

DEPUTY OIL & GAS INSPECTOR

U.S. BUREAU OF LAND MANAGEMENT
NAVAJO NATION LANDS

FEB 03 1999

PIT REMEDIATION AND CLOSURE REPORT

Operator: SEAGRAMS - TEXAS PACIFIC / CO A-PLUS WELL SVC. Telephone: (505) 325-2627

Address: P.O. Box 1979, FARMINGTON, NM 87499

Facility or Well Name: HORSESHOE GALLUP CENTRAL TANK BATTERY @ NAVAJO A1 WELL

Location: Unit or Qtr/Qtr Sec M Sec 27 T 32N R 17W County SAN JUAN

Pit Type: Separator____ Dehydrator____ Other TANK DRAIN

Land Type: NAVAJO NATION RANGE LAND

Pit Location:
(Attach diagram)

Pit dimensions: length 144', width 135', depth 12' MAX

Reference: wellhead X, other _____

Footage from reference: 180

Direction from reference: N 90 Degrees X 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)
 X 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) 10

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) 0
 xNo (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)
 × Greater than 1000 feet (0 points) 0

RANKING SCORE (TOTAL POINTS): 10

Date Remediation Started: 12-2-97 Date Completed: 12-6-97

Remediation Method: Excavation X Approx. cubic yards 738
(Check all appropriate sections) Landfarmed _____ Insitu Bioremediation _____
Other _____

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

General Description of Remedial Action: EXCAVATE & HAUL

Groundwater Encountered: No X Yes _____ Depth _____

Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)
Sample location SEE ATTACHED FIELD REPORT
Sample depth SEE ATTACHED FIELD REPORT
Sample date 12/3/97 Sample time VARIOUS

Sample Results

Soil: Benzene	(ppm)	<u>ND</u>	Water: Benzene	(ppb)	<u>X</u>
Total BTEX	(ppm)	<u>0.182 (MAXIMUM)</u>	Toluene	(ppb)	<u>X</u>
Field Headspace	(ppm)	<u>5.0 (MAXIMUM)</u>	Ethylbenzene	(ppb)	<u>X</u>
TPH	(ppm)	<u>30.7 (MAXIMUM)</u>	Total Xylenes	(ppb)	<u>X</u>

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 JANUARY 22, 1998 PRINTED NAME JEFFREY C. BLAGG

SIGNATURE J. C. Blagg AND TITLE PRESIDENT, BLAGG ENGINEERING INC.

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, APPROVAL IS GRANTED IN ACCORDANCE TO THE U.S. BUREAU OF LAND MANAGEMENT'S PIT CLOSURE GUIDELINES.

APPROVED: YES _____ NO _____ (REASON) _____

SIGNED: _____ DATE: _____

CLIENT: <u>SEAGRAMS</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: _____ C.D.C. NO: _____
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FIELD REPORT: CLOSURE VERIFICATION	PAGE No: <u>1</u> of <u>1</u>
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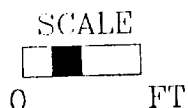
LOCATION: NAME: <u>NAVAJO</u> WELL #: <u>A1</u> PIT: _____	DATE STARTED: <u>12-2-97</u> DATE FINISHED: <u>12-6-97</u>
QUAD/UNIT: <u>M SEC: 27 TWP: 32N RNG: 17W PM: NM CNTY: SJ ST: NM</u>	ENVIRONMENTAL SPECIALIST: <u>JCB</u>
QTR/FOOTAGE: <u>SW/4 SW/4</u> CONTRACTOR: <u>PAUL & SON</u>	

