



Thursday, June 25, 2020

John Mahoney
Mahoney Environmental
1601 10th Ave.
Greeley, CO 80631

Re: ALS Workorder: 2005357
Project Name: GAIL #1 Tank Battery
Project Number: 2020.124

Dear Mr. Mahoney:

Fourteen soil samples and two water samples were received from Mahoney Environmental, on 5/23/2020. The samples were scheduled for the following analyses:

GC/MS Volatiles

Inorganics

Metals

Total Extractable Petroleum Hydrocarbons (Diesel)

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

ALS Environmental
Katie M. O'Brien
Project Manager

ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280



2005357

GC/MS Volatiles:

The samples were analyzed using GC/MS following the current revision of SOP 525 based on SW-846 Method 8260C. The samples were also analyzed for Gasoline Range Organics (GRO).

The method blank VL200605-3MB had gasoline range organics detected below the reporting limit. This compound was detected in the associated samples, so the data was flagged.

The CCV for GRO was high (0.4%) and the sample results have been flagged accordingly as estimated values.

Due to the high concentrations of target compounds found in sample -15, (WATER 1) there is a potential for carryover contamination greater than the reporting limit for benzene, toluene and m,p,o-xylenes in sample -16 (WATER 2). The sample was not re-analyzed due to the hold time expiring.

All remaining acceptance criteria were met.

DRO:

The samples were analyzed following the current revision of SOP 406 generally based on SW-846 Methods 8000C and 8015D. TEPH is a multicomponent mixture and is quantitated by summing the entire carbon range, rather than individual peaks. The carbon range integrated in this test extends from C10 to C28.

All acceptance criteria were met.

Metals:

The samples were analyzed following SW-846, 3rd Edition procedures. Analysis by Trace ICP followed method 6010D and the current revision of SOP 834. Mercury analysis by CVAA followed method 7471A and the current revision of SOP 812.

A matrix spike and matrix spike duplicate were digested and analyzed with the Trace ICP batch. All acceptance criteria for accuracy and precision were met with the following exceptions:

<u>Analyte</u>	<u>Sample ID</u>
Boron	2005357-1MS/MSD

The native sample result is flagged for matrix spike failure and an analytical post spike was performed. The result of the spike was acceptable, indicating that the matrix was not significantly affecting quantitation of this analyte.

All remaining acceptance criteria were met.

**Inorganics:**

The samples were analyzed following SW-846 and USDA Handbook 60 Chapter 6 procedures for the current revisions of the following SOPs and methods:

<u>Analyte</u>	<u>Method</u>	<u>SOP #</u>
Electrical conductivity	USDA60	810 Draft
Sodium Adsorption Ratio	USDA60	810 Draft
Paste pH	USDA60	810 Draft
Hexavalent chromium	7196A	1122
Chloride	9056	1113
Sulfate	9056	1113

Chromium III is a calculated value derived from the subtraction of hexavalent chromium from total chromium.

All acceptance criteria were met.

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Sample Number(s) Cross-Reference Table

OrderNum: 2005357

Client Name: Mahoney Environmental

Client Project Name: GAIL #1 Tank Battery

Client Project Number: 2020.124

Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
SOIL 1	2005357-1		SOIL	21-May-20	14:10
SOIL 2	2005357-2		SOIL	21-May-20	14:35
SOIL 3	2005357-3		SOIL	21-May-20	15:05
SOIL 4	2005357-4		SOIL	21-May-20	15:30
SOIL 5	2005357-5		SOIL	21-May-20	15:50
SOIL 6	2005357-6		SOIL	21-May-20	16:15
SOIL 7	2005357-7		SOIL	21-May-20	16:30
SOIL 8	2005357-8		SOIL	22-May-20	10:30
SOIL 9	2005357-9		SOIL	22-May-20	10:40
SOIL 10	2005357-10		SOIL	22-May-20	10:50
SOIL 11	2005357-11		SOIL	22-May-20	11:10
SOIL 12	2005357-12		SOIL	22-May-20	11:55
SOIL 13	2005357-13		SOIL	22-May-20	12:50
SOIL 14	2005357-14		SOIL	22-May-20	13:35
WATER 1	2005357-15		WATER	22-May-20	13:50
WATER 2	2005357-16		WATER	22-May-20	13:50
SOIL 1	2005357-17		SatExtract	21-May-20	14:10
SOIL 2	2005357-18		SatExtract	21-May-20	14:35
SOIL 3	2005357-19		SatExtract	21-May-20	15:05
SOIL 4	2005357-20		SatExtract	21-May-20	15:30
SOIL 5	2005357-21		SatExtract	21-May-20	15:50
SOIL 6	2005357-22		SatExtract	21-May-20	16:15
SOIL 7	2005357-23		SatExtract	21-May-20	16:30
SOIL 8	2005357-24		SatExtract	22-May-20	10:30
SOIL 9	2005357-25		SatExtract	22-May-20	10:40
SOIL 10	2005357-26		SatExtract	22-May-20	10:50
SOIL 11	2005357-27		SatExtract	22-May-20	11:10
SOIL 12	2005357-28		SatExtract	22-May-20	11:55
SOIL 13	2005357-29		SatExtract	22-May-20	12:50
SOIL 14	2005357-30		SatExtract	22-May-20	13:35



ALS Environmental

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Turnaround time for samples received after 2 p.m. will be calculated beginning from the next business day.
Turnaround time for samples received Saturday will be calculated beginning from the next business day.

ALS WORKORDER #	2005357
PAGE	1 of 2
DISPOSAL	BY LAB or RETURN

PROJECT NAME	GAIL #1 Tank BATH	TURNAROUND TIME	STANDARD	SAMPLER	John Mathard
PROJECT No.	2020.124	SITE ID	GAIL #1	FACILITY	268645
COMPANY NAME	Mathard Environmental	EDD FORMAT			
SEND REPORT TO	John Mathard	PURCHASE ORDER			
ADDRESS	P.O. Box 1358	BILL TO COMPANY			
CITY / STATE / ZIP	Greeneville, CO 80632	INVOICE ATTN TO			
PHONE	970-381-5951	ADDRESS			
FAX		CITY / STATE / ZIP			
E-MAIL	JMathard@26442.com	PHONE			
		FAX			
		E-MAIL			

PARAMETER/METHOD REQUEST FOR ANALYSIS

A	BTEX - TPH
B	Metals - EC - PH - SAR
C	Chlorides - Sulfates - TDS
D	
E	
F	
G	
H	
I	
J	

LAB ID	FIELD ID	MATRIX	SAMPLE DATE	SAMPLE TIME	# OF BOTTLES	PRESERVATIVE	QC	A	B	C	D	E	F	G	H	I	J	SEE NOTES SECTION
1	Soil 1	S	5/21/20	14:10	1			2	2	17								
2	Soil 2	S	5/21/20	14:35	1			2	2	17								
3	Soil 3	S	5/21/20	15:05	1			2	2	17								
4	Soil 4	S	5/21/20	15:30	1			2	2	17								
5	Soil 5	S	5/21/20	15:50	1			2	2	17								
6	Soil 6	S	5/21/20	16:15	1			2	2	17								
7	Soil 7	S	5/21/20	16:30	1			2	2	17								
8	Soil 8	S	5/22/20	10:30	1			2	2	17								
9	Soil 9	S	5/22/20	10:40	1			2	2	17								
10	Soil 10	S	5/22/20	10:50	1			2	2	17								
11	Soil 11	S	5/22/20	11:10	2			2	2	17								
12	Soil 12	S	5/22/20	11:55	2			2	2	17								

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

PRESERVATION KEY	1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaOH/ZnAcetate 6-NaHSO4 7-4°C 8-Other				
	REPORT LEVEL / QC REQUIRED	SUMMARY (Standard QC)	LEVEL II (Standard QC)	LEVEL III (Std QC + ferra)	LEVEL IV (Std QC + ferra + raw)
	ANALYZE highest dko for PAH				
	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY
	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY
SIGNATURE		PRINTED NAME	DATE	TIME	
John Mathard		John Mathard	5/23/20	11:41	
Taylor Mossad		Taylor Mossad	5/23/20	11:41	



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Mahoney Env.

Workorder No: 2005357

Project Manager: KMO

Initials: TM

Date: 5/26/20

1. Are airbills / shipping documents present and/or removable?	<input checked="" type="checkbox"/>	DROP OFF	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO						
2. Are custody seals on shipping containers intact?	<input checked="" type="checkbox"/>	NONE	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO *						
3. Are custody seals on sample containers intact?	<input checked="" type="checkbox"/>	NONE	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO *						
4. Is there a COC (chain-of-custody) present?	<input type="checkbox"/>		<input checked="" type="checkbox"/>	YES	<input type="checkbox"/>	NO *						
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)	<input type="checkbox"/>		YES	<input checked="" type="checkbox"/>		NO *						
6. Are short-hold samples present?	<input type="checkbox"/>		YES	<input checked="" type="checkbox"/>		NO						
7. Are all samples within holding times for the requested analyses?	<input checked="" type="checkbox"/>		YES	<input type="checkbox"/>		NO *						
8. Were all sample containers received intact? (not broken or leaking)	<input checked="" type="checkbox"/>		YES	<input type="checkbox"/>		NO *						
9. Is there sufficient sample for the requested analyses?	<input checked="" type="checkbox"/>		YES	<input type="checkbox"/>		NO *						
10. Are samples in proper containers for requested analyses? (form 250, <i>Sample Handling Guidelines</i>)	<input checked="" type="checkbox"/>		YES	<input type="checkbox"/>		NO *						
11. Are all aqueous samples preserved correctly, if required? (excluding volatiles)	<input checked="" type="checkbox"/>	N/A	YES	<input type="checkbox"/>		NO *						
12. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm (1/4 inch) diameter? (i.e. size of green pea)	<input type="checkbox"/>	N/A	YES	<input checked="" type="checkbox"/>		NO						
13. Were the samples shipped on ice?	<input type="checkbox"/>		YES	<input checked="" type="checkbox"/>		NO						
14. Were cooler temperatures measured at 0.1-6.0°C?	<input type="checkbox"/>	IR gun used*:	<input type="checkbox"/>	#3	<input type="checkbox"/>	#5	<input type="checkbox"/>	RAD ONLY	<input type="checkbox"/>	YES	<input checked="" type="checkbox"/>	NO
Cooler #: <u>1</u>												
Temperature (°C): <u>amb</u>												
# of custody seals on cooler: <u>0</u>												
External mR/hr reading: <u>-</u>												
Background mR/hr reading: <u>12</u>												
Were external mR/hr readings ≤ two times background and within DOT acceptance criteria? YES / NO / <u>NA</u> (If no, see Form 008.)												

* Please provide details here for NO responses to gray boxes above - for 2 thru 5 & 7 thru 12, notify PM & continue w/ login.

