

July 25, 2018

Olivia Yu Environmental Specialist New Mexico Oil Conservation Division, District 1 1625 N. French Drive Hobbs, New Mexico 88240

Re: Site Characterization Report and Remedial Action Plan Enfield No. 1 Facility Storage Tank Release Bagley North Oil Field, Lea County, New Mexico NE1/4 NE1/4, Sec. 16, T11S, R33E

Dear Ms. Yu:

On behalf of Jay Management, LLC (Jay Management), Timberwolf Environmental, LLC (Timberwolf) conducted a site characterization of the Enfield No. 1 Facility (Site) to assess impacts related to a recent storage tank overflow release. The Site is located in the Bagley North Oil Field approximately 6.07 miles southeast of Caprock, Lea County, New Mexico (Figures 1 through 3). Work conducted at the Site has been authorized by the New Mexico Oil Conservation Division (NMOCD) District 1 Office under Remediation Permit No. 1RP-4714.

### **Environmental Setting**

The Site consists of a wellhead, one above-ground oil storage tank, one above-ground produced water tank, and one heater treater.

The surrounding area is characterized as flat to slightly sloping rural land used for cattle grazing and oil and gas production. According the United States Department of Agriculture – Natural Resources Conservation Service web soil survey, soil at the Site are mapped as the Kimbrough – Lea complex, 0 to 3 percent slopes (KU). Site soil consists of gravelly loam in the upper 3 inches, loam from 3 to 10 inches, and underlain by cemented material to a depth of 80 inches.

### Site History

On 06/02/17, a storage tank overflowed due to the absence of fuse in the electrical box (suspected vandalism). An estimated 27 barrels (bbl) of oil and produced water was released within secondary containment at the Site. Upon discovery, Jay Management replaced the fuse and recovered approximately 22 bbls of free fluids. Written notification of the release was made to the New Mexico Oil Conservation Division (NMOCD) on 06/05/17; a copy of Form C-141 is attached.

### **Regulatory** Criteria

The New Mexico Oil Conservation Division (NMOCD) established remediation action levels for soils impacted by oilfield products or wastes, which are documented under New Mexico Administrative Code (NMAC) Rule 19.15.29. The Rule was repealed and replaced by Oil Conservation Commission Order No.: R-14751, dated June 21, 2018.

Under Rule 19.15.29, soil cleanup criteria is determined primarily based on the distance between the base of impacted soil and the depth to usable groundwater. NMOCD laboratory methodology and soil closure criteria is presented in the following table.

Depth to Groundwater <sup>1</sup>	Constituent	Method <sup>2</sup>	Regulatory Limit <sup>3</sup> (mg/kg)
<u>&lt;</u> 50 feet	Chloride <sup>4</sup>	EPA 300.0	600
	TPH	EPA SW-846 Method 8015M	100
	Total BTEX	EPA SW-846 Method 8021B or 8260B	50
	Benzene	EPA SW-846 Method 8021B or 8015M	10
51 feet-100 feet	Chloride <sup>4</sup>	EPA 300.0	10,000
	TPH	EPA SW-846 Method 8015M	2,500
	GRO+DRO	EPA SW-846 Method 8015M	1,000
	Total BTEX	EPA SW-846 Method 8021B or 8260B	50
	Benzene	EPA SW-846 Method 8021B or 8260B	10
> 100 feet	Chloride <sup>4</sup>	EPA 300.0	20,000
	TPH	EPA SW-846 Method 8015M	2,500
	GRO+DRO	EPA SW-846 Method 8015M	1,000
	Total BTEX	EPA SW-846 Method 8021B or 8260B	50
	Benzene	EPA SW-846 Method 8021B or 8015M	10

### Table 1. Closure Criteria for Soils Impacted by a Release

<sup>1</sup>From base of impact to useable groundwater (i.e., less than 10,000 milligrams per liter (mg/L) total dissolved solids (TDS)) <sup>2</sup>Or other test methods approved by the division

<sup>3</sup>Numerical limits or natural background level, whichever is greater <sup>4</sup>Applies to produced water releases or other fluids which may contain chloride DRO – diesel range organics mg/kg - milligrams per kilograms

GRO - gasoline range organics TPH = GRO + DRO + MRO

BTEX - benzene, toluene, ethylbenzene, xylenes

Prior environmental drilling in the Bagley North Oil Field revealed that usable groundwater is less than 50 feet below ground surface (ft bgs). Therefore, soil closure criteria at the Site is as follows:

- Chloride < 600 mg/kg •
- TPH < 100 mg/kg
- Total BTEX < 50 mg/kg •
- Benzene < 10 mg/kg



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### **Collection and Analysis of Soil Samples**

On 06/06/18, Timberwolf collected soil samples to determine the magnitude and extent of soil impacts. Sample locations are shown in the Sample Location Map (Figure 4).

Timberwolf installed one boring (i.e., SB1) to a depth of 25 ft using a rotary drilling rig and flight augers. Samples were collected from the boring at five-foot depth intervals using a split spoon. Samples SB2 – SB4 were collected at 0-1 ft bgs using a stainless steel handauger. Site conditions during soil sampling activities are documented in the attached photographic log. Location and purpose of soil samples are described in Table 2.

Soil Samples	Location - Purpose
SB1	Collected from the body of the release area – to evaluate remediation efforts and for vertical delineation
SB2, SB3, and SB4	Collected from the perimeter of the release area - to determine horizontal delineation

Table 2. Loc	ation and Purpo	se of Soil Samples

All soil samples were field screened for volatile organic compounds (VOCs) using a photoionization detector (PID). Depth intervals exhibiting the highest PID readings were selected for laboratory analysis. Additionally, deeper intervals were analyzed to achieve vertical delineation. PID readings and soil lithology are documented on the attached soil boring logs.

All sampling equipment was decontaminated between samples using Alconox<sup>®</sup> and deionized water. The soil samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), and mineral range organics (MRO) using laboratory method 8015; benzene, toluene, ethylbenzene, and xylenes (BTEX); and chloride. Analytical methods are documented in the attached laboratory reports. Soil analytical results are shown in Table 3 below.

Semale ID	Benzene	Total BTEX	Tota	drocarbons (mg	ocarbons (mg/kg)		
Sample ID	(mg/kg)	(mg/kg)	GRO	DRO	MRO	TPH	(mg/kg)
SB1 4-5'	0.0029	0.0662	7.0 <sup>B</sup>	3.6 <sup>J</sup>	5.5 <sup>J</sup>	16.1	610
SB1 9-10'	< 0.00069	0.00361	< 2.9	200	160	362.9	360
SB1 14-15'							200 <sup>F1</sup>
SB1 19-20'							33
SB1 24-25'							10 <sup>J</sup>
SB2 0-1'	< 0.00084	0.00428	< 3.6	7.1	28	38.7	< 9.2
SB3 0-1'	0.0032	0.01203	3.9 <sup>JB</sup>	32	61	96.9	160
SB4 0-1'	< 0.00085	0.0047	3.9 <sup>JB</sup>	8.6	32	44.5	< 9.6
NMOCD Site- Specific Criteria	10	50				100	600

Table 3. Analytical Results – S	oil
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mg/kg – milligrams per kilogram

GRO – gasoline range organics

DRO – diesel range organics MRO – mineral range organics

TPH = total petroleum hydrocarbons (TPH = GRO + DRO + MRO)



NMOCD - New Mexico Oil Conservation Division

BTEX - benzene, toluene, ethylbenzene, and toluene

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### **Conclusions**

Based on the Site characterization, the following is concluded:

- The main body of the produced water spill area encompasses approximately 0.09 acres as shown in Figure 4. The release traveled mostly south and west from the point of release
- Field observations while digging with a backhoe and the NRCS soil survey reveal that:
  - The soil horizon is less than 1 ft thick
  - Excavation of the impacted consolidated rock is technically impracticable
- The constituents of concern at the Site are TPH and chloride
- TPH concentrations exceeded the NMOCD cleanup criteria in one soil sample:
  - The concentration of TPH in SB1 9-10' was 362.3 mg/kg
  - o TPH was horizontally delineated; TPH was not vertically delineated
- Chloride concentrations exceeded the NMOCD cleanup criteria in one soil sample:
  - The concentration of chloride at SB1 4-5' was 610 mg/kg
  - Chloride was horizontally and vertically delineated.

### **Remedial Action Plan**

### Remedial Strategy

Since excavating the vertical extent of impacted media is technically impracticable, the proposed site remediation strategy is to excavate impacted soil until refusal, then backfill with clean fill. A groundwater monitoring well will be installed to evaluate and monitor groundwater. (Note: prior to installing a groundwater monitoring well, Timberwolf will secure a permit from the New Mexico Office of the State Engineer to drill a water well with no water rights.) The well will be monitored semi-annually for a period of two years for the following constituents: BTEX and chloride.

If constituents of groundwater are below NMOCD/EPA guidelines for a period of two years the monitored program will be discontinued and a request for no further action (NFA) will be made with the NMOCD District 1 office. If groundwater constituents exceed NMOCD/EPA guidelines, the affected area will be delineated, and a remedial action plan will be submitted to address impacted groundwater.

### Remedial Action Plan

Timberwolf proposes the following remedial action plan to bring the Site in regulatory compliance:

- Excavate the soil horizon (approximately 10 to 12 inches) within the impacted area (approximately 0.09 acres). Note: impacted consolidated rock will remain in place
- Transport excavated soil (approximately 145 cubic yards) to a commercial disposal facility
- Collect confirmation samples from the base and side walls of the excavation
- Backfill the excavation to 1 ft using clean fill as required under 19.15.29 (D)(1) NMAC
- Restore surface vegetation
- Install one groundwater monitor well at the Site to monitor COCs in groundwater semi-annually for a period of two years. Soil samples will be collected during well installation to vertically delineated TPH. A proposed monitor well location map is shown in Figure 5.



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If you have any questions regarding this report and work plan, please call us at 979-324-2139.

Sincerely, Timberwolf Environmental, LLC

l Ul Russell Green Project Manager

Jim Foster President

Attachments: Figures Form C

Form C-141 Photographic Log Soil Boring Log Laboratory Reports and Chain-of-Custody Documents

CC:

Amir Sanker, Jay Management



## **FIGURES**











### FORM C-141

### State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised April 3, 2017

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

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Attached 🗌

			Rel	ease Notifi	catior				And England
11 60						OPERA'		🛛 Initi	al Report 🔲 Final Report
		ay Managem				Contact: Jin		20	
Facility Na			e. 810, Ho	ouston, Texas 77			No.: 979-324-21 e: Well with Ta		
						racinty Typ	e. wen with 12	ank ballery	
Surface Ow	vner: Fee la	and	_	Mineral (	Owner: S	State of Nev	v Mexico	API No	o.: 30-025-21932
				LOCA	ATION	N OF REI	LEASE		
Unit Letter I	Section 16	Township 11S	Range 33E	Feet from the 1,980	North/ South	South Line	Feet from the 660	East/West Line East	County Lea
		1	Latitude	<u>33.363651° N</u>			03.612618° W	NAD83	
				NAT	FURE	OF REL		-	
Type of Rele Source of Re		d Produced W	ater				Release: 27 bbls	and the second se	Recovered: 22 bbls
		fuse pulled fro	om electric	al box.		06/02/201	Iour of Occurrent	ce: Date and 06/02/20	Hour of Discovery: 17 1455
Was Immedi		Given?		] No 🗌 Not R	equired	If YES, To Olivia Yu		00/02/20	
By Whom?						Date and H	Iour: 06/02/2017	1526	
Was a Water	rcourse Rea	ched?	]Yes 🗵	] No		If YES, Vo	olume Impacting	the Watercourse.	
The release	was cause	em and Reme ed by someon ent is in goo	ne remov		; the fus	se was found	d on the ground	beside the electr	ical box. The fuse was
Release occ bbls of fluid	curred with d was reco	vered with a	dary cont vacuum	en.* ainment area of truck for off-site hotographs (e.g.,	e dispos	al.	lone of the relea	ased fluids left the	e site. Approximately 22
regulations a public health should their or the enviro	all operators or the envi operations honment. In a	are required t ronment. The nave failed to	to report and e acceptance adequately DCD accept	nd/or file certain i ce of a C-141 repo investigate and i	release no ort by the remediate	otifications and NMOCD m e contaminati	nd perform correc arked as "Final R on that pose a thr	tive actions for rel- eport" does not relie eat to ground water	suant to NMOCD rules and eases which may endanger teve the operator of liability r, surface water, human health ompliance with any other
Signature:		hor	L				OIL CON	SERVATION	DIVISION
Printed Nam	e: Jim Fos	ter			1	Approved by Environmental Specialist:			
Title:	Environ	mental Consu	ltant		1	Approval Dat	e:	Expiration	Date:
E-mail Addr	ess: jim@te	eamtimberwol	lf.com		(	Conditions of	Approval:		

06/05/17 Phone: 979-324-2139 Date: \* Attach Additional Sheets If Necessary

## PHOTOGRAPHIC DOCUMENTATION



### PHOTOGRAPHIC LOG

Project No.:	ISR-170054	Client:	Jay Management, LLC
Project Name:	Enfield No. 1 Release	Site Location:	Lea County, New Mexico
Task Description:	Site Characterization	Date:	June 5, 2018
Photo No.:         1         Direction:         South         Comments:         View of the point of release and SB1 sample location.		Transfer pump	BI
Photo No.: 2 Direction: South Comments: View of surface soil			
impacts.			