EXCAVATION APPROX. <u>144</u> FT. x <u>135</u> FT. x <u>12</u> FT. DEEP.	CUBIC YARDAGE: <u>738</u>
DISPOSAL FACILITY: <u>ENVIROTECH LANDFARMS</u>	REMEDIAL METHOD: <u>LANDFARM</u>
LAND USE: <u>RANGE</u>	LEASE: <u>NAVAJO</u> FORMATION: <u>GALLUP</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>180</u> FT. <u>N90E</u> FROM WELLHEAD. DEPTH TO GROUNDWATER: <u>>100</u> NEAREST WATER SOURCE: <u>>1000</u> NEAREST SURFACE WATER: <u>>1000</u> NAVAJO EPA RANKING SCORE: <u>10</u> NAVAJO EPA TPH CLOSURE STD: <u>1000</u> PPM SOIL AND EXCAVATION DESCRIPTION:
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CHECK ONE:
☒ PIT ABANDONED
☐ STEEL TANK INSTALLED
☐ FIBERGLASS TANK INSTALLED

Pit soil comprised of silty sand & clay.
 Pit base excavated 1'-4' until field testing indicated clean soil.
 Soil samples collected for laboratory confirmation testing.



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

PIT PERIMETER

OVM RESULTS

PIT PROFILE

SEE ATTACHED
DIAGRAM

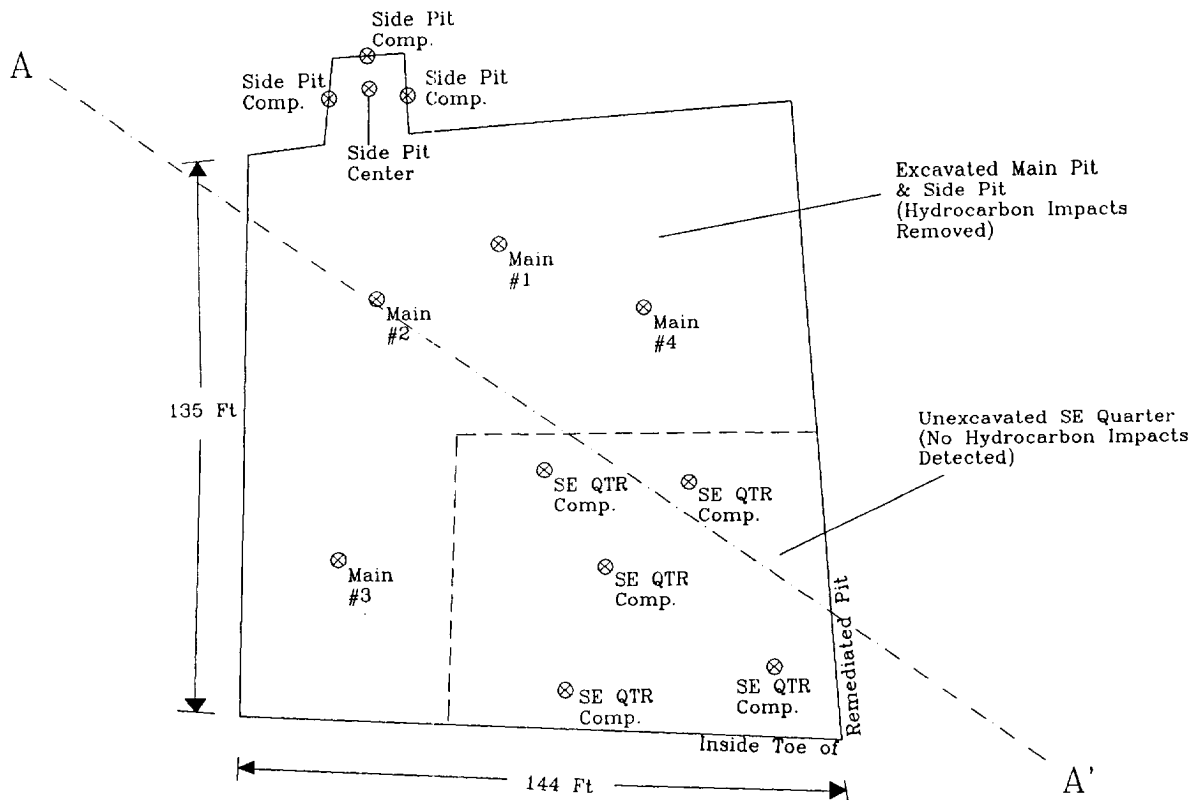
SAMPLE ID	FIELD HEADSPACE P10 (ppm)
MAIN PIT #1	4.0
MAIN PIT #2	1.4
MAIN PIT #3	0.0
MAIN PIT #4	0.2
SIDE PIT COMPOSITE	5.0
SIDE PIT BOTTOM	0.6
SE QUARTER COMPOSITE	0.0
LAB SAMPLES	
MAIN PIT #1	ND
MAIN PIT #2	ND
MAIN PIT #3	ND
MAIN PIT #4	0.5
SIDE PIT COMPOSITE	ND
SIDE PIT BOTTOM	30.7
SE QUARTER COMP.	3.6