5.) COC lists 1 bottle for sample 5: 2 jars received

12.) 357-15-3,4,5,6,7,8 have notable headspace

Were unpreserved bottles pH checked ☐ YES / ☒ NA

All client bottle ID's vs ALS lab ID's double-checked by: TM

If applicable, was the client contacted? YES / NO / NA Contact: _____

Date/Time: _____

Project Manager Signature / Date: _____

[Signature] 5/26/20

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SAMPLE SUMMARY REPORT

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 1
Legal Location:
Collection Date: 5/21/2020 14:10

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-1
Matrix: SOIL
Percent Moisture: 18.3

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	ND		9.7	MG/KG	1	6/1/2020 16:04
Surr: O-TERPHENYL	89		56-120	%REC	1	6/1/2020 16:04
GC/MS Volatiles			SW8260		Prep Date: 6/4/2020	PrepBy: TWK
BENZENE	ND		5.9	UG/KG	1	6/4/2020 15:23
TOLUENE	ND		5.9	UG/KG	1	6/4/2020 15:23
ETHYLBENZENE	ND		5.9	UG/KG	1	6/4/2020 15:23
M+P-XYLENE	ND		8.2	UG/KG	1	6/4/2020 15:23
O-XYLENE	ND		5.9	UG/KG	1	6/4/2020 15:23
Surr: DIBROMOFLUOROMETHANE	106		77-125	%REC	1	6/4/2020 15:23
Surr: TOLUENE-D8	95		80-120	%REC	1	6/4/2020 15:23
Surr: 4-BROMOFLUOROBENZENE	104		71-121	%REC	1	6/4/2020 15:23
GASOLINE RANGE ORGANICS	ND		590	UG/KG	1	6/4/2020 15:23
Hexavalent Chromium			SW7196		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM VI	ND		0.12	MG/KG	1	6/2/2020
ICP Metals			SW6010		Prep Date: 5/28/2020	PrepBy: JML
SILVER	ND		1.1	MG/KG	1	5/29/2020 13:42
ARSENIC	4.7		3.4	MG/KG	1	5/29/2020 13:42
BORON	ND	N	11	MG/KG	1	5/29/2020 13:42
BARIUM	89		11	MG/KG	1	5/29/2020 13:42
CADMIUM	ND		0.57	MG/KG	1	5/29/2020 13:42
CHROMIUM	11		1.1	MG/KG	1	5/29/2020 13:42
COPPER	9.8		1.1	MG/KG	1	5/29/2020 13:42
NICKEL	12		2.3	MG/KG	1	5/29/2020 13:42
LEAD	9.7		2.3	MG/KG	1	5/29/2020 13:42
SELENIUM	ND		3.4	MG/KG	1	5/29/2020 13:42
ZINC	35		2.3	MG/KG	1	5/29/2020 13:42
Mercury			SW7471		Prep Date: 5/29/2020	PrepBy: JRS
MERCURY	ND		0.039	MG/KG	1	6/3/2020 16:50
Sodium Adsorption Ratio			USDA60		Prep Date: 6/3/2020	PrepBy: LMC
PASTE PH	7.8		0.1	pH	1	6/3/2020
Trivalent Chromium (from Total Cr - Cr+6)			CRIII		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM III	11		1.1	MG/KG	1	6/2/2020

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SAMPLE SUMMARY REPORT

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 2
Legal Location:
Collection Date: 5/21/2020 14:35

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-2
Matrix: SOIL
Percent Moisture: 15.7

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	21		9.4	MG/KG	1	6/1/2020 16:25
Surr: O-TERPHENYL	88		56-120	%REC	1	6/1/2020 16:25
GC/MS Volatiles			SW8260		Prep Date: 6/4/2020	PrepBy: TWK
BENZENE	ND		58	UG/KG	1	6/4/2020 20:48
TOLUENE	150		58	UG/KG	1	6/4/2020 20:48
ETHYLBENZENE	ND		58	UG/KG	1	6/4/2020 20:48
M+P-XYLENE	1100		81	UG/KG	1	6/4/2020 20:48
O-XYLENE	300		58	UG/KG	1	6/4/2020 20:48
Surr: DIBROMOFLUOROMETHANE	101		77-125	%REC	1	6/4/2020 20:48
Surr: TOLUENE-D8	93		80-120	%REC	1	6/4/2020 20:48
Surr: 4-BROMOFLUOROBENZENE	99		71-121	%REC	1	6/4/2020 20:48
GASOLINE RANGE ORGANICS	92000		5800	UG/KG	1	6/4/2020 20:48
Hexavalent Chromium			SW7196		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM VI	ND		0.12	MG/KG	1	6/2/2020
ICP Metals			SW6010		Prep Date: 5/28/2020	PrepBy: JML
SILVER	ND		1.2	MG/KG	1	5/29/2020 13:46
ARSENIC	ND		3.5	MG/KG	1	5/29/2020 13:46
BORON	ND		12	MG/KG	1	5/29/2020 13:46
BARIUM	81		12	MG/KG	1	5/29/2020 13:46
CADMIUM	ND		0.58	MG/KG	1	5/29/2020 13:46
CHROMIUM	7.4		1.2	MG/KG	1	5/29/2020 13:46
COPPER	6.6		1.2	MG/KG	1	5/29/2020 13:46
NICKEL	7		2.3	MG/KG	1	5/29/2020 13:46
LEAD	6.6		2.3	MG/KG	1	5/29/2020 13:46
SELENIUM	ND		3.5	MG/KG	1	5/29/2020 13:46
ZINC	23		2.3	MG/KG	1	5/29/2020 13:46
Mercury			SW7471		Prep Date: 5/29/2020	PrepBy: JRS
MERCURY	ND		0.038	MG/KG	1	6/3/2020 16:52
Sodium Adsorption Ratio			USDA60		Prep Date: 6/3/2020	PrepBy: LMC
PASTE PH	8.2		0.1	pH	1	6/3/2020
Trivalent Chromium (from Total Cr - Cr+6)			CRIII		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM III	7.4		1.2	MG/KG	1	6/2/2020

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 3
Legal Location:
Collection Date: 5/21/2020 15:05

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-3
Matrix: SOIL
Percent Moisture: 20.1

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	ND		9.9	MG/KG	1	6/1/2020 16:46
Surr: O-TERPHENYL	86		56-120	%REC	1	6/1/2020 16:46
GC/MS Volatiles			SW8260		Prep Date: 6/4/2020	PrepBy: TWK
BENZENE	ND		5.9	UG/KG	1	6/4/2020 15:51
TOLUENE	ND		5.9	UG/KG	1	6/4/2020 15:51
ETHYLBENZENE	ND		5.9	UG/KG	1	6/4/2020 15:51
M+P-XYLENE	ND		8.3	UG/KG	1	6/4/2020 15:51
O-XYLENE	ND		5.9	UG/KG	1	6/4/2020 15:51
Surr: DIBROMOFLUOROMETHANE	112		77-125	%REC	1	6/4/2020 15:51
Surr: TOLUENE-D8	94		80-120	%REC	1	6/4/2020 15:51
Surr: 4-BROMOFLUOROBENZENE	105		71-121	%REC	1	6/4/2020 15:51
GASOLINE RANGE ORGANICS	ND		590	UG/KG	1	6/4/2020 15:51
Hexavalent Chromium			SW7196		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM VI	ND		0.12	MG/KG	1	6/2/2020
ICP Metals			SW6010		Prep Date: 5/28/2020	PrepBy: JML
SILVER	ND		1.1	MG/KG	1	5/29/2020 13:47
ARSENIC	3.9		3.3	MG/KG	1	5/29/2020 13:47
BORON	ND		11	MG/KG	1	5/29/2020 13:47
BARIUM	130		11	MG/KG	1	5/29/2020 13:47
CADMIUM	ND		0.55	MG/KG	1	5/29/2020 13:47
CHROMIUM	14		1.1	MG/KG	1	5/29/2020 13:47
COPPER	10		1.1	MG/KG	1	5/29/2020 13:47
NICKEL	11		2.2	MG/KG	1	5/29/2020 13:47
LEAD	12		2.2	MG/KG	1	5/29/2020 13:47
SELENIUM	ND		3.3	MG/KG	1	5/29/2020 13:47
ZINC	44		2.2	MG/KG	1	5/29/2020 13:47
Mercury			SW7471		Prep Date: 5/29/2020	PrepBy: JRS
MERCURY	ND		0.039	MG/KG	1	6/3/2020 16:54
Sodium Adsorption Ratio			USDA60		Prep Date: 6/3/2020	PrepBy: LMC
PASTE PH	7.9		0.1	pH	1	6/3/2020
Trivalent Chromium (from Total Cr - Cr+6)			CRIII		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM III	14		1.1	MG/KG	1	6/2/2020

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 4
Legal Location:
Collection Date: 5/21/2020 15:30

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-4
Matrix: SOIL
Percent Moisture: 16.3

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	11		9.5	MG/KG	1	6/1/2020 17:08
Surr: O-TERPHENYL	89		56-120	%REC	1	6/1/2020 17:08
GC/MS Volatiles			SW8260		Prep Date: 6/4/2020	PrepBy: TWK
BENZENE	ND		14	UG/KG	1	6/4/2020 16:37
TOLUENE	ND		14	UG/KG	1	6/4/2020 16:37
ETHYLBENZENE	ND		14	UG/KG	1	6/4/2020 16:37
M+P-XYLENE	ND		19	UG/KG	1	6/4/2020 16:37
O-XYLENE	ND		14	UG/KG	1	6/4/2020 16:37
Surr: DIBROMOFLUOROMETHANE	102		77-125	%REC	1	6/4/2020 16:37
Surr: TOLUENE-D8	96		80-120	%REC	1	6/4/2020 16:37
Surr: 4-BROMOFLUOROBENZENE	100		71-121	%REC	1	6/4/2020 16:37
GASOLINE RANGE ORGANICS	2100		1400	UG/KG	1	6/4/2020 16:37
Hexavalent Chromium			SW7196		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM VI	ND		0.12	MG/KG	1	6/2/2020
ICP Metals			SW6010		Prep Date: 5/28/2020	PrepBy: JML
SILVER	ND		1.2	MG/KG	1	5/29/2020 13:48
ARSENIC	ND		3.5	MG/KG	1	5/29/2020 13:48
BORON	ND		12	MG/KG	1	5/29/2020 13:48
BARIUM	110		12	MG/KG	1	5/29/2020 13:48
CADMIUM	ND		0.58	MG/KG	1	5/29/2020 13:48
CHROMIUM	10		1.2	MG/KG	1	5/29/2020 13:48
COPPER	8.7		1.2	MG/KG	1	5/29/2020 13:48
NICKEL	9.2		2.3	MG/KG	1	5/29/2020 13:48
LEAD	8.6		2.3	MG/KG	1	5/29/2020 13:48
SELENIUM	ND		3.5	MG/KG	1	5/29/2020 13:48
ZINC	32		2.3	MG/KG	1	5/29/2020 13:48
Mercury			SW7471		Prep Date: 5/29/2020	PrepBy: JRS
MERCURY	ND		0.04	MG/KG	1	6/3/2020 16:56
Sodium Adsorption Ratio			USDA60		Prep Date: 6/3/2020	PrepBy: LMC
PASTE PH	8.2		0.1	pH	1	6/3/2020
Trivalent Chromium (from Total Cr - Cr+6)			CRIII		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM III	10		1.2	MG/KG	1	6/2/2020