### PHOTOGRAPHIC LOG

Project No.:	ISR-170054	Client:	Jay Management, LLC
Project Name:	Enfield No. 1 Release	Site Location:	Lea County, New Mexico
Task Description:	Site Characterization	Date:	June 6, 2018
Photo No.: 3 Direction: West Comments: View of SB1 sample location.			SB1
Photo No.: 4			
Direction: East			
Comments: View of impacted area and SB4 sample location. Note: Above- ground flowlines present.			SB4

SOIL BORING LOGS

### SOIL BORING REPORT

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SB1

			THIOT		AL
Client: Jay Management, LLC		Completion Date: 06/06/18			
Project Name: State OG SWD	No. 2	Logged By: Morgan Vizi, Joe Whiteley			
Site Location:Lea County, NM	Location:Lea County, NM Drilled By: Enviro-Drill, Inc.				
Project Number: 170054		Drilling Method & Boring Diameter: Direct Push Te	echnolo	ogy 2"	
Boring Coordinates: 33.36369	, -103.61266	Total Depth (ft): 25'			
Ground Surface Elevation (ft, m	nsl): 4,280 ft	First Water Encountered (ft): NA			
Depth (feet) USCS PID PID Reading (ppm)	Soil Sample	Soil Description	Well	Comple	etion
SW 20 10 10 10 15 5 5 5 5 5 5 5 5 5 5 5 5 5	G	AND (TAN) RAVELLY SAND (TAN) AND (TAN) TD = 25'			
Well Completion:					

# LABORATORY REPORT AND CHAIN OF CUSTODY DOCUMENTS



THE LEADER IN ENVIRONMENTAL TESTING

# **ANALYTICAL REPORT**

### TestAmerica Laboratories, Inc.

TestAmerica Nashville 2960 Foster Creighton Drive Nashville, TN 37204 Tel: (615)726-0177

### TestAmerica Job ID: 490-153479-1 Client Project/Site: Enfield 170054

### For:

Timberwolf Environmental LLC 1920 W. Vill Maria Suite 305-2 Box 205 Bryan, Texas 77807

Attn: Mr. James Foster

Dean a. Jomen

Authorized for release by: 6/19/2018 6:28:32 PM

Dean Joiner, Project Manager II (713)690-4444 dean.joiner@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



www.testamericainc.com

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### Sample Summary

TestAmerica Job ID: 490-153479-1

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### Client: Timberwolf Environmental LLC Project/Site: Enfield 170054

Lab Sample ID	Client Sample ID	Matrix	Collected Received
490-153479-1	SB2 0-1'	Solid	06/06/18 11:22 06/08/18 09:20
490-153479-2	SB3 0-1'	Solid	06/06/18 11:28 06/08/18 09:20
490-153479-3	SB4 0-1'	Solid	06/06/18 11:35 06/08/18 09:20
490-153479-4	SB1 4-5'	Solid	06/06/18 11:22 06/08/18 09:20
490-153479-5	SB1 9-10'	Solid	06/06/18 11:27 06/08/18 09:20

### Job ID: 490-153479-1

### Laboratory: TestAmerica Nashville

Narrative

Job Narrative 490-153479-1

**Case Narrative** 

#### Comments

No additional comments.

### Receipt

The samples were received on 6/8/2018 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.2° C.

### GC/MS VOA

Method(s) 8260B: Internal standard responses were outside of acceptance limits for the following sample: SB3 0-1' (490-153479-2). The sample(s) shows evidence of matrix interference.

Method(s) 8260B: Batch 490-521957 is reported without a matrix spike/matrix spike duplicate (MS/MSD). The batch MS/MSD was originally performed on another client's sample, and this test was canceled at client request. This MS/MSD result does not have immediate bearing on any samples except for the actual sample spiked. The associated laboratory control sample (LCS) met acceptance criteria and provides long-term precision and accuracy for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### HPLC/IC

Method(s) 9056: The method blank for preparation batch 490-521347 and analytical batch 490-521596 contained Chloride above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction or re-analysis of samples was not performed.

Method(s) 9056: The method blank for analytical batch 490-521724 contained Chloride above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

Method(s) 9056: The following sample was diluted due to the nature of the sample matrix: SB1 4-5' (490-153479-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC Semi VOA

Method(s) 8015C: Batch 490-521795 is reported without a matrix spike/matrix spike duplicate (MS/MSD). The batch MS/MSD was originally performed on another client's sample, and this test was canceled at client request. This MS/MSD result does not have immediate bearing on any samples except for the actual sample spiked. The associated laboratory control sample (LCS) met acceptance criteria and provides long-term precision and accuracy for this batch.

Method(s) 8015C: The following sample was diluted to bring the concentration of target analytes within the calibration range: SB1 9-10' (490-153479-5). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **Organic Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Qualifiers

### **GC/MS VOA**

Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	
*	ISTD response or retention time outside acceptable limits	
GC VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
В	Compound was found in the blank and sample.	9
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	
GC Semi V	OA	g
Qualifier	Qualifier Description	
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	1
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	1

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

### Client Sample ID: SB2 0-1' Date Collected: 06/06/18 11:22

Date Received: 06/08/18 09:20

Lab Sample ID: 490-153479-1
Matrix: Solid
Percent Solids: 75.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	0.00084	U	0.0025	0.00084	mg/Kg		06/11/18 09:49	06/15/18 10:39	
Ethylbenzene	0.00084	U	0.0025	0.00084	mg/Kg	¢	06/11/18 09:49	06/15/18 10:39	
Xylenes, Total	0.0015	U	0.0075	0.0015	mg/Kg	¢	06/11/18 09:49	06/15/18 10:39	
Toluene	0.0011	J	0.0025	0.00093	mg/Kg	¢	06/11/18 09:49	06/15/18 10:39	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)			70 - 130				06/11/18 09:49	06/15/18 10:39	
1,2-Dichloroethane-d4 (Surr)	97		70 - 130				06/11/18 09:49	06/15/18 10:39	
Toluene-d8 (Surr)	108		70 - 130				06/11/18 09:49	06/15/18 10:39	
Dibromofluoromethane (Surr)	98		70 - 130				06/11/18 09:49	06/15/18 10:39	
Method: 8015C - Nonhalog Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
C6-C10	3.6	U	7.2	3.6	mg/Kg		06/11/18 09:49	06/17/18 20:10	
•	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
•	91	Qualifier	Limits 50 - 150				<b>Prepared</b> 06/11/18 09:49	Analyzed 06/17/18 20:10	Dil F
a,a,a-Trifluorotoluene	91		50 - 150	ified (Die	sel Rang	le Orc	06/11/18 09:49	•	Dil Fa
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog	jenated Organi		50 - 150		e <mark>sel Rang</mark> Unit	je Orç D	06/11/18 09:49	•	
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte	jenated Organi	cs using G	50 - 150	MDL			06/11/18 09:49	06/17/18 20:10	
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28	91 Jenated Organi Result	cs using G	50 - 150 GC/FID -Mod RL	MDL 3.3	Unit	D	06/11/18 09:49 ganics) Prepared	06/17/18 20:10 Analyzed 06/15/18 02:42	
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40	enated Organi Result 7.1	cs using G Qualifier	<b>50 - 150</b> <b>50 - 150</b> <b>C/FID -Mod</b> <b>RL</b> <u>6.6</u>	MDL 3.3	Unit mg/Kg	₽	06/11/18 09:49 panics) Prepared 06/09/18 12:00	06/17/18 20:10 Analyzed 06/15/18 02:42	Dil Fa
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate	enated Organi Result 7.1 28	cs using G Qualifier	<b>50 - 150</b> <b>50 - 150</b> <b>C/FID -Mod</b> <b>RL</b> 6.6 6.6	MDL 3.3	Unit mg/Kg	₽	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00	06/17/18 20:10 Analyzed 06/15/18 02:42 06/15/18 02:42 Analyzed	Dil Fa
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr)	enated Organi Result 7.1 28 <u>%Recovery</u> 97 Chromatogra	CS USING C Qualifier Qualifier phy - Solu	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.6 6.6 <i>Limits</i> 50 - 150	MDL 3.3 3.3	Unit mg/Kg mg/Kg	₽	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared	06/17/18 20:10 Analyzed 06/15/18 02:42 06/15/18 02:42 Analyzed	Dil Fa
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ior Analyte	enated Organi Result 7.1 28 <u>%Recovery</u> 97 Chromatogra Result	CS USING C Qualifier Qualifier phy - Solu Qualifier	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.6 6.6 <i>Limits</i> 50 - 150 <b>ble</b> <b>RL</b>	MDL 3.3 3.3 MDL	Unit mg/Kg mg/Kg Unit	D 77 27 27 27 27 27 27 27 27 27 27 27 27	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared	06/17/18 20:10 Analyzed 06/15/18 02:42 06/15/18 02:42 Analyzed 06/15/18 02:42 Analyzed	Dil Fa Dil Fa Dil Fa
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ior Analyte	enated Organi Result 7.1 28 <u>%Recovery</u> 97 Chromatogra	CS USING C Qualifier Qualifier phy - Solu Qualifier	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.6 6.6 <i>Limits</i> 50 - 150 <b>ble</b>	MDL 3.3 3.3 MDL	Unit mg/Kg mg/Kg	₽ ☆	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared 06/09/18 12:00	06/17/18 20:10 Analyzed 06/15/18 02:42 06/15/18 02:42 Analyzed 06/15/18 02:42	Dil Fa
a, a, a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, lor Analyte Chloride General Chemistry	enated Organi Result 7.1 28 <u>%Recovery</u> 97 Chromatogra Result 9.2	CS using C Qualifier Qualifier Phy - Solu Qualifier U	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.6 6.6 <i>Limits</i> 50 - 150 <b>ble</b> <b>RL</b> 13	MDL 3.3 3.3 3.3 MDL 9.2	Unit mg/Kg mg/Kg Unit mg/Kg	D 77 27 27 27 27 27 27 27 27 27 27 27 27	06/11/18 09:49         06/11/18 09:49         Prepared         06/09/18 12:00         06/09/18 12:00         Prepared         06/09/18 12:00         Prepared         06/09/18 12:00         Prepared         06/09/18 12:00	Analyzed           06/17/18 20:10           Analyzed           06/15/18 02:42           06/15/18 02:42           Analyzed           06/15/18 02:42           Analyzed           06/15/18 02:42           06/15/18 02:42           06/15/18 02:42           06/15/18 02:42           06/15/18 02:42	Dil Fa
a, a, a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, lor Analyte Chloride General Chemistry	enated Organi Result 7.1 28 <u>%Recovery</u> 97 Chromatogra Result 9.2	CS USING C Qualifier Qualifier phy - Solu Qualifier	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.6 6.6 <i>Limits</i> 50 - 150 <b>ble</b> <b>RL</b> 13	MDL 3.3 3.3 MDL 9.2 RL	Unit mg/Kg mg/Kg Unit Unit	D 77 27 27 27 27 27 27 27 27 27 27 27 27	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared 06/09/18 12:00	Analyzed           06/17/18 20:10           Analyzed           06/15/18 02:42           06/15/18 02:42           Analyzed           06/15/18 02:42           Analyzed           06/15/18 02:42           Analyzed           06/15/18 02:42	Dil Fa
Surrogate a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, lor Analyte Chloride General Chemistry Analyte Percent Moisture	enated Organi Result 7.1 28 <u>%Recovery</u> 97 Chromatogra Result 9.2	CS using C Qualifier Qualifier Phy - Solu Qualifier U	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.6 6.6 <i>Limits</i> 50 - 150 <b>ble</b> <b>RL</b> 13	MDL 3.3 3.3 3.3 MDL 9.2	Unit mg/Kg mg/Kg Unit Unit	D 	06/11/18 09:49         06/11/18 09:49         Prepared         06/09/18 12:00         06/09/18 12:00         Prepared         06/09/18 12:00         Prepared         06/09/18 12:00         Prepared         06/09/18 12:00	Analyzed           06/17/18 20:10           Analyzed           06/15/18 02:42           06/15/18 02:42           Analyzed           06/15/18 02:42           Analyzed           06/15/18 02:42           06/15/18 02:42           06/15/18 02:42           06/15/18 02:42           06/15/18 02:42	Dil Fa

### Client Sample ID: SB3 0-1' Date Collected: 06/06/18 11:28

Date Received: 06/08/18 09:20

Lab Sample ID: 490-153479-2
Matrix: Solid
Percent Solids: 82.2

5

6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	0.0032		0.0022	0.00073	mg/Kg	<u>Å</u>	06/11/18 09:49	06/15/18 11:07	
Ethylbenzene	0.00073	U	0.0022	0.00073	mg/Kg	¢	06/11/18 09:49	06/15/18 11:07	
Xylenes, Total	0.0041	J	0.0065	0.0013	mg/Kg	₽	06/11/18 09:49	06/15/18 11:07	
Toluene	0.0040		0.0022	0.00080	mg/Kg	¢	06/11/18 09:49	06/15/18 11:07	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	123	*	70 - 130				06/11/18 09:49	06/15/18 11:07	
1,2-Dichloroethane-d4 (Surr)	99		70 - 130				06/11/18 09:49	06/15/18 11:07	
Toluene-d8 (Surr)	112		70 - 130				06/11/18 09:49	06/15/18 11:07	
Dibromofluoromethane (Surr)	100		70 - 130				06/11/18 09:49	06/15/18 11:07	
Method: 8015C - Nonhalog						_			
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa
C6-C10	3.9	JB	6.9	3.5	mg/Kg	<u>Å</u>	06/11/18 09:49	06/17/18 20:40	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
•	<b>%Recovery</b> 90	Qualifier	Limits					Analyzed 06/17/18 20:40	Dil Fa
a,a,a-Trifluorotoluene			50 - 150				06/11/18 09:49	•	Dil Fa
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog	jenated Organi	cs using G	50 - 150				06/11/18 09:49	06/17/18 20:40	
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte	enated Organi Result		50 - 150 GC/FID -Mod RL	MDL	Unit	D	06/11/18 09:49 ganics) Prepared	06/17/18 20:40 Analyzed	
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28	enated Organi Result	cs using G	<b>50 - 150</b> <b>C/FID -Mod</b> <b>RL</b> 6.1	MDL 3.0	Unit mg/Kg	— D	06/11/18 09:49 ganics) Prepared 06/09/18 12:00	06/17/18 20:40 Analyzed 06/15/18 03:00	Dil Fa
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28	enated Organi Result	cs using G	50 - 150 GC/FID -Mod RL	MDL 3.0	Unit	D	06/11/18 09:49 ganics) Prepared 06/09/18 12:00	06/17/18 20:40 Analyzed	
Surrogate a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate	enated Organi Result	cs using G Qualifier	<b>50 - 150</b> <b>C/FID -Mod</b> <b>RL</b> 6.1	MDL 3.0	Unit mg/Kg	— D	06/11/18 09:49 ganics) Prepared 06/09/18 12:00	06/17/18 20:40 Analyzed 06/15/18 03:00	Dil Fa
a, a, a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate	enated Organi Result 32 61	cs using G Qualifier	<b>50 - 150</b> <b>C/FID -Mod</b> <b>RL</b> 6.1 6.1	MDL 3.0	Unit mg/Kg	— D	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared	06/17/18 20:40 Analyzed 06/15/18 03:00 06/15/18 03:00	Dil Fa
a, a, a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr)	enated Organi Result 32 61 %Recovery 99	CS USING C Qualifier Qualifier	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.1 6.1 6.1 <i>Limits</i> 50 - 150	MDL 3.0	Unit mg/Kg	— D	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared	06/17/18 20:40  Analyzed  06/15/18 03:00  06/15/18 03:00  Analyzed	Dil Fa
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ior	enated Organi Result 32 61 <u>%Recovery</u> 99	CS USING C Qualifier Qualifier	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.1 6.1 6.1 <i>Limits</i> 50 - 150	<u>MDL</u> 3.0 3.0 MDL	Unit mg/Kg mg/Kg Unit	— D	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared	06/17/18 20:40 Analyzed 06/15/18 03:00 06/15/18 03:00 Analyzed 06/15/18 03:00 Analyzed	Dil Fa
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40	enated Organi Result 32 61 <u>%Recovery</u> 99	CS USING C Qualifier Qualifier phy - Solu	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.1 6.1 <i>Limits</i> 50 - 150 <b>ble</b>	<u>MDL</u> 3.0 3.0 MDL	Unit mg/Kg mg/Kg	D 森	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared 06/09/18 12:00	06/17/18 20:40 Analyzed 06/15/18 03:00 06/15/18 03:00 Analyzed 06/15/18 03:00	Dil Fa
a, a, a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, lor Analyte Chloride	genated Organi Result 32 61 %Recovery 99 Chromatogra Result	CS USING C Qualifier Qualifier phy - Solu	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.1 6.1 <u>Limits</u> 50 - 150 <b>ble</b> <b>RL</b>	<u>MDL</u> 3.0 3.0 MDL	Unit mg/Kg mg/Kg Unit		06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared 06/09/18 12:00	06/17/18 20:40 Analyzed 06/15/18 03:00 06/15/18 03:00 Analyzed 06/15/18 03:00 Analyzed	Dil Fa Dil Fa
a, a, a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ior Analyte Chloride General Chemistry	enated Organi Result 32 61 <u>%Recovery</u> 99 Chromatogra Result 160	CS USING C Qualifier Qualifier phy - Solu	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.1 6.1 <u>Limits</u> 50 - 150 <b>ble</b> <b>RL</b>	MDL 3.0 3.0 MDL 8.5	Unit mg/Kg mg/Kg Unit		06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared 06/09/18 12:00	06/17/18 20:40 Analyzed 06/15/18 03:00 06/15/18 03:00 Analyzed 06/15/18 03:00 Analyzed	Dil Fa Dil Fa
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ior Analyte	enated Organi Result 32 61 <u>%Recovery</u> 99 Chromatogra Result 160	CS USING C Qualifier Qualifier phy - Solu Qualifier	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.1 6.1 <i>Limits</i> 50 - 150 <b>ble</b> <b>RL</b> 12	MDL 3.0 3.0 MDL 8.5	Unit mg/Kg mg/Kg Unit Unit	D 	06/11/18 09:49         06/11/18 09:49         Prepared         06/09/18 12:00         06/09/18 12:00         Prepared         06/09/18 12:00         Prepared         06/09/18 12:00         Prepared         06/09/18 12:00	O6/17/18 20:40           Analyzed           06/15/18 03:00           06/15/18 03:00           Analyzed           06/15/18 03:00           Analyzed           06/15/18 03:00           Analyzed           06/15/18 18:19	Dil Fa Dil Fa Dil Fa Dil Fa