SEE ATTACHED
DIAGRAM

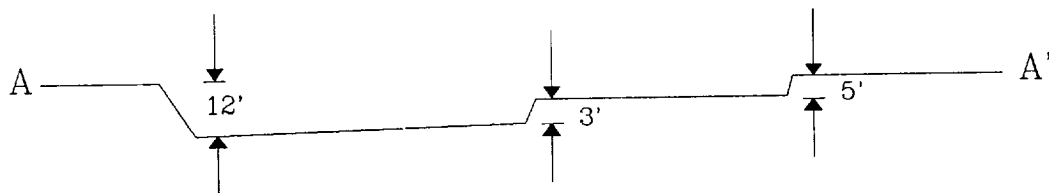
	18015 TPH	BENZENE	BTEX
MAIN PIT #1	ND	ND	0.045 PPM
MAIN PIT #2	ND	ND	0.045
MAIN PIT #3	ND	ND	ND
MAIN PIT #4	0.5	ND	0.182
SIDE PIT COMPOSITE	ND	ND	ND
SIDE PIT BOTTOM	30.7	ND	ND
SE QUARTER COMP.	3.6	ND	ND

TRAVEL NOTES:	CALLOUT: _____	ONSITE: _____
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PLAN VIEW



SIDE VIEW



Note: Diagram dimensions and feature locations are approximate only. This diagram should not be used for construction or survey purposes.

N

LEGEND

⊗ Main #1

Soil Sample Location

0 50 100 FEET

SEAGRAMS HORSESHOE GALLUP - LARGE PIT
SW/4 27-T32N-R17W - NAVAJO NATION - NEW MEXICO

BLAGG ENGINEERING, INC.

DATE: 12/97

FIGURE 2

BY: JCB

P.O. BOX 87, BLOOMFIELD, NM
PHONE: (505)632-1199

CHAIN OF CUSTODY RECORD

Client/Project Name		Project Location		ANALYSIS/PARAMETERS							Remarks		
BLAGG/SEAGRAM		HORSESHOE											
Sampler: (Signature)		Chain of Custody Tape No.											
J-C. Blagg		04034-10											
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TPH 8015	BTEX 8020						Remarks
MAW PIT #1	12-3-97	1015	C626	Soil	1	X	X						
MAIN PIT #2	"	1029	C627	"	1	X	X						
MAIN PIT #3	"	1038	C628	"	1	X	X						
MAIN PIT #4	"	1112	C629	"	1	X	X						
SIDE PIT SPURVEIL	"	1002	C630	"	1	X	X						
SIDE PIT BOTTOM	"	1008	C631	"	1	X	X						
MAW PIT SE QUARTY	"	1104	C632	"	1	X	X						
5 FT. Composite													
				Samples received 2001 1/2 intact at									
Relinquished by: (Signature)		Date		Time		Received by: (Signature)		Date		Time			
J-C. Blagg		12-3-97		1333		Denn L. Gierman		12-3-97		1333			
Relinquished by: (Signature)						Received by: (Signature)							
Relinquished by: (Signature)						Received by: (Signature)							

ENVIROTECH INC.

