



August 22, 2018

Mr. Jason Litwiller
URS
2425 River Road (c/o SPRU DP)
Niskayuna, New York 12309

Re: SPRU Disposition Project
Work Order: 456917

Dear Mr. Litwiller:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on August 10, 2018. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4778.

Sincerely,

Taylor Cannon for
Hope Taylor
Project Manager

Chain of Custody: 18-COC-32
Enclosures



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Chain of Custody and Supporting Documentation

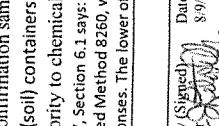
SPRU DP OFF-SITE CHAIN-OF-CUSTODY FORM

Page: <u>1</u> of <u>2</u>	Project #: <u>SPRU DP</u>
COC Number ⁽¹⁾ : <u>18-COC-32</u>	Work Order or Sample Delivery Group (SDG) Number: <u>450917</u>

Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test, X for analyses run from another container.)											
<--Preservative Type (6)											
Sample ID*	Date Collected (mm-dd-yy)	Time Collected (Military) (hh:mm)	Sample Code(2)	Field Filtration (⁽¹⁾)	Sample Matrix (4)	TSCA Registration No.	Total number of containers	Sample Description (required)			
								Alpha Spec - U	Gamma Spec	Alpha Spec - Th232	TCL VOCs (SW8260). For this gray till soil, purge and trap & medium extraction with methanol, excavated G2/H2 Tunnel, NE - confirmation sample
S17	8/9/18	0820	N	N	SO	N	2	X	X	X	Soil from floor, excavated G2/H2 Tunnel - confirmation sample
S18	8/9/18	0822	N	N	SO	N	2	X	X	X	Soil from floor, excavated G2/H2 Tunnel - confirmation sample
SW07	8/9/18	0824	N	N	SO	N	2	X	X	X	Soil from floor, excavated G2/H2 Tunnel, NE - confirmation sample
SW08	8/9/18	0826	N	N	SO	N	2	X	X	X	Soil from floor, excavated G2/H2 Tunnel, NE - confirmation sample
SW09	8/9/18	0828	N	N	SO	N	2	X	X	X	Soil from floor, excavated G2/H2 Tunnel, NE - confirmation sample
SW10	8/9/18	0830	N	N	SO	N	2	X	X	X	Soil from floor, excavated G2/H2 Tunnel, NE - confirmation sample
SW11	8/9/18	0832	N	N	SO	N	2	X	X	X	Soil from floor, excavated G2/H2 Tunnel, NE - confirmation sample
SW11EB	8/9/18	0836	EB	N	W	N	4		X*	X*	Soil from floor, excavated G2/H2 Tunnel, W - confirmation sample
080918TB	8/9/18	0900	TB	N	W	N	2				Equipment Rinse Blank (3-40ml YOA amber glass, 1-250ml poly)
G2ESOL04	8/9/18	0834	N	N	SO	N	1	X			Trip blanks, supplied by GEL Labs (2-40ml VOC)
G2SOL05D	8/9/18	0811	N	N	SO	N	1	X			Soil from floor, excavated G2 East - confirmation sample
G2SOL05MSD	8/9/18	0811	N	N	SO	N	1	X			Soil from floor, excavated G2 NW - Duplicate, confirmation sample
TAT Requested (working days): Normal: Rush: X- 8 Day chemicals	Specify below:							Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4			
Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards:											
No (clean confirmation samples). VOC samples taken from 6-12" depth (excavation dug >24 hours from sampling). Soil is dry till, gray in color. PID had no detections.											
Freeze VOC (soil) containers upon receipt at GEL Labs to extend hold time longer than 48 hours (even though these are not vials). For SVOOC sample (page 2), sampling equipment was not reused. Equipment rinse blank analysis for VOCs & metals.											
Analysis prior to chemicals, then rad (if enough material). Please return cooler & ice packs. REPORT DATA AS pCi/g, DRY WEIGHT CORRECTED.											
SPRU-ENV-017, Section 6.1 says: 'KAPL experience has shown low responses of internal standards in gray till samples analyzed for VOCs, resulting in data being unusable. Based on KAPL agreements with NYSDEC and to ensure usable data, the gray till samples will also be analyzed using a modified Method 8260, whereby analysis is performed using the low level purge and trap and the medium level methanol extraction. NYSDEC agreed that reanalysis for low level purge and trap is not needed to confirm the matrix effect from the till on the low internal standard responses. The lower of the two analytes (base & modified Method 8260) is used for reporting. Gray till samples can be identified on the COC to alert GEL to perform the dual analysis.'											

TAT Requested (working days): Normal: Rush: X- 8 Day chemicals Specify below: Yes E-mail Results (Yes/No): Yes

Chain of Custody Signatures

1. Jason Litwiller  Date: 8/9/18 Time: 1600 Received by (signed) Date: 8/10/18 Time: 0555

Lab PM: Hope Taylor Method of Shipment: Fed Ex

Airbill #: 7729 3672 2935 Date Shipped: 08/09/18

Sample Shipping and Delivery Details

For Lab Receiving Use Only

Custody Seal intact?

YES NO

Cooler Temp: C

SPRU-1206, Rev 3 (SPRU-RC-119)

06/05/14

- Chain of Custody Number = Client Determined
- Sample Codes: N = Normal Sample, C = Composite*, TB = Trip Blank, EB = Equipment Blank, FB = Field Blank
- Field Filter: For liquid matrices, indicate with a X - if yes the sample was field filtered or -N- for sample was not field filtered.
- Matrix Codes: GW=Groundwater, WW=Water, ML=Misc. Liquid, SO=Soil, SD=Sediment, SL=Shade, MW=Misc. Solid Waste, O=Oil, F=Filter, P=Wire, SM=smear(s), MET=metal, CON-concrete
- Sample Analysis Requested: Analytical suite (eg., Gamma spec (full suite), TCLP metals or analytical method requested (eg., Alpha spec (spec isotope), X260B (VOCs), 601B/7470A (total metals +Hg) and number of containers provided for each).
- Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank.

SPRU DP OFF-SITE CHAIN-OF-CUSTODY FORM

Page: <u>2</u> of <u>2</u>	Project #: <u>SPRU DP</u>
COC Number ⁽¹⁾ : <u>18-COC-32</u>	Work Order or Sample Delivery Group (SDG) Number:

Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test, X for analyses run from another container.)									
<--Preservative Type (6)									
Sample ID*	Date Collected (mm-dd-yy)	Time Collected (Military) (hh:mm)	Sample Code(2)	Field Filtered (¹)	Sample Matrix (4)	TSCA Regulated (Y) or SVOCs (SW8270)	Sample Description (required)		
							Total number of containers	Shipped this sample re: considered:	Note: Additional sample is required for sample-specific QC (as needed)
G2SWSOL08	8/9/18	0745	N	SO	N	X	X		VOCs (SW8260), For this gray till soil, purge and trap & medium extraction with medium level Soil from sidewall, excavated G2 NW - confirmation sample
G2SWSOL09	8/9/18	0749	N	SO	N	X	X		Metals incl Hg (Se by SW6020)
G2SWSOL10	8/9/18	0753	N	SO	N	X	X		Soil from sidewall, excavated G2 N - confirmation sample
G2SWSOL11	8/9/18	0757	N	SO	N	X	X		Soil from sidewall, excavated G2 N - confirmation sample
G2SWSOL12	8/9/18	0801	N	SO	N	X	X		Soil from sidewall, excavated G2 NW - confirmation sample
G2SWSOL03	8/9/18	0805	N	SO	N	X	X		Soil from sidewall, excavated G2 W - confirmation sample
G2SOL03	8/9/18	0807	N	SO	N	X	X		Soil from floor, excavated G2 W - confirmation sample
G2SOL04	8/9/18	0809	N	SO	N	X	X		Soil from floor, excavated G2 NW corner - confirmation sample (125ml & 250ml)
G2SOL05	8/9/18	0811	N	SO	N	X	X		Soil from floor, excavated G2 NW - confirmation sample
G2SOL08	8/9/18	0813	N	SO	N	X	X		Soil from floor, excavated G2 N - confirmation sample
G2SOL10	8/9/18	0815	N	SO	N	X	X		Soil from floor, excavated G2 N - confirmation sample

TAT Requested (working days): Normal: Rush: X - 8 Day chemicals Specify below: E-mail Results (Yes): Yes Circle Deliverable: C.ofA / QC.Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards:

No (clean confirmation samples). VOC samples taken from 6-12' depth. Soil is dry till, gray in color. PID had no detections. Sample (G2SOL04) for SVOC analysis was taken with dedicated sample equipment.

REPORT DATA AS pcf/g, DRY WEIGHT CORRECTED.

SPRU-ENV-017, Section 6.1 says: "KAPL experience has shown low responses of internal standards in gray till samples analyzed for VOCs, resulting in data being unusable. Based on KAPL agreements with NYSDDEC and to ensure usable data, the gray till samples will also be analyzed using a modified Method 8260, whereby analysis is performed using the low level purge and trap and the medium level methanol extraction. NYSDDEC agreed that reanalysis for low level purge and trap is not needed to confirm the matrix effect from the till on the low internal standard responses. The lower of the usable concentrations from the two analyses (base & modified Method 8260) is used for reporting. Gray till samples can be identified on the COC to alert KEL to perform the dual analysis."

Environmental Specialist or Manager Approval: William Dugan

Relinquished By (Signed): <u>J. Jason Litwiller</u>	Date: <u>8/9/18</u>	Time: <u>1600</u>	Received by (signed): <u>J. Jason Litwiller</u>	Date: <u>8/10/18</u>	Time: <u>0855</u>	Lab PM: <u>Hope Taylor</u>	Method of Shipment: <u>Fed Ex</u>	Airbill #: <u>7729 3672 2935</u>
						Sample Shipping and Delivery Details		
						Date Shipped: <u>8/9/18</u>		

- Chain of Custody Number = Client Determined
- Sample Codes: N = Normal Sample, C = Compacted*, TB = Trip Blank, EB = Equipment Blank, FB = Field Blank *NOTE: All samples are grab samples unless otherwise specified
- Field Filter: For liquid matrices, indicate with a -1; for yes the sample was field filtered or -N for sample was not field filtered.
- Matrix Codes: GW=Groundwater, WW=Waste Water, MW=Misc. Liquid, SO=Soil, SD=Sediment, SI=Sludge, MW=Misc. Solid Waste, O=Oil, P=Filter, P-Wipe, SM=sieve(s), MET=metal, CON=concrete
- Sample Analysis Requested: Analytical suite (e.g., Gamma spec (full suite), TCLP metals) or analytical method requested (e.g., Alpha spec (spec isotopes), SW8260B (VOCs), 610(B)7470(A) (total metals - Hg) and number of containers provided for each..
- Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, IX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank.

SPRU-1206, Rev 3 (SPRU-RC-119)

06/05/14

For Lab Receiving Use Only
Custody Seal Intact?
YES
NO
Cooler Temp: C

SAMPLE RECEIPT & REVIEW FORM

Client: URSC	SDG/AR/COC/Work Order: 456917		
Received By: JMW	Date Received: 8/10/18		
Carrier and Tracking Number FedEx Express FedEx Ground UPS Field Services Courier Other 772936722935			
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
Shipped as a DOT Hazardous?	<input checked="" type="checkbox"/>		Hazard Class Shipped: UN#:
COC/Samples marked or classified as radioactive?	<input checked="" type="checkbox"/>		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <input checked="" type="checkbox"/> CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
Is package, COC, and/or Samples marked HAZ?	<input checked="" type="checkbox"/>		If yes, select Hazards below, and contact the GEL Safety Group. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria		Yes	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>		
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>		Preservation Method: Wet Ice <input checked="" type="checkbox"/> Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 6
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>		Temperature Device Serial #: FR2-18 . Secondary Temperature Device Serial # (if Applicable):
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>		Sample ID's and Containers Affected: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>		If Yes, Are Encores or Soil Kits present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> (If yes, take to VOA Freezer) Do VOA vials contain acid preservation? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A (If unknown, select No) VOA vials free of headspace? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A Sample ID's and containers affected:
8 Samples received within holding time?	<input checked="" type="checkbox"/>		ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>		Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>		Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>		Sample ID's affected: Only 2 vials for total of 3 containers for SW 11E3 .
12 Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>		
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>		
Comments (Use Continuation Form if needed):			

PM (or PMA) review: Initials TMC Date 8/13/18 Page 1 of 1

Subject: Re: Fwd: Fwd: Shipment of soil samples (for chem confirmation) from G2 and G2/H2 Tunnel

From: Joanne Harley <Joanne.Harley@gel.com>

Date: 8/10/2018 1:37 PM

To: "Litwiller, Jason" <Jason.Litwiller@aecom.com>, Michael.Boerste@aecom.com

CC: "team.taylor" <team.taylor@gel.com>

Jason,

We received these samples today. The only item of note is there were 2 vials received of the EB SW11EB, not 3 as listed on the chain of custody.

The group leader and I reviewed the request to put the 4oz jars in the volatile freezer. Based on our discussion, we are not going to do this. We have not previously frozen full soil jars and are afraid they are more likely to break and cause contamination. The freezing of the jar does not really meet the intention of method 5035A which is impossible to achieve in the field to the grey till matrix as you described.

Joanne

Joanne Harley

Manager of Client and Support Services



Laboratories LLC

2040 Savage Road, Charleston, SC 29407 | PO Box 30712, Charleston, SC 29417

Office Direct: 843.769.7387 | Office Main: 843.556.8171 | Fax: 843.766.1178

E-Mail: joanne.harley@gel.com | Website: www.gel.com

Analytical Testing



From: Litwiller, Jason

Sent: Tuesday, August 07, 2018 4:55 PM

To: Hope Taylor

Subject: Shipment of soil samples (for chem confirmation) from G2 and G2/H2 Tunnel

The last batch of soil samples (for chem analysis) is shipping today for arrival at GEL Labs in the morning.

Per guidance from Michael Boerste, freeze VOC (soil) containers (not vials) upon receipt at GEL Labs to extend hold time longer than 48 hours.

The COC (2 pages) is attached.

Thanks

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<http://www.gellaboratories.com>

Laboratory Certifications

List of current GEL Certifications as of 22 August 2018

State	Certification
Alaska	17-018
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC00012
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA180011
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122018-1
New Hampshire NELAP	205415
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-18-13
Utah NELAP	SC000122018-26
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier Explanation

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
- A The TIC is a suspected aldol-condensation product
- B Target analyte was detected in the associated blank
- B Metals-Either presence of analyte detected in the associated blank, or
MDL/IDL < sample value < PQL
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- d 5-day BOD-The 2:1 depletion requirement was not met for this sample
- E Organics-Concentration of the target analyte exceeds the instrument calibration range
- E Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- H Analytical holding time was exceeded
- h Preparation or preservation holding time was exceeded
- J Value is estimated
- N Metals-The Matrix spike sample recovery is not within specified control limits
- N Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
- N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
- ND Analyte concentration is not detected above the reporting limit
- UI Gamma Spectroscopy-Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound
- Z Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Volatile Analysis

Case Narrative

**GC/MS Volatile
Technical Case Narrative
URS Energy & Construction (URSC)
SDG #: 456917**

Product: Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer

Analytical Method: SW846 8260C

Analytical Procedure: GL-OA-E-038 REV# 26

Analytical Batch: 1792111

Product: Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer

Analytical Method: SW846 5035A/8260C

Analytical Procedure: GL-OA-E-038 REV# 26

Analytical Batch: 1794368

Preparation Method: SW846 5035A

Preparation Procedure: GL-OA-E-039 REV# 12

Preparation Batch: 1794367

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
456917001	S17
456917002	S18
456917003	SW07
456917004	SW08
456917005	SW09
456917006	SW10
456917007	SW11
456917008	SW11EB
456917009	080918TB
456917010	G2ESOL04
456917011	G2SOL05D
456917012	G2SOL05
456917013	G2SWSOL08
456917014	G2SWSOL09
456917015	G2SWSOL10
456917016	G2SWSOL11
456917017	G2SWSOL12
456917018	G2SWSOL03
456917019	G2SOL03
456917020	G2SOL04
456917021	G2SOL08
456917022	G2SOL10
1204090986	Method Blank (MB)
1204090987	Laboratory Control Sample (LCS)
1204090988	456633009(NonSDG) Post Spike (PS)
1204090989	456633009(NonSDG) Post Spike Duplicate (PSD)
1204096020	Method Blank (MB)
1204096021	High Blank (HB)
1204096022	Laboratory Control Sample (LCS)
1204096023	456917012(G2SOL05) Post Spike (PS)
1204096024	456917012(G2SOL05) Post Spike Duplicate (PSD)
1204096218	Method Blank (MB)

1204096219	Method Blank (MB)
1204096220	Method Blank (MB)
1204096221	Laboratory Control Sample (LCS)
1204096222	Laboratory Control Sample (LCS)
1204096223	Laboratory Control Sample (LCS)

Samples 456917001, 002, 003, 004, 005, 006, 007, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019, 020, 021 and 022 in this SDG were analyzed on a "dry weight corrected" basis. Samples 456917008 and 009 in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

Continuing Calibration Verification Requirements

The calibration verification standard requirements were not all met for samples . The daily CCV analyzed on 8/13/18 was biased high for Dichlorodifluoromethane at 32.1%D, Trichlorofluoromethane at 25.2%D, and Acetone at 46.6%D. Less than 20% of the analytes were outside the method criteria. This satisfies the method criteria. The results are reported. The calibration verification standard requirements were not all met for samples . The daily CCV analyzed on 8/17/18 was biased high for Acetone at 22.5%D; 2-Butanone at 28.0%D and 2-Hexanone at 24.7%D. The daily CCV analyzed on 8/20/18 was biased high for Dichlorodluoromethane at 20.5%D; Bromomethane at 46.0%D; Acetone at 20.6%D; 2-Butanone at 21.7%D and 2-Hexanone at 28.1%D. The daily CCV analyzed on 8/21/18 was biased high for Acetone at 23.0%D and 2-Hexanone at 23.6%D. Less than 20% of the analytes were outside the method criteria. This satisfies the method criteria. The results are reported.

Quality Control (QC) Information

Blank (MB) Statement

Target analytes were detected in the blank 1204096218 (MB) below the reporting limit.

Surrogate Recoveries

Surrogate recoveries, in samples (See Below) were outside the acceptance limits. The client does not require a neat re-analysis to confirm the results. The samples were re-analyzed using a methanol extraction dilution procedure and had acceptable surrogate recoveries. Both sets of results are reported.

Sample	Analyte	Value
1204096023 (G2SOL05PS)	Bromofluorobenzene	132* (70%-130%)
	Toluene-d8	128* (81%-120%)
1204096024 (G2SOL05PSD)	Toluene-d8	149* (81%-120%)
456917001 (S17)	Toluene-d8	128* (81%-120%)
456917002 (S18)	Toluene-d8	146* (81%-120%)
456917003 (SW07)	Toluene-d8	121* (81%-120%)
456917004 (SW08)	Bromofluorobenzene	134* (70%-130%)
	Toluene-d8	132* (81%-120%)
456917005 (SW09)	Toluene-d8	128* (81%-120%)
456917006 (SW10)	Toluene-d8	143* (81%-120%)

456917007 (SW11)	Toluene-d8	144* (81%-120%)
456917011 (G2SOL05D)	Bromofluorobenzene	181* (70%-130%)
	Toluene-d8	134* (81%-120%)
456917012 (G2SOL05)	Toluene-d8	134* (81%-120%)
456917013 (G2SWSOL08)	Bromofluorobenzene	133* (70%-130%)
	Toluene-d8	146* (81%-120%)
456917016 (G2SWSOL11)	Bromofluorobenzene	134* (70%-130%)
456917017 (G2SWSOL12)	Toluene-d8	134* (81%-120%)
456917018 (G2SWSOL03)	Toluene-d8	130* (81%-120%)
456917019 (G2SOL03)	Toluene-d8	133* (81%-120%)
456917020 (G2SOL04)	Bromofluorobenzene	168* (70%-130%)
	Toluene-d8	167* (81%-120%)
456917021 (G2SOL08)	Toluene-d8	141* (81%-120%)
456917022 (G2SOL10)	1, 2-Dichloroethane-d4	131* (81%-124%)
	Toluene-d8	132* (81%-120%)

Laboratory Control Sample (LCS) Recovery

The LCS/and or LCSD (See Below) recovery was not within the acceptance limits for all analytes. The unacceptable analyte was not detected in the samples associated with the laboratory control sample. Therefore, the data were reported.

Sample	Analyte	Value
1204090987 (LCS)	Acetone	147* (70%-130%)
	Dichlorodifluoromethane	132* (70%-130%)

Matrix Spike/Matrix Spike Duplicate Recovery Statement

The spike and/or spike duplicate (See Below) recoveries were not all within the acceptance limits.

Sample	Analyte	Value
1204090988 (Non SDG 456633009PS)	Several	See applicable report
1204090989 (Non SDG 456633009PSD)	Several	See applicable report
1204096023 (G2SOL05PS)	Several	See applicable report
1204096024 (G2SOL05PSD)	Several	See applicable report

Relative Percent Difference (RPD) Statement

The RPD between the matrix spike pair (See Below) were not all within the acceptance limits. The unacceptable RPD may be attributed to matrix interference and/or sample non-homogeneity.

Sample	Analyte	Value
1204096023PS and 1204096024PSD (G2SOL05)	Several	See applicable report

Internal Standard (ISTD) Acceptance

In samples 1204096023 (G2SOL05PS), 1204096024 (G2SOL05PSD), 456917001 (S17), 456917002 (S18), 456917003 (SW07), 456917004 (SW08), 456917005 (SW09), 456917006 (SW10), 456917007 (SW11), 456917010 (G2ESOL04), 456917011 (G2SOL05D), 456917012 (G2SOL05), 456917013 (G2SWSOL08), 456917014 (G2SWSOL09), 456917015 (G2SWSOL10), 456917016 (G2SWSOL11), 456917017 (G2SWSOL12), 456917018 (G2SWSOL03), 456917019 (G2SOL03), 456917020 (G2SOL04), 456917021 (G2SOL08) and 456917022 (G2SOL10), internal standard responses were outside the required acceptance criteria. The client does not require a neat re-analysis to confirm the results. The samples were re-analyzed using a methanol extraction dilution procedure and had acceptable internal standard responses. Both sets of results are reported.

Technical Information

Sample Dilutions/Methanol Dilutions

The samples In this SDG were analyzed neat and methanol dilution extraction procedure. Both sets of results are reported.

Analyte	456917									
	001	002	003	004	005	006	007	010	011	012
Several	50X 1X									

Analyte	456917									
	013	014	015	016	017	018	019	020	021	022
Several	50X 1X									

Sample Re-extraction/Re-analysis

Re-analyzed due to bad purge. 456917020 (G2SOL04).

Miscellaneous Information

Manual Integrations

Some initial calibration standards, continuing calibration standards, and/or samples (See Below) may have required manual integrations due to software limitations.

Sample	Analyte	Value
1204096023 (G2SOL05PS)	Chloroethane	Result 304ug/kg
1204096024 (G2SOL05PSD)	Chloroethane	Result 252ug/kg

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

**Qualifier Definition Report
for**

URSC013 URS Energy & Construction (2012-SC-SPRU-29463-171)
Client SDG: 456917 GEL Work Order: 456917

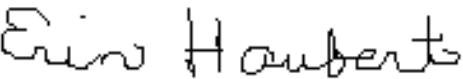
The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- B The target analyte was detected in the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- DL Indicates that sample is diluted.
- RA Indicates that sample is re-analyzed without re-extraction.
- RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature:  **Name:** **Erin Haubert**
Date: **22 AUG 2018** **Title:** **Data Validator**

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	S17	Project:	URSC00211
Sample ID:	456917001	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:20		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	7.5%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	15.9	106	ug/kg	0.980	50	JP1	08/18/18	0625	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	15.9	106	ug/kg	0.980	50					
1,1,2-Trichloroethane	U	ND	15.9	106	ug/kg	0.980	50					
1,1-Dichloroethane	U	ND	15.9	106	ug/kg	0.980	50					
1,1-Dichloroethylene	U	ND	15.9	106	ug/kg	0.980	50					
1,2,3-Trichlorobenzene	U	ND	15.9	106	ug/kg	0.980	50					
1,2,4-Trichlorobenzene	U	ND	15.9	106	ug/kg	0.980	50					
1,2-Dibromo-3-chloropropane	U	ND	26.5	106	ug/kg	0.980	50					
1,2-Dibromoethane	U	ND	15.9	106	ug/kg	0.980	50					
1,2-Dichlorobenzene	U	ND	15.9	106	ug/kg	0.980	50					
1,2-Dichloroethane	U	ND	15.9	106	ug/kg	0.980	50					
1,2-Dichloropropane	U	ND	15.9	106	ug/kg	0.980	50					
1,3-Dichlorobenzene	U	ND	15.9	106	ug/kg	0.980	50					
1,4-Dichlorobenzene	U	ND	15.9	106	ug/kg	0.980	50					
1,4-Dioxane	U	ND	795	2650	ug/kg	0.980	50					
2-Butanone	U	ND	159	530	ug/kg	0.980	50					
2-Hexanone	U	ND	159	530	ug/kg	0.980	50					
4-Methyl-2-pentanone	U	ND	159	530	ug/kg	0.980	50					
Acetone	U	ND	159	530	ug/kg	0.980	50					
Benzene	U	ND	15.9	106	ug/kg	0.980	50					
Bromochloromethane	U	ND	15.9	106	ug/kg	0.980	50					
Bromodichloromethane	U	ND	15.9	106	ug/kg	0.980	50					
Bromoform	U	ND	15.9	106	ug/kg	0.980	50					
Bromomethane	U	ND	15.9	106	ug/kg	0.980	50					
Carbon disulfide	U	ND	84.8	530	ug/kg	0.980	50					
Carbon tetrachloride	U	ND	15.9	106	ug/kg	0.980	50					
Chlorobenzene	U	ND	15.9	106	ug/kg	0.980	50					
Chloroethane	U	ND	15.9	106	ug/kg	0.980	50					
Chloroform	U	ND	15.9	106	ug/kg	0.980	50					
Chloromethane	U	ND	15.9	106	ug/kg	0.980	50					
Cyclohexane	U	ND	15.9	106	ug/kg	0.980	50					
Dibromochloromethane	U	ND	15.9	106	ug/kg	0.980	50					
Dichlorodifluoromethane	U	ND	15.9	106	ug/kg	0.980	50					
Ethylbenzene	U	ND	15.9	106	ug/kg	0.980	50					
Isopropylbenzene	U	ND	15.9	106	ug/kg	0.980	50					
Methyl acetate	U	ND	79.5	265	ug/kg	0.980	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	S17	Project:	URSC00211
Sample ID:	456917001	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	15.9	106	ug/kg	0.980	50					
Methylene chloride	U	ND	84.8	265	ug/kg	0.980	50					
Styrene	U	ND	15.9	106	ug/kg	0.980	50					
Tetrachloroethylene	U	ND	15.9	106	ug/kg	0.980	50					
Toluene	U	ND	15.9	106	ug/kg	0.980	50					
Trichloroethylene	U	ND	15.9	106	ug/kg	0.980	50					
Trichlorofluoromethane	U	ND	15.9	106	ug/kg	0.980	50					
Trichlorotrifluoroethane	U	ND	84.8	265	ug/kg	0.980	50					
Vinyl chloride	U	ND	15.9	106	ug/kg	0.980	50					
cis-1,2-Dichloroethylene	U	ND	15.9	106	ug/kg	0.980	50					
cis-1,3-Dichloropropylene	U	ND	15.9	106	ug/kg	0.980	50					
m,p-Xylenes	U	ND	15.9	212	ug/kg	0.980	50					
o-Xylene	U	ND	15.9	106	ug/kg	0.980	50					
tert-Butyl methyl ether	U	ND	15.9	106	ug/kg	0.980	50					
trans-1,2-Dichloroethylene	U	ND	15.9	106	ug/kg	0.980	50					
trans-1,3-Dichloropropylene	U	ND	15.9	106	ug/kg	0.980	50					
1,1,1-Trichloroethane	U	ND	0.318	2.12	ug/kg	0.980	1	JP1	08/20/18	1217	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.318	2.12	ug/kg	0.980	1					
1,1,2-Trichloroethane	U	ND	0.318	2.12	ug/kg	0.980	1					
1,1-Dichloroethane	U	ND	0.318	2.12	ug/kg	0.980	1					
1,1-Dichloroethylene	U	ND	0.318	2.12	ug/kg	0.980	1					
1,2,3-Trichlorobenzene	J	1.98	0.318	2.12	ug/kg	0.980	1					
1,2,4-Trichlorobenzene	J	1.73	0.318	2.12	ug/kg	0.980	1					
1,2-Dibromo-3-chloropropane	U	ND	0.530	2.12	ug/kg	0.980	1					
1,2-Dibromoethane	U	ND	0.318	2.12	ug/kg	0.980	1					
1,2-Dichlorobenzene	J	0.700	0.318	2.12	ug/kg	0.980	1					
1,2-Dichloroethane	U	ND	0.318	2.12	ug/kg	0.980	1					
1,2-Dichloropropane	U	ND	0.318	2.12	ug/kg	0.980	1					
1,3-Dichlorobenzene	J	0.806	0.318	2.12	ug/kg	0.980	1					
1,4-Dichlorobenzene	J	0.996	0.318	2.12	ug/kg	0.980	1					
1,4-Dioxane	U	ND	15.9	53.0	ug/kg	0.980	1					
2-Butanone	U	ND	3.18	10.6	ug/kg	0.980	1					
2-Hexanone	U	ND	3.18	10.6	ug/kg	0.980	1					
4-Methyl-2-pentanone	U	ND	3.18	10.6	ug/kg	0.980	1					
Acetone	J	4.18	3.18	10.6	ug/kg	0.980	1					
Benzene	U	ND	0.318	2.12	ug/kg	0.980	1					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	S17	Project:	URSC00211
Sample ID:	456917001	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.318	2.12	ug/kg	0.980	1					
Bromodichloromethane	U	ND	0.318	2.12	ug/kg	0.980	1					
Bromoform	U	ND	0.318	2.12	ug/kg	0.980	1					
Bromomethane	U	ND	0.318	2.12	ug/kg	0.980	1					
Carbon disulfide	J	3.48	1.70	10.6	ug/kg	0.980	1					
Carbon tetrachloride	U	ND	0.318	2.12	ug/kg	0.980	1					
Chlorobenzene	U	ND	0.318	2.12	ug/kg	0.980	1					
Chloroethane	U	ND	0.318	2.12	ug/kg	0.980	1					
Chloroform	U	ND	0.318	2.12	ug/kg	0.980	1					
Chloromethane	U	ND	0.318	2.12	ug/kg	0.980	1					
Cyclohexane	U	ND	0.318	2.12	ug/kg	0.980	1					
Dibromochloromethane	U	ND	0.318	2.12	ug/kg	0.980	1					
Dichlorodifluoromethane	U	ND	0.318	2.12	ug/kg	0.980	1					
Ethylbenzene	U	ND	0.318	2.12	ug/kg	0.980	1					
Isopropylbenzene	U	ND	0.318	2.12	ug/kg	0.980	1					
Methyl acetate	U	ND	1.59	5.30	ug/kg	0.980	1					
Methylcyclohexane	U	ND	0.318	2.12	ug/kg	0.980	1					
Methylene chloride		6.32	1.70	5.30	ug/kg	0.980	1					
Styrene	U	ND	0.318	2.12	ug/kg	0.980	1					
Tetrachloroethylene	U	ND	0.318	2.12	ug/kg	0.980	1					
Toluene	U	ND	0.318	2.12	ug/kg	0.980	1					
Trichloroethylene	U	ND	0.318	2.12	ug/kg	0.980	1					
Trichlorofluoromethane	U	ND	0.318	2.12	ug/kg	0.980	1					
Trichlorotrifluoroethane	U	ND	1.70	5.30	ug/kg	0.980	1					
Vinyl chloride	U	ND	0.318	2.12	ug/kg	0.980	1					
cis-1,2-Dichloroethylene	U	ND	0.318	2.12	ug/kg	0.980	1					
cis-1,3-Dichloropropylene	U	ND	0.318	2.12	ug/kg	0.980	1					
m,p-Xylenes	U	ND	0.318	4.24	ug/kg	0.980	1					
o-Xylene	U	ND	0.318	2.12	ug/kg	0.980	1					
tert-Butyl methyl ether	U	ND	0.318	2.12	ug/kg	0.980	1					
trans-1,2-Dichloroethylene	U	ND	0.318	2.12	ug/kg	0.980	1					
trans-1,3-Dichloropropylene	U	ND	0.318	2.12	ug/kg	0.980	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2203	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	S17	Project:	URSC00211
Sample ID:	456917001	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/20/18	1055		1794367			

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 5035A/8260C		
2	SW846 5035A/8260C		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2630 ug/kg	50.0	99	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2650 ug/kg	50.0	100	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2590 ug/kg	50.0	98	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	52.2 ug/kg	50.0	99	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	51.9 ug/kg	50.0	98	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	67.6 ug/kg	50.0	128*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	S18	Project:	URSC00211
Sample ID:	456917002	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:22		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	8.67%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	16.1	107	ug/kg	0.980	50	JP1	08/18/18	0656	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	16.1	107	ug/kg	0.980	50					
1,1,2-Trichloroethane	U	ND	16.1	107	ug/kg	0.980	50					
1,1-Dichloroethane	U	ND	16.1	107	ug/kg	0.980	50					
1,1-Dichloroethylene	U	ND	16.1	107	ug/kg	0.980	50					
1,2,3-Trichlorobenzene	U	ND	16.1	107	ug/kg	0.980	50					
1,2,4-Trichlorobenzene	U	ND	16.1	107	ug/kg	0.980	50					
1,2-Dibromo-3-chloropropane	U	ND	26.8	107	ug/kg	0.980	50					
1,2-Dibromoethane	U	ND	16.1	107	ug/kg	0.980	50					
1,2-Dichlorobenzene	U	ND	16.1	107	ug/kg	0.980	50					
1,2-Dichloroethane	U	ND	16.1	107	ug/kg	0.980	50					
1,2-Dichloropropane	U	ND	16.1	107	ug/kg	0.980	50					
1,3-Dichlorobenzene	U	ND	16.1	107	ug/kg	0.980	50					
1,4-Dichlorobenzene	U	ND	16.1	107	ug/kg	0.980	50					
1,4-Dioxane	U	ND	805	2680	ug/kg	0.980	50					
2-Butanone	U	ND	161	537	ug/kg	0.980	50					
2-Hexanone	U	ND	161	537	ug/kg	0.980	50					
4-Methyl-2-pentanone	U	ND	161	537	ug/kg	0.980	50					
Acetone	U	ND	161	537	ug/kg	0.980	50					
Benzene	U	ND	16.1	107	ug/kg	0.980	50					
Bromochloromethane	U	ND	16.1	107	ug/kg	0.980	50					
Bromodichloromethane	U	ND	16.1	107	ug/kg	0.980	50					
Bromoform	U	ND	16.1	107	ug/kg	0.980	50					
Bromomethane	U	ND	16.1	107	ug/kg	0.980	50					
Carbon disulfide	U	ND	85.9	537	ug/kg	0.980	50					
Carbon tetrachloride	U	ND	16.1	107	ug/kg	0.980	50					
Chlorobenzene	U	ND	16.1	107	ug/kg	0.980	50					
Chloroethane	U	ND	16.1	107	ug/kg	0.980	50					
Chloroform	U	ND	16.1	107	ug/kg	0.980	50					
Chloromethane	U	ND	16.1	107	ug/kg	0.980	50					
Cyclohexane	U	ND	16.1	107	ug/kg	0.980	50					
Dibromochloromethane	U	ND	16.1	107	ug/kg	0.980	50					
Dichlorodifluoromethane	U	ND	16.1	107	ug/kg	0.980	50					
Ethylbenzene	U	ND	16.1	107	ug/kg	0.980	50					
Isopropylbenzene	U	ND	16.1	107	ug/kg	0.980	50					
Methyl acetate	U	ND	80.5	268	ug/kg	0.980	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	S18	Project:	URSC00211
Sample ID:	456917002	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	16.1	107	ug/kg	0.980	50					
Methylene chloride	U	ND	85.9	268	ug/kg	0.980	50					
Styrene	U	ND	16.1	107	ug/kg	0.980	50					
Tetrachloroethylene	U	ND	16.1	107	ug/kg	0.980	50					
Toluene	U	ND	16.1	107	ug/kg	0.980	50					
Trichloroethylene	J	32.2	16.1	107	ug/kg	0.980	50					
Trichlorofluoromethane	U	ND	16.1	107	ug/kg	0.980	50					
Trichlorotrifluoroethane	U	ND	85.9	268	ug/kg	0.980	50					
Vinyl chloride	U	ND	16.1	107	ug/kg	0.980	50					
cis-1,2-Dichloroethylene	U	ND	16.1	107	ug/kg	0.980	50					
cis-1,3-Dichloropropylene	U	ND	16.1	107	ug/kg	0.980	50					
m,p-Xylenes	U	ND	16.1	215	ug/kg	0.980	50					
o-Xylene	U	ND	16.1	107	ug/kg	0.980	50					
tert-Butyl methyl ether	U	ND	16.1	107	ug/kg	0.980	50					
trans-1,2-Dichloroethylene	U	ND	16.1	107	ug/kg	0.980	50					
trans-1,3-Dichloropropylene	U	ND	16.1	107	ug/kg	0.980	50					
1,1,1-Trichloroethane	U	ND	0.316	2.11	ug/kg	0.962	1	JP1	08/20/18	1248	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.316	2.11	ug/kg	0.962	1					
1,1,2-Trichloroethane	U	ND	0.316	2.11	ug/kg	0.962	1					
1,1-Dichloroethane	U	ND	0.316	2.11	ug/kg	0.962	1					
1,1-Dichloroethylene	U	ND	0.316	2.11	ug/kg	0.962	1					
1,2,3-Trichlorobenzene	J	1.21	0.316	2.11	ug/kg	0.962	1					
1,2,4-Trichlorobenzene	J	1.07	0.316	2.11	ug/kg	0.962	1					
1,2-Dibromo-3-chloropropane	U	ND	0.526	2.11	ug/kg	0.962	1					
1,2-Dibromoethane	U	ND	0.316	2.11	ug/kg	0.962	1					
1,2-Dichlorobenzene	U	ND	0.316	2.11	ug/kg	0.962	1					
1,2-Dichloroethane	U	ND	0.316	2.11	ug/kg	0.962	1					
1,2-Dichloropropane	U	ND	0.316	2.11	ug/kg	0.962	1					
1,3-Dichlorobenzene	J	0.379	0.316	2.11	ug/kg	0.962	1					
1,4-Dichlorobenzene	J	0.705	0.316	2.11	ug/kg	0.962	1					
1,4-Dioxane	U	ND	15.8	52.6	ug/kg	0.962	1					
2-Butanone	U	ND	3.16	10.5	ug/kg	0.962	1					
2-Hexanone	U	ND	3.16	10.5	ug/kg	0.962	1					
4-Methyl-2-pentanone	U	ND	3.16	10.5	ug/kg	0.962	1					
Acetone	U	ND	3.16	10.5	ug/kg	0.962	1					
Benzene	U	ND	0.316	2.11	ug/kg	0.962	1					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	S18	Project:	URSC00211
Sample ID:	456917002	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Bromodichloromethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Bromoform	U	ND	0.316	2.11	ug/kg	0.962	1					
Bromomethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Carbon disulfide	U	ND	1.68	10.5	ug/kg	0.962	1					
Carbon tetrachloride	U	ND	0.316	2.11	ug/kg	0.962	1					
Chlorobenzene	U	ND	0.316	2.11	ug/kg	0.962	1					
Chloroethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Chloroform	J	1.48	0.316	2.11	ug/kg	0.962	1					
Chloromethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Cyclohexane	U	ND	0.316	2.11	ug/kg	0.962	1					
Dibromochloromethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Dichlorodifluoromethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Ethylbenzene	U	ND	0.316	2.11	ug/kg	0.962	1					
Isopropylbenzene	U	ND	0.316	2.11	ug/kg	0.962	1					
Methyl acetate	U	ND	1.58	5.26	ug/kg	0.962	1					
Methylcyclohexane	U	ND	0.316	2.11	ug/kg	0.962	1					
Methylene chloride		10.1	1.68	5.26	ug/kg	0.962	1					
Styrene	U	ND	0.316	2.11	ug/kg	0.962	1					
Tetrachloroethylene	U	ND	0.316	2.11	ug/kg	0.962	1					
Toluene	U	ND	0.316	2.11	ug/kg	0.962	1					
Trichloroethylene	J	1.72	0.316	2.11	ug/kg	0.962	1					
Trichlorofluoromethane	J	0.537	0.316	2.11	ug/kg	0.962	1					
Trichlorotrifluoroethane	U	ND	1.68	5.26	ug/kg	0.962	1					
Vinyl chloride	U	ND	0.316	2.11	ug/kg	0.962	1					
cis-1,2-Dichloroethylene	J	0.368	0.316	2.11	ug/kg	0.962	1					
cis-1,3-Dichloropropylene	U	ND	0.316	2.11	ug/kg	0.962	1					
m,p-Xylenes	U	ND	0.316	4.21	ug/kg	0.962	1					
o-Xylene	U	ND	0.316	2.11	ug/kg	0.962	1					
tert-Butyl methyl ether	U	ND	0.316	2.11	ug/kg	0.962	1					
trans-1,2-Dichloroethylene	U	ND	0.316	2.11	ug/kg	0.962	1					
trans-1,3-Dichloropropylene	U	ND	0.316	2.11	ug/kg	0.962	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2204	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	S18	Project:	URSC00211
Sample ID:	456917002	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/20/18		1056		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 5035A/8260C		
2	SW846 5035A/8260C		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2700 ug/kg	50.0	101	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2510 ug/kg	50.0	94	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2660 ug/kg	50.0	99	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	60.2 ug/kg	50.0	114	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	56.0 ug/kg	50.0	106	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	77.0 ug/kg	50.0	146*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	SW07	Project:	URSC00211
Sample ID:	456917003	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:24		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	6.81%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	14.1	94.1	ug/kg	0.877	50	JP1	08/18/18	0727	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	14.1	94.1	ug/kg	0.877	50					
1,1,2-Trichloroethane	U	ND	14.1	94.1	ug/kg	0.877	50					
1,1-Dichloroethane	U	ND	14.1	94.1	ug/kg	0.877	50					
1,1-Dichloroethylene	U	ND	14.1	94.1	ug/kg	0.877	50					
1,2,3-Trichlorobenzene	U	ND	14.1	94.1	ug/kg	0.877	50					
1,2,4-Trichlorobenzene	U	ND	14.1	94.1	ug/kg	0.877	50					
1,2-Dibromo-3-chloropropane	U	ND	23.5	94.1	ug/kg	0.877	50					
1,2-Dibromoethane	U	ND	14.1	94.1	ug/kg	0.877	50					
1,2-Dichlorobenzene	U	ND	14.1	94.1	ug/kg	0.877	50					
1,2-Dichloroethane	U	ND	14.1	94.1	ug/kg	0.877	50					
1,2-Dichloropropane	U	ND	14.1	94.1	ug/kg	0.877	50					
1,3-Dichlorobenzene	U	ND	14.1	94.1	ug/kg	0.877	50					
1,4-Dichlorobenzene	U	ND	14.1	94.1	ug/kg	0.877	50					
1,4-Dioxane	U	ND	706	2350	ug/kg	0.877	50					
2-Butanone	U	ND	141	471	ug/kg	0.877	50					
2-Hexanone	U	ND	141	471	ug/kg	0.877	50					
4-Methyl-2-pentanone	U	ND	141	471	ug/kg	0.877	50					
Acetone	U	ND	141	471	ug/kg	0.877	50					
Benzene	U	ND	14.1	94.1	ug/kg	0.877	50					
Bromochloromethane	U	ND	14.1	94.1	ug/kg	0.877	50					
Bromodichloromethane	U	ND	14.1	94.1	ug/kg	0.877	50					
Bromoform	U	ND	14.1	94.1	ug/kg	0.877	50					
Bromomethane	U	ND	14.1	94.1	ug/kg	0.877	50					
Carbon disulfide	U	ND	75.3	471	ug/kg	0.877	50					
Carbon tetrachloride	U	ND	14.1	94.1	ug/kg	0.877	50					
Chlorobenzene	U	ND	14.1	94.1	ug/kg	0.877	50					
Chloroethane	U	ND	14.1	94.1	ug/kg	0.877	50					
Chloroform	U	ND	14.1	94.1	ug/kg	0.877	50					
Chloromethane	U	ND	14.1	94.1	ug/kg	0.877	50					
Cyclohexane	U	ND	14.1	94.1	ug/kg	0.877	50					
Dibromochloromethane	U	ND	14.1	94.1	ug/kg	0.877	50					
Dichlorodifluoromethane	U	ND	14.1	94.1	ug/kg	0.877	50					
Ethylbenzene	U	ND	14.1	94.1	ug/kg	0.877	50					
Isopropylbenzene	U	ND	14.1	94.1	ug/kg	0.877	50					
Methyl acetate	U	ND	70.6	235	ug/kg	0.877	50					

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	SW07	Project:	URSC00211
Sample ID:	456917003	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	14.1	94.1	ug/kg	0.877	50					
Methylene chloride	U	ND	75.3	235	ug/kg	0.877	50					
Styrene	U	ND	14.1	94.1	ug/kg	0.877	50					
Tetrachloroethylene	U	ND	14.1	94.1	ug/kg	0.877	50					
Toluene	U	ND	14.1	94.1	ug/kg	0.877	50					
Trichloroethylene	U	ND	14.1	94.1	ug/kg	0.877	50					
Trichlorofluoromethane	U	ND	14.1	94.1	ug/kg	0.877	50					
Trichlorotrifluoroethane	U	ND	75.3	235	ug/kg	0.877	50					
Vinyl chloride	U	ND	14.1	94.1	ug/kg	0.877	50					
cis-1,2-Dichloroethylene	U	ND	14.1	94.1	ug/kg	0.877	50					
cis-1,3-Dichloropropylene	U	ND	14.1	94.1	ug/kg	0.877	50					
m,p-Xylenes	U	ND	14.1	188	ug/kg	0.877	50					
o-Xylene	U	ND	14.1	94.1	ug/kg	0.877	50					
tert-Butyl methyl ether	U	ND	14.1	94.1	ug/kg	0.877	50					
trans-1,2-Dichloroethylene	U	ND	14.1	94.1	ug/kg	0.877	50					
trans-1,3-Dichloropropylene	U	ND	14.1	94.1	ug/kg	0.877	50					
1,1,1-Trichloroethane	U	ND	0.322	2.15	ug/kg	1.00	1	JP1	08/20/18	1319	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.322	2.15	ug/kg	1.00	1					
1,1,2-Trichloroethane	U	ND	0.322	2.15	ug/kg	1.00	1					
1,1-Dichloroethane	U	ND	0.322	2.15	ug/kg	1.00	1					
1,1-Dichloroethylene	U	ND	0.322	2.15	ug/kg	1.00	1					
1,2,3-Trichlorobenzene	J	0.848	0.322	2.15	ug/kg	1.00	1					
1,2,4-Trichlorobenzene	J	1.20	0.322	2.15	ug/kg	1.00	1					
1,2-Dibromo-3-chloropropane	U	ND	0.537	2.15	ug/kg	1.00	1					
1,2-Dibromoethane	U	ND	0.322	2.15	ug/kg	1.00	1					
1,2-Dichlorobenzene	U	ND	0.322	2.15	ug/kg	1.00	1					
1,2-Dichloroethane	U	ND	0.322	2.15	ug/kg	1.00	1					
1,2-Dichloropropane	U	ND	0.322	2.15	ug/kg	1.00	1					
1,3-Dichlorobenzene	J	0.451	0.322	2.15	ug/kg	1.00	1					
1,4-Dichlorobenzene	J	0.751	0.322	2.15	ug/kg	1.00	1					
1,4-Dioxane	U	ND	16.1	53.7	ug/kg	1.00	1					
2-Butanone	U	ND	3.22	10.7	ug/kg	1.00	1					
2-Hexanone	U	ND	3.22	10.7	ug/kg	1.00	1					
4-Methyl-2-pentanone	U	ND	3.22	10.7	ug/kg	1.00	1					
Acetone	J	4.74	3.22	10.7	ug/kg	1.00	1					
Benzene	U	ND	0.322	2.15	ug/kg	1.00	1					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	SW07	Project:	URSC00211
Sample ID:	456917003	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.322	2.15	ug/kg	1.00	1					
Bromodichloromethane	U	ND	0.322	2.15	ug/kg	1.00	1					
Bromoform	U	ND	0.322	2.15	ug/kg	1.00	1					
Bromomethane	U	ND	0.322	2.15	ug/kg	1.00	1					
Carbon disulfide	J	1.95	1.72	10.7	ug/kg	1.00	1					
Carbon tetrachloride	U	ND	0.322	2.15	ug/kg	1.00	1					
Chlorobenzene	U	ND	0.322	2.15	ug/kg	1.00	1					
Chloroethane	U	ND	0.322	2.15	ug/kg	1.00	1					
Chloroform	U	ND	0.322	2.15	ug/kg	1.00	1					
Chloromethane	U	ND	0.322	2.15	ug/kg	1.00	1					
Cyclohexane	U	ND	0.322	2.15	ug/kg	1.00	1					
Dibromochloromethane	U	ND	0.322	2.15	ug/kg	1.00	1					
Dichlorodifluoromethane	U	ND	0.322	2.15	ug/kg	1.00	1					
Ethylbenzene	U	ND	0.322	2.15	ug/kg	1.00	1					
Isopropylbenzene	U	ND	0.322	2.15	ug/kg	1.00	1					
Methyl acetate	U	ND	1.61	5.37	ug/kg	1.00	1					
Methylcyclohexane	U	ND	0.322	2.15	ug/kg	1.00	1					
Methylene chloride		15.9	1.72	5.37	ug/kg	1.00	1					
Styrene	U	ND	0.322	2.15	ug/kg	1.00	1					
Tetrachloroethylene	U	ND	0.322	2.15	ug/kg	1.00	1					
Toluene	U	ND	0.322	2.15	ug/kg	1.00	1					
Trichloroethylene	U	ND	0.322	2.15	ug/kg	1.00	1					
Trichlorofluoromethane	U	ND	0.322	2.15	ug/kg	1.00	1					
Trichlorotrifluoroethane	U	ND	1.72	5.37	ug/kg	1.00	1					
Vinyl chloride	U	ND	0.322	2.15	ug/kg	1.00	1					
cis-1,2-Dichloroethylene	U	ND	0.322	2.15	ug/kg	1.00	1					
cis-1,3-Dichloropropylene	U	ND	0.322	2.15	ug/kg	1.00	1					
m,p-Xylenes	U	ND	0.322	4.29	ug/kg	1.00	1					
o-Xylene	U	ND	0.322	2.15	ug/kg	1.00	1					
tert-Butyl methyl ether	U	ND	0.322	2.15	ug/kg	1.00	1					
trans-1,2-Dichloroethylene	U	ND	0.322	2.15	ug/kg	1.00	1					
trans-1,3-Dichloropropylene	U	ND	0.322	2.15	ug/kg	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2205	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID: SW07	Project: URSC00211
Sample ID: 456917003	Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/20/18		1057		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	SW846 5035A/8260C				
2	SW846 5035A/8260C				