## Client Sample ID: SB4 0-1'

Lab Sample	ID:	490-153479-3
		Matrix: Solid

Percent Solids: 74.5

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6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00085	U	0.0026	0.00085	mg/Kg	⇒	06/11/18 09:49	06/15/18 11:35	1
Ethylbenzene	0.00085	U	0.0026	0.00085	mg/Kg	¢	06/11/18 09:49	06/15/18 11:35	1
Xylenes, Total	0.0016	U	0.0077	0.0016	mg/Kg	₽	06/11/18 09:49	06/15/18 11:35	1
Toluene	0.0014	J	0.0026	0.00094	mg/Kg	¢	06/11/18 09:49	06/15/18 11:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130				06/11/18 09:49	06/15/18 11:35	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130				06/11/18 09:49	06/15/18 11:35	1
Toluene-d8 (Surr)	104		70 - 130				06/11/18 09:49	06/15/18 11:35	1
Dibromofluoromethane (Surr)	98		70 - 130				06/11/18 09:49	06/15/18 11:35	1
Method: 8015C - Nonhalog	enated Organi	cs using G	C/FID -Mod	ified (Ga	soline Ra	ange (	Organics)		
Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
C6-C10	3.9	JB	7.4	3.7	mg/Kg	<u>Å</u>	06/11/18 09:49	06/17/18 21:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
•	<u>%Recovery</u> 90	Qualifier	Limits 50 - 150				<b>Prepared</b> 06/11/18 09:49	Analyzed 06/17/18 21:10	
a,a,a-Trifluorotoluene			50 - 150	ified (Die	sel Ranc	ie Orc	06/11/18 09:49	-	
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog	enated Organi		50 - 150	ified (Die MDL		je Orç D	06/11/18 09:49	-	1
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte	enated Organi	cs using G	50 - 150	MDL			06/11/18 09:49	06/17/18 21:10	Dil Fac
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28	enated Organi Result	cs using G	50 - 150 GC/FID -Mod RL	MDL 3.3	Unit	D	06/11/18 09:49 ganics) Prepared	06/17/18 21:10 Analyzed 06/15/18 03:17	Dil Fac
a, a, a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40	enated Organi Result 8.6	c <mark>s using C</mark> Qualifier	50 - 150 6C/FID -Mod RL 6.5	MDL 3.3	Unit mg/Kg	— <b>D</b>	06/11/18 09:49 ganics) Prepared 06/09/18 12:00	06/17/18 21:10 Analyzed 06/15/18 03:17	Dil Fac
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate	enated Organi Result 8.6 32	c <mark>s using C</mark> Qualifier	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.5 6.5	MDL 3.3	Unit mg/Kg	— <b>D</b>	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00	O6/17/18 21:10           Analyzed           06/15/18 03:17           06/15/18 03:17	Dil Fa
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr)	enated Organi Result 8.6 32 %Recovery 89	CS USING C Qualifier Qualifier	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.5 6.5 <i>Limits</i> 50 - 150	MDL 3.3	Unit mg/Kg	— <b>D</b>	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared	06/17/18 21:10 Analyzed 06/15/18 03:17 06/15/18 03:17 Analyzed	Dil Fac
a, a, a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ion	enated Organi Result 8.6 32 %Recovery 89 Chromatogra	CS USING C Qualifier Qualifier	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.5 6.5 <i>Limits</i> 50 - 150	MDL 3.3 3.3	Unit mg/Kg	— <b>D</b>	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared	06/17/18 21:10 Analyzed 06/15/18 03:17 06/15/18 03:17 Analyzed	Dil Fac
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ion Analyte	enated Organi Result 8.6 32 %Recovery 89 Chromatogra	Qualifier Qualifier Qualifier Qualifier	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.5 6.5 <i>Limits</i> 50 - 150 <b>ble</b>	MDL 3.3 3.3 MDL	Unit mg/Kg mg/Kg	D 莽 卒	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared 06/09/18 12:00	Analyzed           06/17/18 21:10           Analyzed           06/15/18 03:17           06/15/18 03:17           Analyzed           06/15/18 03:17	Dil Fac
a, a, a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ion Analyte Chloride	enated Organi Result 8.6 32 %Recovery 89 Chromatogra Result 9.6	Qualifier Qualifier Qualifier Qualifier Qualifier	50 - 150 SC/FID -Mod RL 6.5 6.5 Limits 50 - 150 ble RL 14	MDL 3.3 3.3 MDL 9.6	Unit mg/Kg mg/Kg Unit mg/Kg		06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared 06/09/18 12:00	06/17/18 21:10 Analyzed 06/15/18 03:17 06/15/18 03:17 Analyzed 06/15/18 03:17 Analyzed	Dil Fac
a, a, a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ion Analyte Chloride General Chemistry	enated Organi Result 8.6 32 %Recovery 89 Chromatogra Result 9.6	Qualifier Qualifier Qualifier Qualifier	50 - 150 SC/FID -Mod RL 6.5 6.5 Limits 50 - 150 ble RL 14	MDL 3.3 3.3 MDL 9.6	Unit mg/Kg mg/Kg Unit Unit		06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared 06/09/18 12:00	O6/17/18 21:10           Analyzed           06/15/18 03:17           06/15/18 03:17           06/15/18 03:17           06/15/18 03:17           Analyzed           06/15/18 03:17           Analyzed           06/15/18 03:17           Analyzed           06/15/18 03:17	1 Dil Fac
Surrogate a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ion Analyte Chloride General Chemistry Analyte Percent Moisture	enated Organi Result 8.6 32 %Recovery 89 Chromatogra Result 9.6	Qualifier Qualifier Qualifier Qualifier Qualifier	50 - 150 SC/FID -Mod RL 6.5 6.5 Limits 50 - 150 ble RL 14	MDL 3.3 3.3 MDL 9.6	Unit mg/Kg mg/Kg Unit mg/Kg	D 	06/11/18 09:49 prepared 06/09/18 12:00 06/09/18 12:00 Prepared 06/09/18 12:00 Prepared Prepared	Analyzed           06/17/18 21:10           Analyzed           06/15/18 03:17           06/15/18 03:17           Analyzed           06/15/18 03:17           Analyzed           06/15/18 03:17           06/15/18 03:17           06/15/18 03:17           06/15/18 03:17           06/15/18 03:17	Dil Fac

### Client Sample ID: SB1 4-5' Date Collected: 06/06/18 11:22

Date Received: 06/08/18 09:20

### Lab Sample ID: 490-153479-4 Matrix: Solid

Percent Solids: 80.3

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6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0029		0.0023	0.00076	mg/Kg	₽	06/11/18 09:49	06/15/18 12:02	1
Ethylbenzene	0.0037		0.0023	0.00076	mg/Kg	¢	06/11/18 09:49	06/15/18 12:02	1
Xylenes, Total	0.053		0.0068	0.0014	mg/Kg	¢	06/11/18 09:49	06/15/18 12:02	1
Toluene	0.0066		0.0023	0.00084	mg/Kg	¢	06/11/18 09:49	06/15/18 12:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130				06/11/18 09:49	06/15/18 12:02	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 130				06/11/18 09:49	06/15/18 12:02	1
Toluene-d8 (Surr)	106		70 - 130				06/11/18 09:49	06/15/18 12:02	1
Dibromofluoromethane (Surr)	97		70 - 130				06/11/18 09:49	06/15/18 12:02	1
Method: 8015C - Nonhalog	enated Organi	cs using G	C/FID -Mod	ified (Ga	soline Ra	ange (	Organics)		
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	7.0	В	6.9	3.4	mg/Kg	<u> </u>	06/11/18 09:49	06/17/18 21:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
•	%Recovery 92	Qualifier	Limits				<b>Prepared</b> 06/11/18 09:49	Analyzed 06/17/18 21:40	
Surrogate a,a,a-Trifluorotoluene Method: 8015C - Nonhalog	92		50 - 150	ified (Die	sel Ranc	ae Oro	06/11/18 09:49	•	
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog	enated Organi		50 - 150	ified (Die MDL		je Orç D	06/11/18 09:49	•	1
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte	enated Organi	cs using C Qualifier	50 - 150	MDL		-	06/11/18 09:49	06/17/18 21:40	1 Dil Fac
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28	enated Organi Result	CS USING C Qualifier J	50 - 150 GC/FID -Mod RL	MDL 3.1	Unit	D	06/11/18 09:49 ganics) Prepared	06/17/18 21:40 Analyzed 06/15/18 03:35	Dil Fac
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40	enated Organi Result 3.6	<mark>Cs using C</mark> Qualifier J J	<b>C/FID -Mod</b> <b>RL</b> <u>6.2</u>	MDL 3.1	Unit mg/Kg	D ₽	06/11/18 09:49 panics) Prepared 06/09/18 12:00	06/17/18 21:40 Analyzed 06/15/18 03:35	1 Dil Fac
a, a, a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate	enated Organi Result 3.6 5.5	<mark>Cs using C</mark> Qualifier J J	<b>50 - 150</b> <b>C/FID -Mod</b> <b>RL</b> 6.2 6.2	MDL 3.1	Unit mg/Kg	D ₽	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00	06/17/18 21:40 Analyzed 06/15/18 03:35 06/15/18 03:35	Dil Fac
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr)	enated Organi Result 3.6 5.5 %Recovery 92	CS USING C Qualifier J J Qualifier	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.2 6.2 <u>Limits</u> 50 - 150	MDL 3.1	Unit mg/Kg	D ₽	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared	06/17/18 21:40 Analyzed 06/15/18 03:35 06/15/18 03:35 Analyzed	Dil Fac
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ion	enated Organi Result 3.6 5.5 %Recovery 92 Chromatogra	CS USING C Qualifier J J Qualifier	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.2 6.2 <u>Limits</u> 50 - 150 <b>ble</b> <b>RL</b>	MDL 3.1	Unit mg/Kg mg/Kg	<b>D</b> ☆ D	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared	06/17/18 21:40 Analyzed 06/15/18 03:35 06/15/18 03:35 Analyzed	Dil Fac
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ion Analyte	enated Organi Result 3.6 5.5 %Recovery 92 Chromatogra	cs using G Qualifier J J Qualifier phy - Solu	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.2 6.2 <i>Limits</i> 50 - 150 <b>ble</b>	MDL 3.1 3.1 MDL	Unit mg/Kg mg/Kg	₽ ₩	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared 06/09/18 12:00	06/17/18 21:40 Analyzed 06/15/18 03:35 06/15/18 03:35 Analyzed 06/15/18 03:35	Dil Fac
a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ion Analyte Chloride	enated Organi Result 3.6 5.5 %Recovery 92 Chromatogra Result 610	cs using G Qualifier J Qualifier phy - Solu Qualifier	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.2 6.2 <u>Limits</u> 50 - 150 <b>ble</b> <b>RL</b> 62	MDL 3.1 3.1 MDL 43	Unit mg/Kg mg/Kg Unit mg/Kg	<b>D</b> ☆ D	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared 06/09/18 12:00	06/17/18 21:40 Analyzed 06/15/18 03:35 06/15/18 03:35 Analyzed 06/15/18 03:35	Dil Fac
a, a, a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ion Analyte Chloride General Chemistry	enated Organi Result 3.6 5.5 %Recovery 92 Chromatogra Result 610	cs using G Qualifier J J Qualifier phy - Solu	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.2 6.2 <u>Limits</u> 50 - 150 <b>ble</b> <b>RL</b> 62 RL	MDL 3.1 3.1 MDL 43	Unit mg/Kg mg/Kg Unit Unit	<b>D</b> ☆ D	06/11/18 09:49 panics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared 06/09/18 12:00	Analyzed           06/17/18 21:40           Analyzed           06/15/18 03:35           06/15/18 03:35           Analyzed           06/15/18 03:35           Analyzed           06/15/18 03:35           Analyzed           06/15/18 03:35           Analyzed           06/15/18 03:35	Dil Fac
•	enated Organi Result 3.6 5.5 %Recovery 92 Chromatogra Result 610	cs using G Qualifier J Qualifier phy - Solu Qualifier	50 - 150 <b>C/FID -Mod</b> <b>RL</b> 6.2 6.2 <u>Limits</u> 50 - 150 <b>ble</b> <b>RL</b> 62	MDL 3.1 3.1 MDL 43	Unit mg/Kg mg/Kg Unit mg/Kg	D 	06/11/18 09:49         06/11/18 09:49         Prepared         06/09/18 12:00         06/09/18 12:00         Prepared         06/09/18 12:00         Prepared         06/09/18 12:00         Prepared         06/09/18 12:00	Analyzed           06/17/18 21:40           Analyzed           06/15/18 03:35           06/15/18 03:35           Analyzed           06/15/18 03:35           Analyzed           06/15/18 03:35           06/15/18 03:35           06/15/18 03:35           06/15/18 03:35           06/15/18 03:35	Dil Fac