5796 U.S. Highway 64-3014

Farmington, New Mexico 87401

(505) 632-0615

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

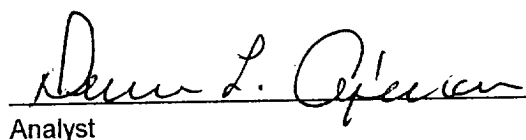
Client:	Blagg / Seagram	Project #:	04034-10
Sample ID:	Main Pit #1	Date Reported:	12-04-97
Laboratory Number:	C626	Date Sampled:	12-03-97
Chain of Custody No:	5684	Date Received:	12-03-97
Sample Matrix:	Soil	Date Extracted:	12-03-97
Preservative:	Cool	Date Analyzed:	12-04-97
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

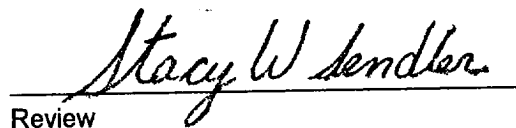
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

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: **Horseshoe.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

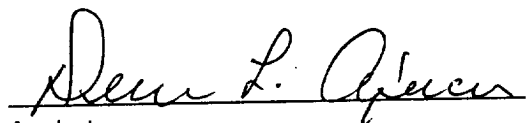
Client:	Blagg / Seagram	Project #:	04034-10
Sample ID:	Main Pit #2	Date Reported:	12-04-97
Laboratory Number:	C627	Date Sampled:	12-03-97
Chain of Custody No:	5684	Date Received:	12-03-97
Sample Matrix:	Soil	Date Extracted:	12-03-97
Preservative:	Cool	Date Analyzed:	12-04-97
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

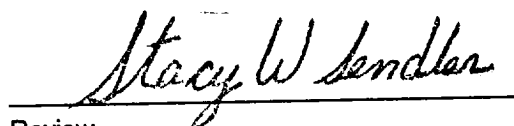
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

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: **Horseshoe.**


Analyst


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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

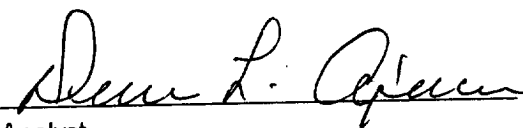
Client:	Blagg / Seagram	Project #:	04034-10
Sample ID:	Main Pit #3	Date Reported:	12-04-97
Laboratory Number:	C628	Date Sampled:	12-03-97
Chain of Custody No:	5684	Date Received:	12-03-97
Sample Matrix:	Soil	Date Extracted:	12-03-97
Preservative:	Cool	Date Analyzed:	12-04-97
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

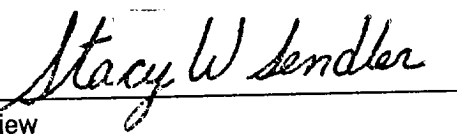
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

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: Horseshoe.


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

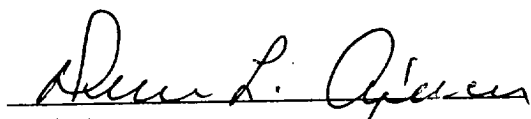
Client:	Blagg / Seagram	Project #:	04034-10
Sample ID:	Main Pit #4	Date Reported:	12-04-97
Laboratory Number:	C629	Date Sampled:	12-03-97
Chain of Custody No:	5684	Date Received:	12-03-97
Sample Matrix:	Soil	Date Extracted:	12-03-97
Preservative:	Cool	Date Analyzed:	12-04-97
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

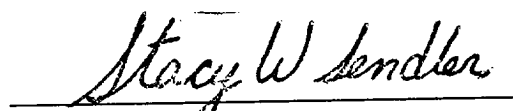
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	0.2	0.2
Diesel Range (C10 - C28)	0.3	0.1
Total Petroleum Hydrocarbons	0.5	0.2

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: Horseshoe.