ALS -- Fort Collins

SAMPLE SUMMARY REPORT

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 5
Legal Location:
Collection Date: 5/21/2020 15:50

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-5
Matrix: SOIL
Percent Moisture: 16.3

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	ND		9.5	MG/KG	1	6/1/2020 17:29
Surr: O-TERPHENYL	87		56-120	%REC	1	6/1/2020 17:29
GC/MS Volatiles			SW8260		Prep Date: 5/28/2020	PrepBy: TWK
BENZENE	ND		5.4	UG/KG	1	5/28/2020 21:19
TOLUENE	ND		5.4	UG/KG	1	5/28/2020 21:19
ETHYLBENZENE	ND		5.4	UG/KG	1	5/28/2020 21:19
M+P-XYLENE	ND		7.5	UG/KG	1	5/28/2020 21:19
O-XYLENE	ND		5.4	UG/KG	1	5/28/2020 21:19
Surr: DIBROMOFLUOROMETHANE	104		77-125	%REC	1	5/28/2020 21:19
Surr: TOLUENE-D8	96		80-120	%REC	1	5/28/2020 21:19
Surr: 4-BROMOFLUOROBENZENE	102		71-121	%REC	1	5/28/2020 21:19
GASOLINE RANGE ORGANICS	560	J	540	UG/KG	1	5/28/2020 21:19
Hexavalent Chromium			SW7196		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM VI	ND		0.12	MG/KG	1	6/2/2020
ICP Metals			SW6010		Prep Date: 5/28/2020	PrepBy: JML
SILVER	ND		1.2	MG/KG	1	5/29/2020 13:52
ARSENIC	ND		3.6	MG/KG	1	5/29/2020 13:52
BORON	ND		12	MG/KG	1	5/29/2020 13:52
BARIUM	110		12	MG/KG	1	5/29/2020 13:52
CADMIUM	ND		0.59	MG/KG	1	5/29/2020 13:52
CHROMIUM	11		1.2	MG/KG	1	5/29/2020 13:52
COPPER	10		1.2	MG/KG	1	5/29/2020 13:52
NICKEL	11		2.4	MG/KG	1	5/29/2020 13:52
LEAD	10		2.4	MG/KG	1	5/29/2020 13:52
SELENIUM	ND		3.6	MG/KG	1	5/29/2020 13:52
ZINC	35		2.4	MG/KG	1	5/29/2020 13:52
Mercury			SW7471		Prep Date: 5/29/2020	PrepBy: JRS
MERCURY	ND		0.04	MG/KG	1	6/3/2020 16:58
Sodium Adsorption Ratio			USDA60		Prep Date: 6/3/2020	PrepBy: LMC
PASTE PH	8.3		0.1	pH	1	6/3/2020
Trivalent Chromium (from Total Cr - Cr+6)			CRIII		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM III	11		1.2	MG/KG	1	6/2/2020

ALS -- Fort Collins

SAMPLE SUMMARY REPORT

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 6
Legal Location:
Collection Date: 5/21/2020 16:15

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-6
Matrix: SOIL
Percent Moisture: 10.0

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	ND		8.9	MG/KG	1	6/1/2020 18:33
Surr: O-TERPHENYL	95		56-120	%REC	1	6/1/2020 18:33
GC/MS Volatiles			SW8260		Prep Date: 5/28/2020	PrepBy: TWK
BENZENE	ND		5.3	UG/KG	1	5/28/2020 21:42
TOLUENE	ND		5.3	UG/KG	1	5/28/2020 21:42
ETHYLBENZENE	ND		5.3	UG/KG	1	5/28/2020 21:42
M+P-XYLENE	ND		7.5	UG/KG	1	5/28/2020 21:42
O-XYLENE	ND		5.3	UG/KG	1	5/28/2020 21:42
Surr: DIBROMOFLUOROMETHANE	101		77-125	%REC	1	5/28/2020 21:42
Surr: TOLUENE-D8	98		80-120	%REC	1	5/28/2020 21:42
Surr: 4-BROMOFLUOROBENZENE	97		71-121	%REC	1	5/28/2020 21:42
GASOLINE RANGE ORGANICS	ND		530	UG/KG	1	5/28/2020 21:42
Hexavalent Chromium			SW7196		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM VI	ND		0.11	MG/KG	1	6/2/2020
ICP Metals			SW6010		Prep Date: 5/28/2020	PrepBy: JML
SILVER	ND		1.1	MG/KG	1	5/29/2020 13:53
ARSENIC	3.4		3.3	MG/KG	1	5/29/2020 13:53
BORON	ND		11	MG/KG	1	5/29/2020 13:53
BARIUM	98		11	MG/KG	1	5/29/2020 13:53
CADMIUM	ND		0.55	MG/KG	1	5/29/2020 13:53
CHROMIUM	12		1.1	MG/KG	1	5/29/2020 13:53
COPPER	10		1.1	MG/KG	1	5/29/2020 13:53
NICKEL	7.5		2.2	MG/KG	1	5/29/2020 13:53
LEAD	7.8		2.2	MG/KG	1	5/29/2020 13:53
SELENIUM	ND		3.3	MG/KG	1	5/29/2020 13:53
ZINC	29		2.2	MG/KG	1	5/29/2020 13:53
Mercury			SW7471		Prep Date: 5/29/2020	PrepBy: JRS
MERCURY	ND		0.037	MG/KG	1	6/3/2020 17:00
Sodium Adsorption Ratio			USDA60		Prep Date: 6/3/2020	PrepBy: LMC
PASTE PH	8		0.1	pH	1	6/3/2020
Trivalent Chromium (from Total Cr - Cr+6)			CRIII		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM III	12		1.1	MG/KG	1	6/2/2020

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SAMPLE SUMMARY REPORT

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 7
Legal Location:
Collection Date: 5/21/2020 16:30

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-7
Matrix: SOIL
Percent Moisture: 15.2

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	ND		9.3	MG/KG	1	6/1/2020 18:54
Surr: O-TERPHENYL	89		56-120	%REC	1	6/1/2020 18:54
GC/MS Volatiles			SW8260		Prep Date: 5/28/2020	PrepBy: TWK
BENZENE	ND		5.6	UG/KG	1	5/28/2020 22:05
TOLUENE	ND		5.6	UG/KG	1	5/28/2020 22:05
ETHYLBENZENE	ND		5.6	UG/KG	1	5/28/2020 22:05
M+P-XYLENE	ND		7.9	UG/KG	1	5/28/2020 22:05
O-XYLENE	ND		5.6	UG/KG	1	5/28/2020 22:05
Surr: DIBROMOFLUOROMETHANE	107		77-125	%REC	1	5/28/2020 22:05
Surr: TOLUENE-D8	94		80-120	%REC	1	5/28/2020 22:05
Surr: 4-BROMOFLUOROBENZENE	98		71-121	%REC	1	5/28/2020 22:05
GASOLINE RANGE ORGANICS	ND		560	UG/KG	1	5/28/2020 22:05
Hexavalent Chromium			SW7196		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM VI	ND		0.11	MG/KG	1	6/2/2020
ICP Metals			SW6010		Prep Date: 5/28/2020	PrepBy: JML
SILVER	ND		1.2	MG/KG	1	5/29/2020 13:54
ARSENIC	ND		3.5	MG/KG	1	5/29/2020 13:54
BORON	ND		12	MG/KG	1	5/29/2020 13:54
BARIUM	100		12	MG/KG	1	5/29/2020 13:54
CADMIUM	ND		0.59	MG/KG	1	5/29/2020 13:54
CHROMIUM	10		1.2	MG/KG	1	5/29/2020 13:54
COPPER	9.9		1.2	MG/KG	1	5/29/2020 13:54
NICKEL	8.7		2.4	MG/KG	1	5/29/2020 13:54
LEAD	13		2.4	MG/KG	1	5/29/2020 13:54
SELENIUM	ND		3.5	MG/KG	1	5/29/2020 13:54
ZINC	37		2.4	MG/KG	1	5/29/2020 13:54
Mercury			SW7471		Prep Date: 5/29/2020	PrepBy: JRS
MERCURY	ND		0.037	MG/KG	1	6/3/2020 17:07
Sodium Adsorption Ratio			USDA60		Prep Date: 6/3/2020	PrepBy: LMC
PASTE PH	8		0.1	pH	1	6/3/2020
Trivalent Chromium (from Total Cr - Cr+6)			CRIII		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM III	10		1.2	MG/KG	1	6/2/2020

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SAMPLE SUMMARY REPORT

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 8
Legal Location:
Collection Date: 5/22/2020 10:30

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-8
Matrix: SOIL
Percent Moisture: 17.3

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	ND		9.6	MG/KG	1	6/1/2020 19:16
Surr: O-TERPHENYL	92		56-120	%REC	1	6/1/2020 19:16
GC/MS Volatiles			SW8260		Prep Date: 5/28/2020	PrepBy: TWK
BENZENE	ND		5.7	UG/KG	1	5/28/2020 22:27
TOLUENE	ND		5.7	UG/KG	1	5/28/2020 22:27
ETHYLBENZENE	ND		5.7	UG/KG	1	5/28/2020 22:27
M+P-XYLENE	ND		8	UG/KG	1	5/28/2020 22:27
O-XYLENE	ND		5.7	UG/KG	1	5/28/2020 22:27
Surr: DIBROMOFLUOROMETHANE	103		77-125	%REC	1	5/28/2020 22:27
Surr: TOLUENE-D8	98		80-120	%REC	1	5/28/2020 22:27
Surr: 4-BROMOFLUOROBENZENE	98		71-121	%REC	1	5/28/2020 22:27
GASOLINE RANGE ORGANICS	ND		570	UG/KG	1	5/28/2020 22:27
Hexavalent Chromium			SW7196		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM VI	ND		0.12	MG/KG	1	6/2/2020
ICP Metals			SW6010		Prep Date: 5/28/2020	PrepBy: JML
SILVER	ND		1.2	MG/KG	1	5/29/2020 13:55
ARSENIC	4.5		3.5	MG/KG	1	5/29/2020 13:55
BORON	ND		12	MG/KG	1	5/29/2020 13:55
BARIUM	130		12	MG/KG	1	5/29/2020 13:55
CADMIUM	ND		0.59	MG/KG	1	5/29/2020 13:55
CHROMIUM	11		1.2	MG/KG	1	5/29/2020 13:55
COPPER	9.8		1.2	MG/KG	1	5/29/2020 13:55
NICKEL	11		2.4	MG/KG	1	5/29/2020 13:55
LEAD	9.1		2.4	MG/KG	1	5/29/2020 13:55
SELENIUM	ND		3.5	MG/KG	1	5/29/2020 13:55
ZINC	33		2.4	MG/KG	1	5/29/2020 13:55
Mercury			SW7471		Prep Date: 5/29/2020	PrepBy: JRS
MERCURY	ND		0.04	MG/KG	1	6/3/2020 17:09
Sodium Adsorption Ratio			USDA60		Prep Date: 6/3/2020	PrepBy: LMC
PASTE PH	8.5		0.1	pH	1	6/3/2020
Trivalent Chromium (from Total Cr - Cr+6)			CRIII		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM III	11		1.2	MG/KG	1	6/2/2020

