Operation, Maintenance and Monitoring Report November - December 2018

NOW Corporation NYSDEC Site No. 3-14-008

Work Assignment No. D007626-25

Prepared for:

SUPERFUND STANDBY PROGRAM
New York State
Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by:

AECOM Technical Services Northeast, Inc. 40 British American Boulevard Latham, New York 12110

January 2019



January 29, 2019

Mr. Robert Strang NYSDEC Division of Environmental Remediation 625 Broadway, 12th Floor Albany, New York 12233-7013

Re: NOW Corporation - Site No. 3-14-008

O&M Summary Report: November-December 2018

Dear Mr. Strang:

This monthly summary report describes the operation, maintenance and monitoring (OM&M) of the remedial system at the NOW Corporation site in the Town of Clinton, New York, for a 44-day period (October 24 – December 7, 2018).

With the exceptions noted below, if any, the pump and treat system was online and operational throughout the reporting period. Approximately 695,900 gallons of water were treated. Discharge from the treatment system averaged approximately 15,800 gallons per day (gpd).

As of the last day of the reporting period, a total of 113,758,000 gallons of groundwater had been recovered and treated by the system since it became operational in February 1998.

Table 1 summarizes influent and effluent analytical data for water samples collected on December 7, 2018. **There were no exceedances of effluent limitations.** A copy of the analytical laboratory report is attached. Total VOCs in the most contaminated extraction well (TW-2A) was 965 ug/L; last month's value was 393 ug/L.

Table 2 presents selected operational data recorded on the sampling date. Table 3 presents water levels measured in selected monitoring wells.

There was no downtime during the reporting period. Pumps in recovery wells were operational throughout the period.

AECOM made one site visit to conduct the required system inspection, perform scheduled and unscheduled maintenance, and to collect water samples. Details for the current period follow:

<u>December 7</u> – Performed monthly system inspection and influent and effluent sampling. Turned all recovery well pumps off to allow recharge prior to sampling to ensure all recovery wells were contributing to effluent and total influent samples. Disassembled TW-2A flow meter; removed black pieces of scale that had been jamming the impeller. Confirmed proper operation of heat tape on exposed portion of outdoor effluent line. The VFD regulating the stripper blower was at 60 Hz upon arrival, and remained at that setting upon departure.

Page 2 Mr. Robert Strang NYSDEC

Please feel free to contact me at (518) 951-2262, or at <u>stephen.choiniere@aecom.com</u> if you have any questions or comments regarding this report or the operation of the treatment system.

Sincerely,

AECOM Technical Services Northeast, Inc.

Stephen R. Choiniere Project Manager

Table 1
Summary of Influent and Effluent Data
Sampling Date: December 7, 2018
NOW Corporation Site
NYSDEC Site No. 3-14-008
Town of Clinton, New York

Analytes/	TotalRecovery Wells				Effluent			
Parameters	Influent	Effluent	TW-1	TW-2A	TW-3	Lim	itations	
							(units)	
Quantity treated, avg per day		15,815				Monitor	gallons	
pH	7.3	7.7				6.5 to 8.5	standard units	
Oil and Grease	1.30	< 0.990	NA	NA	NA	15	mg/L	
Total Cyanide	< 0.010	< 0.010	NA	NA	NA	0.01	mg/L	
TDS	232	254	NA	NA	NA	1000	mg/L	
TSS	5.0	0.2 J	NA	NA	NA	50	mg/L	
Aluminum, Total	<25.0	<25.0	NA	NA	NA	Monitor	ug/L	
Arsenic, Total	< 4.00	< 4.00	NA	NA	NA	100	ug/L	
Barium, Total	58.5	70.1	NA	NA	NA	Monitor	ug/L	
Chromium	< 5.0	< 5.0	NA	NA	NA	400	ug/L	
Copper	< 20.0	< 5.0	NA	NA	NA	24	ug/L	
Iron	195 J	< 200	NA	NA	NA	600	ug/L	
Mercury	< 0.20	< 0.20	NA	NA	NA	0.8	ug/L	
Manganese	314	48.0	NA	NA	NA	Monitor	ug/L	
Nickel	<10.0	< 5.0	NA	NA	NA	200	ug/L	
Zinc	5.5 J	<20.0	NA	NA	NA	150	ug/L	
1,1,1-Trichloroethane	540	0.7 J	0.7 J	590	7	10	ug/L	
1,1,2-Trichloroethane	<1.00	< 1.00	<1.00	0.2 J	<1.00	1.2	ug/L	
1,1-Dichloroethane	65	0.3 J	21	82	5	10	ug/L	
1,1-Dichloroethene	7	< 0.50	8	10	1 J	0.5	ug/L	
1,2-Dichloroethane	0.3 J	< 1.00	<1.00	0.4 J	<1.00	1.6	ug/L	
2-Butanone	<10	< 5.0	< 2.00	< 2.00	< 2.00	NL	ug/L	
Benzene	<1.00	< 1.00	<1.00	< 1.00	<1.00	1.4	ug/L	
Chlorobenzene	<1.00	< 1.00	<1.00	< 1.00	<1.00	10	ug/L	
Chloroethane	<1.00	< 2.00	< 2.00	< 1.00	<1	10	ug/L	
cis -1,2-Dichloroethene	6	< 1.00	3	12	0.5 J	5	ug/L	
Ethylbenzene	<1.00	< 1.00	<1.00	< 1.00	<1.00	10	ug/L	
o-Xylene	<1	< 1.00	<1.00	< 1.00	<1.00	5	ug/L	
m,p-Xylene	<5	< 2.00	< 2.00	< 2.00	< 2.00	10	ug/L	
Tetrachloroethene	<1.00	< 1.00	<1.00	< 1.00	<1.00	1.4	ug/L	
Tertrahydrofuran	< 2.00	2 J	< 2.00	< 2.00	< 2.00	NL	ug/L	
Toluene	< 1.00	< 1.00	<1.00	<1.00	<1.00	10	ug/L	
Trichloroethene	150	0.5 J	38	270	14	6	ug/L	
Vinyl Chloride	<1	<1	<1	0.4 J	<1	0.6	ug/L	

Notes:

- 1) Detected concentrations are presented in **bold** typeface, and are expressed in the units shown in far right column.
- 2) Effluent concentration boxed in **bold** denotes exceedance of effluent limitations.
- 3) NA indicates not analyzed.
- 4) "J" indicates an estimated concentration below the reporting limit (RL).
- 5) "B" denotes metal detected in method blank at concentration below the RL, but above the method detection limit.
- 6) "**D**" indicates result from a diluted sample.
- 7) NL indicates no effluent limitations specified.

Tables Dec 2018.xls 1/29/2019

Table 2 Summary of December 2018 O&M Data

NOW Corporation Site Town of Clinton, New York

Instrumentati	Pumping Rate Water Level Above Transducer Flow Meter Reading Pump Pressure 7-2A Pumping Rate Water Level Above Transducer Flow Meter Reading Pump Pressure 7-3 Pumping Rate Water Level Above Transducer Flow Meter Reading Pump Pressure 7-3 Pumping Rate Water Level Above Transducer Flow Meter Reading Pump Pressure 7-3 Arrival Departure Stripper	12/7/18	Units
TW-1			
	Pumping Rate	1	GPM
	Water Level Above Transducer	14.80	feet
	Flow Meter Reading	9,281,800	gallons
	Pump Pressure	0	psi
TW-2A			
	Pumping Rate	13	GPM
	Water Level Above Transducer	42.70	feet
	Flow Meter Reading	17,484,700	gallons
	Pump Pressure	0	psi
TW-3			
	Pumping Rate	8	GPM
	Water Level Above Transducer	34.34	feet
	Flow Meter Reading	16,029,900	gallons
	Pump Pressure	0	psi
VFD Setting	Arrival	60	Hz
	Departure	60	Hz
Air Stripper			
	Stripper Blower Pressure	13	inches H ₂ O
	Air Temperature in Stripper	52	°F
Effluent Flow			
	Effluent Flow this period	695,868	gallons
	Total Effluent Flow	113,758,209	gallons

Tables Dec 2018.xls 1/29/2019

Table 3
Groundwater Levels
NOW Corporation Site
NYSDEC Site No. 3-14-008
Town of Clinton, New York

	MP	12/7	7/18
Well ID	Elevation	Depth to Water (Ft below MP)	GW Elevation
MW-1	289.50	9.20	280.30
MW-2	332.51	24.16	308.35
MW-3	312.83	20.10	292.73
MW-3S	312.51	17.74	294.77
MW-4S	298.29	20.10	278.19
MW-4D	298.16	19.91	278.25
MW-5	285.48	17.37	268.11
MW-6S	287.90	3.63	284.27
MW-6D	287.25	5.84	281.41
MW-7S	292.12	12.40	279.72
MW-7D	292.54	24.58	267.96
OW-1	307.75	40.19	267.56
OW-2	305.96	64.33	241.63
OW-3	NA		NA
OW-4	NA		NA
OW-5	NA		NA
OW-6	294.81	4.21	290.60
IW-1	312.46	21.79	290.67
IW-2	304.56	30.35	274.21
MW-8	283.65		NA
MW-9	275.37		NA
MW-10	280.92		NA
MW-11	283.72		NA
MW-12S	NA		NA
MW-12D	NA		NA

Note: NA indicates data are not available.