### Client Sample ID: SB1 9-10' Date Collected: 06/06/18 11.27

Date	conecteu.	00/00/10 11.2/	
Date	<b>Received:</b>	06/08/18 09:20	)

### Lab Sample ID: 490-153479-5 Matrix: Solid Percent Solids: 88.1

6

Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	0.00069	U	0.0021	0.00069	mg/Kg	⇒	06/11/18 09:49	06/15/18 12:30	
Ethylbenzene	0.00069	U	0.0021	0.00069	mg/Kg	¢	06/11/18 09:49	06/15/18 12:30	
Xylenes, Total	0.0013	U	0.0062	0.0013	mg/Kg	₽	06/11/18 09:49	06/15/18 12:30	
Foluene	0.00093	J	0.0021	0.00077	mg/Kg	¢	06/11/18 09:49	06/15/18 12:30	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
-Bromofluorobenzene (Surr)	93		70 - 130				06/11/18 09:49	06/15/18 12:30	
,2-Dichloroethane-d4 (Surr)	98		70 - 130				06/11/18 09:49	06/15/18 12:30	
Toluene-d8 (Surr)	101		70 - 130				06/11/18 09:49	06/15/18 12:30	
Dibromofluoromethane (Surr)	97		70 - 130				06/11/18 09:49	06/15/18 12:30	
	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
C6-C10	2.9		<u> </u>	2.9	mg/Kg	— <u>\$</u>	06/11/18 09:49	06/17/18 22:10	
C6-C10 Surrogate			5.9 Limits 50 - 150	2.9	mg/Kg	<u> </u>	06/11/18 09:49 Prepared 06/11/18 09:49	Analyzed	Dil Fa
C6-C10 Surrogate a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte	2.9 %Recovery 90 genated Organi Result	Qualifier	Limits 50 - 150 GC/FID -Mod RL	ified (Die MDL	esel Rang Unit	je Orç D	Prepared 06/11/18 09:49 ganics) Prepared	Analyzed 06/17/18 22:10 Analyzed	
C6-C10 Surrogate a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28	2.9 %Recovery 90 genated Organi Result 200	Qualifier	Limits 50 - 150 GC/FID -Mod RL 5.6	ified (Die MDL 2.8	esel Rang Unit mg/Kg	je Orç	Prepared 06/11/18 09:49 ganics) Prepared 06/09/18 12:00	Analyzed 06/17/18 22:10 Analyzed 06/15/18 03:52	
C6-C10 Surrogate n,a,a-Trifluorotoluene Method: 8015C - Nonhalog Nnalyte C10-C28	2.9 %Recovery 90 genated Organi Result	Qualifier	Limits 50 - 150 GC/FID -Mod RL	ified (Die MDL 2.8	esel Rang Unit	je Orç D	Prepared 06/11/18 09:49 ganics) Prepared 06/09/18 12:00	Analyzed 06/17/18 22:10 Analyzed	
C6-C10 Surrogate a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40	2.9 %Recovery 90 genated Organi Result 200 160 %Recovery	Qualifier CS USING C Qualifier	Limits 50 - 150 GC/FID -Mod RL 5.6	ified (Die MDL 2.8	esel Rang Unit mg/Kg	je Org D ╦	Prepared 06/11/18 09:49 ganics) Prepared 06/09/18 12:00	Analyzed 06/17/18 22:10 Analyzed 06/15/18 03:52	Dil Fa
C6-C10 Surrogate A,a,a-Trifluorotoluene Method: 8015C - Nonhalog Nnalyte C10-C28 C24-C40 Surrogate	2.9 %Recovery 90 genated Organi Result 200 160	Qualifier CS USING C Qualifier	Limits 50 - 150 GC/FID -Mod RL 5.6 28	ified (Die MDL 2.8	esel Rang Unit mg/Kg	je Org D ╦	Prepared 06/11/18 09:49 ganics) Prepared 06/09/18 12:00 06/09/18 12:00	Analyzed 06/17/18 22:10 Analyzed 06/15/18 03:52 06/16/18 18:10 Analyzed	Dil Fa
C6-C10 Surrogate a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate p-Terphenyl (Surr)	2.9 %Recovery 90 genated Organi Result 200 160 %Recovery 67	Qualifier CS USING Q Qualifier Qualifier	Limits 50 - 150 C/FID -Mod RL 5.6 28 Limits 50 - 150	ified (Die MDL 2.8	esel Rang Unit mg/Kg	je Org D ╦	Prepared 06/11/18 09:49 ganics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared	Analyzed 06/17/18 22:10 Analyzed 06/15/18 03:52 06/16/18 18:10 Analyzed	Dil Fa
Analyte C6-C10 Surrogate a,a,a-Trifluorotoluene Method: 8015C - Nonhalog Analyte C10-C28 C24-C40 Surrogate o-Terphenyl (Surr) Method: 9056 - Anions, Ion Analyte	2.9 %Recovery 90 genated Organi Result 200 160 %Recovery 67 n Chromatogra	Qualifier CS USING Q Qualifier Qualifier	Limits 50 - 150 C/FID -Mod RL 5.6 28 Limits 50 - 150	ified (Die MDL 2.8 14 MDL	esel Rang Unit mg/Kg	je Org D ╦	Prepared 06/11/18 09:49 ganics) Prepared 06/09/18 12:00 06/09/18 12:00 Prepared	Analyzed 06/17/18 22:10 Analyzed 06/15/18 03:52 06/16/18 18:10 Analyzed	Dil Fa Dil Fa Dil Fa

Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.9	0.1	0.1 %			06/12/18 14:37	1
Percent Solids	88.1	0.1	0.1 %			06/12/18 14:37	1

Lab Sample ID: MB 490-521957/7

### Method: 8260B - Volatile Organic Compounds (GC/MS)

#### **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 521957 MB MB Analyte **Result Qualifier** RL MDL Unit D Prepared Analyzed Dil Fac Benzene 0.0020 0.00067 mg/Kg 06/15/18 03:45 0.00067 U 1 Ethylbenzene 0.00067 U 0.0020 0.00067 mg/Kg 06/15/18 03:45 1 Xylenes, Total 0.0012 U 0.0060 0.0012 mg/Kg 06/15/18 03:45 1 Toluene 0.00074 U 0.0020 0.00074 mg/Kg 06/15/18 03:45 1 MB MB Surrogate Qualifier Limits Prepared Dil Fac %Recovery Analyzed 4-Bromofluorobenzene (Surr) 93 70 - 130 06/15/18 03:45 1,2-Dichloroethane-d4 (Surr) 98 70 - 130 06/15/18 03:45 1 Toluene-d8 (Surr) 102 70 - 130 06/15/18 03:45 1 Dibromofluoromethane (Surr) 99 70 - 130 06/15/18 03:45 1

### Lab Sample ID: LCS 490-521957/3 **Matrix: Solid** Analysis Batch: 521957

### **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.0500	0.0519		mg/Kg		104	70 - 130	
Ethylbenzene	0.0500	0.0473		mg/Kg		95	70 - 130	
Xylenes, Total	0.100	0.0963		mg/Kg		96	70 - 130	
Toluene	0.0500	0.0514		mg/Kg		103	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	88		70 - 130
1,2-Dichloroethane-d4 (Surr)	92		70 - 130
Toluene-d8 (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	98		70 - 130

#### Lab Sample ID: LCSD 490-521957/4 Matrix: Solid

### Analysis Batch: 521957

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0500	0.0501		mg/Kg		100	70 - 130	4	37
Ethylbenzene	0.0500	0.0460		mg/Kg		92	70 - 130	3	38
Xylenes, Total	0.100	0.0959		mg/Kg		96	70 - 130	0	38
Toluene	0.0500	0.0497		mg/Kg		99	70 - 130	3	40

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	88		70 - 130
1,2-Dichloroethane-d4 (Surr)	90		70 - 130
Toluene-d8 (Surr)	98		70 - 130
Dibromofluoromethane (Surr)	98		70 - 130

### **Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA**

Lab Sample ID: MB 490-52	20847/1-A									Clie	ent Sam	ole ID: M		
Matrix: Solid												Prep Ty		
Analysis Batch: 522497		MD	мв									Prep Ba	atch: 5	20847
Analyta	Pa		Qualifier	RL		MDL	llmit		<b>_</b>	в.	ropored	Analy		Dil Fac
Analyte C6-C10	Ke						mg/Kg	~	D		repared	Analy 06/17/18		
00-010		2.5	0	5.0		2.5	my/K	9		00/1	1/10 09.44	00/17/10	19.40	
		MВ	MB											
Surrogate	%Reco	very	Qualifier	Limits						Pi	repared	Analy	zed	Dil Fae
a,a,a-Trifluorotoluene		91		50 - 150						06/1	1/18 09:44	06/17/18	19:40	1
Lab Sample ID: LCS 490-5	20847/2-A							Clie	ent	Sar	nple ID:	Lab Co	ntrol Sa	ample
Matrix: Solid											- C	<b>Prep Ty</b>		
Analysis Batch: 522497												Prep Ba	-	
-				Spike	LCS	LCS						%Rec.		
Analyte				Added	Result	Qual	ifier	Unit		D	%Rec	Limits		
C6-C10				500	484			mg/Kg			97	70 - 130		
	LCS	105	:											
Surrogate	%Recovery			Limits										
a.a.a-Trifluorotoluene	84			50 - 150										
-,-,-														
Lab Sample ID: LCSD 490	-520847/3-A						C	lient S	am	ple	ID: Lab	Control	Sampl	e Dup
Matrix: Solid												<b>Prep Ty</b>		
Analysis Batch: 522497												Prep Ba		
-				Spike	LCSD	LCS	D					%Rec.		RPD
Analyte				Added	Result	Qual	ifier	Unit		D	%Rec	Limits	RPD	Limi
C6-C10				500	461			mg/Kg			92	70 - 130	5	21
	LCSD	LCS	SD											
Surrogate	%Recovery			Limits										
a,a,a-Trifluorotoluene	83			50 - 150										
Lab Sample ID: 490-15347	′9-1 MS										Client	Sample	ID: SB	<mark>32 0-1</mark>
Matrix: Solid												Prep Ty		
Analysis Batch: 522497												Prep Ba	atch: 5	20847
	Sample		•	Spike		MS						%Rec.		
Analyte	Result		lifier	Added	Result	Qual	ifier			D	/01100	Limits		
C6-C10	3.6	U		725	636			mg/Kg		₩	88	56 - 130		
	MS	мs												
Surrogate	%Recovery		lifier	Limits										
a,a,a-Trifluorotoluene	83			50 - 150										
Lab Sample ID: 490-15347	'9-1 MSD										Client	Sample		
Matrix: Solid												Prep Ty	-	
Analysis Batch: 522497	-			• •								Prep Ba	atch: 5	
	Sample		-	Spike		MSD				_	~-	%Rec.		RPD
Analyte	Result		lifier	Added	Result	Qual	ifier	Unit			%Rec	Limits	RPD	Limi
C6-C10	3.6	U		725	606			mg/Kg		₿ Ø	84	56 - 130	5	21
	MSD	MSL	כ											

a,a,a-Trifluorotoluene 83

50 - 150

#### Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) Lab Sample ID: MB 490-520680/1-A **Client Sample ID: Method Blank Matrix: Solid** Prep Type: Total/NA Analysis Batch: 521795 Prep Batch: 520680 MB MB Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac C10-C28 5.0 2.5 U 2.5 mg/Kg 06/09/18 12:00 06/15/18 00:57 1 C24-C40 2.5 U 5.0 2.5 mg/Kg 06/09/18 12:00 06/15/18 00:57 1 MB MB Surrogate Qualifier Limits %Recovery Prepared Analvzed Dil Fac o-Terphenyl (Surr) 99 50 - 150 06/09/18 12:00 06/15/18 00:57 1 Lab Sample ID: LCS 490-520680/2-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA Analysis Batch: 521795 Prep Batch: 520680 LCS LCS Spike %Rec. Limits Analyte Added Result Qualifier Unit D %Rec C10-C28 40.0 36.8 mg/Kg 92 54 - 130 LCS LCS Surrogate %Recovery Qualifier Limits o-Terphenyl (Surr) 50 - 150 96 Lab Sample ID: LCSD 490-520680/3-A **Client Sample ID: Lab Control Sample Dup Matrix: Solid** Prep Type: Total/NA Analysis Batch: 521795 Prep Batch: 520680 LCSD LCSD Spike %Rec. RPD Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit C10-C28 40.0 42.4 mg/Kg 106 54 - 130 14 47 LCSD LCSD Surrogate %Recovery Qualifier Limits o-Terphenyl (Surr) 107 50 - 150 Method: 9056 - Anions, Ion Chromatography

Lab Sample ID: MB 490-521724/3 Matrix: Solid Analysis Batch: 521724									Clie	ent San	ple ID: Method Prep Type: To	
	MB	MB										
Analyte	Result	Qualifier		RL	I	MDL U	nit	D	) P	repared	Analyzed	Dil Fac
Chloride	0.70	U		1.0		0.70 m	ng/Kg				06/14/18 12:07	1
Lab Sample ID: LCS 490-521724/4 Matrix: Solid Analysis Batch: 521724								Clier	nt Sai	nple ID	: Lab Control S Prep Type: To	
Analysis Batch. 521724			Spike		LCS	LCS					%Rec.	
Analyte			Added			Qualif	ier	Unit	D	%Rec	Limits	
Chloride			10.0		9.84			mg/Kg		98	80 - 120	