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2320 ug/kg	50.0	98	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2280 ug/kg	50.0	97	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2270 ug/kg	50.0	96	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	60.1 ug/kg	50.0	112	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	48.5 ug/kg	50.0	90	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	65.2 ug/kg	50.0	121*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	SW08	Project:	URSC00211
Sample ID:	456917004	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:26		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	9.8%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	16.0	107	ug/kg	0.962	50	JP1	08/18/18	0757	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	16.0	107	ug/kg	0.962	50					
1,1,2-Trichloroethane	U	ND	16.0	107	ug/kg	0.962	50					
1,1-Dichloroethane	U	ND	16.0	107	ug/kg	0.962	50					
1,1-Dichloroethylene	U	ND	16.0	107	ug/kg	0.962	50					
1,2,3-Trichlorobenzene	U	ND	16.0	107	ug/kg	0.962	50					
1,2,4-Trichlorobenzene	U	ND	16.0	107	ug/kg	0.962	50					
1,2-Dibromo-3-chloropropane	U	ND	26.6	107	ug/kg	0.962	50					
1,2-Dibromoethane	U	ND	16.0	107	ug/kg	0.962	50					
1,2-Dichlorobenzene	U	ND	16.0	107	ug/kg	0.962	50					
1,2-Dichloroethane	U	ND	16.0	107	ug/kg	0.962	50					
1,2-Dichloropropane	U	ND	16.0	107	ug/kg	0.962	50					
1,3-Dichlorobenzene	U	ND	16.0	107	ug/kg	0.962	50					
1,4-Dichlorobenzene	U	ND	16.0	107	ug/kg	0.962	50					
1,4-Dioxane	U	ND	799	2660	ug/kg	0.962	50					
2-Butanone	U	ND	160	533	ug/kg	0.962	50					
2-Hexanone	U	ND	160	533	ug/kg	0.962	50					
4-Methyl-2-pentanone	U	ND	160	533	ug/kg	0.962	50					
Acetone	U	ND	160	533	ug/kg	0.962	50					
Benzene	U	ND	16.0	107	ug/kg	0.962	50					
Bromochloromethane	U	ND	16.0	107	ug/kg	0.962	50					
Bromodichloromethane	U	ND	16.0	107	ug/kg	0.962	50					
Bromoform	U	ND	16.0	107	ug/kg	0.962	50					
Bromomethane	U	ND	16.0	107	ug/kg	0.962	50					
Carbon disulfide	U	ND	85.3	533	ug/kg	0.962	50					
Carbon tetrachloride	U	ND	16.0	107	ug/kg	0.962	50					
Chlorobenzene	U	ND	16.0	107	ug/kg	0.962	50					
Chloroethane	U	ND	16.0	107	ug/kg	0.962	50					
Chloroform	U	ND	16.0	107	ug/kg	0.962	50					
Chloromethane	U	ND	16.0	107	ug/kg	0.962	50					
Cyclohexane	U	ND	16.0	107	ug/kg	0.962	50					
Dibromochloromethane	U	ND	16.0	107	ug/kg	0.962	50					
Dichlorodifluoromethane	U	ND	16.0	107	ug/kg	0.962	50					
Ethylbenzene	U	ND	16.0	107	ug/kg	0.962	50					
Isopropylbenzene	U	ND	16.0	107	ug/kg	0.962	50					
Methyl acetate	U	ND	79.9	266	ug/kg	0.962	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	SW08	Project:	URSC00211
Sample ID:	456917004	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	16.0	107	ug/kg	0.962	50					
Methylene chloride	U	ND	85.3	266	ug/kg	0.962	50					
Styrene	U	ND	16.0	107	ug/kg	0.962	50					
Tetrachloroethylene	U	ND	16.0	107	ug/kg	0.962	50					
Toluene	U	ND	16.0	107	ug/kg	0.962	50					
Trichloroethylene	U	ND	16.0	107	ug/kg	0.962	50					
Trichlorofluoromethane	U	ND	16.0	107	ug/kg	0.962	50					
Trichlorotrifluoroethane	U	ND	85.3	266	ug/kg	0.962	50					
Vinyl chloride	U	ND	16.0	107	ug/kg	0.962	50					
cis-1,2-Dichloroethylene	U	ND	16.0	107	ug/kg	0.962	50					
cis-1,3-Dichloropropylene	U	ND	16.0	107	ug/kg	0.962	50					
m,p-Xylenes	U	ND	16.0	213	ug/kg	0.962	50					
o-Xylene	U	ND	16.0	107	ug/kg	0.962	50					
tert-Butyl methyl ether	U	ND	16.0	107	ug/kg	0.962	50					
trans-1,2-Dichloroethylene	U	ND	16.0	107	ug/kg	0.962	50					
trans-1,3-Dichloropropylene	U	ND	16.0	107	ug/kg	0.962	50					
1,1,1-Trichloroethane	U	ND	0.326	2.17	ug/kg	0.980	1	JP1	08/20/18	1350	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.326	2.17	ug/kg	0.980	1					
1,1,2-Trichloroethane	U	ND	0.326	2.17	ug/kg	0.980	1					
1,1-Dichloroethane	U	ND	0.326	2.17	ug/kg	0.980	1					
1,1-Dichloroethylene	U	ND	0.326	2.17	ug/kg	0.980	1					
1,2,3-Trichlorobenzene	U	ND	0.326	2.17	ug/kg	0.980	1					
1,2,4-Trichlorobenzene	J	0.456	0.326	2.17	ug/kg	0.980	1					
1,2-Dibromo-3-chloropropane	U	ND	0.543	2.17	ug/kg	0.980	1					
1,2-Dibromoethane	U	ND	0.326	2.17	ug/kg	0.980	1					
1,2-Dichlorobenzene	U	ND	0.326	2.17	ug/kg	0.980	1					
1,2-Dichloroethane	U	ND	0.326	2.17	ug/kg	0.980	1					
1,2-Dichloropropane	U	ND	0.326	2.17	ug/kg	0.980	1					
1,3-Dichlorobenzene	U	ND	0.326	2.17	ug/kg	0.980	1					
1,4-Dichlorobenzene	J	0.326	0.326	2.17	ug/kg	0.980	1					
1,4-Dioxane	U	ND	16.3	54.3	ug/kg	0.980	1					
2-Butanone	U	ND	3.26	10.9	ug/kg	0.980	1					
2-Hexanone	U	ND	3.26	10.9	ug/kg	0.980	1					
4-Methyl-2-pentanone	U	ND	3.26	10.9	ug/kg	0.980	1					
Acetone	U	ND	3.26	10.9	ug/kg	0.980	1					
Benzene	U	ND	0.326	2.17	ug/kg	0.980	1					

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	SW08	Project:	URSC00211
Sample ID:	456917004	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.326	2.17	ug/kg	0.980	1					
Bromodichloromethane	U	ND	0.326	2.17	ug/kg	0.980	1					
Bromoform	U	ND	0.326	2.17	ug/kg	0.980	1					
Bromomethane	U	ND	0.326	2.17	ug/kg	0.980	1					
Carbon disulfide	U	ND	1.74	10.9	ug/kg	0.980	1					
Carbon tetrachloride	U	ND	0.326	2.17	ug/kg	0.980	1					
Chlorobenzene	U	ND	0.326	2.17	ug/kg	0.980	1					
Chloroethane	U	ND	0.326	2.17	ug/kg	0.980	1					
Chloroform	U	ND	0.326	2.17	ug/kg	0.980	1					
Chloromethane	U	ND	0.326	2.17	ug/kg	0.980	1					
Cyclohexane	U	ND	0.326	2.17	ug/kg	0.980	1					
Dibromochloromethane	U	ND	0.326	2.17	ug/kg	0.980	1					
Dichlorodifluoromethane	U	ND	0.326	2.17	ug/kg	0.980	1					
Ethylbenzene	U	ND	0.326	2.17	ug/kg	0.980	1					
Isopropylbenzene	U	ND	0.326	2.17	ug/kg	0.980	1					
Methyl acetate	U	ND	1.63	5.43	ug/kg	0.980	1					
Methylcyclohexane	U	ND	0.326	2.17	ug/kg	0.980	1					
Methylene chloride	U	ND	1.74	5.43	ug/kg	0.980	1					
Styrene	U	ND	0.326	2.17	ug/kg	0.980	1					
Tetrachloroethylene	U	ND	0.326	2.17	ug/kg	0.980	1					
Toluene	U	ND	0.326	2.17	ug/kg	0.980	1					
Trichloroethylene	U	ND	0.326	2.17	ug/kg	0.980	1					
Trichlorofluoromethane	U	ND	0.326	2.17	ug/kg	0.980	1					
Trichlorotrifluoroethane	U	ND	1.74	5.43	ug/kg	0.980	1					
Vinyl chloride	U	ND	0.326	2.17	ug/kg	0.980	1					
cis-1,2-Dichloroethylene	U	ND	0.326	2.17	ug/kg	0.980	1					
cis-1,3-Dichloropropylene	U	ND	0.326	2.17	ug/kg	0.980	1					
m,p-Xylenes	U	ND	0.326	4.35	ug/kg	0.980	1					
o-Xylene	U	ND	0.326	2.17	ug/kg	0.980	1					
tert-Butyl methyl ether	U	ND	0.326	2.17	ug/kg	0.980	1					
trans-1,2-Dichloroethylene	U	ND	0.326	2.17	ug/kg	0.980	1					
trans-1,3-Dichloropropylene	U	ND	0.326	2.17	ug/kg	0.980	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2206	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID: SW08	Project: URSC00211
Sample ID: 456917004	Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A	5035A/8260C Prep			JP1	08/20/18		1058		1794367			

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 5035A/8260C		
2	SW846 5035A/8260C		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2650 ug/kg	50.0	99	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2640 ug/kg	50.0	99	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2670 ug/kg	50.0	100	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	60.8 ug/kg	50.0	112	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	72.6 ug/kg	50.0	134*	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	71.7 ug/kg	50.0	132*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	SW09	Project:	URSC00211
Sample ID:	456917005	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:28		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	8.7%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	15.8	105	ug/kg	0.962	50	JP1	08/18/18	0828	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	15.8	105	ug/kg	0.962	50					
1,1,2-Trichloroethane	U	ND	15.8	105	ug/kg	0.962	50					
1,1-Dichloroethane	U	ND	15.8	105	ug/kg	0.962	50					
1,1-Dichloroethylene	U	ND	15.8	105	ug/kg	0.962	50					
1,2,3-Trichlorobenzene	U	ND	15.8	105	ug/kg	0.962	50					
1,2,4-Trichlorobenzene	U	ND	15.8	105	ug/kg	0.962	50					
1,2-Dibromo-3-chloropropane	U	ND	26.3	105	ug/kg	0.962	50					
1,2-Dibromoethane	U	ND	15.8	105	ug/kg	0.962	50					
1,2-Dichlorobenzene	U	ND	15.8	105	ug/kg	0.962	50					
1,2-Dichloroethane	U	ND	15.8	105	ug/kg	0.962	50					
1,2-Dichloropropane	U	ND	15.8	105	ug/kg	0.962	50					
1,3-Dichlorobenzene	U	ND	15.8	105	ug/kg	0.962	50					
1,4-Dichlorobenzene	U	ND	15.8	105	ug/kg	0.962	50					
1,4-Dioxane	U	ND	790	2630	ug/kg	0.962	50					
2-Butanone	U	ND	158	527	ug/kg	0.962	50					
2-Hexanone	U	ND	158	527	ug/kg	0.962	50					
4-Methyl-2-pentanone	U	ND	158	527	ug/kg	0.962	50					
Acetone	U	ND	158	527	ug/kg	0.962	50					
Benzene	U	ND	15.8	105	ug/kg	0.962	50					
Bromochloromethane	U	ND	15.8	105	ug/kg	0.962	50					
Bromodichloromethane	U	ND	15.8	105	ug/kg	0.962	50					
Bromoform	U	ND	15.8	105	ug/kg	0.962	50					
Bromomethane	U	ND	15.8	105	ug/kg	0.962	50					
Carbon disulfide	U	ND	84.3	527	ug/kg	0.962	50					
Carbon tetrachloride	U	ND	15.8	105	ug/kg	0.962	50					
Chlorobenzene	U	ND	15.8	105	ug/kg	0.962	50					
Chloroethane	U	ND	15.8	105	ug/kg	0.962	50					
Chloroform	U	ND	15.8	105	ug/kg	0.962	50					
Chloromethane	U	ND	15.8	105	ug/kg	0.962	50					
Cyclohexane	U	ND	15.8	105	ug/kg	0.962	50					
Dibromochloromethane	U	ND	15.8	105	ug/kg	0.962	50					
Dichlorodifluoromethane	U	ND	15.8	105	ug/kg	0.962	50					
Ethylbenzene	U	ND	15.8	105	ug/kg	0.962	50					
Isopropylbenzene	U	ND	15.8	105	ug/kg	0.962	50					
Methyl acetate	U	ND	79.0	263	ug/kg	0.962	50					

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	SW09	Project:	URSC00211
Sample ID:	456917005	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	15.8	105	ug/kg	0.962	50					
Methylene chloride	U	ND	84.3	263	ug/kg	0.962	50					
Styrene	U	ND	15.8	105	ug/kg	0.962	50					
Tetrachloroethylene	U	ND	15.8	105	ug/kg	0.962	50					
Toluene	U	ND	15.8	105	ug/kg	0.962	50					
Trichloroethylene	U	ND	15.8	105	ug/kg	0.962	50					
Trichlorofluoromethane	U	ND	15.8	105	ug/kg	0.962	50					
Trichlorotrifluoroethane	U	ND	84.3	263	ug/kg	0.962	50					
Vinyl chloride	U	ND	15.8	105	ug/kg	0.962	50					
cis-1,2-Dichloroethylene	U	ND	15.8	105	ug/kg	0.962	50					
cis-1,3-Dichloropropylene	U	ND	15.8	105	ug/kg	0.962	50					
m,p-Xylenes	U	ND	15.8	211	ug/kg	0.962	50					
o-Xylene	U	ND	15.8	105	ug/kg	0.962	50					
tert-Butyl methyl ether	U	ND	15.8	105	ug/kg	0.962	50					
trans-1,2-Dichloroethylene	U	ND	15.8	105	ug/kg	0.962	50					
trans-1,3-Dichloropropylene	U	ND	15.8	105	ug/kg	0.962	50					
1,1,1-Trichloroethane	U	ND	0.316	2.11	ug/kg	0.962	1	JP1	08/20/18	1421	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.316	2.11	ug/kg	0.962	1					
1,1,2-Trichloroethane	U	ND	0.316	2.11	ug/kg	0.962	1					
1,1-Dichloroethane	U	ND	0.316	2.11	ug/kg	0.962	1					
1,1-Dichloroethylene	U	ND	0.316	2.11	ug/kg	0.962	1					
1,2,3-Trichlorobenzene	U	ND	0.316	2.11	ug/kg	0.962	1					
1,2,4-Trichlorobenzene	U	ND	0.316	2.11	ug/kg	0.962	1					
1,2-Dibromo-3-chloropropane	U	ND	0.527	2.11	ug/kg	0.962	1					
1,2-Dibromoethane	U	ND	0.316	2.11	ug/kg	0.962	1					
1,2-Dichlorobenzene	U	ND	0.316	2.11	ug/kg	0.962	1					
1,2-Dichloroethane	U	ND	0.316	2.11	ug/kg	0.962	1					
1,2-Dichloropropane	U	ND	0.316	2.11	ug/kg	0.962	1					
1,3-Dichlorobenzene	U	ND	0.316	2.11	ug/kg	0.962	1					
1,4-Dichlorobenzene	U	ND	0.316	2.11	ug/kg	0.962	1					
1,4-Dioxane	U	ND	15.8	52.7	ug/kg	0.962	1					
2-Butanone	U	ND	3.16	10.5	ug/kg	0.962	1					
2-Hexanone	U	ND	3.16	10.5	ug/kg	0.962	1					
4-Methyl-2-pentanone	U	ND	3.16	10.5	ug/kg	0.962	1					
Acetone	U	ND	3.16	10.5	ug/kg	0.962	1					
Benzene	U	ND	0.316	2.11	ug/kg	0.962	1					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	SW09	Project:	URSC00211
Sample ID:	456917005	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Bromodichloromethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Bromoform	U	ND	0.316	2.11	ug/kg	0.962	1					
Bromomethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Carbon disulfide	J	4.05	1.69	10.5	ug/kg	0.962	1					
Carbon tetrachloride	U	ND	0.316	2.11	ug/kg	0.962	1					
Chlorobenzene	U	ND	0.316	2.11	ug/kg	0.962	1					
Chloroethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Chloroform	U	ND	0.316	2.11	ug/kg	0.962	1					
Chloromethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Cyclohexane	U	ND	0.316	2.11	ug/kg	0.962	1					
Dibromochloromethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Dichlorodifluoromethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Ethylbenzene	U	ND	0.316	2.11	ug/kg	0.962	1					
Isopropylbenzene	U	ND	0.316	2.11	ug/kg	0.962	1					
Methyl acetate	U	ND	1.58	5.27	ug/kg	0.962	1					
Methylcyclohexane	U	ND	0.316	2.11	ug/kg	0.962	1					
Methylene chloride	U	ND	1.69	5.27	ug/kg	0.962	1					
Styrene	U	ND	0.316	2.11	ug/kg	0.962	1					
Tetrachloroethylene	U	ND	0.316	2.11	ug/kg	0.962	1					
Toluene	U	ND	0.316	2.11	ug/kg	0.962	1					
Trichloroethylene	U	ND	0.316	2.11	ug/kg	0.962	1					
Trichlorofluoromethane	U	ND	0.316	2.11	ug/kg	0.962	1					
Trichlorotrifluoroethane	U	ND	1.69	5.27	ug/kg	0.962	1					
Vinyl chloride	U	ND	0.316	2.11	ug/kg	0.962	1					
cis-1,2-Dichloroethylene	U	ND	0.316	2.11	ug/kg	0.962	1					
cis-1,3-Dichloropropylene	U	ND	0.316	2.11	ug/kg	0.962	1					
m,p-Xylenes	U	ND	0.316	4.21	ug/kg	0.962	1					
o-Xylene	U	ND	0.316	2.11	ug/kg	0.962	1					
tert-Butyl methyl ether	U	ND	0.316	2.11	ug/kg	0.962	1					
trans-1,2-Dichloroethylene	U	ND	0.316	2.11	ug/kg	0.962	1					
trans-1,3-Dichloropropylene	U	ND	0.316	2.11	ug/kg	0.962	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2207	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID: SW09	Project: URSC00211
Sample ID: 456917005	Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/20/18		1059		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	SW846 5035A/8260C				
2	SW846 5035A/8260C				
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2560 ug/kg	50.0	97	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2540 ug/kg	50.0	96	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2830 ug/kg	50.0	107	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	58.9 ug/kg	50.0	112	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	55.4 ug/kg	50.0	105	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	67.5 ug/kg	50.0	128*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	SW10	Project:	URSC00211
Sample ID:	456917006	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:30		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	7.27%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	16.2	108	ug/kg	1.00	50	JP1	08/18/18	0859	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	16.2	108	ug/kg	1.00	50					
1,1,2-Trichloroethane	U	ND	16.2	108	ug/kg	1.00	50					
1,1-Dichloroethane	U	ND	16.2	108	ug/kg	1.00	50					
1,1-Dichloroethylene	U	ND	16.2	108	ug/kg	1.00	50					
1,2,3-Trichlorobenzene	U	ND	16.2	108	ug/kg	1.00	50					
1,2,4-Trichlorobenzene	U	ND	16.2	108	ug/kg	1.00	50					
1,2-Dibromo-3-chloropropane	U	ND	27.0	108	ug/kg	1.00	50					
1,2-Dibromoethane	U	ND	16.2	108	ug/kg	1.00	50					
1,2-Dichlorobenzene	U	ND	16.2	108	ug/kg	1.00	50					
1,2-Dichloroethane	U	ND	16.2	108	ug/kg	1.00	50					
1,2-Dichloropropane	U	ND	16.2	108	ug/kg	1.00	50					
1,3-Dichlorobenzene	U	ND	16.2	108	ug/kg	1.00	50					
1,4-Dichlorobenzene	U	ND	16.2	108	ug/kg	1.00	50					
1,4-Dioxane	U	ND	809	2700	ug/kg	1.00	50					
2-Butanone	U	ND	162	539	ug/kg	1.00	50					
2-Hexanone	U	ND	162	539	ug/kg	1.00	50					
4-Methyl-2-pentanone	U	ND	162	539	ug/kg	1.00	50					
Acetone	U	ND	162	539	ug/kg	1.00	50					
Benzene	U	ND	16.2	108	ug/kg	1.00	50					
Bromochloromethane	U	ND	16.2	108	ug/kg	1.00	50					
Bromodichloromethane	U	ND	16.2	108	ug/kg	1.00	50					
Bromoform	U	ND	16.2	108	ug/kg	1.00	50					
Bromomethane	U	ND	16.2	108	ug/kg	1.00	50					
Carbon disulfide	U	ND	86.3	539	ug/kg	1.00	50					
Carbon tetrachloride	U	ND	16.2	108	ug/kg	1.00	50					
Chlorobenzene	U	ND	16.2	108	ug/kg	1.00	50					
Chloroethane	U	ND	16.2	108	ug/kg	1.00	50					
Chloroform	U	ND	16.2	108	ug/kg	1.00	50					
Chloromethane	U	ND	16.2	108	ug/kg	1.00	50					
Cyclohexane	U	ND	16.2	108	ug/kg	1.00	50					
Dibromochloromethane	U	ND	16.2	108	ug/kg	1.00	50					
Dichlorodifluoromethane	U	ND	16.2	108	ug/kg	1.00	50					
Ethylbenzene	U	ND	16.2	108	ug/kg	1.00	50					
Isopropylbenzene	U	ND	16.2	108	ug/kg	1.00	50					
Methyl acetate	U	ND	80.9	270	ug/kg	1.00	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	SW10	Project:	URSC00211
Sample ID:	456917006	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	16.2	108	ug/kg	1.00	50					
Methylene chloride	U	ND	86.3	270	ug/kg	1.00	50					
Styrene	U	ND	16.2	108	ug/kg	1.00	50					
Tetrachloroethylene	U	ND	16.2	108	ug/kg	1.00	50					
Toluene	U	ND	16.2	108	ug/kg	1.00	50					
Trichloroethylene	J	105	16.2	108	ug/kg	1.00	50					
Trichlorofluoromethane	U	ND	16.2	108	ug/kg	1.00	50					
Trichlorotrifluoroethane	U	ND	86.3	270	ug/kg	1.00	50					
Vinyl chloride	U	ND	16.2	108	ug/kg	1.00	50					
cis-1,2-Dichloroethylene	U	ND	16.2	108	ug/kg	1.00	50					
cis-1,3-Dichloropropylene	U	ND	16.2	108	ug/kg	1.00	50					
m,p-Xylenes	U	ND	16.2	216	ug/kg	1.00	50					
o-Xylene	U	ND	16.2	108	ug/kg	1.00	50					
tert-Butyl methyl ether	U	ND	16.2	108	ug/kg	1.00	50					
trans-1,2-Dichloroethylene	U	ND	16.2	108	ug/kg	1.00	50					
trans-1,3-Dichloropropylene	U	ND	16.2	108	ug/kg	1.00	50					
1,1,1-Trichloroethane	U	ND	0.317	2.11	ug/kg	0.980	1	JP1	08/20/18	1452	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.317	2.11	ug/kg	0.980	1					
1,1,2-Trichloroethane	U	ND	0.317	2.11	ug/kg	0.980	1					
1,1-Dichloroethane	U	ND	0.317	2.11	ug/kg	0.980	1					
1,1-Dichloroethylene	U	ND	0.317	2.11	ug/kg	0.980	1					
1,2,3-Trichlorobenzene	U	ND	0.317	2.11	ug/kg	0.980	1					
1,2,4-Trichlorobenzene	U	ND	0.317	2.11	ug/kg	0.980	1					
1,2-Dibromo-3-chloropropane	U	ND	0.529	2.11	ug/kg	0.980	1					
1,2-Dibromoethane	U	ND	0.317	2.11	ug/kg	0.980	1					
1,2-Dichlorobenzene	U	ND	0.317	2.11	ug/kg	0.980	1					
1,2-Dichloroethane	U	ND	0.317	2.11	ug/kg	0.980	1					
1,2-Dichloropropane	U	ND	0.317	2.11	ug/kg	0.980	1					
1,3-Dichlorobenzene	U	ND	0.317	2.11	ug/kg	0.980	1					
1,4-Dichlorobenzene	U	ND	0.317	2.11	ug/kg	0.980	1					
1,4-Dioxane	U	ND	15.9	52.9	ug/kg	0.980	1					
2-Butanone	U	ND	3.17	10.6	ug/kg	0.980	1					
2-Hexanone	U	ND	3.17	10.6	ug/kg	0.980	1					
4-Methyl-2-pentanone	U	ND	3.17	10.6	ug/kg	0.980	1					
Acetone	U	ND	3.17	10.6	ug/kg	0.980	1					
Benzene	U	ND	0.317	2.11	ug/kg	0.980	1					

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	SW10	Project:	URSC00211
Sample ID:	456917006	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.317	2.11	ug/kg	0.980	1					
Bromodichloromethane	U	ND	0.317	2.11	ug/kg	0.980	1					
Bromoform	U	ND	0.317	2.11	ug/kg	0.980	1					
Bromomethane	U	ND	0.317	2.11	ug/kg	0.980	1					
Carbon disulfide	U	ND	1.69	10.6	ug/kg	0.980	1					
Carbon tetrachloride	U	ND	0.317	2.11	ug/kg	0.980	1					
Chlorobenzene	U	ND	0.317	2.11	ug/kg	0.980	1					
Chloroethane	U	ND	0.317	2.11	ug/kg	0.980	1					
Chloroform	U	ND	0.317	2.11	ug/kg	0.980	1					
Chloromethane	U	ND	0.317	2.11	ug/kg	0.980	1					
Cyclohexane	U	ND	0.317	2.11	ug/kg	0.980	1					
Dibromochloromethane	U	ND	0.317	2.11	ug/kg	0.980	1					
Dichlorodifluoromethane	U	ND	0.317	2.11	ug/kg	0.980	1					
Ethylbenzene	U	ND	0.317	2.11	ug/kg	0.980	1					
Isopropylbenzene	U	ND	0.317	2.11	ug/kg	0.980	1					
Methyl acetate	U	ND	1.59	5.29	ug/kg	0.980	1					
Methylcyclohexane	U	ND	0.317	2.11	ug/kg	0.980	1					
Methylene chloride	J	3.94	1.69	5.29	ug/kg	0.980	1					
Styrene	U	ND	0.317	2.11	ug/kg	0.980	1					
Tetrachloroethylene	U	ND	0.317	2.11	ug/kg	0.980	1					
Toluene	U	ND	0.317	2.11	ug/kg	0.980	1					
Trichloroethylene		4.70	0.317	2.11	ug/kg	0.980	1					
Trichlorofluoromethane	U	ND	0.317	2.11	ug/kg	0.980	1					
Trichlorotrifluoroethane	U	ND	1.69	5.29	ug/kg	0.980	1					
Vinyl chloride	U	ND	0.317	2.11	ug/kg	0.980	1					
cis-1,2-Dichloroethylene	U	ND	0.317	2.11	ug/kg	0.980	1					
cis-1,3-Dichloropropylene	U	ND	0.317	2.11	ug/kg	0.980	1					
m,p-Xylenes	U	ND	0.317	4.23	ug/kg	0.980	1					
o-Xylene	U	ND	0.317	2.11	ug/kg	0.980	1					
tert-Butyl methyl ether	U	ND	0.317	2.11	ug/kg	0.980	1					
trans-1,2-Dichloroethylene	U	ND	0.317	2.11	ug/kg	0.980	1					
trans-1,3-Dichloropropylene	U	ND	0.317	2.11	ug/kg	0.980	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2208	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID: SW10	Project: URSC00211
Sample ID: 456917006	Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/20/18		1100		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 5035A/8260C		
2	SW846 5035A/8260C		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2670 ug/kg	50.0	99	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2460 ug/kg	50.0	91	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2710 ug/kg	50.0	101	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	57.9 ug/kg	50.0	109	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	65.5 ug/kg	50.0	124	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	75.6 ug/kg	50.0	143*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	SW11	Project:	URSC00211
Sample ID:	456917007	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:32		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	8.28%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	15.4	103	ug/kg	0.943	50	JP1	08/18/18	0930	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	15.4	103	ug/kg	0.943	50					
1,1,2-Trichloroethane	U	ND	15.4	103	ug/kg	0.943	50					
1,1-Dichloroethane	U	ND	15.4	103	ug/kg	0.943	50					
1,1-Dichloroethylene	U	ND	15.4	103	ug/kg	0.943	50					
1,2,3-Trichlorobenzene	U	ND	15.4	103	ug/kg	0.943	50					
1,2,4-Trichlorobenzene	U	ND	15.4	103	ug/kg	0.943	50					
1,2-Dibromo-3-chloropropane	U	ND	25.7	103	ug/kg	0.943	50					
1,2-Dibromoethane	U	ND	15.4	103	ug/kg	0.943	50					
1,2-Dichlorobenzene	U	ND	15.4	103	ug/kg	0.943	50					
1,2-Dichloroethane	U	ND	15.4	103	ug/kg	0.943	50					
1,2-Dichloropropane	U	ND	15.4	103	ug/kg	0.943	50					
1,3-Dichlorobenzene	U	ND	15.4	103	ug/kg	0.943	50					
1,4-Dichlorobenzene	U	ND	15.4	103	ug/kg	0.943	50					
1,4-Dioxane	U	ND	771	2570	ug/kg	0.943	50					
2-Butanone	U	ND	154	514	ug/kg	0.943	50					
2-Hexanone	U	ND	154	514	ug/kg	0.943	50					
4-Methyl-2-pentanone	U	ND	154	514	ug/kg	0.943	50					
Acetone	U	ND	154	514	ug/kg	0.943	50					
Benzene	U	ND	15.4	103	ug/kg	0.943	50					
Bromochloromethane	U	ND	15.4	103	ug/kg	0.943	50					
Bromodichloromethane	U	ND	15.4	103	ug/kg	0.943	50					
Bromoform	U	ND	15.4	103	ug/kg	0.943	50					
Bromomethane	U	ND	15.4	103	ug/kg	0.943	50					
Carbon disulfide	U	ND	82.3	514	ug/kg	0.943	50					
Carbon tetrachloride	U	ND	15.4	103	ug/kg	0.943	50					
Chlorobenzene	U	ND	15.4	103	ug/kg	0.943	50					
Chloroethane	U	ND	15.4	103	ug/kg	0.943	50					
Chloroform	U	ND	15.4	103	ug/kg	0.943	50					
Chloromethane	U	ND	15.4	103	ug/kg	0.943	50					
Cyclohexane	U	ND	15.4	103	ug/kg	0.943	50					
Dibromochloromethane	U	ND	15.4	103	ug/kg	0.943	50					
Dichlorodifluoromethane	U	ND	15.4	103	ug/kg	0.943	50					
Ethylbenzene	U	ND	15.4	103	ug/kg	0.943	50					
Isopropylbenzene	U	ND	15.4	103	ug/kg	0.943	50					
Methyl acetate	U	ND	77.1	257	ug/kg	0.943	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	SW11	Project:	URSC00211
Sample ID:	456917007	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	15.4	103	ug/kg	0.943	50					
Methylene chloride	U	ND	82.3	257	ug/kg	0.943	50					
Styrene	U	ND	15.4	103	ug/kg	0.943	50					
Tetrachloroethylene	U	ND	15.4	103	ug/kg	0.943	50					
Toluene	U	ND	15.4	103	ug/kg	0.943	50					
Trichloroethylene	U	ND	15.4	103	ug/kg	0.943	50					
Trichlorofluoromethane	U	ND	15.4	103	ug/kg	0.943	50					
Trichlorotrifluoroethane	U	ND	82.3	257	ug/kg	0.943	50					
Vinyl chloride	U	ND	15.4	103	ug/kg	0.943	50					
cis-1,2-Dichloroethylene	U	ND	15.4	103	ug/kg	0.943	50					
cis-1,3-Dichloropropylene	U	ND	15.4	103	ug/kg	0.943	50					
m,p-Xylenes	U	ND	15.4	206	ug/kg	0.943	50					
o-Xylene	U	ND	15.4	103	ug/kg	0.943	50					
tert-Butyl methyl ether	U	ND	15.4	103	ug/kg	0.943	50					
trans-1,2-Dichloroethylene	U	ND	15.4	103	ug/kg	0.943	50					
trans-1,3-Dichloropropylene	U	ND	15.4	103	ug/kg	0.943	50					
1,1,1-Trichloroethane	U	ND	0.327	2.18	ug/kg	1.00	1	JP1	08/20/18	1523	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.327	2.18	ug/kg	1.00	1					
1,1,2-Trichloroethane	U	ND	0.327	2.18	ug/kg	1.00	1					
1,1-Dichloroethane	U	ND	0.327	2.18	ug/kg	1.00	1					
1,1-Dichloroethylene	U	ND	0.327	2.18	ug/kg	1.00	1					
1,2,3-Trichlorobenzene	U	ND	0.327	2.18	ug/kg	1.00	1					
1,2,4-Trichlorobenzene	U	ND	0.327	2.18	ug/kg	1.00	1					
1,2-Dibromo-3-chloropropane	U	ND	0.545	2.18	ug/kg	1.00	1					
1,2-Dibromoethane	U	ND	0.327	2.18	ug/kg	1.00	1					
1,2-Dichlorobenzene	U	ND	0.327	2.18	ug/kg	1.00	1					
1,2-Dichloroethane	U	ND	0.327	2.18	ug/kg	1.00	1					
1,2-Dichloropropane	U	ND	0.327	2.18	ug/kg	1.00	1					
1,3-Dichlorobenzene	U	ND	0.327	2.18	ug/kg	1.00	1					
1,4-Dichlorobenzene	U	ND	0.327	2.18	ug/kg	1.00	1					
1,4-Dioxane	U	ND	16.4	54.5	ug/kg	1.00	1					
2-Butanone	U	ND	3.27	10.9	ug/kg	1.00	1					
2-Hexanone	U	ND	3.27	10.9	ug/kg	1.00	1					
4-Methyl-2-pentanone	U	ND	3.27	10.9	ug/kg	1.00	1					
Acetone	U	ND	3.27	10.9	ug/kg	1.00	1					
Benzene	U	ND	0.327	2.18	ug/kg	1.00	1					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	SW11	Project:	URSC00211
Sample ID:	456917007	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.327	2.18	ug/kg	1.00	1					
Bromodichloromethane	U	ND	0.327	2.18	ug/kg	1.00	1					
Bromoform	U	ND	0.327	2.18	ug/kg	1.00	1					
Bromomethane	U	ND	0.327	2.18	ug/kg	1.00	1					
Carbon disulfide	U	ND	1.74	10.9	ug/kg	1.00	1					
Carbon tetrachloride	U	ND	0.327	2.18	ug/kg	1.00	1					
Chlorobenzene	U	ND	0.327	2.18	ug/kg	1.00	1					
Chloroethane	U	ND	0.327	2.18	ug/kg	1.00	1					
Chloroform	U	ND	0.327	2.18	ug/kg	1.00	1					
Chloromethane	U	ND	0.327	2.18	ug/kg	1.00	1					
Cyclohexane	U	ND	0.327	2.18	ug/kg	1.00	1					
Dibromochloromethane	U	ND	0.327	2.18	ug/kg	1.00	1					
Dichlorodifluoromethane	U	ND	0.327	2.18	ug/kg	1.00	1					
Ethylbenzene	U	ND	0.327	2.18	ug/kg	1.00	1					
Isopropylbenzene	U	ND	0.327	2.18	ug/kg	1.00	1					
Methyl acetate	U	ND	1.64	5.45	ug/kg	1.00	1					
Methylcyclohexane	U	ND	0.327	2.18	ug/kg	1.00	1					
Methylene chloride	U	ND	1.74	5.45	ug/kg	1.00	1					
Styrene	U	ND	0.327	2.18	ug/kg	1.00	1					
Tetrachloroethylene	U	ND	0.327	2.18	ug/kg	1.00	1					
Toluene	U	ND	0.327	2.18	ug/kg	1.00	1					
Trichloroethylene	J	0.382	0.327	2.18	ug/kg	1.00	1					
Trichlorofluoromethane	U	ND	0.327	2.18	ug/kg	1.00	1					
Trichlorotrifluoroethane	U	ND	1.74	5.45	ug/kg	1.00	1					
Vinyl chloride	U	ND	0.327	2.18	ug/kg	1.00	1					
cis-1,2-Dichloroethylene	U	ND	0.327	2.18	ug/kg	1.00	1					
cis-1,3-Dichloropropylene	U	ND	0.327	2.18	ug/kg	1.00	1					
m,p-Xylenes	U	ND	0.327	4.36	ug/kg	1.00	1					
o-Xylene	U	ND	0.327	2.18	ug/kg	1.00	1					
tert-Butyl methyl ether	U	ND	0.327	2.18	ug/kg	1.00	1					
trans-1,2-Dichloroethylene	U	ND	0.327	2.18	ug/kg	1.00	1					
trans-1,3-Dichloropropylene	U	ND	0.327	2.18	ug/kg	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2209	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID: SW11	Project: URSC00211
Sample ID: 456917007	Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A	5035A/8260C Prep			JP1	08/20/18		1101		1794367			

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 5035A/8260C		
2	SW846 5035A/8260C		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2540 ug/kg	50.0	99	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2410 ug/kg	50.0	94	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2470 ug/kg	50.0	96	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	61.9 ug/kg	50.0	114	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	63.2 ug/kg	50.0	116	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	78.7 ug/kg	50.0	144*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	SW11EB	Project:	URSC00211
Sample ID:	456917008	Client ID:	URSC013
Matrix:	Water		
Collect Date:	09-AUG-18 08:36		
Receive Date:	10-AUG-18		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "As Received"												
1,1,1-Trichloroethane	U	ND	0.300	2.00	ug/L	1	JP1	08/13/18	1840	1792111		1
1,1,2,2-Tetrachloroethane	U	ND	0.300	2.00	ug/L	1						
1,1,2-Trichloroethane	U	ND	0.300	2.00	ug/L	1						
1,1-Dichloroethane	U	ND	0.300	2.00	ug/L	1						
1,1-Dichloroethylene	U	ND	0.300	2.00	ug/L	1						
1,2,3-Trichlorobenzene	U	ND	0.300	2.00	ug/L	1						
1,2,4-Trichlorobenzene	U	ND	0.300	2.00	ug/L	1						
1,2-Dibromo-3-chloropropane	U	ND	0.500	2.00	ug/L	1						
1,2-Dibromoethane	U	ND	0.300	2.00	ug/L	1						
1,2-Dichlorobenzene	U	ND	0.300	2.00	ug/L	1						
1,2-Dichloroethane	U	ND	0.300	2.00	ug/L	1						
1,2-Dichloropropane	U	ND	0.300	2.00	ug/L	1						
1,3-Dichlorobenzene	U	ND	0.300	2.00	ug/L	1						
1,4-Dichlorobenzene	U	ND	0.300	2.00	ug/L	1						
1,4-Dioxane	U	ND	15.0	50.0	ug/L	1						
2-Butanone	J	6.01	3.00	10.0	ug/L	1						
2-Hexanone	U	ND	3.00	10.0	ug/L	1						
4-Methyl-2-pentanone	U	ND	3.00	10.0	ug/L	1						
Acetone	U	ND	3.00	10.0	ug/L	1						
Benzene	U	ND	0.300	2.00	ug/L	1						
Bromochloromethane	U	ND	0.300	2.00	ug/L	1						
Bromodichloromethane	U	ND	0.300	2.00	ug/L	1						
Bromoform	U	ND	0.300	2.00	ug/L	1						
Bromomethane	U	ND	0.300	2.00	ug/L	1						
Carbon disulfide	U	ND	1.60	10.0	ug/L	1						
Carbon tetrachloride	U	ND	0.300	2.00	ug/L	1						
Chlorobenzene	U	ND	0.300	2.00	ug/L	1						
Chloroethane	U	ND	0.300	2.00	ug/L	1						
Chloroform	U	ND	0.300	2.00	ug/L	1						
Chloromethane	U	ND	0.300	2.00	ug/L	1						
Cyclohexane	U	ND	0.300	2.00	ug/L	1						
Dibromochloromethane	U	ND	0.300	2.00	ug/L	1						
Dichlorodifluoromethane	U	ND	0.300	2.00	ug/L	1						
Ethylbenzene	U	ND	0.300	2.00	ug/L	1						
Isopropylbenzene	U	ND	0.300	2.00	ug/L	1						
Methyl acetate	U	ND	1.50	5.00	ug/L	1						

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	SW11EB	Project:	URSC00211
Sample ID:	456917008	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "As Received"												
Methylcyclohexane	U	ND	0.300	2.00	ug/L		1					
Methylene chloride	U	ND	1.60	5.00	ug/L		1					
Styrene	U	ND	0.300	2.00	ug/L		1					
Tetrachloroethylene	U	ND	0.300	2.00	ug/L		1					
Toluene	U	ND	0.300	2.00	ug/L		1					
Trichloroethylene	U	ND	0.300	2.00	ug/L		1					
Trichlorofluoromethane	U	ND	0.300	2.00	ug/L		1					
Trichlorotrifluoroethane	U	ND	1.60	5.00	ug/L		1					
Vinyl chloride	U	ND	0.300	2.00	ug/L		1					
cis-1,2-Dichloroethylene	U	ND	0.300	2.00	ug/L		1					
cis-1,3-Dichloropropylene	U	ND	0.300	2.00	ug/L		1					
m,p-Xylenes	U	ND	0.300	4.00	ug/L		1					
o-Xylene	U	ND	0.300	2.00	ug/L		1					
tert-Butyl methyl ether	U	ND	0.300	2.00	ug/L		1					
trans-1,2-Dichloroethylene	U	ND	0.300	2.00	ug/L		1					
trans-1,3-Dichloropropylene	U	ND	0.300	2.00	ug/L		1					

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	SW846 8260C				
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "As Received"	56.8 ug/L	50.0	114	(71%-134%)
Bromofluorobenzene	SW846 8260C Volatiles "As Received"	50.5 ug/L	50.0	101	(70%-131%)
Toluene-d8	SW846 8260C Volatiles "As Received"	48.4 ug/L	50.0	97	(74%-124%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	080918TB	Project:	URSC00211
Sample ID:	456917009	Client ID:	URSC013
Matrix:	Water		
Collect Date:	09-AUG-18 09:00		
Receive Date:	10-AUG-18		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "As Received"												
1,1,1-Trichloroethane	U	ND	0.300	2.00	ug/L	1	JP1	08/13/18	1910	1792111		1
1,1,2,2-Tetrachloroethane	U	ND	0.300	2.00	ug/L	1						
1,1,2-Trichloroethane	U	ND	0.300	2.00	ug/L	1						
1,1-Dichloroethane	U	ND	0.300	2.00	ug/L	1						
1,1-Dichloroethylene	U	ND	0.300	2.00	ug/L	1						
1,2,3-Trichlorobenzene	U	ND	0.300	2.00	ug/L	1						
1,2,4-Trichlorobenzene	U	ND	0.300	2.00	ug/L	1						
1,2-Dibromo-3-chloropropane	U	ND	0.500	2.00	ug/L	1						
1,2-Dibromoethane	U	ND	0.300	2.00	ug/L	1						
1,2-Dichlorobenzene	U	ND	0.300	2.00	ug/L	1						
1,2-Dichloroethane	U	ND	0.300	2.00	ug/L	1						
1,2-Dichloropropane	U	ND	0.300	2.00	ug/L	1						
1,3-Dichlorobenzene	U	ND	0.300	2.00	ug/L	1						
1,4-Dichlorobenzene	U	ND	0.300	2.00	ug/L	1						
1,4-Dioxane	U	ND	15.0	50.0	ug/L	1						
2-Butanone	U	ND	3.00	10.0	ug/L	1						
2-Hexanone	U	ND	3.00	10.0	ug/L	1						
4-Methyl-2-pentanone	U	ND	3.00	10.0	ug/L	1						
Acetone	U	ND	3.00	10.0	ug/L	1						
Benzene	U	ND	0.300	2.00	ug/L	1						
Bromochloromethane	U	ND	0.300	2.00	ug/L	1						
Bromodichloromethane	U	ND	0.300	2.00	ug/L	1						
Bromoform	U	ND	0.300	2.00	ug/L	1						
Bromomethane	U	ND	0.300	2.00	ug/L	1						
Carbon disulfide	U	ND	1.60	10.0	ug/L	1						
Carbon tetrachloride	U	ND	0.300	2.00	ug/L	1						
Chlorobenzene	U	ND	0.300	2.00	ug/L	1						
Chloroethane	U	ND	0.300	2.00	ug/L	1						
Chloroform	U	ND	0.300	2.00	ug/L	1						
Chloromethane	U	ND	0.300	2.00	ug/L	1						
Cyclohexane	U	ND	0.300	2.00	ug/L	1						
Dibromochloromethane	U	ND	0.300	2.00	ug/L	1						
Dichlorodifluoromethane	U	ND	0.300	2.00	ug/L	1						
Ethylbenzene	U	ND	0.300	2.00	ug/L	1						
Isopropylbenzene	U	ND	0.300	2.00	ug/L	1						
Methyl acetate	U	ND	1.50	5.00	ug/L	1						

