

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

API # 30-045-09381

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Thompson Engineering	Contact	Vern Andrews
Address	7415 East main St., Farmington, NM 87402	Telephone No.	505-327-4892
Facility Name	Ollie Sullivan # 1	Facility Type	Well Location

Surface Owner - FEE	Mineral Owner - FEE	Lease No. - FEE
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	22	30N	12W	1190	North	840	East	San Juan

Latitude 36.802176 Longitude -108.079304

NATURE OF RELEASE

Type of Release - Produced water	Volume of Release < 5 BBLs	Volume Recovered - 30 yds of soil
Source of Release - Production Pit	Date and Hour of Occurrence	Date and Hour of Discovery 7/29/09 - 7:00 pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? The surface landowner reported pit running over to Thompson Engineering and NMOCD. Vern Andrews was then in contact with Brandon Powell for remedial action.	
By Whom? Surface Landowner - Billy Bell	Date and Hour - July 30, 2009	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
11/15/09
11/15/09

Describe Cause of Problem and Remedial Action Taken.* The production pit overflowed and saturated the northeast corner of the soil around the pit with produced water. Samples were taken with Brandon Powell and soil was then excavated to a point that the chloride level was under 250 ppm.
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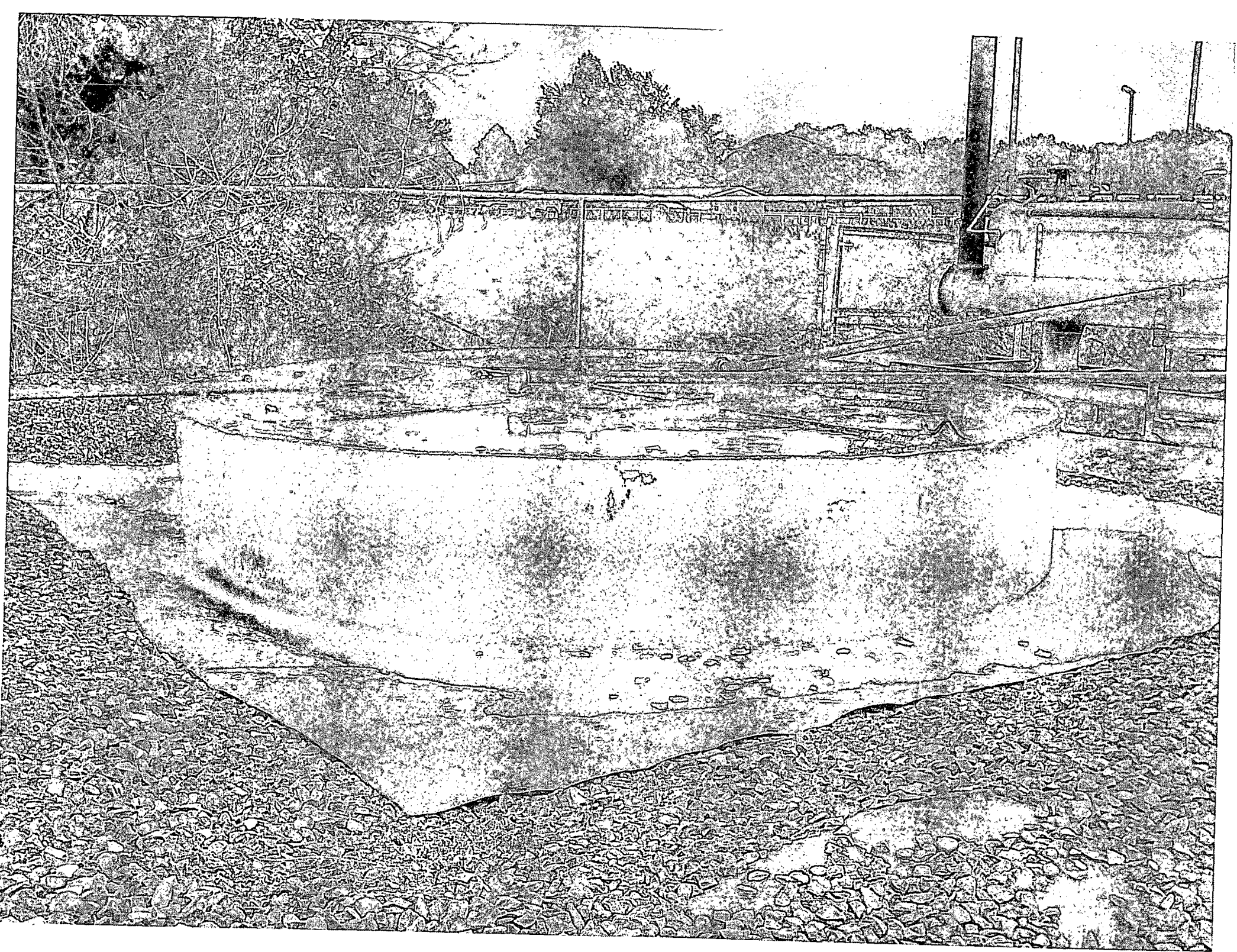
Describe Area Affected and Cleanup Action Taken.* The soil on the northeast side of the production pit was above acceptable chloride limits and was excavated to a depth of 6 1/2 feet to a point where field spot samples showed the chloride level to be below 250 ppm. A composite sample was then taken to Envirotech for lab analysis. The hole was then backfilled and the area under the pit was lined with a 60 mil liner.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <u>Vern J. Andrews</u>		OIL CONSERVATION DIVISION	
Printed Name: Vern Andrews		Approved by District Supervisor: <u>Brandon Powell</u> For CP	
Title: Production Foreman		Approval Date: <u>11/9/09</u>	Expiration Date:
E-mail Address: vern@walsheng.net		Conditions of Approval:	
Date: 10/1/09 Phone: 505-320-1763		Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