5

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### Method: 9056 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 490-521	724/5				C	lient Sa	mple	ID: Lab	Control		
Matrix: Solid									Prep Ty	pe: Tot	al/NA
Analysis Batch: 521724											
			Spike		LCSD				%Rec.		RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride _			10.0	9.92		mg/Kg		99	80 - 120	1	20
Lab Sample ID: MB 490-521347	7/1-A						Clie	ent Sam	ple ID: M	ethod I	Blank
Matrix: Solid									Prep Ty	/pe: So	oluble
Analysis Batch: 521596											
		MB MB									
Analyte	Re	esult Qualifier		RL	MDL Unit	D	P	repared	Analyz	zed	Dil Fac
Chloride		6.9 U		9.9	6.9 mg/K	g			06/13/18	16:50	1
Lab Sample ID: LCS 490-52134	17/2-A					Clier	nt Sar	nple ID	: Lab Cor	ntrol Sa	ample
Matrix: Solid						-			Prep Ty		
Analysis Batch: 521596											
······ <b>,</b> ······························			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			101	107		mg/Kg		106	80 - 120		
_											
Lab Sample ID: LCSD 490-521	347/3-A				c	lient Sa	mple	ID: Lab		Sample	e Dun
Lab Sample ID: LCSD 490-521 Matrix: Solid	347/3-A				C	lient Sa	mple	ID: Lab	Control		_
Matrix: Solid	347/3- <b>A</b>	L.			C	lient Sa	mple	ID: Lab	Control Prep Ty		_
	347/3-A		Spike	LCSD		lient Sa	mple	ID: Lab			oluble
Matrix: Solid Analysis Batch: 521596	347/3-A		Spike Added		LCSD		mple D		Prep Ty %Rec.	/pe: Sc	oluble RPC
Matrix: Solid	347/3-A	·	Spike Added 98.8			Unit mg/Kg	Ì	<b>ID: Lab</b> <u>%Rec</u> 106	Prep Ty		RPD Limit
Matrix: Solid Analysis Batch: 521596 Analyte Chloride			Added	Result	LCSD	Unit	Ì	<b>%Rec</b>	Prep Ty %Rec. Limits 80 - 120	rpe: Sc RPD	RPD Limit
Matrix: Solid Analysis Batch: 521596 Analyte Chloride Lab Sample ID: 490-153479-1			Added	Result	LCSD	Unit	Ì	<b>%Rec</b>	Prep Ty %Rec. Limits 80 - 120 t Sample	(pe: Sc RPD 2 ID: SB	RPD Limit 20 2 0-1
Matrix: Solid Analysis Batch: 521596 Analyte Chloride Lab Sample ID: 490-153479-1 Matrix: Solid		·	Added	Result	LCSD	Unit	Ì	<b>%Rec</b>	Prep Ty %Rec. Limits 80 - 120	(pe: Sc RPD 2 ID: SB	RPD Limit 20 2 0-1
Matrix: Solid Analysis Batch: 521596 Analyte Chloride Lab Sample ID: 490-153479-1	MS		Added 98.8	Result	LCSD Qualifier	Unit	Ì	<b>%Rec</b>	Prep Ty %Rec. Limits 80 - 120 t Sample	(pe: Sc RPD 2 ID: SB	RPD Limit 20 2 0-1
Matrix: Solid Analysis Batch: 521596 Analyte Chloride Lab Sample ID: 490-153479-1 M Matrix: Solid Analysis Batch: 521596	MS Sample	Sample	Added 98.8 Spike	Result 105 MS	LCSD Qualifier MS	<b>Unit</b> mg/Kg	<u>D</u>	%Rec 106 Clien	Prep Ty %Rec. Limits 80 - 120 t Sample Prep Ty %Rec.	(pe: Sc RPD 2 ID: SB	RPD Limit 20 2 0-1
Matrix: Solid Analysis Batch: 521596 Analyte Chloride Lab Sample ID: 490-153479-1 Matrix: Solid	MS Sample	Sample Qualifier	Added 98.8	Result 105 MS	LCSD Qualifier	Unit	Ì	<b>%Rec</b>	Prep Ty %Rec. Limits 80 - 120 t Sample Prep Ty	(pe: Sc RPD 2 ID: SB	RPD Limit 20 2 0-1
Matrix: Solid Analysis Batch: 521596 Analyte Chloride Lab Sample ID: 490-153479-1 M Matrix: Solid Analysis Batch: 521596 Analyte Chloride	MS Sample Result 9.2	Sample Qualifier	Added 98.8 Spike Added	Result 105 MS Result	LCSD Qualifier MS	Unit mg/Kg Unit	<u>D</u>	%Rec           106           Clien           %Rec           106	Prep Ty %Rec. Limits 80 - 120 t Sample Prep Ty %Rec. Limits 80 - 120	(pe: So RPD 2 ID: SB (pe: So	20-11
Matrix: Solid Analysis Batch: 521596 Analyte Chloride Lab Sample ID: 490-153479-1 M Matrix: Solid Analysis Batch: 521596 Analyte Chloride Lab Sample ID: 490-153479-1 M	MS Sample Result 9.2	Sample Qualifier	Added 98.8 Spike Added	Result 105 MS Result	LCSD Qualifier MS	Unit mg/Kg Unit	<u>D</u>	%Rec           106           Clien           %Rec           106	Prep Ty %Rec. Limits 80 - 120 t Sample Prep Ty %Rec. Limits 80 - 120 t Sample	(pe: So RPD 2 ID: SB (pe: So ID: SB	International Stress           RPD           Limit           20           20           20           20           21           22           20           21           22           20           21           22           22           20           21           22           20           21           22           20           21           22           22           20           21
Matrix: Solid Analysis Batch: 521596 Analyte Chloride Lab Sample ID: 490-153479-1 M Matrix: Solid Analysis Batch: 521596 Analyte Chloride Lab Sample ID: 490-153479-1 M Matrix: Solid	MS Sample Result 9.2	Sample Qualifier	Added 98.8 Spike Added	Result 105 MS Result	LCSD Qualifier MS	Unit mg/Kg Unit	<u>D</u>	%Rec           106           Clien           %Rec           106	Prep Ty %Rec. Limits 80 - 120 t Sample Prep Ty %Rec. Limits 80 - 120	(pe: So RPD 2 ID: SB (pe: So ID: SB	International Stress           RPD           Limit           20           20           20           20           21           22           20           21           22           20           21           22           22           20           21           22           20           21           22           20           21           22           22           20           21
Matrix: Solid Analysis Batch: 521596 Analyte Chloride Lab Sample ID: 490-153479-1 M Matrix: Solid Analysis Batch: 521596 Analyte Chloride Lab Sample ID: 490-153479-1 M	MS Sample Result 9.2 MSD	Sample Qualifier	Added 98.8 Spike Added	Result 105 MS Result 140	LCSD Qualifier MS	Unit mg/Kg Unit	<u>D</u>	%Rec           106           Clien           %Rec           106	Prep Ty %Rec. Limits 80 - 120 t Sample Prep Ty %Rec. Limits 80 - 120 t Sample	(pe: So RPD 2 ID: SB (pe: So ID: SB	RPD Limit 20 2 0-1' bluble
Matrix: Solid Analysis Batch: 521596 Analyte Chloride Lab Sample ID: 490-153479-1 M Matrix: Solid Analysis Batch: 521596 Analyte Chloride Lab Sample ID: 490-153479-1 M Matrix: Solid	MS Sample Result 9.2 MSD Sample	Sample Qualifier U	Added 98.8 Spike Added 132	Result 105 MS Result 140	LCSD Qualifier MS Qualifier	Unit mg/Kg Unit	<u>D</u>	%Rec           106           Clien           %Rec           106	Prep Ty %Rec. Limits 80 - 120 t Sample Prep Ty %Rec. Limits 80 - 120 t Sample Prep Ty	(pe: So RPD 2 ID: SB (pe: So ID: SB	RPD           Limit           20           22           0-1'           0luble           20           22           0-1'

### **QC Association Summary**

TestAmerica Job ID: 490-153479-1

### **GC/MS VOA**

### Prep Batch: 520848

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
490-153479-1	SB2 0-1'	Total/NA	Solid	5030B	
490-153479-2	SB3 0-1'	Total/NA	Solid	5030B	
490-153479-3	SB4 0-1'	Total/NA	Solid	5030B	
490-153479-4	SB1 4-5'	Total/NA	Solid	5030B	
490-153479-5	SB1 9-10'	Total/NA	Solid	5030B	

#### Lab Sample ID **Client Sample ID** Prep Type Matrix Method Prep Batch 490-153479-1 SB2 0-1' Total/NA Solid 8260B 520848 490-153479-2 SB3 0-1' Total/NA Solid 8260B 520848 490-153479-3 SB4 0-1' Total/NA Solid 8260B 520848 490-153479-4 SB1 4-5' Total/NA Solid 8260B 520848 490-153479-5 SB1 9-10' Total/NA Solid 8260B 520848 MB 490-521957/7 Method Blank Total/NA Solid 8260B LCS 490-521957/3 Lab Control Sample Total/NA Solid 8260B LCSD 490-521957/4 Lab Control Sample Dup Total/NA Solid 8260B

### **GC VOA**

### Prep Batch: 520847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153479-1	SB2 0-1'	Total/NA	Solid	5030B	
490-153479-2	SB3 0-1'	Total/NA	Solid	5030B	
490-153479-3	SB4 0-1'	Total/NA	Solid	5030B	
490-153479-4	SB1 4-5'	Total/NA	Solid	5030B	
490-153479-5	SB1 9-10'	Total/NA	Solid	5030B	
MB 490-520847/1-A	Method Blank	Total/NA	Solid	5030B	
LCS 490-520847/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 490-520847/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
490-153479-1 MS	SB2 0-1'	Total/NA	Solid	5030B	
490-153479-1 MSD	SB2 0-1'	Total/NA	Solid	5030B	

### Analysis Batch: 522497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153479-1	SB2 0-1'	Total/NA	Solid	8015C	520847
490-153479-2	SB3 0-1'	Total/NA	Solid	8015C	520847
490-153479-3	SB4 0-1'	Total/NA	Solid	8015C	520847
490-153479-4	SB1 4-5'	Total/NA	Solid	8015C	520847
490-153479-5	SB1 9-10'	Total/NA	Solid	8015C	520847
MB 490-520847/1-A	Method Blank	Total/NA	Solid	8015C	520847
LCS 490-520847/2-A	Lab Control Sample	Total/NA	Solid	8015C	520847
LCSD 490-520847/3-A	Lab Control Sample Dup	Total/NA	Solid	8015C	520847
490-153479-1 MS	SB2 0-1'	Total/NA	Solid	8015C	520847
490-153479-1 MSD	SB2 0-1'	Total/NA	Solid	8015C	520847

### GC Semi VOA

### Prep Batch: 520680

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
490-153479-1	SB2 0-1'	Total/NA	Solid	3550C	

### GC Semi VOA (Continued)

### Prep Batch: 520680 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153479-2	SB3 0-1'	Total/NA	Solid	3550C	
490-153479-3	SB4 0-1'	Total/NA	Solid	3550C	
490-153479-4	SB1 4-5'	Total/NA	Solid	3550C	
490-153479-5	SB1 9-10'	Total/NA	Solid	3550C	
MB 490-520680/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 490-520680/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 490-520680/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	

### Analysis Batch: 521795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153479-1	SB2 0-1'	Total/NA	Solid	8015C	520680
490-153479-2	SB3 0-1'	Total/NA	Solid	8015C	520680
490-153479-3	SB4 0-1'	Total/NA	Solid	8015C	520680
490-153479-4	SB1 4-5'	Total/NA	Solid	8015C	520680
490-153479-5	SB1 9-10'	Total/NA	Solid	8015C	520680
MB 490-520680/1-A	Method Blank	Total/NA	Solid	8015C	520680
LCS 490-520680/2-A	Lab Control Sample	Total/NA	Solid	8015C	520680
LCSD 490-520680/3-A	Lab Control Sample Dup	Total/NA	Solid	8015C	520680

### Analysis Batch: 522376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153479-5	SB1 9-10'	Total/NA	Solid	8015C	520680

### HPLC/IC

### Leach Batch: 521347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153479-1	SB2 0-1'	Soluble	Solid	DI Leach	
490-153479-2	SB3 0-1'	Soluble	Solid	DI Leach	
490-153479-3	SB4 0-1'	Soluble	Solid	DI Leach	
490-153479-4	SB1 4-5'	Soluble	Solid	DI Leach	
490-153479-5	SB1 9-10'	Soluble	Solid	DI Leach	
MB 490-521347/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 490-521347/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 490-521347/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
490-153479-1 MS	SB2 0-1'	Soluble	Solid	DI Leach	
490-153479-1 MSD	SB2 0-1'	Soluble	Solid	DI Leach	

### Analysis Batch: 521596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153479-1	SB2 0-1'	Soluble	Solid	9056	521347
490-153479-2	SB3 0-1'	Soluble	Solid	9056	521347
490-153479-3	SB4 0-1'	Soluble	Solid	9056	521347
490-153479-5	SB1 9-10'	Soluble	Solid	9056	521347
MB 490-521347/1-A	Method Blank	Soluble	Solid	9056	521347
LCS 490-521347/2-A	Lab Control Sample	Soluble	Solid	9056	521347
LCSD 490-521347/3-A	Lab Control Sample Dup	Soluble	Solid	9056	521347
490-153479-1 MS	SB2 0-1'	Soluble	Solid	9056	521347
490-153479-1 MSD	SB2 0-1'	Soluble	Solid	9056	521347

### **QC** Association Summary

TestAmerica Job ID: 490-153479-1

### HPLC/IC (Continued)

### Analysis Batch: 521724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153479-4	SB1 4-5'	Soluble	Solid	9056	521347
MB 490-521724/3	Method Blank	Total/NA	Solid	9056	
LCS 490-521724/4	Lab Control Sample	Total/NA	Solid	9056	
LCSD 490-521724/5	Lab Control Sample Dup	Total/NA	Solid	9056	

### **General Chemistry**

### Analysis Batch: 521273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153479-1	SB2 0-1'	Total/NA	Solid	Moisture	
490-153479-2	SB3 0-1'	Total/NA	Solid	Moisture	
490-153479-3	SB4 0-1'	Total/NA	Solid	Moisture	
490-153479-4	SB1 4-5'	Total/NA	Solid	Moisture	
490-153479-5	SB1 9-10'	Total/NA	Solid	Moisture	
Lab Sample ID: 490-153479-1

Lab Sample ID: 490-153479-1

Matrix: Solid

Matrix: Solid

Percent Solids: 75.6

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### Client Sample ID: SB2 0-1' Date Collected: 06/06/18 11:22 Date Received: 06/08/18 09:20

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	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			521273	06/12/18 14:37	BAA	TAL NSH