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID: 080918TB	Project: URSC00211
Sample ID: 456917009	Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "As Received"												
Methylcyclohexane	U	ND	0.300	2.00	ug/L		1					
Methylene chloride	U	ND	1.60	5.00	ug/L		1					
Styrene	U	ND	0.300	2.00	ug/L		1					
Tetrachloroethylene	U	ND	0.300	2.00	ug/L		1					
Toluene	U	ND	0.300	2.00	ug/L		1					
Trichloroethylene	U	ND	0.300	2.00	ug/L		1					
Trichlorofluoromethane	U	ND	0.300	2.00	ug/L		1					
Trichlorotrifluoroethane	U	ND	1.60	5.00	ug/L		1					
Vinyl chloride	U	ND	0.300	2.00	ug/L		1					
cis-1,2-Dichloroethylene	U	ND	0.300	2.00	ug/L		1					
cis-1,3-Dichloropropylene	U	ND	0.300	2.00	ug/L		1					
m,p-Xylenes	U	ND	0.300	4.00	ug/L		1					
o-Xylene	U	ND	0.300	2.00	ug/L		1					
tert-Butyl methyl ether	U	ND	0.300	2.00	ug/L		1					
trans-1,2-Dichloroethylene	U	ND	0.300	2.00	ug/L		1					
trans-1,3-Dichloropropylene	U	ND	0.300	2.00	ug/L		1					

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	SW846 8260C				
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "As Received"	58.9 ug/L	50.0	118	(71%-134%)
Bromofluorobenzene	SW846 8260C Volatiles "As Received"	52.8 ug/L	50.0	106	(70%-131%)
Toluene-d8	SW846 8260C Volatiles "As Received"	46.4 ug/L	50.0	93	(74%-124%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	G2ESOL04	Project:	URSC00211
Sample ID:	456917010	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:34		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	8.41%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	14.6	97.5	ug/kg	0.893	50	JP1	08/18/18	1001	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	14.6	97.5	ug/kg	0.893	50					
1,1,2-Trichloroethane	U	ND	14.6	97.5	ug/kg	0.893	50					
1,1-Dichloroethane	U	ND	14.6	97.5	ug/kg	0.893	50					
1,1-Dichloroethylene	U	ND	14.6	97.5	ug/kg	0.893	50					
1,2,3-Trichlorobenzene	U	ND	14.6	97.5	ug/kg	0.893	50					
1,2,4-Trichlorobenzene	U	ND	14.6	97.5	ug/kg	0.893	50					
1,2-Dibromo-3-chloropropane	U	ND	24.4	97.5	ug/kg	0.893	50					
1,2-Dibromoethane	U	ND	14.6	97.5	ug/kg	0.893	50					
1,2-Dichlorobenzene	U	ND	14.6	97.5	ug/kg	0.893	50					
1,2-Dichloroethane	U	ND	14.6	97.5	ug/kg	0.893	50					
1,2-Dichloropropane	U	ND	14.6	97.5	ug/kg	0.893	50					
1,3-Dichlorobenzene	U	ND	14.6	97.5	ug/kg	0.893	50					
1,4-Dichlorobenzene	U	ND	14.6	97.5	ug/kg	0.893	50					
1,4-Dioxane	U	ND	731	2440	ug/kg	0.893	50					
2-Butanone	U	ND	146	487	ug/kg	0.893	50					
2-Hexanone	U	ND	146	487	ug/kg	0.893	50					
4-Methyl-2-pentanone	U	ND	146	487	ug/kg	0.893	50					
Acetone	U	ND	146	487	ug/kg	0.893	50					
Benzene	U	ND	14.6	97.5	ug/kg	0.893	50					
Bromochloromethane	U	ND	14.6	97.5	ug/kg	0.893	50					
Bromodichloromethane	U	ND	14.6	97.5	ug/kg	0.893	50					
Bromoform	U	ND	14.6	97.5	ug/kg	0.893	50					
Bromomethane	U	ND	14.6	97.5	ug/kg	0.893	50					
Carbon disulfide	U	ND	78.0	487	ug/kg	0.893	50					
Carbon tetrachloride	U	ND	14.6	97.5	ug/kg	0.893	50					
Chlorobenzene	U	ND	14.6	97.5	ug/kg	0.893	50					
Chloroethane	U	ND	14.6	97.5	ug/kg	0.893	50					
Chloroform	U	ND	14.6	97.5	ug/kg	0.893	50					
Chloromethane	U	ND	14.6	97.5	ug/kg	0.893	50					
Cyclohexane	U	ND	14.6	97.5	ug/kg	0.893	50					
Dibromochloromethane	U	ND	14.6	97.5	ug/kg	0.893	50					
Dichlorodifluoromethane	U	ND	14.6	97.5	ug/kg	0.893	50					
Ethylbenzene	U	ND	14.6	97.5	ug/kg	0.893	50					
Isopropylbenzene	U	ND	14.6	97.5	ug/kg	0.893	50					
Methyl acetate	U	ND	73.1	244	ug/kg	0.893	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2ESOL04	Project:	URSC00211
Sample ID:	456917010	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	14.6	97.5	ug/kg	0.893	50					
Methylene chloride	U	ND	78.0	244	ug/kg	0.893	50					
Styrene	U	ND	14.6	97.5	ug/kg	0.893	50					
Tetrachloroethylene	U	ND	14.6	97.5	ug/kg	0.893	50					
Toluene	U	ND	14.6	97.5	ug/kg	0.893	50					
Trichloroethylene	U	ND	14.6	97.5	ug/kg	0.893	50					
Trichlorofluoromethane	U	ND	14.6	97.5	ug/kg	0.893	50					
Trichlorotrifluoroethane	U	ND	78.0	244	ug/kg	0.893	50					
Vinyl chloride	U	ND	14.6	97.5	ug/kg	0.893	50					
cis-1,2-Dichloroethylene	U	ND	14.6	97.5	ug/kg	0.893	50					
cis-1,3-Dichloropropylene	U	ND	14.6	97.5	ug/kg	0.893	50					
m,p-Xylenes	U	ND	14.6	195	ug/kg	0.893	50					
o-Xylene	U	ND	14.6	97.5	ug/kg	0.893	50					
tert-Butyl methyl ether	U	ND	14.6	97.5	ug/kg	0.893	50					
trans-1,2-Dichloroethylene	U	ND	14.6	97.5	ug/kg	0.893	50					
trans-1,3-Dichloropropylene	U	ND	14.6	97.5	ug/kg	0.893	50					
1,1,1-Trichloroethane	U	ND	0.309	2.06	ug/kg	0.943	1	JP1	08/20/18	1554	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.309	2.06	ug/kg	0.943	1					
1,1,2-Trichloroethane	U	ND	0.309	2.06	ug/kg	0.943	1					
1,1-Dichloroethane	U	ND	0.309	2.06	ug/kg	0.943	1					
1,1-Dichloroethylene	U	ND	0.309	2.06	ug/kg	0.943	1					
1,2,3-Trichlorobenzene	U	ND	0.309	2.06	ug/kg	0.943	1					
1,2,4-Trichlorobenzene	U	ND	0.309	2.06	ug/kg	0.943	1					
1,2-Dibromo-3-chloropropane	U	ND	0.515	2.06	ug/kg	0.943	1					
1,2-Dibromoethane	U	ND	0.309	2.06	ug/kg	0.943	1					
1,2-Dichlorobenzene	U	ND	0.309	2.06	ug/kg	0.943	1					
1,2-Dichloroethane	U	ND	0.309	2.06	ug/kg	0.943	1					
1,2-Dichloropropane	U	ND	0.309	2.06	ug/kg	0.943	1					
1,3-Dichlorobenzene	U	ND	0.309	2.06	ug/kg	0.943	1					
1,4-Dichlorobenzene	U	ND	0.309	2.06	ug/kg	0.943	1					
1,4-Dioxane	U	ND	15.4	51.5	ug/kg	0.943	1					
2-Butanone	U	ND	3.09	10.3	ug/kg	0.943	1					
2-Hexanone	U	ND	3.09	10.3	ug/kg	0.943	1					
4-Methyl-2-pentanone	U	ND	3.09	10.3	ug/kg	0.943	1					
Acetone	U	ND	3.09	10.3	ug/kg	0.943	1					
Benzene	U	ND	0.309	2.06	ug/kg	0.943	1					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2ESOL04	Project:	URSC00211
Sample ID:	456917010	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.309	2.06	ug/kg	0.943	1					
Bromodichloromethane	U	ND	0.309	2.06	ug/kg	0.943	1					
Bromoform	U	ND	0.309	2.06	ug/kg	0.943	1					
Bromomethane	U	ND	0.309	2.06	ug/kg	0.943	1					
Carbon disulfide	U	ND	1.65	10.3	ug/kg	0.943	1					
Carbon tetrachloride	U	ND	0.309	2.06	ug/kg	0.943	1					
Chlorobenzene	U	ND	0.309	2.06	ug/kg	0.943	1					
Chloroethane	U	ND	0.309	2.06	ug/kg	0.943	1					
Chloroform	U	ND	0.309	2.06	ug/kg	0.943	1					
Chloromethane	U	ND	0.309	2.06	ug/kg	0.943	1					
Cyclohexane	U	ND	0.309	2.06	ug/kg	0.943	1					
Dibromochloromethane	U	ND	0.309	2.06	ug/kg	0.943	1					
Dichlorodifluoromethane	U	ND	0.309	2.06	ug/kg	0.943	1					
Ethylbenzene	U	ND	0.309	2.06	ug/kg	0.943	1					
Isopropylbenzene	U	ND	0.309	2.06	ug/kg	0.943	1					
Methyl acetate	U	ND	1.54	5.15	ug/kg	0.943	1					
Methylcyclohexane	U	ND	0.309	2.06	ug/kg	0.943	1					
Methylene chloride	U	ND	1.65	5.15	ug/kg	0.943	1					
Styrene	U	ND	0.309	2.06	ug/kg	0.943	1					
Tetrachloroethylene	U	ND	0.309	2.06	ug/kg	0.943	1					
Toluene	U	ND	0.309	2.06	ug/kg	0.943	1					
Trichloroethylene	U	ND	0.309	2.06	ug/kg	0.943	1					
Trichlorofluoromethane	U	ND	0.309	2.06	ug/kg	0.943	1					
Trichlorotrifluoroethane	U	ND	1.65	5.15	ug/kg	0.943	1					
Vinyl chloride	U	ND	0.309	2.06	ug/kg	0.943	1					
cis-1,2-Dichloroethylene	U	ND	0.309	2.06	ug/kg	0.943	1					
cis-1,3-Dichloropropylene	U	ND	0.309	2.06	ug/kg	0.943	1					
m,p-Xylenes	U	ND	0.309	4.12	ug/kg	0.943	1					
o-Xylene	U	ND	0.309	2.06	ug/kg	0.943	1					
tert-Butyl methyl ether	U	ND	0.309	2.06	ug/kg	0.943	1					
trans-1,2-Dichloroethylene	U	ND	0.309	2.06	ug/kg	0.943	1					
trans-1,3-Dichloropropylene	U	ND	0.309	2.06	ug/kg	0.943	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2210	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2ESOL04	Project:	URSC00211
Sample ID:	456917010	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/20/18		1102		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 5035A/8260C		
2	SW846 5035A/8260C		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2410 ug/kg	50.0	99	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2300 ug/kg	50.0	94	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2340 ug/kg	50.0	96	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	54.4 ug/kg	50.0	106	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	50.5 ug/kg	50.0	98	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	51.5 ug/kg	50.0	100	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	G2SOL05D	Project:	URSC00211
Sample ID:	456917011	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:11		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	13.4%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	16.0	107	ug/kg	0.926	50	JP1	08/19/18	0015	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	16.0	107	ug/kg	0.926	50					
1,1,2-Trichloroethane	U	ND	16.0	107	ug/kg	0.926	50					
1,1-Dichloroethane	U	ND	16.0	107	ug/kg	0.926	50					
1,1-Dichloroethylene	U	ND	16.0	107	ug/kg	0.926	50					
1,2,3-Trichlorobenzene	U	ND	16.0	107	ug/kg	0.926	50					
1,2,4-Trichlorobenzene	U	ND	16.0	107	ug/kg	0.926	50					
1,2-Dibromo-3-chloropropane	U	ND	26.7	107	ug/kg	0.926	50					
1,2-Dibromoethane	U	ND	16.0	107	ug/kg	0.926	50					
1,2-Dichlorobenzene	U	ND	16.0	107	ug/kg	0.926	50					
1,2-Dichloroethane	U	ND	16.0	107	ug/kg	0.926	50					
1,2-Dichloropropane	U	ND	16.0	107	ug/kg	0.926	50					
1,3-Dichlorobenzene	U	ND	16.0	107	ug/kg	0.926	50					
1,4-Dichlorobenzene	U	ND	16.0	107	ug/kg	0.926	50					
1,4-Dioxane	U	ND	802	2670	ug/kg	0.926	50					
2-Butanone	U	ND	160	535	ug/kg	0.926	50					
2-Hexanone	U	ND	160	535	ug/kg	0.926	50					
4-Methyl-2-pentanone	U	ND	160	535	ug/kg	0.926	50					
Acetone	U	ND	160	535	ug/kg	0.926	50					
Benzene	U	ND	16.0	107	ug/kg	0.926	50					
Bromochloromethane	U	ND	16.0	107	ug/kg	0.926	50					
Bromodichloromethane	U	ND	16.0	107	ug/kg	0.926	50					
Bromoform	U	ND	16.0	107	ug/kg	0.926	50					
Bromomethane	U	ND	16.0	107	ug/kg	0.926	50					
Carbon disulfide	U	ND	85.6	535	ug/kg	0.926	50					
Carbon tetrachloride	U	ND	16.0	107	ug/kg	0.926	50					
Chlorobenzene	U	ND	16.0	107	ug/kg	0.926	50					
Chloroethane	U	ND	16.0	107	ug/kg	0.926	50					
Chloroform	U	ND	16.0	107	ug/kg	0.926	50					
Chloromethane	U	ND	16.0	107	ug/kg	0.926	50					
Cyclohexane	U	ND	16.0	107	ug/kg	0.926	50					
Dibromochloromethane	U	ND	16.0	107	ug/kg	0.926	50					
Dichlorodifluoromethane	U	ND	16.0	107	ug/kg	0.926	50					
Ethylbenzene	U	ND	16.0	107	ug/kg	0.926	50					
Isopropylbenzene	U	ND	16.0	107	ug/kg	0.926	50					
Methyl acetate	U	ND	80.2	267	ug/kg	0.926	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SOL05D	Project:	URSC00211
Sample ID:	456917011	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	16.0	107	ug/kg	0.926	50					
Methylene chloride	U	ND	85.6	267	ug/kg	0.926	50					
Styrene	U	ND	16.0	107	ug/kg	0.926	50					
Tetrachloroethylene	U	ND	16.0	107	ug/kg	0.926	50					
Toluene	U	ND	16.0	107	ug/kg	0.926	50					
Trichloroethylene	U	ND	16.0	107	ug/kg	0.926	50					
Trichlorofluoromethane	U	ND	16.0	107	ug/kg	0.926	50					
Trichlorotrifluoroethane	U	ND	85.6	267	ug/kg	0.926	50					
Vinyl chloride	U	ND	16.0	107	ug/kg	0.926	50					
cis-1,2-Dichloroethylene	U	ND	16.0	107	ug/kg	0.926	50					
cis-1,3-Dichloropropylene	U	ND	16.0	107	ug/kg	0.926	50					
m,p-Xylenes	U	ND	16.0	214	ug/kg	0.926	50					
o-Xylene	U	ND	16.0	107	ug/kg	0.926	50					
tert-Butyl methyl ether	U	ND	16.0	107	ug/kg	0.926	50					
trans-1,2-Dichloroethylene	U	ND	16.0	107	ug/kg	0.926	50					
trans-1,3-Dichloropropylene	U	ND	16.0	107	ug/kg	0.926	50					
1,1,1-Trichloroethane	U	ND	0.333	2.22	ug/kg	0.962	1	JP1	08/20/18	1625	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.333	2.22	ug/kg	0.962	1					
1,1,2-Trichloroethane	U	ND	0.333	2.22	ug/kg	0.962	1					
1,1-Dichloroethane	U	ND	0.333	2.22	ug/kg	0.962	1					
1,1-Dichloroethylene	U	ND	0.333	2.22	ug/kg	0.962	1					
1,2,3-Trichlorobenzene	U	ND	0.333	2.22	ug/kg	0.962	1					
1,2,4-Trichlorobenzene	U	ND	0.333	2.22	ug/kg	0.962	1					
1,2-Dibromo-3-chloropropane	U	ND	0.555	2.22	ug/kg	0.962	1					
1,2-Dibromoethane	U	ND	0.333	2.22	ug/kg	0.962	1					
1,2-Dichlorobenzene	U	ND	0.333	2.22	ug/kg	0.962	1					
1,2-Dichloroethane	U	ND	0.333	2.22	ug/kg	0.962	1					
1,2-Dichloropropane	U	ND	0.333	2.22	ug/kg	0.962	1					
1,3-Dichlorobenzene	U	ND	0.333	2.22	ug/kg	0.962	1					
1,4-Dichlorobenzene	U	ND	0.333	2.22	ug/kg	0.962	1					
1,4-Dioxane	U	ND	16.7	55.5	ug/kg	0.962	1					
2-Butanone	U	ND	3.33	11.1	ug/kg	0.962	1					
2-Hexanone	U	ND	3.33	11.1	ug/kg	0.962	1					
4-Methyl-2-pentanone	U	ND	3.33	11.1	ug/kg	0.962	1					
Acetone	U	ND	3.33	11.1	ug/kg	0.962	1					
Benzene	U	ND	0.333	2.22	ug/kg	0.962	1					

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	G2SOL05D	Project:	URSC00211
Sample ID:	456917011	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.333	2.22	ug/kg	0.962	1					
Bromodichloromethane	U	ND	0.333	2.22	ug/kg	0.962	1					
Bromoform	U	ND	0.333	2.22	ug/kg	0.962	1					
Bromomethane	U	ND	0.333	2.22	ug/kg	0.962	1					
Carbon disulfide	U	ND	1.78	11.1	ug/kg	0.962	1					
Carbon tetrachloride	U	ND	0.333	2.22	ug/kg	0.962	1					
Chlorobenzene	U	ND	0.333	2.22	ug/kg	0.962	1					
Chloroethane	U	ND	0.333	2.22	ug/kg	0.962	1					
Chloroform	U	ND	0.333	2.22	ug/kg	0.962	1					
Chloromethane	U	ND	0.333	2.22	ug/kg	0.962	1					
Cyclohexane	U	ND	0.333	2.22	ug/kg	0.962	1					
Dibromochloromethane	U	ND	0.333	2.22	ug/kg	0.962	1					
Dichlorodifluoromethane	U	ND	0.333	2.22	ug/kg	0.962	1					
Ethylbenzene	U	ND	0.333	2.22	ug/kg	0.962	1					
Isopropylbenzene	U	ND	0.333	2.22	ug/kg	0.962	1					
Methyl acetate	U	ND	1.67	5.55	ug/kg	0.962	1					
Methylcyclohexane	U	ND	0.333	2.22	ug/kg	0.962	1					
Methylene chloride	U	ND	1.78	5.55	ug/kg	0.962	1					
Styrene	U	ND	0.333	2.22	ug/kg	0.962	1					
Tetrachloroethylene	U	ND	0.333	2.22	ug/kg	0.962	1					
Toluene	U	ND	0.333	2.22	ug/kg	0.962	1					
Trichloroethylene	U	ND	0.333	2.22	ug/kg	0.962	1					
Trichlorofluoromethane	U	ND	0.333	2.22	ug/kg	0.962	1					
Trichlorotrifluoroethane	U	ND	1.78	5.55	ug/kg	0.962	1					
Vinyl chloride	U	ND	0.333	2.22	ug/kg	0.962	1					
cis-1,2-Dichloroethylene	U	ND	0.333	2.22	ug/kg	0.962	1					
cis-1,3-Dichloropropylene	U	ND	0.333	2.22	ug/kg	0.962	1					
m,p-Xylenes	U	ND	0.333	4.44	ug/kg	0.962	1					
o-Xylene	U	ND	0.333	2.22	ug/kg	0.962	1					
tert-Butyl methyl ether	U	ND	0.333	2.22	ug/kg	0.962	1					
trans-1,2-Dichloroethylene	U	ND	0.333	2.22	ug/kg	0.962	1					
trans-1,3-Dichloropropylene	U	ND	0.333	2.22	ug/kg	0.962	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2211	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SOL05D	Project:	URSC00211
Sample ID:	456917011	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/20/18		1103		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	SW846 5035A/8260C				
2	SW846 5035A/8260C				
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2630 ug/kg	50.0	98	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2500 ug/kg	50.0	94	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2850 ug/kg	50.0	107	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	55.3 ug/kg	50.0	100	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	101 ug/kg	50.0	181*	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	74.3 ug/kg	50.0	134*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	G2SOL05	Project:	URSC00211
Sample ID:	456917012	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:11		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	15.4%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	17.1	114	ug/kg	0.962	50	JP1	08/19/18	0046	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	17.1	114	ug/kg	0.962	50					
1,1,2-Trichloroethane	U	ND	17.1	114	ug/kg	0.962	50					
1,1-Dichloroethane	U	ND	17.1	114	ug/kg	0.962	50					
1,1-Dichloroethylene	U	ND	17.1	114	ug/kg	0.962	50					
1,2,3-Trichlorobenzene	U	ND	17.1	114	ug/kg	0.962	50					
1,2,4-Trichlorobenzene	U	ND	17.1	114	ug/kg	0.962	50					
1,2-Dibromo-3-chloropropane	U	ND	28.4	114	ug/kg	0.962	50					
1,2-Dibromoethane	U	ND	17.1	114	ug/kg	0.962	50					
1,2-Dichlorobenzene	U	ND	17.1	114	ug/kg	0.962	50					
1,2-Dichloroethane	U	ND	17.1	114	ug/kg	0.962	50					
1,2-Dichloropropane	U	ND	17.1	114	ug/kg	0.962	50					
1,3-Dichlorobenzene	U	ND	17.1	114	ug/kg	0.962	50					
1,4-Dichlorobenzene	U	ND	17.1	114	ug/kg	0.962	50					
1,4-Dioxane	U	ND	853	2840	ug/kg	0.962	50					
2-Butanone	U	ND	171	568	ug/kg	0.962	50					
2-Hexanone	U	ND	171	568	ug/kg	0.962	50					
4-Methyl-2-pentanone	U	ND	171	568	ug/kg	0.962	50					
Acetone	U	ND	171	568	ug/kg	0.962	50					
Benzene	U	ND	17.1	114	ug/kg	0.962	50					
Bromochloromethane	U	ND	17.1	114	ug/kg	0.962	50					
Bromodichloromethane	U	ND	17.1	114	ug/kg	0.962	50					
Bromoform	U	ND	17.1	114	ug/kg	0.962	50					
Bromomethane	U	ND	17.1	114	ug/kg	0.962	50					
Carbon disulfide	U	ND	90.9	568	ug/kg	0.962	50					
Carbon tetrachloride	U	ND	17.1	114	ug/kg	0.962	50					
Chlorobenzene	U	ND	17.1	114	ug/kg	0.962	50					
Chloroethane	U	ND	17.1	114	ug/kg	0.962	50					
Chloroform	U	ND	17.1	114	ug/kg	0.962	50					
Chloromethane	U	ND	17.1	114	ug/kg	0.962	50					
Cyclohexane	U	ND	17.1	114	ug/kg	0.962	50					
Dibromochloromethane	U	ND	17.1	114	ug/kg	0.962	50					
Dichlorodifluoromethane	U	ND	17.1	114	ug/kg	0.962	50					
Ethylbenzene	U	ND	17.1	114	ug/kg	0.962	50					
Isopropylbenzene	U	ND	17.1	114	ug/kg	0.962	50					
Methyl acetate	U	ND	85.3	284	ug/kg	0.962	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SOL05	Project:	URSC00211
Sample ID:	456917012	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	17.1	114	ug/kg	0.962	50					
Methylene chloride	U	ND	90.9	284	ug/kg	0.962	50					
Styrene	U	ND	17.1	114	ug/kg	0.962	50					
Tetrachloroethylene	U	ND	17.1	114	ug/kg	0.962	50					
Toluene	U	ND	17.1	114	ug/kg	0.962	50					
Trichloroethylene	U	ND	17.1	114	ug/kg	0.962	50					
Trichlorofluoromethane	U	ND	17.1	114	ug/kg	0.962	50					
Trichlorotrifluoroethane	U	ND	90.9	284	ug/kg	0.962	50					
Vinyl chloride	U	ND	17.1	114	ug/kg	0.962	50					
cis-1,2-Dichloroethylene	U	ND	17.1	114	ug/kg	0.962	50					
cis-1,3-Dichloropropylene	U	ND	17.1	114	ug/kg	0.962	50					
m,p-Xylenes	U	ND	17.1	227	ug/kg	0.962	50					
o-Xylene	U	ND	17.1	114	ug/kg	0.962	50					
tert-Butyl methyl ether	U	ND	17.1	114	ug/kg	0.962	50					
trans-1,2-Dichloroethylene	U	ND	17.1	114	ug/kg	0.962	50					
trans-1,3-Dichloropropylene	U	ND	17.1	114	ug/kg	0.962	50					
1,1,1-Trichloroethane	U	ND	0.341	2.27	ug/kg	0.962	1	JP1	08/20/18	1656	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.341	2.27	ug/kg	0.962	1					
1,1,2-Trichloroethane	U	ND	0.341	2.27	ug/kg	0.962	1					
1,1-Dichloroethane	U	ND	0.341	2.27	ug/kg	0.962	1					
1,1-Dichloroethylene	U	ND	0.341	2.27	ug/kg	0.962	1					
1,2,3-Trichlorobenzene	U	ND	0.341	2.27	ug/kg	0.962	1					
1,2,4-Trichlorobenzene	U	ND	0.341	2.27	ug/kg	0.962	1					
1,2-Dibromo-3-chloropropane	U	ND	0.568	2.27	ug/kg	0.962	1					
1,2-Dibromoethane	U	ND	0.341	2.27	ug/kg	0.962	1					
1,2-Dichlorobenzene	U	ND	0.341	2.27	ug/kg	0.962	1					
1,2-Dichloroethane	U	ND	0.341	2.27	ug/kg	0.962	1					
1,2-Dichloropropane	U	ND	0.341	2.27	ug/kg	0.962	1					
1,3-Dichlorobenzene	U	ND	0.341	2.27	ug/kg	0.962	1					
1,4-Dichlorobenzene	U	ND	0.341	2.27	ug/kg	0.962	1					
1,4-Dioxane	U	ND	17.1	56.8	ug/kg	0.962	1					
2-Butanone	U	ND	3.41	11.4	ug/kg	0.962	1					
2-Hexanone	U	ND	3.41	11.4	ug/kg	0.962	1					
4-Methyl-2-pentanone	U	ND	3.41	11.4	ug/kg	0.962	1					
Acetone	U	ND	3.41	11.4	ug/kg	0.962	1					
Benzene	U	ND	0.341	2.27	ug/kg	0.962	1					

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SOL05	Project:	URSC00211
Sample ID:	456917012	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.341	2.27	ug/kg	0.962	1					
Bromodichloromethane	U	ND	0.341	2.27	ug/kg	0.962	1					
Bromoform	U	ND	0.341	2.27	ug/kg	0.962	1					
Bromomethane	U	ND	0.341	2.27	ug/kg	0.962	1					
Carbon disulfide	U	ND	1.82	11.4	ug/kg	0.962	1					
Carbon tetrachloride	U	ND	0.341	2.27	ug/kg	0.962	1					
Chlorobenzene	U	ND	0.341	2.27	ug/kg	0.962	1					
Chloroethane	U	ND	0.341	2.27	ug/kg	0.962	1					
Chloroform	U	ND	0.341	2.27	ug/kg	0.962	1					
Chloromethane	U	ND	0.341	2.27	ug/kg	0.962	1					
Cyclohexane	U	ND	0.341	2.27	ug/kg	0.962	1					
Dibromochloromethane	U	ND	0.341	2.27	ug/kg	0.962	1					
Dichlorodifluoromethane	U	ND	0.341	2.27	ug/kg	0.962	1					
Ethylbenzene	U	ND	0.341	2.27	ug/kg	0.962	1					
Isopropylbenzene	U	ND	0.341	2.27	ug/kg	0.962	1					
Methyl acetate	U	ND	1.71	5.68	ug/kg	0.962	1					
Methylcyclohexane	U	ND	0.341	2.27	ug/kg	0.962	1					
Methylene chloride		9.02	1.82	5.68	ug/kg	0.962	1					
Styrene	U	ND	0.341	2.27	ug/kg	0.962	1					
Tetrachloroethylene	U	ND	0.341	2.27	ug/kg	0.962	1					
Toluene	U	ND	0.341	2.27	ug/kg	0.962	1					
Trichloroethylene	U	ND	0.341	2.27	ug/kg	0.962	1					
Trichlorofluoromethane	U	ND	0.341	2.27	ug/kg	0.962	1					
Trichlorotrifluoroethane	U	ND	1.82	5.68	ug/kg	0.962	1					
Vinyl chloride	U	ND	0.341	2.27	ug/kg	0.962	1					
cis-1,2-Dichloroethylene	U	ND	0.341	2.27	ug/kg	0.962	1					
cis-1,3-Dichloropropylene	U	ND	0.341	2.27	ug/kg	0.962	1					
m,p-Xylenes	U	ND	0.341	4.55	ug/kg	0.962	1					
o-Xylene	U	ND	0.341	2.27	ug/kg	0.962	1					
tert-Butyl methyl ether	U	ND	0.341	2.27	ug/kg	0.962	1					
trans-1,2-Dichloroethylene	U	ND	0.341	2.27	ug/kg	0.962	1					
trans-1,3-Dichloropropylene	U	ND	0.341	2.27	ug/kg	0.962	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2212	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SOL05	Project:	URSC00211
Sample ID:	456917012	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/20/18		1104		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 5035A/8260C		
2	SW846 5035A/8260C		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2770 ug/kg	50.0	98	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2810 ug/kg	50.0	99	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2830 ug/kg	50.0	99	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	62.9 ug/kg	50.0	111	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	56.9 ug/kg	50.0	100	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	76.3 ug/kg	50.0	134*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	G2SWSOL08	Project:	URSC00211
Sample ID:	456917013	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 07:45		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	6.49%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	14.1	93.8	ug/kg	0.877	50	JP1	08/19/18	0117	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	14.1	93.8	ug/kg	0.877	50					
1,1,2-Trichloroethane	U	ND	14.1	93.8	ug/kg	0.877	50					
1,1-Dichloroethane	U	ND	14.1	93.8	ug/kg	0.877	50					
1,1-Dichloroethylene	U	ND	14.1	93.8	ug/kg	0.877	50					
1,2,3-Trichlorobenzene	U	ND	14.1	93.8	ug/kg	0.877	50					
1,2,4-Trichlorobenzene	U	ND	14.1	93.8	ug/kg	0.877	50					
1,2-Dibromo-3-chloropropane	U	ND	23.5	93.8	ug/kg	0.877	50					
1,2-Dibromoethane	U	ND	14.1	93.8	ug/kg	0.877	50					
1,2-Dichlorobenzene	U	ND	14.1	93.8	ug/kg	0.877	50					
1,2-Dichloroethane	U	ND	14.1	93.8	ug/kg	0.877	50					
1,2-Dichloropropane	U	ND	14.1	93.8	ug/kg	0.877	50					
1,3-Dichlorobenzene	U	ND	14.1	93.8	ug/kg	0.877	50					
1,4-Dichlorobenzene	U	ND	14.1	93.8	ug/kg	0.877	50					
1,4-Dioxane	U	ND	704	2350	ug/kg	0.877	50					
2-Butanone	U	ND	141	469	ug/kg	0.877	50					
2-Hexanone	U	ND	141	469	ug/kg	0.877	50					
4-Methyl-2-pentanone	U	ND	141	469	ug/kg	0.877	50					
Acetone	U	ND	141	469	ug/kg	0.877	50					
Benzene	U	ND	14.1	93.8	ug/kg	0.877	50					
Bromochloromethane	U	ND	14.1	93.8	ug/kg	0.877	50					
Bromodichloromethane	U	ND	14.1	93.8	ug/kg	0.877	50					
Bromoform	U	ND	14.1	93.8	ug/kg	0.877	50					
Bromomethane	U	ND	14.1	93.8	ug/kg	0.877	50					
Carbon disulfide	U	ND	75.0	469	ug/kg	0.877	50					
Carbon tetrachloride	U	ND	14.1	93.8	ug/kg	0.877	50					
Chlorobenzene	U	ND	14.1	93.8	ug/kg	0.877	50					
Chloroethane	U	ND	14.1	93.8	ug/kg	0.877	50					
Chloroform	U	ND	14.1	93.8	ug/kg	0.877	50					
Chloromethane	U	ND	14.1	93.8	ug/kg	0.877	50					
Cyclohexane	U	ND	14.1	93.8	ug/kg	0.877	50					
Dibromochloromethane	U	ND	14.1	93.8	ug/kg	0.877	50					
Dichlorodifluoromethane	U	ND	14.1	93.8	ug/kg	0.877	50					
Ethylbenzene	U	ND	14.1	93.8	ug/kg	0.877	50					
Isopropylbenzene	U	ND	14.1	93.8	ug/kg	0.877	50					
Methyl acetate	U	ND	70.4	235	ug/kg	0.877	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL08	Project:	URSC00211
Sample ID:	456917013	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	14.1	93.8	ug/kg	0.877	50					
Methylene chloride	U	ND	75.0	235	ug/kg	0.877	50					
Styrene	U	ND	14.1	93.8	ug/kg	0.877	50					
Tetrachloroethylene	U	ND	14.1	93.8	ug/kg	0.877	50					
Toluene	U	ND	14.1	93.8	ug/kg	0.877	50					
Trichloroethylene	U	ND	14.1	93.8	ug/kg	0.877	50					
Trichlorofluoromethane	U	ND	14.1	93.8	ug/kg	0.877	50					
Trichlorotrifluoroethane	U	ND	75.0	235	ug/kg	0.877	50					
Vinyl chloride	U	ND	14.1	93.8	ug/kg	0.877	50					
cis-1,2-Dichloroethylene	U	ND	14.1	93.8	ug/kg	0.877	50					
cis-1,3-Dichloropropylene	U	ND	14.1	93.8	ug/kg	0.877	50					
m,p-Xylenes	U	ND	14.1	188	ug/kg	0.877	50					
o-Xylene	U	ND	14.1	93.8	ug/kg	0.877	50					
tert-Butyl methyl ether	U	ND	14.1	93.8	ug/kg	0.877	50					
trans-1,2-Dichloroethylene	U	ND	14.1	93.8	ug/kg	0.877	50					
trans-1,3-Dichloropropylene	U	ND	14.1	93.8	ug/kg	0.877	50					
1,1,1-Trichloroethane	U	ND	0.315	2.10	ug/kg	0.980	1	JP1	08/20/18	1727	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.315	2.10	ug/kg	0.980	1					
1,1,2-Trichloroethane	U	ND	0.315	2.10	ug/kg	0.980	1					
1,1-Dichloroethane	U	ND	0.315	2.10	ug/kg	0.980	1					
1,1-Dichloroethylene	U	ND	0.315	2.10	ug/kg	0.980	1					
1,2,3-Trichlorobenzene	U	ND	0.315	2.10	ug/kg	0.980	1					
1,2,4-Trichlorobenzene	U	ND	0.315	2.10	ug/kg	0.980	1					
1,2-Dibromo-3-chloropropane	U	ND	0.524	2.10	ug/kg	0.980	1					
1,2-Dibromoethane	U	ND	0.315	2.10	ug/kg	0.980	1					
1,2-Dichlorobenzene	U	ND	0.315	2.10	ug/kg	0.980	1					
1,2-Dichloroethane	U	ND	0.315	2.10	ug/kg	0.980	1					
1,2-Dichloropropane	U	ND	0.315	2.10	ug/kg	0.980	1					
1,3-Dichlorobenzene	U	ND	0.315	2.10	ug/kg	0.980	1					
1,4-Dichlorobenzene	U	ND	0.315	2.10	ug/kg	0.980	1					
1,4-Dioxane	U	ND	15.7	52.4	ug/kg	0.980	1					
2-Butanone	U	ND	3.15	10.5	ug/kg	0.980	1					
2-Hexanone	U	ND	3.15	10.5	ug/kg	0.980	1					
4-Methyl-2-pentanone	U	ND	3.15	10.5	ug/kg	0.980	1					
Acetone	U	ND	3.15	10.5	ug/kg	0.980	1					
Benzene	U	ND	0.315	2.10	ug/kg	0.980	1					

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL08	Project:	URSC00211
Sample ID:	456917013	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.315	2.10	ug/kg	0.980	1					
Bromodichloromethane	U	ND	0.315	2.10	ug/kg	0.980	1					
Bromoform	U	ND	0.315	2.10	ug/kg	0.980	1					
Bromomethane	U	ND	0.315	2.10	ug/kg	0.980	1					
Carbon disulfide	U	ND	1.68	10.5	ug/kg	0.980	1					
Carbon tetrachloride	U	ND	0.315	2.10	ug/kg	0.980	1					
Chlorobenzene	U	ND	0.315	2.10	ug/kg	0.980	1					
Chloroethane	U	ND	0.315	2.10	ug/kg	0.980	1					
Chloroform	U	ND	0.315	2.10	ug/kg	0.980	1					
Chloromethane	U	ND	0.315	2.10	ug/kg	0.980	1					
Cyclohexane	U	ND	0.315	2.10	ug/kg	0.980	1					
Dibromochloromethane	U	ND	0.315	2.10	ug/kg	0.980	1					
Dichlorodifluoromethane	U	ND	0.315	2.10	ug/kg	0.980	1					
Ethylbenzene	U	ND	0.315	2.10	ug/kg	0.980	1					
Isopropylbenzene	U	ND	0.315	2.10	ug/kg	0.980	1					
Methyl acetate	U	ND	1.57	5.24	ug/kg	0.980	1					
Methylcyclohexane	U	ND	0.315	2.10	ug/kg	0.980	1					
Methylene chloride	J	2.89	1.68	5.24	ug/kg	0.980	1					
Styrene	U	ND	0.315	2.10	ug/kg	0.980	1					
Tetrachloroethylene	U	ND	0.315	2.10	ug/kg	0.980	1					
Toluene	U	ND	0.315	2.10	ug/kg	0.980	1					
Trichloroethylene	U	ND	0.315	2.10	ug/kg	0.980	1					
Trichlorofluoromethane	U	ND	0.315	2.10	ug/kg	0.980	1					
Trichlorotrifluoroethane	U	ND	1.68	5.24	ug/kg	0.980	1					
Vinyl chloride	U	ND	0.315	2.10	ug/kg	0.980	1					
cis-1,2-Dichloroethylene	U	ND	0.315	2.10	ug/kg	0.980	1					
cis-1,3-Dichloropropylene	U	ND	0.315	2.10	ug/kg	0.980	1					
m,p-Xylenes	U	ND	0.315	4.19	ug/kg	0.980	1					
o-Xylene	U	ND	0.315	2.10	ug/kg	0.980	1					
tert-Butyl methyl ether	U	ND	0.315	2.10	ug/kg	0.980	1					
trans-1,2-Dichloroethylene	U	ND	0.315	2.10	ug/kg	0.980	1					
trans-1,3-Dichloropropylene	U	ND	0.315	2.10	ug/kg	0.980	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2213	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL08	Project:	URSC00211
Sample ID:	456917013	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/20/18		1107		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	SW846 5035A/8260C				
2	SW846 5035A/8260C				
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2220 ug/kg	50.0	95	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2340 ug/kg	50.0	100	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2310 ug/kg	50.0	99	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	60.4 ug/kg	50.0	115	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	69.9 ug/kg	50.0	133*	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	76.4 ug/kg	50.0	146*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	G2SWSOL09	Project:	URSC00211
Sample ID:	456917014	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 07:49		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	10.8%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	16.2	108	ug/kg	0.962	50	JP1	08/19/18	0148	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	16.2	108	ug/kg	0.962	50					
1,1,2-Trichloroethane	U	ND	16.2	108	ug/kg	0.962	50					
1,1-Dichloroethane	U	ND	16.2	108	ug/kg	0.962	50					
1,1-Dichloroethylene	U	ND	16.2	108	ug/kg	0.962	50					
1,2,3-Trichlorobenzene	U	ND	16.2	108	ug/kg	0.962	50					
1,2,4-Trichlorobenzene	U	ND	16.2	108	ug/kg	0.962	50					
1,2-Dibromo-3-chloropropane	U	ND	26.9	108	ug/kg	0.962	50					
1,2-Dibromoethane	U	ND	16.2	108	ug/kg	0.962	50					
1,2-Dichlorobenzene	U	ND	16.2	108	ug/kg	0.962	50					
1,2-Dichloroethane	U	ND	16.2	108	ug/kg	0.962	50					
1,2-Dichloropropane	U	ND	16.2	108	ug/kg	0.962	50					
1,3-Dichlorobenzene	U	ND	16.2	108	ug/kg	0.962	50					
1,4-Dichlorobenzene	U	ND	16.2	108	ug/kg	0.962	50					
1,4-Dioxane	U	ND	808	2690	ug/kg	0.962	50					
2-Butanone	U	ND	162	539	ug/kg	0.962	50					
2-Hexanone	U	ND	162	539	ug/kg	0.962	50					
4-Methyl-2-pentanone	U	ND	162	539	ug/kg	0.962	50					
Acetone	U	ND	162	539	ug/kg	0.962	50					
Benzene	U	ND	16.2	108	ug/kg	0.962	50					
Bromochloromethane	U	ND	16.2	108	ug/kg	0.962	50					
Bromodichloromethane	U	ND	16.2	108	ug/kg	0.962	50					
Bromoform	U	ND	16.2	108	ug/kg	0.962	50					
Bromomethane	U	ND	16.2	108	ug/kg	0.962	50					
Carbon disulfide	U	ND	86.2	539	ug/kg	0.962	50					
Carbon tetrachloride	U	ND	16.2	108	ug/kg	0.962	50					
Chlorobenzene	U	ND	16.2	108	ug/kg	0.962	50					
Chloroethane	U	ND	16.2	108	ug/kg	0.962	50					
Chloroform	U	ND	16.2	108	ug/kg	0.962	50					
Chloromethane	U	ND	16.2	108	ug/kg	0.962	50					
Cyclohexane	U	ND	16.2	108	ug/kg	0.962	50					
Dibromochloromethane	U	ND	16.2	108	ug/kg	0.962	50					
Dichlorodifluoromethane	U	ND	16.2	108	ug/kg	0.962	50					
Ethylbenzene	U	ND	16.2	108	ug/kg	0.962	50					
Isopropylbenzene	U	ND	16.2	108	ug/kg	0.962	50					
Methyl acetate	U	ND	80.8	269	ug/kg	0.962	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL09	Project:	URSC00211
Sample ID:	456917014	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	16.2	108	ug/kg	0.962	50					
Methylene chloride	U	ND	86.2	269	ug/kg	0.962	50					
Styrene	U	ND	16.2	108	ug/kg	0.962	50					
Tetrachloroethylene	U	ND	16.2	108	ug/kg	0.962	50					
Toluene	U	ND	16.2	108	ug/kg	0.962	50					
Trichloroethylene	U	ND	16.2	108	ug/kg	0.962	50					
Trichlorofluoromethane	J	17.8	16.2	108	ug/kg	0.962	50					
Trichlorotrifluoroethane	U	ND	86.2	269	ug/kg	0.962	50					
Vinyl chloride	U	ND	16.2	108	ug/kg	0.962	50					
cis-1,2-Dichloroethylene	U	ND	16.2	108	ug/kg	0.962	50					
cis-1,3-Dichloropropylene	U	ND	16.2	108	ug/kg	0.962	50					
m,p-Xylenes	U	ND	16.2	215	ug/kg	0.962	50					
o-Xylene	U	ND	16.2	108	ug/kg	0.962	50					
tert-Butyl methyl ether	U	ND	16.2	108	ug/kg	0.962	50					
trans-1,2-Dichloroethylene	U	ND	16.2	108	ug/kg	0.962	50					
trans-1,3-Dichloropropylene	U	ND	16.2	108	ug/kg	0.962	50					
1,1,1-Trichloroethane	U	ND	0.323	2.15	ug/kg	0.962	1	JP1	08/20/18	1758	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.323	2.15	ug/kg	0.962	1					
1,1,2-Trichloroethane	U	ND	0.323	2.15	ug/kg	0.962	1					
1,1-Dichloroethane	U	ND	0.323	2.15	ug/kg	0.962	1					
1,1-Dichloroethylene	U	ND	0.323	2.15	ug/kg	0.962	1					
1,2,3-Trichlorobenzene	U	ND	0.323	2.15	ug/kg	0.962	1					
1,2,4-Trichlorobenzene	U	ND	0.323	2.15	ug/kg	0.962	1					
1,2-Dibromo-3-chloropropane	U	ND	0.539	2.15	ug/kg	0.962	1					
1,2-Dibromoethane	U	ND	0.323	2.15	ug/kg	0.962	1					
1,2-Dichlorobenzene	U	ND	0.323	2.15	ug/kg	0.962	1					
1,2-Dichloroethane	U	ND	0.323	2.15	ug/kg	0.962	1					
1,2-Dichloropropane	U	ND	0.323	2.15	ug/kg	0.962	1					
1,3-Dichlorobenzene	U	ND	0.323	2.15	ug/kg	0.962	1					
1,4-Dichlorobenzene	U	ND	0.323	2.15	ug/kg	0.962	1					
1,4-Dioxane	U	ND	16.2	53.9	ug/kg	0.962	1					
2-Butanone	U	ND	3.23	10.8	ug/kg	0.962	1					
2-Hexanone	U	ND	3.23	10.8	ug/kg	0.962	1					
4-Methyl-2-pentanone	U	ND	3.23	10.8	ug/kg	0.962	1					
Acetone	U	ND	3.23	10.8	ug/kg	0.962	1					
Benzene	U	ND	0.323	2.15	ug/kg	0.962	1					

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL09	Project:	URSC00211
Sample ID:	456917014	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.323	2.15	ug/kg	0.962	1					
Bromodichloromethane	U	ND	0.323	2.15	ug/kg	0.962	1					
Bromoform	U	ND	0.323	2.15	ug/kg	0.962	1					
Bromomethane	U	ND	0.323	2.15	ug/kg	0.962	1					
Carbon disulfide	U	ND	1.72	10.8	ug/kg	0.962	1					
Carbon tetrachloride	U	ND	0.323	2.15	ug/kg	0.962	1					
Chlorobenzene	U	ND	0.323	2.15	ug/kg	0.962	1					
Chloroethane	U	ND	0.323	2.15	ug/kg	0.962	1					
Chloroform	U	ND	0.323	2.15	ug/kg	0.962	1					
Chloromethane	U	ND	0.323	2.15	ug/kg	0.962	1					
Cyclohexane	U	ND	0.323	2.15	ug/kg	0.962	1					
Dibromochloromethane	U	ND	0.323	2.15	ug/kg	0.962	1					
Dichlorodifluoromethane	U	ND	0.323	2.15	ug/kg	0.962	1					
Ethylbenzene	U	ND	0.323	2.15	ug/kg	0.962	1					
Isopropylbenzene	U	ND	0.323	2.15	ug/kg	0.962	1					
Methyl acetate	U	ND	1.62	5.39	ug/kg	0.962	1					
Methylcyclohexane	U	ND	0.323	2.15	ug/kg	0.962	1					
Methylene chloride	J	4.53	1.72	5.39	ug/kg	0.962	1					
Styrene	U	ND	0.323	2.15	ug/kg	0.962	1					
Tetrachloroethylene	U	ND	0.323	2.15	ug/kg	0.962	1					
Toluene	J	0.528	0.323	2.15	ug/kg	0.962	1					
Trichloroethylene	U	ND	0.323	2.15	ug/kg	0.962	1					
Trichlorofluoromethane	U	ND	0.323	2.15	ug/kg	0.962	1					
Trichlorotrifluoroethane	U	ND	1.72	5.39	ug/kg	0.962	1					
Vinyl chloride	U	ND	0.323	2.15	ug/kg	0.962	1					
cis-1,2-Dichloroethylene	U	ND	0.323	2.15	ug/kg	0.962	1					
cis-1,3-Dichloropropylene	U	ND	0.323	2.15	ug/kg	0.962	1					
m,p-Xylenes	U	ND	0.323	4.31	ug/kg	0.962	1					
o-Xylene	U	ND	0.323	2.15	ug/kg	0.962	1					
tert-Butyl methyl ether	U	ND	0.323	2.15	ug/kg	0.962	1					
trans-1,2-Dichloroethylene	U	ND	0.323	2.15	ug/kg	0.962	1					
trans-1,3-Dichloropropylene	U	ND	0.323	2.15	ug/kg	0.962	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2214	1794367

