 grams

Volume Freon:

20.00 mL

Dilution Factor:

1 (unitless)

TPH Reading:

730 mg/kg

TPH Result:

2920.0 mg/kg

Reported TPH Result:

2900 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.

3292

3536

7.15

Comments:

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

Comments:

Production Tank Pit - BJ399

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

8J399

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 APACHE #102-8E (M)</u>		
Location: Unit or Qtr/Qtr Sec <u>I</u> Sec <u>3</u> T26N R4W County <u>RIO ARIZONA</u>		
Land Type: <u>RANGE</u>		
Date Remediation Started: <u>8/12/96</u>		Date Completed: <u>7/10/98</u>
Remediation Method: Landfarmed <input checked="" type="checkbox"/> Composted <input type="checkbox"/> Other <input type="checkbox"/>		Approx. cubic yards <u>400</u>
Depth To Groundwater: (pts.) <u>0</u>		Final Closure Sampling: Sampling Date: <u>7/6/98</u> Time: <u>0930</u> Sample Results: Field Headspace (ppm) <u>14.9</u> TPH (ppm) <u>6.0</u> Method <u>8015</u> Other <input type="text"/>
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>7/10/98</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>K. C. Mamm</u>		DATE: <u>7-27-98</u>

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>8J399</u> C.O.C. NO: <u>6088</u>
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FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: <u>JICA. APACHE</u> 102 WELL #: <u>8E (m)</u> PITS: <u>PROD.</u> QUAD/UNIT: <u>I</u> SEC: <u>3</u> TWP: <u>26N</u> RNG: <u>4W</u> PM: <u>NM</u> CNTY: <u>LA</u> ST: <u>NM</u> OTR/FOOTAGE: <u>SE/4</u> <u>NE/4</u> CONTRACTOR: <u>P & S</u>	DATE STARTED: <u>7/6/98</u> DATE FINISHED: _____ ENVIRONMENTAL SPECIALIST: <u>NV</u>
---	--

SOIL REMEDIATION:

 REMEDIATION SYSTEM: LANDFARM

 APPROX. CUBIC YARDAGE: 400

 LAND USE: RANGE

 LIFT DEPTH (ft): 1'-2'

FIELD NOTES & REMARKS:

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

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

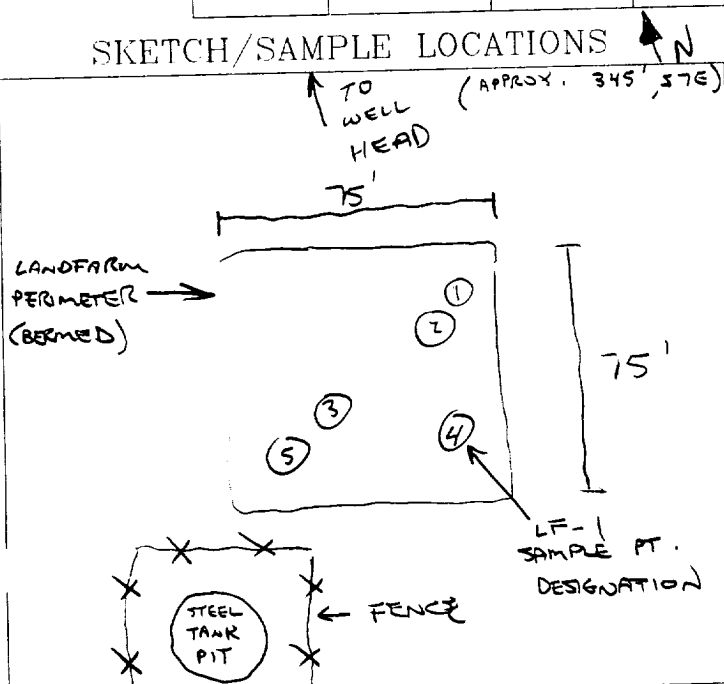
SOIL MOSTLY DK. YELL. BROWN SILTY SAND TO CLAY NON COHESIVE TO PLASTIC, SLIGHTLY MOIST TO MOIST FIRM, SAMPLING DEPTHS RANGE FROM 1'-2', NO DISCOLORATION OR HC ODOOR OBSERVED @ ANY OF THE SAMPLE PTS. LANDFARM LOCATION ACTUALLY ON TICARILLA APACHE #102-28 WELL PAD, COLLECTED 5 PT. COMPOSITE SAMPLE FOR LAB ANALYSIS.

CLOSED

FIELD 418.1 CALCULATIONS

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

SKETCH/SAMPLE LOCATIONS



OVM RESULTS

LAB SAMPLES

SAMPLE ID	FIELD HEADSPACE PID (pphm)	SAMPLE ID	ANALYSIS	TIME	RESULTS
LF-1	14.9	LF-1	TPH (8015)	0930	6.0

SCALE

0 FT

TRAVEL NOTES:

 CALLOUT: NA

 ONSITE: 7/6/98

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

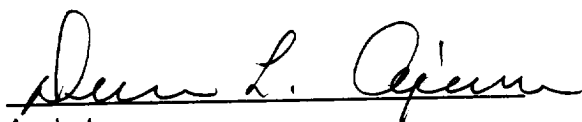
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	07-08-98
Laboratory Number:	D591	Date Sampled:	07-06-98
Chain of Custody No:	6088	Date Received:	07-06-98
Sample Matrix:	Soil	Date Extracted:	07-07-98
Preservative:	Cool	Date Analyzed:	07-07-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

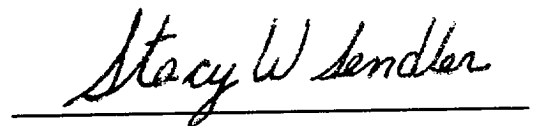
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	1.3	0.2
Diesel Range (C10 - C28)	4.7	0.1
Total Petroleum Hydrocarbons	6.0	0.2

ND - Parameter not detected at the stated detection limit.

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

Comments: Jicarilla Apache #102 - 8E(M) Landfarm. 5 Pt. Composite.


Analyst


Review

6088

[illegible]