### Client Sample ID: SB2 0-1' Date Collected: 06/06/18 11:22 Date Received: 06/08/18 09:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.26 g	5.0 mL	520848	06/11/18 09:49	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 mL	521957	06/15/18 10:39	S1S	TAL NSH
Total/NA	Prep	5030B			5.87 g	5.0 mL	520847	06/11/18 09:49	JLP	TAL NSH
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	522497	06/17/18 20:10	S1S	TAL NSH
Total/NA	Prep	3550C			25.10 g	1.00 mL	520680	06/09/18 12:00	AMD	TAL NSH
Total/NA	Analysis	8015C		1			521795	06/15/18 02:42	LOJ	TAL NSH
Soluble	Leach	DI Leach			3.01 g	30 mL	521347	06/13/18 12:00	LDC	TAL NSH
Soluble	Analysis	9056		1			521596	06/13/18 17:35	T1C	TAL NSH

### Client Sample ID: SB3 0-1' Date Collected: 06/06/18 11:28 Date Received: 06/08/18 09:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			521273	06/12/18 14:37	BAA	TAL NSH

### Client Sample ID: SB3 0-1' Date Collected: 06/06/18 11:28 Date Received: 06/08/18 09:20

### Lab Sample ID: 490-153479-2 Ма

atr	ix:	Sol	lid

### Lab Sample ID: 490-153479-2 Matrix: Solid Percent Solids: 82.2

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.60 g	5.0 mL	520848	06/11/18 09:49	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 mL	521957	06/15/18 11:07	S1S	TAL NSH
Total/NA	Prep	5030B			5.18 g	5.0 mL	520847	06/11/18 09:49	JLP	TAL NSH
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	522497	06/17/18 20:40	S1S	TAL NSH
Total/NA	Prep	3550C			25.05 g	1.00 mL	520680	06/09/18 12:00	AMD	TAL NSH
Total/NA	Analysis	8015C		1			521795	06/15/18 03:00	LOJ	TAL NSH
Soluble	Leach	DI Leach			3.02 g	30 mL	521347	06/13/18 12:00	LDC	TAL NSH
Soluble	Analysis	9056		1			521596	06/13/18 18:19	T1C	TAL NSH

Lab Sample ID: 490-153479-3

Lab Sample ID: 490-153479-3

Matrix: Solid

Matrix: Solid

Percent Solids: 74.5

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### Client Sample ID: SB4 0-1' Date Collected: 06/06/18 11:35 Date Received: 06/08/18 09:20

	Prep Type	Batch Type Analvsis	Batch Method Moisture	Run	Dil Factor	Initial Amount	Final Amount	Batch Number 521273	Prepared or Analyzed 06/12/18 14:37	Analyst	Lab TAL NSH	
l		Analysis	woisture		1			521273	00/12/18 14.37	ВАА	TAL NOT	

### Client Sample ID: SB4 0-1' Date Collected: 06/06/18 11:35 Date Received: 06/08/18 09:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.26 g	5.0 mL	520848	06/11/18 09:49	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 mL	521957	06/15/18 11:35	S1S	TAL NSH
Total/NA	Prep	5030B			5.86 g	5.0 mL	520847	06/11/18 09:49	JLP	TAL NSH
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	522497	06/17/18 21:10	S1S	TAL NSH
Total/NA	Prep	3550C			25.63 g	1.00 mL	520680	06/09/18 12:00	AMD	TAL NSH
Total/NA	Analysis	8015C		1			521795	06/15/18 03:17	LOJ	TAL NSH
Soluble	Leach	DI Leach			2.95 g	30 mL	521347	06/13/18 12:00	LDC	TAL NSH
Soluble	Analysis	9056		1			521596	06/13/18 18:34	T1C	TAL NSH

### Client Sample ID: SB1 4-5' Date Collected: 06/06/18 11:22 Date Received: 06/08/18 09:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			521273	06/12/18 14:37	BAA	TAL NSH

### Client Sample ID: SB1 4-5' Date Collected: 06/06/18 11:22 Date Received: 06/08/18 09:20

### Lab Sample ID: 490-153479-4 Matrix: Solid

### Lab Sample ID: 490-153479-4 Matrix: Solid Percent Solids: 80.3

Lab Sample ID: 490-153479-5

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.52 g	5.0 mL	520848	06/11/18 09:49	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 mL	521957	06/15/18 12:02	S1S	TAL NSH
Total/NA	Prep	5030B			5.52 g	5.0 mL	520847	06/11/18 09:49	JLP	TAL NSH
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	522497	06/17/18 21:40	S1S	TAL NSH
Total/NA	Prep	3550C			25.12 g	1.00 mL	520680	06/09/18 12:00	AMD	TAL NSH
Total/NA	Analysis	8015C		1			521795	06/15/18 03:35	LOJ	TAL NSH
Soluble	Leach	DI Leach			3.03 g	30 mL	521347	06/13/18 12:00	LDC	TAL NSH
Soluble	Analysis	9056		5			521724	06/14/18 12:51	SW1	TAL NSH

### Client Sample ID: SB1 9-10' Date Collected: 06/06/18 11:27 Date Received: 06/08/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			521273	06/12/18 14:37	BAA	TAL NSH

TestAmerica Nashville

Matrix: Solid

### Client Sample ID: SB1 9-10' Date Collected: 06/06/18 11:27 Date Received: 06/08/18 09:20

Lab Sample ID: 490-153479-5 Matrix: Solid Percent Solids: 88.1

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_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.48 g	5.0 mL	520848	06/11/18 09:49	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 mL	521957	06/15/18 12:30	S1S	TAL NSH
Total/NA	Prep	5030B			5.48 g	5.0 mL	520847	06/11/18 09:49	JLP	TAL NSH
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	522497	06/17/18 22:10	S1S	TAL NSH
Total/NA	Prep	3550C			25.14 g	1.00 mL	520680	06/09/18 12:00	AMD	TAL NSH
Total/NA	Analysis	8015C		1			521795	06/15/18 03:52	LOJ	TAL NSH
Total/NA	Prep	3550C			25.14 g	1.00 mL	520680	06/09/18 12:00	AMD	TAL NSH
Total/NA	Analysis	8015C		5			522376	06/16/18 18:10	GMH	TAL NSH
Soluble	Leach	DI Leach			3.05 g	30 mL	521347	06/13/18 12:00	LDC	TAL NSH
Soluble	Analysis	9056		1			521596	06/13/18 19:04	T1C	TAL NSH

### Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

# **Method Summary**

### Client: Timberwolf Environmental LLC Project/Site: Enfield 170054

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Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL NSH
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL NSH
9056	Anions, Ion Chromatography	SW846	TAL NSH
Moisture	Percent Moisture	EPA	TAL NSH
3550C	Ultrasonic Extraction	SW846	TAL NSH
5030B	Purge and Trap	SW846	TAL NSH
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL NSH

### Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Client: Timberwolf Environmental LLC Project/Site: Enfield 170054 TestAmerica Job ID: 490-153479-1

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All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	A2LA		NA: NELAP & A2LA	12-31-19
A2LA	ISO/IEC 17025		0453.07	12-31-19
Alaska (UST)	State Program	10	UST-087	06-30-18
Arizona	State Program	9	AZ0473	05-05-19
Arkansas DEQ	State Program	6	88-0737	04-25-19
California	State Program	9	2938	10-31-18
Connecticut	State Program	1	PH-0220	12-31-19
Florida	NELAP	4	E87358	06-30-18
Georgia	State Program	4	E87358(FL)/453.07(A2L A)	06-30-18
Illinois	NELAP	5	200010	12-09-18
lowa	State Program	7	131	04-01-18 *
Kansas	NELAP	7	E-10229	10-31-18
Kentucky (UST)	State Program	4	19	06-30-18
Kentucky (WW)	State Program	4	90038	12-31-18
Louisiana	NELAP	6	30613	06-30-18
Maine	State Program	1	TN00032	11-03-19
Maryland	State Program	3	316	03-31-19
Massachusetts	State Program	1	M-TN032	06-30-18
Minnesota	NELAP	5	047-999-345	12-31-18
Mississippi	State Program	4	N/A	06-30-18
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-18
New Hampshire	NELAP	1	2963	10-09-18
New Jersey	NELAP	2	TN965	06-30-18
New York	NELAP	2	11342	03-31-19
North Carolina (WW/SW)	State Program	4	387	12-31-18
North Dakota	State Program	8	R-146	06-30-18
Ohio VAP	State Program	5	CL0033	07-06-19
Oklahoma	State Program	6	9412	08-31-18
Oregon	NELAP	10	TN200001	04-26-19
Pennsylvania	NELAP	3	68-00585	06-30-18
Rhode Island	State Program	1	LAO00268	12-30-18
South Carolina	State Program	4	84009 (001)	02-28-18 *
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-18
USDA	Federal		P330-13-00306	12-01-19
Utah	NELAP	8	TN00032	07-31-18
Virginia	NELAP	3	460152	06-14-18 *
Washington	State Program	10	C789	07-19-18
West Virginia DEP	State Program	3	219	02-28-19
Wisconsin	State Program	5	998020430	08-31-18
Wyoming (UST)	A2LA	8	453.07	12-31-19

### Laboratory: TestAmerica Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	17-051-0	08-04-18
Louisiana	NELAP	6	01967	06-30-18
Oklahoma	State Program	6	2017-138	08-31-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Client: Timberwolf Environmental LLC Project/Site: Enfield 170054

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### Laboratory: TestAmerica Houston (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Texas	NELAP	6	T104704223-17-22	10-31-18
USDA	Federal		P330-18-00130	04-30-21

TestAmerica	
THE LEADER IN ENV'RONMENTAL TEST NG	-153479 Chain of Custody
Nashville, TN COOLER RECEIPT FORM	
Cooler Received/Opened On <u>6/8/2018 @ 0920</u> Time Samples Removed From Cooler <u>1853</u> Time Samples Placed In Storage <u>1902</u>	(2 Hour Window)
1/065	
1. Tracking # (last 4 digits, FedEx) Courier: <u>FedEx</u> IR Gun ID17610176 pH Strip Lot A Chlorine Strip Lot A	M
<ol> <li>Temperature of rep. sample or temp blank when opened: S Z Degrees Celsius</li> </ol>	
<ol> <li>Temperature of rep. sample of temp blank when opened</li></ol>	YES NO. NA
4. Were custody seals on outside of cooler?	VER NO. NA
If yes, how many and where:	TESNONA
5. Were the seals intact, signed, and dated correctly?	YES NO NA
6. Were custody papers inside cooler?	YES.NONA
I certify that I opened the cooler and answered questions 1-6 (initial)	
7. Were custody seals on containers: YES (NO) and Intact	YESNO.
Were these signed and dated correctly?	YESNO
8. Packing mat'l used? (Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Pa	
9. Cooling process:	-
10. Did all containers arrive in good condition (unbroken)?	YES NO NA
11. Were all container labels complete (#, date, signed, pres., etc)?	ES.NONA
12. Did all container labels and tags agree with custody papers?	YES NO NA
13a. Were VOA vials received?	YES NO NA
b. Was there any observable headspace present in any VOA vial?	YESNO NA
Larger than this.	$\bigcirc$
14. Was there a Trip Blank in this cooler? YES. NONA If multiple coolers, seque	nce #
I certify that I unloaded the cooler and answered guestions 7-14 (intial)	
15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level?	YESNO.
b. Did the bottle labels indicate that the correct preservatives were used	(TES)NONA
16. Was residual chlorine present?	YESNO(NA)
I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)	6tt
17. Were custody papers properly filled out (ink, signed, etc)?	ES.NONA
18. Did you sign the custody papers in the appropriate place?	YES).NONA
19. Were correct containers used for the analysis requested?	YESNONA
20. Was sufficient amount of sample sent in each container?	(YES)NONA
Leertify that Lentered this project into LIMS and answered questions 17-20 (intial)	
I certify that I attached a label with the unique LIMS number to each container (intial)	
21. Were there Non-Conformance issues at login? YES. (NO) Was a NCM generated? YES. (NO	.).#

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TestAmerica Mouston		Chain	Chain of Custody Record	ord 177261	TestAmerica
Kouston, TX 77046-5862 Phone: 713.690.4444 Fax: 713.690.5646	Regulatory Program:		CRA Other:		THE LEADER IN ENVIRONMENTAL TESTING TestAmerica Laboratories, Inc. TAL-8210 (0713)
Client Contact	Project Manager:	Joiner	Site Contact:	Date: (0/~/ 12	COC No:
Timber woll P			Lab Contact:	L	of LCOCs
19 Maria	Analysis Turn	d Time	ß		Sampler:
te/Zip: Brys	CALENDAR DAYS	WWORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below		°∂†		Walk-in Client:
Project Name: Z. Avair() 1705 CI	2 weeks		1)		Lab Sampling:
		<u> </u>	ا ک asm		Job / SDG No.:
PO#	1 day		P;		
Sample Identification	Sample Sample (C=Comp. Date Time G=Grab)	# of Matrix Cont.	~?(4) XIIX	044	Sample Specific Notes:
5k3 0-1'	6/6/13 1123 (31	501 2	<u> </u>		
SB3 0-1'	1 112 i				
584 D-1,	11:35				
521 4-51	6611				Loc: 490
	1137				0.+00
251 14-15'	5211			V	
581 29-201	1 442			$\sqrt{1}$	
1581 Du-25'	1 1/47				
1 1					
Preservation Used: 1= Ice, 2= HCI; 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other	5=NaOH; 6= Other				
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Pleas Comments Section if the lab is to dispose of the sample.	Please List any EPA Waste Codes for the sample in the	r the sample in the		Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) 人	ed longer than 1 month)
Won-Hazard Elammable Skin Irritant	Doison B	nwon	Return to Client	Chisposal by Lab	Months
Special Instructions/QC Requirements & Comments:				3,20 C	
Custody Seals Intact: C Yes No	Custody Seal No.:		Cooler Temp. ( <sup>o</sup>	°C): Obs'd: Corr'd:	Therm ID No.:
Belliqquished by:	Company: Tim he v vial P	Date/Time: (の/ フノドぞ 11)	Received by:	Company AS	Date/Time: 6-2-12 / 092()
	Company:	Date/Time:	Rečeived by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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6/19/2018 ļ

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THE LEADER IN ENVIRONMENTAL TESTING

# **ANALYTICAL REPORT**

### TestAmerica Laboratories, Inc.

TestAmerica Nashville 2960 Foster Creighton Drive Nashville, TN 37204 Tel: (615)726-0177

### TestAmerica Job ID: 490-153479-2 Client Project/Site: Enfield 170054

### For:

Timberwolf Environmental LLC 1920 W. Vill Maria Suite 305-2 Box 205 Bryan, Texas 77807

Attn: Mr. James Foster

Authorized for release by: 6/27/2018 12:44:42 PM Taylor Bruzzio, Project Management Assistant I (361)289-2673 taylor.bruzzio@testamericainc.com

Designee for

Dean Joiner, Project Manager II (713)690-4444 dean.joiner@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Sample Summary

TestAmerica Job ID: 490-153479-2

Client: Timberwolf Environmental LLC Project/Site: Enfield 170054

TestAmenca Job ID. 490-155479-2

Lab Sample ID	Client Sample ID	Matrix	Collected Received
190-153479-6	SB1 14-15'	Solid	06/06/18 11:35 06/08/18 09:2
190-153479-7	SB1 19-20'	Solid	06/06/18 11:42 06/08/18 09:2
90-153479-8	SB1 24-25'	Solid	06/06/18 11:47 06/08/18 09:2

### Job ID: 490-153479-2

### Laboratory: TestAmerica Nashville

Narrative

Job Narrative 490-153479-2

**Case Narrative** 

### Comments

No additional comments.