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 2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL09	Project:	URSC00211
Sample ID:	456917014	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/20/18		1108		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 5035A/8260C		
2	SW846 5035A/8260C		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2620 ug/kg	50.0	97	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2620 ug/kg	50.0	97	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2780 ug/kg	50.0	103	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	53.8 ug/kg	50.0	100	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	61.3 ug/kg	50.0	114	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	61.1 ug/kg	50.0	113	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	G2SWSOL10	Project:	URSC00211
Sample ID:	456917015	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 07:53		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	11.6%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	17.0	113	ug/kg	1.00	50	JP1	08/19/18	0219	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	17.0	113	ug/kg	1.00	50					
1,1,2-Trichloroethane	U	ND	17.0	113	ug/kg	1.00	50					
1,1-Dichloroethane	U	ND	17.0	113	ug/kg	1.00	50					
1,1-Dichloroethylene	U	ND	17.0	113	ug/kg	1.00	50					
1,2,3-Trichlorobenzene	U	ND	17.0	113	ug/kg	1.00	50					
1,2,4-Trichlorobenzene	U	ND	17.0	113	ug/kg	1.00	50					
1,2-Dibromo-3-chloropropane	U	ND	28.3	113	ug/kg	1.00	50					
1,2-Dibromoethane	U	ND	17.0	113	ug/kg	1.00	50					
1,2-Dichlorobenzene	U	ND	17.0	113	ug/kg	1.00	50					
1,2-Dichloroethane	U	ND	17.0	113	ug/kg	1.00	50					
1,2-Dichloropropane	U	ND	17.0	113	ug/kg	1.00	50					
1,3-Dichlorobenzene	U	ND	17.0	113	ug/kg	1.00	50					
1,4-Dichlorobenzene	U	ND	17.0	113	ug/kg	1.00	50					
1,4-Dioxane	U	ND	848	2830	ug/kg	1.00	50					
2-Butanone	U	ND	170	565	ug/kg	1.00	50					
2-Hexanone	U	ND	170	565	ug/kg	1.00	50					
4-Methyl-2-pentanone	U	ND	170	565	ug/kg	1.00	50					
Acetone	U	ND	170	565	ug/kg	1.00	50					
Benzene	U	ND	17.0	113	ug/kg	1.00	50					
Bromochloromethane	U	ND	17.0	113	ug/kg	1.00	50					
Bromodichloromethane	U	ND	17.0	113	ug/kg	1.00	50					
Bromoform	U	ND	17.0	113	ug/kg	1.00	50					
Bromomethane	U	ND	17.0	113	ug/kg	1.00	50					
Carbon disulfide	U	ND	90.5	565	ug/kg	1.00	50					
Carbon tetrachloride	U	ND	17.0	113	ug/kg	1.00	50					
Chlorobenzene	U	ND	17.0	113	ug/kg	1.00	50					
Chloroethane	U	ND	17.0	113	ug/kg	1.00	50					
Chloroform	U	ND	17.0	113	ug/kg	1.00	50					
Chloromethane	U	ND	17.0	113	ug/kg	1.00	50					
Cyclohexane	U	ND	17.0	113	ug/kg	1.00	50					
Dibromochloromethane	U	ND	17.0	113	ug/kg	1.00	50					
Dichlorodifluoromethane	U	ND	17.0	113	ug/kg	1.00	50					
Ethylbenzene	U	ND	17.0	113	ug/kg	1.00	50					
Isopropylbenzene	U	ND	17.0	113	ug/kg	1.00	50					
Methyl acetate	U	ND	84.8	283	ug/kg	1.00	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL10	Project:	URSC00211
Sample ID:	456917015	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	17.0	113	ug/kg	1.00	50					
Methylene chloride	U	ND	90.5	283	ug/kg	1.00	50					
Styrene	U	ND	17.0	113	ug/kg	1.00	50					
Tetrachloroethylene	U	ND	17.0	113	ug/kg	1.00	50					
Toluene	U	ND	17.0	113	ug/kg	1.00	50					
Trichloroethylene	U	ND	17.0	113	ug/kg	1.00	50					
Trichlorofluoromethane	U	ND	17.0	113	ug/kg	1.00	50					
Trichlorotrifluoroethane	U	ND	90.5	283	ug/kg	1.00	50					
Vinyl chloride	U	ND	17.0	113	ug/kg	1.00	50					
cis-1,2-Dichloroethylene	U	ND	17.0	113	ug/kg	1.00	50					
cis-1,3-Dichloropropylene	U	ND	17.0	113	ug/kg	1.00	50					
m,p-Xylenes	U	ND	17.0	226	ug/kg	1.00	50					
o-Xylene	U	ND	17.0	113	ug/kg	1.00	50					
tert-Butyl methyl ether	U	ND	17.0	113	ug/kg	1.00	50					
trans-1,2-Dichloroethylene	U	ND	17.0	113	ug/kg	1.00	50					
trans-1,3-Dichloropropylene	U	ND	17.0	113	ug/kg	1.00	50					
1,1,1-Trichloroethane	U	ND	0.339	2.26	ug/kg	1.00	1	JP1	08/20/18	1829	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.339	2.26	ug/kg	1.00	1					
1,1,2-Trichloroethane	U	ND	0.339	2.26	ug/kg	1.00	1					
1,1-Dichloroethane	U	ND	0.339	2.26	ug/kg	1.00	1					
1,1-Dichloroethylene	U	ND	0.339	2.26	ug/kg	1.00	1					
1,2,3-Trichlorobenzene	U	ND	0.339	2.26	ug/kg	1.00	1					
1,2,4-Trichlorobenzene	U	ND	0.339	2.26	ug/kg	1.00	1					
1,2-Dibromo-3-chloropropane	U	ND	0.565	2.26	ug/kg	1.00	1					
1,2-Dibromoethane	U	ND	0.339	2.26	ug/kg	1.00	1					
1,2-Dichlorobenzene	U	ND	0.339	2.26	ug/kg	1.00	1					
1,2-Dichloroethane	U	ND	0.339	2.26	ug/kg	1.00	1					
1,2-Dichloropropane	U	ND	0.339	2.26	ug/kg	1.00	1					
1,3-Dichlorobenzene	U	ND	0.339	2.26	ug/kg	1.00	1					
1,4-Dichlorobenzene	U	ND	0.339	2.26	ug/kg	1.00	1					
1,4-Dioxane	U	ND	17.0	56.5	ug/kg	1.00	1					
2-Butanone	U	ND	3.39	11.3	ug/kg	1.00	1					
2-Hexanone	U	ND	3.39	11.3	ug/kg	1.00	1					
4-Methyl-2-pentanone	U	ND	3.39	11.3	ug/kg	1.00	1					
Acetone	U	ND	3.39	11.3	ug/kg	1.00	1					
Benzene	U	ND	0.339	2.26	ug/kg	1.00	1					

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL10	Project:	URSC00211
Sample ID:	456917015	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.339	2.26	ug/kg	1.00	1					
Bromodichloromethane	U	ND	0.339	2.26	ug/kg	1.00	1					
Bromoform	U	ND	0.339	2.26	ug/kg	1.00	1					
Bromomethane	U	ND	0.339	2.26	ug/kg	1.00	1					
Carbon disulfide	U	ND	1.81	11.3	ug/kg	1.00	1					
Carbon tetrachloride	U	ND	0.339	2.26	ug/kg	1.00	1					
Chlorobenzene	U	ND	0.339	2.26	ug/kg	1.00	1					
Chloroethane	U	ND	0.339	2.26	ug/kg	1.00	1					
Chloroform	U	ND	0.339	2.26	ug/kg	1.00	1					
Chloromethane	U	ND	0.339	2.26	ug/kg	1.00	1					
Cyclohexane	U	ND	0.339	2.26	ug/kg	1.00	1					
Dibromochloromethane	U	ND	0.339	2.26	ug/kg	1.00	1					
Dichlorodifluoromethane	U	ND	0.339	2.26	ug/kg	1.00	1					
Ethylbenzene	U	ND	0.339	2.26	ug/kg	1.00	1					
Isopropylbenzene	U	ND	0.339	2.26	ug/kg	1.00	1					
Methyl acetate	U	ND	1.70	5.65	ug/kg	1.00	1					
Methylcyclohexane	U	ND	0.339	2.26	ug/kg	1.00	1					
Methylene chloride	J	2.72	1.81	5.65	ug/kg	1.00	1					
Styrene	U	ND	0.339	2.26	ug/kg	1.00	1					
Tetrachloroethylene	U	ND	0.339	2.26	ug/kg	1.00	1					
Toluene	U	ND	0.339	2.26	ug/kg	1.00	1					
Trichloroethylene	U	ND	0.339	2.26	ug/kg	1.00	1					
Trichlorofluoromethane	U	ND	0.339	2.26	ug/kg	1.00	1					
Trichlorotrifluoroethane	U	ND	1.81	5.65	ug/kg	1.00	1					
Vinyl chloride	U	ND	0.339	2.26	ug/kg	1.00	1					
cis-1,2-Dichloroethylene	U	ND	0.339	2.26	ug/kg	1.00	1					
cis-1,3-Dichloropropylene	U	ND	0.339	2.26	ug/kg	1.00	1					
m,p-Xylenes	U	ND	0.339	4.52	ug/kg	1.00	1					
o-Xylene	U	ND	0.339	2.26	ug/kg	1.00	1					
tert-Butyl methyl ether	U	ND	0.339	2.26	ug/kg	1.00	1					
trans-1,2-Dichloroethylene	U	ND	0.339	2.26	ug/kg	1.00	1					
trans-1,3-Dichloropropylene	U	ND	0.339	2.26	ug/kg	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2215	1794367

GEL LABORATORIES LLC
 2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL10	Project:	URSC00211
Sample ID:	456917015	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/20/18		1109		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 5035A/8260C		
2	SW846 5035A/8260C		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2670 ug/kg	50.0	94	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2800 ug/kg	50.0	99	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2850 ug/kg	50.0	101	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	60.6 ug/kg	50.0	107	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	59.4 ug/kg	50.0	105	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	55.1 ug/kg	50.0	98	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	G2SWSOL11	Project:	URSC00211
Sample ID:	456917016	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 07:57		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	7.05%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	13.9	92.7	ug/kg	0.862	50	JP1	08/19/18	0250	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	13.9	92.7	ug/kg	0.862	50					
1,1,2-Trichloroethane	U	ND	13.9	92.7	ug/kg	0.862	50					
1,1-Dichloroethane	U	ND	13.9	92.7	ug/kg	0.862	50					
1,1-Dichloroethylene	U	ND	13.9	92.7	ug/kg	0.862	50					
1,2,3-Trichlorobenzene	U	ND	13.9	92.7	ug/kg	0.862	50					
1,2,4-Trichlorobenzene	U	ND	13.9	92.7	ug/kg	0.862	50					
1,2-Dibromo-3-chloropropane	U	ND	23.2	92.7	ug/kg	0.862	50					
1,2-Dibromoethane	U	ND	13.9	92.7	ug/kg	0.862	50					
1,2-Dichlorobenzene	U	ND	13.9	92.7	ug/kg	0.862	50					
1,2-Dichloroethane	U	ND	13.9	92.7	ug/kg	0.862	50					
1,2-Dichloropropane	U	ND	13.9	92.7	ug/kg	0.862	50					
1,3-Dichlorobenzene	U	ND	13.9	92.7	ug/kg	0.862	50					
1,4-Dichlorobenzene	U	ND	13.9	92.7	ug/kg	0.862	50					
1,4-Dioxane	U	ND	696	2320	ug/kg	0.862	50					
2-Butanone	U	ND	139	464	ug/kg	0.862	50					
2-Hexanone	U	ND	139	464	ug/kg	0.862	50					
4-Methyl-2-pentanone	U	ND	139	464	ug/kg	0.862	50					
Acetone	U	ND	139	464	ug/kg	0.862	50					
Benzene	U	ND	13.9	92.7	ug/kg	0.862	50					
Bromochloromethane	U	ND	13.9	92.7	ug/kg	0.862	50					
Bromodichloromethane	U	ND	13.9	92.7	ug/kg	0.862	50					
Bromoform	U	ND	13.9	92.7	ug/kg	0.862	50					
Bromomethane	U	ND	13.9	92.7	ug/kg	0.862	50					
Carbon disulfide	U	ND	74.2	464	ug/kg	0.862	50					
Carbon tetrachloride	U	ND	13.9	92.7	ug/kg	0.862	50					
Chlorobenzene	U	ND	13.9	92.7	ug/kg	0.862	50					
Chloroethane	U	ND	13.9	92.7	ug/kg	0.862	50					
Chloroform	U	ND	13.9	92.7	ug/kg	0.862	50					
Chloromethane	U	ND	13.9	92.7	ug/kg	0.862	50					
Cyclohexane	U	ND	13.9	92.7	ug/kg	0.862	50					
Dibromochloromethane	U	ND	13.9	92.7	ug/kg	0.862	50					
Dichlorodifluoromethane	U	ND	13.9	92.7	ug/kg	0.862	50					
Ethylbenzene	U	ND	13.9	92.7	ug/kg	0.862	50					
Isopropylbenzene	U	ND	13.9	92.7	ug/kg	0.862	50					
Methyl acetate	U	ND	69.6	232	ug/kg	0.862	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL11	Project:	URSC00211
Sample ID:	456917016	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	13.9	92.7	ug/kg	0.862	50					
Methylene chloride	U	ND	74.2	232	ug/kg	0.862	50					
Styrene	U	ND	13.9	92.7	ug/kg	0.862	50					
Tetrachloroethylene	U	ND	13.9	92.7	ug/kg	0.862	50					
Toluene	U	ND	13.9	92.7	ug/kg	0.862	50					
Trichloroethylene	U	ND	13.9	92.7	ug/kg	0.862	50					
Trichlorofluoromethane	U	ND	13.9	92.7	ug/kg	0.862	50					
Trichlorotrifluoroethane	U	ND	74.2	232	ug/kg	0.862	50					
Vinyl chloride	U	ND	13.9	92.7	ug/kg	0.862	50					
cis-1,2-Dichloroethylene	U	ND	13.9	92.7	ug/kg	0.862	50					
cis-1,3-Dichloropropylene	U	ND	13.9	92.7	ug/kg	0.862	50					
m,p-Xylenes	U	ND	13.9	185	ug/kg	0.862	50					
o-Xylene	U	ND	13.9	92.7	ug/kg	0.862	50					
tert-Butyl methyl ether	U	ND	13.9	92.7	ug/kg	0.862	50					
trans-1,2-Dichloroethylene	U	ND	13.9	92.7	ug/kg	0.862	50					
trans-1,3-Dichloropropylene	U	ND	13.9	92.7	ug/kg	0.862	50					
1,1,1-Trichloroethane	U	ND	0.304	2.03	ug/kg	0.943	1	JP1	08/20/18	1900	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.304	2.03	ug/kg	0.943	1					
1,1,2-Trichloroethane	U	ND	0.304	2.03	ug/kg	0.943	1					
1,1-Dichloroethane	U	ND	0.304	2.03	ug/kg	0.943	1					
1,1-Dichloroethylene	U	ND	0.304	2.03	ug/kg	0.943	1					
1,2,3-Trichlorobenzene	U	ND	0.304	2.03	ug/kg	0.943	1					
1,2,4-Trichlorobenzene	U	ND	0.304	2.03	ug/kg	0.943	1					
1,2-Dibromo-3-chloropropane	U	ND	0.507	2.03	ug/kg	0.943	1					
1,2-Dibromoethane	U	ND	0.304	2.03	ug/kg	0.943	1					
1,2-Dichlorobenzene	U	ND	0.304	2.03	ug/kg	0.943	1					
1,2-Dichloroethane	U	ND	0.304	2.03	ug/kg	0.943	1					
1,2-Dichloropropane	U	ND	0.304	2.03	ug/kg	0.943	1					
1,3-Dichlorobenzene	U	ND	0.304	2.03	ug/kg	0.943	1					
1,4-Dichlorobenzene	U	ND	0.304	2.03	ug/kg	0.943	1					
1,4-Dioxane	U	ND	15.2	50.7	ug/kg	0.943	1					
2-Butanone	U	ND	3.04	10.1	ug/kg	0.943	1					
2-Hexanone	U	ND	3.04	10.1	ug/kg	0.943	1					
4-Methyl-2-pentanone	U	ND	3.04	10.1	ug/kg	0.943	1					
Acetone	U	ND	3.04	10.1	ug/kg	0.943	1					
Benzene	U	ND	0.304	2.03	ug/kg	0.943	1					

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL11	Project:	URSC00211
Sample ID:	456917016	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.304	2.03	ug/kg	0.943	1					
Bromodichloromethane	U	ND	0.304	2.03	ug/kg	0.943	1					
Bromoform	U	ND	0.304	2.03	ug/kg	0.943	1					
Bromomethane	U	ND	0.304	2.03	ug/kg	0.943	1					
Carbon disulfide	U	ND	1.62	10.1	ug/kg	0.943	1					
Carbon tetrachloride	U	ND	0.304	2.03	ug/kg	0.943	1					
Chlorobenzene	U	ND	0.304	2.03	ug/kg	0.943	1					
Chloroethane	U	ND	0.304	2.03	ug/kg	0.943	1					
Chloroform	U	ND	0.304	2.03	ug/kg	0.943	1					
Chloromethane	U	ND	0.304	2.03	ug/kg	0.943	1					
Cyclohexane	U	ND	0.304	2.03	ug/kg	0.943	1					
Dibromochloromethane	U	ND	0.304	2.03	ug/kg	0.943	1					
Dichlorodifluoromethane	U	ND	0.304	2.03	ug/kg	0.943	1					
Ethylbenzene	U	ND	0.304	2.03	ug/kg	0.943	1					
Isopropylbenzene	U	ND	0.304	2.03	ug/kg	0.943	1					
Methyl acetate	U	ND	1.52	5.07	ug/kg	0.943	1					
Methylcyclohexane	U	ND	0.304	2.03	ug/kg	0.943	1					
Methylene chloride	U	ND	1.62	5.07	ug/kg	0.943	1					
Styrene	U	ND	0.304	2.03	ug/kg	0.943	1					
Tetrachloroethylene	U	ND	0.304	2.03	ug/kg	0.943	1					
Toluene	U	ND	0.304	2.03	ug/kg	0.943	1					
Trichloroethylene	U	ND	0.304	2.03	ug/kg	0.943	1					
Trichlorofluoromethane	U	ND	0.304	2.03	ug/kg	0.943	1					
Trichlorotrifluoroethane	U	ND	1.62	5.07	ug/kg	0.943	1					
Vinyl chloride	U	ND	0.304	2.03	ug/kg	0.943	1					
cis-1,2-Dichloroethylene	U	ND	0.304	2.03	ug/kg	0.943	1					
cis-1,3-Dichloropropylene	U	ND	0.304	2.03	ug/kg	0.943	1					
m,p-Xylenes	U	ND	0.304	4.06	ug/kg	0.943	1					
o-Xylene	U	ND	0.304	2.03	ug/kg	0.943	1					
tert-Butyl methyl ether	U	ND	0.304	2.03	ug/kg	0.943	1					
trans-1,2-Dichloroethylene	U	ND	0.304	2.03	ug/kg	0.943	1					
trans-1,3-Dichloropropylene	U	ND	0.304	2.03	ug/kg	0.943	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2216	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL11	Project:	URSC00211
Sample ID:	456917016	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/20/18		1110		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 5035A/8260C		
2	SW846 5035A/8260C		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2200 ug/kg	50.0	95	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2200 ug/kg	50.0	95	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2300 ug/kg	50.0	99	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	55.1 ug/kg	50.0	109	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	67.9 ug/kg	50.0	134*	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	59.0 ug/kg	50.0	116	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	G2SWSOL12	Project:	URSC00211
Sample ID:	456917017	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:01		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	9.31%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	16.2	108	ug/kg	0.980	50	JP1	08/19/18	0321	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	16.2	108	ug/kg	0.980	50					
1,1,2-Trichloroethane	U	ND	16.2	108	ug/kg	0.980	50					
1,1-Dichloroethane	U	ND	16.2	108	ug/kg	0.980	50					
1,1-Dichloroethylene	U	ND	16.2	108	ug/kg	0.980	50					
1,2,3-Trichlorobenzene	U	ND	16.2	108	ug/kg	0.980	50					
1,2,4-Trichlorobenzene	U	ND	16.2	108	ug/kg	0.980	50					
1,2-Dibromo-3-chloropropane	U	ND	27.0	108	ug/kg	0.980	50					
1,2-Dibromoethane	U	ND	16.2	108	ug/kg	0.980	50					
1,2-Dichlorobenzene	U	ND	16.2	108	ug/kg	0.980	50					
1,2-Dichloroethane	U	ND	16.2	108	ug/kg	0.980	50					
1,2-Dichloropropane	U	ND	16.2	108	ug/kg	0.980	50					
1,3-Dichlorobenzene	U	ND	16.2	108	ug/kg	0.980	50					
1,4-Dichlorobenzene	U	ND	16.2	108	ug/kg	0.980	50					
1,4-Dioxane	U	ND	811	2700	ug/kg	0.980	50					
2-Butanone	U	ND	162	540	ug/kg	0.980	50					
2-Hexanone	U	ND	162	540	ug/kg	0.980	50					
4-Methyl-2-pentanone	U	ND	162	540	ug/kg	0.980	50					
Acetone	U	ND	162	540	ug/kg	0.980	50					
Benzene	U	ND	16.2	108	ug/kg	0.980	50					
Bromochloromethane	U	ND	16.2	108	ug/kg	0.980	50					
Bromodichloromethane	U	ND	16.2	108	ug/kg	0.980	50					
Bromoform	U	ND	16.2	108	ug/kg	0.980	50					
Bromomethane	U	ND	16.2	108	ug/kg	0.980	50					
Carbon disulfide	U	ND	86.5	540	ug/kg	0.980	50					
Carbon tetrachloride	U	ND	16.2	108	ug/kg	0.980	50					
Chlorobenzene	U	ND	16.2	108	ug/kg	0.980	50					
Chloroethane	U	ND	16.2	108	ug/kg	0.980	50					
Chloroform	U	ND	16.2	108	ug/kg	0.980	50					
Chloromethane	U	ND	16.2	108	ug/kg	0.980	50					
Cyclohexane	U	ND	16.2	108	ug/kg	0.980	50					
Dibromochloromethane	U	ND	16.2	108	ug/kg	0.980	50					
Dichlorodifluoromethane	U	ND	16.2	108	ug/kg	0.980	50					
Ethylbenzene	U	ND	16.2	108	ug/kg	0.980	50					
Isopropylbenzene	U	ND	16.2	108	ug/kg	0.980	50					
Methyl acetate	U	ND	81.1	270	ug/kg	0.980	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL12	Project:	URSC00211
Sample ID:	456917017	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	16.2	108	ug/kg	0.980	50					
Methylene chloride	U	ND	86.5	270	ug/kg	0.980	50					
Styrene	U	ND	16.2	108	ug/kg	0.980	50					
Tetrachloroethylene	U	ND	16.2	108	ug/kg	0.980	50					
Toluene	U	ND	16.2	108	ug/kg	0.980	50					
Trichloroethylene	U	ND	16.2	108	ug/kg	0.980	50					
Trichlorofluoromethane	U	ND	16.2	108	ug/kg	0.980	50					
Trichlorotrifluoroethane	U	ND	86.5	270	ug/kg	0.980	50					
Vinyl chloride	U	ND	16.2	108	ug/kg	0.980	50					
cis-1,2-Dichloroethylene	U	ND	16.2	108	ug/kg	0.980	50					
cis-1,3-Dichloropropylene	U	ND	16.2	108	ug/kg	0.980	50					
m,p-Xylenes	U	ND	16.2	216	ug/kg	0.980	50					
o-Xylene	U	ND	16.2	108	ug/kg	0.980	50					
tert-Butyl methyl ether	U	ND	16.2	108	ug/kg	0.980	50					
trans-1,2-Dichloroethylene	U	ND	16.2	108	ug/kg	0.980	50					
trans-1,3-Dichloropropylene	U	ND	16.2	108	ug/kg	0.980	50					
1,1,1-Trichloroethane	U	ND	0.331	2.21	ug/kg	1.00	1	JP1	08/20/18	1931	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.331	2.21	ug/kg	1.00	1					
1,1,2-Trichloroethane	U	ND	0.331	2.21	ug/kg	1.00	1					
1,1-Dichloroethane	U	ND	0.331	2.21	ug/kg	1.00	1					
1,1-Dichloroethylene	U	ND	0.331	2.21	ug/kg	1.00	1					
1,2,3-Trichlorobenzene	U	ND	0.331	2.21	ug/kg	1.00	1					
1,2,4-Trichlorobenzene	U	ND	0.331	2.21	ug/kg	1.00	1					
1,2-Dibromo-3-chloropropane	U	ND	0.551	2.21	ug/kg	1.00	1					
1,2-Dibromoethane	U	ND	0.331	2.21	ug/kg	1.00	1					
1,2-Dichlorobenzene	U	ND	0.331	2.21	ug/kg	1.00	1					
1,2-Dichloroethane	U	ND	0.331	2.21	ug/kg	1.00	1					
1,2-Dichloropropane	U	ND	0.331	2.21	ug/kg	1.00	1					
1,3-Dichlorobenzene	U	ND	0.331	2.21	ug/kg	1.00	1					
1,4-Dichlorobenzene	U	ND	0.331	2.21	ug/kg	1.00	1					
1,4-Dioxane	U	ND	16.5	55.1	ug/kg	1.00	1					
2-Butanone	U	ND	3.31	11.0	ug/kg	1.00	1					
2-Hexanone	U	ND	3.31	11.0	ug/kg	1.00	1					
4-Methyl-2-pentanone	U	ND	3.31	11.0	ug/kg	1.00	1					
Acetone	U	ND	3.31	11.0	ug/kg	1.00	1					
Benzene	U	ND	0.331	2.21	ug/kg	1.00	1					

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL12	Project:	URSC00211
Sample ID:	456917017	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Bromodichloromethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Bromoform	U	ND	0.331	2.21	ug/kg	1.00	1					
Bromomethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Carbon disulfide	U	ND	1.76	11.0	ug/kg	1.00	1					
Carbon tetrachloride	U	ND	0.331	2.21	ug/kg	1.00	1					
Chlorobenzene	U	ND	0.331	2.21	ug/kg	1.00	1					
Chloroethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Chloroform	U	ND	0.331	2.21	ug/kg	1.00	1					
Chloromethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Cyclohexane	U	ND	0.331	2.21	ug/kg	1.00	1					
Dibromochloromethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Dichlorodifluoromethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Ethylbenzene	U	ND	0.331	2.21	ug/kg	1.00	1					
Isopropylbenzene	U	ND	0.331	2.21	ug/kg	1.00	1					
Methyl acetate	U	ND	1.65	5.51	ug/kg	1.00	1					
Methylcyclohexane	U	ND	0.331	2.21	ug/kg	1.00	1					
Methylene chloride	U	ND	1.76	5.51	ug/kg	1.00	1					
Styrene	U	ND	0.331	2.21	ug/kg	1.00	1					
Tetrachloroethylene	U	ND	0.331	2.21	ug/kg	1.00	1					
Toluene	U	ND	0.331	2.21	ug/kg	1.00	1					
Trichloroethylene	U	ND	0.331	2.21	ug/kg	1.00	1					
Trichlorofluoromethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Trichlorotrifluoroethane	U	ND	1.76	5.51	ug/kg	1.00	1					
Vinyl chloride	U	ND	0.331	2.21	ug/kg	1.00	1					
cis-1,2-Dichloroethylene	U	ND	0.331	2.21	ug/kg	1.00	1					
cis-1,3-Dichloropropylene	U	ND	0.331	2.21	ug/kg	1.00	1					
m,p-Xylenes	U	ND	0.331	4.41	ug/kg	1.00	1					
o-Xylene	U	ND	0.331	2.21	ug/kg	1.00	1					
tert-Butyl methyl ether	U	ND	0.331	2.21	ug/kg	1.00	1					
trans-1,2-Dichloroethylene	U	ND	0.331	2.21	ug/kg	1.00	1					
trans-1,3-Dichloropropylene	U	ND	0.331	2.21	ug/kg	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2217	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL12	Project:	URSC00211
Sample ID:	456917017	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/20/18		1111		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 5035A/8260C		
2	SW846 5035A/8260C		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2580 ug/kg	50.0	96	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2580 ug/kg	50.0	96	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2730 ug/kg	50.0	101	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	61.1 ug/kg	50.0	111	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	70.4 ug/kg	50.0	128	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	73.8 ug/kg	50.0	134*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID:	G2SWSOL03	Project:	URSC00211
Sample ID:	456917018	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:05		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	8.61%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	15.5	103	ug/kg	0.943	50	JP1	08/19/18	0352	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	15.5	103	ug/kg	0.943	50					
1,1,2-Trichloroethane	U	ND	15.5	103	ug/kg	0.943	50					
1,1-Dichloroethane	U	ND	15.5	103	ug/kg	0.943	50					
1,1-Dichloroethylene	U	ND	15.5	103	ug/kg	0.943	50					
1,2,3-Trichlorobenzene	U	ND	15.5	103	ug/kg	0.943	50					
1,2,4-Trichlorobenzene	U	ND	15.5	103	ug/kg	0.943	50					
1,2-Dibromo-3-chloropropane	U	ND	25.8	103	ug/kg	0.943	50					
1,2-Dibromoethane	U	ND	15.5	103	ug/kg	0.943	50					
1,2-Dichlorobenzene	U	ND	15.5	103	ug/kg	0.943	50					
1,2-Dichloroethane	U	ND	15.5	103	ug/kg	0.943	50					
1,2-Dichloropropane	U	ND	15.5	103	ug/kg	0.943	50					
1,3-Dichlorobenzene	U	ND	15.5	103	ug/kg	0.943	50					
1,4-Dichlorobenzene	U	ND	15.5	103	ug/kg	0.943	50					
1,4-Dioxane	U	ND	774	2580	ug/kg	0.943	50					
2-Butanone	U	ND	155	516	ug/kg	0.943	50					
2-Hexanone	U	ND	155	516	ug/kg	0.943	50					
4-Methyl-2-pentanone	U	ND	155	516	ug/kg	0.943	50					
Acetone	U	ND	155	516	ug/kg	0.943	50					
Benzene	U	ND	15.5	103	ug/kg	0.943	50					
Bromochloromethane	U	ND	15.5	103	ug/kg	0.943	50					
Bromodichloromethane	U	ND	15.5	103	ug/kg	0.943	50					
Bromoform	U	ND	15.5	103	ug/kg	0.943	50					
Bromomethane	U	ND	15.5	103	ug/kg	0.943	50					
Carbon disulfide	U	ND	82.6	516	ug/kg	0.943	50					
Carbon tetrachloride	U	ND	15.5	103	ug/kg	0.943	50					
Chlorobenzene	U	ND	15.5	103	ug/kg	0.943	50					
Chloroethane	U	ND	15.5	103	ug/kg	0.943	50					
Chloroform	U	ND	15.5	103	ug/kg	0.943	50					
Chloromethane	U	ND	15.5	103	ug/kg	0.943	50					
Cyclohexane	U	ND	15.5	103	ug/kg	0.943	50					
Dibromochloromethane	U	ND	15.5	103	ug/kg	0.943	50					
Dichlorodifluoromethane	U	ND	15.5	103	ug/kg	0.943	50					
Ethylbenzene	U	ND	15.5	103	ug/kg	0.943	50					
Isopropylbenzene	U	ND	15.5	103	ug/kg	0.943	50					
Methyl acetate	U	ND	77.4	258	ug/kg	0.943	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL03	Project:	URSC00211
Sample ID:	456917018	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	15.5	103	ug/kg	0.943	50					
Methylene chloride	U	ND	82.6	258	ug/kg	0.943	50					
Styrene	U	ND	15.5	103	ug/kg	0.943	50					
Tetrachloroethylene	U	ND	15.5	103	ug/kg	0.943	50					
Toluene	U	ND	15.5	103	ug/kg	0.943	50					
Trichloroethylene	U	ND	15.5	103	ug/kg	0.943	50					
Trichlorofluoromethane	U	ND	15.5	103	ug/kg	0.943	50					
Trichlorotrifluoroethane	U	ND	82.6	258	ug/kg	0.943	50					
Vinyl chloride	U	ND	15.5	103	ug/kg	0.943	50					
cis-1,2-Dichloroethylene	U	ND	15.5	103	ug/kg	0.943	50					
cis-1,3-Dichloropropylene	U	ND	15.5	103	ug/kg	0.943	50					
m,p-Xylenes	U	ND	15.5	206	ug/kg	0.943	50					
o-Xylene	U	ND	15.5	103	ug/kg	0.943	50					
tert-Butyl methyl ether	U	ND	15.5	103	ug/kg	0.943	50					
trans-1,2-Dichloroethylene	U	ND	15.5	103	ug/kg	0.943	50					
trans-1,3-Dichloropropylene	U	ND	15.5	103	ug/kg	0.943	50					
1,1,1-Trichloroethane	U	ND	0.328	2.19	ug/kg	1.00	1	JP1	08/20/18	2002	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.328	2.19	ug/kg	1.00	1					
1,1,2-Trichloroethane	U	ND	0.328	2.19	ug/kg	1.00	1					
1,1-Dichloroethane	U	ND	0.328	2.19	ug/kg	1.00	1					
1,1-Dichloroethylene	U	ND	0.328	2.19	ug/kg	1.00	1					
1,2,3-Trichlorobenzene	U	ND	0.328	2.19	ug/kg	1.00	1					
1,2,4-Trichlorobenzene	U	ND	0.328	2.19	ug/kg	1.00	1					
1,2-Dibromo-3-chloropropane	U	ND	0.547	2.19	ug/kg	1.00	1					
1,2-Dibromoethane	U	ND	0.328	2.19	ug/kg	1.00	1					
1,2-Dichlorobenzene	U	ND	0.328	2.19	ug/kg	1.00	1					
1,2-Dichloroethane	U	ND	0.328	2.19	ug/kg	1.00	1					
1,2-Dichloropropane	U	ND	0.328	2.19	ug/kg	1.00	1					
1,3-Dichlorobenzene	U	ND	0.328	2.19	ug/kg	1.00	1					
1,4-Dichlorobenzene	U	ND	0.328	2.19	ug/kg	1.00	1					
1,4-Dioxane	U	ND	16.4	54.7	ug/kg	1.00	1					
2-Butanone	U	ND	3.28	10.9	ug/kg	1.00	1					
2-Hexanone	U	ND	3.28	10.9	ug/kg	1.00	1					
4-Methyl-2-pentanone	U	ND	3.28	10.9	ug/kg	1.00	1					
Acetone	U	ND	3.28	10.9	ug/kg	1.00	1					
Benzene	U	ND	0.328	2.19	ug/kg	1.00	1					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL03	Project:	URSC00211
Sample ID:	456917018	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.328	2.19	ug/kg	1.00	1					
Bromodichloromethane	U	ND	0.328	2.19	ug/kg	1.00	1					
Bromoform	U	ND	0.328	2.19	ug/kg	1.00	1					
Bromomethane	U	ND	0.328	2.19	ug/kg	1.00	1					
Carbon disulfide	U	ND	1.75	10.9	ug/kg	1.00	1					
Carbon tetrachloride	U	ND	0.328	2.19	ug/kg	1.00	1					
Chlorobenzene	U	ND	0.328	2.19	ug/kg	1.00	1					
Chloroethane	U	ND	0.328	2.19	ug/kg	1.00	1					
Chloroform	U	ND	0.328	2.19	ug/kg	1.00	1					
Chloromethane	U	ND	0.328	2.19	ug/kg	1.00	1					
Cyclohexane	U	ND	0.328	2.19	ug/kg	1.00	1					
Dibromochloromethane	U	ND	0.328	2.19	ug/kg	1.00	1					
Dichlorodifluoromethane	U	ND	0.328	2.19	ug/kg	1.00	1					
Ethylbenzene	U	ND	0.328	2.19	ug/kg	1.00	1					
Isopropylbenzene	U	ND	0.328	2.19	ug/kg	1.00	1					
Methyl acetate	U	ND	1.64	5.47	ug/kg	1.00	1					
Methylcyclohexane	U	ND	0.328	2.19	ug/kg	1.00	1					
Methylene chloride	J	3.62	1.75	5.47	ug/kg	1.00	1					
Styrene	U	ND	0.328	2.19	ug/kg	1.00	1					
Tetrachloroethylene	U	ND	0.328	2.19	ug/kg	1.00	1					
Toluene	U	ND	0.328	2.19	ug/kg	1.00	1					
Trichloroethylene	U	ND	0.328	2.19	ug/kg	1.00	1					
Trichlorofluoromethane	U	ND	0.328	2.19	ug/kg	1.00	1					
Trichlorotrifluoroethane	U	ND	1.75	5.47	ug/kg	1.00	1					
Vinyl chloride	U	ND	0.328	2.19	ug/kg	1.00	1					
cis-1,2-Dichloroethylene	U	ND	0.328	2.19	ug/kg	1.00	1					
cis-1,3-Dichloropropylene	U	ND	0.328	2.19	ug/kg	1.00	1					
m,p-Xylenes	U	ND	0.328	4.38	ug/kg	1.00	1					
o-Xylene	U	ND	0.328	2.19	ug/kg	1.00	1					
tert-Butyl methyl ether	U	ND	0.328	2.19	ug/kg	1.00	1					
trans-1,2-Dichloroethylene	U	ND	0.328	2.19	ug/kg	1.00	1					
trans-1,3-Dichloropropylene	U	ND	0.328	2.19	ug/kg	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2218	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SWSOL03	Project:	URSC00211
Sample ID:	456917018	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/20/18		1112		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	SW846 5035A/8260C				
2	SW846 5035A/8260C				
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2500 ug/kg	50.0	97	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2430 ug/kg	50.0	94	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2690 ug/kg	50.0	104	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	59.2 ug/kg	50.0	108	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	63.4 ug/kg	50.0	116	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	71.3 ug/kg	50.0	130*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SOL03	Project:	URSC00211
Sample ID:	456917019	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:07		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	9.46%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	15.9	106	ug/kg	0.962	50	JP1	08/19/18	0422	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	15.9	106	ug/kg	0.962	50					
1,1,2-Trichloroethane	U	ND	15.9	106	ug/kg	0.962	50					
1,1-Dichloroethane	U	ND	15.9	106	ug/kg	0.962	50					
1,1-Dichloroethylene	U	ND	15.9	106	ug/kg	0.962	50					
1,2,3-Trichlorobenzene	U	ND	15.9	106	ug/kg	0.962	50					
1,2,4-Trichlorobenzene	U	ND	15.9	106	ug/kg	0.962	50					
1,2-Dibromo-3-chloropropane	U	ND	26.6	106	ug/kg	0.962	50					
1,2-Dibromoethane	U	ND	15.9	106	ug/kg	0.962	50					
1,2-Dichlorobenzene	U	ND	15.9	106	ug/kg	0.962	50					
1,2-Dichloroethane	U	ND	15.9	106	ug/kg	0.962	50					
1,2-Dichloropropane	U	ND	15.9	106	ug/kg	0.962	50					
1,3-Dichlorobenzene	U	ND	15.9	106	ug/kg	0.962	50					
1,4-Dichlorobenzene	U	ND	15.9	106	ug/kg	0.962	50					
1,4-Dioxane	U	ND	797	2660	ug/kg	0.962	50					
2-Butanone	U	ND	159	531	ug/kg	0.962	50					
2-Hexanone	U	ND	159	531	ug/kg	0.962	50					
4-Methyl-2-pentanone	U	ND	159	531	ug/kg	0.962	50					
Acetone	U	ND	159	531	ug/kg	0.962	50					
Benzene	U	ND	15.9	106	ug/kg	0.962	50					
Bromochloromethane	U	ND	15.9	106	ug/kg	0.962	50					
Bromodichloromethane	U	ND	15.9	106	ug/kg	0.962	50					
Bromoform	U	ND	15.9	106	ug/kg	0.962	50					
Bromomethane	U	ND	15.9	106	ug/kg	0.962	50					
Carbon disulfide	U	ND	85.0	531	ug/kg	0.962	50					
Carbon tetrachloride	U	ND	15.9	106	ug/kg	0.962	50					
Chlorobenzene	U	ND	15.9	106	ug/kg	0.962	50					
Chloroethane	U	ND	15.9	106	ug/kg	0.962	50					
Chloroform	U	ND	15.9	106	ug/kg	0.962	50					
Chloromethane	U	ND	15.9	106	ug/kg	0.962	50					
Cyclohexane	U	ND	15.9	106	ug/kg	0.962	50					
Dibromochloromethane	U	ND	15.9	106	ug/kg	0.962	50					
Dichlorodifluoromethane	U	ND	15.9	106	ug/kg	0.962	50					
Ethylbenzene	U	ND	15.9	106	ug/kg	0.962	50					
Isopropylbenzene	U	ND	15.9	106	ug/kg	0.962	50					
Methyl acetate	U	ND	79.7	266	ug/kg	0.962	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SOL03	Project:	URSC00211
Sample ID:	456917019	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	15.9	106	ug/kg	0.962	50					
Methylene chloride	U	ND	85.0	266	ug/kg	0.962	50					
Styrene	U	ND	15.9	106	ug/kg	0.962	50					
Tetrachloroethylene	U	ND	15.9	106	ug/kg	0.962	50					
Toluene	U	ND	15.9	106	ug/kg	0.962	50					
Trichloroethylene	U	ND	15.9	106	ug/kg	0.962	50					
Trichlorofluoromethane	U	ND	15.9	106	ug/kg	0.962	50					
Trichlorotrifluoroethane	U	ND	85.0	266	ug/kg	0.962	50					
Vinyl chloride	U	ND	15.9	106	ug/kg	0.962	50					
cis-1,2-Dichloroethylene	U	ND	15.9	106	ug/kg	0.962	50					
cis-1,3-Dichloropropylene	U	ND	15.9	106	ug/kg	0.962	50					
m,p-Xylenes	U	ND	15.9	212	ug/kg	0.962	50					
o-Xylene	U	ND	15.9	106	ug/kg	0.962	50					
tert-Butyl methyl ether	U	ND	15.9	106	ug/kg	0.962	50					
trans-1,2-Dichloroethylene	U	ND	15.9	106	ug/kg	0.962	50					
trans-1,3-Dichloropropylene	U	ND	15.9	106	ug/kg	0.962	50					
1,1,1-Trichloroethane	U	ND	0.331	2.21	ug/kg	1.00	1	JP1	08/21/18	1202	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.331	2.21	ug/kg	1.00	1					
1,1,2-Trichloroethane	U	ND	0.331	2.21	ug/kg	1.00	1					
1,1-Dichloroethane	U	ND	0.331	2.21	ug/kg	1.00	1					
1,1-Dichloroethylene	U	ND	0.331	2.21	ug/kg	1.00	1					
1,2,3-Trichlorobenzene	J	0.674	0.331	2.21	ug/kg	1.00	1					
1,2,4-Trichlorobenzene	J	0.663	0.331	2.21	ug/kg	1.00	1					
1,2-Dibromo-3-chloropropane	U	ND	0.552	2.21	ug/kg	1.00	1					
1,2-Dibromoethane	U	ND	0.331	2.21	ug/kg	1.00	1					
1,2-Dichlorobenzene	U	ND	0.331	2.21	ug/kg	1.00	1					
1,2-Dichloroethane	U	ND	0.331	2.21	ug/kg	1.00	1					
1,2-Dichloropropane	U	ND	0.331	2.21	ug/kg	1.00	1					
1,3-Dichlorobenzene	U	ND	0.331	2.21	ug/kg	1.00	1					
1,4-Dichlorobenzene	U	ND	0.331	2.21	ug/kg	1.00	1					
1,4-Dioxane	U	ND	16.6	55.2	ug/kg	1.00	1					
2-Butanone	U	ND	3.31	11.0	ug/kg	1.00	1					
2-Hexanone	U	ND	3.31	11.0	ug/kg	1.00	1					
4-Methyl-2-pentanone	U	ND	3.31	11.0	ug/kg	1.00	1					
Acetone	U	ND	3.31	11.0	ug/kg	1.00	1					
Benzene	U	ND	0.331	2.21	ug/kg	1.00	1					

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SOL03	Project:	URSC00211
Sample ID:	456917019	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Bromodichloromethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Bromoform	U	ND	0.331	2.21	ug/kg	1.00	1					
Bromomethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Carbon disulfide	U	ND	1.77	11.0	ug/kg	1.00	1					
Carbon tetrachloride	U	ND	0.331	2.21	ug/kg	1.00	1					
Chlorobenzene	U	ND	0.331	2.21	ug/kg	1.00	1					
Chloroethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Chloroform	U	ND	0.331	2.21	ug/kg	1.00	1					
Chloromethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Cyclohexane	U	ND	0.331	2.21	ug/kg	1.00	1					
Dibromochloromethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Dichlorodifluoromethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Ethylbenzene	U	ND	0.331	2.21	ug/kg	1.00	1					
Isopropylbenzene	U	ND	0.331	2.21	ug/kg	1.00	1					
Methyl acetate	U	ND	1.66	5.52	ug/kg	1.00	1					
Methylcyclohexane	U	ND	0.331	2.21	ug/kg	1.00	1					
Methylene chloride	U	ND	1.77	5.52	ug/kg	1.00	1					
Styrene	U	ND	0.331	2.21	ug/kg	1.00	1					
Tetrachloroethylene	U	ND	0.331	2.21	ug/kg	1.00	1					
Toluene	J	0.331	0.331	2.21	ug/kg	1.00	1					
Trichloroethylene	U	ND	0.331	2.21	ug/kg	1.00	1					
Trichlorofluoromethane	U	ND	0.331	2.21	ug/kg	1.00	1					
Trichlorotrifluoroethane	U	ND	1.77	5.52	ug/kg	1.00	1					
Vinyl chloride	U	ND	0.331	2.21	ug/kg	1.00	1					
cis-1,2-Dichloroethylene	U	ND	0.331	2.21	ug/kg	1.00	1					
cis-1,3-Dichloropropylene	U	ND	0.331	2.21	ug/kg	1.00	1					
m,p-Xylenes	U	ND	0.331	4.42	ug/kg	1.00	1					
o-Xylene	U	ND	0.331	2.21	ug/kg	1.00	1					
tert-Butyl methyl ether	U	ND	0.331	2.21	ug/kg	1.00	1					
trans-1,2-Dichloroethylene	U	ND	0.331	2.21	ug/kg	1.00	1					
trans-1,3-Dichloropropylene	U	ND	0.331	2.21	ug/kg	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2219	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SOL03	Project:	URSC00211
Sample ID:	456917019	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/21/18		1137		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	SW846 5035A/8260C				
2	SW846 5035A/8260C				