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SAMPLE SUMMARY REPORT

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 9
Legal Location:
Collection Date: 5/22/2020 10:40

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-9
Matrix: SOIL
Percent Moisture: 18.8

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	ND		9.8	MG/KG	1	6/1/2020 19:37
Surr: O-TERPHENYL	90		56-120	%REC	1	6/1/2020 19:37
GC/MS Volatiles			SW8260		Prep Date: 5/28/2020	PrepBy: TWK
BENZENE	ND		6	UG/KG	1	5/28/2020 22:50
TOLUENE	ND		6	UG/KG	1	5/28/2020 22:50
ETHYLBENZENE	ND		6	UG/KG	1	5/28/2020 22:50
M+P-XYLENE	ND		8.4	UG/KG	1	5/28/2020 22:50
O-XYLENE	ND		6	UG/KG	1	5/28/2020 22:50
Surr: DIBROMOFLUOROMETHANE	101		77-125	%REC	1	5/28/2020 22:50
Surr: TOLUENE-D8	98		80-120	%REC	1	5/28/2020 22:50
Surr: 4-BROMOFLUOROBENZENE	93		71-121	%REC	1	5/28/2020 22:50
GASOLINE RANGE ORGANICS	ND		600	UG/KG	1	5/28/2020 22:50
Hexavalent Chromium			SW7196		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM VI	ND		0.12	MG/KG	1	6/2/2020
ICP Metals			SW6010		Prep Date: 5/28/2020	PrepBy: JML
SILVER	ND		1.1	MG/KG	1	5/29/2020 13:56
ARSENIC	ND		3.4	MG/KG	1	5/29/2020 13:56
BORON	ND		11	MG/KG	1	5/29/2020 13:56
BARIUM	120		11	MG/KG	1	5/29/2020 13:56
CADMIUM	ND		0.57	MG/KG	1	5/29/2020 13:56
CHROMIUM	11		1.1	MG/KG	1	5/29/2020 13:56
COPPER	9.6		1.1	MG/KG	1	5/29/2020 13:56
NICKEL	10		2.3	MG/KG	1	5/29/2020 13:56
LEAD	10		2.3	MG/KG	1	5/29/2020 13:56
SELENIUM	ND		3.4	MG/KG	1	5/29/2020 13:56
ZINC	35		2.3	MG/KG	1	5/29/2020 13:56
Mercury			SW7471		Prep Date: 5/29/2020	PrepBy: JRS
MERCURY	ND		0.039	MG/KG	1	6/3/2020 17:11
Sodium Adsorption Ratio			USDA60		Prep Date: 6/3/2020	PrepBy: LMC
PASTE PH	8.6		0.1	pH	1	6/3/2020
Trivalent Chromium (from Total Cr - Cr+6)			CRIII		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM III	11		1.1	MG/KG	1	6/2/2020

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 10
Legal Location:
Collection Date: 5/22/2020 10:50

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-10
Matrix: SOIL
Percent Moisture: 17.1

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	ND		9.6	MG/KG	1	6/1/2020 19:58
Surr: O-TERPHENYL	91		56-120	%REC	1	6/1/2020 19:58
GC/MS Volatiles			SW8260		Prep Date: 5/28/2020	PrepBy: TWK
BENZENE	ND		6	UG/KG	1	5/28/2020 23:13
TOLUENE	ND		6	UG/KG	1	5/28/2020 23:13
ETHYLBENZENE	ND		6	UG/KG	1	5/28/2020 23:13
M+P-XYLENE	ND		8.4	UG/KG	1	5/28/2020 23:13
O-XYLENE	ND		6	UG/KG	1	5/28/2020 23:13
Surr: DIBROMOFLUOROMETHANE	98		77-125	%REC	1	5/28/2020 23:13
Surr: TOLUENE-D8	100		80-120	%REC	1	5/28/2020 23:13
Surr: 4-BROMOFLUOROBENZENE	98		71-121	%REC	1	5/28/2020 23:13
GASOLINE RANGE ORGANICS	ND		600	UG/KG	1	5/28/2020 23:13
Hexavalent Chromium			SW7196		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM VI	ND		0.12	MG/KG	1	6/2/2020
ICP Metals			SW6010		Prep Date: 5/28/2020	PrepBy: JML
SILVER	ND		1.2	MG/KG	1	5/29/2020 13:57
ARSENIC	4.8		3.6	MG/KG	1	5/29/2020 13:57
BORON	ND		12	MG/KG	1	5/29/2020 13:57
BARIUM	150		12	MG/KG	1	5/29/2020 13:57
CADMIUM	ND		0.6	MG/KG	1	5/29/2020 13:57
CHROMIUM	11		1.2	MG/KG	1	5/29/2020 13:57
COPPER	11		1.2	MG/KG	1	5/29/2020 13:57
NICKEL	11		2.4	MG/KG	1	5/29/2020 13:57
LEAD	9.5		2.4	MG/KG	1	5/29/2020 13:57
SELENIUM	ND		3.6	MG/KG	1	5/29/2020 13:57
ZINC	33		2.4	MG/KG	1	5/29/2020 13:57
Mercury			SW7471		Prep Date: 5/29/2020	PrepBy: JRS
MERCURY	ND		0.04	MG/KG	1	6/3/2020 17:13
Sodium Adsorption Ratio			USDA60		Prep Date: 6/3/2020	PrepBy: LMC
PASTE PH	8.4		0.1	pH	1	6/3/2020
Trivalent Chromium (from Total Cr - Cr+6)			CRIII		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM III	11		1.2	MG/KG	1	6/2/2020

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 11
Legal Location:
Collection Date: 5/22/2020 11:10

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-11
Matrix: SOIL
Percent Moisture: 17.2

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	ND		9.6	MG/KG	1	6/1/2020 20:20
Surr: O-TERPHENYL	89		56-120	%REC	1	6/1/2020 20:20
GC/MS Volatiles			SW8260		Prep Date: 5/28/2020	PrepBy: TWK
BENZENE	ND		5.8	UG/KG	1	5/28/2020 23:36
TOLUENE	ND		5.8	UG/KG	1	5/28/2020 23:36
ETHYLBENZENE	ND		5.8	UG/KG	1	5/28/2020 23:36
M+P-XYLENE	ND		8.1	UG/KG	1	5/28/2020 23:36
O-XYLENE	ND		5.8	UG/KG	1	5/28/2020 23:36
Surr: DIBROMOFLUOROMETHANE	99		77-125	%REC	1	5/28/2020 23:36
Surr: TOLUENE-D8	100		80-120	%REC	1	5/28/2020 23:36
Surr: 4-BROMOFLUOROBENZENE	96		71-121	%REC	1	5/28/2020 23:36
GASOLINE RANGE ORGANICS	ND		580	UG/KG	1	5/28/2020 23:36
Hexavalent Chromium			SW7196		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM VI	ND		0.12	MG/KG	1	6/2/2020
ICP Metals			SW6010		Prep Date: 5/28/2020	PrepBy: JML
SILVER	ND		1.1	MG/KG	1	5/29/2020 13:58
ARSENIC	3.5		3.2	MG/KG	1	5/29/2020 13:58
BORON	ND		11	MG/KG	1	5/29/2020 13:58
BARIUM	120		11	MG/KG	1	5/29/2020 13:58
CADMIUM	ND		0.53	MG/KG	1	5/29/2020 13:58
CHROMIUM	11		1.1	MG/KG	1	5/29/2020 13:58
COPPER	9.8		1.1	MG/KG	1	5/29/2020 13:58
NICKEL	10		2.1	MG/KG	1	5/29/2020 13:58
LEAD	9.9		2.1	MG/KG	1	5/29/2020 13:58
SELENIUM	ND		3.2	MG/KG	1	5/29/2020 13:58
ZINC	35		2.1	MG/KG	1	5/29/2020 13:58
Mercury			SW7471		Prep Date: 5/29/2020	PrepBy: JRS
MERCURY	ND		0.037	MG/KG	1	6/3/2020 17:15
Sodium Adsorption Ratio			USDA60		Prep Date: 6/3/2020	PrepBy: LMC
PASTE PH	7.2		0.1	pH	1	6/3/2020
Trivalent Chromium (from Total Cr - Cr+6)			CRIII		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM III	11		1.1	MG/KG	1	6/2/2020

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 12
Legal Location:
Collection Date: 5/22/2020 11:55

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-12
Matrix: SOIL
Percent Moisture: 19.5

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	ND		9.8	MG/KG	1	6/1/2020 20:41
Surr: O-TERPHENYL	90		56-120	%REC	1	6/1/2020 20:41
GC/MS Volatiles			SW8260		Prep Date: 5/28/2020	PrepBy: TWK
BENZENE	ND		5.7	UG/KG	1	5/28/2020 23:58
TOLUENE	ND		5.7	UG/KG	1	5/28/2020 23:58
ETHYLBENZENE	ND		5.7	UG/KG	1	5/28/2020 23:58
M+P-XYLENE	ND		8	UG/KG	1	5/28/2020 23:58
O-XYLENE	ND		5.7	UG/KG	1	5/28/2020 23:58
Surr: DIBROMOFLUOROMETHANE	99		77-125	%REC	1	5/28/2020 23:58
Surr: TOLUENE-D8	103		80-120	%REC	1	5/28/2020 23:58
Surr: 4-BROMOFLUOROBENZENE	96		71-121	%REC	1	5/28/2020 23:58
GASOLINE RANGE ORGANICS	ND		570	UG/KG	1	5/28/2020 23:58
Hexavalent Chromium			SW7196		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM VI	ND		0.12	MG/KG	1	6/2/2020
ICP Metals			SW6010		Prep Date: 5/28/2020	PrepBy: JML
SILVER	ND		1.2	MG/KG	1	5/29/2020 13:59
ARSENIC	4.2		3.5	MG/KG	1	5/29/2020 13:59
BORON	ND		12	MG/KG	1	5/29/2020 13:59
BARIUM	120		12	MG/KG	1	5/29/2020 13:59
CADMIUM	ND		0.59	MG/KG	1	5/29/2020 13:59
CHROMIUM	13		1.2	MG/KG	1	5/29/2020 13:59
COPPER	11		1.2	MG/KG	1	5/29/2020 13:59
NICKEL	10		2.3	MG/KG	1	5/29/2020 13:59
LEAD	11		2.3	MG/KG	1	5/29/2020 13:59
SELENIUM	ND		3.5	MG/KG	1	5/29/2020 13:59
ZINC	39		2.3	MG/KG	1	5/29/2020 13:59
Mercury			SW7471		Prep Date: 5/29/2020	PrepBy: JRS
MERCURY	ND		0.04	MG/KG	1	6/3/2020 17:18
Sodium Adsorption Ratio			USDA60		Prep Date: 6/3/2020	PrepBy: LMC
PASTE PH	7.5		0.1	pH	1	6/3/2020
Trivalent Chromium (from Total Cr - Cr+6)			CRIII		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM III	13		1.2	MG/KG	1	6/2/2020

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 13
Legal Location:
Collection Date: 5/22/2020 12:50

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-13
Matrix: SOIL
Percent Moisture: 17.7