Incident # NMDO 0931452301 23



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

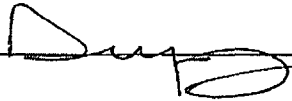
Client:	Walsh Eng.	Project #:	07173-0001
Sample ID:	Water Pit Comp.	Date Reported:	08-07-09
Laboratory Number:	51080	Date Sampled:	08-04-09
Chain of Custody No:	7577	Date Received:	08-04-09
Sample Matrix:	Soil	Date Extracted:	08-05-09
Preservative:	Cool	Date Analyzed:	08-06-09
Condition:	Intact	Analysis Requested:	8015 TPH

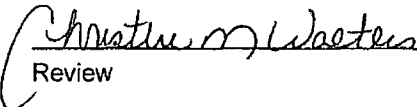
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

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: **Ollie Sullivan #1**


Analyst


Review

EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	08-06-09 QA/QC	Date Reported:	08-07-09
Laboratory Number:	51068	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-06-09
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept Range
Gasoline Range C5 - C10	05-07-07	1.0435E+003	1.0439E+003	0.04%	0 - 15%
Diesel Range C10 - C28	05-07-07	1.0624E+003	1.0628E+003	0.04%	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	80.4	79.9	0.6%	0 - 30%
Diesel Range C10 - C28	832	827	0.6%	0 - 30%

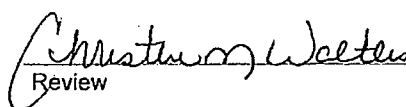
Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
Gasoline Range C5 - C10	80.4	250	332	101%	75 - 125%
Diesel Range C10 - C28	832	250	1,100	102%	75 - 125%

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 51068 - 51075 and 51080 - 51081.

Analyst 

Review 



EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Walsh Eng.	Project #:	07173-0001
Sample ID:	Water Pit Comp.	Date Reported:	08-07-09
Laboratory Number:	51080	Date Sampled:	08-04-09
Chain of Custody:	7577	Date Received:	08-04-09
Sample Matrix:	Soil	Date Analyzed:	08-06-09
Preservative:	Cool	Date Extracted:	08-05-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	4.3	1.0
Ethylbenzene	8.8	1.0
p,m-Xylene	6.2	1.2
o-Xylene	3.5	0.9
Total BTEX	22.8	

ND - Parameter not detected at the stated detection limit.