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2380 ug/kg	50.0	90	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2410 ug/kg	50.0	91	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2770 ug/kg	50.0	104	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	63.4 ug/kg	50.0	115	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	71.7 ug/kg	50.0	130	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	73.7 ug/kg	50.0	133*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SOL04	Project:	URSC00211
Sample ID:	456917020	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:09		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	10.2%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	16.7	111	ug/kg	1.00	50	JP1	08/19/18	0453	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	16.7	111	ug/kg	1.00	50					
1,1,2-Trichloroethane	U	ND	16.7	111	ug/kg	1.00	50					
1,1-Dichloroethane	U	ND	16.7	111	ug/kg	1.00	50					
1,1-Dichloroethylene	U	ND	16.7	111	ug/kg	1.00	50					
1,2,3-Trichlorobenzene	U	ND	16.7	111	ug/kg	1.00	50					
1,2,4-Trichlorobenzene	U	ND	16.7	111	ug/kg	1.00	50					
1,2-Dibromo-3-chloropropane	U	ND	27.8	111	ug/kg	1.00	50					
1,2-Dibromoethane	U	ND	16.7	111	ug/kg	1.00	50					
1,2-Dichlorobenzene	U	ND	16.7	111	ug/kg	1.00	50					
1,2-Dichloroethane	U	ND	16.7	111	ug/kg	1.00	50					
1,2-Dichloropropane	U	ND	16.7	111	ug/kg	1.00	50					
1,3-Dichlorobenzene	U	ND	16.7	111	ug/kg	1.00	50					
1,4-Dichlorobenzene	U	ND	16.7	111	ug/kg	1.00	50					
1,4-Dioxane	U	ND	835	2780	ug/kg	1.00	50					
2-Butanone	U	ND	167	557	ug/kg	1.00	50					
2-Hexanone	U	ND	167	557	ug/kg	1.00	50					
4-Methyl-2-pentanone	U	ND	167	557	ug/kg	1.00	50					
Acetone	U	ND	167	557	ug/kg	1.00	50					
Benzene	U	ND	16.7	111	ug/kg	1.00	50					
Bromochloromethane	U	ND	16.7	111	ug/kg	1.00	50					
Bromodichloromethane	U	ND	16.7	111	ug/kg	1.00	50					
Bromoform	U	ND	16.7	111	ug/kg	1.00	50					
Bromomethane	U	ND	16.7	111	ug/kg	1.00	50					
Carbon disulfide	U	ND	89.1	557	ug/kg	1.00	50					
Carbon tetrachloride	U	ND	16.7	111	ug/kg	1.00	50					
Chlorobenzene	U	ND	16.7	111	ug/kg	1.00	50					
Chloroethane	U	ND	16.7	111	ug/kg	1.00	50					
Chloroform	U	ND	16.7	111	ug/kg	1.00	50					
Chloromethane	U	ND	16.7	111	ug/kg	1.00	50					
Cyclohexane	U	ND	16.7	111	ug/kg	1.00	50					
Dibromochloromethane	U	ND	16.7	111	ug/kg	1.00	50					
Dichlorodifluoromethane	U	ND	16.7	111	ug/kg	1.00	50					
Ethylbenzene	U	ND	16.7	111	ug/kg	1.00	50					
Isopropylbenzene	U	ND	16.7	111	ug/kg	1.00	50					
Methyl acetate	U	ND	83.5	278	ug/kg	1.00	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SOL04	Project:	URSC00211
Sample ID:	456917020	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	16.7	111	ug/kg	1.00	50					
Methylene chloride	U	ND	89.1	278	ug/kg	1.00	50					
Styrene	U	ND	16.7	111	ug/kg	1.00	50					
Tetrachloroethylene	U	ND	16.7	111	ug/kg	1.00	50					
Toluene	U	ND	16.7	111	ug/kg	1.00	50					
Trichloroethylene	J	23.9	16.7	111	ug/kg	1.00	50					
Trichlorofluoromethane	U	ND	16.7	111	ug/kg	1.00	50					
Trichlorotrifluoroethane	U	ND	89.1	278	ug/kg	1.00	50					
Vinyl chloride	U	ND	16.7	111	ug/kg	1.00	50					
cis-1,2-Dichloroethylene	J	35.1	16.7	111	ug/kg	1.00	50					
cis-1,3-Dichloropropylene	U	ND	16.7	111	ug/kg	1.00	50					
m,p-Xylenes	U	ND	16.7	223	ug/kg	1.00	50					
o-Xylene	U	ND	16.7	111	ug/kg	1.00	50					
tert-Butyl methyl ether	U	ND	16.7	111	ug/kg	1.00	50					
trans-1,2-Dichloroethylene	U	ND	16.7	111	ug/kg	1.00	50					
trans-1,3-Dichloropropylene	U	ND	16.7	111	ug/kg	1.00	50					
1,1,1-Trichloroethane	U	ND	0.298	1.99	ug/kg	0.893	1	JP1	08/21/18	1406	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.298	1.99	ug/kg	0.893	1					
1,1,2-Trichloroethane	U	ND	0.298	1.99	ug/kg	0.893	1					
1,1-Dichloroethane	U	ND	0.298	1.99	ug/kg	0.893	1					
1,1-Dichloroethylene	U	ND	0.298	1.99	ug/kg	0.893	1					
1,2,3-Trichlorobenzene	U	ND	0.298	1.99	ug/kg	0.893	1					
1,2,4-Trichlorobenzene	U	ND	0.298	1.99	ug/kg	0.893	1					
1,2-Dibromo-3-chloropropane	U	ND	0.497	1.99	ug/kg	0.893	1					
1,2-Dibromoethane	U	ND	0.298	1.99	ug/kg	0.893	1					
1,2-Dichlorobenzene	U	ND	0.298	1.99	ug/kg	0.893	1					
1,2-Dichloroethane	U	ND	0.298	1.99	ug/kg	0.893	1					
1,2-Dichloropropane	U	ND	0.298	1.99	ug/kg	0.893	1					
1,3-Dichlorobenzene	U	ND	0.298	1.99	ug/kg	0.893	1					
1,4-Dichlorobenzene	U	ND	0.298	1.99	ug/kg	0.893	1					
1,4-Dioxane	U	ND	14.9	49.7	ug/kg	0.893	1					
2-Butanone	U	ND	2.98	9.94	ug/kg	0.893	1					
2-Hexanone	U	ND	2.98	9.94	ug/kg	0.893	1					
4-Methyl-2-pentanone	U	ND	2.98	9.94	ug/kg	0.893	1					
Acetone	U	ND	2.98	9.94	ug/kg	0.893	1					
Benzene	U	ND	0.298	1.99	ug/kg	0.893	1					

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SOL04	Project:	URSC00211
Sample ID:	456917020	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.298	1.99	ug/kg	0.893	1					
Bromodichloromethane	U	ND	0.298	1.99	ug/kg	0.893	1					
Bromoform	U	ND	0.298	1.99	ug/kg	0.893	1					
Bromomethane	U	ND	0.298	1.99	ug/kg	0.893	1					
Carbon disulfide	U	ND	1.59	9.94	ug/kg	0.893	1					
Carbon tetrachloride	U	ND	0.298	1.99	ug/kg	0.893	1					
Chlorobenzene	U	ND	0.298	1.99	ug/kg	0.893	1					
Chloroethane	U	ND	0.298	1.99	ug/kg	0.893	1					
Chloroform	U	ND	0.298	1.99	ug/kg	0.893	1					
Chloromethane	U	ND	0.298	1.99	ug/kg	0.893	1					
Cyclohexane	U	ND	0.298	1.99	ug/kg	0.893	1					
Dibromochloromethane	U	ND	0.298	1.99	ug/kg	0.893	1					
Dichlorodifluoromethane	U	ND	0.298	1.99	ug/kg	0.893	1					
Ethylbenzene	U	ND	0.298	1.99	ug/kg	0.893	1					
Isopropylbenzene	U	ND	0.298	1.99	ug/kg	0.893	1					
Methyl acetate	U	ND	1.49	4.97	ug/kg	0.893	1					
Methylcyclohexane	U	ND	0.298	1.99	ug/kg	0.893	1					
Methylene chloride	U	ND	1.59	4.97	ug/kg	0.893	1					
Styrene	U	ND	0.298	1.99	ug/kg	0.893	1					
Tetrachloroethylene	U	ND	0.298	1.99	ug/kg	0.893	1					
Toluene	U	ND	0.298	1.99	ug/kg	0.893	1					
Trichloroethylene	J	0.448	0.298	1.99	ug/kg	0.893	1					
Trichlorofluoromethane	U	ND	0.298	1.99	ug/kg	0.893	1					
Trichlorotrifluoroethane	U	ND	1.59	4.97	ug/kg	0.893	1					
Vinyl chloride	U	ND	0.298	1.99	ug/kg	0.893	1					
cis-1,2-Dichloroethylene	U	ND	0.298	1.99	ug/kg	0.893	1					
cis-1,3-Dichloropropylene	U	ND	0.298	1.99	ug/kg	0.893	1					
m,p-Xylenes	U	ND	0.298	3.98	ug/kg	0.893	1					
o-Xylene	U	ND	0.298	1.99	ug/kg	0.893	1					
tert-Butyl methyl ether	U	ND	0.298	1.99	ug/kg	0.893	1					
trans-1,2-Dichloroethylene	U	ND	0.298	1.99	ug/kg	0.893	1					
trans-1,3-Dichloropropylene	U	ND	0.298	1.99	ug/kg	0.893	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2220	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SOL04	Project:	URSC00211
Sample ID:	456917020	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/21/18		1317		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	SW846 5035A/8260C				
2	SW846 5035A/8260C				
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2720 ug/kg	50.0	98	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2760 ug/kg	50.0	99	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2750 ug/kg	50.0	99	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	59.6 ug/kg	50.0	120	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	83.4 ug/kg	50.0	168*	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	83.1 ug/kg	50.0	167*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SOL08	Project:	URSC00211
Sample ID:	456917021	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:13		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	6.74%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	15.2	101	ug/kg	0.943	50	JP1	08/19/18	0524	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	15.2	101	ug/kg	0.943	50					
1,1,2-Trichloroethane	U	ND	15.2	101	ug/kg	0.943	50					
1,1-Dichloroethane	U	ND	15.2	101	ug/kg	0.943	50					
1,1-Dichloroethylene	U	ND	15.2	101	ug/kg	0.943	50					
1,2,3-Trichlorobenzene	U	ND	15.2	101	ug/kg	0.943	50					
1,2,4-Trichlorobenzene	U	ND	15.2	101	ug/kg	0.943	50					
1,2-Dibromo-3-chloropropane	U	ND	25.3	101	ug/kg	0.943	50					
1,2-Dibromoethane	U	ND	15.2	101	ug/kg	0.943	50					
1,2-Dichlorobenzene	U	ND	15.2	101	ug/kg	0.943	50					
1,2-Dichloroethane	U	ND	15.2	101	ug/kg	0.943	50					
1,2-Dichloropropane	U	ND	15.2	101	ug/kg	0.943	50					
1,3-Dichlorobenzene	U	ND	15.2	101	ug/kg	0.943	50					
1,4-Dichlorobenzene	U	ND	15.2	101	ug/kg	0.943	50					
1,4-Dioxane	U	ND	759	2530	ug/kg	0.943	50					
2-Butanone	U	ND	152	506	ug/kg	0.943	50					
2-Hexanone	U	ND	152	506	ug/kg	0.943	50					
4-Methyl-2-pentanone	U	ND	152	506	ug/kg	0.943	50					
Acetone	U	ND	152	506	ug/kg	0.943	50					
Benzene	U	ND	15.2	101	ug/kg	0.943	50					
Bromochloromethane	U	ND	15.2	101	ug/kg	0.943	50					
Bromodichloromethane	U	ND	15.2	101	ug/kg	0.943	50					
Bromoform	U	ND	15.2	101	ug/kg	0.943	50					
Bromomethane	U	ND	15.2	101	ug/kg	0.943	50					
Carbon disulfide	U	ND	80.9	506	ug/kg	0.943	50					
Carbon tetrachloride	U	ND	15.2	101	ug/kg	0.943	50					
Chlorobenzene	U	ND	15.2	101	ug/kg	0.943	50					
Chloroethane	U	ND	15.2	101	ug/kg	0.943	50					
Chloroform	U	ND	15.2	101	ug/kg	0.943	50					
Chloromethane	U	ND	15.2	101	ug/kg	0.943	50					
Cyclohexane	U	ND	15.2	101	ug/kg	0.943	50					
Dibromochloromethane	U	ND	15.2	101	ug/kg	0.943	50					
Dichlorodifluoromethane	U	ND	15.2	101	ug/kg	0.943	50					
Ethylbenzene	U	ND	15.2	101	ug/kg	0.943	50					
Isopropylbenzene	U	ND	15.2	101	ug/kg	0.943	50					
Methyl acetate	U	ND	75.9	253	ug/kg	0.943	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SOL08	Project:	URSC00211
Sample ID:	456917021	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	15.2	101	ug/kg	0.943	50					
Methylene chloride	U	ND	80.9	253	ug/kg	0.943	50					
Styrene	U	ND	15.2	101	ug/kg	0.943	50					
Tetrachloroethylene	U	ND	15.2	101	ug/kg	0.943	50					
Toluene	U	ND	15.2	101	ug/kg	0.943	50					
Trichloroethylene	U	ND	15.2	101	ug/kg	0.943	50					
Trichlorofluoromethane	U	ND	15.2	101	ug/kg	0.943	50					
Trichlorotrifluoroethane	U	ND	80.9	253	ug/kg	0.943	50					
Vinyl chloride	U	ND	15.2	101	ug/kg	0.943	50					
cis-1,2-Dichloroethylene	U	ND	15.2	101	ug/kg	0.943	50					
cis-1,3-Dichloropropylene	U	ND	15.2	101	ug/kg	0.943	50					
m,p-Xylenes	U	ND	15.2	202	ug/kg	0.943	50					
o-Xylene	U	ND	15.2	101	ug/kg	0.943	50					
tert-Butyl methyl ether	U	ND	15.2	101	ug/kg	0.943	50					
trans-1,2-Dichloroethylene	U	ND	15.2	101	ug/kg	0.943	50					
trans-1,3-Dichloropropylene	U	ND	15.2	101	ug/kg	0.943	50					
1,1,1-Trichloroethane	U	ND	0.298	1.99	ug/kg	0.926	1	JP1	08/21/18	1304	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.298	1.99	ug/kg	0.926	1					
1,1,2-Trichloroethane	U	ND	0.298	1.99	ug/kg	0.926	1					
1,1-Dichloroethane	U	ND	0.298	1.99	ug/kg	0.926	1					
1,1-Dichloroethylene	U	ND	0.298	1.99	ug/kg	0.926	1					
1,2,3-Trichlorobenzene	U	ND	0.298	1.99	ug/kg	0.926	1					
1,2,4-Trichlorobenzene	J	1.08	0.298	1.99	ug/kg	0.926	1					
1,2-Dibromo-3-chloropropane	U	ND	0.496	1.99	ug/kg	0.926	1					
1,2-Dibromoethane	U	ND	0.298	1.99	ug/kg	0.926	1					
1,2-Dichlorobenzene	U	ND	0.298	1.99	ug/kg	0.926	1					
1,2-Dichloroethane	U	ND	0.298	1.99	ug/kg	0.926	1					
1,2-Dichloropropane	U	ND	0.298	1.99	ug/kg	0.926	1					
1,3-Dichlorobenzene	U	ND	0.298	1.99	ug/kg	0.926	1					
1,4-Dichlorobenzene	J	0.645	0.298	1.99	ug/kg	0.926	1					
1,4-Dioxane	U	ND	14.9	49.6	ug/kg	0.926	1					
2-Butanone	U	ND	2.98	9.93	ug/kg	0.926	1					
2-Hexanone	U	ND	2.98	9.93	ug/kg	0.926	1					
4-Methyl-2-pentanone	U	ND	2.98	9.93	ug/kg	0.926	1					
Acetone	J	3.48	2.98	9.93	ug/kg	0.926	1					
Benzene	U	ND	0.298	1.99	ug/kg	0.926	1					

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SOL08	Project:	URSC00211
Sample ID:	456917021	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.298	1.99	ug/kg	0.926	1					
Bromodichloromethane	U	ND	0.298	1.99	ug/kg	0.926	1					
Bromoform	U	ND	0.298	1.99	ug/kg	0.926	1					
Bromomethane	U	ND	0.298	1.99	ug/kg	0.926	1					
Carbon disulfide	J	2.29	1.59	9.93	ug/kg	0.926	1					
Carbon tetrachloride	U	ND	0.298	1.99	ug/kg	0.926	1					
Chlorobenzene	U	ND	0.298	1.99	ug/kg	0.926	1					
Chloroethane	U	ND	0.298	1.99	ug/kg	0.926	1					
Chloroform	U	ND	0.298	1.99	ug/kg	0.926	1					
Chloromethane	U	ND	0.298	1.99	ug/kg	0.926	1					
Cyclohexane	U	ND	0.298	1.99	ug/kg	0.926	1					
Dibromochloromethane	U	ND	0.298	1.99	ug/kg	0.926	1					
Dichlorodifluoromethane	U	ND	0.298	1.99	ug/kg	0.926	1					
Ethylbenzene	U	ND	0.298	1.99	ug/kg	0.926	1					
Isopropylbenzene	U	ND	0.298	1.99	ug/kg	0.926	1					
Methyl acetate	U	ND	1.49	4.96	ug/kg	0.926	1					
Methylcyclohexane	U	ND	0.298	1.99	ug/kg	0.926	1					
Methylene chloride		8.08	1.59	4.96	ug/kg	0.926	1					
Styrene	U	ND	0.298	1.99	ug/kg	0.926	1					
Tetrachloroethylene	U	ND	0.298	1.99	ug/kg	0.926	1					
Toluene	U	ND	0.298	1.99	ug/kg	0.926	1					
Trichloroethylene	U	ND	0.298	1.99	ug/kg	0.926	1					
Trichlorofluoromethane	U	ND	0.298	1.99	ug/kg	0.926	1					
Trichlorotrifluoroethane	U	ND	1.59	4.96	ug/kg	0.926	1					
Vinyl chloride	U	ND	0.298	1.99	ug/kg	0.926	1					
cis-1,2-Dichloroethylene	U	ND	0.298	1.99	ug/kg	0.926	1					
cis-1,3-Dichloropropylene	U	ND	0.298	1.99	ug/kg	0.926	1					
m,p-Xylenes	U	ND	0.298	3.97	ug/kg	0.926	1					
o-Xylene	U	ND	0.298	1.99	ug/kg	0.926	1					
tert-Butyl methyl ether	U	ND	0.298	1.99	ug/kg	0.926	1					
trans-1,2-Dichloroethylene	U	ND	0.298	1.99	ug/kg	0.926	1					
trans-1,3-Dichloropropylene	U	ND	0.298	1.99	ug/kg	0.926	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2221	1794367

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SOL08	Project:	URSC00211
Sample ID:	456917021	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/21/18		1139		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 5035A/8260C		
2	SW846 5035A/8260C		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2480 ug/kg	50.0	98	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2370 ug/kg	50.0	94	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2570 ug/kg	50.0	101	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	61.6 ug/kg	50.0	124	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	53.6 ug/kg	50.0	108	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	69.9 ug/kg	50.0	141*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SOL10	Project:	URSC00211
Sample ID:	456917022	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:15		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	7.75%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	15.9	106	ug/kg	0.980	50	JP1	08/19/18	0555	1794368	1
1,1,2,2-Tetrachloroethane	U	ND	15.9	106	ug/kg	0.980	50					
1,1,2-Trichloroethane	U	ND	15.9	106	ug/kg	0.980	50					
1,1-Dichloroethane	U	ND	15.9	106	ug/kg	0.980	50					
1,1-Dichloroethylene	U	ND	15.9	106	ug/kg	0.980	50					
1,2,3-Trichlorobenzene	U	ND	15.9	106	ug/kg	0.980	50					
1,2,4-Trichlorobenzene	U	ND	15.9	106	ug/kg	0.980	50					
1,2-Dibromo-3-chloropropane	U	ND	26.6	106	ug/kg	0.980	50					
1,2-Dibromoethane	U	ND	15.9	106	ug/kg	0.980	50					
1,2-Dichlorobenzene	U	ND	15.9	106	ug/kg	0.980	50					
1,2-Dichloroethane	U	ND	15.9	106	ug/kg	0.980	50					
1,2-Dichloropropane	U	ND	15.9	106	ug/kg	0.980	50					
1,3-Dichlorobenzene	U	ND	15.9	106	ug/kg	0.980	50					
1,4-Dichlorobenzene	U	ND	15.9	106	ug/kg	0.980	50					
1,4-Dioxane	U	ND	797	2660	ug/kg	0.980	50					
2-Butanone	U	ND	159	531	ug/kg	0.980	50					
2-Hexanone	U	ND	159	531	ug/kg	0.980	50					
4-Methyl-2-pentanone	U	ND	159	531	ug/kg	0.980	50					
Acetone	U	ND	159	531	ug/kg	0.980	50					
Benzene	U	ND	15.9	106	ug/kg	0.980	50					
Bromochloromethane	U	ND	15.9	106	ug/kg	0.980	50					
Bromodichloromethane	U	ND	15.9	106	ug/kg	0.980	50					
Bromoform	U	ND	15.9	106	ug/kg	0.980	50					
Bromomethane	U	ND	15.9	106	ug/kg	0.980	50					
Carbon disulfide	U	ND	85.0	531	ug/kg	0.980	50					
Carbon tetrachloride	U	ND	15.9	106	ug/kg	0.980	50					
Chlorobenzene	U	ND	15.9	106	ug/kg	0.980	50					
Chloroethane	U	ND	15.9	106	ug/kg	0.980	50					
Chloroform	U	ND	15.9	106	ug/kg	0.980	50					
Chloromethane	U	ND	15.9	106	ug/kg	0.980	50					
Cyclohexane	U	ND	15.9	106	ug/kg	0.980	50					
Dibromochloromethane	U	ND	15.9	106	ug/kg	0.980	50					
Dichlorodifluoromethane	U	ND	15.9	106	ug/kg	0.980	50					
Ethylbenzene	U	ND	15.9	106	ug/kg	0.980	50					
Isopropylbenzene	U	ND	15.9	106	ug/kg	0.980	50					
Methyl acetate	U	ND	79.7	266	ug/kg	0.980	50					

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SOL10	Project:	URSC00211
Sample ID:	456917022	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Methylcyclohexane	U	ND	15.9	106	ug/kg	0.980	50					
Methylene chloride	U	ND	85.0	266	ug/kg	0.980	50					
Styrene	U	ND	15.9	106	ug/kg	0.980	50					
Tetrachloroethylene	U	ND	15.9	106	ug/kg	0.980	50					
Toluene	U	ND	15.9	106	ug/kg	0.980	50					
Trichloroethylene	U	ND	15.9	106	ug/kg	0.980	50					
Trichlorofluoromethane	U	ND	15.9	106	ug/kg	0.980	50					
Trichlorotrifluoroethane	U	ND	85.0	266	ug/kg	0.980	50					
Vinyl chloride	U	ND	15.9	106	ug/kg	0.980	50					
cis-1,2-Dichloroethylene	U	ND	15.9	106	ug/kg	0.980	50					
cis-1,3-Dichloropropylene	U	ND	15.9	106	ug/kg	0.980	50					
m,p-Xylenes	U	ND	15.9	213	ug/kg	0.980	50					
o-Xylene	U	ND	15.9	106	ug/kg	0.980	50					
tert-Butyl methyl ether	U	ND	15.9	106	ug/kg	0.980	50					
trans-1,2-Dichloroethylene	U	ND	15.9	106	ug/kg	0.980	50					
trans-1,3-Dichloropropylene	U	ND	15.9	106	ug/kg	0.980	50					
1,1,1-Trichloroethane	U	ND	0.319	2.13	ug/kg	0.980	1	JP1	08/21/18	1335	1794368	2
1,1,2,2-Tetrachloroethane	U	ND	0.319	2.13	ug/kg	0.980	1					
1,1,2-Trichloroethane	U	ND	0.319	2.13	ug/kg	0.980	1					
1,1-Dichloroethane	U	ND	0.319	2.13	ug/kg	0.980	1					
1,1-Dichloroethylene	U	ND	0.319	2.13	ug/kg	0.980	1					
1,2,3-Trichlorobenzene	U	ND	0.319	2.13	ug/kg	0.980	1					
1,2,4-Trichlorobenzene	J	1.22	0.319	2.13	ug/kg	0.980	1					
1,2-Dibromo-3-chloropropane	U	ND	0.531	2.13	ug/kg	0.980	1					
1,2-Dibromoethane	U	ND	0.319	2.13	ug/kg	0.980	1					
1,2-Dichlorobenzene	U	ND	0.319	2.13	ug/kg	0.980	1					
1,2-Dichloroethane	U	ND	0.319	2.13	ug/kg	0.980	1					
1,2-Dichloropropane	U	ND	0.319	2.13	ug/kg	0.980	1					
1,3-Dichlorobenzene	U	ND	0.319	2.13	ug/kg	0.980	1					
1,4-Dichlorobenzene	U	ND	0.319	2.13	ug/kg	0.980	1					
1,4-Dioxane	U	ND	15.9	53.1	ug/kg	0.980	1					
2-Butanone	U	ND	3.19	10.6	ug/kg	0.980	1					
2-Hexanone	U	ND	3.19	10.6	ug/kg	0.980	1					
4-Methyl-2-pentanone	U	ND	3.19	10.6	ug/kg	0.980	1					
Acetone	J	3.95	3.19	10.6	ug/kg	0.980	1					
Benzene	U	ND	0.319	2.13	ug/kg	0.980	1					

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SOL10	Project:	URSC00211
Sample ID:	456917022	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260C Volatiles "Dry Weight Corrected"												
Bromochloromethane	U	ND	0.319	2.13	ug/kg	0.980	1					
Bromodichloromethane	U	ND	0.319	2.13	ug/kg	0.980	1					
Bromoform	U	ND	0.319	2.13	ug/kg	0.980	1					
Bromomethane	U	ND	0.319	2.13	ug/kg	0.980	1					
Carbon disulfide	J	2.97	1.70	10.6	ug/kg	0.980	1					
Carbon tetrachloride	U	ND	0.319	2.13	ug/kg	0.980	1					
Chlorobenzene	U	ND	0.319	2.13	ug/kg	0.980	1					
Chloroethane	U	ND	0.319	2.13	ug/kg	0.980	1					
Chloroform	U	ND	0.319	2.13	ug/kg	0.980	1					
Chloromethane	U	ND	0.319	2.13	ug/kg	0.980	1					
Cyclohexane	U	ND	0.319	2.13	ug/kg	0.980	1					
Dibromochloromethane	U	ND	0.319	2.13	ug/kg	0.980	1					
Dichlorodifluoromethane	U	ND	0.319	2.13	ug/kg	0.980	1					
Ethylbenzene	U	ND	0.319	2.13	ug/kg	0.980	1					
Isopropylbenzene	U	ND	0.319	2.13	ug/kg	0.980	1					
Methyl acetate	U	ND	1.59	5.31	ug/kg	0.980	1					
Methylcyclohexane	U	ND	0.319	2.13	ug/kg	0.980	1					
Methylene chloride		5.41	1.70	5.31	ug/kg	0.980	1					
Styrene	U	ND	0.319	2.13	ug/kg	0.980	1					
Tetrachloroethylene	U	ND	0.319	2.13	ug/kg	0.980	1					
Toluene	U	ND	0.319	2.13	ug/kg	0.980	1					
Trichloroethylene	U	ND	0.319	2.13	ug/kg	0.980	1					
Trichlorofluoromethane	U	ND	0.319	2.13	ug/kg	0.980	1					
Trichlorotrifluoroethane	U	ND	1.70	5.31	ug/kg	0.980	1					
Vinyl chloride	U	ND	0.319	2.13	ug/kg	0.980	1					
cis-1,2-Dichloroethylene	U	ND	0.319	2.13	ug/kg	0.980	1					
cis-1,3-Dichloropropylene	U	ND	0.319	2.13	ug/kg	0.980	1					
m,p-Xylenes	U	ND	0.319	4.25	ug/kg	0.980	1					
o-Xylene	U	ND	0.319	2.13	ug/kg	0.980	1					
tert-Butyl methyl ether	U	ND	0.319	2.13	ug/kg	0.980	1					
trans-1,2-Dichloroethylene	U	ND	0.319	2.13	ug/kg	0.980	1					
trans-1,3-Dichloropropylene	U	ND	0.319	2.13	ug/kg	0.980	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260C Prep	JP1	08/17/18	2222	1794367

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 2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 22, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
 Project: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SOL10	Project:	URSC00211
Sample ID:	456917022	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
SW846 5035A		5035A/8260C Prep		JP1		08/21/18		1140		1794367		

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 5035A/8260C		
2	SW846 5035A/8260C		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	2600 ug/kg	50.0	98	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	2570 ug/kg	50.0	97	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	2700 ug/kg	50.0	101	(81%-120%)
1,2-Dichloroethane-d4	SW846 8260C Volatiles "Dry Weight Corrected"	69.4 ug/kg	50.0	131*	(81%-124%)
Bromofluorobenzene	SW846 8260C Volatiles "Dry Weight Corrected"	61.1 ug/kg	50.0	115	(70%-130%)
Toluene-d8	SW846 8260C Volatiles "Dry Weight Corrected"	70.3 ug/kg	50.0	132*	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

Quality Control Summary

GEL LABORATORIES LLC
2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: August 22, 2018

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URS

**2425 River Road (c/o SPRU DP)
Niskayuna, New York**

Contact: Mr. Jason Litwiller

Workorder: 456917

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1792111										
QC1204090987	LCS										
1,1,1-Trichloroethane	50.0			54.6	ug/L		109	(70%-130%)	JP1	08/13/18	10:47
1,1,2,2-Tetrachloroethane	50.0			46.5	ug/L		93	(70%-130%)			
1,1,2-Trichloroethane	50.0			45.1	ug/L		90	(70%-130%)			
1,1-Dichloroethane	50.0			51.3	ug/L		103	(70%-130%)			
1,1-Dichloroethylene	50.0			55.8	ug/L		112	(70%-130%)			
1,2,3-Trichlorobenzene	50.0			46.6	ug/L		93	(70%-130%)			
1,2,4-Trichlorobenzene	50.0			49.6	ug/L		99	(70%-130%)			
1,2-Dibromo-3-chloropropane	50.0			46.6	ug/L		93	(70%-130%)			
1,2-Dibromoethane	50.0			45.5	ug/L		91	(70%-130%)			
1,2-Dichlorobenzene	50.0			44.6	ug/L		89	(70%-130%)			
1,2-Dichloroethane	50.0			52.2	ug/L		104	(70%-130%)			
1,2-Dichloropropane	50.0			48.4	ug/L		97	(70%-130%)			
1,3-Dichlorobenzene	50.0			46.5	ug/L		93	(70%-130%)			
1,4-Dichlorobenzene	50.0			46.8	ug/L		94	(70%-130%)			

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch 1792111										
2-Butanone	250		288	ug/L		115	(70%-130%)	JP1	08/13/18	10:47
2-Hexanone	250		270	ug/L		108	(70%-130%)			
4-Methyl-2-pentanone	250		228	ug/L		91	(70%-130%)			
Acetone	250		366	ug/L		147*	(70%-130%)			
Benzene	50.0		47.0	ug/L		94	(70%-130%)			
Bromochloromethane	50.0		44.8	ug/L		90	(70%-130%)			
Bromodichloromethane	50.0		52.7	ug/L		105	(70%-130%)			
Bromoform	50.0		48.2	ug/L		96	(70%-130%)			
Bromomethane	50.0		48.6	ug/L		97	(70%-130%)			
Carbon disulfide	250		264	ug/L		106	(70%-130%)			
Carbon tetrachloride	50.0		56.9	ug/L		114	(70%-130%)			
Chlorobenzene	50.0		44.6	ug/L		89	(70%-130%)			
Chloroethane	50.0		57.7	ug/L		115	(70%-130%)			
Chloroform	50.0		51.9	ug/L		104	(70%-130%)			
Chloromethane	50.0		59.2	ug/L		118	(70%-130%)			

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Parlname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch 1792111										
Cyclohexane	50.0		49.6	ug/L		99	(70%-130%)	JP1	08/13/18	10:47
Dibromochloromethane	50.0		48.7	ug/L		97	(70%-130%)			
Dichlorodifluoromethane	50.0		66.1	ug/L		132 *	(70%-130%)			
Ethylbenzene	50.0		46.2	ug/L		92	(70%-130%)			
Isopropylbenzene	50.0		46.2	ug/L		92	(70%-130%)			
Methyl acetate	250		237	ug/L		95	(70%-130%)			
Methylcyclohexane	50.0		48.7	ug/L		97	(70%-130%)			
Methylene chloride	50.0		46.4	ug/L		93	(70%-130%)			
Styrene	50.0		44.1	ug/L		88	(70%-130%)			
Tetrachloroethylene	50.0		45.9	ug/L		92	(70%-130%)			
Toluene	50.0		44.7	ug/L		89	(70%-130%)			
Trichloroethylene	50.0		48.5	ug/L		97	(70%-130%)			
Trichlorofluoromethane	50.0		62.6	ug/L		125	(70%-130%)			
Vinyl chloride	50.0		59.3	ug/L		119	(70%-130%)			
cis-1,2-Dichloroethylene	50.0		48.4	ug/L		97	(70%-130%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch 1792111										
cis-1,3-Dichloropropylene	50.0		52.3	ug/L		105	(70%-130%)	JP1	08/13/18	10:47
m,p-Xylenes	100		89.1	ug/L		89	(70%-130%)			
o-Xylene	50.0		44.5	ug/L		89	(70%-130%)			
tert-Butyl methyl ether	50.0		47.7	ug/L		95	(70%-130%)			
trans-1,2-Dichloroethylene	50.0		51.7	ug/L		103	(70%-130%)			
trans-1,3-Dichloropropylene	50.0		49.6	ug/L		99	(70%-130%)			
**1,2-Dichloroethane-d4	50.0		54.0	ug/L		108	(71%-134%)			
**Bromofluorobenzene	50.0		49.6	ug/L		99	(70%-131%)			
**Toluene-d8	50.0		47.8	ug/L		96	(74%-124%)			
QC1204090986 MB 1,1,1-Trichloroethane		U	ND	ug/L					08/13/18	11:48
1,1,2,2-Tetrachloroethane		U	ND	ug/L						
1,1,2-Trichloroethane		U	ND	ug/L						
1,1-Dichloroethane		U	ND	ug/L						
1,1-Dichloroethylene		U	ND	ug/L						
1,2,3-Trichlorobenzene		U	ND	ug/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1792111											
1,2,4-Trichlorobenzene				U	ND	ug/L			JP1	08/13/18	11:48
1,2-Dibromo-3-chloropropane				U	ND	ug/L					
1,2-Dibromoethane				U	ND	ug/L					
1,2-Dichlorobenzene				U	ND	ug/L					
1,2-Dichloroethane				U	ND	ug/L					
1,2-Dichloropropane				U	ND	ug/L					
1,3-Dichlorobenzene				U	ND	ug/L					
1,4-Dichlorobenzene				U	ND	ug/L					
1,4-Dioxane				U	ND	ug/L					
2-Butanone				U	ND	ug/L					
2-Hexanone				U	ND	ug/L					
4-Methyl-2-pentanone				U	ND	ug/L					
Acetone				U	ND	ug/L					
Benzene				U	ND	ug/L					
Bromochloromethane				U	ND	ug/L					

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1792111										
Bromodichloromethane				U	ND	ug/L				JP1	08/13/18 11:48
Bromoform				U	ND	ug/L					
Bromomethane				U	ND	ug/L					
Carbon disulfide				U	ND	ug/L					
Carbon tetrachloride				U	ND	ug/L					
Chlorobenzene				U	ND	ug/L					
Chloroethane				U	ND	ug/L					
Chloroform				U	ND	ug/L					
Chloromethane				U	ND	ug/L					
Cyclohexane				U	ND	ug/L					
Dibromochloromethane				U	ND	ug/L					
Dichlorodifluoromethane				U	ND	ug/L					
Ethylbenzene				U	ND	ug/L					
Isopropylbenzene				U	ND	ug/L					
Methyl acetate				U	ND	ug/L					

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1792111										
Methylcyclohexane				U	ND	ug/L				JP1	08/13/18 11:48
Methylene chloride				U	ND	ug/L					
Styrene				U	ND	ug/L					
Tetrachloroethylene				U	ND	ug/L					
Toluene				U	ND	ug/L					
Trichloroethylene				U	ND	ug/L					
Trichlorofluoromethane				U	ND	ug/L					
Trichlorotrifluoroethane				U	ND	ug/L					
Vinyl chloride				U	ND	ug/L					
cis-1,2-Dichloroethylene				U	ND	ug/L					
cis-1,3-Dichloropropylene				U	ND	ug/L					
m,p-Xylenes				U	ND	ug/L					
o-Xylene				U	ND	ug/L					
tert-Butyl methyl ether				U	ND	ug/L					
trans-1,2-Dichloroethylene				U	ND	ug/L					

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1792111										
trans-1,3-Dichloropropylene				U	ug/L					JP1	08/13/18 11:48
**1,2-Dichloroethane-d4	50.0				ug/L	53.7	107	(71%-134%)			
**Bromofluorobenzene	50.0				ug/L	49.5	99	(70%-131%)			
**Toluene-d8	50.0				ug/L	46.5	93	(74%-124%)			
QC1204090988 456633009 PS											
1,1,1-Trichloroethane	50.0	U	ND		ug/L	48.0	96	(70%-130%)			08/13/18 21:44
1,1,2,2-Tetrachloroethane	50.0	U	ND		ug/L	43.0	86	(70%-130%)			
1,1,2-Trichloroethane	50.0	U	ND		ug/L	42.6	85	(70%-130%)			
1,1-Dichloroethane	50.0	U	ND		ug/L	45.6	91	(70%-130%)			
1,1-Dichloroethylene	50.0	U	ND		ug/L	48.5	97	(70%-130%)			
1,2,3-Trichlorobenzene	50.0	U	ND		ug/L	39.0	78	(70%-130%)			
1,2,4-Trichlorobenzene	50.0	U	ND		ug/L	39.7	79	(70%-130%)			
1,2-Dibromo-3-chloropropane	50.0	U	ND		ug/L	43.5	87	(70%-130%)			
1,2-Dibromoethane	50.0	U	ND		ug/L	42.1	84	(70%-130%)			
1,2-Dichlorobenzene	50.0	U	ND		ug/L	39.7	79	(70%-130%)			
1,2-Dichloroethane	50.0	U	ND		ug/L	49.4	99	(70%-130%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1792111											
1,2-Dichloropropane	50.0	U	ND	44.5	ug/L	89	(70%-130%)		JP1	08/13/18	21:44
1,3-Dichlorobenzene	50.0	U	ND	40.5	ug/L	81	(70%-130%)				
1,4-Dichlorobenzene	50.0	U	ND	40.2	ug/L	80	(70%-130%)				
2-Butanone	250	U	ND	156	ug/L	62 *	(70%-130%)				
2-Hexanone	250	U	ND	163	ug/L	65 *	(70%-130%)				
4-Methyl-2-pentanone	250	U	ND	204	ug/L	82	(70%-130%)				
Acetone	250	U	ND	138	ug/L	55 *	(70%-130%)				
Benzene	50.0	U	ND	43.1	ug/L	86	(70%-130%)				
Bromochloromethane	50.0	U	ND	43.2	ug/L	86	(70%-130%)				
Bromodichloromethane	50.0	U	ND	47.8	ug/L	96	(70%-130%)				
Bromoform	50.0	U	ND	43.6	ug/L	87	(70%-130%)				
Bromomethane	50.0	U	ND	45.3	ug/L	91	(70%-130%)				
Carbon disulfide	250	U	ND	222	ug/L	89	(70%-130%)				
Carbon tetrachloride	50.0	U	ND	48.5	ug/L	97	(70%-130%)				
Chlorobenzene	50.0	U	ND	40.0	ug/L	80	(70%-130%)				

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Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1792111										
Chloroethane	50.0	U	ND	51.8	ug/L		104	(70%-130%)	JP1	08/13/18	21:44
Chloroform	50.0	J	0.790	48.3	ug/L		95	(70%-130%)			
Chloromethane	50.0	U	ND	55.4	ug/L		111	(70%-130%)			
Cyclohexane	50.0	U	ND	41.3	ug/L		83	(70%-130%)			
Dibromochloromethane	50.0	U	ND	45.4	ug/L		91	(70%-130%)			
Dichlorodifluoromethane	50.0	U	ND	57.2	ug/L		114	(70%-130%)			
Ethylbenzene	50.0	U	ND	40.2	ug/L		80	(70%-130%)			
Isopropylbenzene	50.0	U	ND	40.2	ug/L		80	(70%-130%)			
Methyl acetate	250	U	ND	214	ug/L		86	(70%-130%)			
Methylcyclohexane	50.0	U	ND	40.4	ug/L		81	(70%-130%)			
Methylene chloride	50.0	U	ND	43.4	ug/L		87	(70%-130%)			
Styrene	50.0	U	ND	39.3	ug/L		79	(70%-130%)			
Tetrachloroethylene	50.0	U	ND	39.0	ug/L		78	(70%-130%)			
Toluene	50.0	U	ND	40.4	ug/L		81	(70%-130%)			
Trichloroethylene	50.0	J	0.380	42.8	ug/L		85	(70%-130%)			

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Parmlname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1792111											
Trichlorofluoromethane	50.0	U	ND	51.4	ug/L		103	(70%-130%)	JP1	08/13/18	21:44
Vinyl chloride	50.0	U	ND	53.1	ug/L		106	(70%-130%)			
cis-1,2-Dichloroethylene	50.0	U	ND	44.9	ug/L		90	(70%-130%)			
cis-1,3-Dichloropropylene	50.0	U	ND	45.7	ug/L		91	(70%-130%)			
m,p-Xylenes	100	U	ND	79.4	ug/L		79	(70%-130%)			
o-Xylene	50.0	U	ND	39.8	ug/L		80	(70%-130%)			
tert-Butyl methyl ether	50.0	U	ND	45.5	ug/L		91	(70%-130%)			
trans-1,2-Dichloroethylene	50.0	U	ND	47.6	ug/L		95	(70%-130%)			
trans-1,3-Dichloropropylene	50.0	U	ND	45.8	ug/L		92	(70%-130%)			
**1,2-Dichloroethane-d4	50.0		55.9	52.3	ug/L		105	(71%-134%)			
**Bromofluorobenzene	50.0		52.4	48.8	ug/L		98	(70%-131%)			
**Toluene-d8	50.0		46.8	47.1	ug/L		94	(74%-124%)			
QC1204090989 456633009 PSD 1,1,1-Trichloroethane	50.0	U	ND	47.6	ug/L	1	95	(0%-20%)		08/13/18	22:15
1,1,2,2-Tetrachloroethane	50.0	U	ND	46.1	ug/L	7	92	(0%-20%)			
1,1,2-Trichloroethane	50.0	U	ND	42.4	ug/L	1	85	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1792111											
1,1-Dichloroethane	50.0	U	ND	46.9	ug/L	3	94	(0%-20%)	JP1	08/13/18	22:15
1,1-Dichloroethylene	50.0	U	ND	47.4	ug/L	2	95	(0%-20%)			
1,2,3-Trichlorobenzene	50.0	U	ND	41.1	ug/L	5	82	(0%-20%)			
1,2,4-Trichlorobenzene	50.0	U	ND	40.3	ug/L	2	81	(0%-20%)			
1,2-Dibromo-3-chloropropane	50.0	U	ND	46.0	ug/L	6	92	(0%-20%)			
1,2-Dibromoethane	50.0	U	ND	42.0	ug/L	0	84	(0%-20%)			
1,2-Dichlorobenzene	50.0	U	ND	41.1	ug/L	3	82	(0%-20%)			
1,2-Dichloroethane	50.0	U	ND	49.2	ug/L	1	98	(0%-20%)			
1,2-Dichloropropane	50.0	U	ND	45.5	ug/L	2	91	(0%-20%)			
1,3-Dichlorobenzene	50.0	U	ND	41.9	ug/L	3	84	(0%-20%)			
1,4-Dichlorobenzene	50.0	U	ND	40.4	ug/L	1	81	(0%-20%)			
2-Butanone	250	U	ND	158	ug/L	1	63 *	(0%-20%)			
2-Hexanone	250	U	ND	166	ug/L	2	67 *	(0%-20%)			
4-Methyl-2-pentanone	250	U	ND	214	ug/L	4	85	(0%-20%)			
Acetone	250	U	ND	138	ug/L	0	55 *	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1792111											
Benzene	50.0	U	ND	42.7	ug/L	1	85	(0%-20%)	JP1	08/13/18	22:15
Bromochloromethane	50.0	U	ND	43.0	ug/L	1	86	(0%-20%)			
Bromodichloromethane	50.0	U	ND	48.5	ug/L	1	97	(0%-20%)			
Bromoform	50.0	U	ND	46.2	ug/L	6	92	(0%-20%)			
Bromomethane	50.0	U	ND	45.5	ug/L	0	91	(0%-20%)			
Carbon disulfide	250	U	ND	222	ug/L	0	89	(0%-20%)			
Carbon tetrachloride	50.0	U	ND	47.4	ug/L	2	95	(0%-20%)			
Chlorobenzene	50.0	U	ND	40.1	ug/L	0	80	(0%-20%)			
Chloroethane	50.0	U	ND	50.2	ug/L	3	100	(0%-20%)			
Chloroform	50.0	J	0.790	48.9	ug/L	1	96	(0%-20%)			
Chloromethane	50.0	U	ND	54.1	ug/L	2	108	(0%-20%)			
Cyclohexane	50.0	U	ND	40.6	ug/L	2	81	(0%-20%)			
Dibromochloromethane	50.0	U	ND	44.0	ug/L	3	88	(0%-20%)			
Dichlorodifluoromethane	50.0	U	ND	57.1	ug/L	0	114	(0%-20%)			
Ethylbenzene	50.0	U	ND	39.4	ug/L	2	79	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1792111											
Isopropylbenzene	50.0	U	ND	40.7	ug/L	1	81	(0%-20%)	JP1	08/13/18	22:15
Methyl acetate	250	U	ND	227	ug/L	6	91	(0%-20%)			
Methylcyclohexane	50.0	U	ND	41.2	ug/L	2	82	(0%-20%)			
Methylene chloride	50.0	U	ND	44.4	ug/L	2	89	(0%-20%)			
Styrene	50.0	U	ND	38.5	ug/L	2	77	(0%-20%)			
Tetrachloroethylene	50.0	U	ND	37.1	ug/L	5	74	(0%-20%)			
Toluene	50.0	U	ND	40.0	ug/L	1	80	(0%-20%)			
Trichloroethylene	50.0	J	0.380	43.4	ug/L	1	86	(0%-20%)			
Trichlorofluoromethane	50.0	U	ND	52.4	ug/L	2	105	(0%-20%)			
Vinyl chloride	50.0	U	ND	52.9	ug/L	0	106	(0%-20%)			
cis-1,2-Dichloroethylene	50.0	U	ND	44.3	ug/L	1	89	(0%-20%)			
cis-1,3-Dichloropropylene	50.0	U	ND	45.9	ug/L	1	92	(0%-20%)			
m,p-Xylenes	100	U	ND	79.1	ug/L	0	79	(0%-20%)			
o-Xylene	50.0	U	ND	38.5	ug/L	3	77	(0%-20%)			
tert-Butyl methyl ether	50.0	U	ND	46.5	ug/L	2	93	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1792111										
trans-1,2-Dichloroethylene	50.0	U	ND	47.1	ug/L	1	94	(0%-20%)	JP1	08/13/18	22:15
trans-1,3-Dichloropropylene	50.0	U	ND	43.5	ug/L	5	87	(0%-20%)			
**1,2-Dichloroethane-d4	50.0		55.9	53.7	ug/L		107	(71%-134%)			
**Bromofluorobenzene	50.0		52.4	50.8	ug/L		102	(70%-131%)			
**Toluene-d8	50.0		46.8	47.4	ug/L		95	(74%-124%)			
Batch	1794368										
QC1204096021	HB										
1,1,1-Trichloroethane			U	ND	ug/kg				JP1	08/18/18	02:50
1,1,2,2-Tetrachloroethane			U	ND	ug/kg						
1,1,2-Trichloroethane			U	ND	ug/kg						
1,1-Dichloroethane			U	ND	ug/kg						
1,1-Dichloroethylene			U	ND	ug/kg						
1,2,3-Trichlorobenzene			U	ND	ug/kg						
1,2,4-Trichlorobenzene			U	ND	ug/kg						
1,2-Dibromo-3-chloropropane			U	ND	ug/kg						
1,2-Dibromoethane			U	ND	ug/kg						
1,2-Dichlorobenzene			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
1,2-Dichloroethane			U	ND	ug/kg				JP1	08/18/18	02:50
1,2-Dichloropropane			U	ND	ug/kg						
1,3-Dichlorobenzene			U	ND	ug/kg						
1,4-Dichlorobenzene			U	ND	ug/kg						
1,4-Dioxane			U	ND	ug/kg						
2-Butanone			U	ND	ug/kg						
2-Hexanone			U	ND	ug/kg						
4-Methyl-2-pentanone			U	ND	ug/kg						
Acetone			U	ND	ug/kg						
Benzene			U	ND	ug/kg						
Bromochloromethane			U	ND	ug/kg						
Bromodichloromethane			U	ND	ug/kg						
Bromoform			U	ND	ug/kg						
Bromomethane			U	ND	ug/kg						
Carbon disulfide			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
Carbon tetrachloride			U	ND	ug/kg				JP1	08/18/18	02:50
Chlorobenzene			U	ND	ug/kg						
Chloroethane			U	ND	ug/kg						
Chloroform			U	ND	ug/kg						
Chloromethane			U	ND	ug/kg						
Cyclohexane			U	ND	ug/kg						
Dibromochloromethane			U	ND	ug/kg						
Dichlorodifluoromethane			U	ND	ug/kg						
Ethylbenzene			U	ND	ug/kg						
Isopropylbenzene			U	ND	ug/kg						
Methyl acetate			U	ND	ug/kg						
Methylcyclohexane			U	ND	ug/kg						
Methylene chloride			U	ND	ug/kg						
Styrene			U	ND	ug/kg						
Tetrachloroethylene			U	ND	ug/kg						