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

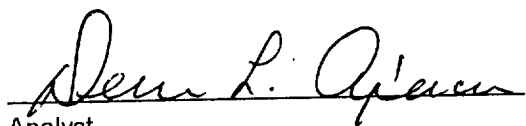
Client:	Blagg / Seagram	Project #:	04034-10
Sample ID:	Side Pit Sidewall 3 Pt. Comp.	Date Reported:	12-04-97
Laboratory Number:	C630	Date Sampled:	12-03-97
Chain of Custody No:	5684	Date Received:	12-03-97
Sample Matrix:	Soil	Date Extracted:	12-03-97
Preservative:	Cool	Date Analyzed:	12-04-97
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

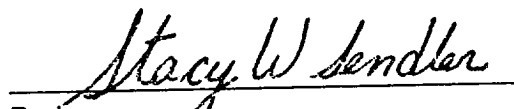
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

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: **Horseshoe.**


Analyst


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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

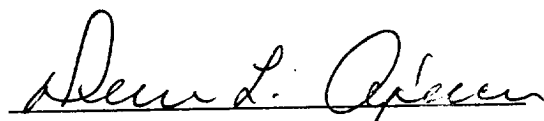
Client:	Blagg / Seagram	Project #:	04034-10
Sample ID:	Side Pit Bottom	Date Reported:	12-04-97
Laboratory Number:	C631	Date Sampled:	12-03-97
Chain of Custody No:	5684	Date Received:	12-03-97
Sample Matrix:	Soil	Date Extracted:	12-03-97
Preservative:	Cool	Date Analyzed:	12-04-97
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

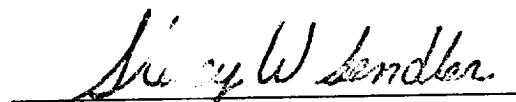
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	30.7	0.1
Total Petroleum Hydrocarbons	30.7	0.2

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: Horseshoe.


Analyst


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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

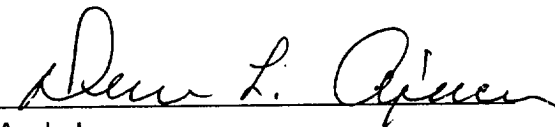
Client:	Blagg / Seagram	Project #:	04034-10
Sample ID:	Main Pit SE Quarter 5 Pt. Com	Date Reported:	12-04-97
Laboratory Number:	C632	Date Sampled:	12-03-97
Chain of Custody No:	5684	Date Received:	12-03-97
Sample Matrix:	Soil	Date Extracted:	12-03-97
Preservative:	Cool	Date Analyzed:	12-04-97
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

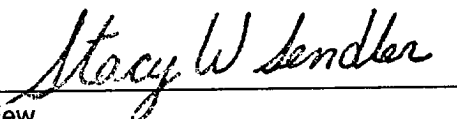
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	3.6	0.1
Total Petroleum Hydrocarbons	3.6	0.2

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: **Horseshoe.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	12-04-TPH QA/QC	Date Reported:	12-04-97
Laboratory Number:	C626	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	12-04-97
Condition:	N/A	Analysis Requested:	TPH

Calibration	I-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept. Range
Gasoline Range C5 - C10	10-28-97	6.1686E-04	6.1196E-04	0.79%	0 - 15%
Diesel Range C10 - C28	10-28-97	6.1629E-04	6.1444E-04	0.30%	0 - 15%

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

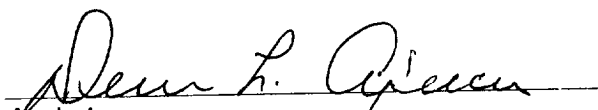
Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	ND	ND	0.0%	0 - 30%
Diesel Range C10 - C28	ND	ND	0.0%	0 - 30%