MP denotes measuring point.

Tables Dec 2018.xls 1/29/2019



V	Final Report
	Revised Report

Report Date: 28-Dec-18 13:10

Laboratory Report SC52491

AECOM Environment 40 British American Boulevard Latham, NY 12110 Attn: Stephen Choiniere

Project: Now Corp - Staatsburg, NY

Project #: 60276639-1

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.

All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110 Connecticut # PH-0777 Florida # E87936 Maine # MA138 New Hampshire # 2972/2538 New Jersey # MA011 New York # 11393 Pennsylvania # 68-04426/68-02924 Rhode Island # LAO00348 USDA # P330-15-00375 Vermont # VT-11393



Authorized by:

Christina White Technical Director

Christina a. White

Eurofins Spectrum Analytical holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 30 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

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Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC52491

Project: Now Corp - Staatsburg, NY

Project Number: 60276639-1

Laboratory ID	Client Sample ID	<u>Matrix</u>	Date Sampled	Date Received
SC52491-01	EFF 60 120718	Ground Water	07-Dec-18 12:18	10-Dec-18 10:48
SC52491-02	INF 120718	Ground Water	07-Dec-18 12:11	10-Dec-18 10:48
SC52491-03	TW-1 120718	Ground Water	07-Dec-18 12:05	10-Dec-18 10:48
SC52491-04	TW-2A 120718	Ground Water	07-Dec-18 12:22	10-Dec-18 10:48
SC52491-05	TW-3 120718	Ground Water	07-Dec-18 12:15	10-Dec-18 10:48
SC52491-06	TB 120718	Trip Blank	07-Dec-18 00:00	10-Dec-18 10:48

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CASE NARRATIVE:

Data has been reported to the RDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the detection limit are reported as "<" (less than) the detection limit in this report.

The samples were received 5.5 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW-846 6010C

Blanks:

P35104AB351404401

Estimated value

Iron

Samples:

SC52491-02 INF 120718

Estimated value

Iron

Zinc

SW-846 8260C

Laboratory Control Samples:

LCSL43QL183533AA

Estimated value

Ethanol

Samples:

SC52491-01 EFF 60 120718

Estimated value

1,1,1-Trichloroethane

1,1-Dichloroethane

Acetone

Tetrahydrofuran

Trichloroethene

SC52491-02 INF 120718

Estimated value

1,2-Dichloroethane

Acetone

SC52491-03 TW-1 120718

SW-846 8260C

Samples:

SC52491-03 TW-1 120718

Estimated value

1,1,1-Trichloroethane

Acetone

SC52491-04 TW-2A 120718

Estimated value

1,1,2-Trichloroethane 1,2-Dichloroethane

Vinyl Chloride

SC52491-05 TW-3 120718

Estimated value

1,1-Dichloroethene

cis-1,2-Dichloroethene

LCSL43YL183533AA

Estimated value

Ethanol

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Sample Acceptance Check Form

Client:	AECOM Environment - Latham, NY
Project:	Now Corp - Staatsburg, NY / 60276639-1
Work Order:	SC52491

12/10/2018

Sample(s) received on:

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	\checkmark		
Were custody seals intact?	\checkmark		
Were samples received at a temperature of $\leq 6^{\circ}$ C?	✓		
Were samples cooled on ice upon transfer to laboratory representative?	✓		
Were sample containers received intact?	\checkmark		
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	\checkmark		
Were samples accompanied by a Chain of Custody document?	\checkmark		
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	V		
Did sample container labels agree with Chain of Custody document?	\checkmark		
Were samples received within method-specific holding times?	\checkmark		

This laboratory report is not valid without an authorized signature on the cover page.

Summary of Hits

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Total Dissolved Solids	254		5	mg/l	SM18-22 2540C
Total Suspended Solids	0.2	J	0.5	mg/l	SM2540D (11)
Barium	0.0701		0.0050	mg/l	SW-846 6010C
Manganese	0.0480		0.0200	mg/l	SW-846 6010C
1,1,1-Trichloroethane	0.7	J.	1	ug/l	SW-846 8260C
1,1-Dichloroethane	0.3	J.	1	ug/l	SW-846 8260C
Acetone	1	J.	20	ug/l	SW-846 8260C
Tetrahydrofuran	2	J.	10	ug/l	SW-846 8260C
Trichloroethene	0.5	J.	1	ug/l	SW-846 8260C
Lab ID: SC52491-02			Client ID: INF 120	718	
Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Oil & Grease	1.30		1.00	mg/l	EPA 1664B
Total Dissolved Solids	232		5	mg/l	SM18-22 2540C
Total Suspended Solids	5.0		0.5	mg/l	SM2540D (11)
Barium	0.0585		0.0050	mg/l	SW-846 6010C
Iron	0.195	J.	0.200	mg/l	SW-846 6010C
Manganese	0.314		0.0200	mg/l	SW-846 6010C
Zinc	0.0055	J.	0.0200	mg/l	SW-846 6010C
1,1,1-Trichloroethane	540		10	ug/l	SW-846 8260C
1,1-Dichloroethane	65		1	ug/l	SW-846 8260C
1,1-Dichloroethene	7		1	ug/l	SW-846 8260C
1,2-Dichloroethane	0.3	J.	1	ug/l	SW-846 8260C
Acetone	1	J.	20	ug/l	SW-846 8260C
cis-1,2-Dichloroethene	6		1	ug/l	SW-846 8260C
Trichloroethene	150		1	ug/l	SW-846 8260C
Lab ID: SC52491-03			Client ID: TW-1 12	20718	
Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
1,1,1-Trichloroethane	0.7	J.	1	ug/l	SW-846 8260C
1,1-Dichloroethane	21		1	ug/l	SW-846 8260C
1,1-Dichloroethene	8		1	ug/l	SW-846 8260C
Acetone	1	J.	20	ug/l	SW-846 8260C
cis-1,2-Dichloroethene	3		1	ug/l	SW-846 8260C
Trichloroethene	38		1	ug/l	SW-846 8260C

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Lab ID: SC52491-04 **Client ID:** TW-2A 120718

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method	
1,1,1-Trichloroethane	590		10	ug/l	SW-846 8260C	
1,1,2-Trichloroethane	0.2	J.	1	ug/l	SW-846 8260C	
1,1-Dichloroethane	82		1	ug/l	SW-846 8260C	
1,1-Dichloroethene	10		1	ug/l	SW-846 8260C	
1,2-Dichloroethane	0.4	J.	1	ug/l	SW-846 8260C	
cis-1,2-Dichloroethene	12		1	ug/l	SW-846 8260C	
Trichloroethene	270		1	ug/l	SW-846 8260C	
Vinyl Chloride	0.4	J.	1	ug/l	SW-846 8260C	

Lab ID: SC52491-05

Trichloroethene

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
1,1,1-Trichloroethane	7		1	ug/l	SW-846 8260C
1,1-Dichloroethane	5		1	ug/l	SW-846 8260C
1,1-Dichloroethene	1	J.	1	ug/l	SW-846 8260C
cis-1.2-Dichloroethene	0.5	J.	1	սջ/]	SW-846 8260C

Client ID:

TW-3 120718

ug/l

SW-846 8260C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

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Sample Identification EFF 60 120718 SC52491-01					<u>Project #</u> 6639-1	(<u>Matrix</u> Ground W	· · · · · · · · · · · · · · · · · · ·	ection Date -Dec-18 12			ceived Dec-18	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	ele Petroleum Hydrocarbons												
Prepared	by method General Prepa Oil & Grease		•	/I	0.000	0.000	4	EDA 4004D	14 Dag 10	44 Dag 40	ID.	4040070	V
G 16		< 0.990	U,OG	mg/l	0.990	0.906	1	EPA 1664B	14-Dec-18	14-Dec-18	JB	1816079	
General C	Chemistry Parameters	054		ma/l	E	2	1	CM49 22 2540C	11 Dog 10	12 Dec 19	CMD	1015006	
	Total Dissolved Solids	254		mg/l	5 0.5	3 0.2	1 1	SM18-22 2540C		12-Dec-18 12-Dec-18	CMB CMB	1815996 1815998	
Cb	Total Suspended Solids	0.2	J	mg/l	0.5	0.2	'	SM2540D (11)	11-Dec-16	12-Dec-16	CIVID	1010990	^
	octed Analyses by method METHOD												
	erformed by Eurofins Lancas	ter Laboratori	es Environme	ental - 1067	0								
57-12-5	Total Cyanide (water)	< 0.010		mg/l	0.010	0.0050	1	EPA 335.4	14-Dec-18 17:30	15-Dec-18 11:24	10670	34810210)
	acted Analyses by method SW-846 3005	<u>4</u>											
Analysis p	erformed by Eurofins Lancas	ter Laboratori	es Environme	ental - 1067	0								
7429-90-5	Aluminum	< 0.300		mg/l	0.300	0.153	1	SW-846 6010C	20-Dec-18 09:30	20-Dec-18 23:08	10670	35114044	1
7440-38-2	Arsenic	< 0.0500		mg/l	0.0500	0.0160	1	"	"	"	"		
7440-39-3	Barium	0.0701		mg/l	0.0050	0.0010	1	u u	"	"	"	"	
7440-47-3	Chromium	< 0.0150		mg/l	0.0150	0.0053	1	"	"	"	"	"	
7440-50-8	Copper	< 0.0200		mg/l	0.0200	0.0062	1	"	"	"	"	"	
7439-89-6	Iron	< 0.200		mg/l	0.200	0.0400	1	"	"	"	"	"	
7439-96-5	Manganese	0.0480		mg/l	0.0200	0.0011	1	"	"	"	"	"	
7440-02-0	Nickel	< 0.0100		mg/l	0.0100	0.0031	1	"	"	"	"	"	
7440-66-6	Zinc	< 0.0200		mg/l	0.0200	0.0030	1	"	"	"	"	"	
<u>Prepared</u>	by method METHOD												
Analysis p	erformed by Eurofins Lancas	ter Laboratori	es Environme	ental - 1067	0								
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.000050	1	SW-846 7470A	17-Dec-18 17:10	18-Dec-18 07:36	10670	34605713	3
	acted Analyses by method SW-846 50300	<u>C</u>											
Analysis p	erformed by Eurofins Lancas	ter Laboratori	es Environme	ental - 1067	0								
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	19-Dec-18 23:18	19-Dec-18 23:19	10670	.183533A	J
71-55-6	1,1,1-Trichloroethane	0.7	J.	ug/l	1	0.3	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	0.3	J.	ug/l	1	0.2	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 5		ug/l	5	0.4	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5		ug/l	5	0.3	1	п	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 5		ug/l	5	1	1	II .	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloroprop ane	< 5		ug/l	5	0.3	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1		ug/l	1	0.2	1	II	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1		ug/l	1	0.3	1	II .	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1		ug/l	1	0.2	1	II .	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	

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Subcontracte Subcontracte Analysis perfor 108-67-8 1 541-73-1 1 142-28-9 1 106-46-7 1 123-91-1 1 594-20-7 2 78-93-3 2 95-49-8 2	·	Result er Laborator < 5 < 5 < 1 < 5 < 250	Flag	ug/l	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracte Analysis performance 108-67-8 1 541-73-1 1 142-28-9 1 106-46-7 1 123-91-1 1 594-20-7 2 78-93-3 2 95-49-8 2	ed Analyses formed by Eurofins Lancaste 1,3,5-Trimethylbenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dioxane	< 5 < 5 < 1 < 5	ies Environme	ug/l									
Analysis performance 108-67-8	in a control of the c	< 5 < 5 < 1 < 5	ies Environme	ug/l									
108-67-8 1 541-73-1 1 142-28-9 1 106-46-7 1 123-91-1 1 594-20-7 2 78-93-3 2 95-49-8 2	1,3-5-Trimethylbenzene 1,3-Dichlorobenzene 1,3-Dichloropropane 1,4-Dichlorobenzene 1,4-Dioxane	< 5 < 5 < 1 < 5	ies Environme	ug/l									
541-73-1 1 142-28-9 1 106-46-7 1 123-91-1 1 594-20-7 2 78-93-3 2 95-49-8 2	1,3-Dichlorobenzene 1,3-Dichloropropane 1,4-Dichlorobenzene 1,4-Dioxane	< 5 < 1 < 5			5								
142-28-9 1 106-46-7 1 123-91-1 1 594-20-7 2 78-93-3 2 95-49-8 2	I,3-Dichloropropane I,4-Dichlorobenzene I,4-Dioxane	< 1 < 5			-	0.3	1	SW-846 8260C	19-Dec-18 23:18	19-Dec-18 23:19	10670	.183533A	J
106-46-7 1 123-91-1 1 594-20-7 2 78-93-3 2 95-49-8 2	l ,4-Dichlorobenzene l ,4-Dioxane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
123-91-1 1 594-20-7 2 78-93-3 2 95-49-8 2	1,4-Dioxane			ug/l	1	0.2	1	n n	"	"	"	"	
594-20-7 2 78-93-3 2 95-49-8 2		< 250		ug/l	5	0.2	1	n	"	"	"	"	
78-93-3 2 95-49-8 2	2,2-Dichloropropane	~ ZJU		ug/l	250	29	1	n	"	"	"	"	
95-49-8 2		< 1		ug/l	1	0.3	1	n	"	"	"	"	
_	2-Butanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
	2-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
591-78-6 2	2-Hexanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
106-43-4 4	1-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-10-1 4	1-Methyl-2-pentanone	< 10		ug/l	10	0.5	1	"	"	"	•		
67-64-1 Д	Acetone	1	J.	ug/l	20	0.7	1	"	"	"	"	"	
107-13-1 A	Acrylonitrile	< 20		ug/l	20	0.3	1	"	"	"	"	"	
71-43-2 B	Benzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-86-1 B	Bromobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
74-97-5 B	Bromochloromethane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
75-27-4 B	Bromodichloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-25-2 B	Bromoform	< 4		ug/l	4	0.2	1	"	"	"	"	"	
74-83-9 B	Bromomethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
75-15-0 C	Carbon Disulfide	< 5		ug/l	5	0.2	1	"	"	"	"	"	
56-23-5 C	Carbon Tetrachloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-90-7 C	Chlorobenzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-00-3 C	Chloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
67-66-3 C	Chloroform	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-87-3 C	Chloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-59-2 ci	cis-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-01-5 ci	cis-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-20-3 d	di-Isopropyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
124-48-1 D	Dibromochloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-95-3 D	Dibromomethane	< 1		ug/l	1	0.2	1	n	"	"	"	"	
	Dichlorodifluoromethane	< 1		ug/l	1	0.2	1		"	"	"	"	
	Ethanol	< 750		ug/l	750	280	1		"	"	"	"	
60-29-7 E	Ethyl ether	< 5		ug/l	5	0.2	1		"	"	"		
	Ethyl t-butyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
	Ethylbenzene	< 1		ug/l	1	0.4	1		"		"	"	
	Freon 113	< 10		ug/l	10	0.2	1		"	"	"	"	
	Hexachlorobutadiene	< 5		ug/l	5	0.7	1	"	"	"	"	"	
	sopropylbenzene	< 5		ug/l	5	0.2	1	n .	"	"	"	"	
	m+p-Xylene	< 5		ug/l	5	1	1	"	"	"	"	"	
	Methyl Tertiary Butyl Ether	< 1		ug/l	1	0.2	1	II .	"	"			
	Methylene Chloride	< 1		ug/l	1	0.3	1	"	"	"	"	"	
	n-Butylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
	n-Propylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
	Naphthalene	< 5		ug/l	5	1	1	"	"	"			