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	3.4	J	9.6	MG/KG	1	6/1/2020 21:02
Surr: O-TERPHENYL	88		56-120	%REC	1	6/1/2020 21:02
GC/MS Volatiles			SW8260		Prep Date: 5/28/2020	PrepBy: TWK
BENZENE	ND		6	UG/KG	1	5/29/2020 00:21
TOLUENE	ND		6	UG/KG	1	5/29/2020 00:21
ETHYLBENZENE	ND		6	UG/KG	1	5/29/2020 00:21
M+P-XYLENE	ND		8.4	UG/KG	1	5/29/2020 00:21
O-XYLENE	ND		6	UG/KG	1	5/29/2020 00:21
Surr: DIBROMOFLUOROMETHANE	102		77-125	%REC	1	5/29/2020 00:21
Surr: TOLUENE-D8	99		80-120	%REC	1	5/29/2020 00:21
Surr: 4-BROMOFLUOROBENZENE	95		71-121	%REC	1	5/29/2020 00:21
GASOLINE RANGE ORGANICS	ND		600	UG/KG	1	5/29/2020 00:21
Hexavalent Chromium			SW7196		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM VI	ND		0.12	MG/KG	1	6/2/2020
ICP Metals			SW6010		Prep Date: 5/28/2020	PrepBy: JML
SILVER	ND		1.1	MG/KG	1	5/29/2020 14:00
ARSENIC	ND		3.3	MG/KG	1	5/29/2020 14:00
BORON	ND		11	MG/KG	1	5/29/2020 14:00
BARIUM	110		11	MG/KG	1	5/29/2020 14:00
CADMIUM	ND		0.55	MG/KG	1	5/29/2020 14:00
CHROMIUM	11		1.1	MG/KG	1	5/29/2020 14:00
COPPER	9.9		1.1	MG/KG	1	5/29/2020 14:00
NICKEL	9.3		2.2	MG/KG	1	5/29/2020 14:00
LEAD	12		2.2	MG/KG	1	5/29/2020 14:00
SELENIUM	ND		3.3	MG/KG	1	5/29/2020 14:00
ZINC	35		2.2	MG/KG	1	5/29/2020 14:00
Mercury			SW7471		Prep Date: 5/29/2020	PrepBy: JRS
MERCURY	ND		0.039	MG/KG	1	6/3/2020 17:20
Sodium Adsorption Ratio			USDA60		Prep Date: 6/3/2020	PrepBy: LMC
PASTE PH	7.4		0.1	pH	1	6/3/2020
Trivalent Chromium (from Total Cr - Cr+6)			CRIII		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM III	11		1.1	MG/KG	1	6/2/2020

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SAMPLE SUMMARY REPORT

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 14
Legal Location:
Collection Date: 5/22/2020 13:35

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-14
Matrix: SOIL
Percent Moisture: 10.9

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	3.9	J	8.8	MG/KG	1	6/1/2020 21:23
Surr: O-TERPHENYL	86		56-120	%REC	1	6/1/2020 21:23
GC/MS Volatiles			SW8260		Prep Date: 5/28/2020	PrepBy: TWK
BENZENE	ND		5.4	UG/KG	1	5/29/2020 00:44
TOLUENE	ND		5.4	UG/KG	1	5/29/2020 00:44
ETHYLBENZENE	ND		5.4	UG/KG	1	5/29/2020 00:44
M+P-XYLENE	ND		7.5	UG/KG	1	5/29/2020 00:44
O-XYLENE	ND		5.4	UG/KG	1	5/29/2020 00:44
Surr: DIBROMOFLUOROMETHANE	102		77-125	%REC	1	5/29/2020 00:44
Surr: TOLUENE-D8	96		80-120	%REC	1	5/29/2020 00:44
Surr: 4-BROMOFLUOROBENZENE	95		71-121	%REC	1	5/29/2020 00:44
GASOLINE RANGE ORGANICS	ND		540	UG/KG	1	5/29/2020 00:44
Hexavalent Chromium			SW7196		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM VI	ND		0.11	MG/KG	1	6/2/2020
ICP Metals			SW6010		Prep Date: 5/28/2020	PrepBy: JML
SILVER	ND		0.99	MG/KG	1	5/29/2020 14:01
ARSENIC	3.7		3	MG/KG	1	5/29/2020 14:01
BORON	ND		9.9	MG/KG	1	5/29/2020 14:01
BARIUM	100		9.9	MG/KG	1	5/29/2020 14:01
CADMIUM	ND		0.49	MG/KG	1	5/29/2020 14:01
CHROMIUM	11		0.99	MG/KG	1	5/29/2020 14:01
COPPER	9.8		0.99	MG/KG	1	5/29/2020 14:01
NICKEL	9.2		2	MG/KG	1	5/29/2020 14:01
LEAD	11		2	MG/KG	1	5/29/2020 14:01
SELENIUM	ND		3	MG/KG	1	5/29/2020 14:01
ZINC	34		2	MG/KG	1	5/29/2020 14:01
Mercury			SW7471		Prep Date: 5/29/2020	PrepBy: JRS
MERCURY	ND		0.036	MG/KG	1	6/3/2020 17:22
Sodium Adsorption Ratio			USDA60		Prep Date: 6/3/2020	PrepBy: LMC
PASTE PH	7.7		0.1	pH	1	6/3/2020
Trivalent Chromium (from Total Cr - Cr+6)			CRIII		Prep Date: 6/2/2020	PrepBy: KJS
CHROMIUM III	11		0.99	MG/KG	1	6/2/2020

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: WATER 1
Legal Location:
Collection Date: 5/22/2020 13:50

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-15
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	21		1	MG/L	1	6/1/2020 23:30
Surr: O-TERPHENYL	71		69-120	%REC	1	6/1/2020 23:30
GC/MS Volatiles			SW8260_25		Prep Date: 6/5/2020	PrepBy: C1A
BENZENE	1500		50	UG/L	50	6/5/2020 15:06
ETHYLBENZENE	130		50	UG/L	50	6/5/2020 15:06
M+P-XYLENE	2600		50	UG/L	50	6/5/2020 15:06
O-XYLENE	810		50	UG/L	50	6/5/2020 15:06
TOLUENE	6500		200	UG/L	200	6/5/2020 14:47
Surr: 4-BROMOFLUOROBENZENE	103		80-120	%REC	200	6/5/2020 14:47
Surr: 4-BROMOFLUOROBENZENE	100		80-120	%REC	50	6/5/2020 15:06
Surr: DIBROMOFLUOROMETHANE	102		80-120	%REC	50	6/5/2020 15:06
Surr: DIBROMOFLUOROMETHANE	101		80-120	%REC	200	6/5/2020 14:47
Surr: TOLUENE-D8	102		80-120	%REC	50	6/5/2020 15:06
Surr: TOLUENE-D8	100		80-120	%REC	200	6/5/2020 14:47
GASOLINE RANGE ORGANICS	44000	B	20000	UG/L	200	6/5/2020 14:47
Ion Chromatography			SW9056		Prep Date: 5/29/2020	PrepBy: KJS
CHLORIDE	950		10	MG/L	50	5/29/2020 14:05
SULFATE	3900		50	MG/L	50	5/29/2020 14:05
Total Dissolved Solids			SM2540C		Prep Date: 5/27/2020	PrepBy: LMC
TOTAL DISSOLVED SOLIDS	7400		200	MG/L	1	5/29/2020

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: WATER 2
Legal Location:
Collection Date: 5/22/2020 13:50

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-16
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 5/28/2020	PrepBy: JRS
Diesel Range Organics	0.48	J	1	MG/L	1	6/1/2020 23:52
Surr: O-TERPHENYL	80		69-120	%REC	1	6/1/2020 23:52
GC/MS Volatiles			SW8260_25		Prep Date: 6/5/2020	PrepBy: C1A
BENZENE	1.6		1	UG/L	1	6/5/2020 15:46
ETHYLBENZENE	0.58	J	1	UG/L	1	6/5/2020 15:46
M+P-XYLENE	7		1	UG/L	1	6/5/2020 15:46
O-XYLENE	1.5		1	UG/L	1	6/5/2020 15:46
TOLUENE	9		1	UG/L	1	6/5/2020 15:46
Surr: 4-BROMOFLUOROBENZENE	100		80-120	%REC	1	6/5/2020 15:46
Surr: DIBROMOFLUOROMETHANE	101		80-120	%REC	1	6/5/2020 15:46
Surr: TOLUENE-D8	99		80-120	%REC	1	6/5/2020 15:46
GASOLINE RANGE ORGANICS	82	JB	100	UG/L	1	6/5/2020 15:46
Ion Chromatography			SW9056		Prep Date: 5/29/2020	PrepBy: KJS
CHLORIDE	410		10	MG/L	50	5/29/2020 14:45
SULFATE	1800		50	MG/L	50	5/29/2020 14:45
Total Dissolved Solids			SM2540C		Prep Date: 5/27/2020	PrepBy: LMC
TOTAL DISSOLVED SOLIDS	3600		80	MG/L	1	5/29/2020

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 1
Legal Location:
Collection Date: 5/21/2020 14:10

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-17
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 5/28/2020	PrepBy: JML
CALCIUM	79		10	MG/L	10	5/29/2020 14:08
MAGNESIUM	140		10	MG/L	10	5/29/2020 14:08
SODIUM	760		10	MG/L	10	5/29/2020 14:08
Sodium Adsorption Ratio						
		USDA60			Prep Date: 6/1/2020	PrepBy: LMC
ELECTRICAL CONDUCTIVITY @ SATURATION	5300		1	umhos/cm	1	6/1/2020
SODIUM ADSORPTION RATIO	12		0.54	NU	10	5/29/2020 14:08

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 2
Legal Location:
Collection Date: 5/21/2020 14:35

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-18
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 5/28/2020	PrepBy: JML
CALCIUM	110		10	MG/L	10	5/29/2020 14:09
MAGNESIUM	210		10	MG/L	10	5/29/2020 14:09
SODIUM	1300		10	MG/L	10	5/29/2020 14:09
Sodium Adsorption Ratio						
		USDA60			Prep Date: 6/1/2020	PrepBy: LMC
ELECTRICAL CONDUCTIVITY @ SATURATION	8200		1	umhos/cm	1	6/1/2020
SODIUM ADSORPTION RATIO	16		0.54	NU	10	5/29/2020 14:09

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 3
Legal Location:
Collection Date: 5/21/2020 15:05

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-19
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 5/28/2020	PrepBy: JML
CALCIUM	470		10	MG/L	10	5/29/2020 14:10
MAGNESIUM	530		10	MG/L	10	5/29/2020 14:10
SODIUM	1900		100	MG/L	100	5/29/2020 14:32
Sodium Adsorption Ratio						
		USDA60			Prep Date: 6/1/2020	PrepBy: LMC
ELECTRICAL CONDUCTIVITY @ SATURATION	15000		1	umhos/cm	1	6/1/2020
SODIUM ADSORPTION RATIO	14		5.4	NU	100	5/29/2020 14:32

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 4
Legal Location:
Collection Date: 5/21/2020 15:30