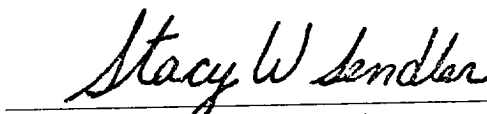
Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	ND	250	249	100%	75 - 125%
Diesel Range C10 - C28	ND	250	250	100%	75 - 125%

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: QA/QC for samples C626 - C632.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Seagram	Project #:	04034-10
Sample ID:	Main Pit #1	Date Reported:	12-04-97
Laboratory Number:	C626	Date Sampled:	12-03-97
Chain of Custody:	5684	Date Received:	12-03-97
Sample Matrix:	Soil	Date Analyzed:	12-04-97
Preservative:	Cool	Date Extracted:	12-03-97
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	8.8
Toluene	11.3	8.4
Ethylbenzene	ND	7.6
p,m-Xylene	22.9	10.8
o-Xylene	10.9	5.2
Total BTEX	45.1	(0.0451 ppm)

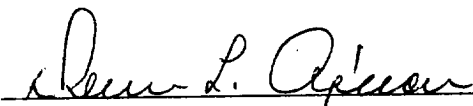
ND - Parameter not detected at the stated detection limit.

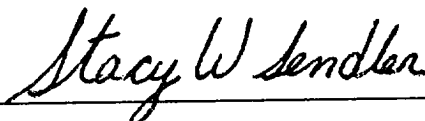
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	101 %
	Bromofluorobenzene	101 %

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: Horseshoe.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Seagram	Project #:	04034-10
Sample ID:	Main Pit #2	Date Reported:	12-04-97
Laboratory Number:	C627	Date Sampled:	12-03-97
Chain of Custody:	5684	Date Received:	12-03-97
Sample Matrix:	Soil	Date Analyzed:	12-04-97
Preservative:	Cool	Date Extracted:	12-03-97
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	8.8
Toluene	17.1	8.4
Ethylbenzene	ND	7.6
p,m-Xylene	15.8	10.8
o-Xylene	12.0	5.2
Total BTEX	44.9	(0.0449 ppm)

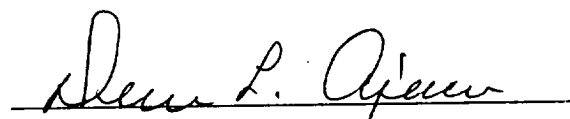
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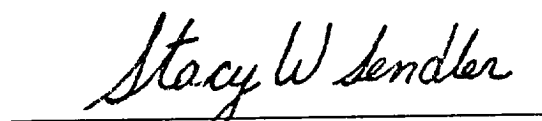
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	97 %
	Bromofluorobenzene	97 %

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: Horseshoe.


Analyst


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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Seagram	Project #:	04034-10
Sample ID:	Main Pit #3	Date Reported:	12-04-97
Laboratory Number:	C628	Date Sampled:	12-03-97
Chain of Custody:	5684	Date Received:	12-03-97
Sample Matrix:	Soil	Date Analyzed:	12-04-97
Preservative:	Cool	Date Extracted:	12-03-97
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	ND	10.8
o-Xylene	ND	5.2
Total BTEX	ND	

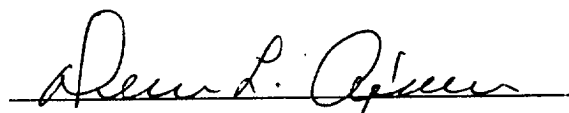
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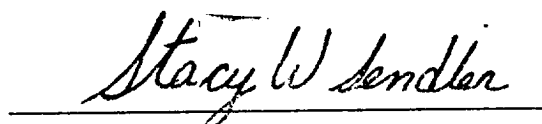
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	99 %
	Bromofluorobenzene	99 %

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: Horseshoe.


