

February 7, 2020

Mr. Payson Long 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: December 2019

Dear Mr. Long:

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 31-day period (November 19 – December 20, 2019).

With the exceptions noted below, if any, the pump and treat system was online and operational throughout the reporting period. Approximately 304,000 gallons of water were treated. Discharge from the treatment system averaged approximately 9,800 gallons per day (gpd).

As of the last day of the reporting period, a total of 117,891,000 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 20, 2019. **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 670 µg/L; last month's value was 1,454 µg/L.

Table 2 presents operational data recorded on the sampling date.

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

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

<u>December 12</u> – Reset the pro controller, which is now working. Noted that TW-3 transducer needs to be replaced.

<u>December 20</u> – Performed monthly system inspection and influent and effluent sampling. Removed the transducer from TW-3 and left TW-3 off. Ordered a new transducer for TW-3.

The VFD regulating the stripper blower remained at 55 Hz upon departure.

Page 2 Mr. Payson Long NYSDEC

Please feel free to contact me at (518) 951-2373, or at lindsay.mitchell@aecom.com if you have any questions or comments regarding this report or the operation of the treatment system.

Sincerely,

AECOM Technical Services Northeast, Inc.

Lindsay Mitchell, P.E.

Lindsay Mitchell

Project Manager

Table 1 Summary of Influent and Effluent Data Sampling Date: December 20, 2019 NOW Corporation Site NYSDEC Site No. 3-14-008 Town of Clinton, New York

Analytes/	Total			Recovery Well	Effluent			
Parameters	Influent	Effluent	TW-1	TW-2A	TW-3	Limitations		
							(units)	
Quantity treated, avg per day		9,812				Monitor	gallons	
pН	6.9	7.3				6.5 to 8.5	standard units	
Oil and Grease	<5	2.5 J	NA	NA	NA	15	mg/L	
Total Cyanide	< 0.01	< 0.01	NA	NA	NA	0.01	mg/L	
TDS	260	260	NA	NA	NA	1000	mg/L	
TSS	5	<2.5	NA	NA	NA	50	mg/L	
Aluminum, Total	<25	<25	NA	NA	NA	Monitor	µg/L	
Arsenic, Total	< 30	< 30	NA	NA	NA	100	µg/L	
Barium, Total	73.7	80.8	NA	NA	NA	Monitor	µg/L	
Chromium	3 J	6.5 J	NA	NA	NA	400	µg/L	
Copper	<20	<20	NA	NA	NA	24	µg/L	
Iron	86 J	61.7 J	NA	NA	NA	600	µg/L	
Mercury	< 0.2	< 0.2	NA	NA	NA	0.8	µg/L	
Manganese	86.2	42.8	NA	NA	NA	Monitor	µg/L	
Nickel	<10	<10	NA	NA	NA	200	µg/L	
Zinc	4.1 J	<20	NA	NA	NA	150	µg/L	
1,1,1-Trichloroethane	260	<1	0.8 J	280	2	10	µg/L	
1,1,2-Trichloroethane	<1	<1	<1	<1	<1	1.2	µg/L	
1,1-Dichloroethane	82	<1	19	89	4	10	µg/L	
1,1-Dichloroethene	8	<1	6	10	0.9 J	0.5	µg/L	
1,2-Dichloroethane	<1	<1	<1	0.4 J	<1	1.6	µg/L	
2-Butanone	<10	<10	<10	<10	<10	NL	µg/L	
Benzene	<1	<1	<1	<1	<1	1.4	µg/L	
Chlorobenzene	<1	<1	<1	<1	<1	10	µg/L	
Chloroethane	<1	<1	<1	<1	<1	10	µg/L	
cis -1,2-Dichloroethene	9	<1	3	10	<1	5	µg/L	
Ethylbenzene	<1	<1	<1	<1	<1	10	µg/L	
o-Xylene	<1	<1	<1	<1	<1	5	µg/L	
m,p-Xylene	<5	<5	<5	<5	<5	10	µg/L	
Tetrachloroethene	<1	<1	<1	<1	<1	1.4	µg/L	
Tetrahydrofuran	<10	0.9 J	<10	<10	<10	NL	µg/L	
Toluene	<1	<1	<1	<1	<1	10	µg/L	
Trichloroethene	240	<1	30	280	13	6	µg/L	
Vinyl Chloride	0.4 J	<1	<1	0.7 J	<1	0.6	µg/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) " \boldsymbol{D} " indicates result from a diluted sample.
- 7) NL indicates no effluent limitations specified.
- 8) "B" indicates analyte is found in the associated blank as well as in the sample.

Tables December 2019_LMM.xls 2/7/2020

Table 2 Summary of December 2019 O&M Data

NOW Corporation Site Town of Clinton, New York

Instrumentati	on/Readings:	12/20/19	Units
TW-1			
	Pumping Rate	0	GPM
	Water Level Above Transducer	14.91	feet
	Flow Meter Reading	9,346,800	gallons
	Pump Pressure	0	psi
TW-2A			
	Pumping Rate	14	GPM
	Water Level Above Transducer	12.00	feet
	Flow Meter Reading	20,619,400	gallons
	Pump Pressure	0	psi
TW-3			
	Pumping Rate	3	GPM
	Water Level Above Transducer	0.00	feet
	Flow Meter Reading	16,982,300	gallons
	Pump Pressure	0	psi
VFD Setting	Arrival	55	Hz
	Departure	55	Hz
Air Stripper			
	Stripper Blower Pressure	13	inches H ₂ O
	Air Temperature in Stripper	48	°F
Effluent Flow			
	Effluent Flow this period	304,163	gallons
	Total Effluent Flow	117,890,728	gallons

Tables December 2019.xls 1/14/2020



V	Final Report
	Revised Report

Report Date: 08-Jan-20 16:01

Laboratory Report SC57148

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.

New York # 11393 USDA # P330-15-00375

Authorized by:

Dawn Wojcik Laboratory Director

Cawn & Worch

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 29 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.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Eurofins Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

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: SC57148

Project: Now Corp - Staatsburg, NY

Project Number: 60276639-1

Laboratory ID	Client Sample ID	<u>Matrix</u>	Date Sampled	Date Received
SC57148-01	EFF55 122019	Ground Water	20-Dec-19 13:40	23-Dec-19 13:45
SC57148-02	INF 122019	Ground Water	20-Dec-19 13:20	23-Dec-19 13:45
SC57148-03	TW-1 122019	Ground Water	20-Dec-19 13:18	23-Dec-19 13:45
SC57148-04	TW-2A 122019	Ground Water	20-Dec-19 13:30	23-Dec-19 13:45
SC57148-05	TW-3 122019	Ground Water	20-Dec-19 13:35	23-Dec-19 13:45
SC57148-06	TB 122019	Trip Blank	20-Dec-19 00:00	23-Dec-19 13:45

08-Jan-20 16:01 Page 2 of 29

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 0.8 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.