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-20
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 5/28/2020	PrepBy: JML
CALCIUM	97		10	MG/L	10	5/29/2020 14:11
MAGNESIUM	180		10	MG/L	10	5/29/2020 14:11
SODIUM	910		10	MG/L	10	5/29/2020 14:11
Sodium Adsorption Ratio						
		USDA60			Prep Date: 6/1/2020	PrepBy: LMC
ELECTRICAL CONDUCTIVITY @ SATURATION	6400		1	umhos/cm	1	6/1/2020
SODIUM ADSORPTION RATIO	13		0.54	NU	10	5/29/2020 14:11

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 5
Legal Location:
Collection Date: 5/21/2020 15:50

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-21
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 5/28/2020	PrepBy: JML
CALCIUM	140		10	MG/L	10	5/29/2020 14:12
MAGNESIUM	150		10	MG/L	10	5/29/2020 14:12
SODIUM	730		10	MG/L	10	5/29/2020 14:12
Sodium Adsorption Ratio						
		USDA60			Prep Date: 6/1/2020	PrepBy: LMC
ELECTRICAL CONDUCTIVITY @ SATURATION	5700		1	umhos/cm	1	6/1/2020
SODIUM ADSORPTION RATIO	10		0.54	NU	10	5/29/2020 14:12

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 6
Legal Location:
Collection Date: 5/21/2020 16:15

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-22
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 5/28/2020	PrepBy: JML
CALCIUM	300		10	MG/L	10	5/29/2020 14:13
MAGNESIUM	50		10	MG/L	10	5/29/2020 14:13
SODIUM	210		10	MG/L	10	5/29/2020 14:13
Sodium Adsorption Ratio						
		USDA60			Prep Date: 6/1/2020	PrepBy: LMC
ELECTRICAL CONDUCTIVITY @ SATURATION	3500		1	umhos/cm	1	6/1/2020
SODIUM ADSORPTION RATIO	3		0.54	NU	10	5/29/2020 14:13

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 7
Legal Location:
Collection Date: 5/21/2020 16:30

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-23
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 5/28/2020	PrepBy: JML
CALCIUM	69		10	MG/L	10	5/29/2020 14:14
MAGNESIUM	25		10	MG/L	10	5/29/2020 14:14
SODIUM	23		10	MG/L	10	5/29/2020 14:14
Sodium Adsorption Ratio						
		USDA60			Prep Date: 6/1/2020	PrepBy: LMC
ELECTRICAL CONDUCTIVITY @ SATURATION	760		1	umhos/cm	1	6/1/2020
SODIUM ADSORPTION RATIO	0.61		0.54	NU	10	5/29/2020 14:14

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 8
Legal Location:
Collection Date: 5/22/2020 10:30

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-24
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 5/28/2020	PrepBy: JML
CALCIUM	59		10	MG/L	10	5/29/2020 14:15
MAGNESIUM	95		10	MG/L	10	5/29/2020 14:15
SODIUM	720		10	MG/L	10	5/29/2020 14:15
Sodium Adsorption Ratio						
		USDA60			Prep Date: 6/1/2020	PrepBy: LMC
ELECTRICAL CONDUCTIVITY @ SATURATION	4800		1	umhos/cm	1	6/1/2020
SODIUM ADSORPTION RATIO	14		0.54	NU	10	5/29/2020 14:15

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 9
Legal Location:
Collection Date: 5/22/2020 10:40

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-25
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 5/28/2020	PrepBy: JML
CALCIUM	61		10	MG/L	10	5/29/2020 14:16
MAGNESIUM	35		10	MG/L	10	5/29/2020 14:16
SODIUM	550		10	MG/L	10	5/29/2020 14:16
Sodium Adsorption Ratio						
		USDA60			Prep Date: 6/1/2020	PrepBy: LMC
ELECTRICAL CONDUCTIVITY @ SATURATION	3400		1	umhos/cm	1	6/1/2020
SODIUM ADSORPTION RATIO	14		0.54	NU	10	5/29/2020 14:16

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 10
Legal Location:
Collection Date: 5/22/2020 10:50

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-26
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 5/28/2020	PrepBy: JML
CALCIUM	63		10	MG/L	10	5/29/2020 14:19
MAGNESIUM	85		10	MG/L	10	5/29/2020 14:19
SODIUM	360		10	MG/L	10	5/29/2020 14:19
Sodium Adsorption Ratio						
		USDA60			Prep Date: 6/1/2020	PrepBy: LMC
ELECTRICAL CONDUCTIVITY @ SATURATION	2800		1	umhos/cm	1	6/1/2020
SODIUM ADSORPTION RATIO	6.9		0.54	NU	10	5/29/2020 14:19

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 11
Legal Location:
Collection Date: 5/22/2020 11:10

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-27
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 5/28/2020	PrepBy: JML
CALCIUM	120		10	MG/L	10	5/29/2020 14:20
MAGNESIUM	39		10	MG/L	10	5/29/2020 14:20
SODIUM	260		10	MG/L	10	5/29/2020 14:20
Sodium Adsorption Ratio						
		USDA60			Prep Date: 6/1/2020	PrepBy: LMC
ELECTRICAL CONDUCTIVITY @ SATURATION	2300		1	umhos/cm	1	6/1/2020
SODIUM ADSORPTION RATIO	5.4		0.54	NU	10	5/29/2020 14:20

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 12
Legal Location:
Collection Date: 5/22/2020 11:55

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-28
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 5/28/2020	PrepBy: JML
CALCIUM	100		10	MG/L	10	5/29/2020 14:22
MAGNESIUM	40		10	MG/L	10	5/29/2020 14:22
SODIUM	260		10	MG/L	10	5/29/2020 14:22
Sodium Adsorption Ratio						
		USDA60			Prep Date: 6/1/2020	PrepBy: LMC
ELECTRICAL CONDUCTIVITY @ SATURATION	2100		1	umhos/cm	1	6/1/2020
SODIUM ADSORPTION RATIO	5.5		0.54	NU	10	5/29/2020 14:22

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 13
Legal Location:
Collection Date: 5/22/2020 12:50

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-29
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 5/28/2020	PrepBy: JML
CALCIUM	500		10	MG/L	10	5/29/2020 14:23
MAGNESIUM	300		10	MG/L	10	5/29/2020 14:23
SODIUM	1300		10	MG/L	10	5/29/2020 14:23
Sodium Adsorption Ratio						
		USDA60			Prep Date: 6/1/2020	PrepBy: LMC
ELECTRICAL CONDUCTIVITY @ SATURATION	11000		1	umhos/cm	1	6/1/2020
SODIUM ADSORPTION RATIO	12		0.54	NU	10	5/29/2020 14:23

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 14
Legal Location:
Collection Date: 5/22/2020 13:35

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-30
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 5/28/2020	PrepBy: JML
CALCIUM	430		10	MG/L	10	5/29/2020 14:24
MAGNESIUM	260		10	MG/L	10	5/29/2020 14:24
SODIUM	1100		10	MG/L	10	5/29/2020 14:24
Sodium Adsorption Ratio						
		USDA60			Prep Date: 6/1/2020	PrepBy: LMC
ELECTRICAL CONDUCTIVITY @ SATURATION	9400		1	umhos/cm	1	6/1/2020
SODIUM ADSORPTION RATIO	10		0.54	NU	10	5/29/2020 14:24

Client: Mahoney Environmental
Project: 2020.124 GAIL #1 Tank Battery
Sample ID: SOIL 14
Legal Location:
Collection Date: 5/22/2020 13:35

Date: 25-Jun-20
Work Order: 2005357
Lab ID: 2005357-30
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC
 U or ND - Result is less than the sample specific MDC.
 Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
 Y2 - Chemical Yield outside default limits.
 W - DER is greater than Warning Limit of 1.42
 * - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
 # - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
 G - Sample density differs by more than 15% of LCS density.
 D - DER is greater than Control Limit
 M - Requested MDC not met.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
 L - LCS Recovery below lower control limit.
 H - LCS Recovery above upper control limit.
 P - LCS, Matrix Spike Recovery within control limits.
 N - Matrix Spike Recovery outside control limits
 NC - Not Calculated for duplicate results less than 5 times MDC
 B - Analyte concentration greater than MDC.
 B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).
 U or ND - Indicates that the compound was analyzed for but not detected.
 E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
 M - Duplicate injection precision was not met.
 N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
 Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
 * - Duplicate analysis (relative percent difference) not within control limits.
 S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

U or ND - Indicates that the compound was analyzed for but not detected.
 B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.
 E - Analyte concentration exceeds the upper level of the calibration range.
 J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).
 A - A tentatively identified compound is a suspected aldol-condensation product.
 X - The analyte was diluted below an accurate quantitation level.
 * - The spike recovery is equal to or outside the control criteria used.
 + - The relative percent difference (RPD) equals or exceeds the control criteria.
 G - A pattern resembling gasoline was detected in this sample.
 D - A pattern resembling diesel was detected in this sample.
 M - A pattern resembling motor oil was detected in this sample.
 C - A pattern resembling crude oil was detected in this sample.
 4 - A pattern resembling JP-4 was detected in this sample.
 5 - A pattern resembling JP-5 was detected in this sample.
 H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
 L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
 Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
 - gasoline
 - JP-8
 - diesel
 - mineral spirits
 - motor oil
 - Stoddard solvent
 - bunker C

ALS -- Fort Collins

Date: 6/25/2020 10:03

Client: Mahoney Environmental
Work Order: 2005357
Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: **HC200528-81-1** Instrument ID **FUELS-1** Method: **SW8015M**

LCS	Sample ID: HC200528-81			Units: MG/L			Analysis Date: 6/1/2020 22:27					
Client ID:	Run ID: HC200601-81A				Prep Date: 5/28/2020		DF: 1					
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual	
Diesel Range Organics	8.82	1.07	8.33		106	53-120				20		
Surr: O-TERPHENYL	1.57		1.67		94	69-120						

LCSD	Sample ID: HC200528-81			Units: MG/L			Analysis Date: 6/1/2020 22:48					
Client ID:	Run ID: HC200601-81A				Prep Date: 5/28/2020		DF: 1					
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual	
Diesel Range Organics	8.96	1.07	8.33		108	53-120		8.82	2	20		
Surr: O-TERPHENYL	1.58		1.67		95	69-120			0			

MB	Sample ID: HC200528-81			Units: MG/L			Analysis Date: 6/1/2020 22:06		
Client ID:	Run ID: HC200601-81A				Prep Date: 5/28/2020		DF: 1		
Analyte	Result	ReportLimit							Qual
Diesel Range Organics	ND	1.1							
Surr: O-TERPHENYL	1.61		97	69-120					

The following samples were analyzed in this batch:

2005357-15	2005357-16
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Client: Mahoney Environmental
Work Order: 2005357
Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: **HC200528-82-1** Instrument ID: **FUELS-1** Method: **SW8015M**

LCS	Sample ID: HC200528-82			Units: MG/KG			Analysis Date: 6/1/2020 13:35				
Client ID:	Run ID: HC200601-81A			Prep Date: 5/28/2020			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	70.4	8	62.5		113	75-124				20	
Surr: O-TERPHENYL	9.56		12.5		76	56-120					