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Seagram	Project #:	04034-10
Sample ID:	Main Pit #4	Date Reported:	12-04-97
Laboratory Number:	C629	Date Sampled:	12-03-97
Chain of Custody:	5684	Date Received:	12-03-97
Sample Matrix:	Soil	Date Analyzed:	12-04-97
Preservative:	Cool	Date Extracted:	12-03-97
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	8.8
Toluene	40.1	8.4
Ethylbenzene	13.4	7.6
p,m-Xylene	80.7	10.8
o-Xylene	48.1	5.2
Total BTEX	182	(0.182 ppm)

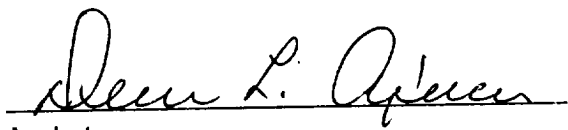
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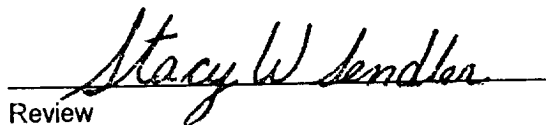
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	98 %
	Bromofluorobenzene	98 %

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: Horseshoe.


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Seagram	Project #:	04034-10
Sample ID:	Side Pit Sidewal 3 pt. Comp.	Date Reported:	12-04-97
Laboratory Number:	C630	Date Sampled:	12-03-97
Chain of Custody:	5684	Date Received:	12-03-97
Sample Matrix:	Soil	Date Analyzed:	12-04-97
Preservative:	Cool	Date Extracted:	12-03-97
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	ND	10.8
o-Xylene	ND	5.2
Total BTEX	ND	

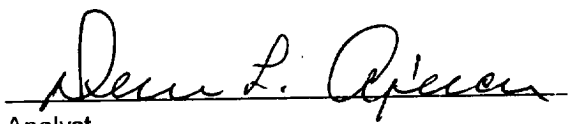
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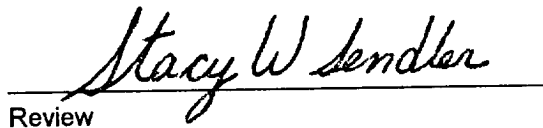
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	97 %
	Bromofluorobenzene	97 %

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: Horseshoe.


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Seagram	Project #:	04034-10
Sample ID:	Side Pit Bottom	Date Reported:	12-04-97
Laboratory Number:	C631	Date Sampled:	12-03-97
Chain of Custody:	5684	Date Received:	12-03-97
Sample Matrix:	Soil	Date Analyzed:	12-04-97
Preservative:	Cool	Date Extracted:	12-03-97
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	ND	10.8
o-Xylene	ND	5.2
Total BTEX	ND	

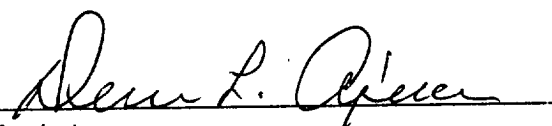
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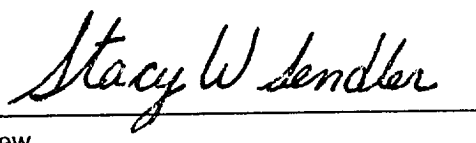
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	97 %
	Bromofluorobenzene	97 %

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: Horseshoe.


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Seagram	Project #:	04034-10
Sample ID:	Main Pit SE Quarter 5 Pt. Composite	Date Reported:	12-04-97
Laboratory Number:	C632	Date Sampled:	12-03-97
Chain of Custody:	5684	Date Received:	12-03-97
Sample Matrix:	Soil	Date Analyzed:	12-04-97
Preservative:	Cool	Date Extracted:	12-03-97
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	ND	10.8
o-Xylene	ND	5.2
Total BTEX	ND	

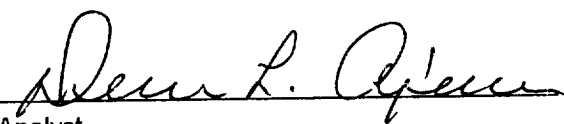
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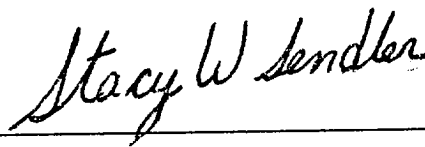
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	98 %
	Bromofluorobenzene	98 %

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: Horseshoe.