Sample 10 EFF 60 12 SC52491-					Project # 6639-1		<u>Matrix</u> Ground W		ection Date -Dec-18 12			Dec-18	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cer
Subcontra	cted Analyses												
Subcontra	acted Analyses												
Analysis pe	erformed by Eurofins Lancaste	er Laboratoi	ries Environm	ental - 10670)								
95-47-6	o-Xylene	< 1		ug/l	1	0.4	1	SW-846 8260C	19-Dec-18 23:18	19-Dec-18 23:19	10670	.183533A	,
99-87-6	p-Isopropyltoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
100-42-5	Styrene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 5		ug/l	5	0.8	1	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 50		ug/l	50	12	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 5		ug/l	5	0.3	1		"	"	"	"	
127-18-4	Tetrachloroethene	< 1		ug/l	1	0.2	1		"	"	"	"	
109-99-9	Tetrahydrofuran	2	J.	ug/l	10	0.7	1		"	"	"	"	
108-88-3	Toluene	< 1		ug/l	1	0.2	1		"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1		ug/l	1	0.2	1		"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-buten e	< 50		ug/l	50	6	1	"	"	"	u	"	
79-01-6	Trichloroethene	0.5	J.	ug/l	1	0.2	1	"	"	u u	"	"	
75-69-4	Trichlorofluoromethane	< 1		ug/l	1	0.2	1	"	"		"	"	
75-01-4	Vinyl Chloride	< 1		ug/l	1	0.2	1	"	"	"		"	

80-120 %

80-120 %

80-120 %

17060-07-0

460-00-4

1868-53-7

2037-26-5

1,2-Dichloroethane-d4

4-Bromofluorobenzene

Dibromofluoromethane

Toluene-d8

100

97

98

99

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Sample Id INF 1207 SC52491					<u>Project #</u> 6639-1		<u>Matrix</u> Ground W		ection Date '-Dec-18 12			eceived Dec-18	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	le Petroleum Hydrocarbons												
Prepared	by method General Prepa		•		4.00	0.045	4	EDA 4004D	44 D 40	44 D 40	ID	1010070	
~	Oil & Grease	1.30	OG	mg/l	1.00	0.915	1	EPA 1664B	14-Dec-18	14-Dec-18	JB	1816079	X
General C	Chemistry Parameters			/I	-	2	4	CM40 00 0540C	11 Dec 10	40 D 40	CMD	1015000	
	Total Dissolved Solids	232		mg/l	5 0.5	3 0.2	1 1	SM18-22 2540C		12-Dec-18		1815996 1815998	
C	Total Suspended Solids	5.0		mg/l	0.5	0.2	'	SM2540D (11)	11-Dec-16	12-Dec-18	CIVID	1013990	^
Prepared	octed Analyses by method METHOD												
	erformed by Eurofins Lancasi		es Environme										
57-12-5	Total Cyanide (water)	< 0.010		mg/l	0.010	0.0050	1	EPA 335.4	14-Dec-18 17:30	15-Dec-18 11:25	10670	34810210)
Prepared	acted Analyses by method SW-846 3005/												
	erformed by Eurofins Lancasi		es Environme										
7429-90-5	Aluminum	< 0.300		mg/l	0.300	0.153	1	SW-846 6010C	20-Dec-18 09:30	20-Dec-18 23:11	10670	35114044	ţ
7440-38-2	Arsenic	< 0.0500		mg/l	0.0500	0.0160	1	"	"	"	"	"	
7440-39-3	Barium	0.0585		mg/l	0.0050	0.0010	1	"	"	"	"	"	
7440-47-3	Chromium	< 0.0150		mg/l	0.0150	0.0053	1	"	"	"	"	"	
7440-50-8	Copper	< 0.0200		mg/l	0.0200	0.0062	1	"	"	"	"	"	
7439-89-6	Iron	0.195	J.	mg/l	0.200	0.0400	1	"	"	"	"	"	
7439-96-5	Manganese	0.314		mg/l	0.0200	0.0011	1	"	"	"	"	"	
7440-02-0	Nickel	< 0.0100		mg/l	0.0100	0.0031	1	"	"	"	"	"	
7440-66-6 Prepared	Zinc by method METHOD	0.0055	J.	mg/l	0.0200	0.0030	1	"	"	"	"	"	
Analysis p	erformed by Eurofins Lancasi	ter Laboratori	es Environme	ental - 1067	0								
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.000050	1	SW-846 7470A	17-Dec-18 07:30	17-Dec-18 11:56	10670	34805713	3
	acted Analyses by method SW-846 50300	<u>2</u>											
Analysis pe	erformed by Eurofins Lancasi	ter Laboratori	es Environme	ental - 1067	0								
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	19-Dec-18 23:40	19-Dec-18 23:41	10670	.183533A	,
71-55-6	1,1,1-Trichloroethane	540		ug/l	10	3	10	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	65		ug/l	1	0.2	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	7		ug/l	1	0.2	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 5		ug/l	5	0.4	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 5		ug/l	5	1	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloroprop ane	< 5		ug/l	5	0.3	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1		ug/l	1	0.2	1	п	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5		ug/l	5	0.2	1	п	"	"	"	"	
107-06-2	1,2-Dichloroethane	0.3	J.	ug/l	1	0.3	1	п	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1		ug/l	1	0.2	1	11	u u	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	

Sample Id INF 1207: SC52491-				Client F 60276	<u>Project #</u> 6639-1		<u>Matrix</u> Ground Wa	· · · · · · · · · · · · · · · · · · ·	ection Date '-Dec-18 12			ceived Dec-18	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	cted Analyses acted Analyses												
Analysis pe 108-67-8	erformed by Eurofins Lancast 1,3,5-Trimethylbenzene	er Laborator < 5	ies Environme	ntal - 10670 ug/l) 5	0.3	1	SW-846 8260C	19-Dec-18 23:40	19-Dec-18 23:41	10670	.183533A	J
541-73-1	1,3-Dichlorobenzene	< 5		ug/l	5	0.2	1	u u	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 250		ug/l	250	29	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1		ug/l	1	0.3	1		"	"	"	"	
78-93-3	2-Butanone	< 10		ug/l	10	0.3	1		"	"	"	"	
95-49-8	2-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 10		ug/l	10	0.3	1	"	u u	"	"	"	
106-43-4	4-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 10		ug/l	10	0.5	1	"	"	"	"	"	
67-64-1	Acetone	1	J.	ug/l	20	0.7	1	"	"	"	"		
107-13-1	Acrylonitrile	< 20		ug/l	20	0.3	1	"	"	"	"		
71-43-2	Benzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 5		ug/l	5	0.2	1	"	"	"	"		
74-97-5	Bromochloromethane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-25-2	Bromoform	< 4		ug/l	4	0.2	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1		ug/l	1	0.3	1		"	"	"	"	
75-15-0	Carbon Disulfide	< 5		ug/l	5	0.2	1		"	"	"	"	
56-23-5	Carbon Tetrachloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-00-3	Chloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
67-66-3	Chloroform	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1		ug/l	1	0.2	1		"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	6		ug/l	1	0.2	1		"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 1		ug/l	1	0.2	1		"	"	"	"	
108-20-3	di-Isopropyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 1		ug/l	1	0.2	1		"	"	"	"	
74-95-3	Dibromomethane	< 1		ug/l	1	0.2	1		"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1		ug/l	1	0.2	1		"	"	"	"	
64-17-5	Ethanol	< 750		ug/l	750	280	1		"	"	"	"	
60-29-7	Ethyl ether	< 5		ug/l	5	0.2	1		"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 1		ug/l	1	0.2	1		"	"	"		
100-41-4	Ethylbenzene	< 1		ug/l	1	0.4	1		"	"	"		
76-13-1	Freon 113	< 10		ug/l	10	0.2	1		"	"	"		
87-68-3	Hexachlorobutadiene	< 5		ug/l	5	0.7	1	"	"	"		"	
98-82-8	Isopropylbenzene	< 5		ug/l	5	0.2	1	"	"	"		"	
	m+p-Xylene	< 5		ug/l	5	1	1	"	"	"		"	
1634-04-4	Methyl Tertiary Butyl Ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-09-2	Methylene Chloride	· < 1		ug/l	1	0.3	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 5		ug/l	5	0.2	1	"	n	"	"		
103-65-1	n-Propylbenzene	< 5		ug/l	5	0.2	1	"	n	"	"		
91-20-3	Naphthalene	< 5		ug/l	5	1	1	"		"	"	"	
J. 20-0	тарпшаюне	٠ ٥		ug/I	J		'						