EPA 1664B

Samples:

SC57148-01 EFF55 122019

Estimated value

HEM (oil & grease)

SW-846 6010C

Samples:

SC57148-01 EFF55 122019

Estimated value

Chromium

Iron

SC57148-02 INF 122019

Estimated value

Chromium

Iron Zinc

SW-846 8260C

Samples:

SC57148-01 EFF55 122019

Estimated value

Tetrahydrofuran

SC57148-02 INF 122019

Estimated value

trans-1,2-Dichloroethene

Vinyl Chloride

SC57148-03 TW-1 122019

Estimated value

1,1,1-Trichloroethane

SC57148-04 TW-2A 122019

SW-846 8260C

Samples:

SC57148-04 TW-2A 122019

Estimated value

1,2-Dichloroethane Vinyl Chloride

SC57148-05 TW-3 122019

Estimated value

1,1-Dichloroethene

SC57148-06 TB 122019

Estimated value

Acetone

t-Butyl alcohol

08-Jan-20 16:01 Page 4 of 29

Sample Acceptance Check Form

Client:	AECOM Environment - Latham, NY
Project:	Now Corp - Staatsburg, NY / 60276639-1
Work Order:	SC57148

Sample(s) received on: 12/23/2019

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?	✓		
Were samples received at a temperature of $\leq 6^{\circ}$ C?	✓		
Were samples cooled on ice upon transfer to laboratory representative?	\checkmark		
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?	✓		
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?			
Did sample container labels agree with Chain of Custody document?	\checkmark		
Were samples received within method-specific holding times?	\checkmark		

Summary of Hits

Lab ID:	SC57148-01	Client ID:	EFF55 122019

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method			
HEM (oil & grease)	2.5	J.	5.0	mg/l	EPA 1664B			
Tot. Diss. Solids	260		10	mg/l	SM2540C-11			
Barium	0.0808		0.0050	mg/l	SW-846 6010C			
Chromium	0.0065	J.	0.0150	mg/l	SW-846 6010C			
Iron	0.0617	J.	0.200	mg/l	SW-846 6010C			
Manganese	0.0428		0.0100	mg/l	SW-846 6010C			
Tetrahydrofuran	0.9	J.	10	ug/l	SW-846 8260C			
Lab ID: SC57148-02			Client ID: INF 122	2019				
Parameter	Result	Flag	Reporting Limit	Units	Analytical Method			
Total Suspended Solids	5.0		2.5	mg/l	SM 2540D-11			
Tot. Diss. Solids	260		10	mg/l	SM2540C-11			
Barium	0.0737		0.0050	mg/l	SW-846 6010C			
Chromium	0.0030	J.	0.0150	mg/l	SW-846 6010C			
Iron	0.0860	J.	0.200	mg/l	SW-846 6010C			
Manganese	0.0862		0.0100	mg/l	SW-846 6010C			
Zinc	0.0041	J.	0.0200	mg/l	SW-846 6010C			
1,1,1-Trichloroethane	260		1	ug/l	SW-846 8260C			
1,1-Dichloroethane	82		1	ug/l	SW-846 8260C			
1,1-Dichloroethene	8		1	ug/l	SW-846 8260C			
cis-1,2-Dichloroethene	9		1	ug/l	SW-846 8260C			
trans-1,2-Dichloroethene	0.2	J.	1	ug/l	SW-846 8260C			
Trichloroethene	240		1	ug/l	SW-846 8260C			
Vinyl Chloride	0.4	J.	1	ug/l	SW-846 8260C			
Lab ID: SC57148-03			Client ID: TW-1 122019					
Parameter	Result	Flag	Reporting Limit	Units	Analytical Method			
1,1,1-Trichloroethane	0.8	J.	1	ug/l	SW-846 8260C			
1,1-Dichloroethane	19		1	ug/l	SW-846 8260C			
1,1-Dichloroethene	6		1	ug/l	SW-846 8260C			
cis-1,2-Dichloroethene	3		1	ug/l	SW-846 8260C			
Trichloroethene	30		1	ug/l	SW-846 8260C			
Lab ID: SC57148-04			Client ID: TW-2A	122019				
Parameter	Result	Flag	Reporting Limit	Units	Analytical Method			
1,1,1-Trichloroethane	280		1	ug/l	SW-846 8260C			
1,1-Dichloroethane	89		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	10		1	ug/l	SW-846 8260C			
Trichloroethene	280		1	ug/l	SW-846 8260C			
Vinyl Chloride	0.7	J.	1	ug/l	SW-846 8260C			

08-Jan-20 16:01 Page 6 of 29

Lab ID: SC57148-05 **Client ID:** TW-3 122019

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
1,1,1-Trichloroethane	2		1	ug/l	SW-846 8260C
1,1-Dichloroethane	4		1	ug/l	SW-846 8260C
1,1-Dichloroethene	0.9	J.	1	ug/l	SW-846 8260C
Trichloroethene	13		1	ug/l	SW-846 8260C
Lab ID: SC57148-06			Client ID: TB 122019		
Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Acetone	0.8	J.	20	ug/l	SW-846 8260C
t-Butyl alcohol	30	J.	50	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.