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client:	N/A	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	12-04-97
Laboratory Number:	12-04-BTEX.BLANK	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	12-04-97
Condition:	N/A	Analysis Requested:	BTEX

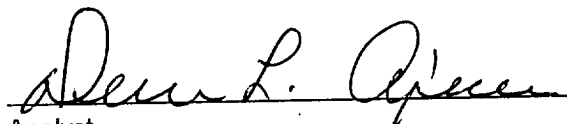
Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	0.2
Toluene	ND	0.2
Ethylbenzene	ND	0.2
p,m-Xylene	ND	0.2
o-Xylene	ND	0.1

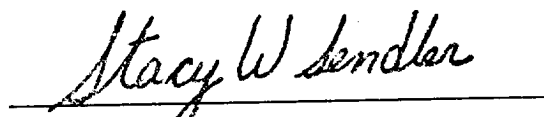
ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	100 %
	Bromofluorobenzene	101 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for samples C626 - C632.


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	12-04-97
Laboratory Number:	C626	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	Cool	Date Analyzed:	12-04-97
Condition:	Cool and Intact	Analysis Requested:	BTEX

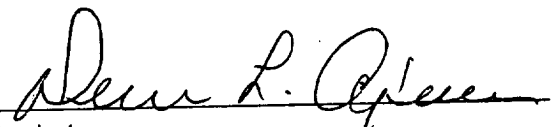
Parameter	Sample Result (ug/Kg)	Duplicate Result (ug/Kg)	Det. Limit (ug/Kg)	Percent Difference
Benzene	ND	ND	8.8	0.0%
Toluene	11.3	11.2	8.4	1.0%
Ethylbenzene	ND	ND	7.6	0.0%
p,m-Xylene	22.9	22.7	10.8	0.8%
o-Xylene	10.9	10.8	5.2	1.0%

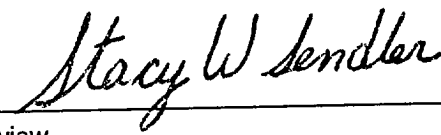
ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria:	Parameter	Maximum Difference
	8021 Compounds	30 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for samples C626 - C632.


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

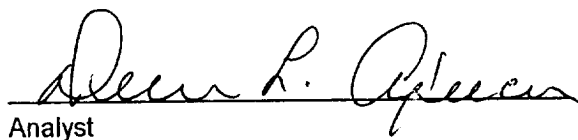
Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	12-04-97
Laboratory Number:	C626	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	Cool	Date Extracted:	12-03-97
Condition:	Cool and Intact	Date Analyzed:	12-04-97

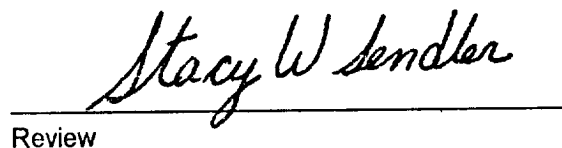
Parameter	Sample Result (ug/Kg)	Spike Added (ug/Kg)	Spiked Sample Result (ug/Kg)	Det. Limit (ug/Kg)	Percent Recovery	SW-846 % Rec. Accept. Range
Benzene	ND	50.0	49.3	8.8	99%	39-150
Toluene	11.3	50.0	59.9	8.4	98%	46-148
Ethylbenzene	ND	50.0	54.0	7.6	98%	32-160
p,m-Xylene	22.9	100	122	10.8	99%	46-148
o-Xylene	10.9	50.0	60.0	5.2	99%	46-148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for samples C626 - C632.


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