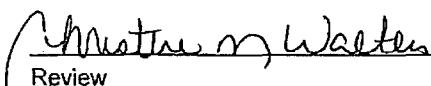
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.0 %
	1,4-difluorobenzene	98.0 %
	Bromochlorobenzene	98.0 %

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: Ollie Sullivan #1


Analyst


Review



**EPA METHOD 8021
AROMATIC VOLATILE ORGANICS**

Client:	N/A	Project #:	N/A
Sample ID:	08-08-BT QA/QC	Date Reported:	08-07-09
Laboratory Number:	51068	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-06-09
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF	C-Cal RF	%Diff	Blank Conc	Detect Limit
			Accept Range 0 - 15%		
Benzene	4.1514E+006	4.1597E+006	0.2%	ND	0.1
Toluene	3.8098E+006	3.8174E+006	0.2%	ND	0.1
Ethylbenzene	3.3197E+006	3.3264E+006	0.2%	ND	0.1
p,m-Xylene	8.5594E+006	8.5766E+006	0.2%	ND	0.1
o-Xylene	3.1771E+006	3.1835E+006	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff	Accept Range	Detect Limit
Benzene	10.1	10.3	2.0%	0 - 30%	0.9
Toluene	24.1	25.2	4.6%	0 - 30%	1.0
Ethylbenzene	30.6	31.2	2.0%	0 - 30%	1.0
p,m-Xylene	62.3	63.2	1.4%	0 - 30%	1.2
o-Xylene	135	141	4.2%	0 - 30%	0.9

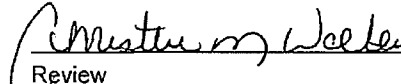
Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	%Recovery	Accept Range
Benzene	10.1	50.0	59.0	98.2%	39 - 150
Toluene	24.1	50.0	72.9	98.4%	46 - 148
Ethylbenzene	30.6	50.0	77.3	95.9%	32 - 160
p,m-Xylene	62.3	100	159	98.0%	46 - 148
o-Xylene	135	50.0	183	98.5%	46 - 148

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 51068 - 51070, 51080, 51081, and 51090 - 51094.

Analyst 


Review



envirotech
Analytical Laboratory

CATION / ANION ANALYSIS

Client:	Walsh Eng.	Project #:	07173-0001
Sample ID:	Water Pit Comp	Date Reported:	08-07-08
Laboratory Number:	51080	Date Sampled:	08-04-08
Chain of Custody:	7577	Date Received:	08-04-08
Sample Matrix:	Soil Extract	Date Extracted:	08-06-08
Preservative:	Cool	Date Analyzed:	08-07-08
Condition:	Intact		

Parameter	Analytical Result	Units		
pH	6.48	s.u.		
Conductivity @ 25° C	2,670	umhos/cm		
Total Dissolved Solids @ 180C	1,840	mg/L		
Total Dissolved Solids (Calc)	1,806	mg/L		
SAR	29.9	ratio		
Total Alkalinity as CaCO3	46.0	mg/L		
Total Hardness as CaCO3	92.0	mg/L		
Bicarbonate as HCO3	46.0	mg/L	0.75	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	4.00	mg/L	0.06	meq/L
Nitrite Nitrogen	0.008	mg/L	0.00	meq/L
Chloride	1,040	mg/L	29.34	meq/L
Fluoride	0.125	mg/L	0.01	meq/L
Phosphate	7.60	mg/L	0.24	meq/L
Sulfate	21.6	mg/L	0.45	meq/L
Iron	0.060	mg/L	0.00	meq/L
Calcium	30.4	mg/L	1.52	meq/L
Magnesium	3.90	mg/L	0.32	meq/L
Potassium	10.4	mg/L	0.27	meq/L
Sodium	660	mg/L	28.71	meq/L
Cations			30.82	meq/L
Anions			30.85	meq/L
Cation/Anion Difference			0.12%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: Ollie Sullivan #1.