Sample Id INF 1207 SC52491-				Client F 60276	<u>Project #</u> 6639-1		<u>Matrix</u> Ground Wa		ection Date -Dec-18 12			ceived Dec-18	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontra	cted Analyses												
Subcontra	acted Analyses												
Analysis pe	erformed by Eurofins Lancaste	er Laboratorie.	s Environme	ıtal - 10670)								
95-47-6	o-Xylene	< 1		ug/l	1	0.4	1	SW-846 8260C	19-Dec-18 23:40	19-Dec-18 23:41	10670	.183533A	,
99-87-6	p-Isopropyltoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
100-42-5	Styrene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 5		ug/l	5	0.8	1	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 50		ug/l	50	12	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 10		ug/l	10	0.7	1	"	"	"	"	"	
108-88-3	Toluene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"		
10061-02-6	trans-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-buten e	< 50		ug/l	50	6	1	"	II	"	"	"	
79-01-6	Trichloroethene	150		ug/l	1	0.2	1	"	"	"	"		
75-69-4	Trichlorofluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
Surrogate r	recoveries:												
17060-07-0	1,2-Dichloroethane-d4	102			80-12	0 %		"	"	"	"	"	
460-00-4	4-Bromofluorobenzene	101			80-12	0 %		"	"	"	"	"	
1868-53-7	Dibromofluoromethane	105			80-12	0 %		"	"	"	"	"	

2037-26-5

Toluene-d8

101

28-Dec-18 13:10 Page 13 of 30

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2037-26-5

Toluene-d8

100

80-120 %

80-120 %

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460-00-4

1868-53-7

2037-26-5

4-Bromofluorobenzene

Dibromofluoromethane

Toluene-d8

96

107

100

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2037-26-5

Toluene-d8

96

Sample Ic TB 12071 SC52491-				<u>Client F</u> 60276	Project # 6639-1		<u>Matrix</u> Trip Blan		-Dec-18 00			ceived Dec-18	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontra	cted Analyses												
Subcontra	acted Analyses												
Analysis pe	erformed by Eurofins Lancast	er Laboratorie	es Environme	ental - 10670)								
156-59-2	cis-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	SW-846 8260C	19-Dec-18 22:57	19-Dec-18 22:58	10670	.183533A	V
10061-01-5	cis-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 1		ug/l	1	0.2	1		"	"	"	"	
124-48-1	Dibromochloromethane	< 1		ug/l	1	0.2	1		"	"	"	"	
74-95-3	Dibromomethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
64-17-5	Ethanol	< 750		ug/l	750	280	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5		ug/l	5	0.2	1	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
76-13-1	Freon 113	< 10		ug/l	10	0.2	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 5		ug/l	5	0.7	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 5		ug/l	5	1	1	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-09-2	Methylene Chloride	< 1		ug/l	1	0.3	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5		ug/l	5	1	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
100-42-5	Styrene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 5		ug/l	5	0.8	1	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 50		ug/l	50	12	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 10		ug/l	10	0.7	1	"	"	"	"	"	
108-88-3	Toluene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-buten e	< 50		ug/l	50	6	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
Surrogate i	recoveries:												
17060-07-0	1,2-Dichloroethane-d4	100			80-12	0 %		"	"	"	"	"	
460-00-4	4-Bromofluorobenzene	98			80-12			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	100			80-12			"	"	"	"		
2037-26-5	Toluene-d8	100			80-12			u u	"	"	"	"	
						.							

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Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 1664B										
Batch 1816079 - General Preparation SVOC										
Blank (1816079-BLK1)					Pre	epared & Ar	nalyzed: 14-	-Dec-18		
Oil & Grease	< 1.02	U	mg/l	1.02						
LCS (1816079-BS1)					Pre	epared & Ar	nalyzed: 14-	-Dec-18		
Oil & Grease	33.8		mg/l	1.03	41.2		82	78-114		
LCS Dup (1816079-BSD1)					Pre	epared & Ar	nalyzed: 14-	-Dec-18		
Oil & Grease	32.8		mg/l	1.03	41.2		80	78-114	3	11