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch	1794368									
Toluene			U	ND	ug/kg				JP1	08/18/18 02:50
Trichloroethylene			U	ND	ug/kg					
Trichlorofluoromethane			U	ND	ug/kg					
Trichlorotrifluoroethylene			U	ND	ug/kg					
Vinyl chloride			U	ND	ug/kg					
cis-1,2-Dichloroethylene			U	ND	ug/kg					
cis-1,3-Dichloropropylene			U	ND	ug/kg					
m,p-Xylenes			U	ND	ug/kg					
o-Xylene			U	ND	ug/kg					
tert-Butyl methyl ether			U	ND	ug/kg					
trans-1,2-Dichloroethylene			U	ND	ug/kg					
trans-1,3-Dichloropropylene			U	ND	ug/kg					
**1,2-Dichloroethane-d4	50.0			51.6	ug/L		103	(81%-124%)		
**Bromofluorobenzene	50.0			50.3	ug/L		101	(70%-130%)		
**Toluene-d8	50.0			53.8	ug/L		108	(81%-120%)		

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch 1794368										
QC1204096022	LCS									
1,1,1-Trichloroethane	50.0		48.7	ug/kg		97	(70%-130%)	JP1	08/18/18	00:47
1,1,2,2-Tetrachloroethane	50.0		47.4	ug/kg		95	(70%-130%)			
1,1,2-Trichloroethane	50.0		47.0	ug/kg		94	(70%-130%)			
1,1-Dichloroethane	50.0		49.5	ug/kg		99	(70%-130%)			
1,1-Dichloroethylene	50.0		49.4	ug/kg		99	(70%-130%)			
1,2,3-Trichlorobenzene	50.0		44.9	ug/kg		90	(70%-130%)			
1,2,4-Trichlorobenzene	50.0		44.1	ug/kg		88	(70%-130%)			
1,2-Dibromo-3-chloropropane	50.0		48.3	ug/kg		97	(70%-130%)			
1,2-Dibromoethane	50.0		47.5	ug/kg		95	(70%-130%)			
1,2-Dichlorobenzene	50.0		45.9	ug/kg		92	(70%-130%)			
1,2-Dichloroethane	50.0		48.2	ug/kg		96	(70%-130%)			
1,2-Dichloropropane	50.0		47.6	ug/kg		95	(70%-130%)			
1,3-Dichlorobenzene	50.0		45.2	ug/kg		90	(70%-130%)			
1,4-Dichlorobenzene	50.0		46.5	ug/kg		93	(70%-130%)			
2-Butanone	250		271	ug/kg		108	(70%-130%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch 1794368										
2-Hexanone	250		263	ug/kg		105	(70%-130%)	JP1	08/18/18	00:47
4-Methyl-2-pentanone	250		231	ug/kg		92	(70%-130%)			
Acetone	250		251	ug/kg		100	(70%-130%)			
Benzene	50.0		46.5	ug/kg		93	(70%-130%)			
Bromochloromethane	50.0		46.2	ug/kg		92	(70%-130%)			
Bromodichloromethane	50.0		49.3	ug/kg		99	(70%-130%)			
Bromoform	50.0		49.9	ug/kg		100	(70%-130%)			
Bromomethane	50.0		46.6	ug/kg		93	(70%-130%)			
Carbon disulfide	250		246	ug/kg		99	(70%-130%)			
Carbon tetrachloride	50.0		48.2	ug/kg		96	(70%-130%)			
Chlorobenzene	50.0		47.6	ug/kg		95	(70%-130%)			
Chloroethane	50.0		43.9	ug/kg		88	(70%-130%)			
Chloroform	50.0		47.4	ug/kg		95	(70%-130%)			
Chloromethane	50.0		40.4	ug/kg		81	(70%-130%)			
Cyclohexane	50.0		45.6	ug/kg		91	(70%-130%)			

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Parlname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch 1794368										
Dibromochloromethane	50.0		48.7	ug/kg		97	(70%-130%)	JP1	08/18/18	00:47
Dichlorodifluoromethane	50.0		37.5	ug/kg		75	(70%-130%)			
Ethylbenzene	50.0		46.3	ug/kg		93	(70%-130%)			
Isopropylbenzene	50.0		46.5	ug/kg		93	(70%-130%)			
Methyl acetate	250		226	ug/kg		90	(70%-130%)			
Methylcyclohexane	50.0		44.5	ug/kg		89	(70%-130%)			
Methylene chloride	50.0		47.9	ug/kg		96	(70%-130%)			
Styrene	50.0		45.4	ug/kg		91	(70%-130%)			
Tetrachloroethylene	50.0		45.4	ug/kg		91	(70%-130%)			
Toluene	50.0		45.6	ug/kg		91	(70%-130%)			
Trichloroethylene	50.0		47.9	ug/kg		96	(70%-130%)			
Trichlorofluoromethane	50.0		45.6	ug/kg		91	(70%-130%)			
Vinyl chloride	50.0		43.2	ug/kg		86	(70%-130%)			
cis-1,2-Dichloroethylene	50.0		48.1	ug/kg		96	(70%-130%)			
cis-1,3-Dichloropropylene	50.0		49.8	ug/kg		100	(70%-130%)			

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Parlname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch	1794368									
m,p-Xylenes	100		88.4	ug/kg		88	(70%-130%)	JP1	08/18/18	00:47
o-Xylene	50.0		45.1	ug/kg		90	(70%-130%)			
tert-Butyl methyl ether	50.0		46.4	ug/kg		93	(70%-130%)			
trans-1,2-Dichloroethylene	50.0		47.4	ug/kg		95	(70%-130%)			
trans-1,3-Dichloropropylene	50.0		48.1	ug/kg		96	(70%-130%)			
**1,2-Dichloroethane-d4	50.0		48.8	ug/L		98	(81%-124%)			
**Bromofluorobenzene	50.0		47.7	ug/L		95	(70%-130%)			
**Toluene-d8	50.0		48.5	ug/L		97	(81%-120%)			
QC1204096221 LCS 1,1,1-Trichloroethane	50.0		52.9	ug/kg		106	(70%-130%)			08/18/18 20:39
1,1,2,2-Tetrachloroethane	50.0		48.5	ug/kg		97	(70%-130%)			
1,1,2-Trichloroethane	50.0		47.9	ug/kg		96	(70%-130%)			
1,1-Dichloroethane	50.0		53.7	ug/kg		107	(70%-130%)			
1,1-Dichloroethylene	50.0		54.6	ug/kg		109	(70%-130%)			
1,2,3-Trichlorobenzene	50.0		48.0	ug/kg		96	(70%-130%)			
1,2,4-Trichlorobenzene	50.0	B	49.0	ug/kg		98	(70%-130%)			

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Parlname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch 1794368										
1,2-Dibromo-3-chloropropane	50.0		48.8	ug/kg		98	(70%-130%)	JP1	08/18/18	20:39
1,2-Dibromoethane	50.0		48.0	ug/kg		96	(70%-130%)			
1,2-Dichlorobenzene	50.0		47.9	ug/kg		96	(70%-130%)			
1,2-Dichloroethane	50.0		50.5	ug/kg		101	(70%-130%)			
1,2-Dichloropropane	50.0		51.1	ug/kg		102	(70%-130%)			
1,3-Dichlorobenzene	50.0		49.6	ug/kg		99	(70%-130%)			
1,4-Dichlorobenzene	50.0		48.2	ug/kg		96	(70%-130%)			
2-Butanone	250		275	ug/kg		110	(70%-130%)			
2-Hexanone	250		280	ug/kg		112	(70%-130%)			
4-Methyl-2-pentanone	250		247	ug/kg		99	(70%-130%)			
Acetone	250		286	ug/kg		114	(70%-130%)			
Benzene	50.0		49.3	ug/kg		99	(70%-130%)			
Bromochloromethane	50.0		50.8	ug/kg		102	(70%-130%)			
Bromodichloromethane	50.0		51.7	ug/kg		103	(70%-130%)			
Bromoform	50.0		50.5	ug/kg		101	(70%-130%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch 1794368										
Bromomethane	50.0		53.5	ug/kg		107	(70%-130%)	JP1	08/18/18	20:39
Carbon disulfide	250		263	ug/kg		105	(70%-130%)			
Carbon tetrachloride	50.0		52.3	ug/kg		105	(70%-130%)			
Chlorobenzene	50.0		48.8	ug/kg		98	(70%-130%)			
Chloroethane	50.0		49.9	ug/kg		100	(70%-130%)			
Chloroform	50.0		51.1	ug/kg		102	(70%-130%)			
Chloromethane	50.0		52.2	ug/kg		104	(70%-130%)			
Cyclohexane	50.0		49.2	ug/kg		98	(70%-130%)			
Dibromochloromethane	50.0		48.3	ug/kg		97	(70%-130%)			
Dichlorodifluoromethane	50.0		56.8	ug/kg		114	(70%-130%)			
Ethylbenzene	50.0		47.1	ug/kg		94	(70%-130%)			
Isopropylbenzene	50.0		47.1	ug/kg		94	(70%-130%)			
Methyl acetate	250		245	ug/kg		98	(70%-130%)			
Methylcyclohexane	50.0		50.3	ug/kg		101	(70%-130%)			
Methylene chloride	50.0		52.0	ug/kg		104	(70%-130%)			

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Parmlname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch 1794368										
Styrene	50.0		46.3	ug/kg		93	(70%-130%)	JP1	08/18/18	20:39
Tetrachloroethylene	50.0		47.1	ug/kg		94	(70%-130%)			
Toluene	50.0		47.4	ug/kg		95	(70%-130%)			
Trichloroethylene	50.0		50.8	ug/kg		102	(70%-130%)			
Trichlorofluoromethane	50.0		53.9	ug/kg		108	(70%-130%)			
Vinyl chloride	50.0		53.6	ug/kg		107	(70%-130%)			
cis-1,2-Dichloroethylene	50.0		49.1	ug/kg		98	(70%-130%)			
cis-1,3-Dichloropropylene	50.0		53.5	ug/kg		107	(70%-130%)			
m,p-Xylenes	100		95.1	ug/kg		95	(70%-130%)			
o-Xylene	50.0		46.9	ug/kg		94	(70%-130%)			
tert-Butyl methyl ether	50.0		50.2	ug/kg		100	(70%-130%)			
trans-1,2-Dichloroethylene	50.0		52.3	ug/kg		105	(70%-130%)			
trans-1,3-Dichloropropylene	50.0		48.2	ug/kg		96	(70%-130%)			
**1,2-Dichloroethane-d4	50.0		51.1	ug/L		102	(81%-124%)			
**Bromofluorobenzene	50.0		47.9	ug/L		96	(70%-130%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch	1794368									
**Toluene-d8	50.0		48.8	ug/L		98	(81%-120%)	JP1	08/18/18	20:39
QC1204096222 LCS 1,1,1-Trichloroethane	50.0		49.7	ug/kg		99	(70%-130%)			08/20/18 10:14
1,1,2,2-Tetrachloroethane	50.0		51.1	ug/kg		102	(70%-130%)			
1,1,2-Trichloroethane	50.0		48.5	ug/kg		97	(70%-130%)			
1,1-Dichloroethane	50.0		50.7	ug/kg		101	(70%-130%)			
1,1-Dichloroethylene	50.0		51.4	ug/kg		103	(70%-130%)			
1,2,3-Trichlorobenzene	50.0		50.2	ug/kg		100	(70%-130%)			
1,2,4-Trichlorobenzene	50.0		49.2	ug/kg		98	(70%-130%)			
1,2-Dibromo-3-chloropropane	50.0		51.2	ug/kg		102	(70%-130%)			
1,2-Dibromoethane	50.0		50.1	ug/kg		100	(70%-130%)			
1,2-Dichlorobenzene	50.0		49.1	ug/kg		98	(70%-130%)			
1,2-Dichloroethane	50.0		50.2	ug/kg		100	(70%-130%)			
1,2-Dichloroproppane	50.0		48.9	ug/kg		98	(70%-130%)			
1,3-Dichlorobenzene	50.0		48.9	ug/kg		98	(70%-130%)			
1,4-Dichlorobenzene	50.0		48.4	ug/kg		97	(70%-130%)			

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Parlname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch 1794368										
2-Butanone	250		292	ug/kg		117	(70%-130%)	JP1	08/20/18	10:14
2-Hexanone	250		296	ug/kg		118	(70%-130%)			
4-Methyl-2-pentanone	250		261	ug/kg		105	(70%-130%)			
Acetone	250		286	ug/kg		115	(70%-130%)			
Benzene	50.0		49.3	ug/kg		99	(70%-130%)			
Bromochloromethane	50.0		49.1	ug/kg		98	(70%-130%)			
Bromodichloromethane	50.0		50.5	ug/kg		101	(70%-130%)			
Bromoform	50.0		51.0	ug/kg		102	(70%-130%)			
Bromomethane	50.0		54.1	ug/kg		108	(70%-130%)			
Carbon disulfide	250		263	ug/kg		105	(70%-130%)			
Carbon tetrachloride	50.0		49.3	ug/kg		99	(70%-130%)			
Chlorobenzene	50.0		49.6	ug/kg		99	(70%-130%)			
Chloroethane	50.0		51.3	ug/kg		103	(70%-130%)			
Chloroform	50.0		48.8	ug/kg		98	(70%-130%)			
Chloromethane	50.0		53.9	ug/kg		108	(70%-130%)			

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Parlname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch 1794368										
Cyclohexane	50.0		46.2	ug/kg		92	(70%-130%)	JP1	08/20/18	10:14
Dibromochloromethane	50.0		50.9	ug/kg		102	(70%-130%)			
Dichlorodifluoromethane	50.0		55.9	ug/kg		112	(70%-130%)			
Ethylbenzene	50.0		47.5	ug/kg		95	(70%-130%)			
Isopropylbenzene	50.0		46.8	ug/kg		94	(70%-130%)			
Methyl acetate	250		247	ug/kg		99	(70%-130%)			
Methylcyclohexane	50.0		45.9	ug/kg		92	(70%-130%)			
Methylene chloride	50.0		50.6	ug/kg		101	(70%-130%)			
Styrene	50.0		46.2	ug/kg		92	(70%-130%)			
Tetrachloroethylene	50.0		46.7	ug/kg		93	(70%-130%)			
Toluene	50.0		45.5	ug/kg		91	(70%-130%)			
Trichloroethylene	50.0		48.4	ug/kg		97	(70%-130%)			
Trichlorofluoromethane	50.0		52.4	ug/kg		105	(70%-130%)			
Vinyl chloride	50.0		54.0	ug/kg		108	(70%-130%)			
cis-1,2-Dichloroethylene	50.0		48.5	ug/kg		97	(70%-130%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch	1794368									
cis-1,3-Dichloropropylene	50.0		51.7	ug/kg		103	(70%-130%)	JP1	08/20/18	10:14
m,p-Xylenes	100		93.4	ug/kg		93	(70%-130%)			
o-Xylene	50.0		46.3	ug/kg		93	(70%-130%)			
tert-Butyl methyl ether	50.0		49.0	ug/kg		98	(70%-130%)			
trans-1,2-Dichloroethylene	50.0		50.9	ug/kg		102	(70%-130%)			
trans-1,3-Dichloropropylene	50.0		49.5	ug/kg		99	(70%-130%)			
**1,2-Dichloroethane-d4	50.0		51.0	ug/L		102	(81%-124%)			
**Bromofluorobenzene	50.0		51.7	ug/L		103	(70%-130%)			
**Toluene-d8	50.0		47.1	ug/L		94	(81%-120%)			
QC1204096223 LCS 1,1,1-Trichloroethane	50.0		45.4	ug/kg		91	(70%-130%)		08/21/18	09:56
1,1,2,2-Tetrachloroethane	50.0		43.7	ug/kg		87	(70%-130%)			
1,1,2-Trichloroethane	50.0		44.3	ug/kg		89	(70%-130%)			
1,1-Dichloroethane	50.0		43.9	ug/kg		88	(70%-130%)			
1,1-Dichloroethylene	50.0		45.1	ug/kg		90	(70%-130%)			
1,2,3-Trichlorobenzene	50.0		45.3	ug/kg		91	(70%-130%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch 1794368										
1,2,4-Trichlorobenzene	50.0		46.4	ug/kg		93	(70%-130%)	JP1	08/21/18	09:56
1,2-Dibromo-3-chloropropane	50.0		41.3	ug/kg		83	(70%-130%)			
1,2-Dibromoethane	50.0		46.5	ug/kg		93	(70%-130%)			
1,2-Dichlorobenzene	50.0		46.0	ug/kg		92	(70%-130%)			
1,2-Dichloroethane	50.0		47.1	ug/kg		94	(70%-130%)			
1,2-Dichloropropane	50.0		45.1	ug/kg		90	(70%-130%)			
1,3-Dichlorobenzene	50.0		45.1	ug/kg		90	(70%-130%)			
1,4-Dichlorobenzene	50.0		45.3	ug/kg		91	(70%-130%)			
2-Butanone	250		245	ug/kg		98	(70%-130%)			
2-Hexanone	250		282	ug/kg		113	(70%-130%)			
4-Methyl-2-pentanone	250		248	ug/kg		99	(70%-130%)			
Acetone	250		249	ug/kg		100	(70%-130%)			
Benzene	50.0		44.3	ug/kg		89	(70%-130%)			
Bromochloromethane	50.0		43.7	ug/kg		87	(70%-130%)			
Bromodichloromethane	50.0		47.1	ug/kg		94	(70%-130%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch 1794368										
Bromoform	50.0		44.8	ug/kg		90	(70%-130%)	JP1	08/21/18	09:56
Bromomethane	50.0		51.1	ug/kg		102	(70%-130%)			
Carbon disulfide	250		228	ug/kg		91	(70%-130%)			
Carbon tetrachloride	50.0		45.8	ug/kg		92	(70%-130%)			
Chlorobenzene	50.0		45.8	ug/kg		92	(70%-130%)			
Chloroethane	50.0		49.9	ug/kg		100	(70%-130%)			
Chloroform	50.0		46.5	ug/kg		93	(70%-130%)			
Chloromethane	50.0		50.2	ug/kg		100	(70%-130%)			
Cyclohexane	50.0		41.3	ug/kg		83	(70%-130%)			
Dibromochloromethane	50.0		47.9	ug/kg		96	(70%-130%)			
Dichlorodifluoromethane	50.0		52.1	ug/kg		104	(70%-130%)			
Ethylbenzene	50.0		44.4	ug/kg		89	(70%-130%)			
Isopropylbenzene	50.0		43.1	ug/kg		86	(70%-130%)			
Methyl acetate	250		205	ug/kg		82	(70%-130%)			
Methylcyclohexane	50.0		40.7	ug/kg		81	(70%-130%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch 1794368										
Methylene chloride	50.0		44.3	ug/kg		89	(70%-130%)	JP1	08/21/18	09:56
Styrene	50.0		45.2	ug/kg		90	(70%-130%)			
Tetrachloroethylene	50.0		44.1	ug/kg		88	(70%-130%)			
Toluene	50.0		45.2	ug/kg		90	(70%-130%)			
Trichloroethylene	50.0		45.4	ug/kg		91	(70%-130%)			
Trichlorofluoromethane	50.0		51.1	ug/kg		102	(70%-130%)			
Vinyl chloride	50.0		52.3	ug/kg		105	(70%-130%)			
cis-1,2-Dichloroethylene	50.0		42.1	ug/kg		84	(70%-130%)			
cis-1,3-Dichloropropylene	50.0		46.8	ug/kg		94	(70%-130%)			
m,p-Xylenes	100		91.6	ug/kg		92	(70%-130%)			
o-Xylene	50.0		45.5	ug/kg		91	(70%-130%)			
tert-Butyl methyl ether	50.0		43.9	ug/kg		88	(70%-130%)			
trans-1,2-Dichloroethylene	50.0		45.1	ug/kg		90	(70%-130%)			
trans-1,3-Dichloropropylene	50.0		47.4	ug/kg		95	(70%-130%)			
**1,2-Dichloroethane-d4	50.0		50.5	ug/L		101	(81%-124%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
**Bromofluorobenzene	50.0			49.0	ug/L		98	(70%-130%)	JP1	08/21/18	09:56
**Toluene-d8	50.0			49.1	ug/L		98	(81%-120%)			
QC1204096020 MB 1,1,1-Trichloroethane			U	ND	ug/kg					08/18/18	02:19
1,1,2,2-Tetrachloroethane			U	ND	ug/kg						
1,1,2-Trichloroethane			U	ND	ug/kg						
1,1-Dichloroethane			U	ND	ug/kg						
1,1-Dichloroethylene			U	ND	ug/kg						
1,2,3-Trichlorobenzene			U	ND	ug/kg						
1,2,4-Trichlorobenzene			U	ND	ug/kg						
1,2-Dibromo-3-chloropropane			U	ND	ug/kg						
1,2-Dibromoethane			U	ND	ug/kg						
1,2-Dichlorobenzene			U	ND	ug/kg						
1,2-Dichloroethane			U	ND	ug/kg						
1,2-Dichloropropane			U	ND	ug/kg						
1,3-Dichlorobenzene			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
1,4-Dichlorobenzene			U	ND	ug/kg				JP1	08/18/18	02:19
1,4-Dioxane			U	ND	ug/kg						
2-Butanone			U	ND	ug/kg						
2-Hexanone			U	ND	ug/kg						
4-Methyl-2-pentanone			U	ND	ug/kg						
Acetone			U	ND	ug/kg						
Benzene			U	ND	ug/kg						
Bromochloromethane			U	ND	ug/kg						
Bromodichloromethane			U	ND	ug/kg						
Bromoform			U	ND	ug/kg						
Bromomethane			U	ND	ug/kg						
Carbon disulfide			U	ND	ug/kg						
Carbon tetrachloride			U	ND	ug/kg						
Chlorobenzene			U	ND	ug/kg						
Chloroethane			U	ND	ug/kg						

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch	1794368									
Chloroform		U	ND	ug/kg				JP1	08/18/18	02:19
Chloromethane		U	ND	ug/kg						
Cyclohexane		U	ND	ug/kg						
Dibromochloromethane		U	ND	ug/kg						
Dichlorodifluoromethane		U	ND	ug/kg						
Ethylbenzene		U	ND	ug/kg						
Isopropylbenzene		U	ND	ug/kg						
Methyl acetate		U	ND	ug/kg						
Methylcyclohexane		U	ND	ug/kg						
Methylene chloride		U	ND	ug/kg						
Styrene		U	ND	ug/kg						
Tetrachloroethylene		U	ND	ug/kg						
Toluene		U	ND	ug/kg						
Trichloroethylene		U	ND	ug/kg						
Trichlorofluoromethane		U	ND	ug/kg						

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch	1794368									
Trichlorotrifluoroethane			U	ND	ug/kg				JP1	08/18/18 02:19
Vinyl chloride			U	ND	ug/kg					
cis-1,2-Dichloroethylene			U	ND	ug/kg					
cis-1,3-Dichloropropylene			U	ND	ug/kg					
m,p-Xylenes			U	ND	ug/kg					
o-Xylene			U	ND	ug/kg					
tert-Butyl methyl ether			U	ND	ug/kg					
trans-1,2-Dichloroethylene			U	ND	ug/kg					
trans-1,3-Dichloropropylene			U	ND	ug/kg					
**1,2-Dichloroethane-d4	50.0			50.2	ug/L		100	(81%-124%)		
**Bromofluorobenzene	50.0			47.5	ug/L		95	(70%-130%)		
**Toluene-d8	50.0			49.2	ug/L		98	(81%-120%)		
QC1204096218 MB 1,1,1-Trichloroethane			U	ND	ug/kg					08/18/18 22:42
1,1,2,2-Tetrachloroethane			U	ND	ug/kg					
1,1,2-Trichloroethane			U	ND	ug/kg					

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
1,1-Dichloroethane			U	ND	ug/kg				JP1	08/18/18	22:42
1,1-Dichloroethylene			U	ND	ug/kg						
1,2,3-Trichlorobenzene			U	ND	ug/kg						
1,2,4-Trichlorobenzene			J	0.310	ug/kg						
1,2-Dibromo-3-chloropropane			U	ND	ug/kg						
1,2-Dibromoethane			U	ND	ug/kg						
1,2-Dichlorobenzene			U	ND	ug/kg						
1,2-Dichloroethane			U	ND	ug/kg						
1,2-Dichloropropane			U	ND	ug/kg						
1,3-Dichlorobenzene			U	ND	ug/kg						
1,4-Dichlorobenzene			U	ND	ug/kg						
1,4-Dioxane			U	ND	ug/kg						
2-Butanone			U	ND	ug/kg						
2-Hexanone			U	ND	ug/kg						
4-Methyl-2-pentanone			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
Acetone			U	ND	ug/kg				JP1	08/18/18	22:42
Benzene			U	ND	ug/kg						
Bromochloromethane			U	ND	ug/kg						
Bromodichloromethane			U	ND	ug/kg						
Bromoform			U	ND	ug/kg						
Bromomethane			U	ND	ug/kg						
Carbon disulfide			U	ND	ug/kg						
Carbon tetrachloride			U	ND	ug/kg						
Chlorobenzene			U	ND	ug/kg						
Chloroethane			U	ND	ug/kg						
Chloroform			U	ND	ug/kg						
Chloromethane			U	ND	ug/kg						
Cyclohexane			U	ND	ug/kg						
Dibromochloromethane			U	ND	ug/kg						
Dichlorodifluoromethane			U	ND	ug/kg						

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Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
Ethylbenzene			U	ND	ug/kg				JP1	08/18/18	22:42
Isopropylbenzene			U	ND	ug/kg						
Methyl acetate			U	ND	ug/kg						
Methylcyclohexane			U	ND	ug/kg						
Methylene chloride			U	ND	ug/kg						
Styrene			U	ND	ug/kg						
Tetrachloroethylene			U	ND	ug/kg						
Toluene			U	ND	ug/kg						
Trichloroethylene			U	ND	ug/kg						
Trichlorofluoromethane			U	ND	ug/kg						
Trichlorotrifluoroethane			U	ND	ug/kg						
Vinyl chloride			U	ND	ug/kg						
cis-1,2-Dichloroethylene			U	ND	ug/kg						
cis-1,3-Dichloropropylene			U	ND	ug/kg						
m,p-Xylenes			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
o-Xylene				U	ND	ug/kg				JP1	08/18/18 22:42
tert-Butyl methyl ether				U	ND	ug/kg					
trans-1,2-Dichloroethylene				U	ND	ug/kg					
trans-1,3-Dichloropropylene				U	ND	ug/kg					
**1,2-Dichloroethane-d4	50.0				49.3	ug/L	99	(81%-124%)			
**Bromofluorobenzene	50.0				49.0	ug/L	98	(70%-130%)			
**Toluene-d8	50.0				49.3	ug/L	99	(81%-120%)			
QC1204096219 MB 1,1,1-Trichloroethane				U	ND	ug/kg					08/20/18 11:46
1,1,2,2-Tetrachloroethane				U	ND	ug/kg					
1,1,2-Trichloroethane				U	ND	ug/kg					
1,1-Dichloroethane				U	ND	ug/kg					
1,1-Dichloroethylene				U	ND	ug/kg					
1,2,3-Trichlorobenzene				U	ND	ug/kg					
1,2,4-Trichlorobenzene				U	ND	ug/kg					
1,2-Dibromo-3-chloropropane				U	ND	ug/kg					

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
1,2-Dibromoethane			U	ND	ug/kg				JP1	08/20/18	11:46
1,2-Dichlorobenzene			U	ND	ug/kg						
1,2-Dichloroethane			U	ND	ug/kg						
1,2-Dichloropropane			U	ND	ug/kg						
1,3-Dichlorobenzene			U	ND	ug/kg						
1,4-Dichlorobenzene			U	ND	ug/kg						
1,4-Dioxane			U	ND	ug/kg						
2-Butanone			U	ND	ug/kg						
2-Hexanone			U	ND	ug/kg						
4-Methyl-2-pentanone			U	ND	ug/kg						
Acetone			U	ND	ug/kg						
Benzene			U	ND	ug/kg						
Bromochloromethane			U	ND	ug/kg						
Bromodichloromethane			U	ND	ug/kg						
Bromoform			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
Bromomethane			U	ND	ug/kg				JP1	08/20/18	11:46
Carbon disulfide			U	ND	ug/kg						
Carbon tetrachloride			U	ND	ug/kg						
Chlorobenzene			U	ND	ug/kg						
Chloroethane			U	ND	ug/kg						
Chloroform			U	ND	ug/kg						
Chloromethane			U	ND	ug/kg						
Cyclohexane			U	ND	ug/kg						
Dibromochloromethane			U	ND	ug/kg						
Dichlorodifluoromethane			U	ND	ug/kg						
Ethylbenzene			U	ND	ug/kg						
Isopropylbenzene			U	ND	ug/kg						
Methyl acetate			U	ND	ug/kg						
Methylcyclohexane			U	ND	ug/kg						
Methylene chloride			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
Styrene			U	ND	ug/kg				JP1	08/20/18	11:46
Tetrachloroethylene			U	ND	ug/kg						
Toluene			U	ND	ug/kg						
Trichloroethylene			U	ND	ug/kg						
Trichlorofluoromethane			U	ND	ug/kg						
Trichlorotrifluoroethane			U	ND	ug/kg						
Vinyl chloride			U	ND	ug/kg						
cis-1,2-Dichloroethylene			U	ND	ug/kg						
cis-1,3-Dichloropropylene			U	ND	ug/kg						
m,p-Xylenes			U	ND	ug/kg						
o-Xylene			U	ND	ug/kg						
tert-Butyl methyl ether			U	ND	ug/kg						
trans-1,2-Dichloroethylene			U	ND	ug/kg						
trans-1,3-Dichloropropylene			U	ND	ug/kg						
**1,2-Dichloroethane-d4	50.0			51.2	ug/L			102	(81%-124%)		

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch	1794368									
**Bromofluorobenzene	50.0		52.1	ug/L		104	(70%-130%)	JP1	08/20/18	11:46
**Toluene-d8	50.0		50.0	ug/L		100	(81%-120%)			
QC1204096220 MB 1,1,1-Trichloroethane		U	ND	ug/kg					08/21/18	11:31
1,1,2,2-Tetrachloroethane		U	ND	ug/kg						
1,1,2-Trichloroethane		U	ND	ug/kg						
1,1-Dichloroethane		U	ND	ug/kg						
1,1-Dichloroethylene		U	ND	ug/kg						
1,2,3-Trichlorobenzene		U	ND	ug/kg						
1,2,4-Trichlorobenzene		U	ND	ug/kg						
1,2-Dibromo-3-chloropropane		U	ND	ug/kg						
1,2-Dibromoethane		U	ND	ug/kg						
1,2-Dichlorobenzene		U	ND	ug/kg						
1,2-Dichloroethane		U	ND	ug/kg						
1,2-Dichloropropane		U	ND	ug/kg						
1,3-Dichlorobenzene		U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
1,4-Dichlorobenzene			U	ND	ug/kg				JP1	08/21/18	11:31
1,4-Dioxane			U	ND	ug/kg						
2-Butanone			U	ND	ug/kg						
2-Hexanone			U	ND	ug/kg						
4-Methyl-2-pentanone			U	ND	ug/kg						
Acetone			U	ND	ug/kg						
Benzene			U	ND	ug/kg						
Bromochloromethane			U	ND	ug/kg						
Bromodichloromethane			U	ND	ug/kg						
Bromoform			U	ND	ug/kg						
Bromomethane			U	ND	ug/kg						
Carbon disulfide			U	ND	ug/kg						
Carbon tetrachloride			U	ND	ug/kg						
Chlorobenzene			U	ND	ug/kg						
Chloroethane			U	ND	ug/kg						

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS										
Batch	1794368									
Chloroform		U	ND	ug/kg				JP1	08/21/18	11:31
Chloromethane		U	ND	ug/kg						
Cyclohexane		U	ND	ug/kg						
Dibromochloromethane		U	ND	ug/kg						
Dichlorodifluoromethane		U	ND	ug/kg						
Ethylbenzene		U	ND	ug/kg						
Isopropylbenzene		U	ND	ug/kg						
Methyl acetate		U	ND	ug/kg						
Methylcyclohexane		U	ND	ug/kg						
Methylene chloride		U	ND	ug/kg						
Styrene		U	ND	ug/kg						
Tetrachloroethylene		U	ND	ug/kg						
Toluene		U	ND	ug/kg						
Trichloroethylene		U	ND	ug/kg						
Trichlorofluoromethane		U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
Trichlorotrifluoroethane				U	ND	ug/kg				JP1	08/21/18 11:31
Vinyl chloride				U	ND	ug/kg					
cis-1,2-Dichloroethylene				U	ND	ug/kg					
cis-1,3-Dichloropropylene				U	ND	ug/kg					
m,p-Xylenes				U	ND	ug/kg					
o-Xylene				U	ND	ug/kg					
tert-Butyl methyl ether				U	ND	ug/kg					
trans-1,2-Dichloroethylene				U	ND	ug/kg					
trans-1,3-Dichloropropylene				U	ND	ug/kg					
**1,2-Dichloroethane-d4	50.0				53.2	ug/L		106	(81%-124%)		
**Bromofluorobenzene	50.0				50.5	ug/L		101	(70%-130%)		
**Toluene-d8	50.0				51.4	ug/L		103	(81%-120%)		
QC1204096023 456917012 PS 1,1,1-Trichloroethane	50.0	U	ND		39.7	ug/L		79	(70%-130%)		08/19/18 06:26
1,1,1-Trichloroethane	50.0	U	ND		41.6	ug/L		83	(70%-130%)		08/20/18 20:33
1,1,2,2-Tetrachloroethane	50.0	U	ND		40.6	ug/L		81	(70%-130%)		08/19/18 06:26

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
1,1,2,2-Tetrachloroethane	50.0	U	ND	46.0	ug/L		92	(70%-130%)	JP1	08/20/18	20:33
1,1,2-Trichloroethane	50.0	U	ND	36.7	ug/L		73	(70%-130%)			
1,1,2-Trichloroethane	50.0	U	ND	41.6	ug/L		83	(70%-130%)		08/19/18	06:26
1,1-Dichloroethane	50.0	U	ND	41.4	ug/L		83	(70%-130%)		08/20/18	20:33
1,1-Dichloroethane	50.0	U	ND	42.3	ug/L		85	(70%-130%)		08/19/18	06:26
1,1-Dichloroethylene	50.0	U	ND	38.7	ug/L		77	(70%-130%)		08/20/18	20:33
1,1-Dichloroethylene	50.0	U	ND	39.5	ug/L		79	(70%-130%)		08/19/18	06:26
1,2,3-Trichlorobenzene	50.0	U	ND	26.9	ug/L		54 *	(70%-130%)			
1,2,3-Trichlorobenzene	50.0	U	ND	7.29	ug/L		15 *	(70%-130%)		08/20/18	20:33
1,2,4-Trichlorobenzene	50.0	U	ND B	25.6	ug/L		51 *	(70%-130%)		08/19/18	06:26
1,2,4-Trichlorobenzene	50.0	U	ND	7.67	ug/L		15 *	(70%-130%)		08/20/18	20:33
1,2-Dibromo-3-chloropropane	50.0	U	ND	16.7	ug/L		33 *	(70%-130%)			
1,2-Dibromo-3-chloropropane	50.0	U	ND	36.2	ug/L		72	(70%-130%)		08/19/18	06:26
1,2-Dibromoethane	50.0	U	ND	22.3	ug/L		45 *	(70%-130%)		08/20/18	20:33
1,2-Dibromoethane	50.0	U	ND	40.9	ug/L		82	(70%-130%)		08/19/18	06:26

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1794368											
1,2-Dichlorobenzene	50.0	U	ND	20.5	ug/L	41 *	(70%-130%)		JP1	08/20/18	20:33
1,2-Dichlorobenzene	50.0	U	ND	30.9	ug/L	62 *	(70%-130%)			08/19/18	06:26
1,2-Dichloroethane	50.0	U	ND	32.5	ug/L	65 *	(70%-130%)			08/20/18	20:33
1,2-Dichloroethane	50.0	U	ND	42.9	ug/L	86	(70%-130%)			08/19/18	06:26
1,2-Dichloropropane	50.0	U	ND	31.9	ug/L	64 *	(70%-130%)			08/20/18	20:33
1,2-Dichloropropane	50.0	U	ND	43.1	ug/L	86	(70%-130%)			08/19/18	06:26
1,3-Dichlorobenzene	50.0	U	ND	22.2	ug/L	44 *	(70%-130%)			08/20/18	20:33
1,3-Dichlorobenzene	50.0	U	ND	29.3	ug/L	59 *	(70%-130%)			08/19/18	06:26
1,4-Dichlorobenzene	50.0	U	ND	19.3	ug/L	39 *	(70%-130%)			08/20/18	20:33
1,4-Dichlorobenzene	50.0	U	ND	28.6	ug/L	57 *	(70%-130%)			08/19/18	06:26
2-Butanone	250	U	ND	187	ug/L	75	(70%-130%)				
2-Butanone	250	U	ND	203	ug/L	81	(70%-130%)			08/20/18	20:33
2-Hexanone	250	U	ND	106	ug/L	43 *	(70%-130%)				
2-Hexanone	250	U	ND	176	ug/L	70	(70%-130%)			08/19/18	06:26
4-Methyl-2-pentanone	250	U	ND	175	ug/L	70	(70%-130%)			08/20/18	20:33

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
4-Methyl-2-pentanone	250	U	ND	197	ug/L	79	(70%-130%)		JP1	08/19/18	06:26
Acetone	250	U	ND	169	ug/L	68 *	(70%-130%)				
Acetone	250	U	ND	262	ug/L	105	(70%-130%)			08/20/18	20:33
Benzene	50.0	U	ND	31.6	ug/L	63 *	(70%-130%)				
Benzene	50.0	U	ND	41.6	ug/L	83	(70%-130%)			08/19/18	06:26
Bromochloromethane	50.0	U	ND	36.1	ug/L	72	(70%-130%)			08/20/18	20:33
Bromochloromethane	50.0	U	ND	42.3	ug/L	85	(70%-130%)			08/19/18	06:26
Bromodichloromethane	50.0	U	ND	32.5	ug/L	65 *	(70%-130%)			08/20/18	20:33
Bromodichloromethane	50.0	U	ND	40.7	ug/L	81	(70%-130%)			08/19/18	06:26
Bromoform	50.0	U	ND	39.2	ug/L	78	(70%-130%)				
Bromoform	50.0	U	ND	45.3	ug/L	91	(70%-130%)			08/20/18	20:33
Bromomethane	50.0	U	ND	15.3	ug/L	31 *	(70%-130%)			08/19/18	06:26
Bromomethane	50.0	U	ND	36.1	ug/L	72	(70%-130%)			08/20/18	20:33
Carbon disulfide	250	U	ND	169	ug/L	67 *	(70%-130%)				
Carbon disulfide	250	U	ND	198	ug/L	79	(70%-130%)			08/19/18	06:26

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Parlname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
Carbon tetrachloride	50.0	U	ND	37.1	ug/L	74	(70%-130%)		JP1	08/19/18	06:26
Carbon tetrachloride	50.0	U	ND	39.4	ug/L	79	(70%-130%)			08/20/18	20:33
Chlorobenzene	50.0	U	ND	23.1	ug/L	46*	(70%-130%)				
Chlorobenzene	50.0	U	ND	36.6	ug/L	73	(70%-130%)			08/19/18	06:26
Chloroethane	50.0	U	ND	43.0	ug/L	86	(70%-130%)			08/20/18	20:33
Chloroethane	50.0	U	ND	5.35	ug/L	11*	(70%-130%)			08/19/18	06:26
Chloroform	50.0	U	ND	39.6	ug/L	79	(70%-130%)			08/20/18	20:33
Chloroform	50.0	U	ND	41.9	ug/L	84	(70%-130%)			08/19/18	06:26
Chloromethane	50.0	U	ND	47.6	ug/L	95	(70%-130%)				
Chloromethane	50.0	U	ND	73.0	ug/L	146*	(70%-130%)			08/20/18	20:33
Cyclohexane	50.0	U	ND	32.0	ug/L	64*	(70%-130%)				
Cyclohexane	50.0	U	ND	36.2	ug/L	72	(70%-130%)			08/19/18	06:26
Dibromochloromethane	50.0	U	ND	34.7	ug/L	69*	(70%-130%)			08/20/18	20:33
Dibromochloromethane	50.0	U	ND	41.9	ug/L	84	(70%-130%)			08/19/18	06:26
Dichlorodifluoromethane	50.0	U	ND	45.6	ug/L	91	(70%-130%)				

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Parlname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
Dichlorodifluoromethane	50.0	U	ND	48.0	ug/L	96	(70%-130%)		JP1	08/20/18	20:33
Ethylbenzene	50.0	U	ND	26.6	ug/L	53 *	(70%-130%)				
Ethylbenzene	50.0	U	ND	31.5	ug/L	63 *	(70%-130%)			08/19/18	06:26
Isopropylbenzene	50.0	U	ND	28.6	ug/L	57 *	(70%-130%)				
Isopropylbenzene	50.0	U	ND	52.8	ug/L	106	(70%-130%)			08/20/18	20:33
Methyl acetate	250	U	ND	216	ug/L	86	(70%-130%)			08/19/18	06:26
Methyl acetate	250	U	ND	219	ug/L	88	(70%-130%)			08/20/18	20:33
Methylcyclohexane	50.0	U	ND	25.7	ug/L	51 *	(70%-130%)				
Methylcyclohexane	50.0	U	ND	34.5	ug/L	69 *	(70%-130%)			08/19/18	06:26
Methylene chloride	50.0	U	ND	43.9	ug/L	88	(70%-130%)				
Methylene chloride	50.0		7.93	47.3	ug/L	79	(70%-130%)			08/20/18	20:33
Styrene	50.0	U	ND	15.9	ug/L	32 *	(70%-130%)				
Styrene	50.0	U	ND	31.6	ug/L	63 *	(70%-130%)			08/19/18	06:26
Tetrachloroethylene	50.0	U	ND	30.9	ug/L	62 *	(70%-130%)				
Tetrachloroethylene	50.0	U	ND	31.7	ug/L	63 *	(70%-130%)			08/20/18	20:33

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
Toluene	50.0	U	ND	33.8	ug/L	68*	(70%-130%)		JP1	08/20/18	20:33
Toluene	50.0	U	ND	36.5	ug/L	73	(70%-130%)			08/19/18	06:26
Trichloroethylene	50.0	U	ND	26.7	ug/L	53*	(70%-130%)			08/20/18	20:33
Trichloroethylene	50.0	U	ND	38.4	ug/L	77	(70%-130%)			08/19/18	06:26
Trichlorofluoromethane	50.0	U	ND	41.0	ug/L	82	(70%-130%)			08/20/18	20:33
Trichlorofluoromethane	50.0	U	ND	41.4	ug/L	83	(70%-130%)			08/19/18	06:26
Vinyl chloride	50.0	U	ND	41.0	ug/L	82	(70%-130%)			08/20/18	20:33
Vinyl chloride	50.0	U	ND	54.1	ug/L	108	(70%-130%)			08/19/18	06:26
cis-1,2-Dichloroethylene	50.0	U	ND	31.6	ug/L	63*	(70%-130%)			08/20/18	20:33
cis-1,2-Dichloroethylene	50.0	U	ND	41.6	ug/L	83	(70%-130%)			08/19/18	06:26
cis-1,3-Dichloropropylene	50.0	U	ND	21.3	ug/L	43*	(70%-130%)			08/20/18	20:33
cis-1,3-Dichloropropylene	50.0	U	ND	40.9	ug/L	82	(70%-130%)			08/19/18	06:26
m,p-Xylenes	100	U	ND	44.6	ug/L	45*	(70%-130%)			08/20/18	20:33
m,p-Xylenes	100	U	ND	60.2	ug/L	60*	(70%-130%)			08/19/18	06:26
o-Xylene	50.0	U	ND	25.1	ug/L	50*	(70%-130%)			08/20/18	20:33

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
o-Xylene	50.0	U	ND	31.1	ug/L	62 *	(70%-130%)		JP1	08/19/18	06:26
tert-Butyl methyl ether	50.0	U	ND	42.0	ug/L	84	(70%-130%)				
tert-Butyl methyl ether	50.0	U	ND	48.2	ug/L	96	(70%-130%)			08/20/18	20:33
trans-1,2-Dichloroethylene	50.0	U	ND	30.6	ug/L	61 *	(70%-130%)				
trans-1,2-Dichloroethylene	50.0	U	ND	39.3	ug/L	79	(70%-130%)			08/19/18	06:26
trans-1,3-Dichloropropylene	50.0	U	ND	19.7	ug/L	39 *	(70%-130%)			08/20/18	20:33
trans-1,3-Dichloropropylene	50.0	U	ND	40.1	ug/L	80	(70%-130%)			08/19/18	06:26
**1,2-Dichloroethane-d4	50.0		48.8	47.3	ug/L	95	(81%-124%)				
**1,2-Dichloroethane-d4	50.0		55.4	54.3	ug/L	109	(81%-124%)			08/20/18	20:33
**Bromofluorobenzene	50.0		49.4	48.8	ug/L	98	(70%-130%)			08/19/18	06:26
**Bromofluorobenzene	50.0		50.0	66.0	ug/L	132 *	(70%-130%)			08/20/18	20:33
**Toluene-d8	50.0		49.7	47.7	ug/L	95	(81%-120%)			08/19/18	06:26
**Toluene-d8	50.0		67.1	64.1	ug/L	128 *	(81%-120%)			08/20/18	20:33
QC1204096024 456917012 PSD											
1,1,1-Trichloroethane	50.0	U	ND	37.2	ug/L	7	74	(0%-20%)		08/19/18	06:57
1,1,1-Trichloroethane	50.0	U	ND	49.3	ug/L	17	99	(0%-20%)		08/20/18	21:04