EFF55 12	Sample Identification EFF55 122019 SC57148-01					(<u>Matrix</u> Ground Water		Collection Date/Time 20-Dec-19 13:40		Received 23-Dec-19		
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cer
	acted Analyses												
	by method SM 2540D-11	. 17 1 7	* CT007										
Analysis p	performed by Phoenix Environ Total Suspended Solids	mental Labs, I < 2.5	nc. * - C100/	mg/l	2.5	2.5	0.5	SM 2540D-11	24-Dec-19	24-Dec-19	11301	511706A	L.
Prepared	by method SM2540C-11			_					06:25	06:25			
	performed by Phoenix Environ	mental Lahs I	nc * - CT007										
ysis p	Tot. Diss. Solids	260		mg/l	10	10	1	SM2540C-11		24-Dec-19	11301	511716A	ı
Prepared	by method SM 4500 CN								08:07	08:07			
Analysis p	performed by Phoenix Environ	mental Labs, I	nc. * - CT007										
57-12-5	Total Cyanide	< 0.010		mg/l	0.010	0.010	1	SW9010C/SW9 012B	26-Dec-19	27-Dec-19 14:16	11301	511896A	
	acted Analyses												
	by method General Prepa			. 1 1066	7.0								
Analysis p	performed by Eurofins Lancasi					4.4	4	EDA 4004D	24 Dag 40	24 Dec 40	40070	2050070	
	HEM (oil & grease)	2.5	J.	mg/l	5.0	1.4	1	EPA 1664B	15:35	31-Dec-19 15:35	10670	36580790)
	acted Analyses I by method SW-846 3005A	A											
	performed by Eurofins Lancasi	_ '	es Environmer	ntal - 1067	70								
7440-39-3	Barium	0.0808		mg/l	0.0050	0.0010	1	SW-846 6010C	31-Dec-19 02:47	05-Jan-20 15:16	10670	3621404	1
7440-47-3	Chromium	0.0065	J.	mg/l	0.0150	0.0016	1	"	"	"	"	"	
7440-50-8	Copper	< 0.0200		mg/l	0.0200	0.0120	1	"	"	"	"	"	
7439-89-6	Iron	0.0617	J.	mg/l	0.200	0.0400	1	"	"	"	"	"	
7439-96-5	Manganese	0.0428		mg/l	0.0100	0.0030	1	"	"	"	"	"	
7440-02-0	Nickel	< 0.0100		mg/l	0.0100	0.0021	1	"	"	"	"	"	
7440-66-6	Zinc	< 0.0200		mg/l	0.0200	0.0037	1	"	"	"	"	"	
Re-analys	sis of Subcontracted Analy	ses											
Prepared	by method SW-846 3005A	<u>4</u>											
7440-38-2	Arsenic	< 0.0300		mg/l	0.0300	0.0160	1	SW-846 6010C	31-Dec-19 02:47	05-Jan-20 20:47	10670	3621404	1
	1 by method SW-846 3020/	_ '											
	performed by Eurofins Lancasi		es Environmer										
7429-90-5	Aluminum	< 0.0250		mg/l	0.0250	0.0197	1	SW-846 6020A	31-Dec-19 03:24	07-Jan-20 10:35	10670	6214047	(
Prepared	by method METHOD												
Analysis p	performed by Eurofins Lancasi	ter Laboratorie	es Environmer	ital - 1067	70								
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.000050	1	SW-846 7470A	31-Dec-19 04:52	31-Dec-19 09:47	10670	3620571	3
	acted Analyses I by method SW-846 50300	<u>2</u>											
	performed by Eurofins Lancasi		es Environmer	ital - 1067	70								
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	31-Dec-19 13:38	31-Dec-19 13:39	10670	.193651A	,
71-55-6	1,1,1-Trichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	n .	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1		ug/l	1	0.2	1	n .	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1		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	"	"	"	"	"	

Page 8 of 29

ug/l

87-61-6

1,2,3-Trichlorobenzene

< 5

0.2

0.2

1

1

5

1

ug/l

ug/l

Ethyl ether

Ethyl t-butyl ether

< 5

< 1

60-29-7

637-92-3

1

75-01-4

17060-07-0

460-00-4

1868-53-7

2037-26-5

Surrogate recoveries:

Vinyl Chloride

Toluene-d8

1,2-Dichloroethane-d4

4-Bromofluorobenzene

Dibromofluoromethane

< 1

101

99

99

102

ug/l

1

80-120 %

80-120 %

80-120 %

80-120 %

0.2

08-Jan-20 16:01 Page 10 of 29

Sample Identification INF 122019 SC57148-02			Client Project # Matrix 60276639-1 Ground Water			<u></u>	Collection Date/Time ter 20-Dec-19 13:20			Received 23-Dec-19			
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	cted Analyses by method SM 2540D-11												
	rformed by Phoenix Environn	nental Labs, In	c. * - CT007										
, 1	Total Suspended Solids	5.0		mg/l	2.5	2.5	0.5	SM 2540D-11	24-Dec-19	24-Dec-19	11301	511706A	
Dranared I	by method SM2540C-11								06:25	06:25			
	rformed by Phoenix Environs	nantal Labs In	c * CT007										
Anaiysis pe	Tot. Diss. Solids	260	c C1007	mg/l	10	10	1	SM2540C-11	24-Dec-19	24-Dec-19	11301	511716A	
		200		1119/1	10	10	·	OM20100 11	08:07	08:07	11001	01171071	
	by method SM 4500 CN												
	rformed by Phoenix Environn		c. * - CT007										
57-12-5	Total Cyanide	< 0.010		mg/l	0.010	0.010	1	SW9010C/SW9 012B	26-Dec-19	27-Dec-19 14:17	11301	511896A	i
Subcontrac	cted Analyses												
	by method General Prepar	ration_											
Analysis pe	rformed by Eurofins Lancaste	er Laboratorie:	s Environmen	ntal - 10670									
	HEM (oil & grease)	< 5.0		mg/l	5.0	1.4	1	EPA 1664B		31-Dec-19	10670	36580790)
Subcontra	cted Analyses								15:35	15:35			
	by method SW-846 3005A												
	rformed by Eurofins Lancaste		s Environmen	ntal - 10670									
7440-39-3	Barium	0.0737		mg/l	0.0050	0.0010	1	SW-846 6010C	31-Dec-19	05-Jan-20	10670	36214044	4
				Ü					02:47	15:06			
7440-47-3	Chromium	0.0030	J.	mg/l	0.0150	0.0016	1	"	"	"	"	"	
7440-50-8	Copper	< 0.0200		mg/l	0.0200	0.0120	1	"	"	u u	"		
7439-89-6	Iron	0.0860	J.	mg/l	0.200	0.0400	1	"	"	"	"		
7439-96-5	Manganese	0.0862		mg/l	0.0100	0.0030	1	"	"	u u	"	"	
7440-02-0	Nickel	< 0.0100		mg/l	0.0100	0.0021	1	"	"	"	"	"	
7440-66-6	Zinc	0.0041	J.	mg/l	0.0200	0.0037	1	"	"	"	"	"	
	is of Subcontracted Analys by method SW-846 3005A												
7440-38-2	Arsenic	< 0.0300		mg/l	0.0300	0.0160	1	SW-846 6010C			10670	36214044	1
Prepared I	by method SW-846 3020A								02:47	20:44			
	rformed by Eurofins Lancaste		s Environmen	ntal - 10670									
7429-90-5	Aluminum	< 0.0250		mg/l	0.0250	0.0197	1	SW-846 6020A	31-Dec-19	07-Jan-20	10670	6214047	(
Drongradi	by mothed METHOD			-					03:24	10:30			
	by method METHOD	an I ah '	v Esseries	.tal 10770									
, ,	rformed by Eurofins Lancaste		s Environmen			0.000050	4	CW 946 74704	21 Dec 10	21 Dec 10	10670	26205741	2
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.000050	1	SW-846 7470A	31-Dec-19 04:52	31-Dec-19 09:39	100/0	36205713	,
·	cted Analyses by method SW-846 5030C	:											
	rformed by Eurofins Lancaste		s Environmen	ntal - 10670									
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	31-Dec-19 14:00	31-Dec-19 14:01	10670	.193651A	J
71-55-6	1,1,1-Trichloroethane	260		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	ıı	"		"	"	
75-34-3	1,1-Dichloroethane	82		ug/l	1	0.2	1	ıı	"		"	"	
				_				"		"			
75-35-4	1,1-Dichloroethene	8		ug/l	1	0.2	1		-				
75-35-4 563-58-6	1,1-Dichloroethene1,1-Dichloropropene	8 < 5		ug/l ug/l	1 5	0.2 0.2	1	"	"	"	"	"	