LCSD	Sample ID: HC200528-82			Units: MG/KG			Analysis Date: 6/1/2020 13:56				
Client ID:	Run ID: HC200601-81A			Prep Date: 5/28/2020			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	70.5	8	62.5		113	75-124		70.4	0	20	
Surr: O-TERPHENYL	9.48		12.5		76	56-120			1		

MB	Sample ID: HC200528-82			Units: MG/KG			Analysis Date: 6/1/2020 13:14			
Client ID:		Run ID: HC200601-81A			Prep Date: 5/28/2020			DF: 1		
Analyte		Result	ReportLimit							Qual
Diesel Range Organics		ND	8							
Surr: O-TERPHENYL		9.82			79	56-120				

The following samples were analyzed in this batch:

2005357-1	2005357-2	2005357-3
2005357-4	2005357-5	2005357-6
2005357-7	2005357-8	2005357-9
2005357-10	2005357-11	2005357-12
2005357-13	2005357-14	

Client: Mahoney Environmental
Work Order: 2005357
Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: **HG200529-1-1** Instrument ID **CETAC7500** Method: **SW7471**

LCS	Sample ID: HG200529-1			Units: MG/KG			Analysis Date: 6/3/2020 16:45				
Client ID:	Run ID: HG200603-1A1			Prep Date: 5/29/2020			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
MERCURY	0.163	0.0333	0.167		98	80-120				20	

LCSD	Sample ID: HG200529-1				Units: MG/KG		Analysis Date: 6/3/2020 16:47				
Client ID:	Run ID: HG200603-1A1				Prep Date: 5/29/2020			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
MERCURY	0.166	0.0333	0.167		100	80-120		0.163	2	20	

MB		Sample ID: HG200529-1			Units: MG/KG		Analysis Date: 6/3/2020 16:43		
Client ID:		Run ID: HG200603-1A1			Prep Date: 5/29/2020		DF: 1		
Analyte		Result	ReportLimit						Qual
MERCURY		ND	0.033						

The following samples were analyzed in this batch:

2005357-1	2005357-2	2005357-3
2005357-4	2005357-5	2005357-6
2005357-7	2005357-8	2005357-9
2005357-10	2005357-11	2005357-12
2005357-13	2005357-14	

Client: Mahoney Environmental
Work Order: 2005357
Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: **IP200528-9-1** Instrument ID: **ICPTTrace2** Method: **SW6010**

LCS	Sample ID: IP200528-9			Units: MG/KG		Analysis Date: 5/29/2020 13:40					
Client ID:	Run ID: IT200529-1A6			Prep Date: 5/28/2020				DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
ARSENIC	93.1	3	100		93	80-120				20	
BARIUM	105	10	100		105	80-120				20	
BORON	82.7	10	100		83	80-120				20	
CADMIUM	4.68	0.5	5		94	80-120				20	
CHROMIUM	20.6	1	20		103	80-120				20	
COPPER	25.8	1	25		103	80-120				20	
LEAD	49.9	2	50		100	80-120				20	
NICKEL	48.8	2	50		98	80-120				20	
SELENIUM	173	3	200		86	80-120				20	
SILVER	9.84	1	10		98	80-120				20	
ZINC	48.9	2	50		98	80-120				20	

MB		Sample ID: IP200528-9		Units: MG/KG		Analysis Date: 5/29/2020 13:39	
Client ID:		Run ID: IT200529-1A6		Prep Date: 5/28/2020		DF: 1	
Analyte	Result	ReportLimit					Qual
ARSENIC	ND	3					
BARIUM	ND	10					
BORON	ND	10					
CADMIUM	ND	0.5					
CHROMIUM	ND	1					
COPPER	ND	1					
LEAD	ND	2					
NICKEL	ND	2					
SELENIUM	ND	3					
SILVER	ND	1					
ZINC	ND	2					

Client: Mahoney Environmental
 Work Order: 2005357
 Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: IP200528-9-1 Instrument ID ICPTTrace2 Method: SW6010

MS		Sample ID: 2005357-1				Units: MG/KG		Analysis Date: 5/29/2020 13:44			
Client ID: SOIL 1			Run ID: IT200529-1A6				Prep Date: 5/28/2020		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
ARSENIC	109	3.42	114	4.7	92	80-120				20	
BARIUM	220	11.4	114	89	115	80-120				20	
BORON	80.5	11.4	114	11	71	80-120				20	N
CADMIUM	5.39	0.57	5.7	0.57	95	80-120				20	
CHROMIUM	34	1.14	22.8	11	101	80-120				20	
COPPER	40.1	1.14	28.5	9.8	106	80-120				20	
LEAD	65.2	2.28	57	9.7	97	80-120				20	
NICKEL	63.8	2.28	57	12	92	80-120				20	
SELENIUM	192	3.42	228	3.4	84	80-120				20	
SILVER	11.1	1.14	11.4	1.1	97	80-120				20	
ZINC	88.9	2.28	57	35	95	80-120				20	

MSD				Sample ID: 2005357-1				Units: MG/KG				Analysis Date: 5/29/2020 13:45			
Client ID: SOIL 1				Run ID: IT200529-1A6				Prep Date: 5/28/2020				DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual				
ARSENIC	109	3.43	114	4.7	91.4	80-120		109		20					
BARIUM	218	11.4	114	89	112.5	80-120		220		20					
BORON	80.7	11.4	114	11	70	80-120		80.5		20	N				
CADMIUM	5.45	0.572	5.72	0.57	95	80-120		5.39		20					
CHROMIUM	34.4	1.14	22.9	11	102.5	80-120		34		20					
COPPER	39.9	1.14	28.6	9.8	105.3	80-120		40.1		20					
LEAD	66.1	2.29	57.2	9.7	98.5	80-120		65.2		20					
NICKEL	65.7	2.29	57.2	12	94.5	80-120		63.8		20					
SELENIUM	194	3.43	229	3.4	85	80-120		192		20					
SILVER	11.1	1.14	11.4	1.1	97	80-120		11.1		20					
ZINC	90.4	2.29	57.2	35	97	80-120		88.9		20					

The following samples were analyzed in this batch:

2005357-1	2005357-2	2005357-3
2005357-4	2005357-5	2005357-6
2005357-7	2005357-8	2005357-9
2005357-10	2005357-11	2005357-12
2005357-13	2005357-14	

Client: Mahoney Environmental
Work Order: 2005357
Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: **VL200528-2-1** Instrument ID **HPV2** Method: **SW8260**

LCS	Sample ID: VL200528-2			Units: UG/KG			Analysis Date: 5/28/2020 14:15				
Client ID:	Run ID: VL200528-2A			Prep Date: 5/28/2020			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	996	500	1000		100	75-125				20	

LCSD	Sample ID: VL200528-2				Units: UG/KG		Analysis Date: 5/28/2020 14:37				
Client ID:	Run ID: VL200528-2A				Prep Date: 5/28/2020			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	859	500	1000		86	75-125		996	15	20	

MB		Sample ID: VL200528-22			Units: UG/KG		Analysis Date: 5/28/2020 15:46		
Client ID:		Run ID: VL200528-2A			Prep Date: 5/28/2020			DF: 1	
Analyte		Result	ReportLimit		Qual				
GASOLINE RANGE ORGANICS		ND	500						

The following samples were analyzed in this batch:

2005357-5	2005357-6	2005357-7
2005357-8	2005357-9	2005357-10
2005357-11	2005357-12	2005357-13
2005357-14		

Client: Mahoney Environmental
 Work Order: 2005357
 Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: **VL200528-2-2** Instrument ID: **HPV2** Method: **SW8260**

LCS	Sample ID: VL200528-22			Units: UG/KG		Analysis Date: 5/28/2020 15:00					
Client ID:	Run ID: VL200528-2A			Prep Date: 5/28/2020		DF: 1					
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	41	5	40		102	70-129				30	
TOLUENE	38.7	5	40		97	68-125				30	
ETHYLBENZENE	38.5	5	40		96	70-123				30	
M+P-XYLENE	76.5	7	80		96	72-123				30	
O-XYLENE	38.8	5	40		97	73-121				30	
Surr: DIBROMOFLUOROMETHANE	52.7		50		105	77-125					
Surr: TOLUENE-D8	49.6		50		99	80-120					
Surr: 4-BROMOFLUOROBENZENE	48.5		50		97	71-121					

LCSD	Sample ID: VL200528-22			Units: UG/KG			Analysis Date: 5/28/2020 15:23				
Client ID:	Run ID: VL200528-2A			Prep Date: 5/28/2020			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	39.8	5	40		100	70-129		41	3	30	
TOLUENE	38.4	5	40		96	68-125		38.7	1	30	
ETHYLBENZENE	38.5	5	40		96	70-123		38.5	0	30	
M+P-XYLENE	76.8	7	80		96	72-123		76.5	0	30	
O-XYLENE	38.8	5	40		97	73-121		38.8	0	30	
Surr: DIBROMOFLUOROMETHANE	52.7		50		105	77-125			0		
Surr: TOLUENE-D8	49.1		50		98	80-120			1		
Surr: 4-BROMOFLUOROBENZENE	49.5		50		99	71-121			2		

MB		Sample ID: VL200528-22		Units: UG/KG		Analysis Date: 5/28/2020 15:46	
Client ID:		Run ID: VL200528-2A		Prep Date: 5/28/2020		DF: 1	
Analyte	Result	ReportLimit					Qual
BENZENE	ND	5					
TOLUENE	ND	5					
ETHYLBENZENE	ND	5					
M+P-XYLENE	ND	7					
O-XYLENE	ND	5					
Surr: DIBROMOFLUOROMETHANE	52.2			104	77-125		
Surr: TOLUENE-D8	49.4			99	80-120		
Surr: 4-BROMOFLUOROBENZENE	49.4			99	71-121		

Client: Mahoney Environmental
Work Order: 2005357
Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: **VL200528-2-2**

Instrument ID **HPV2**

Method: **SW8260**

The following samples were analyzed in this batch:

2005357-5	2005357-6	2005357-7
2005357-8	2005357-9	2005357-10
2005357-11	2005357-12	2005357-13
2005357-14		

Client: Mahoney Environmental
Work Order: 2005357
Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: **VL200604-2-1** Instrument ID **HPV2** Method: **SW8260**

LCS	Sample ID: VL200604-2			Units: UG/KG			Analysis Date: 6/4/2020 11:20				
Client ID:		Run ID: VL200604-2A			Prep Date: 6/4/2020			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	1730	488	1950		88	75-125				20	

LCSD	Sample ID: VL200604-2			Units: UG/KG			Analysis Date: 6/4/2020 11:43				
Client ID:	Run ID: VL200604-2A			Prep Date: 6/4/2020			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	1670	488	1950		85	75-125		1730	3	20	

MB		Sample ID: VL200604-22			Units: UG/KG		Analysis Date: 6/4/2020 12:57	
Client ID:		Run ID: VL200604-2A			Prep Date: 6/4/2020		DF: 1	
Analyte		Result	ReportLimit					
GASOLINE RANGE ORGANICS		ND	490					

MB		Sample ID: VL200604-2M			Units: UG/KG		Analysis Date: 6/4/2020 18:08	
Client ID:		Run ID: VL200604-2A			Prep Date: 6/4/2020		DF: 50	
Analyte		Result	ReportLimit		Qual			
GASOLINE RANGE ORGANICS		ND	24000					