Analyst


Review

CHAIN OF CUSTODY RECORD

7577

Client: <i>T. THOMPSON / WALSH ENG.</i>			Project Name / Location: <i>OLIVER SULLIVAN #1</i>				ANALYSIS / PARAMETERS													
Client Address: <i>7415 EAST MAIN</i>			Sampler Name: <i>VERN ANDREWS</i>				TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE			Sample Cool	Sample Intact
Client Phone No.: <i>505-320-1763</i>			Client No.: <i>07173 - 0001</i>																	
Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative														
<i>WATER PIT COMP.</i>	<i>8/4</i>	<i>9:15 AM</i>	<i>51080</i>	<i>Soil Solid</i>															<i>✓</i>	<i>✓</i>
				Soil Solid																
				Soil Solid																
				Soil Solid																
				Soil Solid																
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				Soil Solid																
				Soil Solid																
Relinquished by: (Signature) <i>Vern J. Andrews</i>					Date <i>8/4/09</i>	Time <i>10:30</i>	Received by: (Signature) <i>[Signature]</i>					Date <i>8/4/09</i>	Time <i>10:30</i>							
Relinquished by: (Signature)							Received by: (Signature)													
Relinquished by: (Signature)							Received by: (Signature)													

fern@walsheng.net



envirotech
Analytical Laboratory

5796 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • lab@envirotech-inc.com

01061000
PHELLOUND
SAMPLE LOCATION





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Analytical Laboratory

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

Client:	Walsh Engineering	Project #:	07173-0001
Sample ID:	Background	Date Reported:	08-21-09
Laboratory Number:	51323	Date Sampled:	08-17-09
Chain of Custody No:	7758	Date Received:	08-17-09
Sample Matrix:	Soil	Date Extracted:	08-19-09
Preservative:	Cool	Date Analyzed:	08-20-09
Condition:	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: **Ollie Sullivan #1**

Analyst

Review

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

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	08-20-09 QA/QC	Date Reported:	08-21-09
Laboratory Number:	51305	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-20-09
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept. Range
Gasoline Range C5 - C10	05-07-07	9.5983E+002	9.6022E+002	0.04%	0 - 15%
Diesel Range C10 - C28	05-07-07	1.0515E+003	1.0519E+003	0.04%	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	36.3	35.0	3.6%	0 - 30%


Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	ND	250	246	98.4%	75 - 125%
Diesel Range C10 - C28	36.3	250	279	97.6%	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 51305, 51322, 51323, 51337, and 51350.

Analyst 


 Review



EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Walsh Engineering	Project #:	07173-0001
Sample ID:	Background	Date Reported:	08-21-09
Laboratory Number:	51323	Date Sampled:	08-17-09
Chain of Custody:	7758	Date Received:	08-17-09
Sample Matrix:	Soil	Date Analyzed:	08-20-09
Preservative:	Cool	Date Extracted:	08-19-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	ND	1.0
Ethylbenzene	ND	1.0
p,m-Xylene	ND	1.2
o-Xylene	ND	0.9
Total BTEX	ND	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.0 %
	1,4-difluorobenzene	98.0 %
	Bromochlorobenzene	98.0 %

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: Ollie Sullivan #1

Analyst

Review



envirotech

Analytical Laboratory

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	08-20-BT QA/QC	Date Reported:	08-21-09
Laboratory Number:	51305	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-20-09
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF	C-Cal RF	%Diff.	Blank Conc	Detect Limit
		Accept Range	0 - 15%		
Benzene	3.8868E+006	3.8946E+006	0.2%	ND	0.1
Toluene	3.6159E+006	3.6231E+006	0.2%	ND	0.1
Ethylbenzene	3.2174E+006	3.2239E+006	0.2%	ND	0.1
p,m-Xylene	8.2854E+006	8.3020E+006	0.2%	ND	0.1
o-Xylene	3.0687E+006	3.0748E+006	0.2%	ND	0.1

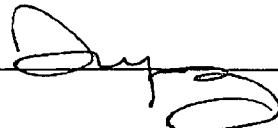
Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect Limit
Benzene	4.3	4.0	7.0%	0 - 30%	0.9
Toluene	9.0	9.4	4.4%	0 - 30%	1.0
Ethylbenzene	8.0	7.4	7.5%	0 - 30%	1.0
p,m-Xylene	18.2	17.7	2.7%	0 - 30%	1.2
o-Xylene	11.3	10.5	7.1%	0 - 30%	0.9

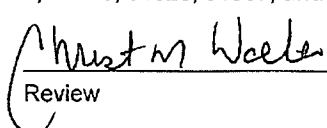
Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	4.3	50.0	53.5	98.5%	39 - 150
Toluene	9.0	50.0	58.5	99.2%	46 - 148
Ethylbenzene	8.0	50.0	56.5	97.4%	32 - 160
p,m-Xylene	18.2	100	109	92.4%	46 - 148
o-Xylene	11.3	50.0	59.6	97.2%	46 - 148

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 51305, 51322, 51323, 51325, 51326, 51328, 51337, and 51339 - 51341.