80-120 %

80-120 %

08-Jan-20 16:01 Page 13 of 29

460-00-4

1868-53-7

2037-26-5

4-Bromofluorobenzene

Dibromofluoromethane

Toluene-d8

100

101

102

08-Jan-20 16:01 Page 15 of 29

2037-26-5

Toluene-d8

101

80-120 %

Dibromofluoromethane

Toluene-d8

102

103

1868-53-7

2037-26-5

08-Jan-20 16:01 Page 19 of 29

2037-26-5

Toluene-d8

102

Sample Identification TB 122019 SC57148-06			Client Project # 60276639-1			<u>Matrix</u> Trip Blar		Collection Date/Time 20-Dec-19 00:00			Received 23-Dec-19		
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontra	acted Analyses												
	acted Analyses												
	by method SW-846 50300												
	performed by Eurofins Lancasi		ies Environm					0144 0 40 00000	0.4 5 40	0.4 5 40	40070	100051	
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	31-Dec-19 12:09	31-Dec-19 12:10	10670	.193651	V
71-55-6	1,1,1-Trichloroethane	< 1		ug/l	1	0.3	1	II .	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	II .	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1		ug/l	1	0.2	1	n .	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1		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	"	"	"	"	"	
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	"	"	"	"	"	
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	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
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	"	"	"	"	"	
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	8.0	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	1	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	II .	"	"	"	"	

08-Jan-20 16:01 Page 21 of 29

2037-26-5

Toluene-d8

101

Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
				Pre	pared & A	nalyzed: 24	-Dec-19		
< 2.5		mg/l	2.5	68.2		BRL	-		
				Pre	pared & A	nalyzed: 24	-Dec-19		
72.00		mg/l	2.5	68.2		106	85-115		20
				Pre	pared & A	nalyzed: 24	-Dec-19		
< 10		mg/l	10	259		BRL	-		
				Pre	pared & A	nalyzed: 24	-Dec-19		
232.0		mg/l	10	259		90	85-115		20
				Pre	pared: 26-	Dec-19 A	nalyzed: 27-D	ec-19	
< 0.010		mg/l	0.010			BRL	-		
		Source: SC	<u> 57148-01</u>	Pre	pared: 26-	Dec-19 A	nalyzed: 27-D	ec-19	
< 0.010		mg/l	0.010		BDL		-	NC	20
				Pre	pared: 26-	Dec-19 A	nalyzed: 27-D	ec-19	
0.4270		mg/l	0.010	0.429		99.5	90-110		20
		Source: SC	<u> 57148-01</u>	Pre	pared: 26-	Dec-19 A	nalyzed: 27-D	ec-19	
0.2150		mg/l	0.010)00000298	BDL	107	90-110		20
	< 2.5 72.00 < 10 232.0 < 0.010 < 0.010 0.4270	< 2.5 72.00 < 10 232.0 < 0.010 < 0.010 0.4270	< 2.5 mg/l 72.00 mg/l < 10 mg/l 232.0 mg/l < 0.010 mg/l Source: SC < 0.010 mg/l Source: SC Source: SC	< 2.5 72.00 mg/l 2.5 72.00 mg/l 2.5 < 10 mg/l 10 232.0 mg/l 10 Source: SC57148-01 < 0.010 mg/l 0.010 Source: SC57148-01 Source: SC57148-01 Source: SC57148-01	Pre	Result Flag Units *RDL Level Result	Prepared & Analyzed: 24 2.5 68.2 BRL	Result Flag Units *RDL Level Result %REC Limits	Result Flag Units *RDL Level Result %REC Limits RPD

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 1664B										
Batch 19365807902A - General Preparation										
Blank (B365102B)					Pre	epared & Ar	nalyzed: 31	-Dec-19		
HEM (oil & grease)	< 5.0		mg/l	5.0			-	_		
LCS (L365102Q)					Pre	epared & Ar	nalvzed: 31	-Dec-19		
HEM (oil & grease)	40.8		mg/l	5.0	40.0		102	78-114		
LCS Dup (L365102Y)			Ü		Pre	epared & Ar	nalvzed: 31	-Dec-19		
HEM (oil & grease)	39.8		mg/l	5.0	40.0		100	78-114	2	13
SW-846 6010C			· ·							
Batch 193621404401 - SW-846 3005A										
Blank (P36204AB)					Pre	enared: 31-	Dec-19 Ar	nalyzed: 05-J	lan-20	
Arsenic	< 0.0300		mg/l	0.0300	<u></u>	parca. o i	200 10 71	-	arr zo	
Blank (P36204ABB)	0.0000		mg/i	0.0000	Dro	narod: 31	Dec 10 A	nalyzed: 05-J	lan 20	
Barium	< 0.0050		mg/l	0.0050	110	parcu. 51-	Dec-19 A	aiyzeu. 05-0	MI-20	
Zinc	0.0030		mg/l	0.0030				-		
Nickel	< 0.0100		mg/l	0.0200				-		
Manganese	< 0.0100		mg/l	0.0100				_		
Iron	< 0.200		mg/l	0.200				_		
Chromium	< 0.0150		mg/l	0.0150				_		
Copper	< 0.0200		mg/l	0.0200				-		
LCS (P36204AQ)			J		Pre	enared: 31-	Dec-19 Ar	nalyzed: 05-J	lan-20	
Arsenic	0.0624		mg/l	0.0300	0.0600	parca. or	104	80-120	an Lo	
LCS (P36204AQQ)	0.00=		3			enared: 31		nalyzed: 05-J	lan₌20	
Manganese	0.0210		mg/l	0.0100	0.0200	<u> </u>	105	80-120	<u>an-20</u>	
Nickel	2.15		mg/l	0.0100	2.02		106	80-120		
Chromium	0.0312		mg/l	0.0150	0.0300		104	80-120		
Zinc	0.443		mg/l	0.0200	0.440		101	80-120		
Barium	0.0104		mg/l	0.0050	0.0100		104	80-120		
Iron	0.407		mg/l	0.200	0.400		102	80-120		
Copper	0.0402		mg/l	0.0200	0.0400		100	80-120		
SW-846 6020A										
Batch 193621404701A - SW-846 3020A										
Blank (P36204ABB)					Pre	enared: 31-	Dec-19 Ar	nalyzed: 07-J	lan-20	
Aluminum	< 0.0250		mg/l	0.0250	110	parca. or	200 10 71	- -	an Lo	
LCS (P36204AQQ)	0.0200		9	0.0200	Pre	enared: 31	Dec-19 Δι	nalyzed: 07-J	lan₌20	
Aluminum	0.201		mg/l	0.0250	0.200	spared. 51-	100	88-114	MI-20	
	0.201		9	0.0200	0.200			00		
SW-846 7470A										
Batch 193620571301 - METHOD				255442.22	Des		I	D 10		
Duplicate (P230854D220941)	< 0.00030		Source: SO		Pre	epared & Ar	iaiyzed: 31	-Dec-19	0	20
Mercury	< 0.00020		mg/l	0.00020	_	BDL		-	0	20
Matrix Spike Dup (P230854M220945)	0.0004		Source: SO			epared & Ar			0	00
Mercury	0.00091		mg/l	0.00020	0.0010	BDL	91	80-120	2	20
Matrix Spike (P230854R220943)			Source: SO			epared & Ar				
Mercury	0.00093		mg/l	0.00020	0.0010	BDL	93	80-120		
Blank (P36271ABB)				0.000	<u>Pre</u>	epared & Ar	nalyzed: 31	<u>-Dec-19</u>		
Mercury	< 0.00020		mg/l	0.00020				-		
LCS (P36271AQQ)						epared & Ar				
Mercury	0.00095		mg/l	0.00020	0.0010		95	80-110		
SW-846 8260C										
Batch L193651AA - SW-846 5030C										