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
1,1,2,2-Tetrachloroethane	50.0	U	ND	40.4	ug/L	0	81	(0%-20%)	JP1	08/19/18	06:57
1,1,2,2-Tetrachloroethane	50.0	U	ND	58.9	ug/L	25*	118	(0%-20%)		08/20/18	21:04
1,1,2-Trichloroethane	50.0	U	ND	42.9	ug/L	3	86	(0%-20%)		08/19/18	06:57
1,1,2-Trichloroethane	50.0	U	ND	55.5	ug/L	41*	111	(0%-20%)		08/20/18	21:04
1,1-Dichloroethane	50.0	U	ND	41.5	ug/L	2	83	(0%-20%)		08/19/18	06:57
1,1-Dichloroethane	50.0	U	ND	49.8	ug/L	18	100	(0%-20%)		08/20/18	21:04
1,1-Dichloroethylene	50.0	U	ND	38.9	ug/L	2	78	(0%-20%)		08/19/18	06:57
1,1-Dichloroethylene	50.0	U	ND	45.3	ug/L	16	91	(0%-20%)		08/20/18	21:04
1,2,3-Trichlorobenzene	50.0	U	ND	11.1	ug/L	41*	22*	(0%-20%)			
1,2,3-Trichlorobenzene	50.0	U	ND	28.7	ug/L	6	57*	(0%-20%)		08/19/18	06:57
1,2,4-Trichlorobenzene	50.0	U	ND	11.8	ug/L	42*	24*	(0%-20%)		08/20/18	21:04
1,2,4-Trichlorobenzene	50.0	U	ND B	26.5	ug/L	3	53*	(0%-20%)		08/19/18	06:57
1,2-Dibromo-3-chloropropane	50.0	U	ND	16.9	ug/L	1	34*	(0%-20%)		08/20/18	21:04
1,2-Dibromo-3-chloropropane	50.0	U	ND	39.9	ug/L	10	80	(0%-20%)		08/19/18	06:57
1,2-Dibromoethane	50.0	U	ND	25.3	ug/L	12	51*	(0%-20%)		08/20/18	21:04

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
1,2-Dibromoethane	50.0	U	ND	42.6	ug/L	4	85	(0%-20%)	JP1	08/19/18	06:57
1,2-Dichlorobenzene	50.0	U	ND	27.2	ug/L	28*	54*	(0%-20%)		08/20/18	21:04
1,2-Dichlorobenzene	50.0	U	ND	29.1	ug/L	6	58*	(0%-20%)		08/19/18	06:57
1,2-Dichloroethane	50.0	U	ND	34.4	ug/L	6	69*	(0%-20%)		08/20/18	21:04
1,2-Dichloroethane	50.0	U	ND	42.3	ug/L	1	85	(0%-20%)		08/19/18	06:57
1,2-Dichloropropane	50.0	U	ND	34.8	ug/L	9	70	(0%-20%)		08/20/18	21:04
1,2-Dichloropropane	50.0	U	ND	39.8	ug/L	8	80	(0%-20%)		08/19/18	06:57
1,3-Dichlorobenzene	50.0	U	ND	25.7	ug/L	13	51*	(0%-20%)			
1,3-Dichlorobenzene	50.0	U	ND	34.7	ug/L	44*	69*	(0%-20%)		08/20/18	21:04
1,4-Dichlorobenzene	50.0	U	ND	26.0	ug/L	9	52*	(0%-20%)		08/19/18	06:57
1,4-Dichlorobenzene	50.0	U	ND	28.6	ug/L	39*	57*	(0%-20%)		08/20/18	21:04
2-Butanone	250	U	ND	221	ug/L	17	88	(0%-20%)		08/19/18	06:57
2-Butanone	250	U	ND	237	ug/L	15	95	(0%-20%)		08/20/18	21:04
2-Hexanone	250	U	ND	202	ug/L	14	81	(0%-20%)		08/19/18	06:57
2-Hexanone	250	U	ND	92.5	ug/L	14	37*	(0%-20%)		08/20/18	21:04

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Parlname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
4-Methyl-2-pentanone	250	U	ND	206	ug/L	4	82	(0%-20%)	JP1	08/19/18	06:57
4-Methyl-2-pentanone	250	U	ND	233	ug/L	28*	93	(0%-20%)		08/20/18	21:04
Acetone	250	U	ND	194	ug/L	13	78	(0%-20%)		08/19/18	06:57
Acetone	250	U	ND	309	ug/L	16	124	(0%-20%)		08/20/18	21:04
Benzene	50.0	U	ND	34.5	ug/L	9	69 *	(0%-20%)			
Benzene	50.0	U	ND	37.9	ug/L	9	76	(0%-20%)		08/19/18	06:57
Bromochloromethane	50.0	U	ND	42.2	ug/L	16	84	(0%-20%)		08/20/18	21:04
Bromochloromethane	50.0	U	ND	43.0	ug/L	2	86	(0%-20%)		08/19/18	06:57
Bromodichloromethane	50.0	U	ND	34.4	ug/L	6	69 *	(0%-20%)		08/20/18	21:04
Bromodichloromethane	50.0	U	ND	38.6	ug/L	5	77	(0%-20%)		08/19/18	06:57
Bromoform	50.0	U	ND	40.3	ug/L	3	81	(0%-20%)			
Bromoform	50.0	U	ND	58.9	ug/L	26*	118	(0%-20%)		08/20/18	21:04
Bromomethane	50.0	U	ND	14.5	ug/L	6	29 *	(0%-20%)		08/19/18	06:57
Bromomethane	50.0	U	ND	50.6	ug/L	33*	101	(0%-20%)		08/20/18	21:04
Carbon disulfide	250	U	ND	185	ug/L	9	74	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1794368											
Carbon disulfide	250	U	ND	189	ug/L	5	76	(0%-20%)	JP1	08/19/18	06:57
Carbon tetrachloride	50.0	U	ND	34.7	ug/L	7	69 *	(0%-20%)			
Carbon tetrachloride	50.0	U	ND	44.2	ug/L	11	88	(0%-20%)		08/20/18	21:04
Chlorobenzene	50.0	U	ND	31.1	ug/L	29 *	62 *	(0%-20%)			
Chlorobenzene	50.0	U	ND	32.0	ug/L	13	64 *	(0%-20%)		08/19/18	06:57
Chloroethane	50.0	U	ND	4.43	ug/L	19	9 *	(0%-20%)			
Chloroethane	50.0	U	ND	53.8	ug/L	22 *	108	(0%-20%)		08/20/18	21:04
Chloroform	50.0	U	ND	39.5	ug/L	6	79	(0%-20%)		08/19/18	06:57
Chloroform	50.0	U	ND	46.2	ug/L	15	92	(0%-20%)		08/20/18	21:04
Chloromethane	50.0	U	ND	45.7	ug/L	4	91	(0%-20%)		08/19/18	06:57
Chloromethane	50.0	U	ND	97.2	ug/L	28 *	194 *	(0%-20%)		08/20/18	21:04
Cyclohexane	50.0	U	ND	32.8	ug/L	10	66 *	(0%-20%)		08/19/18	06:57
Cyclohexane	50.0	U	ND	36.2	ug/L	12	72	(0%-20%)		08/20/18	21:04
Dibromochloromethane	50.0	U	ND	40.0	ug/L	5	80	(0%-20%)		08/19/18	06:57
Dibromochloromethane	50.0	U	ND	49.4	ug/L	35 *	99	(0%-20%)		08/20/18	21:04

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
Dichlorodifluoromethane	50.0	U	ND	43.6	ug/L	4	87	(0%-20%)	JP1	08/19/18	06:57
Dichlorodifluoromethane	50.0	U	ND	57.1	ug/L	17	114	(0%-20%)		08/20/18	21:04
Ethylbenzene	50.0	U	ND	26.4	ug/L	18	53 *	(0%-20%)		08/19/18	06:57
Ethylbenzene	50.0	U	ND	41.7	ug/L	44 *	83	(0%-20%)		08/20/18	21:04
Isopropylbenzene	50.0	U	ND	23.3	ug/L	21 *	47 *	(0%-20%)		08/19/18	06:57
Isopropylbenzene	50.0	U	ND	90.5	ug/L	53 *	181 *	(0%-20%)		08/20/18	21:04
Methyl acetate	250	U	ND	240	ug/L	11	96	(0%-20%)		08/19/18	06:57
Methyl acetate	250	U	ND	301	ug/L	32 *	121	(0%-20%)		08/20/18	21:04
Methylcyclohexane	50.0	U	ND	28.7	ug/L	11	57 *	(0%-20%)			
Methylcyclohexane	50.0	U	ND	31.4	ug/L	9	63 *	(0%-20%)		08/19/18	06:57
Methylene chloride	50.0	U	ND	43.2	ug/L	2	86	(0%-20%)			
Methylene chloride	50.0		7.93	59.3	ug/L	23 *	103	(0%-20%)		08/20/18	21:04
Styrene	50.0	U	ND	20.4	ug/L	25 *	41 *	(0%-20%)			
Styrene	50.0	U	ND	29.6	ug/L	7	59 *	(0%-20%)		08/19/18	06:57
Tetrachloroethylene	50.0	U	ND	26.7	ug/L	15	53 *	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
Tetrachloroethylene	50.0	U	ND	50.8	ug/L	46*	102	(0%-20%)	JP1	08/20/18	21:04
Toluene	50.0	U	ND	31.2	ug/L	16	62 *	(0%-20%)		08/19/18	06:57
Toluene	50.0	U	ND	47.4	ug/L	33*	95	(0%-20%)		08/20/18	21:04
Trichloroethylene	50.0	U	ND	27.7	ug/L	3	55 *	(0%-20%)			
Trichloroethylene	50.0	U	ND	33.9	ug/L	12	68 *	(0%-20%)		08/19/18	06:57
Trichlorofluoromethane	50.0	U	ND	39.3	ug/L	5	79	(0%-20%)			
Trichlorofluoromethane	50.0	U	ND	47.8	ug/L	15	96	(0%-20%)		08/20/18	21:04
Vinyl chloride	50.0	U	ND	51.9	ug/L	23*	104	(0%-20%)			
Vinyl chloride	50.0	U	ND	52.1	ug/L	4	104	(0%-20%)		08/19/18	06:57
cis-1,2-Dichloroethylene	50.0	U	ND	36.0	ug/L	13	72	(0%-20%)		08/20/18	21:04
cis-1,2-Dichloroethylene	50.0	U	ND	40.5	ug/L	3	81	(0%-20%)		08/19/18	06:57
cis-1,3-Dichloropropylene	50.0	U	ND	18.5	ug/L	14	37 *	(0%-20%)		08/20/18	21:04
cis-1,3-Dichloropropylene	50.0	U	ND	38.9	ug/L	5	78	(0%-20%)		08/19/18	06:57
m,p-Xylenes	100	U	ND	52.3	ug/L	14	52 *	(0%-20%)			
m,p-Xylenes	100	U	ND	72.3	ug/L	47*	72	(0%-20%)		08/20/18	21:04

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1794368										
o-Xylene	50.0	U	ND	28.9	ug/L	8	58*	(0%-20%)	JP1	08/19/18	06:57
o-Xylene	50.0	U	ND	34.8	ug/L	32*	70	(0%-20%)		08/20/18	21:04
tert-Butyl methyl ether	50.0	U	ND	46.0	ug/L	9	92	(0%-20%)		08/19/18	06:57
tert-Butyl methyl ether	50.0	U	ND	60.5	ug/L	23*	121	(0%-20%)		08/20/18	21:04
trans-1,2-Dichloroethylene	50.0	U	ND	34.9	ug/L	13	70	(0%-20%)			
trans-1,2-Dichloroethylene	50.0	U	ND	37.9	ug/L	3	76	(0%-20%)		08/19/18	06:57
trans-1,3-Dichloropropylene	50.0	U	ND	22.7	ug/L	14	45*	(0%-20%)		08/20/18	21:04
trans-1,3-Dichloropropylene	50.0	U	ND	38.9	ug/L	3	78	(0%-20%)		08/19/18	06:57
**1,2-Dichloroethane-d4	50.0		48.8	47.4	ug/L		95	(81%-124%)			
**1,2-Dichloroethane-d4	50.0		55.4	57.2	ug/L		114	(81%-124%)		08/20/18	21:04
**Bromofluorobenzene	50.0		49.4	49.7	ug/L		99	(70%-130%)		08/19/18	06:57
**Bromofluorobenzene	50.0		50.0	58.6	ug/L		117	(70%-130%)		08/20/18	21:04
**Toluene-d8	50.0		49.7	46.3	ug/L		93	(81%-120%)		08/19/18	06:57
**Toluene-d8	50.0		67.1	74.6	ug/L		149*	(81%-120%)		08/20/18	21:04

Notes:

The Qualifiers in this report are defined as follows:

QC Summary

Workorder: 456917

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
**	Analyte is a surrogate compound										
<	Result is less than value reported										
>	Result is greater than value reported										
A	The TIC is a suspected aldol-condensation product										
B	The target analyte was detected in the associated blank.										
C	Analyte has been confirmed by GC/MS analysis										
D	Results are reported from a diluted aliquot of the sample										
E	Concentration of the target analyte exceeds the instrument calibration range										
H	Analytical holding time was exceeded										
J	Value is estimated										
JNX	Non Calibrated Compound										
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor										
N	Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor										
N/A	RPD or %Recovery limits do not apply.										
N1	See case narrative										
ND	Analyte concentration is not detected above the detection limit										
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, the difference is >70%.										
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.										
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.										
UJ	Compound cannot be extracted										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Y	QC Samples were not spiked with this compound										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

[^]The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Semi-Volatile Analysis

Case Narrative

**GC/MS Semivolatile
Technical Case Narrative
URS Energy & Construction (URSC)
SDG #: 456917**

Product: Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry

Analytical Method: SW846 3541/8270C

Analytical Procedure: GL-OA-E-009 REV# 40

Analytical Batch: 1791788

Preparation Method: SW846 3541

Preparation Procedure: GL-OA-E-066 REV# 8

Preparation Batch: 1791787

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
456917020	G2SOL04
1204090345	Method Blank (MB)
1204090346	Laboratory Control Sample (LCS)
1204090347	456917020(G2SOL04) Matrix Spike (MS)
1204090348	456917020(G2SOL04) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Surrogate Recoveries

The MS or MSD (See Below) recoveries were not within the acceptance limits. The associated MS or MSD passed recoveries, as did the LCS. It appears that the low recoveries were isolated to the MS or MSD only and were the result of a poor extraction.

Sample	Analyte	Value
1204090348 (G2SOL04MSD)	2, 4, 6-Tribromophenol	26* (39%-115%)
	2-Fluorobiphenyl	18* (35%-107%)
	2-Fluorophenol	15* (36%-104%)
	Nitrobenzene-d5	17* (34%-109%)
	Phenol-d5	18* (39%-106%)
	p-Terphenyl-d14	24* (45%-119%)

Spike Recovery Statement

The MS or MSD (See Below) spike recoveries were not within the acceptance limits. The associated MS or

MSD passed recoveries, as did the LCS. It appears that the low spike recoveries were isolated to the MS or MSD only and were the result of a poor extraction.

Sample	Analyte	Value
1204090348 (G2SOL04MSD)	Several	See applicable report

The MS or MSD (See Below) recovered spiked analytes outside of the established acceptance limits. As similar recoveries were displayed in the MS and MSD, the failures were attributed to sample matrix interference and the data were reported.

Sample	Analyte	Value
1204090347 (G2SOL04MS)	Several	See applicable report

MS/MSD Relative Percent Difference (RPD) Statement

The RPD values between the MS and MSD, (See Below), were not within the acceptance limits due to the large difference between the individual recoveries in each MS and MSD analyte pair. The failures may be attributed to an error in the extraction process.

Sample	Analyte	Value
1204090347MS and 1204090348MSD (G2SOL04)	Several	See applicable report

Miscellaneous Information

Manual Integrations

Sample (See Below) required manual integration in order to properly identify one or more peaks and/or to correctly position the baseline as set in the calibration standard injections.

Sample	Analyte	Value
1204090347 (G2SOL04MS)	N-Methyl-N-nitrosomethylamine	Result 1010ug/kg

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

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Qualifier Definition Report for

URSC013 URS Energy & Construction (2012-SC-SPRU-29463-171)

Client SDG: 456917 GEL Work Order: 456917

The Qualifiers in this report are defined as follows:

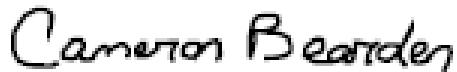
- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- B The target analyte was detected in the associated blank.
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- DL Indicates that sample is diluted.
- RA Indicates that sample is re-analyzed without re-extraction.
- RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature:



Name: Cameron Bearden

Date: 16 AUG 2018

Title: Group Leader

Sample Data Summary

Certificate of Analysis

Report Date: August 14, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
SPRU Disposition Project

Client Sample ID:	G2SOL04	Project:	URSC00211
Sample ID:	456917020	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:09		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	10.2%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
8270C BNA Soil "Dry Weight Corrected"												
1,2,4-Trichlorobenzene	U	ND	111	371	ug/kg	0.0333	1	JMB3	08/13/18	1840	1791788	1
1,2-Dichlorobenzene	U	ND	111	371	ug/kg	0.0333	1					
1,2-Diphenylhydrazine	U	ND	111	371	ug/kg	0.0333	1					
1,3-Dichlorobenzene	U	ND	111	371	ug/kg	0.0333	1					
1,4-Dichlorobenzene	U	ND	111	371	ug/kg	0.0333	1					
1-Methylnaphthalene	U	ND	11.1	37.1	ug/kg	0.0333	1					
2,4,5-Trichlorophenol	U	ND	111	371	ug/kg	0.0333	1					
2,4,6-Trichlorophenol	U	ND	111	371	ug/kg	0.0333	1					
2,4-Dichlorophenol	U	ND	111	371	ug/kg	0.0333	1					
2,4-Dimethylphenol	U	ND	111	371	ug/kg	0.0333	1					
2,4-Dinitrophenol	U	ND	111	742	ug/kg	0.0333	1					
2,4-Dinitrotoluene	U	ND	111	371	ug/kg	0.0333	1					
2,6-Dinitrotoluene	U	ND	111	371	ug/kg	0.0333	1					
2-Chloronaphthalene	U	ND	11.1	37.1	ug/kg	0.0333	1					
2-Chlorophenol	U	ND	111	371	ug/kg	0.0333	1					
2-Methyl-4,6-dinitrophenol	U	ND	111	371	ug/kg	0.0333	1					
2-Methylnaphthalene	U	ND	11.1	37.1	ug/kg	0.0333	1					
2-Nitrophenol	U	ND	111	371	ug/kg	0.0333	1					
3,3'-Dichlorobenzidine	U	ND	111	371	ug/kg	0.0333	1					
4-Bromophenylphenylether	U	ND	111	371	ug/kg	0.0333	1					
4-Chloro-3-methylphenol	U	ND	148	371	ug/kg	0.0333	1					
4-Chloroaniline	U	ND	111	371	ug/kg	0.0333	1					
4-Chlorophenylphenylether	U	ND	111	371	ug/kg	0.0333	1					
4-Nitrophenol	U	ND	111	371	ug/kg	0.0333	1					
Acenaphthene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Acenaphthylene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Acetophenone	U	ND	111	371	ug/kg	0.0333	1					
Aniline	U	ND	111	371	ug/kg	0.0333	1					
Anthracene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Benzidine	U	ND	111	371	ug/kg	0.0333	1					
Benzo(a)anthracene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Benzo(a)pyrene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Benzo(b)fluoranthene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Benzo(ghi)perylene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Benzo(k)fluoranthene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Benzoic acid	U	ND	186	742	ug/kg	0.0333	1					

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Certificate of Analysis

Report Date: August 14, 2018

Company : URS
 Address : 2425 River Road (c/o SPRU DP)

Contact: Mr. Jason Litwiller
 Project: SPRU Disposition Project

Client Sample ID:	G2SOL04	Project:	URSC00211
Sample ID:	456917020	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
8270C BNA Soil "Dry Weight Corrected"												
Benzyl alcohol	U	ND	111	371	ug/kg	0.0333	1					
Butylbenzylphthalate	U	ND	11.1	37.1	ug/kg	0.0333	1					
Carbazole	U	ND	11.1	37.1	ug/kg	0.0333	1					
Chrysene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Di-n-butylphthalate	U	ND	11.1	37.1	ug/kg	0.0333	1					
Di-n-octylphthalate	U	ND	11.1	37.1	ug/kg	0.0333	1					
Dibenzo(a,h)anthracene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Dibenzofuran	U	ND	111	371	ug/kg	0.0333	1					
Diethylphthalate	U	ND	11.1	37.1	ug/kg	0.0333	1					
Dimethylphthalate	U	ND	11.1	37.1	ug/kg	0.0333	1					
Diphenylamine	U	ND	111	371	ug/kg	0.0333	1					
Fluoranthene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Fluorene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Hexachlorobenzene	U	ND	111	371	ug/kg	0.0333	1					
Hexachlorobutadiene	U	ND	111	371	ug/kg	0.0333	1					
Hexachlorocyclopentadiene	U	ND	111	371	ug/kg	0.0333	1					
Hexachloroethane	U	ND	111	371	ug/kg	0.0333	1					
Indeno(1,2,3-cd)pyrene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Isophorone	U	ND	111	371	ug/kg	0.0333	1					
N-Methyl-N-nitrosomethylamine	U	ND	111	371	ug/kg	0.0333	1					
N-Nitrosodipropylamine	U	ND	111	371	ug/kg	0.0333	1					
Naphthalene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Nitrobenzene	U	ND	111	371	ug/kg	0.0333	1					
Pentachlorophenol	U	ND	111	371	ug/kg	0.0333	1					
Phenanthrene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Phenol	U	ND	111	371	ug/kg	0.0333	1					
Pyrene	U	ND	11.1	37.1	ug/kg	0.0333	1					
Pyridine	U	ND	111	371	ug/kg	0.0333	1					
Tributylphosphate	U	ND	111	371	ug/kg	0.0333	1					
bis(2-Chloro-1-methylethyl)ether	U	ND	111	371	ug/kg	0.0333	1					
bis(2-Chloroethoxy)methane	U	ND	111	371	ug/kg	0.0333	1					
bis(2-Chloroethyl) ether	U	ND	111	371	ug/kg	0.0333	1					
bis(2-Ethylhexyl)phthalate	U	ND	11.1	37.1	ug/kg	0.0333	1					
m,p-Cresols	U	ND	111	371	ug/kg	0.0333	1					
m-Nitroaniline	U	ND	111	371	ug/kg	0.0333	1					
o-Cresol	U	ND	111	371	ug/kg	0.0333	1					

Certificate of Analysis

Report Date: August 14, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	G2SOL04	Project:	URSC00211
Sample ID:	456917020	Client ID:	URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
8270C BNA Soil "Dry Weight Corrected"												
o-Nitroaniline	U	ND	122	371	ug/kg	0.0333	1					
p-Nitroaniline	U	ND	111	371	ug/kg	0.0333	1					
The following Prep Methods were performed:												
Method	Description			Analyst	Date	Time	Prep Batch					
SW846 3541	Prep Method 3541 8270C BNA for Soil			DXB8	08/13/18	1019	1791787					
The following Analytical Methods were performed:												
Method	Description				Analyst Comments							
1	SW846 3541/8270C											
Surrogate/Tracer Recovery	Test			Result	Nominal	Recovery%	Acceptable Limits					
2-Fluorobiphenyl	8270C BNA Soil "Dry Weight Corrected"			1180 ug/kg	1860	64	(35%-107%)					
Nitrobenzene-d5	8270C BNA Soil "Dry Weight Corrected"			1280 ug/kg	1860	69	(34%-109%)					
p-Terphenyl-d14	8270C BNA Soil "Dry Weight Corrected"			1380 ug/kg	1860	74	(45%-119%)					
2,4,6-Tribromophenol	8270C BNA Soil "Dry Weight Corrected"			3070 ug/kg	3710	83	(39%-115%)					
2-Fluorophenol	8270C BNA Soil "Dry Weight Corrected"			2630 ug/kg	3710	71	(36%-104%)					
Phenol-d5	8270C BNA Soil "Dry Weight Corrected"			2750 ug/kg	3710	74	(39%-106%)					

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

Quality Control Summary

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QC Summary

Report Date: August 14, 2018

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URS

2425 River Road (c/o SPRU DP)
Niskayuna, New York

Contact: Mr. Jason Litwiller

Workorder: 456917

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
1,2,4-Trichlorobenzene	QC1204090346 LCS	1670		1400	ug/kg	84	(52%-108%)	JMB3	08/13/18 15:33		
1,2-Dichlorobenzene		1670		1300	ug/kg	78	(48%-104%)				
1,2-Diphenylhydrazine		1670		1370	ug/kg	82	(56%-104%)				
1,3-Dichlorobenzene		1670		1240	ug/kg	74	(47%-100%)				
1,4-Dichlorobenzene		1670		1280	ug/kg	77	(47%-102%)				
1-Methylnaphthalene		1670		1310	ug/kg	79	(55%-112%)				
2,4,5-Trichlorophenol		1670		1440	ug/kg	87	(58%-108%)				
2,4,6-Trichlorophenol		1670		1500	ug/kg	90	(54%-112%)				
2,4-Dichlorophenol		1670		1470	ug/kg	88	(55%-105%)				
2,4-Dimethylphenol		1670		1150	ug/kg	69	(53%-103%)				
2,4-Dinitrophenol		1670		881	ug/kg	53	(26%-113%)				
2,4-Dinitrotoluene		1670		1550	ug/kg	93	(57%-114%)				
2,6-Dinitrotoluene		1670		1440	ug/kg	86	(59%-109%)				
2-Chloronaphthalene		1670		1320	ug/kg	79	(55%-102%)				

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS										
Batch 1791788										
2-Chlorophenol	1670		1420	ug/kg		85	(54%-106%)	JMB3	08/13/18	15:33
2-Methyl-4,6-dinitrophenol	1670		1010	ug/kg		61	(35%-110%)			
2-Methylnaphthalene	1670		1260	ug/kg		76	(50%-105%)			
2-Nitrophenol	1670		1440	ug/kg		86	(53%-109%)			
3,3'-Dichlorobenzidine	1670		1490	ug/kg		89	(36%-111%)			
4-Bromophenylphenylether	1670		1440	ug/kg		86	(56%-110%)			
4-Chloro-3-methylphenol	1670		1450	ug/kg		87	(56%-111%)			
4-Chloroaniline	1670		1020	ug/kg		62	(38%-99%)			
4-Chlorophenylphenylether	1670		1480	ug/kg		89	(53%-119%)			
4-Nitrophenol	1670		1390	ug/kg		83	(42%-116%)			
Acenaphthene	1670		1330	ug/kg		80	(57%-104%)			
Acenaphthylene	1670		1350	ug/kg		81	(55%-107%)			
Acetophenone	1670		1380	ug/kg		83	(53%-112%)			
Aniline	1670		1030	ug/kg		62	(45%-92%)			
Anthracene	1670		1360	ug/kg		81	(58%-102%)			

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS										
Batch 1791788										
Benzidine	3330		1280	ug/kg		38	(21%-81%)	JMB3	08/13/18	15:33
Benzo(a)anthracene	1670		1370	ug/kg		82	(60%-106%)			
Benzo(a)pyrene	1670		1470	ug/kg		88	(41%-115%)			
Benzo(b)fluoranthene	1670		1350	ug/kg		81	(40%-115%)			
Benzo(ghi)perylene	1670		1520	ug/kg		91	(35%-126%)			
Benzo(k)fluoranthene	1670		1380	ug/kg		83	(41%-117%)			
Benzoic acid	3330		1690	ug/kg		51	(36%-115%)			
Benzyl alcohol	1670		1390	ug/kg		84	(49%-117%)			
Butylbenzylphthalate	1670		1250	ug/kg		75	(57%-117%)			
Carbazole	1670		1590	ug/kg		95	(58%-113%)			
Chrysene	1670		1430	ug/kg		86	(62%-111%)			
Di-n-butylphthalate	1670		1440	ug/kg		87	(58%-127%)			
Di-n-octylphthalate	1670		1320	ug/kg		79	(53%-128%)			
Dibenzo(a,h)anthracene	1670		1560	ug/kg		94	(39%-129%)			
Dibenzofuran	1670		1400	ug/kg		84	(55%-105%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS										
Batch	1791788									
Diethylphthalate	1670	B	1430	ug/kg		86	(59%-111%)	JMB3	08/13/18	15:33
Dimethylphthalate	1670		1370	ug/kg		82	(59%-109%)			
Diphenylamine	1670		1380	ug/kg		83	(56%-102%)			
Fluoranthene	1670		1600	ug/kg		96	(56%-114%)			
Fluorene	1670		1380	ug/kg		83	(54%-108%)			
Hexachlorobenzene	1670		1410	ug/kg		84	(56%-103%)			
Hexachlorobutadiene	1670		1510	ug/kg		91	(52%-112%)			
Hexachlorocyclopentadiene	1670		855	ug/kg		51	(38%-83%)			
Hexachloroethane	1670		1310	ug/kg		79	(51%-105%)			
Indeno(1,2,3-cd)pyrene	1670		1650	ug/kg		99	(36%-123%)			
Isophorone	1670		1260	ug/kg		76	(41%-134%)			
N-Methyl-N-nitrosomethylamine	1670		1170	ug/kg		70	(42%-99%)			
N-Nitrosodipropylamine	1670		1450	ug/kg		87	(51%-111%)			
Naphthalene	1670		1270	ug/kg		76	(54%-106%)			
Nitrobenzene	1670		1470	ug/kg		88	(55%-111%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS										
Batch	1791788									
Pentachlorophenol	1670		1340	ug/kg		80	(44%-111%)	JMB3	08/13/18	15:33
Phenanthrene	1670		1350	ug/kg		81	(58%-101%)			
Phenol	1670		1420	ug/kg		85	(54%-106%)			
Pyrene	1670		1160	ug/kg		70	(50%-109%)			
Pyridine	1670		868	ug/kg		52	(41%-68%)			
Tributylphosphate	1670		1650	ug/kg		99	(53%-128%)			
bis(2-Chloro-1-methylethyl)ether	1670		1390	ug/kg		84	(44%-128%)			
bis(2-Chloroethoxy)methane	1670		1360	ug/kg		81	(52%-110%)			
bis(2-Chloroethyl) ether	1670		1360	ug/kg		81	(50%-111%)			
bis(2-Ethylhexyl)phthalate	1670		1190	ug/kg		72	(58%-122%)			
m,p-Cresols	1670		1570	ug/kg		94	(56%-122%)			
m-Nitroaniline	1670		1310	ug/kg		79	(42%-112%)			
o-Cresol	1670		1390	ug/kg		83	(54%-108%)			
o-Nitroaniline	1670		1450	ug/kg		87	(53%-110%)			
p-Nitroaniline	1670		1760	ug/kg		106	(41%-126%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS										
Batch	1791788									
**2,4,6-Tribromophenol	3330		2930	ug/kg		88	(39%-115%)	JMB3	08/13/18	15:33
**2-Fluorobiphenyl	1670		1170	ug/kg		70	(35%-107%)			
**2-Fluorophenol	3330		2450	ug/kg		74	(36%-104%)			
**Nitrobenzene-d5	1670		1270	ug/kg		76	(34%-109%)			
**Phenol-d5	3330		2620	ug/kg		79	(39%-106%)			
**p-Terphenyl-d14	1670		1210	ug/kg		73	(45%-119%)			
QC1204090345 MB										
1,2,4-Trichlorobenzene		U	ND	ug/kg						08/13/18 15:06
1,2-Dichlorobenzene		U	ND	ug/kg						
1,2-Diphenylhydrazine		U	ND	ug/kg						
1,3-Dichlorobenzene		U	ND	ug/kg						
1,4-Dichlorobenzene		U	ND	ug/kg						
1-Methylnaphthalene		U	ND	ug/kg						
2,4,5-Trichlorophenol		U	ND	ug/kg						
2,4,6-Trichlorophenol		U	ND	ug/kg						
2,4-Dichlorophenol		U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
2,4-Dimethylphenol			U	ND	ug/kg				JMB3	08/13/18	15:06
2,4-Dinitrophenol			U	ND	ug/kg						
2,4-Dinitrotoluene			U	ND	ug/kg						
2,6-Dinitrotoluene			U	ND	ug/kg						
2-Chloronaphthalene			U	ND	ug/kg						
2-Chlorophenol			U	ND	ug/kg						
2-Methyl-4,6-dinitrophenol			U	ND	ug/kg						
2-Methylnaphthalene			U	ND	ug/kg						
2-Nitrophenol			U	ND	ug/kg						
3,3'-Dichlorobenzidine			U	ND	ug/kg						
4-Bromophenylphenylether			U	ND	ug/kg						
4-Chloro-3-methylphenol			U	ND	ug/kg						
4-Chloroaniline			U	ND	ug/kg						
4-Chlorophenylphenylether			U	ND	ug/kg						
4-Nitrophenol			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
Acenaphthene			U	ND	ug/kg				JMB3	08/13/18	15:06
Acenaphthylene			U	ND	ug/kg						
Acetophenone			U	ND	ug/kg						
Aniline			U	ND	ug/kg						
Anthracene			U	ND	ug/kg						
Benzidine			U	ND	ug/kg						
Benzo(a)anthracene			U	ND	ug/kg						
Benzo(a)pyrene			U	ND	ug/kg						
Benzo(b)fluoranthene			U	ND	ug/kg						
Benzo(ghi)perylene			U	ND	ug/kg						
Benzo(k)fluoranthene			U	ND	ug/kg						
Benzoic acid			U	ND	ug/kg						
Benzyl alcohol			U	ND	ug/kg						
Butylbenzylphthalate			U	ND	ug/kg						
Carbazole			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
Chrysene			U	ND	ug/kg				JMB3	08/13/18	15:06
Di-n-butylphthalate			U	ND	ug/kg						
Di-n-octylphthalate			U	ND	ug/kg						
Dibenzo(a,h)anthracene			U	ND	ug/kg						
Dibenzofuran			U	ND	ug/kg						
Diethylphthalate			J	15.0	ug/kg						
Dimethylphthalate			U	ND	ug/kg						
Diphenylamine			U	ND	ug/kg						
Fluoranthene			U	ND	ug/kg						
Fluorene			U	ND	ug/kg						
Hexachlorobenzene			U	ND	ug/kg						
Hexachlorobutadiene			U	ND	ug/kg						
Hexachlorocyclopentadiene			U	ND	ug/kg						
Hexachloroethane			U	ND	ug/kg						
Indeno(1,2,3-cd)pyrene			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
Isophorone			U	ND	ug/kg				JMB3	08/13/18	15:06
N-Methyl-N-nitrosomethylamine			U	ND	ug/kg						
N-Nitrosodipropylamine			U	ND	ug/kg						
Naphthalene			U	ND	ug/kg						
Nitrobenzene			U	ND	ug/kg						
Pentachlorophenol			U	ND	ug/kg						
Phenanthrene			U	ND	ug/kg						
Phenol			U	ND	ug/kg						
Pyrene			U	ND	ug/kg						
Pyridine			U	ND	ug/kg						
Tributylphosphate			U	ND	ug/kg						
bis(2-Chloro-1-methylethyl)ether			U	ND	ug/kg						
bis(2-Chloroethoxy)methane			U	ND	ug/kg						
bis(2-Chloroethyl) ether			U	ND	ug/kg						
bis(2-Ethylhexyl)phthalate			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
m,p-Cresols				U	ND	ug/kg			JMB3	08/13/18	15:06
m-Nitroaniline				U	ND	ug/kg					
o-Cresol				U	ND	ug/kg					
o-Nitroaniline				U	ND	ug/kg					
p-Nitroaniline				U	ND	ug/kg					
**2,4,6-Tribromophenol	3330				2690	ug/kg		81	(39%-115%)		
**2-Fluorobiphenyl	1660				1190	ug/kg		71	(35%-107%)		
**2-Fluorophenol	3330				2470	ug/kg		74	(36%-104%)		
**Nitrobenzene-d5	1660				1270	ug/kg		77	(34%-109%)		
**Phenol-d5	3330				2550	ug/kg		77	(39%-106%)		
**p-Terphenyl-d14	1660				1460	ug/kg		87	(45%-119%)		
QC1204090347 456917020 MS											
1,2,4-Trichlorobenzene	1840	U	ND		979	ug/kg		53	(36%-105%)		08/13/18 19:07
1,2-Dichlorobenzene	1840	U	ND		911	ug/kg		49	(33%-99%)		
1,2-Diphenylhydrazine	1840	U	ND		1080	ug/kg		59	(43%-108%)		
1,3-Dichlorobenzene	1840	U	ND		817	ug/kg		44	(32%-94%)		

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
1,4-Dichlorobenzene	1840	U	ND	862	ug/kg	47	(32%-98%)	JMB3	08/13/18	19:07	
1-Methylnaphthalene	1840	U	ND	1000	ug/kg	55	(37%-113%)				
2,4,5-Trichlorophenol	1840	U	ND	1190	ug/kg	65	(44%-113%)				
2,4,6-Trichlorophenol	1840	U	ND	1230	ug/kg	67	(38%-116%)				
2,4-Dichlorophenol	1840	U	ND	1210	ug/kg	65	(38%-107%)				
2,4-Dimethylphenol	1840	U	ND	965	ug/kg	52	(37%-103%)				
2,4-Dinitrophenol	1840	U	ND	896	ug/kg	49	(13%-121%)				
2,4-Dinitrotoluene	1840	U	ND	1320	ug/kg	72	(46%-116%)				
2,6-Dinitrotoluene	1840	U	ND	1230	ug/kg	67	(44%-113%)				
2-Chloronaphthalene	1840	U	ND	1000	ug/kg	54	(36%-106%)				
2-Chlorophenol	1840	U	ND	1150	ug/kg	63	(36%-107%)				
2-Methyl-4,6-dinitrophenol	1840	U	ND	1000	ug/kg	54	(25%-117%)				
2-Methylnaphthalene	1840	U	ND	958	ug/kg	52	(34%-107%)				
2-Nitrophenol	1840	U	ND	1070	ug/kg	58	(36%-108%)				
3,3'-Dichlorobenzidine	1840	U	ND	1550	ug/kg	84	(25%-108%)				

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch 1791788											
4-Bromophenylphenylether	1840	U	ND	1140	ug/kg	62	(42%-116%)	JMB3	08/13/18	19:07	
4-Chloro-3-methylphenol	1840	U	ND	1270	ug/kg	69	(44%-114%)				
4-Chloroaniline	1840	U	ND	940	ug/kg	51	(30%-94%)				
4-Chlorophenylphenylether	1840	U	ND	1210	ug/kg	66	(41%-121%)				
4-Nitrophenol	1840	U	ND	1240	ug/kg	67	(27%-123%)				
Acenaphthene	1840	U	ND	1060	ug/kg	57	(35%-113%)				
Acenaphthylene	1840	U	ND	1080	ug/kg	59	(41%-108%)				
Acetophenone	1840	U	ND	1120	ug/kg	61	(37%-109%)				
Aniline	1840	U	ND	807	ug/kg	44	(30%-90%)				
Anthracene	1840	U	ND	1120	ug/kg	61	(41%-111%)				
Benzidine	3680	U	ND	902	ug/kg	24	(18%-95%)				
Benzo(a)anthracene	1840	U	ND	1130	ug/kg	61	(42%-115%)				
Benzo(a)pyrene	1840	U	ND	1150	ug/kg	63	(32%-119%)				
Benzo(b)fluoranthene	1840	U	ND	1040	ug/kg	56	(30%-124%)				
Benzo(ghi)perylene	1840	U	ND	1220	ug/kg	66	(13%-126%)				

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
Benzo(k)fluoranthene	1840	U	ND	1060	ug/kg	58	(30%-128%)	JMB3	08/13/18	19:07	
Benzoic acid	3680	U	ND	1860	ug/kg	51	(18%-127%)				
Benzyl alcohol	1840	U	ND	1180	ug/kg	64	(31%-117%)				
Butylbenzylphthalate	1840	U	ND	1000	ug/kg	54	(43%-130%)				
Carbazole	1840	U	ND	1390	ug/kg	76	(43%-116%)				
Chrysene	1840	U	ND	1190	ug/kg	65	(42%-121%)				
Di-n-butylphthalate	1840	U	ND	1260	ug/kg	68	(45%-119%)				
Di-n-octylphthalate	1840	U	ND	1200	ug/kg	65	(41%-129%)				
Dibenzo(a,h)anthracene	1840	U	ND	1340	ug/kg	73	(20%-129%)				
Dibenzofuran	1840	U	ND	1130	ug/kg	61	(38%-111%)				
Diethylphthalate	1840	U	ND	1270	ug/kg	69	(46%-114%)				
Dimethylphthalate	1840	U	ND	1230	ug/kg	67	(42%-114%)				
Diphenylamine	1840	U	ND	1110	ug/kg	60	(43%-109%)				
Fluoranthene	1840	U	ND	1400	ug/kg	76	(41%-115%)				
Fluorene	1840	U	ND	1130	ug/kg	61	(38%-114%)				

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
Hexachlorobenzene	1840	U	ND	1110	ug/kg		60	(44%-106%)	JMB3	08/13/18	19:07
Hexachlorobutadiene	1840	U	ND	1020	ug/kg		55	(34%-108%)			
Hexachlorocyclopentadiene	1840	U	ND	396	ug/kg		22 *	(24%-80%)			
Hexachloroethane	1840	U	ND	861	ug/kg		47	(29%-101%)			
Indeno(1,2,3-cd)pyrene	1840	U	ND	1350	ug/kg		73	(15%-126%)			
Isophorone	1840	U	ND	1040	ug/kg		56	(20%-130%)			
N-Methyl-N-nitrosomethylamine	1840	U	ND	1010	ug/kg		55	(27%-96%)			
N-Nitrosodipropylamine	1840	U	ND	1210	ug/kg		66	(36%-108%)			
Naphthalene	1840	U	ND	939	ug/kg		51	(34%-108%)			
Nitrobenzene	1840	U	ND	1080	ug/kg		59	(36%-111%)			
Pentachlorophenol	1840	U	ND	1250	ug/kg		68	(34%-116%)			
Phenanthrene	1840	U	ND	1110	ug/kg		60	(36%-116%)			
Phenol	1840	U	ND	1290	ug/kg		70	(34%-109%)			
Pyrene	1840	U	ND	856	ug/kg		46	(36%-125%)			
Pyridine	1840	U	ND	508	ug/kg		28 *	(29%-66%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
Tributylphosphate	1840	U	ND	1480	ug/kg	81	(43%-135%)	JMB3	08/13/18	19:07	
bis(2-Chloro-1-methylethyl)ether	1840	U	ND	1040	ug/kg	56	(30%-121%)				
bis(2-Chloroethoxy)methane	1840	U	ND	1060	ug/kg	58	(38%-107%)				
bis(2-Chloroethyl) ether	1840	U	ND	1120	ug/kg	61	(35%-108%)				
bis(2-Ethylhexyl)phthalate	1840	U	ND	992	ug/kg	54	(41%-132%)				
m,p-Cresols	1840	U	ND	1380	ug/kg	75	(40%-123%)				
m-Nitroaniline	1840	U	ND	1020	ug/kg	55	(33%-113%)				
o-Cresol	1840	U	ND	1200	ug/kg	65	(35%-111%)				
o-Nitroaniline	1840	U	ND	1230	ug/kg	67	(39%-114%)				
p-Nitroaniline	1840	U	ND	1690	ug/kg	92	(28%-126%)				
**2,4,6-Tribromophenol	3680		3070	2580	ug/kg	70	(39%-115%)				
**2-Fluorobiphenyl	1840		1180	881	ug/kg	48	(35%-107%)				
**2-Fluorophenol	3680		2630	1900	ug/kg	52	(36%-104%)				
**Nitrobenzene-d5	1840		1280	934	ug/kg	51	(34%-109%)				
**Phenol-d5	3680		2750	2200	ug/kg	60	(39%-106%)				

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
**p-Terphenyl-d14	1840	1380		896	ug/kg		49	(45%-119%)	JMB3	08/13/18	19:07
QC1204090348 456917020 MSD 1,2,4-Trichlorobenzene	1830	U	ND J	346	ug/kg	96*	19*	(0%-30%)		08/13/18	19:34
1,2-Dichlorobenzene	1830	U	ND J	277	ug/kg	107*	15*	(0%-30%)			
1,2-Diphenylhydrazine	1830	U	ND	449	ug/kg	83*	24*	(0%-30%)			
1,3-Dichlorobenzene	1830	U	ND J	247	ug/kg	107*	13*	(0%-30%)			
1,4-Dichlorobenzene	1830	U	ND J	262	ug/kg	107*	14*	(0%-30%)			
1-Methylnaphthalene	1830	U	ND	371	ug/kg	92*	20*	(0%-30%)			
2,4,5-Trichlorophenol	1830	U	ND	420	ug/kg	95*	23*	(0%-30%)			
2,4,6-Trichlorophenol	1830	U	ND	439	ug/kg	95*	24*	(0%-30%)			
2,4-Dichlorophenol	1830	U	ND	414	ug/kg	98*	23*	(0%-30%)			
2,4-Dimethylphenol	1830	U	ND J	316	ug/kg	101*	17*	(0%-30%)			
2,4-Dinitrophenol	1830	U	ND U	ND	ug/kg	200*	0*	(0%-30%)			
2,4-Dinitrotoluene	1830	U	ND	518	ug/kg	87*	28*	(0%-30%)			
2,6-Dinitrotoluene	1830	U	ND	457	ug/kg	91*	25*	(0%-30%)			
2-Chloronaphthalene	1830	U	ND	385	ug/kg	89*	21*	(0%-30%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
2-Chlorophenol	1830	U	ND J	363	ug/kg	104*	20*	(0%-30%)	JMB3	08/13/18	19:34
2-Methyl-4,6-dinitrophenol	1830	U	ND	473	ug/kg	72*	26	(0%-30%)			
2-Methylnaphthalene	1830	U	ND	352	ug/kg	93*	19*	(0%-30%)			
2-Nitrophenol	1830	U	ND J	350	ug/kg	101*	19*	(0%-30%)			
3,3'-Dichlorobenzidine	1830	U	ND	593	ug/kg	89*	32	(0%-30%)			
4-Bromophenylphenylether	1830	U	ND	473	ug/kg	83*	26*	(0%-30%)			
4-Chloro-3-methylphenol	1830	U	ND	433	ug/kg	98*	24*	(0%-30%)			
4-Chloroaniline	1830	U	ND J	344	ug/kg	93*	19*	(0%-30%)			
4-Chlorophenylphenylether	1830	U	ND	483	ug/kg	86*	26*	(0%-30%)			
4-Nitrophenol	1830	U	ND	386	ug/kg	105*	21*	(0%-30%)			
Acenaphthene	1830	U	ND	408	ug/kg	89*	22*	(0%-30%)			
Acenaphthylene	1830	U	ND	412	ug/kg	90*	22*	(0%-30%)			
Acetophenone	1830	U	ND J	358	ug/kg	103*	20*	(0%-30%)			
Aniline	1830	U	ND J	286	ug/kg	95*	16*	(0%-30%)			
Anthracene	1830	U	ND	470	ug/kg	82*	26*	(0%-30%)			

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
Benzidine	3670	U	ND	575	ug/kg	44*	16*	(0%-30%)	JMB3	08/13/18	19:34
Benzo(a)anthracene	1830	U	ND	505	ug/kg	76*	28*	(0%-30%)			
Benzo(a)pyrene	1830	U	ND	508	ug/kg	78*	28*	(0%-30%)			
Benzo(b)fluoranthene	1830	U	ND	488	ug/kg	72*	27*	(0%-30%)			
Benzo(ghi)perylene	1830	U	ND	416	ug/kg	98*	23	(0%-30%)			
Benzo(k)fluoranthene	1830	U	ND	513	ug/kg	70*	28*	(0%-30%)			
Benzoic acid	3670	U	ND	842	ug/kg	75*	23	(0%-30%)			
Benzyl alcohol	1830	U	ND J	345	ug/kg	110*	19*	(0%-30%)			
Butylbenzylphthalate	1830	U	ND	455	ug/kg	75*	25*	(0%-30%)			
Carbazole	1830	U	ND	596	ug/kg	80*	32*	(0%-30%)			
Chrysene	1830	U	ND	528	ug/kg	77*	29*	(0%-30%)			
Di-n-butylphthalate	1830	U	ND	544	ug/kg	79*	30*	(0%-30%)			
Di-n-octylphthalate	1830	U	ND	444	ug/kg	92*	24*	(0%-30%)			
Dibenzo(a,h)anthracene	1830	U	ND	464	ug/kg	97*	25	(0%-30%)			
Dibenzofuran	1830	U	ND	446	ug/kg	87*	24*	(0%-30%)			

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
Diethylphthalate	1830	U	ND	495	ug/kg	88*	27*	(0%-30%)	JMB3	08/13/18	19:34
Dimethylphthalate	1830	U	ND	449	ug/kg	93*	25*	(0%-30%)			
Diphenylamine	1830	U	ND	464	ug/kg	82*	25*	(0%-30%)			
Fluoranthene	1830	U	ND	595	ug/kg	81*	32*	(0%-30%)			
Fluorene	1830	U	ND	454	ug/kg	85*	25*	(0%-30%)			
Hexachlorobenzene	1830	U	ND	468	ug/kg	81*	26*	(0%-30%)			
Hexachlorobutadiene	1830	U	ND J	365	ug/kg	95*	20*	(0%-30%)			
Hexachlorocyclopentadiene	1830	U	ND U	ND	ug/kg	200*	0*	(0%-30%)			
Hexachloroethane	1830	U	ND J	266	ug/kg	106*	15*	(0%-30%)			
Indeno(1,2,3-cd)pyrene	1830	U	ND	456	ug/kg	99*	25	(0%-30%)			
Isophorone	1830	U	ND J	351	ug/kg	99*	19*	(0%-30%)			
N-Methyl-N-nitrosomethylamine	1830	U	ND J	214	ug/kg	130*	12*	(0%-30%)			
N-Nitrosodipropylamine	1830	U	ND	395	ug/kg	101*	22*	(0%-30%)			
Naphthalene	1830	U	ND	339	ug/kg	94*	18*	(0%-30%)			
Nitrobenzene	1830	U	ND J	359	ug/kg	100*	20*	(0%-30%)			

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QC Summary

Workorder: **456917**

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Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
Pentachlorophenol	1830	U	ND J	365	ug/kg	110*	20*	(0%-30%)	JMB3	08/13/18	19:34
Phenanthrene	1830	U	ND	468	ug/kg	81*	26*	(0%-30%)			
Phenol	1830	U	ND J	362	ug/kg	112*	20*	(0%-30%)			
Pyrene	1830	U	ND	416	ug/kg	69*	23*	(0%-30%)			
Pyridine	1830	U	ND J	156	ug/kg	106*	8*	(0%-30%)			
Tributylphosphate	1830	U	ND	628	ug/kg	81*	34*	(0%-30%)			
bis(2-Chloro-1-methylethyl)ether	1830	U	ND J	335	ug/kg	102*	18*	(0%-30%)			
bis(2-Chloroethoxy)methane	1830	U	ND J	363	ug/kg	98*	20*	(0%-30%)			
bis(2-Chloroethyl) ether	1830	U	ND J	309	ug/kg	114*	17*	(0%-30%)			
bis(2-Ethylhexyl)phthalate	1830	U	ND	414	ug/kg	82*	23*	(0%-30%)			
m,p-Cresols	1830	U	ND	427	ug/kg	106*	23*	(0%-30%)			
m-Nitroaniline	1830	U	ND	425	ug/kg	82*	23*	(0%-30%)			
o-Cresol	1830	U	ND J	361	ug/kg	107*	20*	(0%-30%)			
o-Nitroaniline	1830	U	ND	440	ug/kg	94*	24*	(0%-30%)			
p-Nitroaniline	1830	U	ND	684	ug/kg	85*	37	(0%-30%)			

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1791788										
**2,4,6-Tribromophenol	3670	3070		960	ug/kg		26*	(39%-115%)	JMB3	08/13/18	19:34
**2-Fluorobiphenyl	1830	1180		334	ug/kg		18*	(35%-107%)			
**2-Fluorophenol	3670	2630		559	ug/kg		15*	(36%-104%)			
**Nitrobenzene-d5	1830	1280		312	ug/kg		17*	(34%-109%)			
**Phenol-d5	3670	2750		675	ug/kg		18*	(39%-106%)			
**p-Terphenyl-d14	1830	1380		442	ug/kg		24*	(45%-119%)			

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B The target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Concentration of the target analyte exceeds the instrument calibration range
- H Analytical holding time was exceeded
- J Value is estimated
- JNX Non Calibrated Compound
- N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
- N Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, the difference is >70%.