Analyst 


Review 

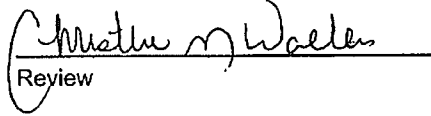
Client:	Walsh Engineering	Project #:	07173-0001
Sample ID:	Background	Date Reported:	08-24-08
Laboratory Number:	51323	Date Sampled:	08-17-08
Chain of Custody:	7758	Date Received:	08-17-08
Sample Matrix:	Soil Extract	Date Extracted:	08-19-08
Preservative:	Cool	Date Analyzed:	08-20-08
Condition:	Intact		

Parameter	Analytical Result	Units		
pH	6.47	s.u.		
Conductivity @ 25° C	2,520	umhos/cm		
Total Dissolved Solids @ 180C	1,420	mg/L		
Total Dissolved Solids (Calc)	1,332	mg/L		
SAR	3.4	ratio		
Total Alkalinity as CaCO3	21.2	mg/L		
Total Hardness as CaCO3	601	mg/L		
Bicarbonate as HCO3	21.2	mg/L	0.35	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	40.0	mg/L	0.65	meq/L
Nitrite Nitrogen	0.318	mg/L	0.01	meq/L
Chloride	204	mg/L	5.75	meq/L
Fluoride	0.300	mg/L	0.02	meq/L
Phosphate	0.900	mg/L	0.03	meq/L
Sulfate	660	mg/L	13.74	meq/L
Iron	<0.01	mg/L	0.00	meq/L
Calcium	171	mg/L	8.53	meq/L
Magnesium	42.4	mg/L	3.49	meq/L
Potassium	9.99	mg/L	0.26	meq/L
Sodium	190	mg/L	8.27	meq/L
Cations			20.54	meq/L
Anions			20.54	meq/L
Cation/Anion Difference			0.01%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
 Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.


Comments: **Ollie Sullivan #1.**


 Analyst


 Review

CHAIN OF CUSTODY RECORD

7758

Client: <i>WALSH ENGINEERING</i>			Project Name / Location: <i>OLLIE SULLIVAN #1 (BACKGROUND SAMPLE)</i>			ANALYSIS / PARAMETERS														
Client Address: <i>7415 E. MAIN, FARM.</i>			Sampler Name: <i>VERN ANDREWS</i>			TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
Client Phone No.: <i>505-320-1763</i>			Client No.: <i>07173-0001</i>																	
Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative HgCl ₂ HCl														
<i>BACKGROUND</i>	<i>8/17</i>	<i>2:30</i>	<i>51323</i>	<i>Soil Solid</i>	<i>Sludge Aqueous</i>	<i>1-1602</i>				<i>X</i>	<i>X</i>				<i>X</i>					<i>✓</i>
				Soil Solid	Sludge Aqueous															
				Soil Solid	Sludge Aqueous															
				Soil Solid	Sludge Aqueous															
				Soil Solid	Sludge Aqueous															
				Soil Solid	Sludge Aqueous															
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				Soil Solid	Sludge Aqueous															
				Soil Solid	Sludge Aqueous															
				Soil Solid	Sludge Aqueous															
Relinquished by: (Signature) <i>Vern Andrews</i>					Date <i>8/17/09</i>	Time <i>3:35</i>	Received by: (Signature) <i>[Signature]</i>					Date <i>8/17/09</i>	Time <i>1535</i>							
Relinquished by: (Signature)							Received by: (Signature)													
Relinquished by: (Signature)							Received by: (Signature)													
<div style="display: flex; justify-content: space-between; align-items: center;"> <i>email results</i> <div style="text-align: center;">  <p>envirotech Analytical Laboratory</p> </div> </div>																				