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limi
SW-846 8260C										
Batch L193651AA - SW-846 5030C										
LCS (LCSL50Q)					Pro	epared & A	nalyzed: 31-	-Dec-19		
Ethyl ether	20		ug/l	5	20		100	59-141		
di-Isopropyl ether	17		ug/l	1	20		84	70-124		
Dichlorodifluoromethane	14		ug/l	1	20		69	41-127		
Dibromomethane	20		ug/l	1	20		100	80-120		
Dibromochloromethane	20		ug/l	1	20		98	71-120		
cis-1,3-Dichloropropene	19		ug/l	1	20		94	75-120		
cis-1,2-Dichloroethene	20		ug/l	1	20		100	80-125		
Chloromethane	15		ug/l	1	20		77	56-121		
Chloroform	20		ug/l	1	20		98	80-120		
Carbon Tetrachloride	19		ug/l	1	20		94	64-134		
Chlorobenzene	20		ug/l	1	20		100	80-120		
Ethyl t-butyl ether	17		ug/l	1	20		84	68-121		
Carbon Disulfide	17		ug/l	5	20		83	65-128		
Bromomethane	15		ug/l	1	20		73	53-128		
Chloroethane	17		ug/l	1	20		83	55-123		
n-Butylbenzene	20		ug/l	5	20		99	76-120		
1,3,5-Trichlorobenzene	18		ug/l	5	20		92	66-123		
t-Butyl alcohol	200		ug/l	50	200		100	60-130		
Bromoform	17		ug/l	4	20		87	51-120		
Styrene	20		ug/l	5	20		99	80-120		
sec-Butylbenzene	21		ug/l	5	20		103	77-120		
p-Isopropyltoluene	20		ug/l	5	20		102	76-120		
t-Amyl methyl ether	18		ug/l	5	20		88	66-120		
n-Propylbenzene	21		ug/l	5	20		106	79-121		
Ethylbenzene	20		ug/l	1	20		100	80-120		
Naphthalene	19		ug/l	5	20		97	53-124		
Methylene Chloride	20		ug/l	1	20		98	80-120		
Methyl Tertiary Butyl Ether	17		ug/l	1	20		85	69-122		
m+p-Xylene	41		ug/l	5	40		101	80-120		
Isopropylbenzene	20		ug/l	5	20		100	80-120		
Hexachlorobutadiene	17		-	5	20		83	63-120		
Freon 113	17		ug/l ug/l	10	20		85	73-139		
o-Xylene	20		ug/l	10	20		99	80-120		
1,1-Dichloropropene			ug/l	5	20		99	78-120		
1,2-Dichlorobenzene	18 20		-	5	20		102	80-120		
1,2-Dibromoethane			ug/l	1	20		102	77-120		
	21		ug/l							
1,2-Dibromo-3-chloropropane	20		ug/l	5	20		101	47-131 75-130		
1,2,4-Trimethylbenzene	21		ug/l	5 5	20 20		104 93	75-120 63 120		
1,2,4-Trichlorobenzene 1,3-Dichlorobenzene	19		ug/l	5	20			63-120 80-120		
, ,	20		ug/l	5 5	20		101 93			
1,2,3-Trichlorobenzene	19		ug/l					66-120		
Benzene	19		ug/l	1	20		94	80-120 80-121		
1,1-Dichloroethene	19		ug/l	1	20		96	80-131		
1,1-Dichloroethane	19		ug/l	1	20		94	80-120		
1,1,2-Trichloroethane	21		ug/l	1	20		107	80-120		
1,1,2,2-Tetrachloroethane	21		ug/l	1	20		104	72-120		
1,1,1-Trichloroethane	19		ug/l	1	20		95	67-126		
1,1,1,2-Tetrachloroethane	20		ug/l	1	20		99	78-120		
1,2,3-Trichloropropane	21		ug/l	5	20		105	75-124		
2,2-Dichloropropane	18		ug/l	1	20		90	55-142		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPE Limi
SW-846 8260C										
Batch L193651AA - SW-846 5030C										
LCS (LCSL50Q)					Pre	epared & Ar	nalyzed: 31-	Dec-19		
Bromochloromethane	18		ug/l	5	20		89	80-120		
Bromobenzene	20		ug/l	5	20		99	80-120		
Acrylonitrile	91		ug/l	20	100		91	60-129		
4-Methyl-2-pentanone	85		ug/l	10	100		85	62-133		
4-Chlorotoluene	20		ug/l	5	20		99	80-120		
2-Hexanone	90		ug/l	10	100		90	56-135		
1,2-Dichloroethane	21		ug/l	1	20		105	73-124		
2-Butanone	130		ug/l	10	150		88	59-135		
			_	10	20		95	80-120		
1,2-Dichloropropane	19		ug/l							
1,4-Dioxane	570		ug/l	250	500		114	63-146		
1,4-Dichlorobenzene	20		ug/l	5	20		101	80-120		
1,3-Dichloropropane	20		ug/l	1	20		101	80-120		
tert-Butylbenzene	19		ug/l	5	20		96	78-120		
1,3,5-Trimethylbenzene	21		ug/l	5	20		106	75-120		
Bromodichloromethane	20		ug/l	1	20		98	71-120		
2-Chlorotoluene	20		ug/l	5	20		100	80-120		
Trichloroethene	19		ug/l	1	20		95	80-120		
Tetrachloroethene	19		ug/l	1	20		97	80-120		
Acetone	160		ug/l	20	150		105	54-157		
Trichlorofluoromethane	19		ug/l	1	20		95	55-135		
trans-1,4-Dichloro-2-butene	89		ug/l	50	100		89	33-143		
trans-1,3-Dichloropropene	20		ug/l	1	20		99	67-120		
trans-1,2-Dichloroethene	19		ug/l	1	20		94	80-126		
Toluene	20		ug/l	1	20		100	80-120		
Tetrahydrofuran	100		ug/l	10	100		105	54-144		
Vinyl Chloride	16		ug/l	1	20		80	56-120		
Surrogate: 1,2-Dichloroethane-d4	50		ug/l		50		101	80-120		
Surrogate: Toluene-d8	52		ug/l		50		103	80-120		
Surrogate: 4-Bromofluorobenzene	52		ug/l		50		104	80-120		
Surrogate: Dibromofluoromethane	48		ug/l		50		96	80-120		
•	7.0		ug/i			narad 0 A	nalyzed: 31-			
LCS Dup (LCSL50Y)	4=			4		epared & Ar	•		0	20
Ethyl t-butyl ether	17		ug/l	1	20		84	68-121	0	30
Ethyl ether	20		ug/l	5	20		98	59-141	2	30
Ethylbenzene	20		ug/l	1	20		100	80-120	0	30
Freon 113	17		ug/l	10	20		84	73-139	1	30
Hexachlorobutadiene	17		ug/l	5	20		83	63-120	0	30
Vinyl Chloride	16		ug/l	1	20		78	56-120	4	30
Trichloroethene	19		ug/l	1	20		95	80-120	0	30
Trichlorofluoromethane	19		ug/l	1	20		94	55-135	1	30
di-Isopropyl ether	17		ug/l	1	20		83	70-124	0	30
Dichlorodifluoromethane	13		ug/l	1	20		66	41-127	3	30
trans-1,4-Dichloro-2-butene	92		ug/l	50	100		92	33-143	3	30
cis-1,3-Dichloropropene	19		ug/l	1	20		95	75-120	1	30
t-Butyl alcohol	200		ug/l	50	200		100	60-130	0	30
cis-1,2-Dichloroethene	20		ug/l	1	20		99	80-125	1	30
Chloromethane	14		ug/l	1	20		72	56-121	7	30
Chloroform	20		ug/l	1	20		100	80-120	2	30
Chloroethane	16		ug/l	1	20		82	55-123	1	30
Dibromomethane	20		ug/l	1	20		100	80-120	0	30
sec-Butylbenzene	21		ug/l	5	20		103	77-120	0	30