QC Summary

Workorder: **456917**

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Q											
Q											
R											
U											
UJ											
X											
Y											
^											
h											

Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.

R Sample results are rejected

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

UJ Compound cannot be extracted

X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Y QC Samples were not spiked with this compound

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^{*} The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
URS Energy & Construction (URSC)
SDG #: 456917

Product: Determination of Metals by ICP

Analytical Method: SW846 3050B/6010D

Analytical Procedure: GL-MA-E-013 REV# 30

Analytical Batch: 1791514

Product: Determination of Metals by ICP

Analytical Method: SW846 3005A/6010D

Analytical Procedure: GL-MA-E-013 REV# 30

Analytical Batch: 1791524

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 32

Analytical Batch: 1791504

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3050B/6020

Analytical Procedure: GL-MA-E-014 REV# 32

Analytical Batch: 1791506

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 36

Analytical Batch: 1792385

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7471A

Analytical Procedure: GL-MA-E-010 REV# 36

Analytical Batch: 1792876

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batches: 1791503 and 1791523

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batches: 1791505 and 1791513

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 36

Preparation Batch: 1792384

Preparation Method: SW846 7471A Prep

Preparation Procedure: GL-MA-E-010 REV# 36

Preparation Batch: 1792873

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
456917001	S17
456917002	S18
456917003	SW07
456917004	SW08
456917005	SW09
456917006	SW10
456917007	SW11
456917008	SW11EB
456917020	G2SOL04
1204089776	Method Blank (MB) ICP
1204089795	Method Blank (MB) ICP
1204089777	Laboratory Control Sample (LCS)
1204089796	Laboratory Control Sample (LCS)
1204089797	Laboratory Control Sample Duplicate (LCSD)
1204089780	456917001(S17L) Serial Dilution (SD)
1204089798	456917008(SW11EBL) Serial Dilution (SD)
1204089778	456917001(S17S) Matrix Spike (MS)
1204089779	456917001(S17SD) Matrix Spike Duplicate (MSD)
1204092710	456917001(S17PS) Post Spike (PS)
1204089757	Method Blank (MB) ICP-MS
1204089761	Method Blank (MB) ICP-MS
1204089758	Laboratory Control Sample (LCS)
1204089762	Laboratory Control Sample (LCS)
1204089759	Laboratory Control Sample Duplicate (LCSD)
1204089760	456917008(SW11EBL) Serial Dilution (SD)
1204089765	456917001(S17L) Serial Dilution (SD)
1204089763	456917001(S17D) Sample Duplicate (DUP)
1204089764	456917001(S17S) Matrix Spike (MS)
1204091582	Method Blank (MB) CVAA
1204092590	Method Blank (MB) CVAA
1204091583	Laboratory Control Sample (LCS)
1204092591	Laboratory Control Sample (LCS)
1204091592	455350002(NonSDGL) Serial Dilution (SD)
1204092594	455397NonSDG(NonSDGL) Serial Dilution (SD)
1204091590	455350002(NonSDGD) Sample Duplicate (DUP)
1204092592	455397NonSDG(NonSDGD) Sample Duplicate (DUP)
1204091591	455350002(NonSDGS) Matrix Spike (MS)
1204092593	455397NonSDG(NonSDGS) Matrix Spike (MS)

Samples 456917001, 002, 003, 004, 005, 006, 007 and 020 in this SDG were analyzed for metals and mercury on a "dry weight corrected" basis. Sample 456917008 in this SDG was analyzed for metals and mercury on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Quality Control (QC) Information

Laboratory Control Sample Duplicate (LCSD)

An LCSD was used in place of matrix QC due to the designation of field QC. 1204089759 (LCSD)-ICP-MS.

Matrix Spike (MS/MSD) Recovery Statement

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analytes. The post spike recoveries were within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recoveries may be attributed to possible sample matrix interference and/or non-homogeneity.

Sample	Analyte	Value
1204089778 (S17MS)	Cobalt	74.6* (75%-125%)
	Lead	70* (75%-125%)
1204089779 (S17MSD)	Antimony	72.4* (75%-125%)
	Cadmium	74.4* (75%-125%)
	Cobalt	71.8* (75%-125%)
	Lead	71* (75%-125%)
	Thallium	74.9* (75%-125%)

The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analyte.

Sample	Analyte	Value
1204089764 (S17MS)	Selenium	73.6* (75%-125%)

MS/MSD Relative Percent Difference (RPD) Statement

The RPD values between qualifying analyte results in the MS and MSD were not within the acceptance limits. Sample non-homogeneity and/or possible matrix interferences may be suspected.

Sample	Analyte	Value
1204089778MS and 1204089779MSD (S17)	Calcium	RPD 32.9* (0%-20%)
	Magnesium	RPD 31.2* (0%-20%)

Technical Information

Preparation/Analytical Method Verification

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment. Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. The ICPMS solid samples in this SDG were diluted the standard two times. ICP-MS.

Analyte	456917							
	001	002	003	004	005	006	007	020
Selenium	2X	2X	2X	2X	2X	2X	2X	2X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

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**Qualifier Definition Report
for**

URSC013 URS Energy & Construction (2012-SC-SPRU-29463-171)
Client SDG: 456917 GEL Work Order: 456917

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- B Either presence of analyte detected in the associated blank, or $MDL/IDL < sample\ value < PQL$
- J Value is estimated
- N Metals--The Matrix spike sample recovery is not within specified control limits
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature:



Name: Edmund Frampton

Date: 20 AUG 2018

Title: Team Leader

Sample Data Summary

Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
SPRU Disposition Project

Client Sample ID:	S17	Project:	URSC00211
Sample ID:	456917001	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:20		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	7.5%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis-CVAA												
7471 Cold Vapor Hg in Solid "Dry Weight Corrected"												
Mercury		0.0262	0.00393	0.0117	mg/kg	54.2	1	MTM1	08/16/18	1059	1792876	1
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		5310	6.97	20.5	mg/kg	94.9	1	TXT1	08/14/18	1918	1791514	2
Antimony	U	ND	0.338	1.03	mg/kg	94.9	1					
Arsenic		4.58	0.513	3.08	mg/kg	94.9	1					
Barium		30.6	0.103	0.513	mg/kg	94.9	1					
Beryllium	J	0.370	0.103	0.513	mg/kg	94.9	1					
Cadmium	J	0.230	0.103	0.513	mg/kg	94.9	1					
Calcium		12500	8.21	25.6	mg/kg	94.9	1					
Chromium		9.18	0.154	0.513	mg/kg	94.9	1					
Cobalt		7.93	0.154	0.513	mg/kg	94.9	1					
Copper		20.8	0.308	1.03	mg/kg	94.9	1					
Iron		15500	8.21	25.6	mg/kg	94.9	1					
Lead		11.9	0.338	1.03	mg/kg	94.9	1					
Magnesium		6170	8.72	30.8	mg/kg	94.9	1					
Manganese		317	0.205	1.03	mg/kg	94.9	1					
Nickel		17.8	0.154	0.513	mg/kg	94.9	1					
Potassium		754	6.56	25.6	mg/kg	94.9	1					
Silver	J	0.295	0.103	0.513	mg/kg	94.9	1					
Sodium		79.7	7.18	25.6	mg/kg	94.9	1					
Thallium	U	ND	0.513	2.05	mg/kg	94.9	1					
Vanadium		10.3	0.103	0.513	mg/kg	94.9	1					
Zinc		36.7	0.410	1.03	mg/kg	94.9	1					
Metals Analysis-ICP-MS												
6020 MIMICP SCAN Metals "Dry Weight Corrected"												
Selenium	J	0.651	0.373	1.04	mg/kg	95.8	2	SKJ	08/14/18	1408	1791506	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SXW1	08/12/18	1110	1791505
SW846 3050B	SW846 3050B Prep	SXW1	08/12/18	1356	1791513
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/15/18	1600	1792873

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Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID: S17 Project: URSC00211
Sample ID: 456917001 Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
The following Analytical Methods were performed:												
Method	Description										Analyst Comments	
1	SW846 7471A											
2	SW846 3050B/6010D											
3	SW846 3050B/6020											

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
SPRU Disposition Project

Client Sample ID:	S18	Project:	URSC00211
Sample ID:	456917002	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:22		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	8.67%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis-CVAA												
7471 Cold Vapor Hg in Solid "Dry Weight Corrected"												
Mercury		0.348	0.00385	0.0115	mg/kg	52.5	1	MTM1	08/16/18	1101	1792876	1
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		7460	7.17	21.1	mg/kg	96.3	1	TXT1	08/14/18	1931	1791514	2
Antimony	U	ND	0.348	1.05	mg/kg	96.3	1					
Arsenic		6.81	0.527	3.16	mg/kg	96.3	1					
Barium		49.8	0.105	0.527	mg/kg	96.3	1					
Beryllium		0.544	0.105	0.527	mg/kg	96.3	1					
Cadmium	J	0.141	0.105	0.527	mg/kg	96.3	1					
Calcium		25200	8.44	26.4	mg/kg	96.3	1					
Chromium		12.0	0.158	0.527	mg/kg	96.3	1					
Cobalt		9.81	0.158	0.527	mg/kg	96.3	1					
Copper		24.7	0.316	1.05	mg/kg	96.3	1					
Iron		21500	8.44	26.4	mg/kg	96.3	1					
Lead		10.2	0.348	1.05	mg/kg	96.3	1					
Magnesium		9880	8.97	31.6	mg/kg	96.3	1					
Manganese		432	0.211	1.05	mg/kg	96.3	1					
Nickel		22.1	0.158	0.527	mg/kg	96.3	1					
Potassium		990	6.75	26.4	mg/kg	96.3	1					
Silver	J	0.321	0.105	0.527	mg/kg	96.3	1					
Sodium		175	7.38	26.4	mg/kg	96.3	1					
Thallium	U	ND	0.527	2.11	mg/kg	96.3	1					
Vanadium		15.6	0.105	0.527	mg/kg	96.3	1					
Zinc		56.2	0.422	1.05	mg/kg	96.3	1					
Metals Analysis-ICP-MS												
6020 MIMICP SCAN Metals "Dry Weight Corrected"												
Selenium	J	0.521	0.364	1.01	mg/kg	92.4	2	SKJ	08/14/18	1421	1791506	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SXW1	08/12/18	1110	1791505
SW846 3050B	SW846 3050B Prep	SXW1	08/12/18	1356	1791513
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/15/18	1600	1792873

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Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
 SPRU Disposition Project

Client Sample ID: S18 Project: URSC00211
Sample ID: 456917002 Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
The following Analytical Methods were performed:												
Method	Description										Analyst Comments	
1	SW846 7471A											
2	SW846 3050B/6010D											
3	SW846 3050B/6020											

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
SPRU Disposition Project

Client Sample ID:	SW07	Project:	URSC00211
Sample ID:	456917003	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:24		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	6.81%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis-CVAA												
7471 Cold Vapor Hg in Solid "Dry Weight Corrected"												
Mercury		0.0227		0.00386		0.0115		mg/kg	53.7	1	MTM1	08/16/18
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		6110		7.10		20.9		mg/kg	97.3	1	TXT1	08/14/18
Antimony	U	ND		0.344		1.04		mg/kg	97.3	1		
Arsenic		4.97		0.522		3.13		mg/kg	97.3	1		
Barium		44.6		0.104		0.522		mg/kg	97.3	1		
Beryllium	J	0.378		0.104		0.522		mg/kg	97.3	1		
Cadmium	J	0.231		0.104		0.522		mg/kg	97.3	1		
Calcium		16400		8.35		26.1		mg/kg	97.3	1		
Chromium		9.78		0.157		0.522		mg/kg	97.3	1		
Cobalt		7.00		0.157		0.522		mg/kg	97.3	1		
Copper		19.9		0.313		1.04		mg/kg	97.3	1		
Iron		16800		8.35		26.1		mg/kg	97.3	1		
Lead		6.49		0.344		1.04		mg/kg	97.3	1		
Magnesium		6460		8.87		31.3		mg/kg	97.3	1		
Manganese		427		0.209		1.04		mg/kg	97.3	1		
Nickel		16.7		0.157		0.522		mg/kg	97.3	1		
Potassium		768		6.68		26.1		mg/kg	97.3	1		
Silver	J	0.275		0.104		0.522		mg/kg	97.3	1		
Sodium		178		7.31		26.1		mg/kg	97.3	1		
Thallium	U	ND		0.522		2.09		mg/kg	97.3	1		
Vanadium		12.0		0.104		0.522		mg/kg	97.3	1		
Zinc		43.8		0.418		1.04		mg/kg	97.3	1		
Metals Analysis-ICP-MS												
6020 MIMICP SCAN Metals "Dry Weight Corrected"												
Selenium	J	0.629		0.368		1.02		mg/kg	95.2	2	SKJ	08/14/18
The following Prep Methods were performed:												
Method	Description		Analyst	Date	Time	Prep Batch						
SW846 3050B	ICP-MS 3050BS PREP		SXW1	08/12/18	1110	1791505						
SW846 3050B	SW846 3050B Prep		SXW1	08/12/18	1356	1791513						
SW846 7471A Prep	EPA 7471A Mercury Prep Soil		AXS5	08/15/18	1600	1792873						

Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID: SW07 Project: URSC00211
Sample ID: 456917003 Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 7471A	
2	SW846 3050B/6010D	
3	SW846 3050B/6020	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
SPRU Disposition Project

Client Sample ID:	SW08	Project:	URSC00211
Sample ID:	456917004	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:26		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	9.8%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis-CVAA												
7471 Cold Vapor Hg in Solid "Dry Weight Corrected"												
Mercury		0.0186		0.00423		0.0126		mg/kg	56.9	1	MTM1	08/16/18
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		8150		7.29		21.4		mg/kg	96.7	1	TXT1	08/14/18
Antimony	U	ND		0.354		1.07		mg/kg	96.7	1		
Arsenic		8.48		0.536		3.22		mg/kg	96.7	1		
Barium		57.6		0.107		0.536		mg/kg	96.7	1		
Beryllium		0.553		0.107		0.536		mg/kg	96.7	1		
Cadmium	J	0.242		0.107		0.536		mg/kg	96.7	1		
Calcium		20900		8.58		26.8		mg/kg	96.7	1		
Chromium		13.2		0.161		0.536		mg/kg	96.7	1		
Cobalt		10.2		0.161		0.536		mg/kg	96.7	1		
Copper		31.0		0.322		1.07		mg/kg	96.7	1		
Iron		22800		8.58		26.8		mg/kg	96.7	1		
Lead		9.86		0.354		1.07		mg/kg	96.7	1		
Magnesium		8600		9.11		32.2		mg/kg	96.7	1		
Manganese		477		0.214		1.07		mg/kg	96.7	1		
Nickel		23.8		0.161		0.536		mg/kg	96.7	1		
Potassium		1050		6.86		26.8		mg/kg	96.7	1		
Silver	J	0.482		0.107		0.536		mg/kg	96.7	1		
Sodium		256		7.51		26.8		mg/kg	96.7	1		
Thallium	U	ND		0.536		2.14		mg/kg	96.7	1		
Vanadium		16.6		0.107		0.536		mg/kg	96.7	1		
Zinc		83.0		0.429		1.07		mg/kg	96.7	1		
Metals Analysis-ICP-MS												
6020 MIMICP SCAN Metals "Dry Weight Corrected"												
Selenium	J	0.713		0.387		1.07		mg/kg	96.9	2	SKJ	08/14/18
The following Prep Methods were performed:												
Method	Description				Analyst	Date		Time		Prep	Batch	
SW846 3050B	ICP-MS 3050BS PREP				SXW1	08/12/18		1110			1791505	
SW846 3050B	SW846 3050B Prep				SXW1	08/12/18		1356			1791513	
SW846 7471A Prep	EPA 7471A Mercury Prep Soil				AXS5	08/15/18		1600			1792873	

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Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID: SW08 Project: URSC00211
Sample ID: 456917004 Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 7471A	
2	SW846 3050B/6010D	
3	SW846 3050B/6020	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
SPRU Disposition Project

Client Sample ID:	SW09	Project:	URSC00211
Sample ID:	456917005	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:28		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	8.7%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis-CVAA												
7471 Cold Vapor Hg in Solid "Dry Weight Corrected"												
Mercury		0.0241	0.00425	0.0127	mg/kg	57.9	1	MTM1	08/16/18	1109	1792876	1
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		7060	7.25	21.3	mg/kg	97.3	1	TXT1	08/14/18	1937	1791514	2
Antimony	U	ND	0.352	1.07	mg/kg	97.3	1					
Arsenic		6.16	0.533	3.20	mg/kg	97.3	1					
Barium		50.1	0.107	0.533	mg/kg	97.3	1					
Beryllium	J	0.519	0.107	0.533	mg/kg	97.3	1					
Cadmium	J	0.172	0.107	0.533	mg/kg	97.3	1					
Calcium		19100	8.52	26.6	mg/kg	97.3	1					
Chromium		11.3	0.160	0.533	mg/kg	97.3	1					
Cobalt		8.83	0.160	0.533	mg/kg	97.3	1					
Copper		21.6	0.320	1.07	mg/kg	97.3	1					
Iron		19300	8.52	26.6	mg/kg	97.3	1					
Lead		8.09	0.352	1.07	mg/kg	97.3	1					
Magnesium		7440	9.06	32.0	mg/kg	97.3	1					
Manganese		444	0.213	1.07	mg/kg	97.3	1					
Nickel		19.6	0.160	0.533	mg/kg	97.3	1					
Potassium		932	6.82	26.6	mg/kg	97.3	1					
Silver	J	0.348	0.107	0.533	mg/kg	97.3	1					
Sodium		189	7.46	26.6	mg/kg	97.3	1					
Thallium	U	ND	0.533	2.13	mg/kg	97.3	1					
Vanadium		14.6	0.107	0.533	mg/kg	97.3	1					
Zinc		46.6	0.426	1.07	mg/kg	97.3	1					
Metals Analysis-ICP-MS												
6020 MIMICP SCAN Metals "Dry Weight Corrected"												
Selenium	J	0.615	0.368	1.02	mg/kg	93.3	2	SKJ	08/14/18	1427	1791506	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SXW1	08/12/18	1110	1791505
SW846 3050B	SW846 3050B Prep	SXW1	08/12/18	1356	1791513
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/15/18	1600	1792873

Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID: SW09 Project: URSC00211
Sample ID: 456917005 Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 7471A	
2	SW846 3050B/6010D	
3	SW846 3050B/6020	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
SPRU Disposition Project

Client Sample ID:	SW10	Project:	URSC00211
Sample ID:	456917006	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:30		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	7.27%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis-CVAA												
7471 Cold Vapor Hg in Solid "Dry Weight Corrected"												
Mercury		0.0159		0.00431		0.0129		mg/kg	59.6	1	MTM1	08/16/18
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		8180		6.88		20.2		mg/kg	93.8	1	TXT1	08/14/18
Antimony	U	ND		0.334		1.01		mg/kg	93.8	1		
Arsenic		7.68		0.506		3.03		mg/kg	93.8	1		
Barium		62.1		0.101		0.506		mg/kg	93.8	1		
Beryllium		0.574		0.101		0.506		mg/kg	93.8	1		
Cadmium	J	0.283		0.101		0.506		mg/kg	93.8	1		
Calcium		22300		8.09		25.3		mg/kg	93.8	1		
Chromium		13.3		0.152		0.506		mg/kg	93.8	1		
Cobalt		10.4		0.152		0.506		mg/kg	93.8	1		
Copper		28.3		0.303		1.01		mg/kg	93.8	1		
Iron		22700		8.09		25.3		mg/kg	93.8	1		
Lead		9.63		0.334		1.01		mg/kg	93.8	1		
Magnesium		9100		8.60		30.3		mg/kg	93.8	1		
Manganese		451		0.202		1.01		mg/kg	93.8	1		
Nickel		23.7		0.152		0.506		mg/kg	93.8	1		
Potassium		1100		6.47		25.3		mg/kg	93.8	1		
Silver	J	0.410		0.101		0.506		mg/kg	93.8	1		
Sodium		344		7.08		25.3		mg/kg	93.8	1		
Thallium	U	ND		0.506		2.02		mg/kg	93.8	1		
Vanadium		16.7		0.101		0.506		mg/kg	93.8	1		
Zinc		64.3		0.405		1.01		mg/kg	93.8	1		
Metals Analysis-ICP-MS												
6020 MIMICP SCAN Metals "Dry Weight Corrected"												
Selenium	J	0.650		0.370		1.03		mg/kg	95.4	2	SKJ	08/14/18

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SXW1	08/12/18	1110	1791505
SW846 3050B	SW846 3050B Prep	SXW1	08/12/18	1356	1791513
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/15/18	1600	1792873

Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID: SW10 Project: URSC00211
Sample ID: 456917006 Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 7471A	
2	SW846 3050B/6010D	
3	SW846 3050B/6020	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
SPRU Disposition Project

Client Sample ID:	SW11	Project:	URSC00211
Sample ID:	456917007	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:32		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	8.28%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis-CVAA												
7471 Cold Vapor Hg in Solid "Dry Weight Corrected"												
Mercury		0.0241	0.00404	0.0121	mg/kg	55.4	1	MTM1	08/16/18	1112	1792876	1
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		8500	7.14	21.0	mg/kg	96.3	1	TXT1	08/14/18	1941	1791514	2
Antimony	U	ND	0.347	1.05	mg/kg	96.3	1					
Arsenic		7.49	0.525	3.15	mg/kg	96.3	1					
Barium		59.5	0.105	0.525	mg/kg	96.3	1					
Beryllium		0.575	0.105	0.525	mg/kg	96.3	1					
Cadmium	J	0.237	0.105	0.525	mg/kg	96.3	1					
Calcium		17500	8.40	26.3	mg/kg	96.3	1					
Chromium		14.3	0.158	0.525	mg/kg	96.3	1					
Cobalt		10.6	0.158	0.525	mg/kg	96.3	1					
Copper		28.4	0.315	1.05	mg/kg	96.3	1					
Iron		22900	8.40	26.3	mg/kg	96.3	1					
Lead		12.4	0.347	1.05	mg/kg	96.3	1					
Magnesium		8390	8.93	31.5	mg/kg	96.3	1					
Manganese		428	0.210	1.05	mg/kg	96.3	1					
Nickel		24.7	0.158	0.525	mg/kg	96.3	1					
Potassium		1030	6.72	26.3	mg/kg	96.3	1					
Silver	J	0.424	0.105	0.525	mg/kg	96.3	1					
Sodium		143	7.35	26.3	mg/kg	96.3	1					
Thallium	U	ND	0.525	2.10	mg/kg	96.3	1					
Vanadium		17.2	0.105	0.525	mg/kg	96.3	1					
Zinc		56.6	0.420	1.05	mg/kg	96.3	1					
Metals Analysis-ICP-MS												
6020 MIMICP SCAN Metals "Dry Weight Corrected"												
Selenium	J	0.688	0.380	1.05	mg/kg	96.7	2	SKJ	08/14/18	1431	1791506	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SXW1	08/12/18	1110	1791505
SW846 3050B	SW846 3050B Prep	SXW1	08/12/18	1356	1791513
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/15/18	1600	1792873

Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID: SW11 Project: URSC00211
Sample ID: 456917007 Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 7471A	
2	SW846 3050B/6010D	
3	SW846 3050B/6020	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID:	SW11EB	Project:	URSC00211
Sample ID:	456917008	Client ID:	URSC013
Matrix:	Water		
Collect Date:	09-AUG-18 08:36		
Receive Date:	10-AUG-18		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/15/18	1501	1792385	1
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum		420	68.0	200	ug/L	1.00	1	JWJ	08/13/18	1848	1791524	2
Antimony	J	3.78	3.50	10.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium		5.59	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium		869	50.0	200	ug/L	1.00	1					
Chromium	J	1.38	1.00	5.00	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	J	3.68	3.00	10.0	ug/L	1.00	1					
Iron		478	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	10.0	ug/L	1.00	1					
Magnesium	J	245	110	300	ug/L	1.00	1					
Manganese		12.8	2.00	10.0	ug/L	1.00	1					
Nickel	U	ND	1.50	5.00	ug/L	1.00	1					
Potassium		238	50.0	150	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium	J	299	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	J	3.61	3.30	10.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Selenium	U	ND	2.00	5.00	ug/L	1.00	1	SKJ	08/13/18	1205	1791504	3
The following Prep Methods were performed:												
Method	Description		Analyst	Date	Time	Prep	Batch					
SW846 3005A	ICP-MS 3005A PREP		SXW1	08/11/18	1232		1791503					
SW846 3005A	SW846 3005A for 6010D		SXW1	08/11/18	1239		1791523					
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid		AXS5	08/14/18	1415		1792384					

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Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID: SW11EB Project: URSC00211
Sample ID: 456917008 Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 7470A	
2	SW846 3005A/6010D	
3	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
SPRU Disposition Project

Client Sample ID:	G2SOL04	Project:	URSC00211
Sample ID:	456917020	Client ID:	URSC013
Matrix:	Soil		
Collect Date:	09-AUG-18 08:09		
Receive Date:	10-AUG-18		
Collector:	Client		
Moisture:	10.2%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis-CVAA												
7471 Cold Vapor Hg in Solid "Dry Weight Corrected"												
Mercury		0.0221		0.00411		0.0123		mg/kg	55.0	1	MTM1	08/16/18 1114 1792876 1
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		8250		7.28		21.4		mg/kg	96.2	1	TXT1	08/14/18 1944 1791514 2
Antimony	U	ND		0.353		1.07		mg/kg	96.2	1		
Arsenic		8.87		0.535		3.21		mg/kg	96.2	1		
Barium		46.1		0.107		0.535		mg/kg	96.2	1		
Beryllium		0.576		0.107		0.535		mg/kg	96.2	1		
Cadmium	J	0.290		0.107		0.535		mg/kg	96.2	1		
Calcium		17300		8.57		26.8		mg/kg	96.2	1		
Chromium		13.7		0.161		0.535		mg/kg	96.2	1		
Cobalt		12.2		0.161		0.535		mg/kg	96.2	1		
Copper		35.7		0.321		1.07		mg/kg	96.2	1		
Iron		23300		8.57		26.8		mg/kg	96.2	1		
Lead		11.9		0.353		1.07		mg/kg	96.2	1		
Magnesium		7270		9.10		32.1		mg/kg	96.2	1		
Manganese		508		0.214		1.07		mg/kg	96.2	1		
Nickel		26.3		0.161		0.535		mg/kg	96.2	1		
Potassium		893		6.85		26.8		mg/kg	96.2	1		
Silver	J	0.443		0.107		0.535		mg/kg	96.2	1		
Sodium		203		7.50		26.8		mg/kg	96.2	1		
Thallium	U	ND		0.535		2.14		mg/kg	96.2	1		
Vanadium		16.3		0.107		0.535		mg/kg	96.2	1		
Zinc		54.9		0.428		1.07		mg/kg	96.2	1		
Metals Analysis-ICP-MS												
6020 MIMICP SCAN Metals "Dry Weight Corrected"												
Selenium	J	0.565		0.368		1.02		mg/kg	91.7	2	SKJ	08/14/18 1433 1791506 3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SXW1	08/12/18	1110	1791505
SW846 3050B	SW846 3050B Prep	SXW1	08/12/18	1356	1791513
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/15/18	1600	1792873

Certificate of Analysis

Report Date: August 20, 2018

Company : URS
Address : 2425 River Road (c/o SPRU DP)

Contact: Niskayuna, New York 12309
Project: Mr. Jason Litwiller
Project: SPRU Disposition Project

Client Sample ID: G2SOL04 Project: URSC00211
Sample ID: 456917020 Client ID: URSC013

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 7471A	
2	SW846 3050B/6010D	
3	SW846 3050B/6020	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

Quality Control Summary

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QC Summary

Report Date: August 20, 2018

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URS
2425 River Road (c/o SPRU DP)
Niskayuna, New York

Contact: Mr. Jason Litwiller

Workorder: 456917

Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1791504										
QC1204089758	LCS										
Selenium		50.0			50.9	ug/L		102 (80%-120%)	SKJ	08/13/18	11:59
QC1204089759	LCSD										
Selenium		50.0			50.4	ug/L	1.02	101 (0%-20%)		08/13/18	12:02
QC1204089757	MB										
Selenium			U		ND	ug/L					08/13/18 11:55
QC1204089760	456917008 SDILT										
Selenium			U	ND U	ND	ug/L	N/A	(0%-20%)		08/13/18	12:08
Batch	1791506										
QC1204089763	456917001 DUP										
Selenium		J	0.651	J	0.593	mg/kg	9.4 ^	(+-0.999)	SKJ	08/14/18	14:11
QC1204089762	LCS										
Selenium		4.78			3.99	mg/kg		83.4 (80%-120%)		08/14/18	14:06
QC1204089761	MB										
Selenium			U		ND	mg/kg					08/14/18 14:04
QC1204089764	456917001 MS										
Selenium		5.33	J	0.651	4.58	mg/kg		73.6* (75%-125%)		08/14/18	14:13
QC1204089765	456917001 SDILT										
Selenium		J	3.14	U	ND	ug/L	N/A	(0%-10%)		08/14/18	14:15

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP										
Batch	1791514									
Aluminum	QC1204089777 LCS	497	407	mg/kg	81.9	(80%-120%)	TXT1	08/14/18 19:16		
Antimony		49.7	41.3	mg/kg	83.1	(80%-120%)				
Arsenic		49.7	41.8	mg/kg	84.2	(80%-120%)				
Barium		49.7	42.1	mg/kg	84.7	(80%-120%)				
Beryllium		49.7	43.7	mg/kg	87.9	(80%-120%)				
Cadmium		49.7	43.3	mg/kg	87.2	(80%-120%)				
Calcium		497	414	mg/kg	83.3	(80%-120%)				
Chromium		49.7	42.1	mg/kg	84.6	(80%-120%)				
Cobalt		49.7	42.1	mg/kg	84.7	(80%-120%)				
Copper		49.7	43.2	mg/kg	86.8	(80%-120%)				
Iron		497	414	mg/kg	83.2	(80%-120%)				
Lead		49.7	43.3	mg/kg	87	(80%-120%)				
Magnesium		497	414	mg/kg	83.2	(80%-120%)				
Manganese		49.7	42.5	mg/kg	85.4	(80%-120%)				
Nickel		49.7	42.0	mg/kg	84.5	(80%-120%)				

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1791514										
Potassium	497			413	mg/kg		83.1	(80%-120%)	TXT1	08/14/18	19:16
Silver	9.94			8.79	mg/kg		88.4	(80%-120%)			
Sodium	497			398	mg/kg		80	(80%-120%)			
Thallium	49.7			44.6	mg/kg		89.8	(80%-120%)			
Vanadium	49.7			42.7	mg/kg		85.8	(80%-120%)			
Zinc	49.7			42.7	mg/kg		85.9	(80%-120%)			
Aluminum	QC1204089776 MB		U	ND	mg/kg					08/14/18	19:13
Antimony			U	ND	mg/kg						
Arsenic			U	ND	mg/kg						
Barium			J	0.0999	mg/kg						
Beryllium			U	ND	mg/kg						
Cadmium			U	ND	mg/kg						
Calcium			U	ND	mg/kg						
Chromium			U	ND	mg/kg						
Cobalt			U	ND	mg/kg						

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1791514										
Copper			U	ND	mg/kg				TXT1	08/14/18	19:13
Iron			U	ND	mg/kg						
Lead			U	ND	mg/kg						
Magnesium			U	ND	mg/kg						
Manganese			U	ND	mg/kg						
Nickel			U	ND	mg/kg						
Potassium			U	ND	mg/kg						
Silver			U	ND	mg/kg						
Sodium			U	ND	mg/kg						
Thallium			U	ND	mg/kg						
Vanadium			U	ND	mg/kg						
Zinc			U	ND	mg/kg						
QC1204089778	456917001	MS									
Aluminum	521		5310	7210	mg/kg				N/A	(75%-125%)	08/14/18 19:20
Antimony	52.1	U	ND	39.4	mg/kg				75.6	(75%-125%)	
Arsenic	52.1		4.58	46.7	mg/kg				80.9	(75%-125%)	

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1791514										
Barium	52.1		30.6	89.8	mg/kg		114	(75%-125%)	TXT1	08/14/18	19:20
Beryllium	52.1	J	0.370	41.9	mg/kg		79.7	(75%-125%)			
Cadmium	52.1	J	0.230	40.3	mg/kg		76.9	(75%-125%)			
Calcium	521		12500	15300	mg/kg		N/A	(75%-125%)			
Chromium	52.1		9.18	54.4	mg/kg		86.8	(75%-125%)			
Cobalt	52.1		7.93	46.8	mg/kg		74.6*	(75%-125%)			
Copper	52.1		20.8	64.3	mg/kg		83.6	(75%-125%)			
Iron	521		15500	19100	mg/kg		N/A	(75%-125%)			
Lead	52.1		11.9	48.3	mg/kg		70*	(75%-125%)			
Magnesium	521		6170	7250	mg/kg		N/A	(75%-125%)			
Manganese	52.1		317	399	mg/kg		N/A	(75%-125%)			
Nickel	52.1		17.8	57.8	mg/kg		76.7	(75%-125%)			
Potassium	521		754	1280	mg/kg		101	(75%-125%)			
Silver	10.4	J	0.295	8.92	mg/kg		82.8	(75%-125%)			
Sodium	521		79.7	509	mg/kg		82.5	(75%-125%)			

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1791514										
Thallium	52.1	U	ND	41.0	mg/kg		78.4	(75%-125%)	TXT1	08/14/18	19:20
Vanadium	52.1		10.3	54.3	mg/kg		84.5	(75%-125%)			
Zinc	52.1		36.7	84.1	mg/kg		91.1	(75%-125%)			
QC1204089779 456917001 MSD											
Aluminum	527		5310	7610	mg/kg	5.4	N/A	(0%-20%)		08/14/18	19:22
Antimony	52.7	U	ND	38.3	mg/kg	3.04	72.4 *	(0%-20%)			
Arsenic	52.7		4.58	47.5	mg/kg	1.58	81.4	(0%-20%)			
Barium	52.7		30.6	91.0	mg/kg	1.29	115	(0%-20%)			
Beryllium	52.7	J	0.370	40.6	mg/kg	3.14	76.3	(0%-20%)			
Cadmium	52.7	J	0.230	39.4	mg/kg	2.14	74.4 *	(0%-20%)			
Calcium	527		12500	21300	mg/kg	32.9 *	N/A	(0%-20%)			
Chromium	52.7		9.18	51.1	mg/kg	6.18	79.6	(0%-20%)			
Cobalt	52.7		7.93	45.8	mg/kg	2.17	71.8 *	(0%-20%)			
Copper	52.7		20.8	66.7	mg/kg	3.73	87.3	(0%-20%)			
Iron	527		15500	20700	mg/kg	7.75	N/A	(0%-20%)			
Lead	52.7		11.9	49.3	mg/kg	2	71 *	(0%-20%)			

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1791514										
Magnesium	527	6170		9930	mg/kg	31.2*	N/A	(0%-20%)	TXT1	08/14/18	19:22
Manganese	52.7	317		427	mg/kg	6.98	N/A	(0%-20%)			
Nickel	52.7	17.8		57.7	mg/kg	0.117	75.7	(0%-20%)			
Potassium	527	754		1330	mg/kg	3.68	109	(0%-20%)			
Silver	10.5	J	0.295	8.80	mg/kg	1.29	80.7	(0%-20%)			
Sodium	527	79.7		498	mg/kg	2.14	79.5	(0%-20%)			
Thallium	52.7	U	ND	39.7	mg/kg	3.37	74.9*	(0%-20%)			
Vanadium	52.7		10.3	54.2	mg/kg	0.242	83.3	(0%-20%)			
Zinc	52.7	36.7		87.8	mg/kg	4.26	97	(0%-20%)			
Antimony	QC1204092710 456917001 PS	500	U	ND	462	ug/L	92.3	(75%-125%)		08/15/18	11:57
Cadmium		500	J	2.24	462	ug/L	91.9	(75%-125%)			
Cobalt		500		77.3	541	ug/L	92.8	(75%-125%)			
Lead		500		116	595	ug/L	95.7	(75%-125%)			
Thallium		500	U	ND	477	ug/L	95.2	(75%-125%)			
Aluminum	QC1204089780 456917001 SDILT		51800	10900	ug/L	5.73		(0%-20%)		08/14/18	19:24

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1791514										
Antimony	U	ND	U	ND	ug/L	N/A		(0%-20%)	TXT1	08/14/18	19:24
Arsenic		44.6	J	8.56	ug/L	4.11		(0%-20%)			
Barium		299		62.8	ug/L	5.14		(0%-20%)			
Beryllium	J	3.61	U	ND	ug/L	N/A		(0%-20%)			
Cadmium	J	2.24	U	ND	ug/L	N/A		(0%-20%)			
Calcium		122000		25400	ug/L	4.65		(0%-20%)			
Chromium		89.5		18.8	ug/L	5.05		(0%-20%)			
Cobalt		77.3		16.9	ug/L	8.96		(0%-20%)			
Copper		202		38.9	ug/L	3.78		(0%-20%)			
Iron		151000		32100	ug/L	6.41		(0%-20%)			
Lead		116		22.5	ug/L	2.95		(0%-20%)			
Magnesium		60100		12700	ug/L	5.45		(0%-20%)			
Manganese		3090		668	ug/L	8.29		(0%-20%)			
Nickel		174		37.8	ug/L	8.96		(0%-20%)			
Potassium		7350		1420	ug/L	3.24		(0%-20%)			

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1791514										
Silver		J	2.88	J	1.33	ug/L	131	(0%-20%)	TXT1	08/14/18	19:24
Sodium			777	J	143	ug/L	7.77	(0%-20%)			
Thallium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Vanadium			101		21.3	ug/L	5.58	(0%-20%)			
Zinc			358		77.6	ug/L	8.54	(0%-20%)			
Batch	1791524										
QC1204089796	LCS										
Aluminum		5000			4510	ug/L	90.3	(80%-120%)	JWJ	08/13/18	18:43
Antimony		500			486	ug/L	97.3	(80%-120%)			
Arsenic		500			453	ug/L	90.6	(80%-120%)			
Barium		500			466	ug/L	93.2	(80%-120%)			
Beryllium		500			464	ug/L	92.9	(80%-120%)			
Cadmium		500			455	ug/L	91	(80%-120%)			
Calcium		5000			4650	ug/L	93.1	(80%-120%)			
Chromium		500			463	ug/L	92.6	(80%-120%)			
Cobalt		500			470	ug/L	94.1	(80%-120%)			
Copper		500			460	ug/L	92	(80%-120%)			

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QC Summary

Workorder: **456917**

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Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP										
Batch	1791524									
Iron	5000		4640	ug/L		92.8	(80%-120%)	JWJ	08/13/18	18:43
Lead	500		464	ug/L		92.8	(80%-120%)			
Magnesium	5000		4600	ug/L		92.1	(80%-120%)			
Manganese	500		466	ug/L		93.3	(80%-120%)			
Nickel	500		463	ug/L		92.6	(80%-120%)			
Potassium	5000		4560	ug/L		91.2	(80%-120%)			
Silver	100		93.5	ug/L		93.5	(80%-120%)			
Sodium	5000		4530	ug/L		90.5	(80%-120%)			
Thallium	500		483	ug/L		96.6	(80%-120%)			
Vanadium	500		472	ug/L		94.4	(80%-120%)			
Zinc	500		450	ug/L		90	(80%-120%)			
QC1204089797	LCSD									
Aluminum	5000		4530	ug/L	0.336	90.6	(0%-20%)		08/13/18	18:46
Antimony	500		477	ug/L	1.92	95.4	(0%-20%)			
Arsenic	500		450	ug/L	0.64	90	(0%-20%)			
Barium	500		460	ug/L	1.39	91.9	(0%-20%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP										
Batch	1791524									
Beryllium	500		461	ug/L	0.711	92.2	(0%-20%)	JWJ	08/13/18	18:46
Cadmium	500		452	ug/L	0.682	90.3	(0%-20%)			
Calcium	5000		4670	ug/L	0.425	93.5	(0%-20%)			
Chromium	500		457	ug/L	1.28	91.4	(0%-20%)			
Cobalt	500		458	ug/L	2.55	91.7	(0%-20%)			
Copper	500		454	ug/L	1.21	90.9	(0%-20%)			
Iron	5000		4640	ug/L	0.0539	92.8	(0%-20%)			
Lead	500		462	ug/L	0.378	92.4	(0%-20%)			
Magnesium	5000		4610	ug/L	0.126	92.2	(0%-20%)			
Manganese	500		460	ug/L	1.4	92	(0%-20%)			
Nickel	500		460	ug/L	0.652	92	(0%-20%)			
Potassium	5000		4550	ug/L	0.264	90.9	(0%-20%)			
Silver	100		92.7	ug/L	0.86	92.7	(0%-20%)			
Sodium	5000		4480	ug/L	1.13	89.5	(0%-20%)			
Thallium	500		474	ug/L	1.87	94.8	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1791524										
Vanadium	500			466	ug/L	1.27	93.2	(0%-20%)	JWJ	08/13/18	18:46
Zinc	500			446	ug/L	1	89.1	(0%-20%)			
Aluminum	QC1204089795 MB		U	ND	ug/L					08/13/18	18:40
Antimony			U	ND	ug/L						
Arsenic			U	ND	ug/L						
Barium			U	ND	ug/L						
Beryllium			U	ND	ug/L						
Cadmium			U	ND	ug/L						
Calcium			U	ND	ug/L						
Chromium			U	ND	ug/L						
Cobalt			U	ND	ug/L						
Copper			U	ND	ug/L						
Iron			U	ND	ug/L						
Lead			U	ND	ug/L						
Magnesium			U	ND	ug/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1791524										
Manganese			U	ND	ug/L				JWJ	08/13/18	18:40
Nickel			U	ND	ug/L						
Potassium			U	ND	ug/L						
Silver			U	ND	ug/L						
Sodium			U	ND	ug/L						
Thallium			U	ND	ug/L						
Vanadium			U	ND	ug/L						
Zinc			U	ND	ug/L						
QC1204089798 456917008 SDILT											
Aluminum		420	J	88.9	ug/L	5.94		(0%-20%)		08/13/18	18:52
Antimony		J	3.78	U	ND	ug/L	N/A	(0%-20%)			
Arsenic		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Barium		5.59	U	ND	ug/L	N/A		(0%-20%)			
Beryllium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Calcium		869	J	189	ug/L	8.74		(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1791524										
Chromium	J	1.38	U	ND	ug/L	N/A		(0%-20%)	JWJ	08/13/18	18:52
Cobalt	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Copper	J	3.68	U	ND	ug/L	N/A		(0%-20%)			
Iron		478		102	ug/L	6.43		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Magnesium	J	245	U	ND	ug/L	N/A		(0%-20%)			
Manganese		12.8	J	2.77	ug/L	7.67		(0%-20%)			
Nickel	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Potassium		238	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Sodium	J	299	U	ND	ug/L	N/A		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Vanadium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Zinc	J	3.61	U	ND	ug/L	N/A		(0%-20%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-Mercury										
Batch 1792385										
QC1204091590	455350002 DUP									
Mercury		4.83	4.95	ug/L	2.53		(0%-20%)	MTM1	08/15/18	15:48
QC1204091583	LCS									
Mercury		2.00	2.06	ug/L		103	(80%-120%)		08/15/18	15:45
QC1204091582	MB									
Mercury		U	ND	ug/L					08/15/18	15:43
QC1204091591	455350002 MS									
Mercury		2.00	4.83	ug/L	6.86		(75%-125%)		08/15/18	15:50
QC1204091592	455350002 SDILT									
Mercury		4.83	1.06	ug/L	9.52		(0%-10%)		08/15/18	15:51
Batch	1792876									
QC1204092592	455397001 DUP									
Mercury		0.140	0.144	mg/kg	2.81		(0%-20%)	MTM1	08/16/18	10:22
QC1204092591	LCS									
Mercury		0.118	0.118	mg/kg		99.7	(80%-120%)		08/16/18	10:19
QC1204092590	MB									
Mercury		U	ND	mg/kg					08/16/18	10:17
QC1204092593	455397001 MS									
Mercury		0.115	0.140	mg/kg	0.268		(80%-120%)		08/16/18	10:24
QC1204092594	455397001 SDILT									
Mercury		2.40	0.482	ug/L	.5		(0%-10%)		08/16/18	10:25

Notes:

The Qualifiers in this report are defined as follows:

< Result is less than value reported

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
>	Result is greater than value reported										
E	%difference of sample and SD is >10%. Sample concentration must meet flagging criteria										
FB	Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies										
H	Analytical holding time was exceeded										
J	Value is estimated										
N	Metals--The Matrix spike sample recovery is not within specified control limits										
N/A	RPD or %Recovery limits do not apply.										
N1	See case narrative										
ND	Analyte concentration is not detected above the detection limit										
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.										
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

[^]The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILIT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.