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-138
Revised March 12, 2007

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Thompson Engineering & Production 7415 East Main St. Farmington, NM 87402
2. Originating Site: Ollie Sullivan # 1
3. Location of Material (Street Address, City, State or ULSTR): A - 22 - T30N - R12W
4. Source and Description of Waste: Soil from under production pit with high chloride levels
Estimated Volume <input type="text"/> yd ³ / bbls Known Volume (to be entered by the operator at the end of the haul) <input type="text"/> yd ³ / bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS I, <input type="text"/> Vern Andrews, representative or authorized agent for Thompson Engineering & Production do hereby Generator Signature certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification) <input checked="" type="checkbox"/> RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. <u>Operator Use Only: Waste Acceptance Frequency</u> <input type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input type="checkbox"/> Per Load <input type="checkbox"/> RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items) <input type="checkbox"/> MSDS Information <input type="checkbox"/> RCRA Hazardous Waste Analysis <input type="checkbox"/> Process Knowledge <input type="checkbox"/> Other (Provide description in Box 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS I, <input type="text"/> , representative for <input type="text"/> do hereby certify that Representative/Agent Signature representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
5. Transporter:

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: JFJ Landfarm c/o Industrial Ecosystems, Inc. / NM 01-0010B

Address of Facility: # 49 CR 3150 Aztec, NM 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Marcella Marquez

TITLE: Administrative Officer DATE:

SIGNATURE:
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: 505-632-1782

62115 S. Moore
L. S. Moore

Final Sample


CATION / ANION ANALYSIS

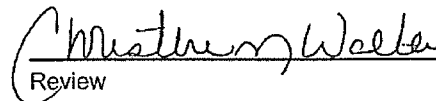
Client:	Walsh Engineering	Project #:	07173-0001
Sample ID:	Production Pit	Date Reported:	08-31-09
Laboratory Number:	51450	Date Sampled:	08-27-09
Chain of Custody:	7846	Date Received:	08-28-09
Sample Matrix:	Soil Extract	Date Extracted:	08-30-09
Preservative:	Cool	Date Analyzed:	08-31-09
Condition:	Intact		

Parameter	Analytical Result	Units		
pH	6.65	s.u.		
Conductivity @ 25° C	142	umhos/cm		
Total Dissolved Solids @ 180C	82.0	mg/L		
Total Dissolved Solids (Calc)	81.1	mg/L		
SAR	0.9	ratio		
Total Alkalinity as CaCO3	58.0	mg/L		
Total Hardness as CaCO3	34.7	mg/L		
Bicarbonate as HCO3	58.0	mg/L	0.95	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	2.70	mg/L	0.04	meq/L
Nitrite Nitrogen	<0.01	mg/L	0.00	meq/L
Chloride	15.0	mg/L	0.42	meq/L
Fluoride	0.060	mg/L	0.00	meq/L
Phosphate	<0.1	mg/L	0.00	meq/L
Sulfate	3.50	mg/L	0.07	meq/L
Iron	5.61	mg/L	0.20	meq/L
Calcium	4.21	mg/L	0.21	meq/L
Magnesium	5.91	mg/L	0.49	meq/L
Potassium	2.15	mg/L	0.05	meq/L
Sodium	12.4	mg/L	0.54	meq/L
Cations			1.49	meq/L
Anions			1.49	meq/L
Cation/Anion Difference			0.11%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
 Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Ollie Sullivan #1.**


 Analyst


 Review



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

Client:	Walsh Engineering	Project #:	07173-0001
Sample ID:	Production Pit	Date Reported:	08-31-09
Laboratory Number:	51450	Date Sampled:	08-27-09
Chain of Custody No:	7846	Date Received:	08-28-09
Sample Matrix:	Soil	Date Extracted:	08-28-09
Preservative:	Cool	Date Analyzed:	08-31-09
Condition:	Intact	Analysis Requested:	8015 TPH

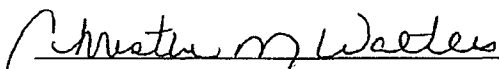
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

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: **Ollie Sullivan #1.**


Analyst


Review



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

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	08-31-09 QA/QC	Date Reported:	08-31-09
Laboratory Number:	51463	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-31-09
Condition:	N/A	Analysis Requested:	TPH

	Cal Date	L-Cal RF	C-Cal RF	% Difference	Accept Range
Gasoline Range C5 - C10	05-07-07	1.0701E+003	1.0706E+003	0.04%	0 - 15%
Diesel Range C10 - C28	05-07-07	1.0822E+003	1.0826E+003	0.04%	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	254	102%	75 - 125%
Diesel Range C10 - C28	ND	250	257	103%	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 51436, 51450, 51456, 51457, 51459 - 51461, and 51463 - 51465.