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General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SM18-22 2540C										
Batch 1815996 - General Preparation										
Blank (1815996-BLK1)					Pre	epared: 11-l	Dec-18 An	alyzed: 12-D	ec-18	
Total Dissolved Solids	< 5	U	mg/l	5						
LCS (1815996-BS1)					Pre	epared: 11-l	Dec-18 An	alyzed: 12-D	ec-18	
Total Dissolved Solids	1040		mg/l	10	1000		104	90-110		
SM2540D (11)										
Batch 1815998 - General Preparation										
Blank (1815998-BLK1)					Pre	epared: 11-l	Dec-18 An	alyzed: 12-D	ec-18	
Total Suspended Solids	< 0.5	U	mg/l	0.5						
LCS (1815998-BS1)					Pre	epared: 11-l	Dec-18 An	alyzed: 12-D	ec-18	
Total Suspended Solids	102		mg/l	10.0	100		102	90-110		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 335.4										
Batch 18348102101B - METHOD										
Blank (P34802AB348102101B)					Pre	enared: 14-	Dec-18 Ar	nalyzed: 15-E)ec-18	
Total Cyanide (water)	< 0.010		mg/l	0.010		parou	200 .0 7	-		
LCS (P34802AQ348102101B)					Pre	nared: 14	Dec-18 Ar	nalyzed: 15-E)ec-18	
Total Cyanide (water)	0.21		mg/l	0.010	0.20	parca. 14	105	90-110	700 10	
•	0.21		mg/i	0.010	0.20		100	00 110		
<u>SW-846 6010C</u> Batch 183511404401 - SW-846 3005A										
					Dro	nared & A	nalyzed: 20	Dec 18		
Blank (P35104AB351404401) Arsenic	< 0.0500		mg/l	0.0500	110	pared & A	lalyzed. 20	<u>-Dec-10</u>		
Zinc	< 0.0200		mg/l	0.0200				_		
Nickel	< 0.0100		mg/l	0.0200				_		
Manganese	< 0.0200		mg/l	0.0200				-		
Iron	0.0405	J.	mg/l	0.200				_		
Copper	< 0.0200	5 .	mg/l	0.0200				-		
Barium	< 0.0200		mg/l	0.0200				_		
Aluminum	< 0.300		mg/l	0.300				_		
Chromium	< 0.0150		mg/l	0.0150				_		
LCS (P35104AQ351404401)	0.0100		mg/i	0.0100	Dre	anared & A	nalyzed: 20	-Dec-18		
Manganese	0.506		mg/l	0.0200	0.500	pared & A	101	90-112		
Iron	1.03		mg/l	0.200	1.00		103	85-115		
Zinc	0.505		mg/l	0.0200	0.500		101	89-111		
Arsenic	0.156		mg/l	0.0500	0.150		104	80-120		
Nickel	0.517		mg/l	0.0100	0.500		103	90-114		
Aluminum	1.94		mg/l	0.300	2.00		97	80-120		
Copper	0.263		mg/l	0.0200	0.250		105	90-115		
Chromium	0.200		mg/l	0.0150	0.200		100	87-110		
Barium	1.99		mg/l	0.0050	2.00		99	87-111		
SW-846 7470A			Ü							
·										
Batch 183460571301 - METHOD					Des		D 40 A-	!·) 10	
Blank (P34671AB346571301)	< 0.00000		ma/l	0.00000	Pre	epared: 17-	Dec-18 Ar	nalyzed: 18-E	<u>Jec-18</u>	
Mercury	< 0.00020		mg/l	0.00020	_					
LCS (P34671AQ346571301)						epared: 17-		nalyzed: 18-E	<u> 0ec-18</u>	
Mercury	0.00086		mg/l	0.00020	0.0010		86	80-114		
Batch 183480571302 - METHOD										
Blank (P34871BB348571302)					<u>Pre</u>	epared & Ai	nalyzed: 17	-Dec-18		
Mercury	< 0.00020		mg/l	0.00020				-		
LCS (P34871BQ348571302)					Pre	epared & A	nalyzed: 17	-Dec-18		
Mercury	0.00086		mg/l	0.00020	0.0010		86	80-114		
<u>SW-846 8260C</u>										
Batch L183533AA - SW-846 5030C										
LCS (LCSL42QL183533AA)					Pre	epared & Ai	nalyzed: 19	-Dec-18		
t-Butyl alcohol	200		ug/l	50	200		101	60-130		
Ethyl ether	22		ug/l	5	20		110	59-141		
di-Isopropyl ether	19		ug/l	1	20		97	70-124		
Dichlorodifluoromethane	15		ug/l	1	20		75	41-127		
Dibromomethane	23		ug/l	1	20		113	80-120		
Dibromochloromethane	22		ug/l	1	20		110	71-120		
cis-1,3-Dichloropropene	22		ug/l	1	20		108	75-120		
cis-1,2-Dichloroethene	23		ug/l	1	20		114	80-120		
Chloromethane	17		ug/l	1	20		85	56-121		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limi
SW-846 8260C										
Batch L183533AA - SW-846 5030C										
LCS (LCSL42QL183533AA)					Pre	epared & Ar	nalyzed: 19-	-Dec-18		
Chlorobenzene	23		ug/l	1	20		114	80-120		
Chloroethane	17		ug/l	1	20		83	55-123		
Ethyl t-butyl ether	19		ug/l	1	20		95	68-121		
Carbon Tetrachloride	22		ug/l	1	20		109	64-134		
Carbon Disulfide	19		ug/l	5	20		97	65-128		
Chloroform	23		ug/l	1	20		114	80-120		
n-Butylbenzene	21		ug/l	5	20		106	76-120		
tert-Butylbenzene	20		ug/l	5	20		99	78-120		
1,3-Dichlorobenzene	22		ug/l	5	20		111	80-120		
t-Amyl methyl ether	20		ug/l	5	20		99	66-120		
Bromomethane	15		ug/l	1	20		75	53-128		
sec-Butylbenzene	22		ug/l	5	20		111	77-120		
p-Isopropyltoluene	22		ug/l	5	20		111	76-120		
Styrene	22		ug/l	5	20		112	80-120		
n-Propylbenzene	22		ug/l	5	20		112	79-121		
Ethylbenzene	22		ug/l	1	20		111	80-120		
Naphthalene	20		ug/l	5	20		98	53-124		
Methylene Chloride	21		ug/l	1	20		105	80-120		
Methyl Tertiary Butyl Ether	19		ug/l	1	20		95	69-122		
m+p-Xylene	45		-	5	40		112	80-120		
Isopropylbenzene			ug/l	5	20		112	80-120		
• • •	22		ug/l				99	63-120		
Hexachlorobutadiene	20		ug/l	5	20					
Freon 113	23		ug/l	10	20		115	73-139		
o-Xylene	22		ug/l	1	20		109	80-120		
1,1-Dichloropropene	22		ug/l	5	20		111	78-120		
1,4-Dichlorobenzene	22		ug/l	5	20		110	80-120		
1,2-Dichlorobenzene	22		ug/l	5	20		112	80-120		
1,2-Dibromoethane	23		ug/l	1	20		113	77-120		
1,2-Dibromo-3-chloropropane	21		ug/l	5	20		104	47-131		
1,2,4-Trimethylbenzene	22		ug/l	5	20		112	75-120		
1,2,4-Trichlorobenzene	21		ug/l	5	20		106	63-120		
1,2-Dichloropropane	22		ug/l	1	20		108	80-120		
1,2,3-Trichlorobenzene	20		ug/l	5	20		102	66-120		
1,3,5-Trichlorobenzene	21		ug/l	5	20		105	66-123		
1,1-Dichloroethene	24		ug/l	1	20		122	80-131		
1,1-Dichloroethane	21		ug/l	1	20		107	80-120		
1,1,2-Trichloroethane	23		ug/l	1	20		116	80-120		
1,1,2,2-Tetrachloroethane	21		ug/l	1	20		105	72-120		
1,1,1-Trichloroethane	22		ug/l	1	20		110	67-126		
1,1,1,2-Tetrachloroethane	22		ug/l	1	20		110	78-120		
1,2,3-Trichloropropane	21		ug/l	5	20		107	75-124		
2-Butanone	140		ug/l	10	150		95	59-135		
Bromodichloromethane	22		ug/l	1	20		109	71-120		
Bromochloromethane	20		ug/l	5	20		102	80-120		
Bromobenzene	22		ug/l	5	20		108	80-120		
Acrylonitrile	94		ug/l	20	100		94	60-129		
4-Methyl-2-pentanone	95		ug/l	10	100		95	62-133		
4-Chlorotoluene	22		ug/l	5	20		110	80-120		
1,2-Dichloroethane	22		ug/l	1	20		111	73-124		
2-Chlorotoluene	22		ug/l	5	20		109	80-120		

analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch L183533AA - SW-846 5030C										
LCS (LCSL42QL183533AA)					Pre	epared & Ar	nalyzed: 19-	Dec-18		
Bromoform	19		ug/l	4	20		93	51-120		
2,2-Dichloropropane	20		ug/l	1	20		100	55-142		
1,4-Dioxane	600		ug/l	250	500		119	63-146		
Tetrachloroethene	22		ug/l	1	20		112	80-120		
1,3-Dichloropropane	22		ug/l	1	20		111	80-120		
Benzene	22		ug/l	1	20		111	80-120		
1,3,5-Trimethylbenzene	22		ug/l	5	20		110	75-120		
2-Hexanone	94		ug/l	10	100		94	56-135		
Acetone	180		ug/l	20	150		122	54-157		
Toluene	23		ug/l	1	20		113	80-120		
trans-1,2-Dichloroethene	23		_	1	20		112	80-120		
			ug/l					67-120		
trans-1,3-Dichloropropene	21		ug/l	1	20		105			
trans-1,4-Dichloro-2-butene	83		ug/l	50	100		83	33-143		
Trichloroethene	22		ug/l	1	20		111	80-120		
Trichlorofluoromethane	19		ug/l	1	20		95	55-135		
Vinyl Chloride	17		ug/l	1	20		85	56-120		
Tetrahydrofuran	120		ug/l	10	100		117	54-144		
Surrogate: Dibromofluoromethane	50		ug/l		50		101	80-120		
Surrogate: 4-Bromofluorobenzene	49		ug/l		50		98	80-120		
Surrogate: Toluene-d8	51		ug/l		50		101	80-120		
Surrogate: 1,2-Dichloroethane-d4	50		ug/l		50		100	80-120		
LCSD (LCSL42YL183533AA)					Pre	epared & Ar	nalyzed: 19-	-Dec-18		
di-Isopropyl ether	19		ug/l	1	20		94	70-124	4	30
Vinyl Chloride	17		ug/l	1	20		87	56-120	3	30
m+p-Xylene	45		ug/l	5	40		113	80-120	1	30
Isopropylbenzene	23		ug/l	5	20		113	80-120	0	30
Hexachlorobutadiene	20		ug/l	5	20		99	63-120	0	30
Freon 113	21		_	10	20			73-139	9	30
			ug/l				105			
Ethylbenzene	22		ug/l	1	20		112	80-120	1	30
cis-1,3-Dichloropropene	22		ug/l	1	20		110	75-120	2	30
Ethyl ether	23		ug/l	5	20		114	59-141	3	30
Dichlorodifluoromethane	15		ug/l	1	20		75	41-127	1	30
Dibromochloromethane	23		ug/l	1	20		113	71-120	3	30
Chloroethane	17		ug/l	1	20		86	55-123	3	30
Trichlorofluoromethane	18		ug/l	1	20		90	55-135	6	30
Chloroform	22		ug/l	1	20		111	80-120	2	30
Tetrachloroethene	22		ug/l	1	20		110	80-120	2	30
cis-1,2-Dichloroethene	23		ug/l	1	20		113	80-120	1	30
Chloromethane	17		ug/l	1	20		84	56-121	2	30
Ethyl t-butyl ether	19		ug/l	1	20		93	68-121	2	30
t-Amyl methyl ether	19		ug/l	5	20		97	66-120	2	30
Methyl Tertiary Butyl Ether	19		ug/l	1	20		97	69-122	2	30
Methylene Chloride	21		ug/l	1	20		107	80-120	2	30
Naphthalene	20		ug/l	5	20		102	53-124	4	30
n-Butylbenzene	21		ug/l	5	20		106	76-120	0	30
n-Propylbenzene	23		ug/l	5	20		115	79-121	3	30
o-Xylene	22		ug/l	1	20		112	80-120	3	30
p-Isopropyltoluene	22		ug/l	5	20		110	76-120	1	30
Toluene	22		ug/l	1	20		112	80-120	1	30
Styrene	23		ug/l	5	20		113	80-120	1	30