The following samples were analyzed in this batch:

2005357-1	2005357-2	2005357-3
2005357-4		

Client: Mahoney Environmental
 Work Order: 2005357
 Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: **VL200604-2-2** Instrument ID: **HPV2** Method: **SW8260**

LCS	Sample ID: VL200604-22			Units: UG/KG		Analysis Date: 6/4/2020 12:06					
Client ID:	Run ID: VL200604-2A			Prep Date: 6/4/2020			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	36	4.78	38.2		94	70-129				30	
TOLUENE	34.5	4.78	38.2		90	68-125				30	
ETHYLBENZENE	34.5	4.78	38.2		90	70-123				30	
M+P-XYLENE	68.9	6.69	76.5		90	72-123				30	
O-XYLENE	34.9	4.78	38.2		91	73-121				30	
Surr: DIBROMOFLUOROMETHANE	51.1		47.8		107	77-125					
Surr: TOLUENE-D8	45.6		47.8		95	80-120					
Surr: 4-BROMOFLUOROBENZENE	48.7		47.8		102	71-121					

LCSD	Sample ID: VL200604-22			Units: UG/KG			Analysis Date: 6/4/2020 12:29				
Client ID:	Run ID: VL200604-2A			Prep Date: 6/4/2020			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	39	4.78	38.2		102	70-129		36	8	30	
TOLUENE	37.4	4.78	38.2		98	68-125		34.5	8	30	
ETHYLBENZENE	38.1	4.78	38.2		100	70-123		34.5	10	30	
M+P-XYLENE	77	6.69	76.5		101	72-123		68.9	11	30	
O-XYLENE	38.1	4.78	38.2		100	73-121		34.9	9	30	
Surr: DIBROMOFLUOROMETHANE	49.3		47.8		103	77-125			4		
Surr: TOLUENE-D8	47		47.8		98	80-120			3		
Surr: 4-BROMOFLUOROBENZENE	49.6		47.8		104	71-121			2		

MB		Sample ID: VL200604-22		Units: UG/KG		Analysis Date: 6/4/2020 12:57	
Client ID:		Run ID: VL200604-2A		Prep Date: 6/4/2020		DF: 1	
Analyte	Result	ReportLimit					Qual
BENZENE	ND	4.8					
TOLUENE	ND	4.8					
ETHYLBENZENE	ND	4.8					
M+P-XYLENE	ND	6.7					
O-XYLENE	ND	4.8					
Surr: DIBROMOFLUOROMETHANE	48.9			102	77-125		
Surr: TOLUENE-D8	47.3			99	80-120		
Surr: 4-BROMOFLUOROBENZENE	49			103	71-121		

Client: Mahoney Environmental
Work Order: 2005357
Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: **VL200604-2-2** Instrument ID **HPV2** Method: **SW8260**

MB Sample ID: **VL200604-2M** Units: **UG/KG** Analysis Date: **6/4/2020 18:08**
Client ID: Run ID: **VL200604-2A** Prep Date: **6/4/2020** DF: **50**

Analyte	Result	ReportLimit	Qual
BENZENE	ND	240	
TOLUENE	ND	240	
ETHYLBENZENE	ND	240	
M+P-XYLENE	ND	330	
O-XYLENE	ND	240	
Surr: DIBROMOFLUOROMETHANE	2530	106	77-125
Surr: TOLUENE-D8	2290	96	80-120
Surr: 4-BROMOFLUOROBENZENE	2400	100	71-121

The following samples were analyzed in this batch:

2005357-1	2005357-2	2005357-3
2005357-4		

Client: Mahoney Environmental
 Work Order: 2005357
 Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: VL200605-3-3 Instrument ID HPV3 Method: SW8260_25

LCS		Sample ID: VL200605-3			Units: %REC		Analysis Date: 6/5/2020 13:47				
Client ID:		Run ID: VL200605-33A			Prep Date: 6/5/2020			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.9		25		100	80-120					
Surr: DIBROMOFLUOROMETHANE	25.1		25		101	80-120					
Surr: TOLUENE-D8	25.1		25		101	80-120					
BENZENE	10.1	1	10		101	80-120				20	
ETHYLBENZENE	9.82	1	10		98	80-120				20	
M+P-XYLENE	20.9	1	20		105	80-120				20	
O-XYLENE	10.4	1	10		104	80-120				20	
TOLUENE	10.1	1	10		101	80-120				20	

LCSD		Sample ID: VL200605-3			Units: %REC		Analysis Date: 6/5/2020 14:07				
Client ID:		Run ID: VL200605-33A			Prep Date: 6/5/2020			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25		25		100	80-120			0		
Surr: DIBROMOFLUOROMETHANE	25.4		25		102	80-120			1		
Surr: TOLUENE-D8	25.1		25		100	80-120			0		
BENZENE	10	1	10		100	80-120		10.1	1	20	
ETHYLBENZENE	9.83	1	10		98	80-120		9.82	0	20	
M+P-XYLENE	20.9	1	20		105	80-120		20.9	0	20	
O-XYLENE	10.4	1	10		104	80-120		10.4	1	20	
TOLUENE	10.1	1	10		101	80-120		10.1	1	20	

MB		Sample ID: VL200605-3		Units: %REC		Analysis Date: 6/5/2020 14:27	
Client ID:		Run ID: VL200605-33A		Prep Date: 6/5/2020		DF: 1	
Analyte	Result	ReportLimit					Qual
Surr: 4-BROMOFLUOROBENZENE	25.7		103	80-120			
Surr: DIBROMOFLUOROMETHANE	25.6		102	80-120			
Surr: TOLUENE-D8	25.1		100	80-120			
BENZENE	ND	1					
ETHYLBENZENE	ND	1					
M+P-XYLENE	ND	1					
O-XYLENE	ND	1					
TOLUENE	ND	1					

The following samples were analyzed in this batch:

2005357-15 2005357-16

Client: Mahoney Environmental
Work Order: 2005357
Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: **VL200605-3-5** Instrument ID **HPV3** Method: **SW8260_25**

LCS	Sample ID: VL200605-33			Units: UG/L			Analysis Date: 6/5/2020 13:07				
Client ID:	Run ID: VL200605-33A			Prep Date: 6/5/2020			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	1200	100	1000		120	75-121				20	

LCSD	Sample ID: VL200605-33			Units: UG/L			Analysis Date: 6/5/2020 13:27				
Client ID:	Run ID: VL200605-33A			Prep Date: 6/5/2020			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	1130	100	1000		113	75-121		1200	6	20	

MB	Sample ID: VL200605-3			Units: UG/L			Analysis Date: 6/5/2020 14:27				
Client ID:	Run ID: VL200605-33A			Prep Date: 6/5/2020			DF: 1				
Analyte	Result	ReportLimit									Qual
GASOLINE RANGE ORGANICS	97	100									J

The following samples were analyzed in this batch:

2005357-15	2005357-16
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Client: Mahoney Environmental
 Work Order: 2005357
 Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: **CR200602-1-1** Instrument ID **Spec** Method: **SW7196**

LCS	Sample ID: CR200602-1				Units: MG/KG			Analysis Date: 6/2/2020			
Client ID:	Run ID: CR200602-1a1				Prep Date: 6/2/2020			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CHROMIUM VI	3.03	0.1	3		101	80-120				20	

MB	Sample ID: CR200602-1	Units: MG/KG	Analysis Date: 6/2/2020
Client ID:	Run ID: CR200602-1a1	Prep Date: 6/2/2020	DF: 1
Analyte	Result	ReportLimit	Qual
CHROMIUM VI	ND	0.1	

MS				Sample ID: 2005357-10				Units: MG/KG				Analysis Date: 6/2/2020			
Client ID: SOIL 10				Run ID: CR200602-1a1				Prep Date: 6/2/2020				DF: 1			
Analyte		Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual			
CHROMIUM VI		1.16	0.115	1.15	0.12	101	75-125				20				

MS				Sample ID: 2005357-2				Units: MG/KG				Analysis Date: 6/2/2020			
Client ID: SOIL 2				Run ID: CR200602-1a1				Prep Date: 6/2/2020				DF: 1			
Analyte				Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual	
CHROMIUM VI				1.13	0.116	1.16	0.12	98	75-125				20		

MSD	Sample ID: 2005357-10				Units: MG/KG			Analysis Date: 6/2/2020			
Client ID: SOIL 10			Run ID: CR200602-1a1			Prep Date: 6/2/2020			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CHROMIUM VI	1.18	0.118	1.18	0.12	101	75-125		1.16	2	20	

MSD	Sample ID: 2005357-2				Units: MG/KG		Analysis Date: 6/2/2020				
Client ID: SOIL 2		Run ID: CR200602-1a1				Prep Date: 6/2/2020			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CHROMIUM VI	1.17	0.118	1.18	0.12	98	75-125		1.13	3	20	

The following samples were analyzed in this batch:

2005357-1	2005357-2	2005357-3
2005357-4	2005357-5	2005357-6
2005357-7	2005357-8	2005357-9
2005357-10	2005357-11	2005357-12
2005357-13	2005357-14	

Client: Mahoney Environmental
Work Order: 2005357
Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: **IC200529-1-1** Instrument ID **IC3** Method: **SW9056**

LCS	Sample ID: IC200529-1				Units: MG/L		Analysis Date: 5/29/2020 07:25				
Client ID:	Run ID: IC200529-1a4				Prep Date: 5/29/2020			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CHLORIDE	10.1	0.2	10		101	90-110				15	
SULFATE	49.8	1	50		100	90-110				15	

LCSD	Sample ID: IC200529-1				Units: MG/L		Analysis Date: 5/29/2020 10:03				
Client ID:	Run ID: IC200529-1a4				Prep Date: 5/29/2020			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CHLORIDE	10.1	0.2	10		101	90-110		10.1	0	15	
SULFATE	49.7	1	50		99	90-110		49.8	0	15	

MB	Sample ID: IC200529-1			Units: MG/L		Analysis Date: 5/29/2020 07:38	
Client ID:	Run ID: IC200529-1a4			Prep Date: 5/29/2020		DF: 1	
Analyte				Result	ReportLimit	Qual	
CHLORIDE				ND	0.2		
SULFATE				ND	1		

The following samples were analyzed in this batch:

2005357-15	2005357-16
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Client: Mahoney Environmental
Work Order: 2005357
Project: 2020.124 GAIL #1 Tank Battery

QC BATCH REPORT

Batch ID: **TD200527-1-1** Instrument ID **Balance** Method: **SM2540C**

LCS	Sample ID: TD200527-1			Units: MG/L			Analysis Date: 5/29/2020				
Client ID:		Run ID: TD200529-2A1			Prep Date: 5/27/2020			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	406	20	400		102	85-115				14	

MB		Sample ID: TD200527-1		Units: MG/L		Analysis Date: 5/29/2020	
Client ID:		Run ID: TD200529-2A1		Prep Date: 5/27/2020		DF: 1	
Analyte		Result	ReportLimit				
TOTAL DISSOLVED SOLIDS		ND	20				

The following samples were analyzed in this batch:

2005357-15	2005357-16
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