### Receipt

The samples were received on 6/8/2018 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.2° C.

### HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### **Organic Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Qualifiers

### HPLC/IC

Qualifier	Qualifier Description	
F1	MS and/or MSD Recovery is outside acceptance limits.	 5
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	9
U	Indicates the analyte was analyzed for but not detected.	

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	6
%R	Percent Recovery	
CFL	Contains Free Liquid	9
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
PQL	Practical Quantitation Limit	
QC	Quality Control	
RER	Relative Error Ratio (Radiochemistry)	
RL	Reporting Limit or Requested Limit (Radiochemistry)	
RPD	Relative Percent Difference, a measure of the relative difference between two points	
TEF	Toxicity Equivalent Factor (Dioxin)	
TEQ	Toxicity Equivalent Quotient (Dioxin)	

### Client Sample ID: SB1 14-15' Lab Sample ID: 490-153479-6 Date Collected: 06/06/18 11:35 Matrix: Solid Date Received: 06/08/18 09:20 **General Chemistry** Analyte Result Qualifier RL RL Unit D Prepared Analyzed Dil Fac 0.1 0.1 % 06/21/18 14:24 Percent Moisture 15.4 1 0.1 0.1 % 06/21/18 14:24 **Percent Solids** 84.6 1

## **Client Sample Results**

Client: Timberwolf Enviro Project/Site: Enfield 1700						T	estAmerica	Job ID: 490-15	53479-2	2
Client Sample ID: S						La	b Sample	e ID: 490-153 Matrix	3479-6 x: Solid	
Date Received: 06/08/18								Percent Solic		
Method: 9056 - Anions Analyte	· · · · · · · · · · · · · · · · · · ·	phy - <mark>Solubl</mark> e Qualifier	e RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	5
Chloride	200	F1	12	8.2	mg/Kg	<del>\\$</del> -		06/25/18 20:36	1	6
										7

### Client Sample ID: SB1 19-20' Lab Sample ID: 490-153479-7 Date Collected: 06/06/18 11:42 Matrix: Solid Date Received: 06/08/18 09:20 **General Chemistry** Analyte **Result Qualifier** RL RL Unit D Prepared Analyzed Dil Fac 0.1 0.1 % 06/21/18 14:24 Percent Moisture 7.9 1 0.1 0.1 % 06/21/18 14:24 **Percent Solids** 92.1 1

## **Client Sample Results**

Client: Timberwolf Environmental LLC Project/Site: Enfield 170054

Client: Timberwolf Enviro Project/Site: Enfield 1700						Т	estAmerica	Job ID: 490-15	53479-2	2
Client Sample ID: S						La	b Sample	ID: 490-153		
Date Collected: 06/06/1 Date Received: 06/08/18								Matrix Percent Solic	c: Solid	
Method: 9056 - Anions		ohy - Soluble	9							4
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	C
Chloride	33		11	7.6	mg/Kg	<u> </u>		06/25/18 21:20	1	6

### Client Sample ID: SB1 24-25' Lab Sample ID: 490-153479-8 Date Collected: 06/06/18 11:47 Matrix: Solid Date Received: 06/08/18 09:20 **General Chemistry** Analyte **Result Qualifier** RL RL Unit D Prepared Analyzed Dil Fac 0.1 0.1 % 06/21/18 14:24 Percent Moisture 6.1 1 0.1 0.1 % 06/21/18 14:24 **Percent Solids** 93.9 1

## **Client Sample Results**

Client: Timberwolf Environmental LLC Project/Site: Enfield 170054

Client: Timberwolf Environ Project/Site: Enfield 1700						Т	estAmerica	Job ID: 490-1	53479-2	2
Client Sample ID: SI Date Collected: 06/06/18						La	b Sample	ID: 490-15	3479-8 x: Solid	
Date Collected: 06/06/18								Percent Solid		
Method: 9056 - Anions Analyte	· · · · · · · · · · · · · · · · · · ·	phy - <mark>Solubl</mark> e Qualifier	e RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	5
Chloride	10	J	11	7.4	mg/Kg	<u> </u>		06/25/18 21:35	1	6
										7

Method: 9056 - Anions, Ion Chromatography
---

Lab Sample ID: MB 490-524	4060/1-A									Cli	ient	Sam	ple ID: M		
Matrix: Solid													Prep T	ype: So	olubl
Analysis Batch: 524613															
		MB MB	_												
Analyte	Re	esult Qu	ualifier		RL		MDL			D	Prep	ared	Analy		Dil Fa
Chloride		7.0 U			10		7.0	mg/Ko	g				06/25/18	19:52	
Lab Sample ID: LCS 490-52	24060/2-A								Cli	ent Sa	amp	le ID	: Lab Cor	ntrol Sa	ampl
Matrix: Solid													Prep T	ype: So	olubl
Analysis Batch: 524613															
-				Spike		LCS	LCS						%Rec.		
Analyte				Added		Result	Qual	ifier	Unit	D	%	Rec	Limits		
Chloride				100		93.9			mg/Kg			94	80 - 120		
Lab Sample ID: LCSD 490-	524060/3-A							С	lient S	ample	e ID	: Lab	Control	Sample	e Du
Matrix: Solid										- C.			Prep T		
Analysis Batch: 524613															
				Spike		LCSD	LCSI	D					%Rec.		RP
Analyte				Added		Result	Qual	ifier	Unit	D	%	Rec	Limits	RPD	Lim
Chloride				101		95.6			mg/Kg			95	80 - 120	2	2
Lab Sample ID: 490-153479	-6 MS										Cli	ent S	Sample ID	: SB1 <sup>-</sup>	14-1!
Matrix: Solid													Prep T	vpe: So	olubl
Analysis Batch: 524613															
	Sample	Sample	)	Spike		MS	MS						%Rec.		
Analyte	Result	Qualifie	ər	Added		Result	Qual	ifier	Unit	D	%	Rec	Limits		
Chloride	200	F1		116		320			mg/Kg	<u></u>	-	102	80 - 120		
Lab Sample ID: 490-153479	-6 MSD										Cli	ent S	Sample ID	: SB1 <sup>·</sup>	<b>14-1</b> ;
													Prep T		
Matrix: Solid						MOD	MSD						%Rec.		RP
	Sample	Sample	)	Spike		10120	10130						/011000.		
Matrix: Solid	-	Sample Qualifie		Spike Added		Result	-		Unit	D	%	Rec	Limits	RPD	Lim

### Method: Moisture - Percent Moisture

Lab Sample ID: 490-153479 Matrix: Solid Analysis Batch: 523650	-6 DU					CI	lient Sample ID: SB1 Prep Type: Tot	
	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Percent Moisture	15.4		14.5		%		<u> </u>	20
Percent Solids	84.6		85.5		%		1	20

# **QC Association Summary**

TestAmerica Job ID: 490-153479-2

### HPLC/IC

### Leach Batch: 524060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153479-6	SB1 14-15'	Soluble	Solid	DI Leach	
490-153479-7	SB1 19-20'	Soluble	Solid	DI Leach	
490-153479-8	SB1 24-25'	Soluble	Solid	DI Leach	
MB 490-524060/1-A	Method Blank	Soluble	Solid	DI Leach	
-CS 490-524060/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
_CSD 490-524060/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
190-153479-6 MS	SB1 14-15'	Soluble	Solid	DI Leach	
490-153479-6 MSD	SB1 14-15'	Soluble	Solid	DI Leach	

### Lab Sample ID **Client Sample ID** Prep Type Matrix Method Prep Batch 490-153479-6 SB1 14-15' Soluble Solid 9056 524060 490-153479-7 SB1 19-20' Soluble Solid 9056 524060 490-153479-8 SB1 24-25' Soluble Solid 9056 524060 MB 490-524060/1-A Method Blank Soluble Solid 9056 524060 LCS 490-524060/2-A Soluble Lab Control Sample Solid 9056 524060 LCSD 490-524060/3-A Lab Control Sample Dup Soluble Solid 9056 524060 524060 490-153479-6 MS SB1 14-15' Soluble Solid 9056 490-153479-6 MSD SB1 14-15' Soluble Solid 9056 524060

### **General Chemistry**

### Analysis Batch: 523650

Lat	o Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490	)-153479-6	SB1 14-15'	Total/NA	Solid	Moisture	
490	)-153479-7	SB1 19-20'	Total/NA	Solid	Moisture	
490	)-153479-8	SB1 24-25'	Total/NA	Solid	Moisture	
490	)-153479-6 DU	SB1 14-15'	Total/NA	Solid	Moisture	

Client Sam Date Collecter Date Received	d: 06/06/18 1	1:35					La	b Sample II		153479-6 atrix: Solic
	Batch	Batch	_	Dil	Initial	Final	Batch	Prepared		
Prep Type Total/NA	Analysis	Method Moisture	Run	Factor 1	Amount	Amount	Number 523650	or Analyzed 06/21/18 14:24	Analyst BAA	TAL NSH
Client Sam	ole ID: SB1	1 14-15'					La	b Sample II	D: 490-	153479-6
ate Collecter	d: 06/06/18 1	1:35							Ма	atrix: Solic olids: 84.6
-	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			3.01 g	30 mL	524060	06/23/18 08:45	JHS	TAL NSH
Soluble	Analysis	9056		1			524613	06/25/18 20:36	SW1	TAL NSH
lient Sam	ple ID: SB1	1 19-20'					La	b Sample II	D: 490-	153479-7
ate Collecte									Ма	atrix: Solic
-	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Bron Tuno	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
гер туре	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,									
Prep Type Total/NA	Analysis	Moisture		1			523650	06/21/18 14:24		TAL NSH
Total/NA Client Samp Date Collected	Analysis ple ID: SB1 d: 06/06/18 1	<b>1 19-20'</b> 1:42		1				b Sample II P	D: 490- Ma	
Total/NA Client Samp Date Collecter Date Received	Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch	<b>1 19-20'</b> 1:42 9:20 Batch		Dil	Initial	Final	La Batch	b Sample II P Prepared	D: <b>490-</b> Ma ercent S	153479-7 atrix: Solic olids: 92.1
Total/NA Client Samp Date Collecter Date Received Prep Type	Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch Type	1 19-20' 1:42 9:20 Batch Method	Run		Amount	Amount	La Batch Number	b Sample II P Prepared or Analyzed	D: 490- Ma ercent S Analyst	153479-7 atrix: Solic olids: 92.1 Lab
Total/NA Client Samp Date Collected Date Received Prep Type Soluble	Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch	<b>1 19-20'</b> 1:42 9:20 Batch	Run	Dil			La Batch	b Sample II P Prepared	D: 490- Ma ercent S Analyst JHS	153479-7 atrix: Solic olids: 92.1
Total/NA Client Samp Date Collecter Date Received Prep Type Soluble Soluble	Analysis ple ID: SB <sup>2</sup> d: 06/06/18 1 d: 06/08/18 0 Batch Type Leach Analysis	1 19-20' 1:42 9:20 Batch Method DI Leach 9056	Run	Dil Factor	Amount	Amount	La Batch Number 524060 524613	b Sample II P Prepared or Analyzed 06/23/18 08:45 06/25/18 21:20	D: 490- Ma ercent S Analyst JHS SW1	153479-7 atrix: Solic olids: 92.1 Lab TAL NSH TAL NSH
Total/NA Client Samp Date Collecter Date Received Prep Type Soluble Soluble Client Samp Date Collecter	Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch Type Leach Analysis ple ID: SB1 d: 06/06/18 1	1 19-20' 1:42 9:20 Batch Method DI Leach 9056 1 24-25' 1:47	Run	Dil Factor	Amount	Amount	La Batch Number 524060 524613	b Sample II P Prepared or Analyzed 06/23/18 08:45	D: 490- Ma ercent S Analyst JHS SW1 D: 490-	153479-7 atrix: Solic olids: 92.1 Lab TAL NSH TAL NSH
Total/NA Client Samp Date Collecter Date Received Prep Type Soluble	Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch Type Leach Analysis ple ID: SB1 d: 06/06/18 1	1 19-20' 1:42 9:20 Batch Method DI Leach 9056 1 24-25' 1:47	Run	Dil Factor	Amount	Amount	La Batch Number 524060 524613	b Sample II P Prepared or Analyzed 06/23/18 08:45 06/25/18 21:20	D: 490- Ma ercent S Analyst JHS SW1 D: 490-	153479-7 atrix: Solic olids: 92.1 <u>Lab</u> TAL NSH TAL NSH TAL NSH
Total/NA Client Samp Date Collecter Date Received Prep Type Soluble Soluble Client Samp Date Collecter	Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch Type Leach Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0	1 19-20' 1:42 9:20 Batch Method DI Leach 9056 1 24-25' 1:47 9:20	Run	Dil Factor 1	Amount 3.00 g	Amount 30 mL	La Batch Number 524060 524613 La	b Sample II Prepared or Analyzed 06/23/18 08:45 06/25/18 21:20 b Sample II	D: 490- Ma ercent S Analyst JHS SW1 D: 490-	153479-7 atrix: Solic olids: 92.1 <u>Lab</u> TAL NSH TAL NSH TAL NSH
Total/NA Client Samp Date Collecter Date Received Soluble Soluble Client Samp Date Collecter Date Received	Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch Type Leach Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch	1 19-20' 1:42 9:20 Batch Method DI Leach 9056 1 24-25' 1:47 9:20 Batch		Dil Factor 1 Dil	Amount 3.00 g	Amount 30 mL	La Batch Number 524060 524613 La Batch	b Sample II Prepared or Analyzed 06/23/18 08:45 06/25/18 21:20 b Sample II Prepared	D: 490- Ma ercent S Analyst JHS SW1 D: 490- Ma Analyst	153479-7 atrix: Solic olids: 92.1 Lab TAL NSH TAL NSH 153479-8 atrix: Solic
Total/NA Client Samp Date Collecter Date Received Prep Type Soluble Soluble Client Samp Date Collecter Date Received Prep Type	Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch Type Leach Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch Type Analysis ple ID: SB1 d: 06/06/18 1	1 19-20' 1:42 9:20 Batch Method DI Leach 9056 1 24-25' 1:47 9:20 Batch Method Moisture 1 24-25' 1:47		Dil Factor 1 Dil Factor	Amount 3.00 g	Amount 30 mL	La Batch Number 524060 524613 La Batch Number 523650	b Sample II Prepared or Analyzed 06/23/18 08:45 06/25/18 21:20 b Sample II Prepared or Analyzed 06/21/18 14:24 b Sample II	D: 490- Ma ercent S JHS SW1 D: 490- Ma Analyst BAA D: 490- Ma	153479-7 atrix: Solic olids: 92.1 Lab TAL NSH TAL NSH 153479-8 atrix: Solic Lab TAL NSH
Total/NA Client Samp Date Collected Date Received Prep Type Soluble Soluble Client Samp Date Collected Date Received Prep Type Total/NA Client Samp Date Collected	Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch Type Leach Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch Type Analysis ple ID: SB1 d: 06/06/18 1	1 19-20' 1:42 9:20 Batch Method DI Leach 9056 1 24-25' 1:47 9:20 Batch Method Moisture 1 24-25' 1:47		Dil Factor 1 Dil Factor	Amount 3.00 g	Amount 30 mL	La Batch Number 524060 524613 La Batch Number 523650	b Sample II Prepared or Analyzed 06/23/18 08:45 06/25/18 21:20 b Sample II Prepared or Analyzed 06/21/18 14:24 b Sample II	D: 490- Ma ercent S JHS SW1 D: 490- Ma Analyst BAA D: 490- Ma	153479-7 atrix: Solic olids: 92.1 Lab TAL NSH TAL NSH 153479-8 atrix: Solic Lab TAL NSH
Total/NA Client Samp Date Collecter Date Received Prep Type Soluble Client Samp Date Collecter Date Received Prep Type Total/NA Client Samp Date Collecter	Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch Type Leach Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch Type Analysis ple ID: SB1 d: 06/06/18 1 d: 06/06/18 1	1 19-20' 1:42 9:20 Batch Method DI Leach 9056 1 24-25' 1:47 9:20 Batch Method Moisture 1 24-25' 1:47 9:20		Dil Factor 1 Dil Factor 1	Amount 3.00 g	Amount 30 mL Final Amount	La Batch Number 524060 524613 La Batch Number 523650 La	b Sample II Prepared or Analyzed 06/23/18 08:45 06/25/18 21:20 b Sample II Prepared or Analyzed 06/21/18 14:24 b Sample II P	D: 490- Ma ercent S JHS SW1 D: 490- Ma Analyst BAA D: 490- Ma	153479-7 atrix: Solic olids: 92.1 Lab TAL NSH TAL NSH 153479-8 atrix: Solic Lab TAL NSH
Total/NA Client Samp Date Collecter Date Received Prep Type Soluble Soluble Client Samp Date Collecter Date Received Total/NA Client Samp Date Collecter Date Collecter Date Collecter	Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch Type Leach Analysis ple ID: SB1 d: 06/06/18 1 d: 06/08/18 0 Batch Type Analysis ple ID: SB1 d: 06/06/18 1 d: 06/06/18 1 d: 06/06/18 1 d: 06/08/18 0	1 19-20' 1:42 9:20 Batch Method DI Leach 9056 1 24-25' 1:47 9:20 Batch Method Moisture 1 24-25' 1:47 9:20 Batch	Run	Dil Factor 1 Dil Factor 1 Dil	Amount 3.00 g Initial Amount	Amount 30 mL Final Amount Final	La Batch Number 524060 524613 La Batch Number 523650 La Batch Batch	b Sample II Prepared or Analyzed 06/23/18 08:45 06/25/18 21:20 b Sample II Prepared 06/21/18 14:24 b Sample II Prepared II Prepared	D: 490- Ma ercent S Analyst JHS SW1 D: 490- Ma BAA D: 490- Ma ercent S Analyst	153479-7 atrix: Solic olids: 92.1 Lab TAL NSH TAL NSH 153479-8 atrix: Solic Lab TAL NSH 153479-8 atrix: Solic olids: 93.9

### Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

### Client: Timberwolf Environmental LLC Project/Site: Enfield 170054

Method	Method Description	Protocol	Laboratory
9056	Anions, Ion Chromatography	SW846	TAL NSH
Moisture	Percent Moisture	EPA	TAL NSH
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL NSH

### **Protocol References:**

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

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EPA Region

Identification Number

NA: NELAP & A2LA

0453.07

UST-087

AZ0473

88-0737

PH-0220

E87358

200010

E-10229

131

19

90038

30613

316

N/A

NA

2963

TN965

11342

P330-13-00306

TN00032

998020430

460152

C789

219

453.07

TN00032

M-TN032

TN00032

047-999-345

2938

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Program

**ISO/IEC 17025** 

State Program

NELAP

NELAP

NELAP

NELAP

NELAP

NELAP

NELAP

NELAP

Federal

NELAP

NELAP

A2LA

State Program

State Program

State Program

Client: Timberwolf Environmental LLC Project/Site: Enfield 170054

Authority

Alaska (UST) Arizona

Arkansas DEQ

California

Florida

Georgia

Illinois

Kansas

Louisiana

Maryland

Minnesota

Mississippi

Nevada

Maine

Kentucky (UST)

Kentucky (WW)

Massachusetts

Montana (UST)

New Hampshire

North Carolina (WW/SW)

New Jersey

North Dakota

Pennsylvania

Rhode Island

Tennessee

Texas

USDA

Utah

Virginia

Washington

Wisconsin

West Virginia DEP

Wyoming (UST)

South Carolina

New York

Ohio VAP

Oklahoma

Oregon

lowa

Connecticut

A2LA

Laboratory: TestAmerica Nashville

TestAmerica Job ID: 490-153479-2

**Expiration Date** 

12-31-19

06-30-18 \*

05-05-19

04-25-19

10-31-18

12-31-19

06-30-18 \*

12-31-19

12-09-18

04-01-18 \*

10-31-18

06-30-18 \*

12-31-18

06-30-18 \*

11-03-19

03-31-19

06-30-18 \*

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06-30-19

02-24-20

07-31-18

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07-06-19

08-31-18

04-26-19

06-30-18 \*

12-30-18

02-28-18 \*

02-23-20

08-31-18

12-01-19

07-31-18

06-14-19

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02-28-19

08-31-18

12-31-19

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4 387 State Program 8 R-146 State Program State Program 5 CL0033 State Program 6 9412 NELAP 10 TN200001 NELAP 3 68-00585 State Program 1 LAO00268 State Program 4 84009 (001) State Program 4 2008 NELAP 6 T104704077

# Laboratory: TestAmerica Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority Arkansas DEQ	Program State Program	EPA Region	Identification Number	Expiration Date
Louisiana	NELAP	6	01967	06-30-18
Oklahoma	State Program	6	2017-138	08-31-18
Texas	NELAP	6	T104704223-17-22	10-31-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Client: Timberwolf Environmental LLC Project/Site: Enfield 170054

# Project/Site: Enfield 170054 2 Laboratory: TestAmerica Houston (Continued) 3 All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report. 4 Muthority Program EPA Region Identification Number Expiration Date 4 USDA Federal P330-18-00130 04-30-21 5 6 7 8 9 9 9

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### Joiner, Dean

From:	Russell Greer <russell@teamtimberwolf.com></russell@teamtimberwolf.com>
Sent:	Wednesday, June 20, 2018 10:07 AM
То:	Joiner, Dean; Bailey Moore; Clay Morris; Jim Foster; Kaitlyn Jacisin; Kevin Cole; Morgan Vizi; Preston Kocian; Ryan Mersmann
Subject:	RE: TestAmerica report files from 490-153479-1 Enfield 170054

### -External Email-

Dean,

We need to run the following samples for chloride and TPH using Method 8015 extended range:

- SB1 14-15'
- SB1 19-20'
- SB1 24-25'

Please let me know if you have any questions. Thanks,

### **Russell Greer**



1920 W. Villa Maria, Suite 205 (Box 205) Bryan, Texas 77807 (979) 450-1509

From: Joiner, Dean [mailto:dean.joiner@testamericainc.com]
Sent: Tuesday, June 19, 2018 6:35 PM
To: Bailey Moore <<u>bailey@teamtimberwolf.com</u>>; Clay Morris <<u>clay@teamtimberwolf.com</u>>; Jim Foster
<<u>jim@teamtimberwolf.com</u>>; Kaitlyn Jacisin <<u>kaitlyn@teamtimberwolf.com</u>>; Kevin Cole
<<u>kevin@teamtimberwolf.com</u>>; Morgan Vizi <<u>morgan@teamtimberwolf.com</u>>; Preston Kocian
<<u>preston@teamtimberwolf.com</u>>; Russell Greer <<u>russell@teamtimberwolf.com</u>>; Ryan Mersmann
<<u>ryan@teamtimberwolf.com</u>>
Subject: TestAmerica report files from 490-153479-1 Enfield 170054

Hello,

Attached please find the report files for job 490-153479-1; Enfield 170054

Please feel free to contact me if you have any questions.

Thank you.

Please let us know if we met your expectations by rating the service you received from TestAmerica on this project by visiting our website at: <u>Project Feedback</u>

**DEAN A JOINER** Project Manager

TestAmerica Houston THE LEADER IN ENVIRONMENTAL TESTING

Tel: 713.690.4444 www.testamericainc.com

Reference: [430564] Attachments: 1

This email has been scanned for Virus/Malware by RusTECH MaiLCLOUD Protect.

TestAmerica	
THE LEADER IN ENVIRONMENTAL TESTING	0-153479 Chain of Custody
Nashville, TN COOLER RECEIPT FORM	
Cooler Received/Opened On <u>6/8/2018 @ 0920</u> Time Samples Removed From Cooler <u>1853</u> Time Samples Placed In Storage <u>1903</u>	(2 Hour Window)
1/065	
1. Tracking #(last 4 digits, FedEx) Courier: <u>FedEx</u> IR Gun ID17610176 pH Strip LotA Chlorine Strip Lot	VA
2. Temperature of rep. sample or temp blank when opened: <u>Siz</u> Degrees Celsius	
<ol> <li>Temperature of rep. sample of temp blank when opened. <u></u></li></ol>	VES NO AND
	YES NO. NA
4. Were custody seals on outside of cooler?	TES NO NA
If yes, how many and where:       ((((((((((((((((((((((((((((((((((((	YESNONA
	YES.NONA
6. Were custody papers inside cooler? I certify that I opened the cooler and answered questions 1-6 (intial)	TES. SNONA
	YESNO.
7. Were custody seals on containers: YES NO and Intact Were these signed and dated correctly?	$\searrow$
8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert P	YESNONA
	-
	e Other None
10. Did all containers arrive in good condition (unbroken)?	VESNONA
11. Were all container labels complete (#, date, signed, pres., etc)?	YES NO NA
12. Did all container labels and tags agree with custody papers?	YESL.NONA
	YESNONA
b. Was there any observable headspace present in any VOA vial?	TESNONA
Larger than this.	
14. Was there a Trip Blank in this cooler? YES. NONA If multiple coolers, seque	ence #
I certify that I unloaded the cooler and answered questions 7-14 (intial)	
15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level?	YESNO.
b. Did the bottle labels indicate that the correct preservatives were used	TES NO NA
16. Was residual chlorine present?	YESNONA
I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)	Gtt
17. Were custody papers properly filled out (ink, signed, etc)?	ESNONA
18. Did you sign the custody papers in the appropriate place?	YESNONA
19. Were correct containers used for the analysis requested?	YES NO NA
20. Was sufficient amount of sample sent in each container?	YESNONA
I certify that I entered this project into LIMS and answered questions 17-20 (intial)	
I certify that I attached a label with the unique LIMS number to each container (intial)	<u>+</u>
21. Were there Non-Conformance issues at login? YES(NO) Was a NCM generated? YES	ð.,#
$\sim$	/

TestAmerica Mouston	0	Chain of Custody Record	rd - 177261	TestAmerica
Kouston, TX 77046-5862 Phone: 713.690.4444 Fax: 713.690.5646	Regulatory Program:	🗌 NPDES 🗌 RCRA 🗌 Other:	, ,	THE LEADER IN ENVIRONMENTAL TESTING <b>TestÅmerica Laboratories, Inc.</b> TAL-8210 (0713)
Client Contact	Project Manager: Dean Joiner	- Site Contact:	Date: (0/~/ 18	COC No:
Name: 1, w	Tel/Fax:		L. L.	of COCs
Address: 1920 111. Nolla Maria	Analysis Turn	6		Sampler:
tan t	CALENDAR DAYS			For Lab Use Only:
le:	TAT if different from Below			Walk-in Client:
Fax: Project Name: ビル 2%, 1, 0 1-100 ビリ	2 weeks	11)		Lab Sampling:
		ک asv		Job / SDG No.:
PO#		)     Qa		
Sample Identification	Sample Sample Type C=Comp, Date Time G=Grab) Matrix	So the sector of		Sample Specific Notes:
SB3 0-1'	6/6/13 1123 (y Soil			
	1128			
5B4 0-1'				C
-11 125	eeu			1 E 2 1 7 0
551 9-10	1111 L			0.100
3 581 14-15'				
581 29-30'	142	>		
sel Du-25'	1 1/47 1	>		
Preservation Used: 1= Ice., 2= HCI; 3= H2SO4, 4=HNO3; 5=NaOH, 6= Other	5=NaOH, 6= Other			
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Pleas Commertis Section if the lab is to dispose of the sample.	Please List any EPA Waste Codes for the sample in the		Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)	sd longer than 1 month)
Won-Hazard Elammable Skin Irritant	Doison B	Return to Client	CDisposal by Lab	Months
Special Instructions/QC Requirements & Comments:			3-20 C	
Custody Seals Intact: 🛛 Yes 🗍 No	al No.:			Therm ID No.:
Belligquished by:	Company: Date/ Tim he v with P 6/7/	Time: /そ 1/10	Company AS	Date/Time: 6-2-12 / 092()
Relinquished by: V		Date/Time: Rečeived by:	Company:	Date/Time:
Relinquished by:	Company: Date	Date/Time: Received in Laboratory by:	Company:	Date/Time:
2018			-	

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6/27/2018

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