					Spike	Source		%REC		RPI
Analyte(s)	Result	Flag	Units	*RDL	Level	Result	%REC	Limits	RPD	Lim
W-846 8260C										
Batch L183533AA - SW-846 5030C										
LCSD (LCSL42YL183533AA)					Pre	epared & Ar	alyzed: 19-	Dec-18		
Trichloroethene	22		ug/l	1	20		110	80-120	1	30
t-Butyl alcohol	210		ug/l	50	200		105	60-130	4	30
tert-Butylbenzene	21		ug/l	5	20		103	78-120	4	30
Dibromomethane	22		ug/l	1	20		110	80-120	2	30
Tetrahydrofuran	120		ug/l	10	100		118	54-144	1	30
Chlorobenzene	23		ug/l	1	20		115	80-120	1	30
trans-1,2-Dichloroethene	23		ug/l	1	20		115	80-120	3	30
trans-1,3-Dichloropropene	21		ug/l	1	20		105	67-120	0	30
trans-1,4-Dichloro-2-butene	88		ug/l	50	100		88	33-143	6	30
sec-Butylbenzene	22		ug/l	5	20		111	77-120	0	30
1,2,4-Trichlorobenzene	21		ug/l	5	20		106	63-120	0	30
1,3-Dichloropropane	22		ug/l	1	20		112	80-120	1	30
1,3-Dichloropenzene	22		ug/l	5	20		112	80-120	1	30
1,3,5-Trimethylbenzene	23		ug/l	5	20		113	75-120	2	30
1,3,5-Trimetriyiberizene 1,3,5-Trichlorobenzene	23 21		ug/i ug/l	5 5	20		107	66-123	2	30
	21 21		-	5 1	20		107	80-120	1	30
1,2-Dichloropropane			ug/l							
1,2-Dichloroethane	21		ug/l	1	20		105	73-124	5	30
1,2-Dichlorobenzene	23		ug/l	5	20		114	80-120	2	30
1,2-Dibromoethane	23		ug/l	1	20		114	77-120	1	30
1,4-Dichlorobenzene	23		ug/l	5	20		113	80-120	3	30
1,2,4-Trimethylbenzene	23		ug/l	5	20		113	75-120	1	30
1,2,3-Trichloropropane	23		ug/l	5	20		115	75-124	7	30
Carbon Tetrachloride	21		ug/l	1	20		106	64-134	2	30
1,2,3-Trichlorobenzene	21		ug/l	5	20		106	66-120	4	30
1,1-Dichloroethene	22		ug/l	1	20		109	80-131	11	30
1,1-Dichloroethane	21		ug/l	1	20		105	80-120	2	30
1,1,2-Trichloroethane	23		ug/l	1	20		117	80-120	1	30
1,1,2,2-Tetrachloroethane	22		ug/l	1	20		110	72-120	5	30
1,1,1-Trichloroethane	21		ug/l	1	20		104	67-126	5	30
1,1,1,2-Tetrachloroethane	22		ug/l	1	20		112	78-120	2	30
1,2-Dibromo-3-chloropropane	21		ug/l	5	20		107	47-131	3	30
Bromobenzene	22		ug/l	5	20		112	80-120	3	30
1,1-Dichloropropene	22		ug/l	5	20		109	78-120	2	30
Carbon Disulfide	20		ug/l	5	20		100	65-128	3	30
Bromomethane	15		ug/l	1	20		74	53-128	1	30
Bromoform	19		ug/l	4	20		96	51-120	4	30
Bromochloromethane	21		ug/l	5	20		103	80-120	0	30
Benzene	22		ug/l	1	20		110	80-120	0	30
Acrylonitrile	95		ug/l	20	100		95	60-129	1	30
Acetone	160		ug/l	20	150		105	54-157	16	30
4-Methyl-2-pentanone	95		ug/l	10	100		95	62-133	0	30
2,2-Dichloropropane	19		ug/l	1	20		97	55-142	3	30
1,4-Dioxane	620		ug/l	250	500		125	63-146	5	30
Bromodichloromethane	22		ug/l	1	20		110	71-120	1	30
2-Hexanone	95		ug/l	10	100		95	56-135	1	30
4-Chlorotoluene	22		ug/l	5	20		112	80-120	2	30
2-Chlorotoluene	23		ug/l	5	20		114	80-120	4	30
2-Butanone	140		ug/l	10	150		93	59-135	3	30
Surrogate: 4-Bromofluorobenzene	50		ug/l		50		100	80-120		
Surrogate: 1,2-Dichloroethane-d4	50 51		ug/l		50		101	80-120		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch L183533AA - SW-846 5030C										
LCSD (LCSL42YL183533AA)					Pre	epared & Ai	nalyzed: 19	-Dec-18		
Surrogate: Toluene-d8	50		ug/l		50		100	80-120		
Surrogate: Dibromofluoromethane	50		ug/l		50		99	80-120		
LCS (LCSL43QL183533AA)					Pre	epared & Aı	nalyzed: 19	-Dec-18		
Ethanol	370	J.	ug/l	750	500		74	31-180		
LCSD (LCSL43YL183533AA)			J		Pre	epared & Aı	nalyzed: 19			
Ethanol	350	J.	ug/l	750	500		69	31-180	7	30
Blank (VBLKL42BL183533AA)			Ü			epared & Ai	nalyzed: 19	-Dec-18		
1,2-Dichlorobenzene	< 5		ug/l	5	<u></u>		10.,,200. 10	-		
1,1,1,2-Tetrachloroethane	< 1		ug/l	1				_		
2-Chlorotoluene	< 5		ug/l	5				_		
2-Butanone	< 10		ug/l	10				_		
2-Hexanone	< 10		ug/l	10				-		
2,2-Dichloropropane	< 1		ug/l	1				_		
1,4-Dioxane	< 250		ug/l	250				-		
1,4-Dichlorobenzene	< 5		ug/l	5				-		
1,3-Dichloropropane	< 1		ug/l	1				-		
1,3-Dichlorobenzene	< 5		ug/l	5				-		
1,3,5-Trimethylbenzene	< 5		ug/l	5				-		
1,3,5-Trichlorobenzene	< 5		ug/l	5				-		
1,2-Dichloropropane	< 1		ug/l	1				-		
1,2-Dichloroethane	< 1		ug/l	1				-		
1,2-Dibromoethane	< 1		ug/l	1				-		
1,2-Dibromo-3-chloropropane	< 5		ug/l	5				-		
1,2,4-Trimethylbenzene	< 5		ug/l	5				-		
1,2,4-Trichlorobenzene	< 5		ug/l	5				-		
1,2,3-Trichloropropane	< 5		ug/l	5				-		
1,2,3-Trichlorobenzene	< 5		ug/l	5				-		
1,1-Dichloropropene	< 5		ug/l	5				-		
1,1-Dichloroethene	< 1		ug/l	1				-		
1,1-Dichloroethane	< 1		ug/l	1				-		
1,1,2-Trichloroethane	< 1		ug/l	1				-		
1,1,1-Trichloroethane	< 1		ug/l	1				-		
o-Xylene	< 1		ug/l	1				-		
4-Chlorotoluene	< 5		ug/l	5				-		
1,1,2,2-Tetrachloroethane	< 1		ug/l	1				-		
t-Amyl methyl ether	< 5		ug/l	5				-		
n-Butylbenzene	< 5		ug/l	5				-		
Freon 113	< 10		ug/l	10				-		
Hexachlorobutadiene	< 5		ug/l	5				-		
Isopropylbenzene	< 5		ug/l	5				-		
m+p-Xylene	< 5		ug/l	5				-		
Methyl Tertiary Butyl Ether	< 1		ug/l	1				-		
Methylene Chloride	< 1		ug/l	1				-		
Naphthalene	< 5		ug/l	5				-		
n-Propylbenzene	< 5		ug/l	5				-		
p-Isopropyltoluene	< 5		ug/l	5				-		
Ethyl t-butyl ether	< 1		ug/l	1				-		
Styrene Ethyl other	< 5 < 5		ug/l	5				-		
Ethyl ether t-Butyl alcohol	< 50		ug/l ug/l	5 50				-		

nalyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPI Limi
	Rosuit	- 146	Cinto	NDL	Level	Result	, vial.c	Limio	10110	1/1111
W-846 8260C										
atch L183533AA - SW-846 5030C										
Blank (VBLKL42BL183533AA)					<u>Pre</u>	epared & Ar	nalyzed: 19-	Dec-18		
tert-Butylbenzene	< 5		ug/l	5				-		
Tetrachloroethene	< 1		ug/l	1				-		
Tetrahydrofuran	< 10		ug/l	10				-		
Toluene	< 1		ug/l	1				-		
trans-1,2-Dichloroethene	< 1		ug/l	1				-		
trans-1,3-Dichloropropene	< 1		ug/l	1				-		
trans-1,4-Dichloro-2-butene	< 50		ug/l	50				-		
Trichloroethene	< 1		ug/l	1				-		
Trichlorofluoromethane	< 1		ug/l	1				-		
Vinyl Chloride	< 1		ug/l	1				-		
sec-Butylbenzene	< 5		ug/l	5				-		
Chlorobenzene	< 1		ug/l	1				-		
Acetone	< 20		ug/l	20				-		
Acrylonitrile	< 20		ug/l	20				-		
Benzene	< 1		ug/l	1				-		
Bromobenzene	< 5		ug/l	5				-		
Bromochloromethane	< 5		ug/l	5				-		
Bromodichloromethane	< 1		ug/l	1				-		
Bromoform	< 4		ug/l	4				-		
Bromomethane	< 1		ug/l	1				-		
Carbon Disulfide	< 5		ug/l	5				-		
Ethylbenzene	< 1		ug/l	1				-		
Carbon Tetrachloride	< 1		ug/l	1				-		
4-Methyl-2-pentanone	< 10		ug/l	10				-		
Chloroethane	< 1		ug/l	1				_		
Chloroform	< 1		ug/l	1				_		
Chloromethane	< 1		ug/l	1				_		
cis-1,2-Dichloroethene	< 1		ug/l	1				_		
cis-1,3-Dichloropropene	< 1		ug/l	1				_		
Dibromochloromethane	< 1		ug/l	1				_		
Dibromomethane	< 1		ug/l	1				_		
Dichlorodifluoromethane	< 1		ug/l	1				_		
di-Isopropyl ether	< 1		ug/l	1				_		
Ethanol	< 750		ug/l	750				-		
Surrogate: Toluene-d8	49		ug/l		50		99	80-120		
Surrogate: Dibromofluoromethane	49		ug/l		50		98	80-120		
Surrogate: 4-Bromofluorobenzene	49		ug/l		50		97	80-120		
Surrogate: 1,2-Dichloroethane-d4	49		ug/l		50		99	80-120		

Notes and Definitions

Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

J. Estimated value

U Analyte included in the analysis, but not detected at or above the MDL.

dry Sample results reported on a dry weight basis

NR Not Reported

RPD Relative Percent Difference

OG The required Matrix Spike and Matrix Spike Duplicate (MS/MSD) for Oil & Grease method 1664B can only be analyzed when the client has submitted sufficient sample volume. An extra liter per MS/MSD is required to fulfill the method QC criteria. Please refer to Chain of Custody and QC Summary (MS/MSD) of the Laboratory Report to verify ample sample volume was submitted to fulfill the requirement.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

This laboratory report is not valid without an authorized signature on the cover page.

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Special Handling:	13425 X

Refrigerated DI VOA Frozen Soil Jar Frozen	IR ID# Ambient In Iced Ref			
Custody Seals: Present Intact Broken	S Condition upon receipt:			
	Corection Factor	18 10:48	12/0/18	Feder
	5.5 E-mail to:	17/18/450	My Sept 12/	the show
	Temp °C	Date: Time:	Received by:	Relinquished by:
			1	4
	4	2		/ 06 73
		-	120718 + 1215 + 4	55 TW-3
		4	120718 1222	04 TW-ZA
Ha, Zn, N.			20718 1205	es 7w-11
Cr, Co, Fe, Ma,	××××	1 4	20718 1211	1 12 INF 12
- *AlBa, *As	X X X	3 - 4	20718 12/7/18 1218 G GW :	82491 S FFF60
	75 C	# of	Ma	Lab ID: Sam
	320 4e 55/ 0+ ya	Ambe Clear Plastic	C=Compsite pe	G= Grab
ASP A*	ta Ti	er Glas	X2=X3=	X1=
No QC	: 4		A=Indoor/Ambient Air SG=Soil Gas	0=0ii S0=Soii SL=Sludge
MA DEP MCP CAM Report? Yes No	Analysis	Containers	Iwater SW=Surface Water WW=Waste Water	DW=Drinking Water GW=Groundwater
additional charges may apppiy	2 4 11 3 5			
QA/QC Reporting Notes:	List Preservative Code below:		2S2O ₃ 2=HCl 3=H ₂ SO ₄ 4=HNO ₃ 5=NaOH 6=Ascorbic Acid 9=Deionized Water 10=H ₃ PO ₄ 11= 12= 12=	F=Field Filtered 1=Na ₂ S2O ₃ 2 7=CH3OH 8=NaHSO ₄ 9=Deioniza
b	SRG	Quote #:	Choiniere , P.O.No.:	Ste
aTSDUTG State: NY	Location: Otgo		2200	Telephone #: 5/8 -95/
COPP 15-14-C	Site Name: 1000		0	>
76634-1	Project No: 602	me	Invoice To: Jan	Report To: 40 St. + Sh. A
All TATs subject to laboratory approval Min. 24-hr notification needed for rushes Samples disposed after 30 days unless otherwise instructed.	All TA Min. 2 Sample	of	Spectrum Analytical Page	_
Rush TAT - Date Needed:	CORD	CHAIN OF CUSTODY RE		eurolins
Standard TAT - 7 to 10 business days				
Special Handling:				

Batch Summary

1815996

General Chemistry Parameters

1815996-BLK1 1815996-BS1

SC52491-01 (EFF 60 120718)

SC52491-02 (INF 120718)

<u>1815998</u>

General Chemistry Parameters

1815998-BLK1 1815998-BS1 SC52491-01 (EFF 60 120718) SC52491-02 (INF 120718)

<u>1816079</u>

Extractable Petroleum Hydrocarbons

1816079-BLK1 1816079-BS1 1816079-BSD1 SC52491-01 (EFF 60 120718) SC52491-02 (INF 120718)

183460571301

Subcontracted Analyses

P34671AB346571301 P34671AQ346571301

SC52491-01 (EFF 60 120718)

183480571302

Subcontracted Analyses

P34871BB348571302 P34871BQ348571302

SC52491-02 (INF 120718)

18348102101B

Subcontracted Analyses

P34802AB348102101B

P34802AQ348102101B

SC52491-01 (EFF 60 120718)

SC52491-02 (INF 120718)

183511404401

Subcontracted Analyses

P35104AB351404401

P35104AQ351404401

SC52491-01 (EFF 60 120718)

SC52491-02 (INF 120718)

L183533AA

Subcontracted Analyses

LCSL42QL183533AA

LCSL42YL183533AA LCSL43YL183533AA LCSL43YL183533AA SC52491-01 (EFF 60 120718) SC52491-02 (INF 120718) SC52491-03 (TW-1 120718) SC52491-04 (TW-2A 120718) SC52491-05 (TW-3 120718) SC52491-06 (TB 120718) VBLKL42BL183533AA