Result	Flag	Units	*RDL	Level	Result	%REC	Limits	RPD	RPD Limit
				Pre	epared & A	nalyzed: 31-	Dec-19		
20		ug/l	5	20		100	80-120	0	30
40		ug/l	5	40		100	80-120	1	30
17		ug/l	1	20		86	69-122	1	30
20		ug/l	1	20		99	80-120	0	30
19		ug/l	5	20		96	53-124	1	30
20		ug/l	5	20		100	76-120	0	30
21		ug/l	5	20		105	79-121	1	30
20		ug/l	1	20		100	80-120	4	30
20		ug/l	5	20		101	76-120	1	30
20		ug/l	1	20		101	67-120	2	30
20		ug/l	5	20		99	80-120	0	30
17		ug/l	5	20		87	66-120	1	30
20		ug/l	1	20		99	71-120	1	30
19		ug/l	5	20		97	78-120	0	30
20		ug/l	1	20		100	80-120	0	30
110		ug/l	10	100		105	54-144	1	30
20		ug/l	1	20		100	80-120	0	30
19		ug/l	1	20		94	80-126	1	30
20		ug/l	1	20		98	80-120	1	30
19		ug/l	1	20		94	64-134	0	30
20		ug/l	1	20		102	80-120	1	30
20		ug/l	5	20		101	80-120	0	30
21		ug/l	5	20		106	75-120	1	30
18		ug/l	5	20		92	66-123	0	30
19		ug/l	1	20		95	80-120	0	30
21		ug/l	1	20		103	73-124	1	30
20		ug/l	5	20		101	80-120	1	30
21		ug/l	1	20		103	77-120	1	30
20		ug/l	5	20		100	80-120	1	30
21		ug/l	5	20		103	75-120	1	30
18		ug/l	5	20		89	63-120	5	30
21		ug/l	5	20		105	75-124	0	30
18		ug/l	5			90	78-120	1	30
19		ug/l	1	20		95	80-131	2	30
19		ug/l	1	20		94	80-120	1	30
21		ug/l	1	20		106	80-120	0	30
21		ug/l	1	20		104	72-120	0	30
19									30
20		ug/l							30
20		ug/l				100	47-131	0	30
19		ug/l							30
18		ug/l				92	66-120	1	30
570		ug/l	250	500		114	63-146	1	30
16		ug/l	5	20		82	65-128	0	30
15		ug/l	1	20		75	53-128	2	30
18		ug/l	4				51-120		30
18		ug/l	5			89	80-120	1	30
19		ug/l	1			94	80-120	0	30
91		ug/l				91	60-129	0	30 30
	40 17 20 19 20 21 20 20 20 20 17 20 19 20 19 20 21 18 19 21 20 21 18 21 20 21 18 21 20 21 18 21 20 21 18 21 20 21 18 21 20 21 21 20 21 21 21 21 21 21 21 21 21 21 21 21 21	40 17 20 19 20 21 20 20 20 20 17 20 19 20 19 20 19 20 19 20 21 18 19 20 21 18 19 21 20 21 18 19 21 20 21 18 19 21 20 21 18 19 21 20 21 18 19 19 20 21 18 19 19 20 21 18 19 19 21 20 21 18 19 19 21 20 21 18 19 19 21 20 21 18 19 19 21 21 18 19 19 21 21 18 19 19 21 21 19 20 20 19 18 18 19 19 21 21 19 20 20 19 18 18 19 19 21 21 19 20 20 19 18 18 19 19 21 21 19 20 20 19 18 570 16 15 18 18 19 91	40	40	20 ug/l 5 20 40 ug/l 5 40 17 ug/l 1 20 20 ug/l 1 20 19 ug/l 5 20 20 ug/l 5 20 21 ug/l 5 20 20 ug/l 5 20 20 ug/l 1 20 19 ug/l 1 20 20 ug/l 1 20 21 ug/l 5 20 21 ug/	20 ug/l 5 20 40 ug/l 5 40 177 ug/l 1 20 20 ug/l 1 20 199 ug/l 5 20 20 ug/l 1 20 20 ug/l 5 20 20 ug/l 1 20 20 ug/l 1 20 20 ug/l 1 20 20 ug/l 1 20 19 ug/l 5 20 21 u	20	40	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch L193651AA - SW-846 5030C										
LCS Dup (LCSL50Y)					Pre	epared & A	nalyzed: 31-	-Dec-19		
2-Butanone	130		ug/l	10	150		88	59-135	1	30
4-Chlorotoluene	20		ug/l	5	20		100	80-120	1	30
2,2-Dichloropropane	19		ug/l	1	20		93	55-142	2	30
Bromodichloromethane	19		ug/l	1	20		96	71-120	2	30
2-Hexanone	91		ug/l	10	100		91	56-135	0	30
4-Methyl-2-pentanone	85		ug/l	10	100		85	62-133	1	30
2-Chlorotoluene	20		ug/l	5	20		99	80-120	0	30
Surrogate: 4-Bromofluorobenzene	52		ug/l		50		104	80-120		
Surrogate: Dibromofluoromethane	48		ug/l		50		97	80-120		
Surrogate: 1,2-Dichloroethane-d4	50		ug/l		50		101	80-120		
Surrogate: Toluene-d8	52		ug/l		50		103	80-120		
LCS (LCSL51Q)					Pre	epared & A	nalyzed: 31-	-Dec-19		
Ethanol	530		ug/l	750	500		106	31-180		
LCS Dup (LCSL51Y)					Pre	epared & A	nalyzed: 31-	-Dec-19		
Ethanol	510		ug/l	750	500		103	31-180	3	30
Blank (VBLKL50B)					Pre	epared & A	nalyzed: 31-	-Dec-19		
1,2-Dichlorobenzene	< 5		ug/l	5				-		
1,1,1,2-Tetrachloroethane	< 1		ug/l	1				_		
2-Butanone	< 10		ug/l	10				_		
2,2-Dichloropropane	< 1		ug/l	1				_		
2-Chlorotoluene	< 5		ug/l	5				_		
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				-		
n-Propylbenzene	< 5		ug/l	5				-		
2-Hexanone	< 10		ug/l	10				-		
1,1,2,2-Tetrachloroethane	< 1		ug/l	1				-		
t-Amyl methyl ether	< 5		ug/l	5				-		
Naphthalene	< 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				_		

nalyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPE Limi
W-846 8260C										
atch L193651AA - SW-846 5030C										
Blank (VBLKL50B)					Pre	epared & Ar	nalyzed: 31-	-Dec-19		
Methylene Chloride	< 1		ug/l	1			-			
n-Butylbenzene	< 5		ug/l	5				_		
o-Xylene	< 1		ug/l	1				_		
p-Isopropyltoluene	< 5		ug/l	5				_		
Ethyl t-butyl ether	< 1		ug/l	1				_		
Styrene	< 5		ug/l	5				_		
Ethyl ether	< 5		ug/l	5				_		
t-Butyl alcohol	< 50		ug/l	50				_		
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			1				-		
sec-Butylbenzene	< 5		ug/l	5				-		
Carbon Tetrachloride	< 1		ug/l					-		
4-Chlorotoluene	< 5		ug/l	1 5				-		
			ug/l					-		
4-Methyl-2-pentanone	< 10		ug/l	10				-		
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				-		
Ethylbenzene	< 1		ug/l	1				-		
Carbon Disulfide	< 5		ug/l	5				-		
Chlorobenzene	< 1		ug/l	1				-		
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: 4-Bromofluorobenzene	50		ug/l		50		100	80-120		
Surrogate: Toluene-d8	51		ug/l		50		102	80-120		
Surrogate: Dibromofluoromethane	49		ug/l		50		98	80-120		
Surrogate: 1,2-Dichloroethane-d4	51		ug/l		50		101	80-120		

Notes and Definitions

J. Estimated value

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.

<u>Laboratory Control Sample (LCS)</u>: 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.

<u>Matrix Spike</u>: 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.

<u>Method Blank</u>: 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.

<u>Surrogate</u>: 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.

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

08-Jan-20 16:01 Page 29 of 29

FEDEX #8088 8989 3719 5057148

2gd

eurofins 0=0il DW=Dinking Water 7=CH3OH 8=NaHSO₄ 9=Deionized Water 10=H₃PO₄ F=Field Filtered Telephone #: Report To: Lab ID: SO=Soil Relinquished by: G= Grab 70-1 EFF55 Stephen Choinie INF TW-24 122019 1=Na₂S2O₃ GW=Groundwater SL=Sludge TB R 2019 American Blud. Sample ID: 122019 122019 122019 122019 Spectrum Analytica 2=HCI Choiniere A=Indoor/Ambient Air SW=Surface Water 3=H2SO4 12/20/19 4=HNO Date: C=Compsite Received by: SG=Soil Gas ww=Waste Water 11= none 5=NaOH CHAIN OF CUSTODY RECORD 335 1330 318 340 320 Time: Invoice To: P.O No. X11 Almgren Drive Agawam, MA 01001 (413) 789-9018 6=Ascorbic Acid -9 Type Page -SE 12/20/19 Matrix Date: Same CVI # of VOA Vials Containers 13:45 ☐ 646 Camp Avenue
N. Kingstown, RI 02852
(401) 732-3400 Time: 22 # of Plastic 8260 Metals* TSS/TDS O+G Cyanide Temp °C ò 6 0 List Preservative Code below: Condition upon receipt: ☐ Ambient 【VIced EDD format E-mail to: Sampler(s) Location S Project No: Staats but Now Corp. ☐ TAT - Date Needed: Custody Seals: ☐ Refrigerated All TAT's subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 60 days unless otherwise instructed SRO Special Handling: Check if chlorinated ☐ DI VOA Frozen Present *Al, Ba, As, Other: Level II State-specific reporting standards QA/QC Reporting Notes: 3-14-008 QA/QC Reporting Level Stand D Intact Level II ☐ Soil Jar Frozen State: NY Broken

FEDEX # 8088 8989 3719 56.57148 PN

	euro
	ofins
Spec	1

Report To:

American Blud. UY 12110

Invoice To:

Same

Project No:

Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page ____

X11 Almgren Drive Agawam, MA 01001 (413) 789-9018 ☐ 646 Camp Avenue
N. Kingstown, RI 02852
(401) 732-3400

TAT
- Date
Needed:

Special Handling:

٠,	_			
7				
0				
2				
•	_	_	4	

Samples disposed after 60 days unless otherwise instructed	Min. 24-hr notification needed for rushes	All TATs subject to laboratory approval
--	---	---

	☐ DI VOA Frozen ☐ Soil Jar Frozen	☐ Ambient ☐ Iced ☐ Refrigerated	IR ID#	ı							
	Present Intact Broken	Condition upon receipt: Custody Seals:	COSE NO.	2				8			
		Marie 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	O	13:45	13/19		1/2	1	A	edex	+7
	ĸ	E-mail to:	Covering Factor	1615	12/20/19	*		tolex	de	2	
		EDD format:	Temp °C	Time:	Date;	•	d by:	Received by:	by:	Relinquished by:	
			\								
			\						V		
	Bn1430										
					\			A _{sal}			
1	client motified.		×		1	1		1 1	B 122019	-08 T	
P	Analysis checked				4	4	1335	4	3 122019	os 7w-3	,
		D~11/30	*			0	1330		M-24 122019	ou Two	
			>				1318		TW-1 122019	-03 Tw.	
	Cu, Fe, Mn, Ha,	X	XXX	7		0	1320		122019	-of INF	
	*Al, Ba, As, Cr,	× ×	XXX	4	S 3	0	1340	12/20/19	148-0 EFF55 122019	-O EFF	SC57148
			N	# of	# of	T	Time:	Date:	Sample ID:		Lab ID:
		•	320 1et	Clear	VOA	ype	е	C=Compsite		G= Grab	
		G hio	als ITD G					X3=	X2=		X1=
	Level II Level IV		*				il Gas	nt Air SG=Soil Gas	SL=Sludge A=Indoor/Ambient Air	SO=Soil SL=	0=0il so
	QA/QC Reporting Level	Analysis		Containers		ter	WW=Waste Water		GW=Groundwater SW=Surface Water		DW =Dinking Water
	9	35	2411				1 1		¥		
	OA/OC Reporting Notes:	List Preservative Code below:	List Pr		c Acid	6=Ascorbic Acid	=NaOH	4=HNO ₃	red 1=Na ₂ S2O ₃ 2=HCl 3=H ₂ SO ₄ 8=NaHSO ₄ 9=Deionized Water 10=H ₃ PO ₄	red 1=Na ₂ S2O ₃ 8=NaHSO ₄ 9=De	F=Field Filtered 7=CH3OH 8=
	ă	SRG		Quote #:		0.:	P.O No.:		Stophen Choiniere	Stepl	Project Mgr:
	State: NY	Sampler(s):							951-2200	518	Telephone #:
	[-	24							101	QI Ma M	+
	D. 13-14-008	Site Name: Now Cord	_	,	k			5.0	SIN AMERICAN WILL	10 Dritish	1

Your Internal Billing Reference

SOME

7

Phone 33

89-188

SATURDAY Delivery NOT available for FedEx Standard Overnight, FedEx 2Dey A.M., or FedEx Express Save

Special Handling and Delivery Signature Options

The party of the p

70000

Date

Sender's Name

Company AECIM

Address

FedEx Tracking Number 8088 8989 س 1719

Steve

Phone

FedEx First Overnight Earliest next business morning

PATRICAN BLVD

ZIP

639

FedEx Envelope*

FedEx Pak*

Packaging * Declared value limit \$500.

FedEx Standard Overnight
Next business afternoon.*
Saturday Delivery NOT available.

HOLD Weekday
FedEx location address
REQUIRED. NOT availab
FedEx First Overnight.

Does this shipment contain dangerous goods?

No Signature Required Package may be left without obtaining a signature for delivery.

Address

March

Company

20

No

HOLD Saturday
FedEx location address
REQUIRED. Available ONLY for
FedEx Priority Overnight and
FedEx 2Day to select locations.

Payment Bill to:

Enter FedEx Acct. No. or Credit Card No. below.

Acct No.

Cash/Check

pped in FedEx packaging Yes Shipper's Declaration not required.

Dry Ice Dry Ice, 9, UN 1845

Cargo Aircraft Only

ZIP

State

0215

Express Package Service NOTE: Service order has changed. Please * To most locations

Packages up to 150 lbs. For packages over 150 lbs., use the FedEx Express Freight US Airbill.

2 or 3 Business Days FedEx 2Day A.M.
Second business morning.*
Saturday Delivery NOT availa

FedEx 2Day
Second business afternoon.* Thursday shipments
will be delivered on Monday unless SATURDAY
Delivery is selected. FedEx Express Saver Third business day.* Saturday Delivery NOT available

FedEx Priority Overnight
Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery

FedEx

FedEx Other

fedexi.com 1.800.GoFedEx 1.800.463.3339

8088 8989 3719

Total Weight

119

Batch Summary

193620571301

Subcontracted Analyses

P230854D220941

P230854M220945

P230854R220943

P36271ABB

P36271AOO

SC57148-01 (EFF55 122019)

SC57148-02 (INF 122019)

193621404401

Subcontracted Analyses

P36204AB

P36204ABB

P36204AQ

P36204AQQ

SC57148-01 (EFF55 122019)

SC57148-01RE01 (EFF55 122019)

SC57148-02 (INF 122019)

SC57148-02RE01 (INF 122019)

193621404701A

Subcontracted Analyses

P36204ABB

P36204AQQ

SC57148-01 (EFF55 122019)

SC57148-02 (INF 122019)

19365807902A

Subcontracted Analyses

B365102B

L365102Q

L365102Y

SC57148-01 (EFF55 122019)

SC57148-02 (INF 122019)

511706A

Subcontracted Analyses

CE91531-BLK

CE91531-LCS

SC57148-01 (EFF55 122019)

SC57148-02 (INF 122019)

511716A

Subcontracted Analyses

CE92038-BLK

CE92038-LCS

SC57148-01 (EFF55 122019)

SC57148-02 (INF 122019)

511896A

<u>Subcontracted Analyses</u>

CE93000-BLK CE93000-DUP CE93000-LCS CE93000-MS

SC57148-01 (EFF55 122019)

SC57148-02 (INF 122019)

L193651AA

Subcontracted Analyses

LCSL50Q LCSL50Y LCSL51Q

LCSL51Y SC57148-01 (EFF55 122019) SC57148-02 (INF 122019) SC57148-03 (TW-1 122019) SC57148-04 (TW-2A 122019) SC57148-05 (TW-3 122019) SC57148-06 (TB 122019)

VBLKL50B