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Review



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**EPA METHOD 8021
AROMATIC VOLATILE ORGANICS**

Client:	Walsh Engineering	Project #:	07173-0001
Sample ID:	Production Pit	Date Reported:	08-31-09
Laboratory Number:	51450	Date Sampled:	08-27-09
Chain of Custody:	7846	Date Received:	08-28-09
Sample Matrix:	Soil	Date Analyzed:	08-31-09
Preservative:	Cool	Date Extracted:	08-28-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	ND	1.0
Ethylbenzene	ND	1.0
p,m-Xylene	ND	1.2
o-Xylene	ND	0.9
Total BTEX	ND	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	97.0 %
	1,4-difluorobenzene	97.0 %
	Bromochlorobenzene	97.0 %

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: Ollie Sullivan #1

Analyst

Review



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**EPA METHOD 8021
AROMATIC VOLATILE ORGANICS**

Client:	N/A	Project #:	N/A
Sample ID:	08-31-BT QA/QC	Date Reported:	08-31-09
Laboratory Number:	51463	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-31-09
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF	C-Cal RF	%Diff	Blank Conc	Detect Limit
		Accept Range 0 - 15%			
Benzene	2.5305E+006	2.5356E+006	0.2%	ND	0.1
Toluene	2.3597E+006	2.3645E+006	0.2%	ND	0.1
Ethylbenzene	2.1239E+006	2.1282E+006	0.2%	ND	0.1
p,m-Xylene	5.5115E+006	5.5226E+006	0.2%	ND	0.1
o-Xylene	2.0354E+006	2.0395E+006	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff	Accept Range	Detect Limit
Benzene	3.5	3.4	2.9%	0 - 30%	0.9
Toluene	10.4	9.9	4.8%	0 - 30%	1.0
Ethylbenzene	8.4	8.2	2.4%	0 - 30%	1.0
p,m-Xylene	15.8	14.2	10.1%	0 - 30%	1.2
o-Xylene	11.4	10.8	5.3%	0 - 30%	0.9

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	%Recovery	Accept Range
Benzene	3.5	50.0	53.0	99.1%	39 - 150
Toluene	10.4	50.0	55.4	91.7%	46 - 148
Ethylbenzene	8.4	50.0	56.4	96.6%	32 - 160
p,m-Xylene	15.8	100	114	98.3%	46 - 148
o-Xylene	11.4	50.0	54.4	88.6%	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 51436, 51450, 51456 - 51457, 51461, and 51463 - 51465.

Analyst


Review

— KUSH —

CHAIN OF CUSTODY RECORD

7946

Client: WALSH ENGINEERING		Project Name / Location: OLLIE SULLIVAN #1				ANALYSIS / PARAMETERS														
Client Address: 7415 E. MAIN, FARMINGTON		Sampler Name: VERN ANDREWS				TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
Client Phone No.: 505-320-1763		Client No.: 07173-0001																		
Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative														
						Hg	Cl													
Production Pit	8/27/09	5:30am	51450	SOIL Solid Sludge Aqueous																
				Soil Solid Sludge Aqueous																
				Soil Solid Sludge Aqueous																
				Soil Solid Sludge Aqueous																
				Soil Solid Sludge Aqueous																
				Soil Solid Sludge Aqueous																
				Soil Solid Sludge Aqueous																
				Soil Solid Sludge Aqueous																
				Soil Solid Sludge Aqueous																
				Soil Solid Sludge Aqueous																
Relinquished by: (Signature) Vern D. Andrews				Date	Time	Received by: (Signature) [Signature]				Date	Time									
Relinquished by: (Signature)						Received by: (Signature)														
Relinquished by: (Signature)						Received by: (Signature)														

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Analytical Laboratory

5796 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • lab@envirotech-inc.com